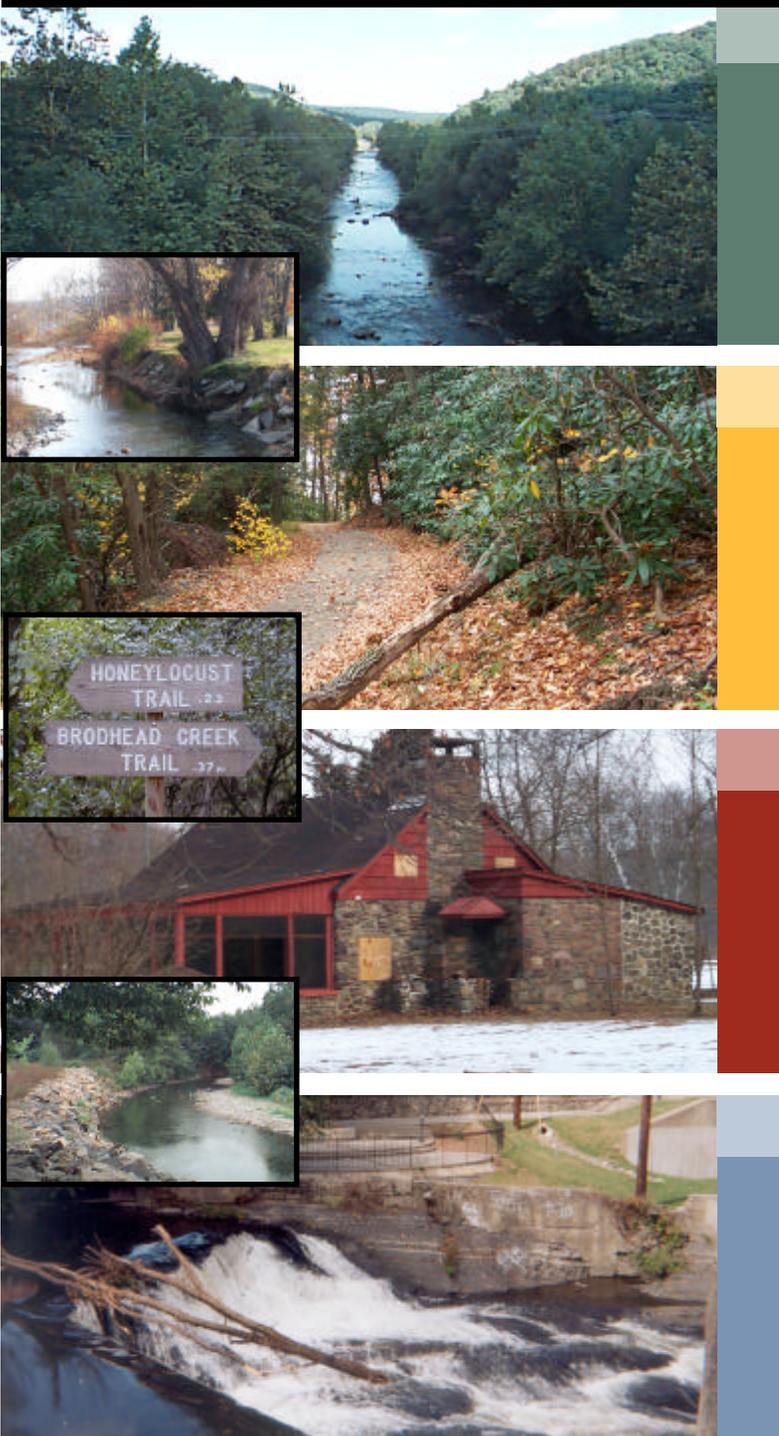


Stroud Region

Monroe County

Brodhead, McMichael, and Pocono Creeks Greenways Plan



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Brodhead, McMichael, and Pocono Creeks Greenways

Multi-Municipal Greenways Plan

The contributions of the following groups and individuals were vital to the successful development of the Brodhead, McMichael, and Pocono Creeks Greenways Plan. They are commended for their interest in the project and the input they provided for use in this Plan.

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Jeff Wilkins, Stroudsburg Borough

All Key Person Interview Participants

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“A greenway is a corridor of open space. Greenways vary greatly in scale, from narrow ribbons of green that run through urban, suburban, and rural areas to wider corridors that incorporate diverse natural, cultural and scenic features. They can incorporate both public and private property, and can be land- or water-based. They may follow old railways, canals, or ridge tops, or they may follow stream corridors, shorelines, or wetlands, and include water trails for non-motorized craft. Some greenways are recreational corridors or scenic byways that may accommodate motorized and non-motorized vehicles. Others function almost exclusively for environmental protection and are not designed for human passage.

Greenways differ in their location and function, but overall, a greenway will protect natural, cultural, and scenic resources, provide recreational benefits, enhance natural beauty and quality of life in neighborhoods and communities, and stimulate economic development opportunities.”

- Pennsylvania's Greenway Definition
Pennsylvania Greenways: An Action Plan for Creating Connections
June 2001



Executive Summary

Background

Following development of the Stroud Region Open Space and Recreation Plan, Stroud Township began a study of the Brodhead, McMichael, and Pocono Creeks Greenways in the summer of 2001.

The Process

The Brodhead, McMichael, and Pocono Creeks Greenways Plan began with documentation and analysis of existing conditions within the creek corridors. Potential greenway user groups were identified to determine the feasibility of accommodating a variety of uses. Building upon an understanding of the current greenway features and desired use of the greenway system, options for its enhancement and development were identified. A detailed implementation plan outlines a step-by-step process for successful completion of the study's recommendations.

Data Collection and Analysis

An understanding of the existing conditions within the study area was important. Detailed base mapping of the three creek corridors was developed and augmented with site visits. The three creek corridors were divided into segments to allow detailed inventory and analysis. The information collected was analyzed to identify potential opportunities and constraints within the greenway system.

The results of this evaluation included the following:

- large areas of publicly-owned lands will be important assets
- topography will be a limiting factor to the construction of trails in some areas, but alternative routes may be identified
- a variety of plans for creek restoration, recreation facility development, and open space conservation are planned,

“Meaningful corridors maintain important habitat linkages and preserve the green fabric so important to Monroe County's past, present, and future.”

-Monroe County 2020

- underway or recently complete
- portions of the stream corridors are in need of restoration
 - private landowners own a significant number of important parcels within the corridor
 - abandoned rail lines within or near the creek corridors may be used for trail development

A firm understanding of existing conditions, opportunities, and constraints provided a base for the remaining components of the study.

Demand and Potential Use

The population of the Stroud Region includes residents of all ages and interests. Residents' desired use of the corridors were an important consideration during the development of recommendations for greenway development.

The demographics of the region were analyzed to identify potential uses by age group. This information was augmented with specific needs identified at Study Committee meetings, Key Person Interviews, and Focus Group meetings.



Vision for the Future of the Brodhead, McMichael, and Pocono Creeks Greenways

The Brodhead, McMichael, and Pocono Creeks Greenway System is the backbone of the Stroud Region. A significant portion of the corridor is protected for future generations to enjoy. Strong cooperative relationships with private landowners ensure open space protection and sensitive land use.

The Greenway System is closely tied to the region's recreation assets. The greenway trail system accommodates a variety of users and connects the community to the greenway corridor. The Levee Loop Trail is packed every day with fitness walkers, rollerbladers, and parents with strollers. The greenways incorporate elements of the recreation and cultural resources within the region. The New Stroud Regional Park, which is connected to the Brodhead Greenway, attracts residents from throughout the area who use the sports fields, skateboard park, trail, and other facilities. The shelters at Pinebrook Park are often rented for family picnics and office parties. The McMichael Creek Conservation Area offers one of many opportunities for residents to fish, boat, and interact with nature.

The Brodhead, McMichael and Pocono creeks are the region's green infrastructure, which builds upon the enhancement and protection of the riparian corridors. They are the living classrooms that teach conservation and sensitivity to nature. They are the visual backdrop for residents' everyday lives. They are representatives of the community's character, signifying a strong commitment to a bright future.

Enhancement, Protection, and Development

Opportunities for the enhancement of the creek corridors, protection of natural resources, and development of recreation facilities are identified.

GREEN INFRASTRUCTURE

The concept of Green Infrastructure emphasizes that a successful greenway serves as the base for all development or preservation within the greenway corridor. The success of the efforts within a greenway system depend on conservation and a sensitivity to existing natural elements. The environmental, cultural, scenic, and recreational value of the Brodhead, McMichael, and Pocono Creeks cannot be overstressed. Therefore, the use of this generalized concept of green infrastructure allows the incorporation of the guiding principles for the future of these creeks into the fabric of the region. Specifically, the green infrastructure concept and associated map may be powerful tools as the regional partners guide future land development. Additionally, the concept will be a helpful educational tool.

TRAILS

Proposed trail route alignments within the three creek corridors are identified. The success of the greenway system will depend, in part, on public support. Opportunities for public access to the greenway corridors will strengthen this support and open doors to a variety of health, educational, and transportation benefits. The proposed greenway trail system runs through the entire greenway study area, to varying degrees. Several different trail types and uses were recognized through the development of this plan and location for the appropriate facilities were identified. All recommendations related to the greenway trail system were made within the context of existing natural conditions and acknowledge the importance of open space conservation.

Implementation

MISSION STATEMENT

The Stroud Region will boast a successful greenway system. Implementation of the Brodhead, McMichael, Pocono Creeks Greenways Plan is based on cooperation and volunteerism. Current and future generations will benefit from efforts to conserve natural areas, provide recreation opportunities, and increase awareness of greenway issues.

TRAIL PROJECTS

A total of approximately forty miles of new trails are recommended. The trail system is divided into suggested trail projects. These smaller trail segments will allow easier planning for phased construction of the trail system. The numbers on the maps do not correspond to priority. Rather, priorities must be evaluated on a regular basis, taking into consideration public support and available funding.

ACTION STRATEGIES

A detailed implementation plan outlines specific recommendations for the future of the Brodhead, McMichael, and Pocono Creek Greenways. The implementation strategies are organized by priority to assist the Greenway Committee and the municipal partners to plan for upcoming projects and associated costs.

Several of the issues addressed by the recommendations of this Plan include the following:

- acquisition of key properties
- stream restoration opportunities
- cooperative efforts with local governments and organizations
- administration of the plan's recommendations
- construction of trails
- construction of trail heads
- construction of pedestrian/bicycle bridges
- educational opportunities
- publicity of the greenway system
- outline of future planning efforts

“The Stroud Region will boast a successful greenway system.”

KEY PARCELS

A significant amount of land within the greenways is publicly owned. However, the streams run through or adjacent to hundreds of properties, most of which are privately owned. To assist in the coordination and prioritizations of open space conservation within the creek corridors, several key parcels within or adjacent to the corridors were identified. The information provided for each parcel will assist municipal officials in setting acquisition priorities

Success Of This Plan

The successful implementation of this plan depends on the following factors:

1. PUBLIC SUPPORT AND EDUCATION

Residents' support of future efforts to preserve open space and develop recreation opportunities within the three greenway corridors is critical to the future of a successful system. Immediately following the approval of this planning document, efforts should be made to publicize its findings.

2. ESTABLISHMENT OF FORMAL ADVOCACY GROUP

The project Study Committee played an important role in the development of this plan. This group's interest in the greenways' future and knowledge of the plan's recommendations will serve as important assets through implementation. Therefore, the municipal regional partners should formally recognize the Study Committee as the Stroud Region Greenway Advisory Board. The Board would report to the Stroud Region Park Commission. Its members could be responsible for tracking the plan's implementation, updating the plan, and general coordination of efforts. The Board's role could logically expand beyond the implementation of this Plan to deal with general greenway issues throughout the Stroud Region.

3. INVOLVEMENT OF ELECTED OFFICIALS

As the primary decision-makers of the region, elected officials should be updated on a regular basis regarding the recommendations of this plan, the status of implementation, public support, and related issues as they arise.

4. INTERGOVERNMENTAL COOPERATION

The successful development of the Brodhead, McMichael and Pocono Creeks Greenways will be one of several current and future opportunities for the regional partners to work together. The base of cooperation that was created as part of the Stroud Region Open Space and Recreation Plan will allow a pooling of resources for the implementation of this plan's

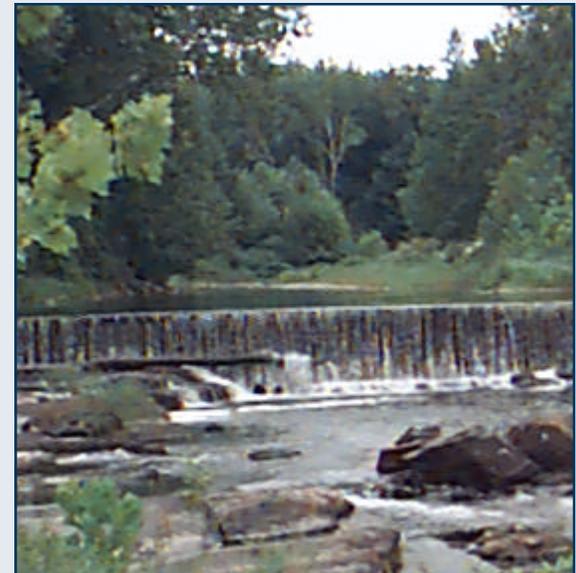
recommendations.

5. FINANCIAL SUPPORT

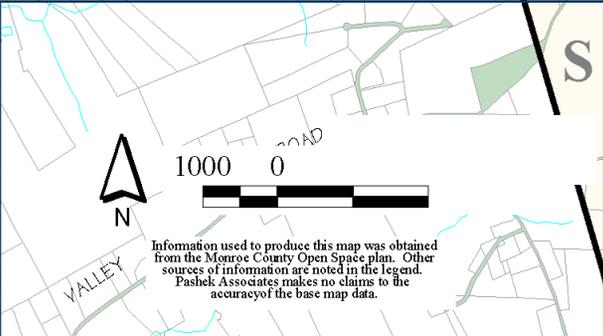
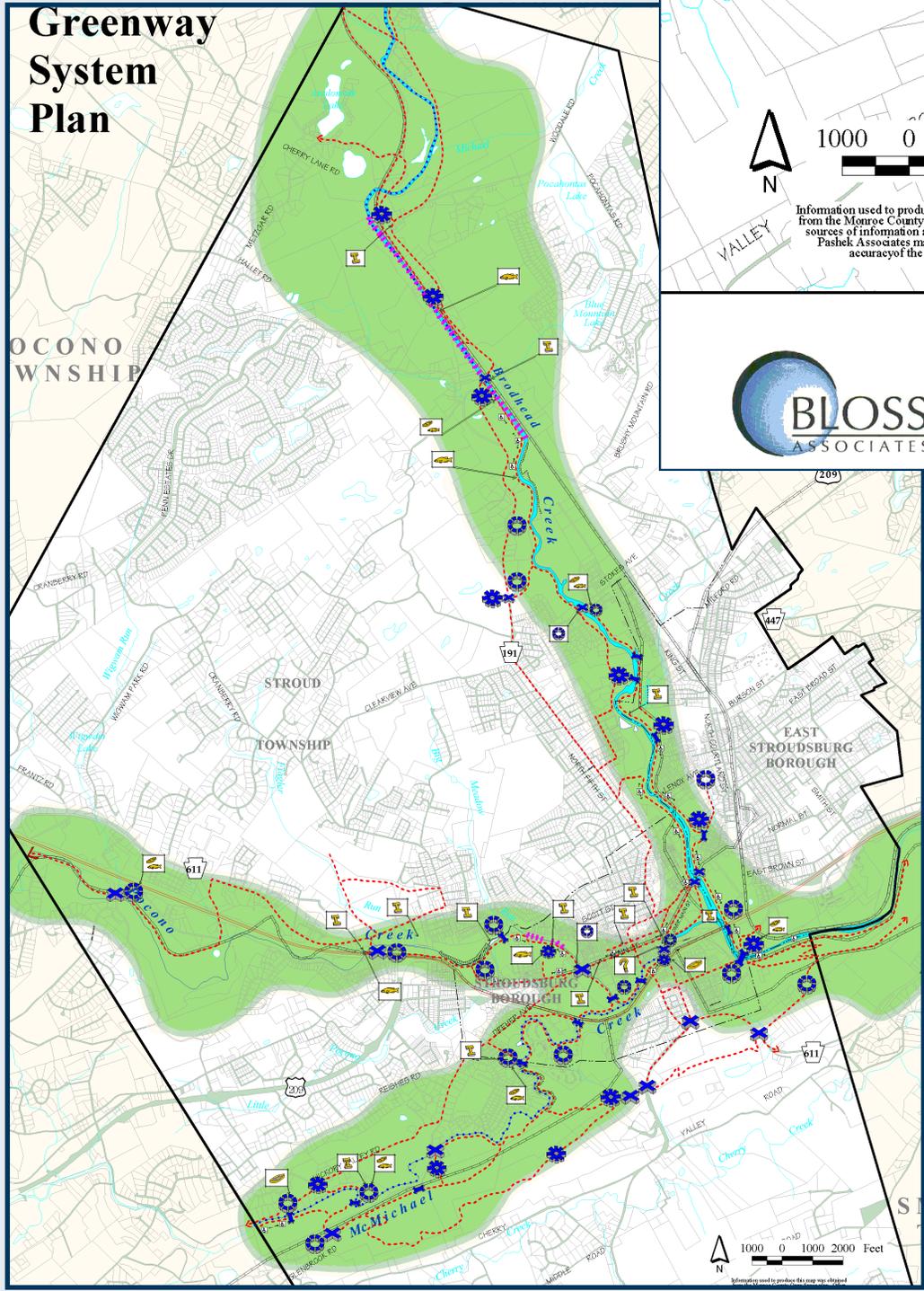
The Stroud Regional Partners continue to show their commitment to a recreation and open space system. Commitment to funding recreation and open space projects will greatly influence the success with which the recommendations of this plan are implemented. Alternative funding sources should be continually explored to supplement contributions of local governments and the efforts of local organizations.

6. VOLUNTEER EFFORTS

A strong volunteer base will make a large contribution to the physical implementation of the plan's recommendations for the future of the greenways. The Stroud Region is fortunate to have several environmental and recreational organizations in the area that are aware of the greenways' importance. Should the Stroud Region Greenway Board be created, one of its duties will be to organize an efficient volunteer system specifically for this plan's implementation.



Greenway System Plan

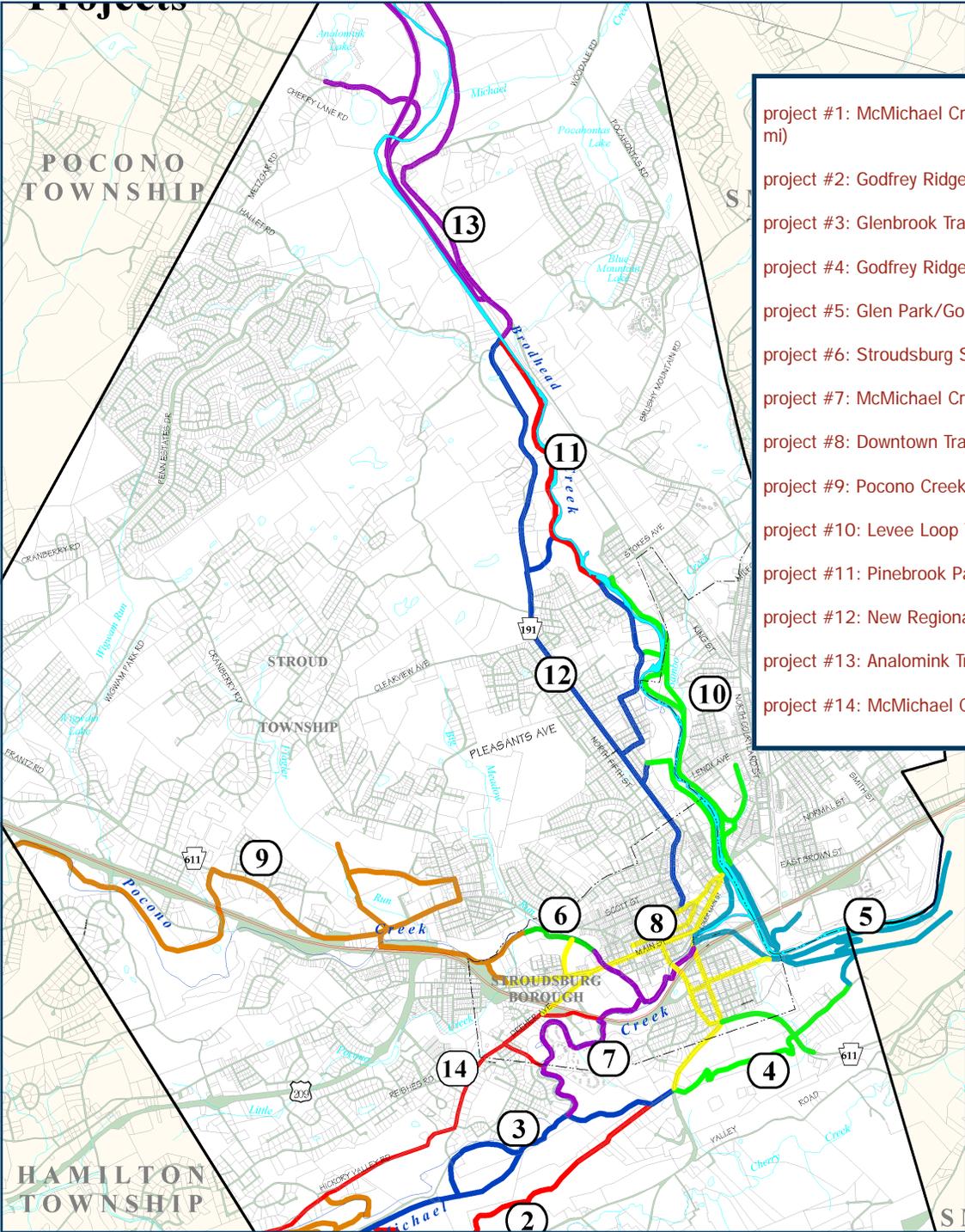


Information used to produce this map was obtained from the Monroe County Open Space plan. Other sources of information are noted in the legend. Pashek Associates makes no claims to the accuracy of the base map data.



Brodhead, McMichael, Pocono Creeks Greenway System Plan

Trail Projects



- project #1: McMichael Creek Conservation Lands (approx. 1.5 mi)
- project #2: Godfrey Ridge Extension (approx. 2 mi)
- project #3: Glenbrook Trail (approx. 3 mi)
- project #4: Godfrey Ridge Trail Connector (approx. 2 mi)
- project #5: Glen Park/Godfrey Ridge Trails (approx. 5 mi)
- project #6: Stroudsburg School District (approx. .5 mi)
- project #7: McMichael Creek Trail (approx. 2.5 mi)
- project #8: Downtown Trails (approx. 5.5 mi)
- project #9: Pocono Creek Trail (approx. 6 mi)
- project #10: Levee Loop Trail (approx. 4 mi)
- project #11: Pinebrook Park (approx. 2 mi)
- project #12: New Regional Park Connection (approx. 5.5 mi)
- project #13: Anomink Trail (approx. 7 mi)
- project #14: McMichael Creek Bicycle Connections (approx. 3 mi)

The Stroud Region Open Space and Recreation Plan (2002) identified the community's desire to preserve open space for current and future generations to enjoy. Following adoption of the Regional Open Space Plan, a greenway study of the Brodhead, McMichael, and Pocono Creeks was begun. This study addresses opportunities for development and management of these key open space corridors.



Introduction

Background

Many cities in the United States are losing population. It was found that Pennsylvania's population has grown by less than 15% in the last 40 years, yet billions of dollars was invested in infrastructure. Instead of being concentrated, the population has spread. As a result, Pennsylvania has lost more than 4 million acres of open space since the 1950s.

The demand for greenways is on the rise. In Pennsylvania, it is the result of the trails and conservation movement by citizens, non-profit organizations, and local governments.

An important unifying element with the three communities of Stroud Township, Stroudsburg, and East Stroudsburg, are the Brodhead, McMichael, and Pocono creek corridors. Each of the creeks weave their way through a variety of changing landscapes creating opportunities for continuous linkages throughout the Stroud Area, ultimately merging and flowing into the Delaware River. Ridge lines often parallel the creek corridors and are important features in the greenway system.

In August of 2001, the recreation and open space planning firm of Pashek Associates, Ltd., with BLOSS Associates, began development of the Brodhead, McMichael, and Pocono Creeks Greenways Plan. The goals of this plan are as follows:

- Develop detailed mapping of the three proposed greenways
- Inventory natural features associated with the greenways
- Identify opportunities and constraints related to the development of the greenways
- Plan a trail system, identifying bridges and access points, in appropriate areas throughout the greenways
- Develop an implementation plan for the three greenways

The demand for greenways is on the rise.

Related Studies

Across the United States, the state of Pennsylvania, and within the Stroud Region, greenways are receiving a growing amount of attention. The following is a brief description of the several studies that may influence, to varying degrees, the development of the Brodhead, McMichael, and Pocono Creeks Greenway Corridors.

Pennsylvania Greenways: An Action plan for Creating Connections - June 2001

Pennsylvania's Department of Conservation and Natural Resources, the Department of Environmental Protection, the Department of Transportation, and the Pennsylvania Greenways Partnership Commission developed an Action Plan for greenways in Pennsylvania. The goal: by 2020, Pennsylvania should have a system of greenways connecting all parts of the state.

“By 2020, Pennsylvania should have a system of greenways.”

- Pennsylvania Greenways Partnership Commission

Pennsylvania's greenways network is comprised of "hubs and spokes." The "hubs" are large areas of publicly owned space, cultural, historic, and recreation sites, and urban and suburban areas. The "spokes" are the greenways. They connect natural areas to the places people reside.

The statewide network of greenways will create a "green infrastructure" for the state. The "spine" of the system will be composed of greenways that possess statewide and national significance. These greenways include large open spaces, land that is part of the "heritage corridor," or land that provides long distance recreational opportunities.

Supporters of the greenways project in Pennsylvania include the Department of Conservation and Natural Resources (DCNR) and various non-profit organizations such as the Pennsylvania Environmental Council, the Conservation Fund, and Rails-to-Trails Conservancy.



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.



Monroe County Comprehensive Plan

The County Comprehensive Plan, completed in 1999, is a tool for economic development, environmental conservation, and land use policy in the rapidly-growing County and its 20 municipalities. The plan recommends methods to accommodate growth that will preserve and enhance the quality of life for all residents. The plan acknowledges that a system of protected, highly diverse, open land and water areas is essential to the County's economic well-being, public image, fiscal balance, and overall quality of life. Building upon this plan, the County completed an Open Space Plan and then assisted with funding regional Open Space Plans for groups of municipalities.

Monroe County Open Space Plan - 2001

This plan and the open space bond referendum passed in 1998 offer testament to the community's broad-based commitment to preserving open space (agricultural lands, stream valleys, ridge tops, woodlands, meadows, parks). The plan outlines a vision of "forever green" that includes parks and open spaces linked by a system of greenways.

Nine conceptual greenway spines were identified in the county plan. These are listed below in order of approximate priority order, relative to development pressures:

- Brodhead Creek Corridor
- Pocono Creek Corridor and WB&E Corridor
- McMichael Creek Corridor
- Popocho/Weir Creek Corridor
- Paradise Creek Corridor
- Cherry Valley - Godfrey Ridge Corridor
- Delaware Valley Rail Corridor
- Chestnut Ridge Corridor
- Pohopoco Ridge Corridor

A few of the plan's recommendations related to greenways are as follows:

- The majority of existing publicly and privately protected lands should be connected by greenways with trails.
- The system should serve conservation functions and especially help protect the County's water resources.
- The system should provide multiple functions as much as possible.
- The system should compliment and extend existing trails and greenways.

Another important recommendation related to the Greenway Plan is to connect the Godfrey Ridge Trail (Brodhead Greenway) with the Paulinskill Valley Trail to create an interstate rail-trail and bicycling and hiking "gateway" to Pennsylvania. From Columbia, New Jersey, the trail would connect with the Columbia-Portland Footbridge over the Delaware River. It would then run north on Route 611 and/or use remnants of railroad rights-of-way near the river to the borough of Delaware Water Gap and the new PennDot visitor's center. This would also provide a potential linkage to the Delaware Water Gap National Recreation Area's McDade Trail and the Appalachian Trail.

Stroud Region Multi-Municipal Open Space and Recreation Plan - 2002

The Regional Open Space and Recreation Plan is a planning tool used to guide future land preservation and acquisition, focus government and community resources, meet park and recreation needs, and initiate a series of realistic strategies important to each community and the Stroud Region as a whole.

The following goals and implementation strategies related to greenways were developed through the planning process.

GREENWAYS AND OPEN SPACE CONSERVATION GOAL:

(1) To acquire significant natural resource lands, parcels along stream corridors, and linear easements for perpetual open space conservation and linkage of land throughout the Stroud Area Region. (2) To create a comprehensive system of greenways and open space that is accessible and inviting to many interests. (3) To create diversity in greenway linkages by connecting urban streetscapes, scenic road corridors, abandoned rail lines, natural resource lands, open space pockets, and cultural resources.

- Complete a Greenways Plan to examine the Brodhead, McMichael, and Pocono Creek corridors, in connection with the County-wide Plan.
- Explore opportunities to provide access to the McMichael Creek Conservation Lands.
- Implement an ambitious acquisition program with associated funding.

"Monroe County is blessed with a great deal of natural diversity. Identifying and preserving greenways offers an important means to preserve and enhance that diversity."

- Monroe County 2020

"Greenways and trails take many forms and have many functions."

- Pennsylvania Greenways Partnership

(REGIONAL) FACILITIES GOAL:

To coordinate, operate and maintain an enhanced regional park system that meets the regional recreation needs of Stroud Area residents.

- Link downtown areas to greenways with pedestrian and bicycle trails.
- Support the development of a bridge over the Brodhead Creek at Glen Park, as recommended in the County Open Space Plan.
- Develop Stream Access Points along Brodhead Creek, including handicap accessible fishing areas.
- Connect trails to other existing and proposed trail systems.

TRANSPORTATION GOAL:

To provide safe and accessible routes of travel for pedestrians, bicyclists, and individuals with disabilities.

- Continually explore opportunities for providing alternative modes of transportation.
- Develop bicycle trails connecting the downtown areas to the Cherry Valley region.

Brodhead Watershed Conservation Plan

(ADOPTED JANUARY 2002)

The river conservation plan describes a vision of the Brodhead watershed that can be shared by all. This Plan created a strategy to help guide and prioritize conservation actions on a watershed-wide basis. It is the guide for a long-term and continuous commitment that encourages municipal authorities to commit to the process of implementing the goals and management objectives.

The study's Action Plan addresses the following issues:

- water quality and quantity
- watershed awareness
- policy, planning and regulation
- fish and wildlife habitat
- historic and cultural resources

The following action items were earmarked for short-term implementation:

- a. Strengthen land use ordinances to minimize effects of impervious

surfaces.

- b. Develop sewage management programs to better manage on-lot septic systems.
- c. Promote and develop greenways to link important natural, recreational, and wildlife habitat areas in cooperation with willing landowners.
- d. Use incentive-based approaches to protect, restore, and conserve important fish and wildlife habitat and direct development away from important habitat areas.
- e. Encourage DEP to take prompt action on known sewage treatment plant violations.
- f. Use open space and other funds to purchase lands to provide public access to fishing waters.
- g. Develop educational programs about protecting sources of drinking water in the Brodhead watershed.
- h. Organize watershed awareness raising activities, especially activities that involve children.
- i. Develop programs to protect existing and potential future sources of drinking water.
- j. Strengthen land use ordinances to better protect groundwater recharge.
- k. Strengthen land use ordinances to better protect floodplains.
- l. Encourage riparian landowners to create and maintain forested stream buffers.

Pocono Creek Pilot Study, Goal-Based Watershed Management

The Pocono Creek Pilot Study integrates watershed management methods with a goals-based planning process. The Pocono Creek watershed, a 46.5 square mile basin within the Brodhead watershed, was chosen as a reproducible pilot study area because of its point- and non-point source pollution problems, major highway corridors, and pristine headwaters areas challenged by residential development. For the purpose of this project, the watershed was divided into six management areas, primarily along sub-watershed drainage areas that share similar characteristics. Planning priorities and technical analysis have been developed for each individual planning unit as well as the Pocono Creek watershed as a whole.

The study presents the following watershed goals:

- Preserve open space;
- Develop using village centers and conservation design;
- Preserve stream corridors and floodplains;

- Improve water quality; and
- Maintain existing stream flow.

These goals were further refined into specific water resource targets organized into four categories: water quality, water quantity, stream bank stability, and the desired biological community. Water resource targets are as follows:

WATER QUALITY

- Sustain existing water quality where it is better than state standards.
- Improve water quality where it doesn't meet state standards.

STREAM FLOW (WATER QUANTITY)

- Provide necessary stream flows to support habitat.

STREAM CHANNEL STABILITY

- Maintain naturally stable streams.
- Achieve stability where equilibrium is lost.

AQUATIC ECOLOGY (MACROINVERTEBRATES)

- Restore or maintain an optimal biological community in each management area.

Greenway Project Feasibility Study - 2000 **(Godfrey Ridge Section of the Brodhead Greenway)**

The vision for the Godfrey Ridge Section of the Brodhead Greenway includes the development of an initial trail spine that serves both transportation and recreational needs and offers the opportunity to create an entire system of trails that could eventually link to this spine. The potential development of this segment as a multi-objective greenway with trails fits into a broader vision for the development of a "Brodhead Greenway." The Godfrey Ridge section is a key link to many surrounding public lands and trails both existing and planned. To the west, it offers a link along the Brodhead Creek to property owned by Stroud Township. It would achieve this through the construction of a bicycle and pedestrian bridge spanning the Brodhead Creek from Glen Park to lands to the north owned by the Borough of East Stroudsburg, near the Twin Borough Recycling Center. This also would create a linkage to East Stroudsburg University and to major shopping facilities along Lincoln Avenue in East Stroudsburg. To the east, it offers a link to Smithfield Township Park and to a visitor center proposed by the Pennsylvania Department of Transportation. In addition, the eastern

reaches also offer links to recently released plans for a trail system proposed by the National Park Service for the Delaware Water Gap National Recreation Area (McDade Trail). By linking to the borough of Delaware Water Gap, access to the Appalachian Trail is provided.

GUIDING RECOMMENDATIONS

1. Provide safe pedestrian and bicycle access between the three Boroughs and through the adjoining Townships.
2. Promote a multi-objective greenway approach for the Godfrey Ridge corridor.
3. Encourage pedestrian and bicycle linkages to the Godfrey Ridge Corridor.

Bicycle/Pedestrian Bridge at Glen Park

As recommended in the County Open Space Plan and Greenway Feasibility Study, planning for the bridge's construction is underway at the writing of this Plan. Development of this bridge across the Brodhead Creek at Glen Park will result in the following benefits:

- Ties together the boroughs of Stroudsburg and East Stroudsburg
- Shifts the main entrance of Glen Park (usage of which will grow as a major hub in the regional greenway system) to the other side of the Creek. This will reduce traffic through the residential area in Stroudsburg adjacent to the current park entrance.
- Provides an alternative crossing the 7th Street Bridge.
- Aids in separating bicyclists and pedestrians from vehicular traffic, thus increasing trail safety and accessibility.
- Connects East Stroudsburg University to the Glen Park Area, facilitating the use of the County-owned parcel adjacent to Glen Park as an "outdoor classroom."
- Creates a connection between the local hospital and the Glen Park recreation area, allowing its use as part of wellness/fitness programs.
- Creates trail looping opportunities.
- Acts as a key element of the Brodhead Greenway Vision. The bridge allows continuation of this greenway segment along the Creek, rather than through the downtown area.

"Everything is connected to everything. Greenways provide connection. They connect places, jurisdictions, and natural areas. They bring together conservation and economic development, green space and communities, people and land."

- Aldo Leopold

Master Site Development Plan for Big Pines Park & Greenway Corridor Feasibility Analysis and Phase One Master Greenway Corridor Plan - 2000 (Flagler Run Greenway)

A greenway feasibility study and Phase I master plan explored establishing the "Flagler Run Greenway," as part of the master site development plan for Big Pines Park located in the headwater area of Flagler Run. The proposed greenway follows the Flagler Run stream corridor running from Brown Road at Big Pines Park through or adjacent to Olde Mill Run, a residential subdivision south of the park, and through Stroudsburg School District property adjacent to and south of Olde Mill Run. The Flagler Run Greenway could ultimately extend from Big Pines Park to an interim southern entrance at the Stroudsburg school tract, to a southern entrance near Stroud Mall and/or Arlington Elementary School and the Eastern Monroe Public Library and ultimately link to its confluence with the Pocono Creek.

Three alternative scenarios for development of the greenway were proposed:

- The public lands scenario - Maximizes the use of public lands to provide recreational and educational trails within the greenway corridor.
- The integrative scenario - Integrates the use of public lands and quasi-public lands to provide recreational and educational trails for pedestrian use within the greenway corridor.
- The bikeways scenario - Maximizes the recreational use of the corridor by providing bikeways/multi-purpose trails throughout.

The preferred scenario for Phase I development of the greenway integrates the use of public lands and quasi-public lands to provide recreational and educational trails for pedestrian use within the greenway corridor and continuous access from the Stroudsburg School District lands to the Township's Big Pines Park.

The Other Main Street Project

The Brodhead Watershed Association submitted an environmental stewardship and watershed protection grant application in 2001 for this project.

The area of Pocono Creek behind Stroudsburg Area High School and near its confluence with the McMichael Creek has severe streambank

erosion, caused by seasonal flooding and urban stormwater runoff. To resolve the current problem, The Other Main Street project is proposed. The project establishes a greenway approximately three miles long adjacent to Pocono Creek. In addition to providing recreational benefits and opportunities, it will protect natural, cultural, and scenic resources, and it will stimulate economic development opportunities in the area. The project will provide trails for walking, biking and fitness, athletic "play spaces," nature observation areas, areas for bird watching, a fish habitat, native planting areas, and tenting sites. The Other Main Street project will add another dimension to the current Greenway project along Brodhead Creek.

About 600 linear feet of restoration will be implemented. Three or four restoration techniques such as bio-engineered gabions, rip-rap, large boulder revetment, and log and rootward placement will be utilized. A steep bank slope will be made available for community scouts, church and/or civic groups to restore the vegetation and reduce erosion of the area. A stream assessment will be taken before and after the project to measure its success. An area will be created for underbrush clearing and for the establishment of a gravel pathway to make Pocono Creek wheelchair accessible.

Christman Property Feasibility Study

In 2002, Stroud Township completed a study to determine the feasibility of utilizing the one hundred seventy-five acre property as a regional active park for the Stroud Region. The site is located along the Brodhead Greenway, just off Route 191. It was determined that approximately 78 acres of the property is suitable for the development of active recreation facilities. Purchase of the conveniently-located property for park development would be of benefit to the region. One of the keys to its success will be regional partnerships.

Stroud Region Peer Study (Intergovernmental Cooperation Agreement)

The officials of Stroudsburg, East Stroudsburg, and Stroud Township are strongly committed to parks, recreation and open space. At the writing of this report, the regional municipal partners are evaluating the possibility of adopting an intergovernmental agreement for the management of recreation and open space. Should an agreement be reached and adopted, the collaboration it will foster will positively impact the implementation of this plan for the Brodhead, McMichael, and Pocono Creeks Greenways.

Greenways

With increasing construction of gray infrastructure (i.e. roads, sewers, utilities), the need to expand green infrastructure grows. There is a demand for both the preservation and creation of open spaces, woodlands, wildlife habitats, parks, and other natural areas. In addition to helping sustain clean air and water and preserve natural resources, green infrastructure may also provide recreational areas.

The concept of a greenway began about 130 years ago with Frederick Law Olmstead, Sr. In designing such spaces as New York City's Central Park and Boston's Emerald Necklace, Olmstead sought to link parks with each other and then link them to neighborhoods. Over the years, several factors have contributed to the escalating demand and need for additional greenways. Fragmentation of land, the need to protect endangered species, decrease in water quality, increased interest in urban revitalization, public health concerns, and sustainable development play a role in the growing demand for greenways. Urban sprawl has contributed to fragmented land; cities are trying to create natural areas within the cities; and the use of alternative transportation is growing.

What is a Greenway?

A greenway is a corridor of open space. Greenways are narrow and wide, urban, suburban and rural, public and private, land- and water-based. Some are used for recreation or preserving scenery while others are used for environmental protection. The location and function of greenways differ, but they all have a common focus - to protect natural, cultural, and scenic resources.

Greenways are found on all levels: state, regional, metropolitan, and community. As an investment in the environment, they provide preservation of land, while allowing communities to grow. In doing so, greenways encourage conservation, recreation, alternative transportation, and environmental education.

A greenway is a protected and linear open space. Greenways can be either publicly or privately owned, and they are one of the fastest growing forms of land preservation.

PENNSYLVANIA'S GREENWAY DEFINITION

A greenway is a corridor of open space. Greenways vary greatly in scale, from narrow ribbons of green that run through urban, suburban, and rural areas to wider corridors that incorporate diverse natural, cultural and scenic features. They can incorporate both public and private property, and can be land- or water-based. They may follow old railways, canals, or ridge tops, or they may follow stream corridors, shorelines, or wetlands, and include water trails for non-motorized craft. Some greenways are recreational corridors or scenic byways that may accommodate motorized and non-motorized vehicles. Others function almost exclusively for environmental protection and are not designed for human passage.

Greenways differ in their location and function, but overall, a greenway will protect natural, cultural, and scenic resources, provide recreational benefits, enhance natural beauty and quality of life in neighborhoods and communities, and stimulate economic development opportunities.

BLUEWAYS

Also referred to as blue routes or water trails, blueways are primarily recreation routes through scenic areas where waterways form the corridor and are used for canoeing, kyaking, or fishing. In many instances, protected areas of open space alongside the waterway act as a greenway.

In contrast to traditional water routes, which were a critical means of transportation and commerce, the "modern water trail" is a recreational waterway on a lake, river, or ocean between specific points containing access points, day use areas, and/ or camping areas for overnight boating trips. Lands for public access, day use, or camping along a water trail may include both public and private lands. An important element of a successful water trail is the ethic of low impact use and stewardship of the lands and waters of the river trail.

North American Water Trails, founded in 1993 to foster the development, enjoyment, and stewardship of recreational water trails, outlines the benefits of developing water trails:

- Water trails foster self-discovery;
- Water trails build skills;
- Water trails teach nature;
- Water trails teach history;
- Water trails revitalize communities; and
- Water trails serve the public interest.

As an investment in the environment, greenways provide preservation of land while allowing communities to grow.

"Promoting environmental stewardship may be the most important issue, but correcting our land use patterns is the most pressing."

- Report of the Pennsylvania 21st Century Environment Commission, September 1998

TRAILS

There are many types of trails (hiking, biking, nature, exercise, multi-use). In many instances, one or more of these trail types fits appropriately within a greenway corridor. The potential for this coexistence may be determined by:

- access
- existence of sensitive natural areas
- greenway width
- adjacent land uses
- connectivity
- local population

The Benefits of Greenways and Open Space

OUTLINE A BLUEPRINT FOR CONSERVATION

Greenways provide a "blueprint for conservation." By creating a plan for future growth, they ensure the preservation of natural and cultural resources. Though land is preserved, growth is not hindered.

PRESERVE NATURAL RESOURCES

Greenways provide many benefits to the environment. They preserve biological diversity and wildlife habitat, they protect water quality, and they are an environmentally sensitive form of stormwater management.

PROVIDE EDUCATIONAL OPPORTUNITIES

Greenways may serve as learning laboratories. Students are able to leave the classroom and learn about nature in an outdoor environment. While in the greenways, they have a hands-on learning experience.

PROVIDE ALTERNATIVE FORMS OF TRANSPORTATION

In highly congested areas, greenways offer an alternative to single-occupant vehicle use. As alternative routes of transportation, they provide pathways for commuting to work. These facilities should receive even greater attention when considering their dual value as both recreational trails and transportation alternatives - improving air quality, saving energy, improving personal health, and reducing congestion.

SUPPORT ECONOMIC PROSPERITY

Along with environmental advantages, greenways are economically beneficial. It has been found that there is a direct relationship between an

increase in property value and proximity to greenways and green space. Therefore, greenways increase real property values. Open space generates revenue and requires few services for its upkeep.

Greenways help generate revenue for business. For example, bicycle trails are a part of greenways, and when one is built, the need for bicycles and related equipment increases. The bicycle industry reaps the benefits and economic development and employment rise.

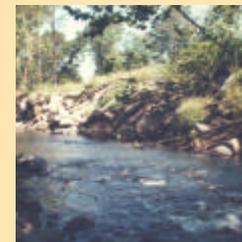
ENHANCE SENSE OF COMMUNITY

Adding to the visual and environmental character, they enhance a sense of place in a community or region. The

FOSTERING PUBLIC RECREATION, HEALTH, AND FITNESS

Greenways offer many diverse forms of recreational opportunities conducive to mental and physical wellness. The number one public health problem identified by the U.S. Surgeon General is the lack of physical activity among adults. Trails within greenways provide individuals opportunities to improve personal health.

BENEFITS OF GREENWAYS AND OPEN SPACE



- Outline a Blueprint for Conservation
- Preserve of Natural Resources
- Provide Educational Opportunities
- Provide Alternative Forms of Transportation
- Support Economic Prosperity
- Enhance Sense of Community
- Fostering Public Recreation, Health, and Fitness
- Protection of Water Resources
- Conservation of Scenic Resources
- Stewardship of Farmland and Rural Character

PROTECTION OF WATER RESOURCES

Non-point source pollution from urban stormwater runoff and other sources is a primary contributor to poor water quality in Pennsylvania's lakes and streams. Providing a vegetative buffer between surface water resources and development can help alleviate this problem. Greenways can effectively serve this function while at the same time provide recreational and other amenities in the community. Greenways and associated open spaces also provide areas for groundwater aquifers, critical to drinking water supplies.

CONSERVATION OF SCENIC RESOURCES

The beauty of natural areas contributes to a high quality of life enjoyed by residents. For visitors, scenic quality is a distinguishing feature that draws them to an area. Greenways can help residents protect, promote, and enjoy their scenic resources.

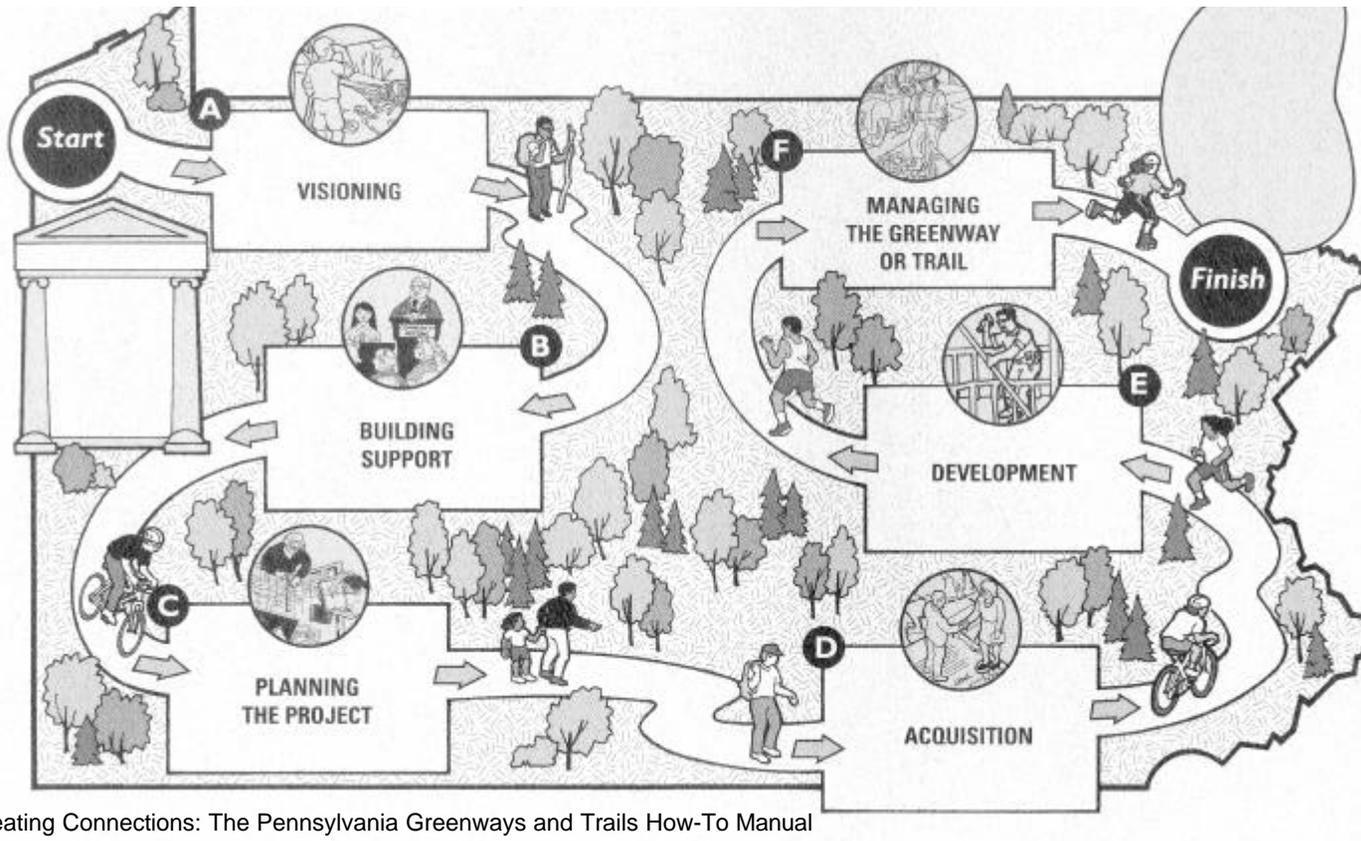
STEWARDSHIP OF FARMLAND AND RURAL CHARACTER

Pennsylvania has a unique agricultural legacy. Greenways provide an method to protect and preserve this legacy.

Developing a Greenway

Phases of Creating a Greenway or Trail (from "Creating Connections: The Pennsylvania Greenways and Trails How-To Manual", Pennsylvania Greenways Partnership, 1998) This resource may be used as a reference as this plan is implemented.

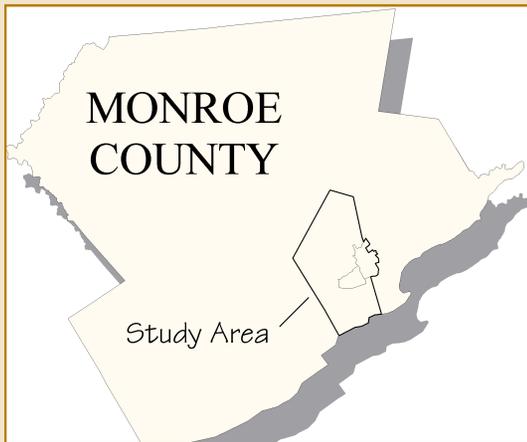
- A.** Visioning
- B.** Building Support
- C.** Planning the Project
- D.** Acquisition
- E.** Development
- F.** Managing the Greenway or Trail



Creating Connections: The Pennsylvania Greenways and Trails How-To Manual

Chapter 1

Data Collection and Analysis



Study Area

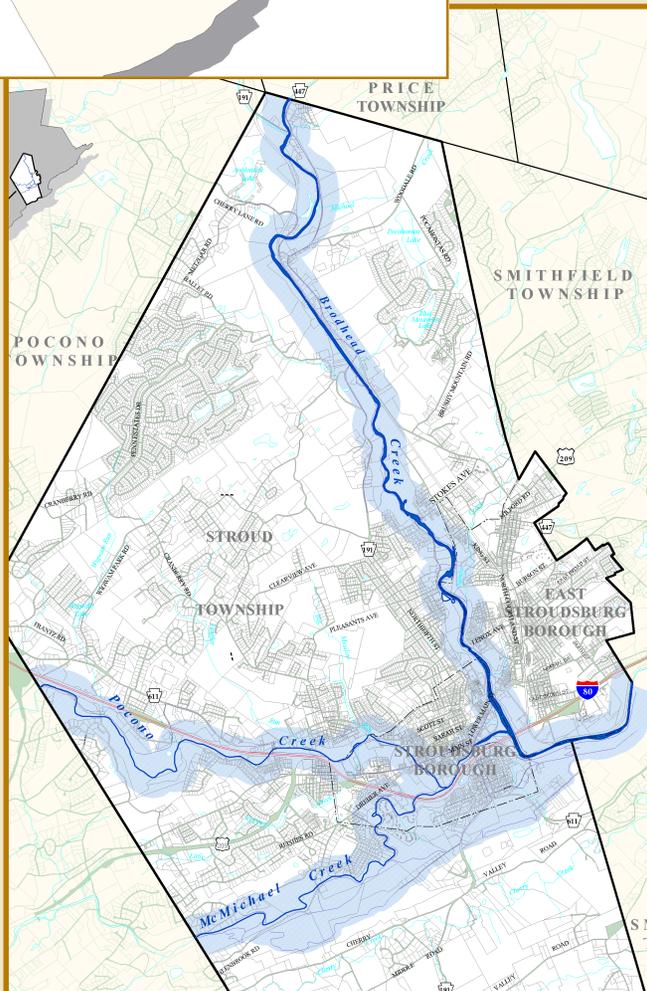
The scope of this Greenway Plan encompasses the Brodhead, McMichael, and Pocono Creeks as they run through Stroud Township and the Boroughs of Stroudsburg and East Stroudsburg, Pennsylvania. The following are the approximate lengths of the stream segments within the study area:

- Brodhead: 9 miles
- McMichael: 5 miles
- Pocono: 5 miles

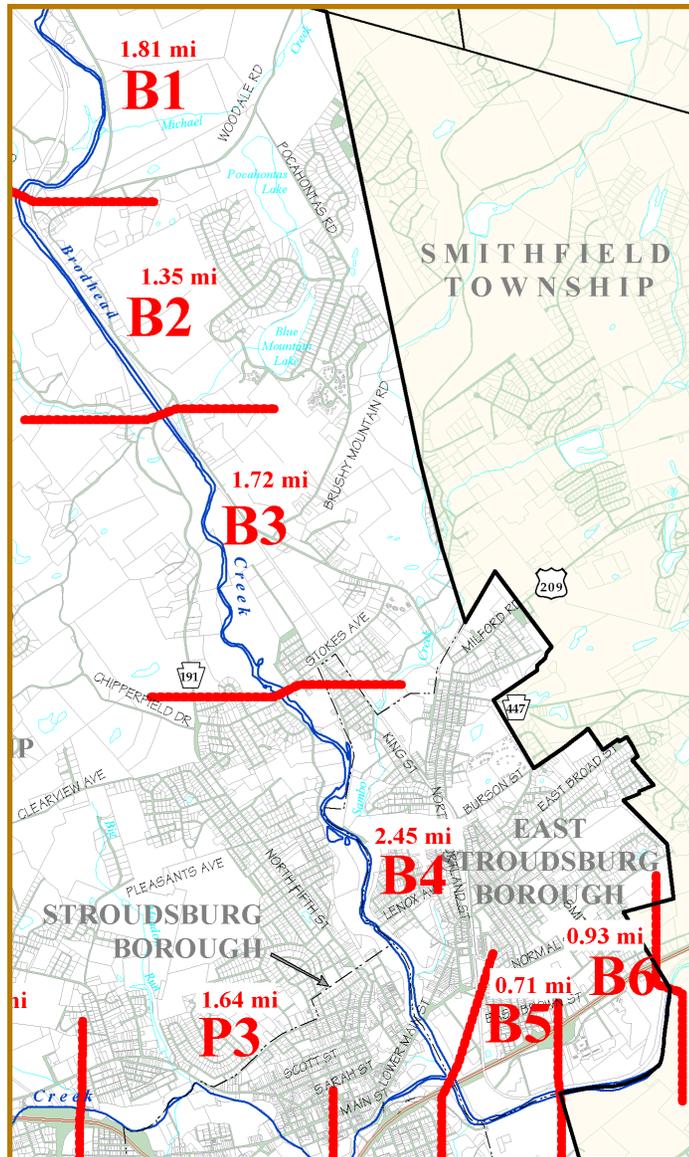
The following inventory and analysis includes the three stream corridors and contiguous areas. Additionally, key community elements found throughout the three-municipal region that are important components of a greenway system are discussed.

The lengths of the three stream corridors within the study area combine for a total of approximately twenty miles. To allow detailed inventory and analysis of the stream corridors, they were divided into smaller, more manageable segments, ranging from .75 miles to 2.5 miles in length. The segments often begin and end at logical landmarks or significant changes in stream character. However, the importance of considering the streams as continuous corridors must be emphasized.

The natural conditions of the greenway corridor will have a variety of impacts on its future use. Several natural features will limit accessibility and construction of recreation facilities. Others will provide unique opportunities to conserve and interpret key elements of the natural environment. The potential impacts of existing natural elements on trail development will require detailed examination.



“The natural conditions of the greenway corridor will have a variety of impacts on its future use.”



Brodhead Creek

Brodhead Creek is described as being "consistently inconsistent." It begins at the Pocono Plateau and runs for about 18.7 miles to the Delaware River at the head of the Delaware Water Gap. It runs through Stroudsburg and East Stroudsburg where it is wide and shallow. The upper part of the creek is narrow and rough, with ledges and boulder patches, it moderates, and then it is rough again with sharp drops and slides. The headwater tributaries boast eight waterfalls.

Any development along Brodhead Creek is typically along the highway. Most streambanks are wooded and many are very dense. Portions of the creek is well-known for trout fishing.

Segment B-1

BOUNDARIES

The creek's intersection with Stroud Township's norther border to the village of Analomink.

LENGTH

1.81 miles

GENERAL CHARACTER

For a majority of this portion, the stream runs between Route 191 and an active rail line, crossing each once. The stream is surrounded by large, privately owned parcels, many of which are generally undeveloped.

NATURAL FEATURES

- primarily gentle slopes, with a mix of moderate and steep areas
- large area of floodplains throughout corridor segment
- large pocket of wetlands south of creek's intersection with Route 191

MAN-MADE FEATURES

- the creek runs between a rail line and Route 191
- Cherry Lane Road crosses over the creek
- railroad tunnels over Cherry Lane Road
- "Red Rock" swimming areas - intensive public use on private land
- Cherry Land Bridge is the limit of PFBC trout stocking
- Evergreen Golf Course (public)

Segment B-2

BOUNDARIES

The village of Analomink to the creek's intersection with Route 191.

LENGTH

1.35 miles

GENERAL CHARACTER

The entire length of stream within this segment was channelized to prevent flooding. Several large parcels, most of which have the same owner, are to the west of the stream. This area is primarily undeveloped. To the east, an active rail line runs parallel to the stream, between the stream and Route 191, which also runs through the same corridor. On the eastern side of Route 191, some residential development exists within smaller parcels.

NATURAL FEATURES

- few, small pockets of wetland areas
- thin area of floodplain running along both sides of the creek
- mix of gentle, moderate, and steep slopes; the area immediately adjacent to the creek is gently sloped

MAN-MADE FEATURES

- the rail line and Route 191, both to the east, run parallel to the creek
- North Fifth Street / Route 191 crosses the creek (High Bridge)
- recycling drop-off center on east side of creek south of Analomink
- existing PennDOT maintenance area is site of proposed rail station and "park and ride" facility
- stream is channelized for length of entire segment as a result of 1955 flood mitigation efforts

Segment B3

BOUNDARIES

The creek's intersection with Route 191 (High Bridge) to the creek's intersection with Stokes Avenue.

LENGTH

1.72 miles

GENERAL CHARACTER

From the Route 191 bridge, the creek is channelized for another 1/2 mile, approximately. From that point, the creek meanders to Stokes Avenue. Within this segment, the creek runs through four main areas:

first, a large parcel of land (mostly to the west of the creek) leased by Stroud Township for use as a park; second, an area in private ownership, comprised of two parcels; third, two parcels of land owned by Stroud Township; and fourth, a large parcel owned by the Stroudsburg Municipal Authority. With the exception of an industrial area between the creek and Route 447 within a privately-owned parcel and the water treatment facility on the Authority's property, the land surrounding the creek in this segment is primarily undeveloped.

NATURAL FEATURES

- large areas of floodplains through entire segment area
- significant areas of hydric soils and wetlands
- slopes are gentle throughout most of the area
- unique forested floodplain remnant
- natural trout habitat

MAN-MADE FEATURES

- North Fifth Street / Route 191 runs parallel with the creek, to the west
- the rail line runs immediately adjacent to the creek, then continues in a southeast direction, as the creek runs south
- Stokes Avenue crosses the creek
- the Water Authority dam and water intake are within this segment of the creek
- the only structures of significance immediately adjacent to the creek are a private home and a Diversey Lever plant, which are in the same area, on opposite sides of the creek
- Trout Unlimited habitat enhancement project in the northern channelized section (random boulder placement)

Segment B-4

BOUNDARIES

The creek's intersection with the Stokes Avenue Bridge to the creek's confluence with McMichael Creek

LENGTH

2.45 miles

GENERAL CHARACTER

This segment of the creek serves as the border between the Boroughs of Stroudsburg and East Stroudsburg. This is the most densely populated area through which the greenway system runs. In limited areas, the surrounding land is developed to the creek's edge. Most of this stream segment is surrounded by flood control or other publicly owned land.

NATURAL FEATURES

- thin ribbons of flood plains along both sides of the creek
- large areas of flood plain north of intersection with Sambo Creek to Stokes Mill Bridge
- pockets of wetlands found several places along creek
- slopes are gentle throughout most of the area
- high stream banks

MAN-MADE FEATURES

- Stokes Mill Road follows the creek at the norther end of this segment
- the flood control levee system begins in this segment; levees run on both sides of the creek
- the Interborough Bridge crosses the creek
- the area south of the bridge receives a lot of public use and activity (fishing/swimming)

Segment B-5

BOUNDARIES

The creek's confluence with McMichael Creek to the creek's intersection with Stroud Township's eastern border.

LENGTH

0.71 miles

GENERAL CHARACTER

This segment varies in character. At the northern end of this section, the stream runs through the developed areas of the two boroughs and under Interstate 80. The stream then turns east. The eastern portion of the stream runs west to east near Glen Park and the County Conservation Lands.

NATURAL FEATURES

- mix of moderate (15-25%) and steep (> 25%) slopes
- large areas of hydric soils and floodplains between the bend in the creek and Interstate 80
- thin ribbon of floodplains adjacent to both banks along east/west portion of the creek

MAN-MADE FEATURES

- Interstate 80 crosses over the creek
- an active rail line runs immediately adjacent to the creek's northern edge
- an abandoned rail bed lies adjacent to the creek's southern edge
- recycling center located on former landfill
- homeless camps

- site of proposed pedestrian bridge

Segment B-6

BOUNDARIES

The creek's intersection with Stroud Township's eastern border to the intersection of the creek and the eastern border of East Stroudsburg.

LENGTH

0.93 miles

GENERAL CHARACTER

This segment is at the easter extreme of the study area. The stream runs primarily west to east, paralleling Interstate 80, which is to the north. The vegetated slopes of the Godfrey Ridge area are to the south of the stream.

NATURAL FEATURES

- thin ribbon of floodplain area immediately adjacent to the creek, along its norther bank
- steep slopes greater than 25% comprise entire corridor to south
- unique natural environments close to large urban population
- waters populated with trout

MAN-MADE FEATURES

- an active rail line runs immediately adjacent to the creek's northern edge
- an abandoned rail bed lies adjacent to the creek's southern edge
- the area south of the creek is subject to public use (network of trails)
- portions of the area to the south were logged by the private landowner
- historic trolley bed
- homeless camps

Recreation Facilities

Recreation facilities in the area are important aspects of the region's fabric. They serve as community gathering points and destinations.

VAN D. YETTER PARK

- 40 acres
- link in Brodhead Greenway
- woodlands

JAY ALBERTSON PARK

- 5 acres
- pond, gazebo
- playground
- basketball court

DANSBURY PARK

- 16 acres
- East Stroudsburg
- swimming pool, playground, picnic pavilion, tennis courts, basketball courts, baseball/soccer/softball fields, trails, open space

GLEN PARK

- 9.5 acres
- softball/soccer fields
- wooded areas
- borders Brodhead Creek

PINEBROOK PARK

- 60 acres leased through 2008
- open field areas, picnic areas, walking paths, fishing areas,
- link in Brodhead Greenway

Rail Corridors

Both active and passive rail lines run through the Brodhead Creek Corridor. These corridors may provide opportunities for trail development.

NAME	STATUS	ADJACENT STREAM
NY, Susquehanna and Western	Abandoned	Brodhead
Norfolk Southern	Active	Brodhead
Monroe County Rail Authority	Active	Brodhead
Wilkes-Barre and Eastern	Abandoned	Pocono, McMichael
Stroudsburg, Watergap and Portland	Abandoned	McMichael, Brodhead
Unknown - line extension	Abandoned	McMichael

Summary: Opportunities and Constraints

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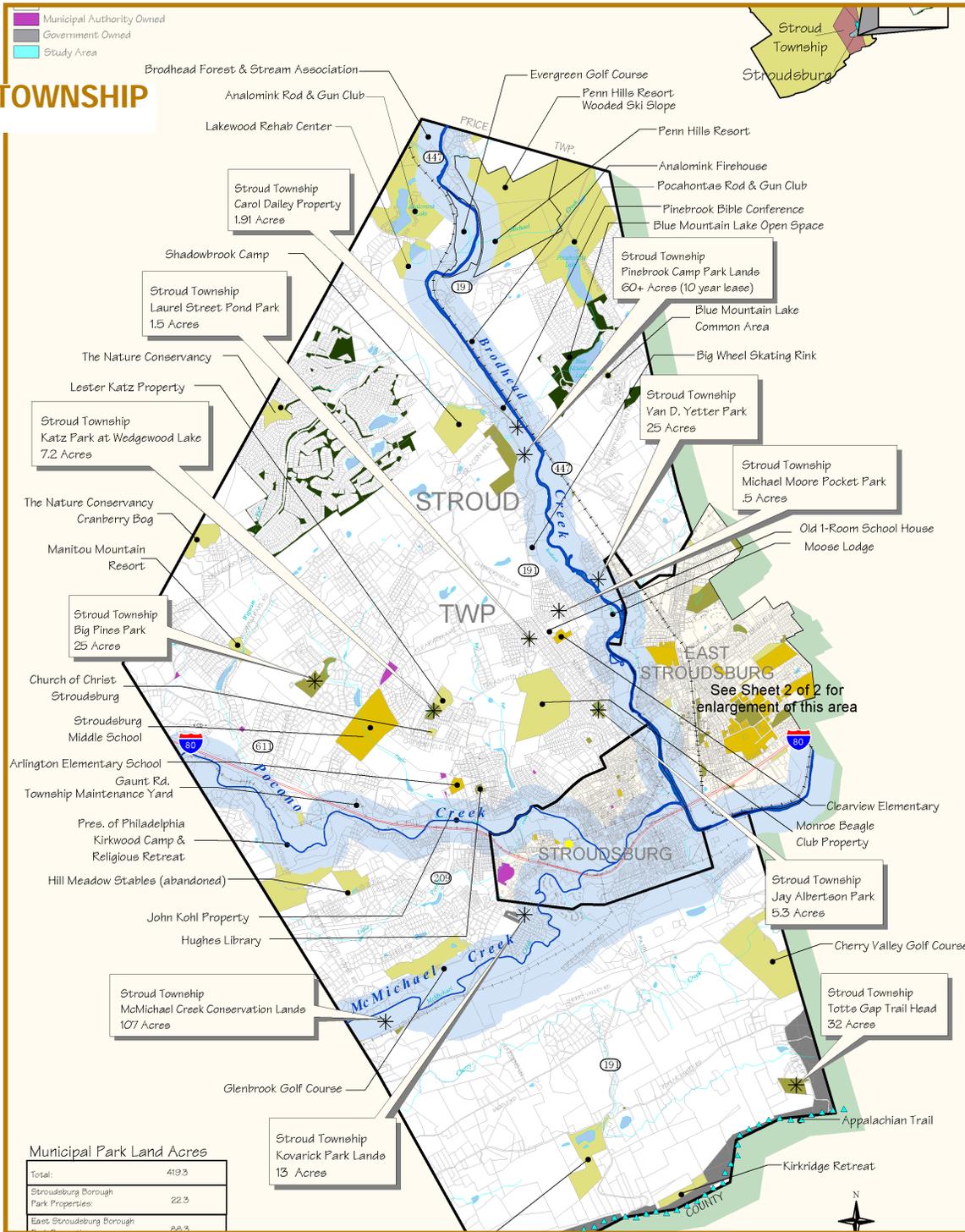
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Opportunities	Constraints
segment B - 1	
<ol style="list-style-type: none"> 1. Routes 191 and 447 present opportunities as scenic bikeways 2. a few small parcels of land within the creek corridor are owned by the Monroe County Railroad Authority 3. the creek corridor is minimally developed 4. cooperative efforts with Price Township 	<ol style="list-style-type: none"> 1. opportunities to provide access to the stream are limited 2. all properties in stream corridor are privately owned 3. large area of floodplains 4. the stream is bounded on either side by an active rail line and Route 191
segment B - 2	
<ol style="list-style-type: none"> 1. wide rail line right of way may provide opportunity for “rail with trail” 2. town of Analomink may serve as destination in trail system 3. Route 191 may provide opportunities for scenic bikeway 4. the Route 191 may be wide enough for construction of an off-road trail 5. one landowner owns a majority of the property to the west of the creek, which may simplify stream restoration/conservation efforts 6. the area between the active rail line and the creek’s edge may accommodate a recreational trail 7. public access potential from the east side 8. interpretation of 1955 flood 9. interpretation of “Spragueville” (Analomink) 	<ol style="list-style-type: none"> 1. to the east, the stream is bounded by an active rail line, Route 191, and several small parcels 2. access to the stream is limited 3. channelization of stream resulted in poor stream habitat 4. with the exception of the rail right of way owned by the Monroe County Rail Authority, all land surrounding the creek is privately owned

Opportunities	Constraints
segment B - 3	
<ol style="list-style-type: none"> 1. topography is primarily gently sloping throughout corridor segment 2. a large portion of the creek runs through or along property owned by Stroud Township or the Stroudsburg Water Authority, which may provide opportunities for conservation efforts and/or recreational facilities 3. the private parcel (currently owned by Christman) on both sides of Route 191 abuts the property owned by the Stroudsburg Water Authority and would be significant portion of contiguous land acreage within the greenway corridor 4. Route 191 may offer an opportunity to provide an on-road recreational trail 5. Route 191 may offer opportunities to provide vehicular access to trail head facilities, should they be developed 6. Existing facilities at Pinebrook Park may be used for the development of trail heads 7. flood plain could be reestablished by relocated old levees 8. preservation of natural area throughout segment 	<ol style="list-style-type: none"> 1. large areas of wetlands, floodplains, and hydric soils may be prohibitive to the development of recreation facilities 2. pedestrian accessibility on Route 191 bridge across creek 3. a privately owned parcel along Route 191 intersects lands owned by Stroud Township and the creek
segment B - 4	
<ol style="list-style-type: none"> 1. levee system on both sides of the creek provides potential for accessible trail development 2. topography is primarily gently sloping 3. East Stroudsburg School District property possess potential for greenway development 4. Boroughs' infrastructure provides several opportunities to provide access to the greenway system 5. a significant portion of the creek runs through flood control 	<ol style="list-style-type: none"> 1. large floodplain areas may prohibit development of recreation facilities 2. the creek runs along or through several privately owned parcels of land 3. on the western side of the creek, at the northern end of this segment, is privately owned and developed to the creek's edge 4. the interborough bridge is a key connection, but is a potential safety concern for trail users

Opportunities	Constraints
segment B - 4, continued	
<p>property</p> <ol style="list-style-type: none"> 6. East Stroudsburg Borough owns a tract of land adjacent to the creek, at Dansbury Park 7. opportunities exist to connect the greenway to the downtown areas 8. connect this greenway segment to a “Big Meadow Run” greenway linkage 9. possibility of bridging access the middle of this segment by capitalizing on the high banks 	<ol style="list-style-type: none"> 5. pedestrian safety within on-road segments of trail
segment B - 5	
<ol style="list-style-type: none"> 1. Glen Park resources 2. Monroe County recently purchased large parcel as conservation lands 3. proximity to Stroudsburg Borough infrastructure increases accessibility 4. levee system presents potential for trail use 	<ol style="list-style-type: none"> 1. large areas of floodplain and hydric soils 2. Interstate 80 overpass will require trail underpass
segment B - 6	
<ol style="list-style-type: none"> 1. large tracts of undeveloped land to the south of creek 2. large tract recently purchased by Monroe County as conservation land 3. potential opportunities for cooperative efforts involving Smithfield Township 4. protection of riparian corridor through conservation of the steep sloped natural area 	<ol style="list-style-type: none"> 1. large areas of very steep slopes 2. active rail line running parallel to stream to north

STROUD TOWNSHIP



Municipal Park Land Acres

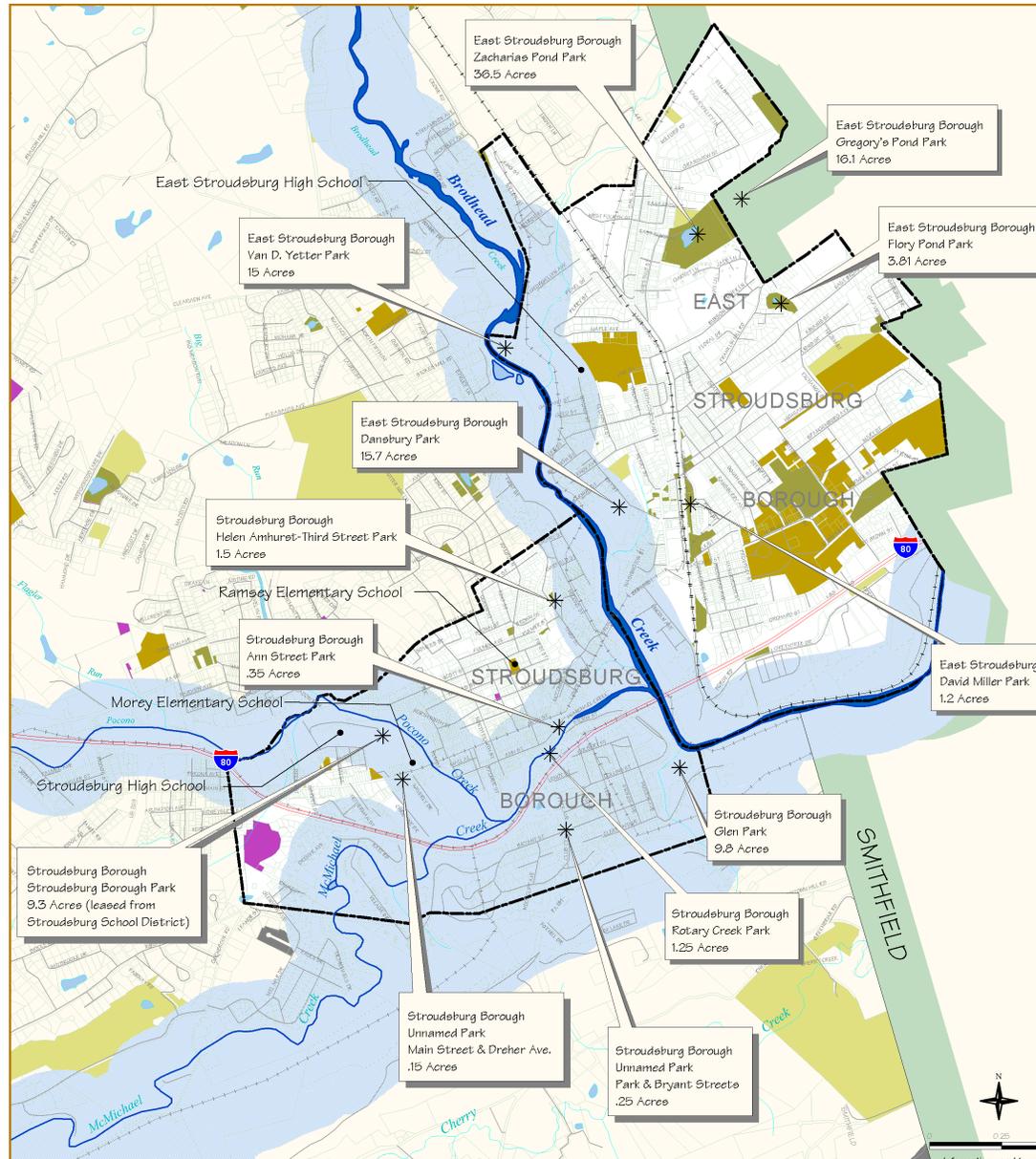
Total:	419.3
Stroudsburg Borough Park Properties:	22.3
East Stroudsburg Borough	86.3

Brodhead Creek EXISTING CONDITIONS Recreation Facilities

Park Properties:	8
Stroud Township Park Properties:	3

Sheet 1 of 2	Exhibit 1-1	Stroud A
		Stroud Ar

STROUDSBURG AND EAST STROUDSBURG



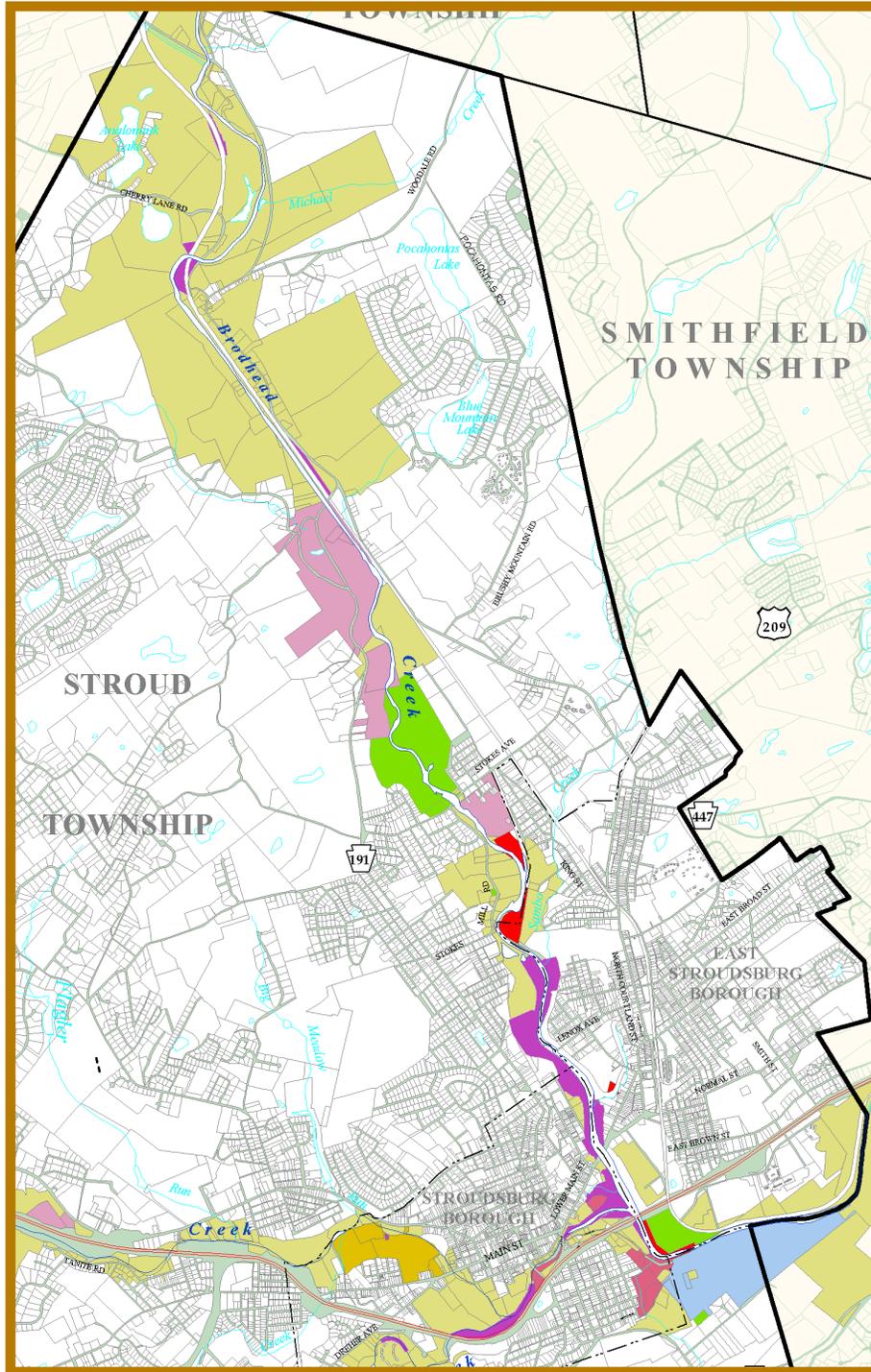
Brodhead Creek EXISTING CONDITIONS Recreation Facilities

Sheet 1 of 2	Exhibit 1-1	East Stroudsburg Borough Park Properties:	8
		Stroud Township Park Properties:	3
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Brodhead Creek

EXISTING CONDITIONS

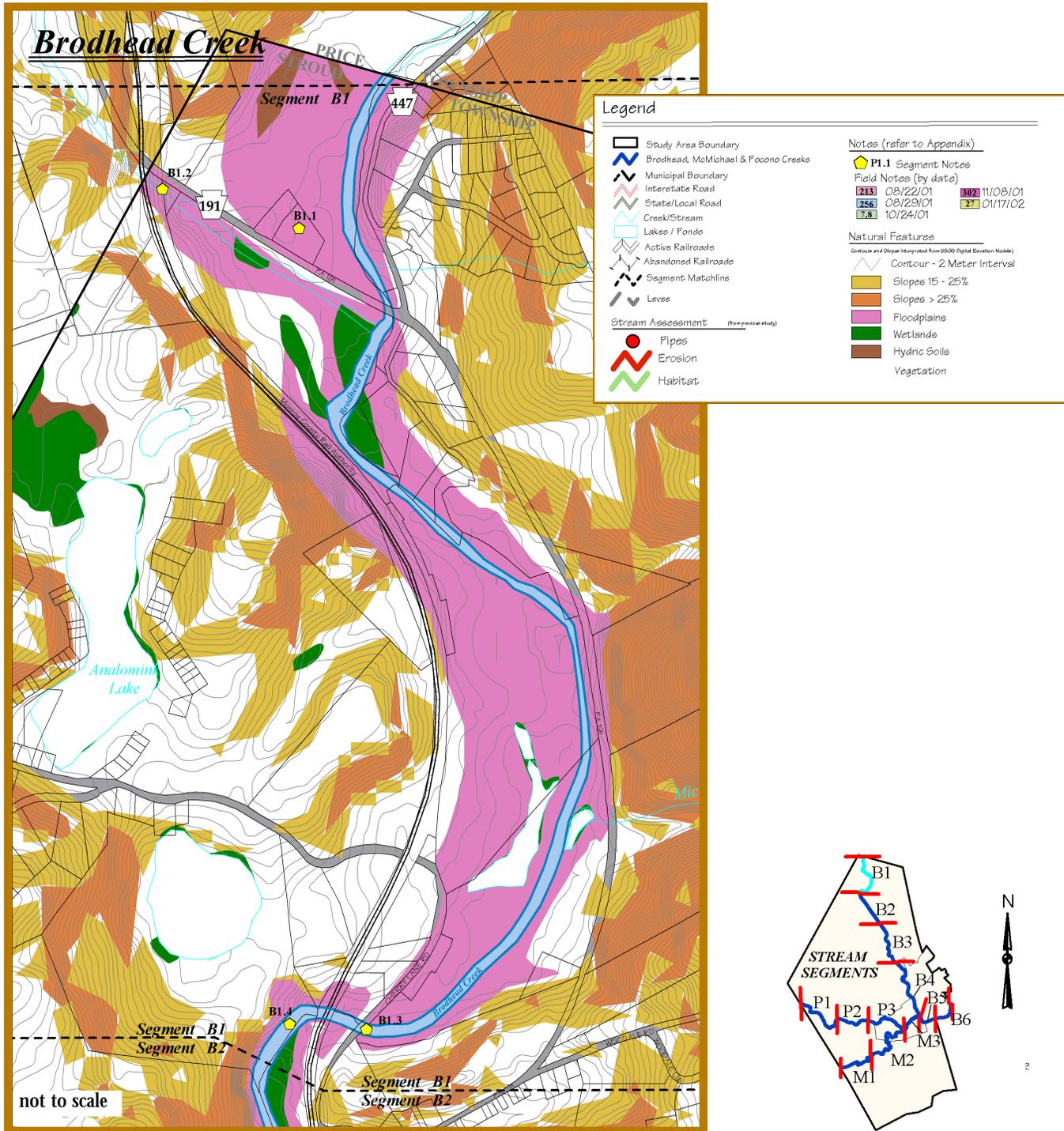
Ownership



Brodhead Creek

EXISTING CONDITIONS

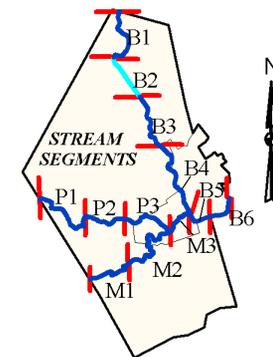
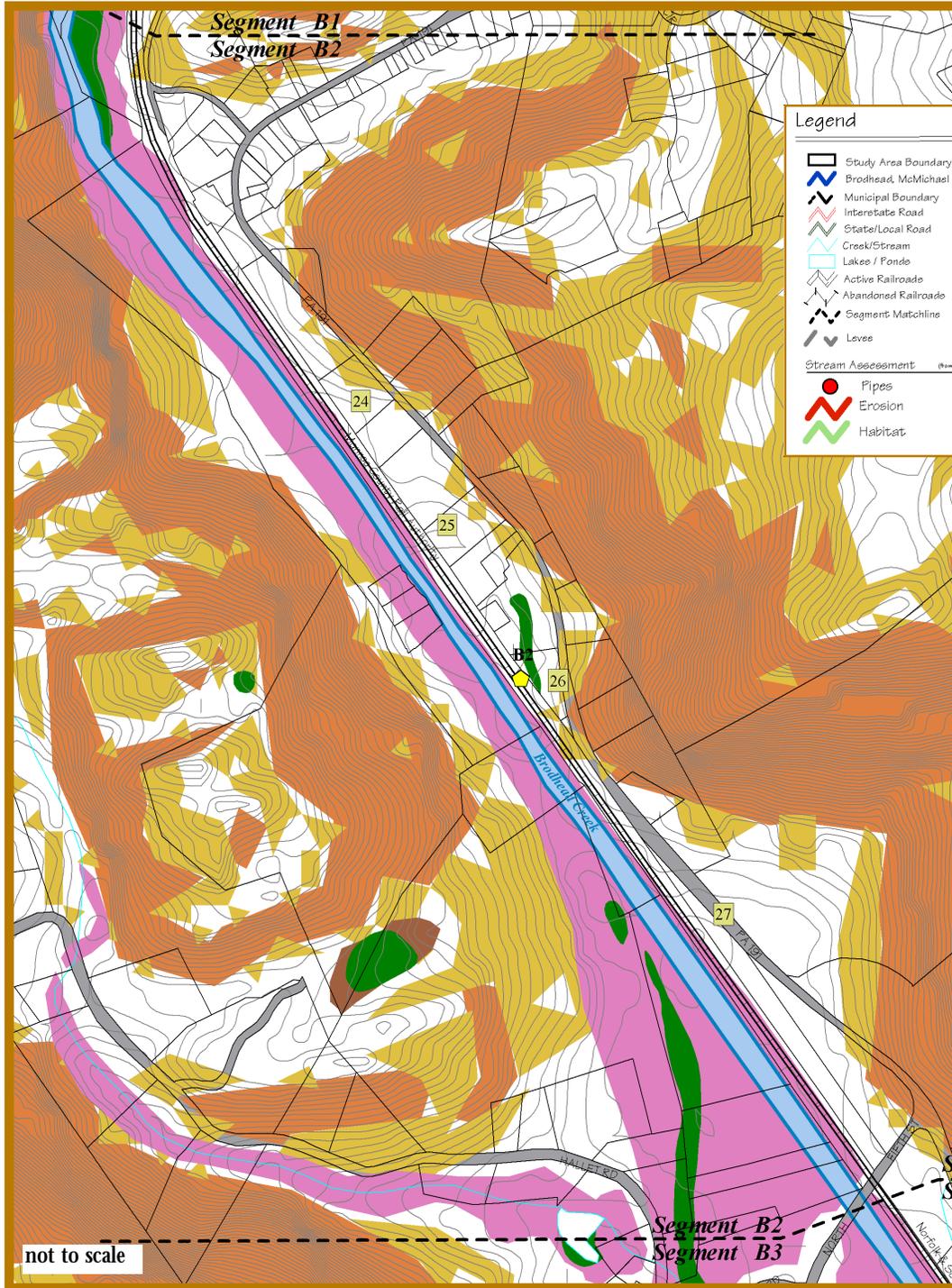
Segment B1



Brodhead Creek

EXISTING CONDITIONS

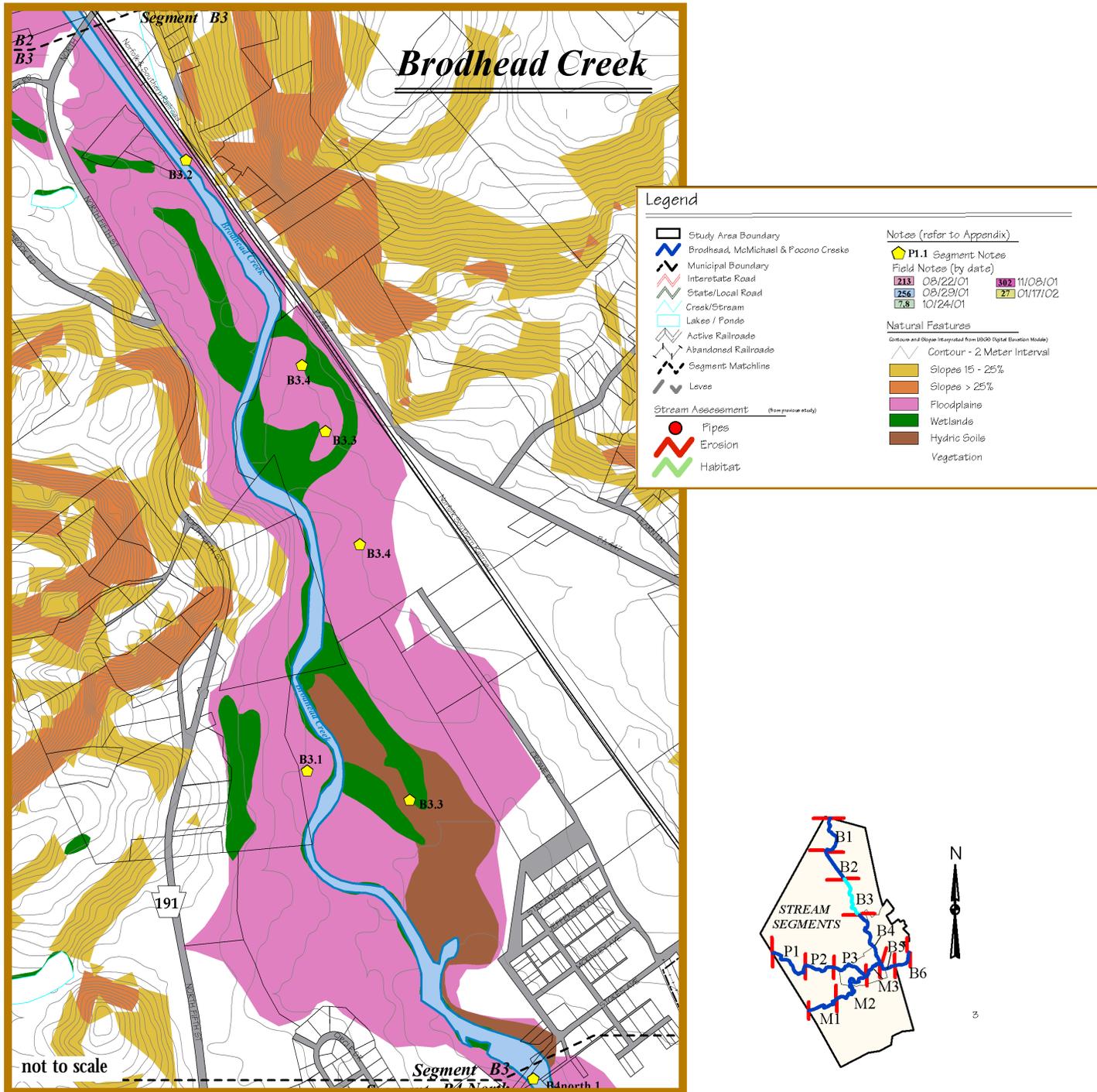
Segment B-2



Brodhead Creek

EXISTING CONDITIONS

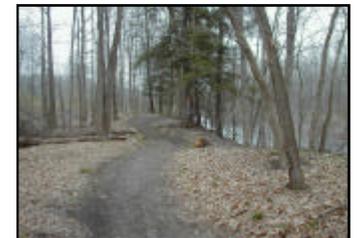
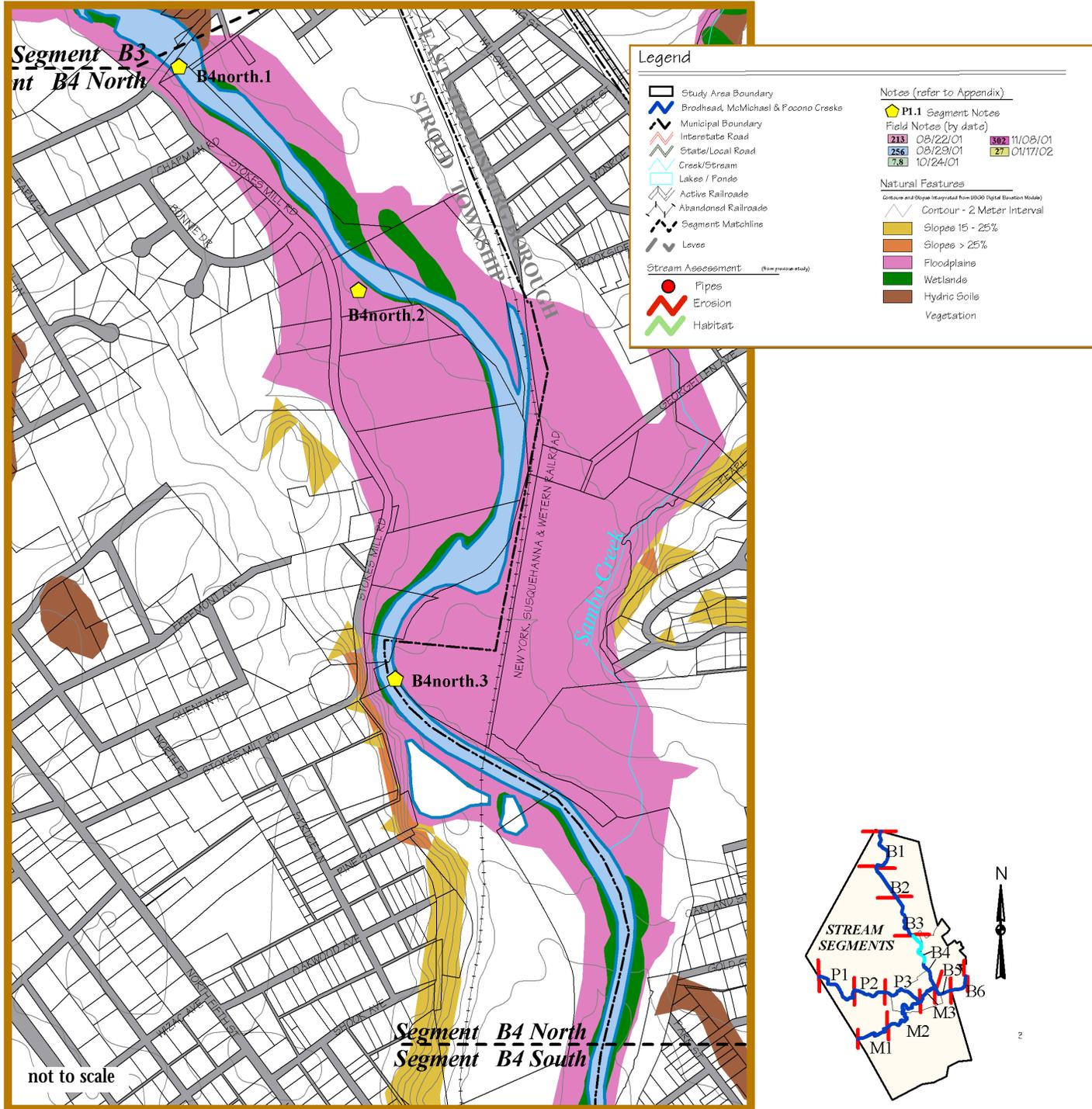
Segment B-3

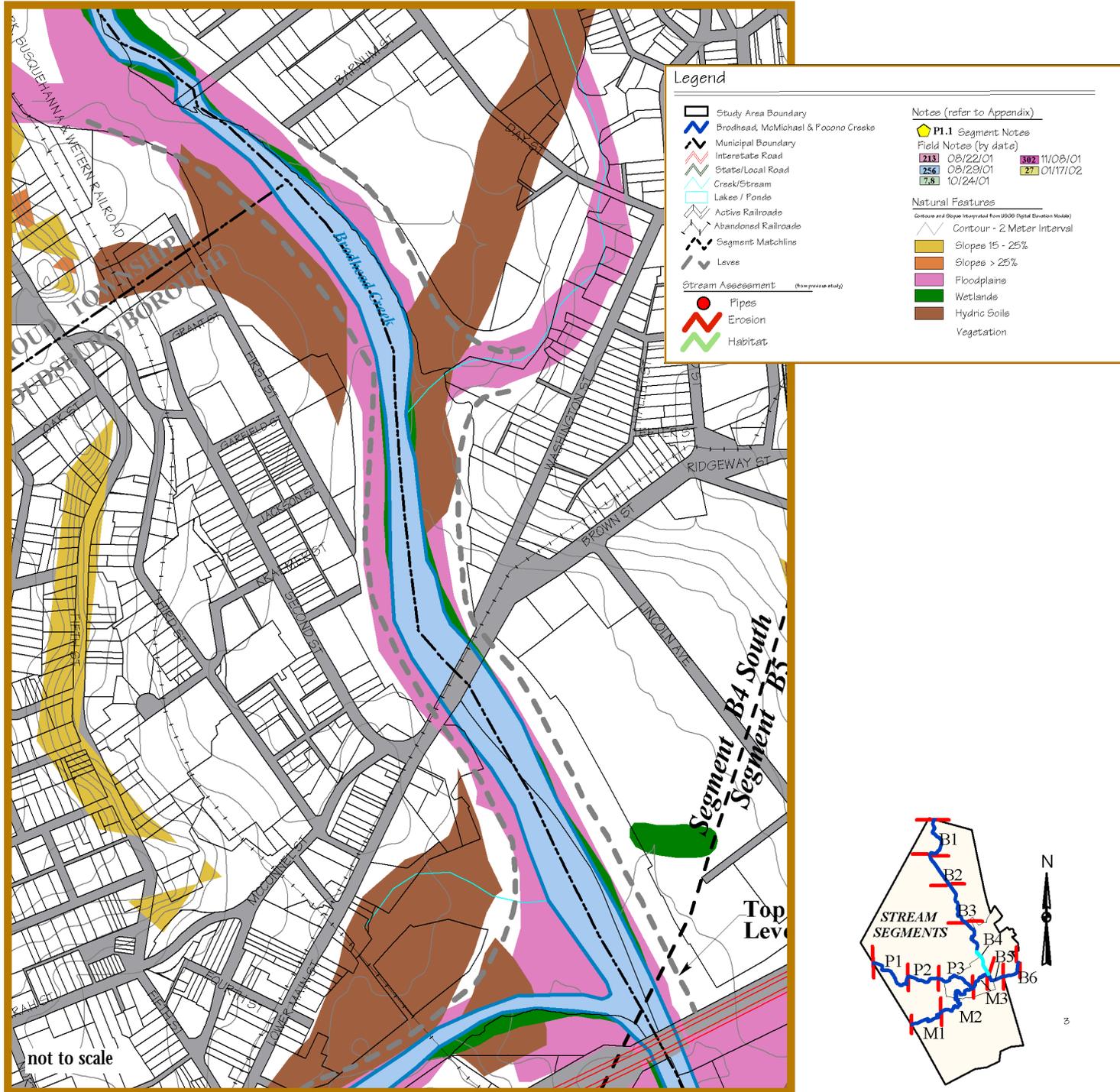


Brodhead Creek

EXISTING CONDITIONS

Segment B-4 north

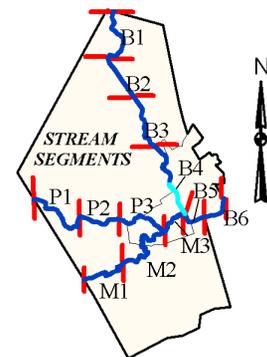




Brodhead Creek

EXISTING CONDITIONS

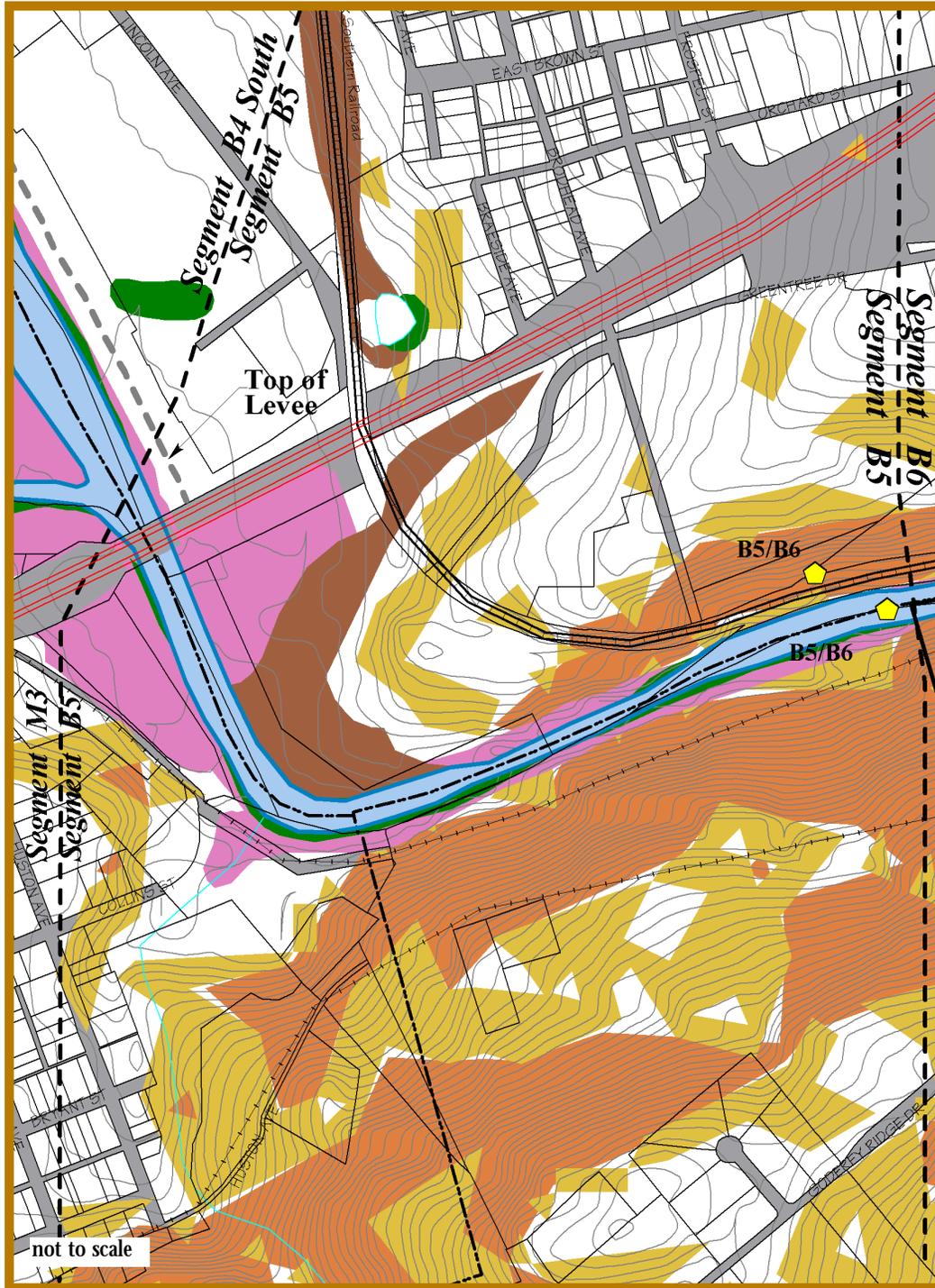
Segment B-4 south



Brodhead Creek

EXISTING CONDITIONS

Segment B-5



Legend

- Study Area Boundary
- Brodhead, McMichael & Pocono Creeks
- Municipal Boundary
- Interstate Road
- State/Local Road
- Creek/Stream
- Lakes / Ponds
- Active Railroad
- Abandoned Railroad
- Segment Matchline
- Levee

Stream Assessment (from previous study)

- Pipes
- Erosion
- Habitat

Notes (refer to Appendix)

P1.1 Segment Notes
Field Notes (by date)

213	08/22/01	302	11/08/01
256	08/29/01	27	01/17/02
178	10/24/01		

Natural Features
Contours and Slopes Interpolated from 10/08 Digital Elevation Model

- Contour - 2 Meter Interval
- Slopes 15 - 25%
- Slopes > 25%
- Floodplains
- Wetlands
- Hydric Soils
- Vegetation



vegetation

Stream Assessment (from previous study)

- Pipes
- Erosion
- Habitat

300 0 300 600 Feet

Information used to produce this map was obtained from the Monroe County Open Space plan. Other sources of information are noted in the legend. Pashkek Associates makes no claims to the accuracy of the base map data.



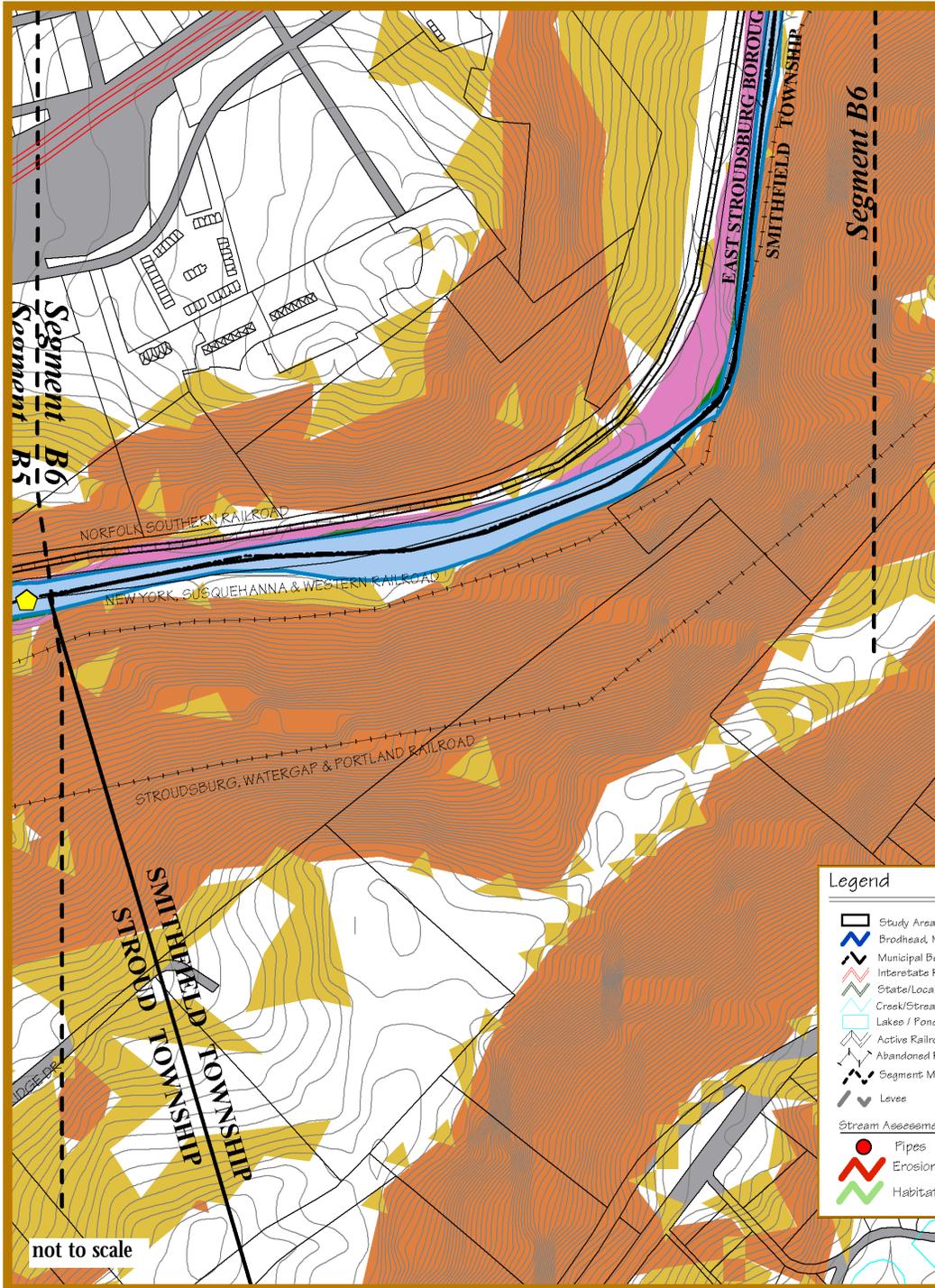
Brodhead, McMichael & Pocono Creeks Greenways Plan

Stoud Township
Stroudsburg Borough &

Brodhead Creek

EXISTING CONDITIONS

Segment B-6



Stream Assessment (from previous study)

- Pipes
- Erosion
- Habitat



Information used to produce this map was obtained from the Monroe County Open Spaces plan. Other sources of information are noted in the legend. Pashiek Associates makes no claims to the accuracy of the base map data.

Brodhead, McMichael & Pcono Creeks Greenways Plan

Legend

- | | |
|------------------------------------|---------------------------|
| Study Area Boundary | P1.1 Segment Notes |
| Brodhead, McMichael & Pcono Creeks | Field Notes (by date) |
| Municipal Boundary | 213 08/22/01 |
| Interstate Road | 256 08/29/01 |
| State/Local Road | 271 01/17/02 |
| Creek/Stream | 7.8 10/24/01 |
| Lakes / Ponds | |
| Active Railroads | |
| Abandoned Railroads | |
| Segment Matchlines | |
| Levee | |
| Pipes | |
| Erosion | |
| Habitat | |
-
- | | |
|---|--|
| Natural Features | |
| <small>Contours and Slope Intergrated from USGS Digital Elevation Model</small> | |
| Contour - 2 Meter Interval | |
| Slopes 15 - 25% | |
| Slopes > 25% | |
| Floodplains | |
| Wetlands | |
| Hydric Soils | |
| Vegetation | |



McMichael Creek

McMichael Creek runs for approximately nine miles from Stroud Township's western border to the creek's confluence with Pocono Creek. The creek runs through a mix of undeveloped and residential land, with varying natural and man-made features.

Segment M-1

BOUNDARIES

Stroud Townships western border to the creek's intersection with Glenbrook Road

LENGTH

1.53 miles

GENERAL CHARACTER

From the Stroud Township Border, the creek runs through the Stroud Township McMichael Creek Conservation Lands, close to the northern edge of the Township's parcel. The stream then runs closer to Glenbrook road as it is diverted around the Glenbrook Golf Course.

NATURAL FEATURES

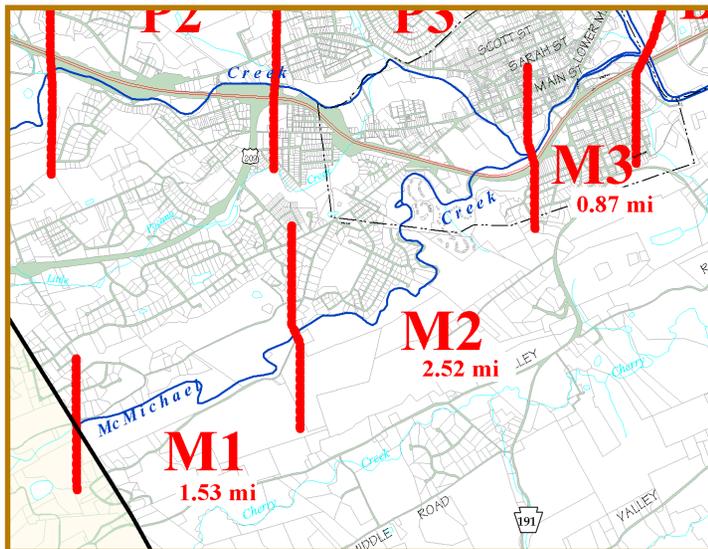
- large areas of floodplains and hydric soils within the stream corridor.
- two moderately-sized wetland areas
- slopes are gentle to moderate
- significant tracts of wooded natural areas
- Godfrey Ridge Corridor
- important wildlife corridor

MAN-MADE FEATURES

- Glenbrook Golf Course
- the creek runs between Glenbrook Road and Hickory Valley Road
- Glenbrook Road crosses the creek
- portions of embankment from a planned and partially build rail bed lies within the creek corridor

Historical Cabin

This one room cabin, sitting at the first bend in the creek within Stroud Township, was built in the early 1950's. It was built by Lester and Frances Levy. The streambank along a deep pool at the bend in the creek was lined with sand and used as a beach. A smaller structure adjacent to the cabin was a bathhouse. The cabin is now owned by Stroud Township as part of the McMichael Creek Conservation Lands.



Segment M-2

BOUNDARIES

The creek's intersection with Glenbrook Road to its confluence with Pocono Creek.

LENGTH

2.52 miles

GENERAL CHARACTER

From its intersection with Glenbrook Road, the stream meanders through a residential area (including Labar Village), under Interstate 80, to its confluence with Pocono Creek. To the northwest, the stream is bounded by several small residential properties. To the southeast, large undeveloped parcels make up the heavily wooded steep slopes.

NATURAL FEATURES

- large areas of floodplain
- moderate areas of hydric soils
- limited wetland areas
- topography gently sloping
- significant tracts of wooded areas
- Godfrey Ridge corridor
- important wildlife corridor connecting north and south sides of I-80

MAN-MADE FEATURES

- residential development immediately adjacent to both sides of the creek
- Interstate 80 crosses the creek

Segment M-3

BOUNDARIES

The creek's confluence with Pocono Creek to its confluence with Brodhead Creek.

LENGTH

0.87 miles

GENERAL CHARACTER

This section of the creek runs through downtown Stroudsburg. The segment begins with the creek's confluence with the Pocono Creek. At this point, the stream is bounded to the south by Interstate 80 and the north by the Hampton Inn. The portion of the stream east of Broad Street, after the bridge at Park Avenue, is bounded by Rotary Park, commercial development, and Interstate 80. This section is the most accessible. On one side, Rotary Park includes an accessible fishing pier and opportunities to get to the creek's edge. On the northern side of the creek, the Willow Tree restaurant takes advantage of the scenic corridor with large windows and an outdoor eating area.

NATURAL FEATURES

- moderate areas of floodplain
- large areas of hydric soils
- moderate area of wetlands
- slopes primarily gentle
- large areas of invasive plant species

MAN-MADE FEATURES

- Interstate 80 runs immediately adjacent to the creek
- Park Avenue crosses the creek
- commercial development abuts the creek across from Rotary Park
- the levee system begins near the "five points" intersection
- the Broad Street bridge crosses the creek

Recreation Facilities

MCMICHAEL CREEK CONSERVATION LANDS

- 107 acres
- stone cottage
- woodlands, meadows
- stream

KOVARICK PARK LANDS

- 13 acres
- woodlands
- trails

ROTARY PARK

- 1.5 acres
- accessible fishing pier
- wooded areas
- plaza area

GLENBROOK GOLF COURSE

- scenic mountains
- small greens
- dining and accommodation facilities
- 18 hole, 72 par course
- designed by Robert White in 1924
- PGA pro on staff
- over 6,500 yards

ANN STREET PARK

- wooded areas, parking areas,
- historic site on 6 acres
- formal plaza area
- view of waterfall
- handicapped accessible pier
- fishing along McMichael Creek

Rail Corridors

Both active and passive rail lines run through the McMichael Creek Corridor. These corridors may provide opportunities for trail development.

NAME	STATUS	ADJACENT STREAM
NY, Susquehanna and Western	Abandoned	Brodhead
Norfolk Southern	Active	Brodhead
Monroe County Rail Authority	Active	Brodhead
Wilkes-Barre and Eastern	Abandoned	Pocono, McMichael
Stroudsburg, Watergap and Portland	Abandoned	McMichael, Brodhead
Unknown - line extension	Abandoned	McMichael

Summary: Opportunities and Constraints

M c M i c h a e l C r e e k

Opportunities	Constraints
segment M - 1	
<ol style="list-style-type: none"> 1. creek runs through the Stroud Township's McMichael Creek Conservation Lands 2. creek corridor is adjacent to public golf course 3. Hickory Valley Road may provide access opportunities 4. Glenbrook Road may provide limited access opportunities (limited steep slopes adjacent to the road) 5. in addition to the Township property, the stream runs through only one other parcel of land (Glenbrook Golf Course), which may simplify preservation efforts 6. should an alternate trail route be located to the south of Glenbrook Road due to steep slopes immediately adjacent to the creek, a majority of land is owned by one property owner 7. an abandoned rail bed that runs north of Glenbrook Road may be used for the development of a recreational trail 8. the Glenbrook Golf Course property to the south of Glenbrook Road may provide an opportunity for the development of trail head facilities 9. the stream's location and the location of Stroud Township's conservation property lend to the development of cooperative efforts with Hampton Township 10. key linkage for further development of regional greenway and trail connections 11. potential overland connection to Cherry Valley via the Godfrey Ridge; also a link to the Godfrey Ridge greenway corridor 12. historic cabin on the Township-owned property may provide opportunities for historical and environmental interpretation. 	<ol style="list-style-type: none"> 1. large areas of steep slopes 2. large areas of floodplains and hydric soils 3. moderate areas of wetlands 4. should the abandoned rail bed along Glenbrook Road be used for trail development, a minor tributary to the creek has caused a significant blowout in the rail bed 5. the stream runs immediately adjacent to three small privately owned properties 6. a portion of the creek abuts Glenbrook Road

Opportunities	Constraints
segment M - 2, cont.	
<ol style="list-style-type: none">1. Stroud Township properties along Glenview Avenue and McMichaels Drive may provide an opportunity to provide stream access and/or trail head facilities (should a recreational trail be developed)2. the creeks runs through or abuts (at their norther edge) three large parcels of land3. planned development of a residential community to the south of the creek, adjacent to the existing Labar Village, may incorporate stream restoration/preservation efforts and/or the development of recreational trails through a public right of way4. the nearby road infrastructure may provide alternative routes for recreational trails within the corridor5. An abandoned rail line running along the slope to the south of the creek may provide an alternative route for a recreational trail6. make a trail connection to the Stroudsmoor Inn7. preserve floodplain area8. slow area in stream may be used as a children's fishing hole	<ol style="list-style-type: none">1. several small residential parcels about the creek2. large area of floodplain and hydric soils3. the creek runs through Labar Village, a gated community (along the northern edge)4. proximity of residential development
segment M - 3	
<ol style="list-style-type: none">1. Rotary Park may offer opportunities for the development of trail head facilities2. the top of the levee along the northern edge of the creek may provide an opportunity for the development of a recreational trail3. the creek runs through the Interstate 80 right of way, providing the potential for development of a recreational trail4. the vacant land near the Hampton Inn may provide opportunities for the development of trail head or other facilities	<ol style="list-style-type: none">1. the stream runs through a relatively constricted corridor2. Interstate 80 runs adjacent to the creek, to the south3. pedestrian access opportunities from the downtown area to the creek from the north are limited

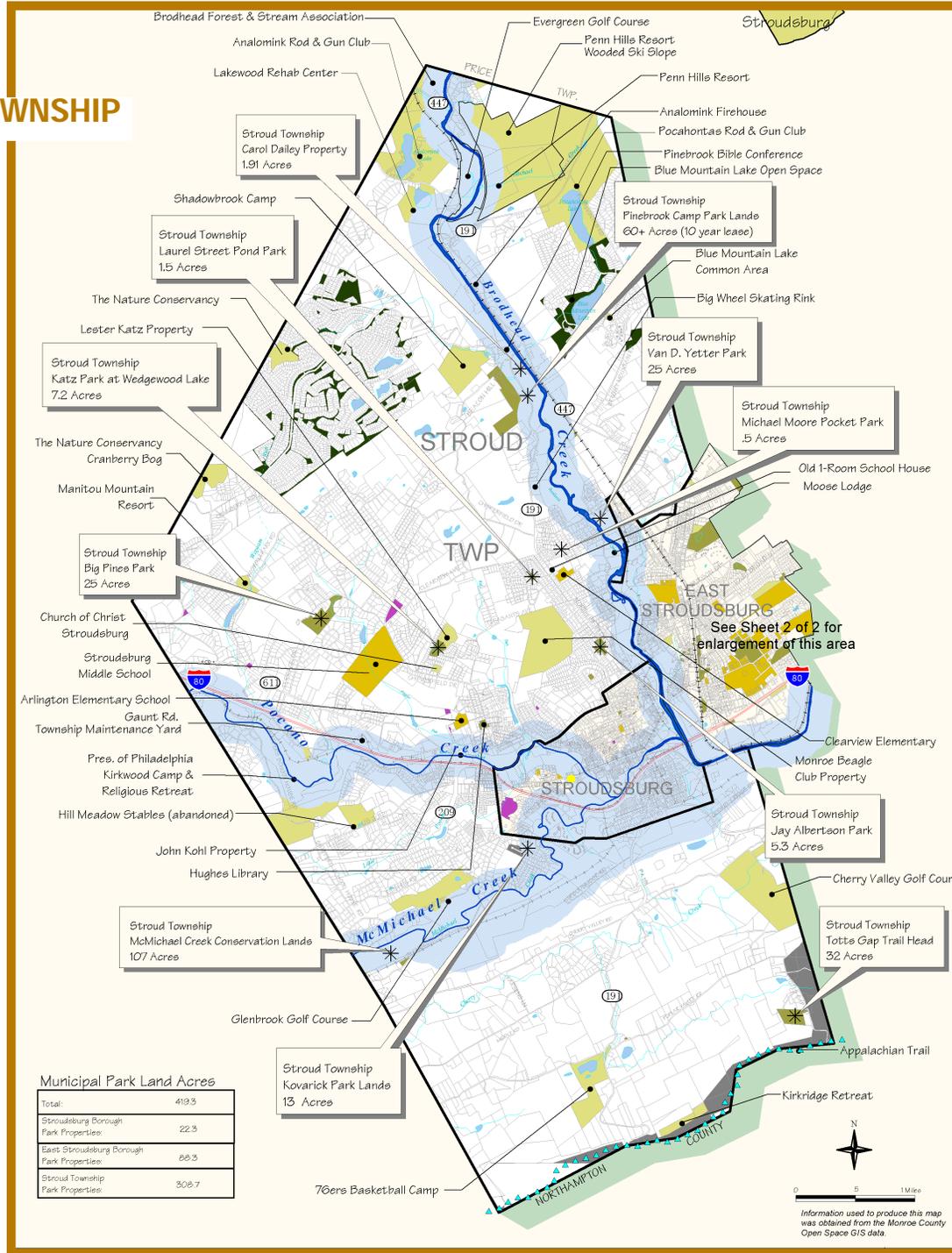
Opportunities

Constraints

segment M - 3

- 5. trail linkage to downtown and “creekfront” area
- 6. several opportunities for historical interpretation

STROUD TOWNSHIP



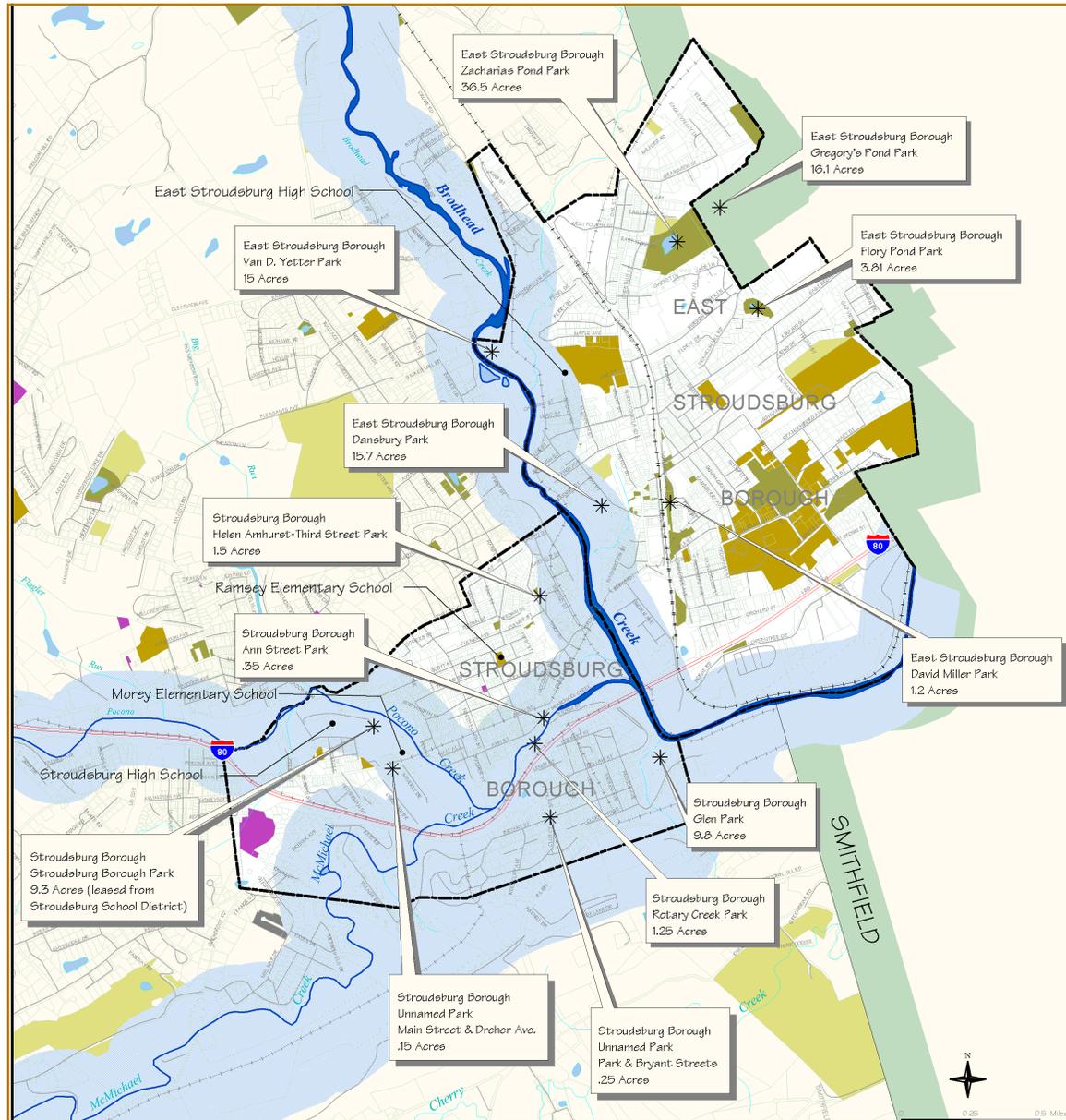
McMichael Creek

EXISTING CONDITIONS

Recreation Facilities

East Stroudsborg Borough Park Properties:	8
Stroud Township Park Properties:	3
Sheet: 1 of 2	Exhibit 1-1
<h1>Stroud</h1> <hr/> <h1>Stroud Ar</h1> <p>Draft 07/20/01</p>	

STROUDSBURG AND EAST STROUDSBURG

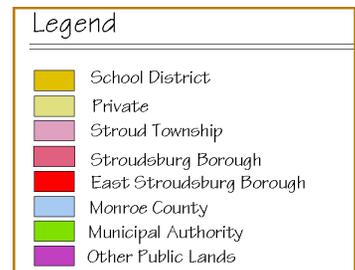
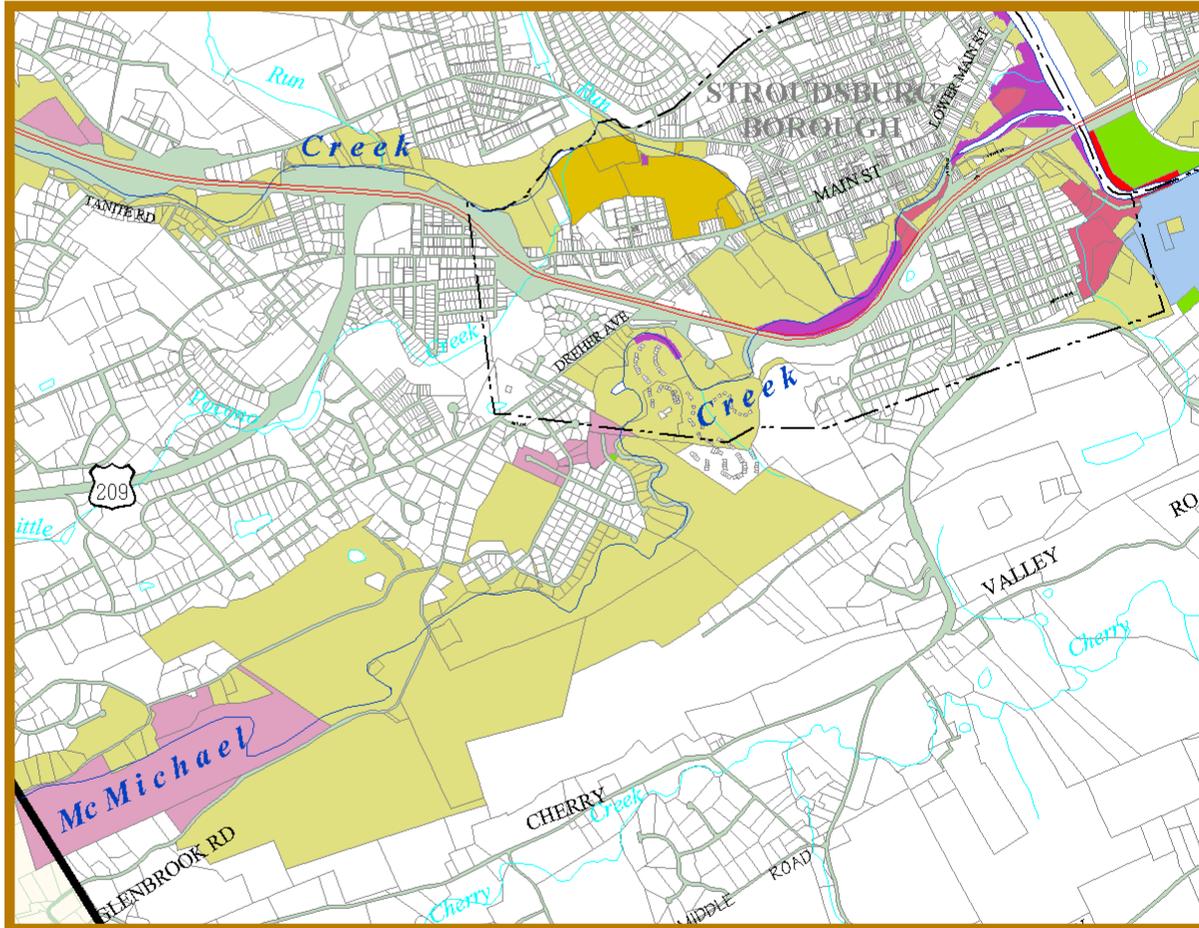


McMichael Creek EXISTING CONDITIONS Recreation Facilities

McMichael Creek

EXISTING CONDITIONS

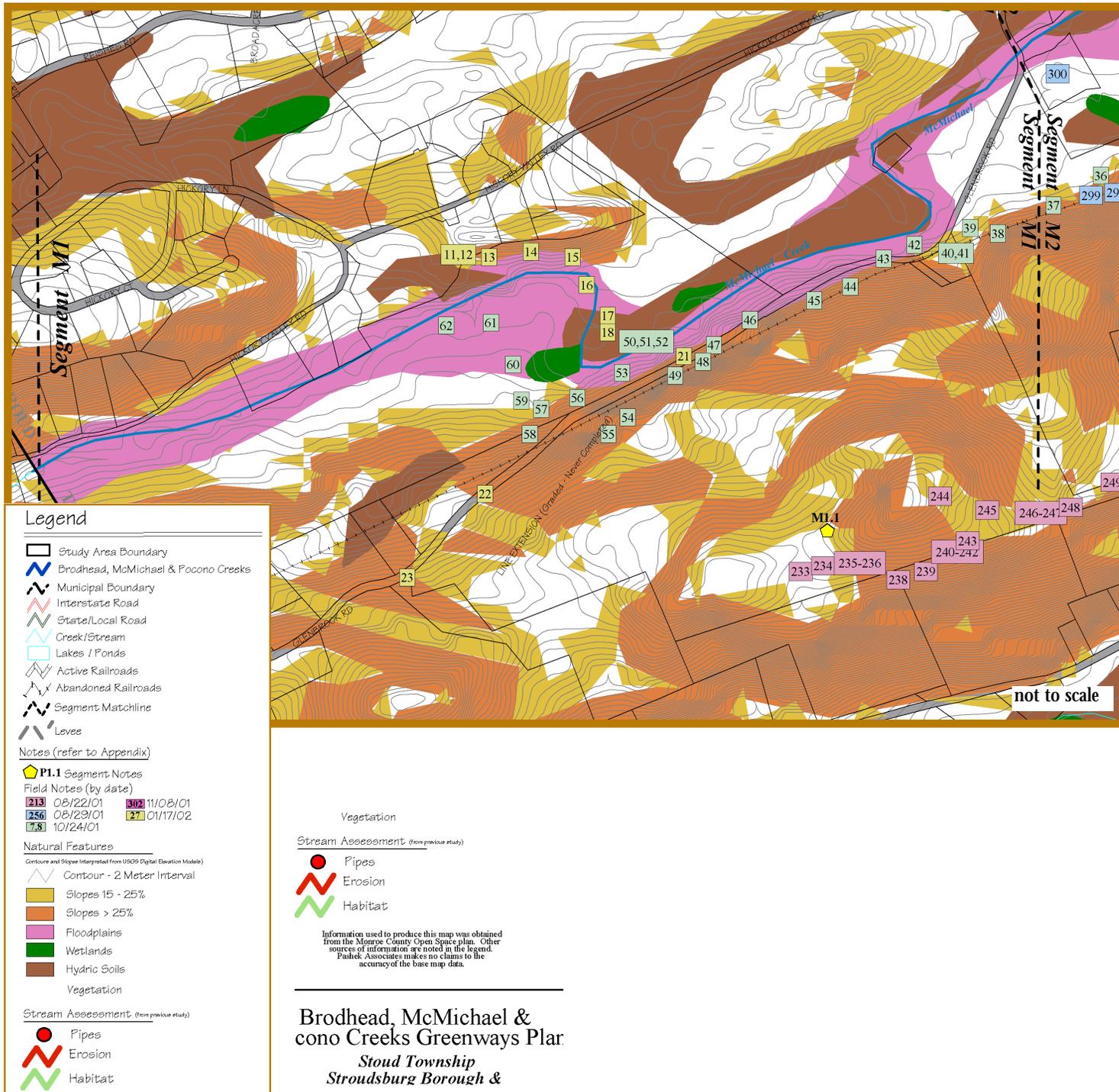
Ownership



McMichael Creek

EXISTING CONDITIONS

Segment M-1



Pocono Creek

Segment P-1

BOUNDARIES

The creek's intersection with Stroud Township's western border to its confluence with an unnamed tributary.

LENGTH

2.09 miles

GENERAL CHARACTER

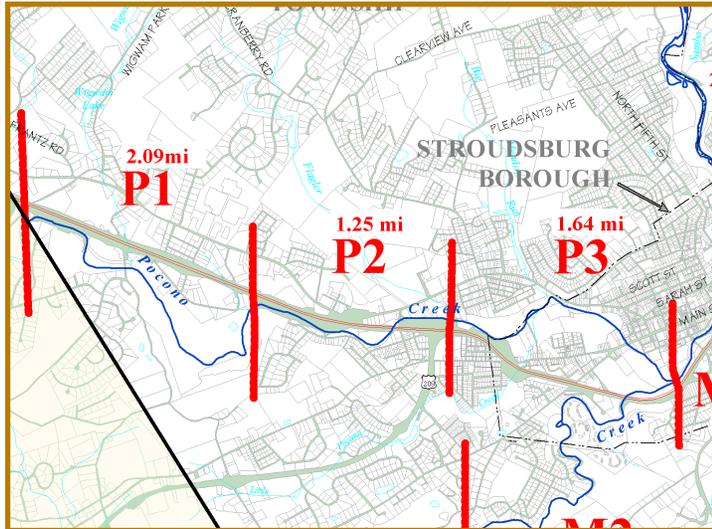
The creek runs through a primarily undeveloped area, a large portion of which is a private campground.

NATURAL FEATURES

- floodplain along both sides of stream
- large pocket of hydric soils
- slopes primarily gentle, small areas of moderate topography
- three ponds, one of which is immediately adjacent to creek

MAN-MADE FEATURES

- Shaffers Schoolhouse Road crosses the creek
- Interstate 80 runs near the creek, to the north
- an abandoned rail line runs adjacent to the creek, to the north
- severe bank erosion in the area immediately adjacent to I-80
- USGS stream gage location
- wildcat dump (former homeless camp)



Segment P-2

BOUNDARIES

Confluence with unnamed tributary to the creek's confluence with Flagler Run.

LENGTH

1.25 miles

GENERAL CHARACTER

The creek is surrounded by residential and commercial development, as well as major transportation routes. It weaves through a narrow corridor, which is comprised of primarily undevelopable steep slopes.

NATURAL FEATURES

- floodplain areas within creek corridor

- slopes gentle
- small area of moderate slopes
- one wetland area

MAN-MADE FEATURES

- Tanite Road runs near the creek, to the south
- Interstate 80 runs adjacent to the creek, to the north
- Bridge Street crosses the creek
- Interstate 80 crosses the creek
- on-stream dam
- Stroud Township maintenance facility on Gaunt Road

Segment P-3

BOUNDARIES

Confluence with Flagler Run to confluence with McMichael Creek.

LENGTH

1.64 miles

GENERAL CHARACTER

A portion of this stream segment is within a pocket of less dense development, surrounded by dense residential and commercial areas. Privately owned undeveloped land surrounds the creek, as well as school district property.

NATURAL FEATURES

- large floodplain areas
- large areas of hydric soils
- several wetland areas
- slopes primarily gentle, small area of moderate
- confluence with Flagler Run
- confluence with Little Pocono Creek

MAN-MADE FEATURES

- Route 611 runs to the north of the creek
- West Main Street crosses the creek
- channelized sections of creek due to I-80 construction

Recreation Facilities

STROUDSBURG BOROUGH PARK

The Borough park sits at the edge of the Pocono Creek, adjacent to the Stroudsburg Borough School Complex. The park includes a pool, picnic pavilion, picnic tables, creek access, and playground equipment.

KIRKWOOD CAMP

This privately owned camp is located on property that surrounds the Pocono Creek. Cabins, trails, a pond, and several recreation areas are within the camp.

Rail Corridors

Both active and passive rail lines run through the Pocono Creek Corridor. These corridors may provide opportunities for trail development.

NAME	STATUS	ADJACENT STREAM
NY, Susquehanna and Western	Abandoned	Brodhead
Norfolk Southern	Active	Brodhead
Monroe County Rail Authority	Active	Brodhead
Wilkes-Barre and Eastern	Abandoned	Pocono, McMichael
Stroudsburg, Watergap and Portland	Abandoned	McMichael, Brodhead
Unknown - line extension	Abandoned	McMichael

Summary: Opportunities and Constraints

Opportunities	Constraints
segment P - 1	
<ol style="list-style-type: none"> 1. topography flat to gently sloping 2. large portion of segment composed of one, privately owned recreation area (private campground) 3. abandoned rail corridor in close proximity to stream, a large portion of which runs through one parcel, offers potential for a regional bicycle/pedestrian trail 4. Shaffers School House Road, which crosses the stream and intersects the abandoned rail line, may provide access to the greenway 5. before crossing the Township's western border, a short segment of the stream runs through the Interstate 80 public right of way 	<ol style="list-style-type: none"> 1. floodplains and hydric soils within stream corridor may impact future development of recreation facilities 2. the stream corridor is fairly isolated; only one public road crosses the corridor
segment P - 2	
<ol style="list-style-type: none"> 1. topography is flat to gently sloping 2. a large portion of the stream in this segment runs through the Interstate 80 public right of way 3. an abandoned railroad right of way may be used for a recreational trail 4. Stroud Township owns two parcels of land to the south of PA 611 5. Tanite Road may provide pedestrian access to the corridor, should recreational trails be developed 6. Bridge Street may provide pedestrian access to the corridor, should recreational trails be developed 7. heavy vehicular traffic on Route 611 could offer high visibility of greenway efforts within this segment 	<ol style="list-style-type: none"> 1. stream corridor in close proximity to Interstate 80 corridor, which may have visual or noise implications 2. stream runs in close proximity to several small residential properties 3. floodplain areas exist within stream corridor and must be considered should a trail be developed 4. the parcels of land owned by Stroud Township are on the opposite side of Interstate 80 as the creek

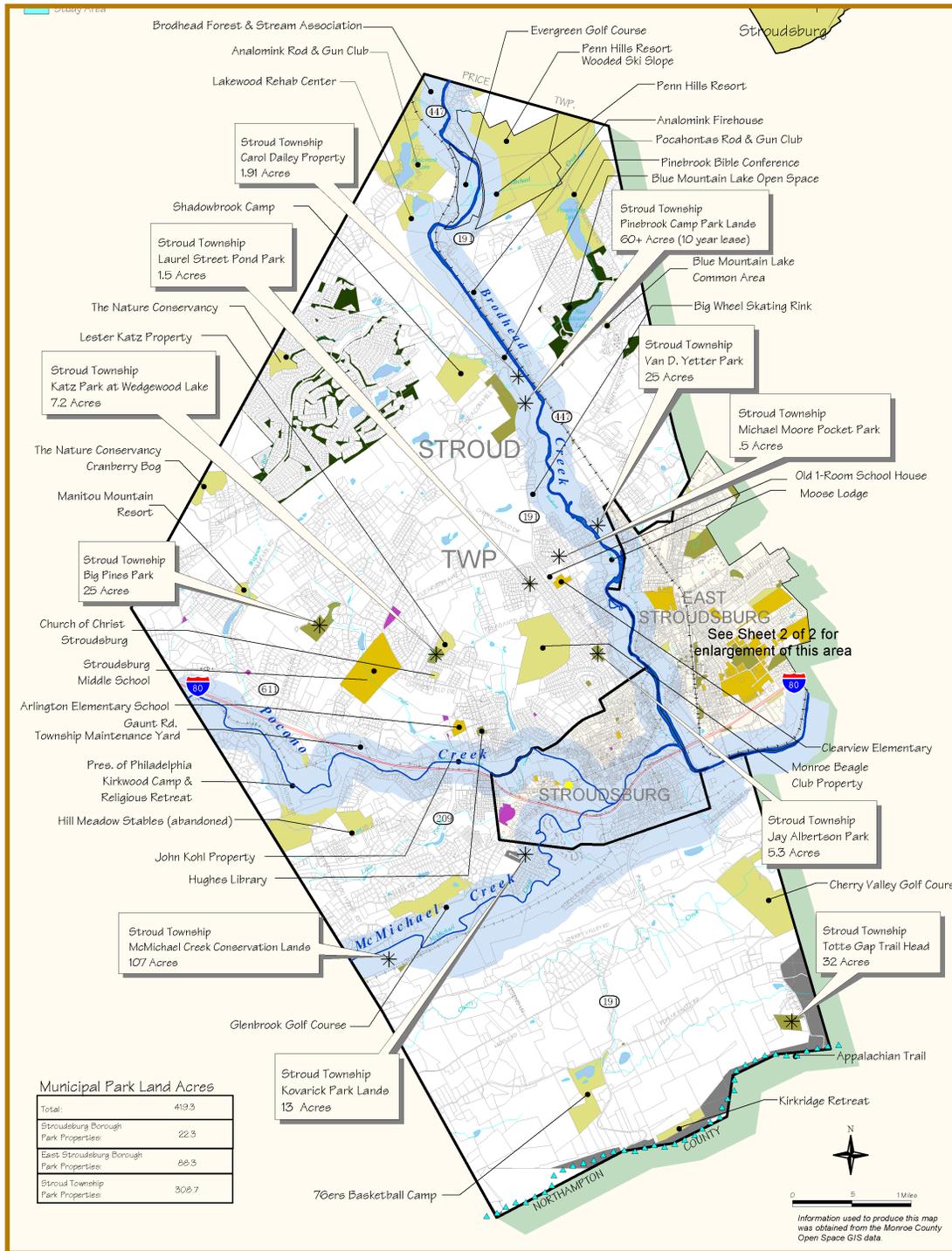
Summary: Opportunities and Constraints, continued

Opportunities	Constraints
segment P - 3	
<ol style="list-style-type: none">1. environmental education opportunities at the confluence of the Pocono and McMichael Creeks2. creek runs adjacent to the Stroudsburg School District Complex (including the Stroudsburg Borough Park)3. topography is flat to gently sloping4. stream's proximity to downtown (Main Street) may offer high visibility of greenway efforts within this segment5. School District property abutting Route 611 may provide access to the corridor6. existing infrastructure at School District property may be used to provide a rail head7. South Tenth Street may provide a pedestrian/bicycle access opportunity	<ol style="list-style-type: none">1. the creek flows under Main Street, requiring a street crossing if a trail were developed parallel to it2. large areas of floodplain and hydric soils3. trail development would require a pedestrian crossing at the intersection of the creek with Main Street4. the eastern portion of this segment runs through several private parcels of land and access to this portion of the stream is limited5. the only opportunity for trail development along the stream on public land is within a narrow strip of the Interstate 80 right of way

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Pocono Creek EXISTING CONDITIONS Recreation Facilities

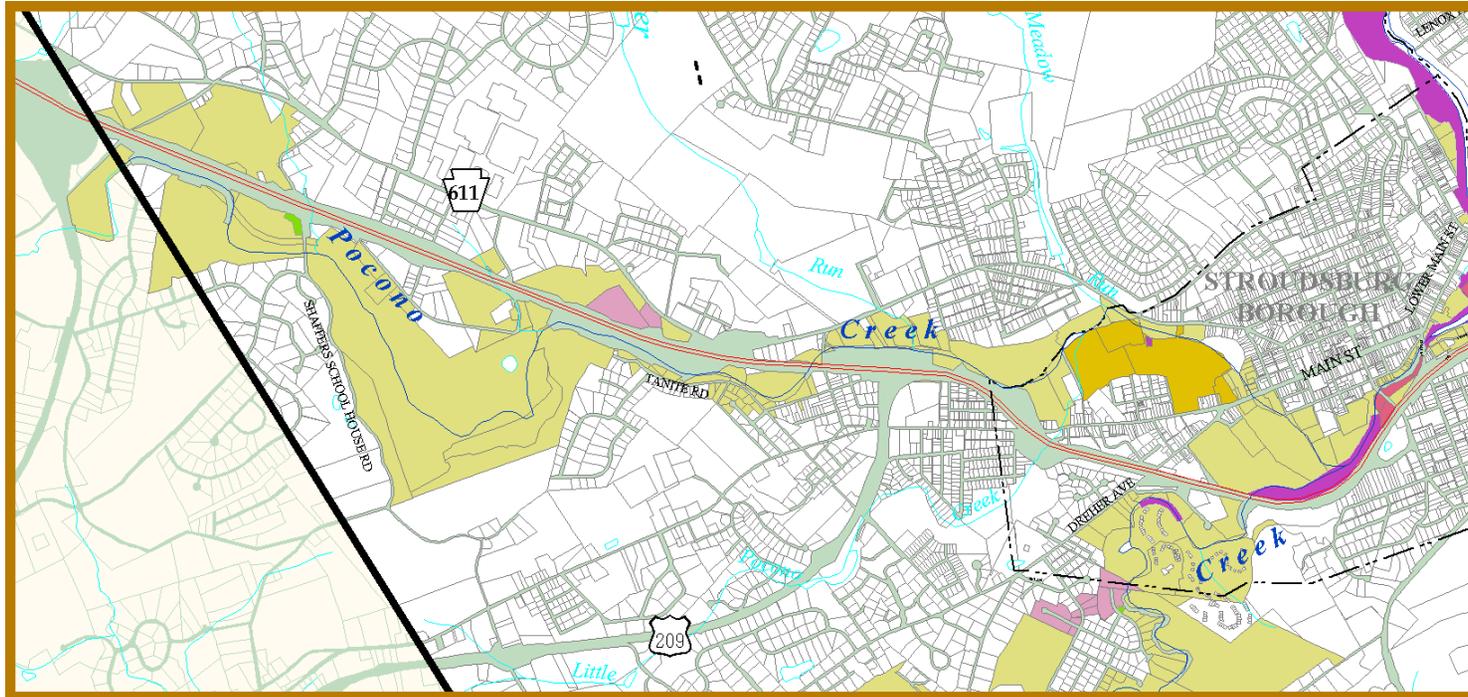


Sheet 1 of 2	Exhibit 1-1	Stroudsburg Borough Park Properties:	22.3
		East Stroudsburg Borough Park Properties:	66.3
		Stroud Township Park Properties:	308.7
		Stroud Ar	Stroud Ar
		Draft 07/20/01	

Pocono Creek

EXISTING CONDITIONS

Ownership



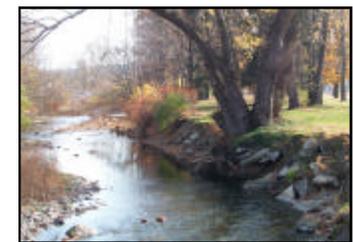
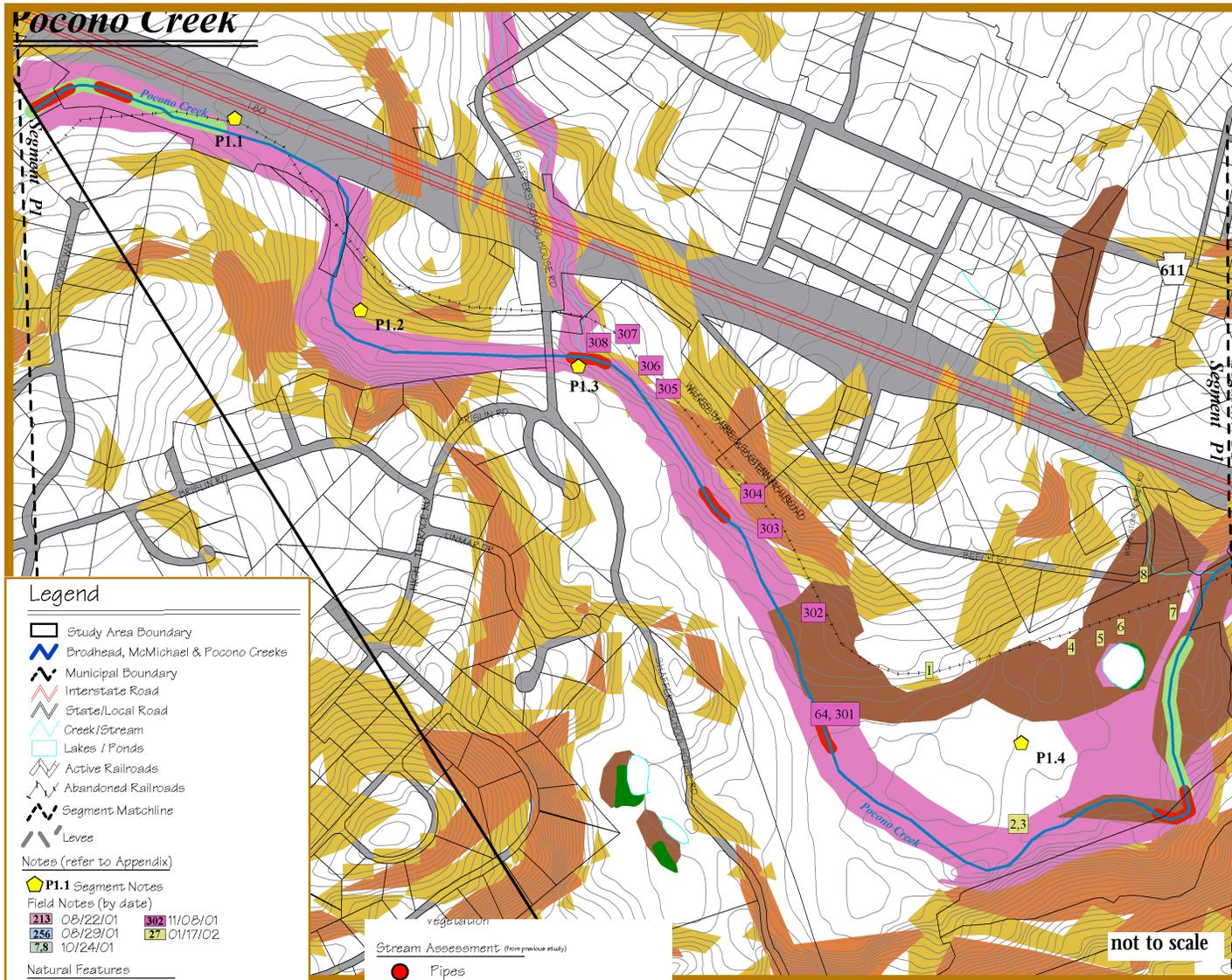
Legend

- School District
- Private
- Stroud Township
- Stroudsburg Borough
- East Stroudsburg Borough
- Monroe County
- Municipal Authority
- Other Public Lands

Pocono Creek

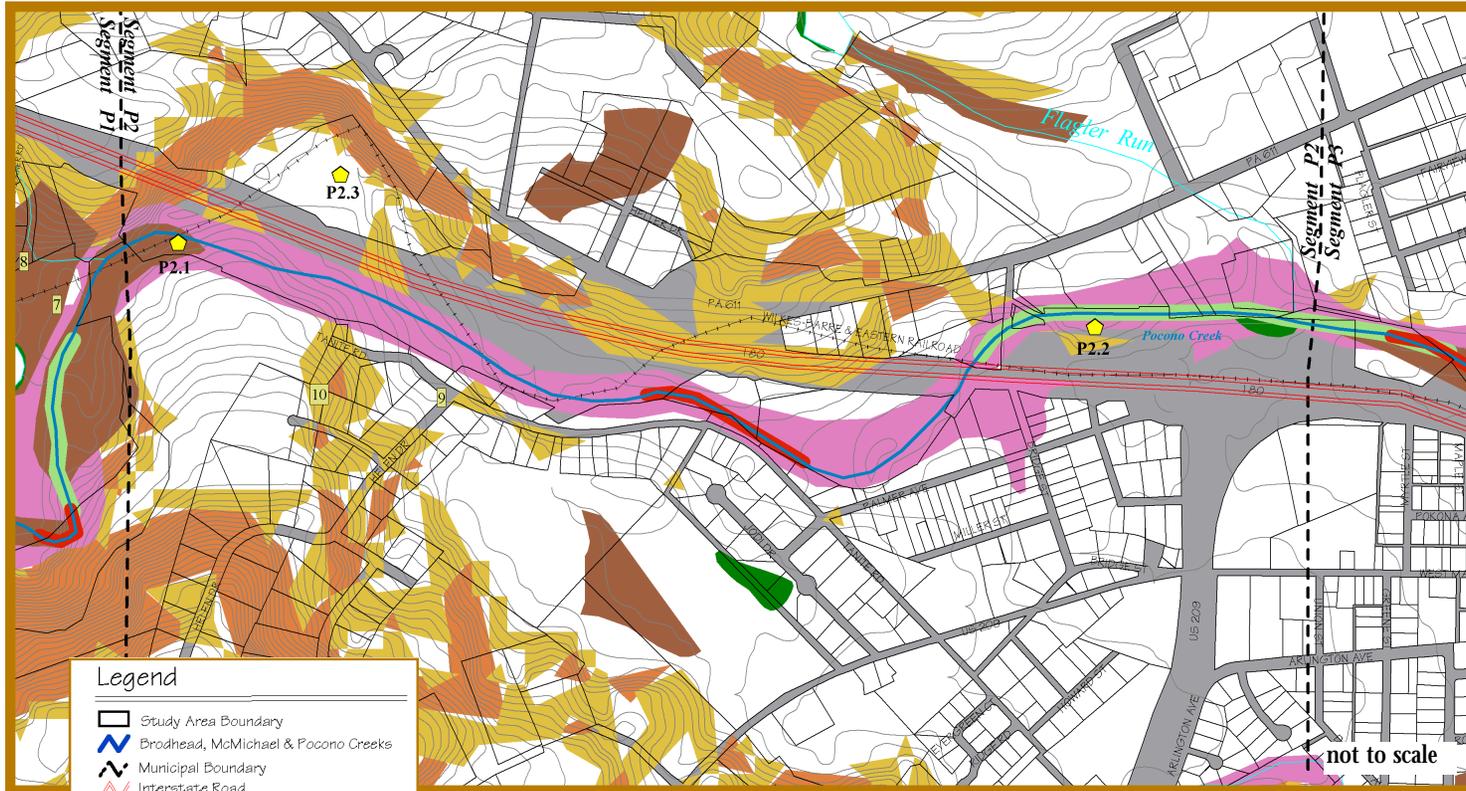
EXISTING CONDITIONS

Segment P-1



Brodhead, McMichael &
Pocono Creeks Greenways Pla
Stoud Township
Stroudsburg Borough &
East Stroudsburg Borough

Pocono Creek EXISTING CONDITIONS Segment P-2



Legend

- Study Area Boundary
- Brodhead, McMichael & Pocono Creeks
- Municipal Boundary
- Interstate Road
- State/Local Road
- Creek/Stream
- Lakes / Ponds
- Active Railroads
- Abandoned Railroads
- Segment Matchline
- Levee

Notes (refer to Appendix)

P1.1 Segment Notes

Field Notes (by date)

213	08/22/01	302	11/08/01
256	08/29/01	27	01/17/02
7,8	10/24/01		

Natural Features

Contour and Slope Interpreted from USGS Digital Elevation Models

- Contour - 2 Meter Interval
- Slopes 15 - 25%
- Slopes > 25%
- Floodplains
- Wetlands
- Hydric Soils
- Vegetation

Stream Assessment (from previous study)

- Pipes
- Erosion
- Habitat

Vegetation

Stream Assessment (from previous study)

- Pipes
- Erosion
- Habitat

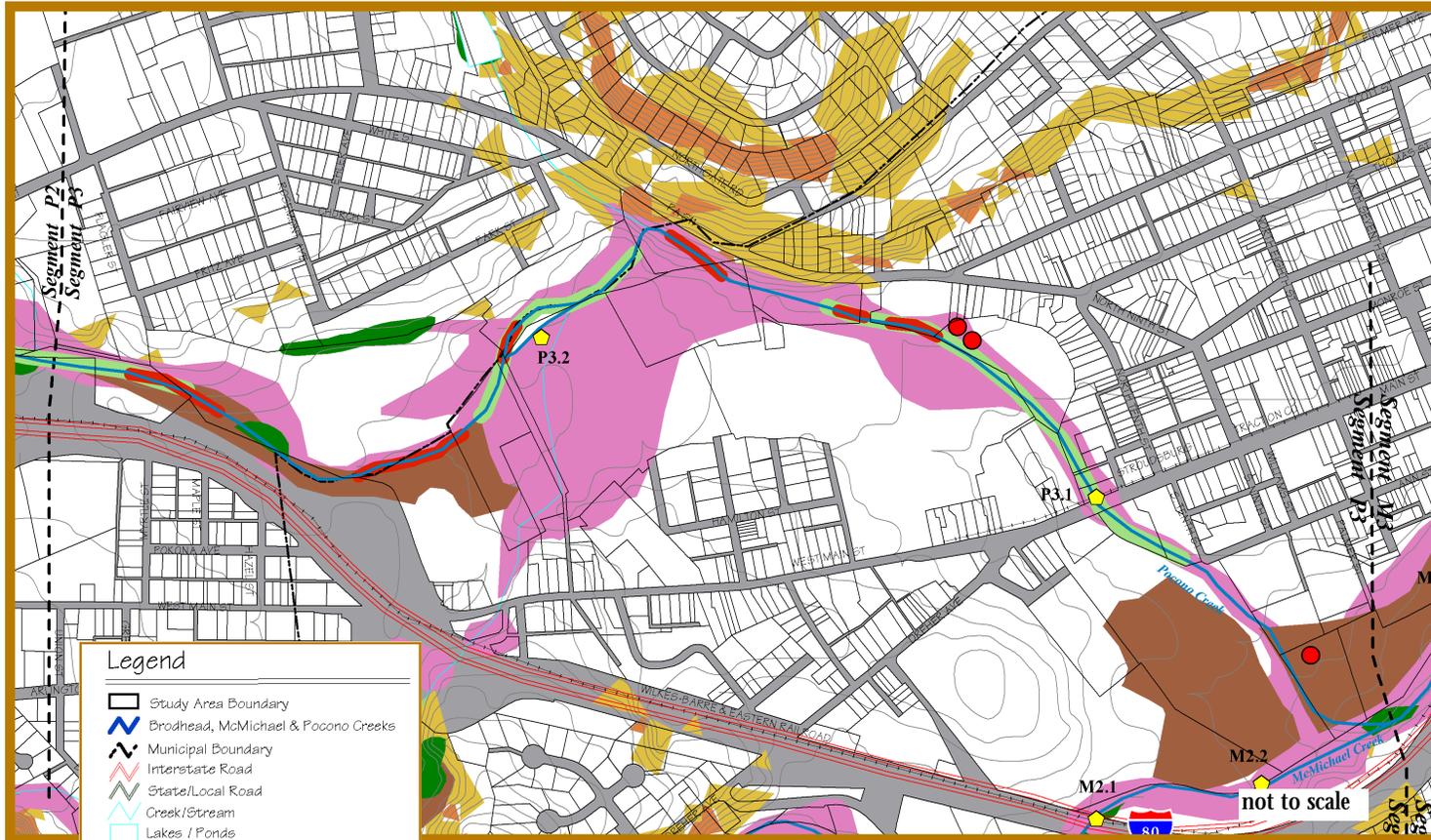
300 0 300 600 Feet

Information used to produce this map was obtained from the Monroe County Open Space plan. Other sources of information are noted in the legend. Padus Associates makes no claims to the accuracy of the base map data.

Brodhead, McMichael & Pocono Creeks Greenways Plan Stoud Township Stroudsburg Borough &



Pocono Creek EXISTING CONDITIONS Segment P-3



Legend

- Study Area Boundary
- Brodhead, McMichael & Pocono Creeks
- Municipal Boundary
- Interstate Road
- State/Local Road
- Creek/Stream
- Lakes/Ponds
- Active Railroads
- Abandoned Railroads
- Segment Matchline
- Levee

Notes (refer to Appendix)

P1.1 Segment Notes
Field Notes (by date)

213	08/22/01	302	11/08/01
256	08/29/01	271	01/17/02
781	10/24/01		

Natural Features
Contours and Slopes Interpreted from USGS Digital Elevation Model

- Contour - 2 Meter Interval
- Slopes 15 - 25%
- Slopes > 25%
- Floodplains
- Wetlands
- Hydric Soils
- Vegetation

Stream Assessment (from previous study)

- Pipes
- Erosion
- Habitat

Vegetation

Stream Assessment (from previous study)

- Pipes
- Erosion
- Habitat

300 0 300 600 Feet

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Brodhead, McMichael & Pocono Creeks Greenways Plan
Stoud Township
Stroudsburg Borough & East Stroudsburg Borough



Landowner Survey

Ownership of property within the greenway corridors is an issue at the heart of a successful greenway plan. To collect input from property owners, surveys were mailed on October 30th, 2001, to 215 owners of property along the three creeks. The survey questions were aimed at collecting input on the landowners support for a greenway system that may include their property.

Results Analysis

RESPONDENTS:

Forty (40) of the 215 landowners who received the survey returned a completed form for a response rate of 19%.

1. HOW LONG HAVE YOU OWNED YOUR PROPERTY WITHIN THE CREEK CORRIDOR?

The greatest number of respondents (25) indicated that they have owned their property for over ten years.

2. HOW MANY PROPERTIES DO YOU OWN ALONG THE THREE CREEKS?

The total number of properties represented by the forty respondents is seventy-two (72). Two landowners were responsible for a large number of the properties, one stating ownership to ten and the other to twenty.

3. HOW DO YOU USE YOUR PROPERTY?

Half of the respondents (20) use their property as their primary residents. The second largest number of respondents (12) use their property for business/commercial purposes.

4. ARE YOU AWARE OF OPPORTUNITIES TO PROVIDE PUBLIC ACCESS ALONG ANY OF THE CREEKS?

Nine respondents are aware of access opportunities. They are as follows: Bridge Street, Glen Park, Private Property, Pocono Park

5. WHICH OF THE FOLLOWING DO YOU CONSIDER THE ONE MOST IMPORTANT BENEFIT OF LIVING NEAR A CREEK?

Recreation opportunities received the least number of responses (4), while natural setting for home received the most (15).

6. DO YOU SUPPORT THE DEVELOPMENT OF GREENWAYS AND TRAILS THROUGHOUT THE STROUD REGION?

The largest number of respondents (19) do support their development. Five (5) respondents indicated that they weren't sure what greenways are.

7. THERE ARE A VARIETY OF TECHNIQUES AVAILABLE TO DEVELOP GREENWAYS. WHICH DO YOU FEEL ARE THE BEST METHODS TO USE AS A REGIONAL OPEN SPACE SYSTEM IS CREATED?

All five options were for the most part evenly supported. (open space easements, acquisition, zoning, transfer/purchase of development rights, agricultural preservation programs)

8. HOW IMPORTANT IS IT FOR THE COMMUNITY TO PRESERVE THE OPEN SPACE AND/OR CREEK CORRIDOR ASSOCIATED WITH YOUR PROPERTY?

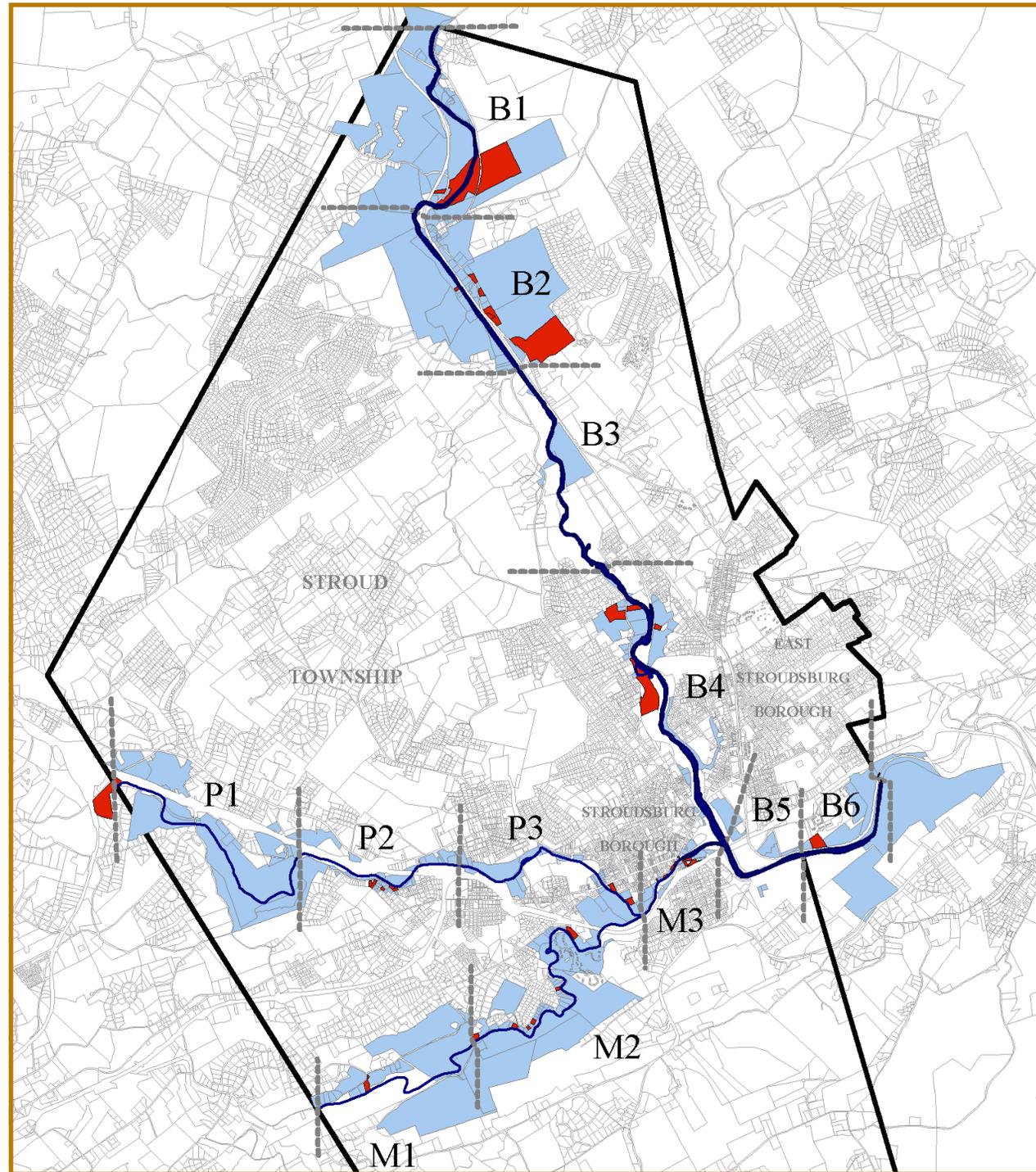
The largest number of respondents (15) felt that it is very important, nine (9) respondents felt it is not important.

9. REGIONAL OPEN SPACE AND RECREATION PLAN ALSO IDENTIFIED STRONG PUBLIC SUPPORT FOR THE CREATION OF A REGIONAL TRAIL SYSTEM. THE TRAILS MAY ACCOMMODATE HIKERS, FISHERMEN, AND BICYCLISTS. DO YOU SUPPORT THE DEVELOPMENT OF TRAILS WITHIN THE BRODHEAD, MCMICHAEL AND POCONO GREENWAYS, INCLUDING YOUR PROPERTY?

Eighteen (18) respondents indicated that they would like to see trails developed; nine (9) indicated that they would like additional information; and eleven (11) respondents would not like to see trails developed.

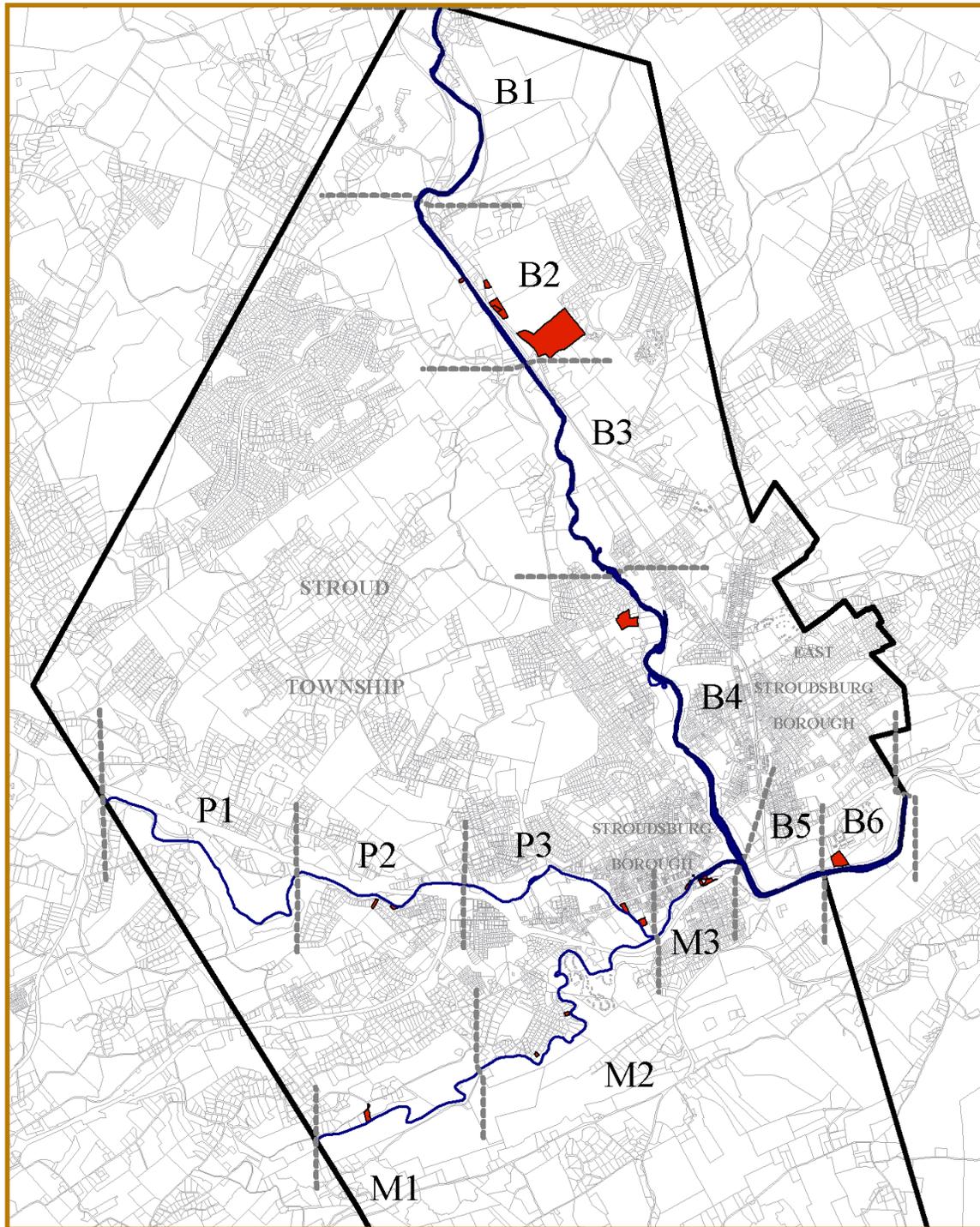
Landowner
Survey

Recipients 
&
Respondents 



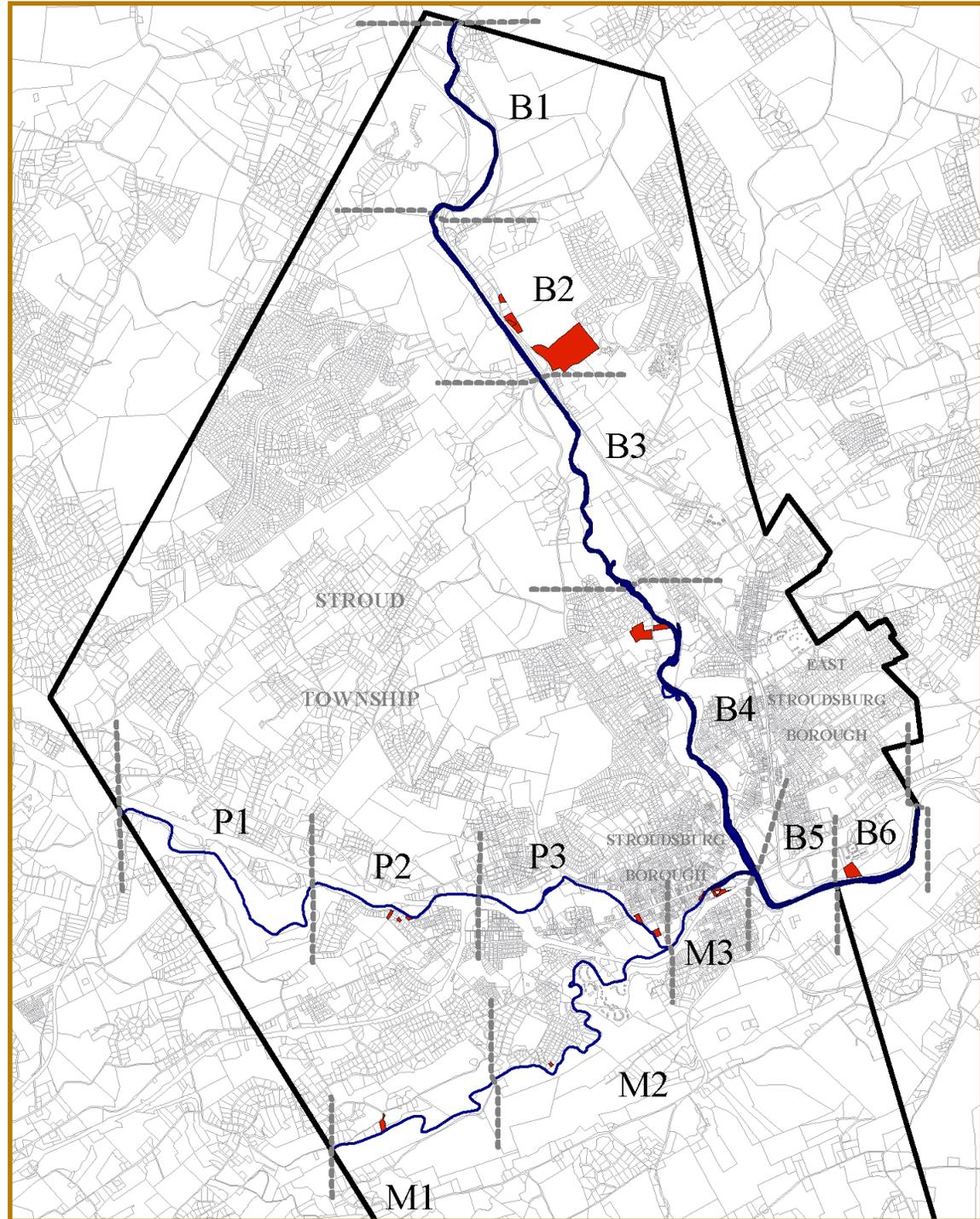
Landowner Survey

*support
development of
greenways and
trail in region*



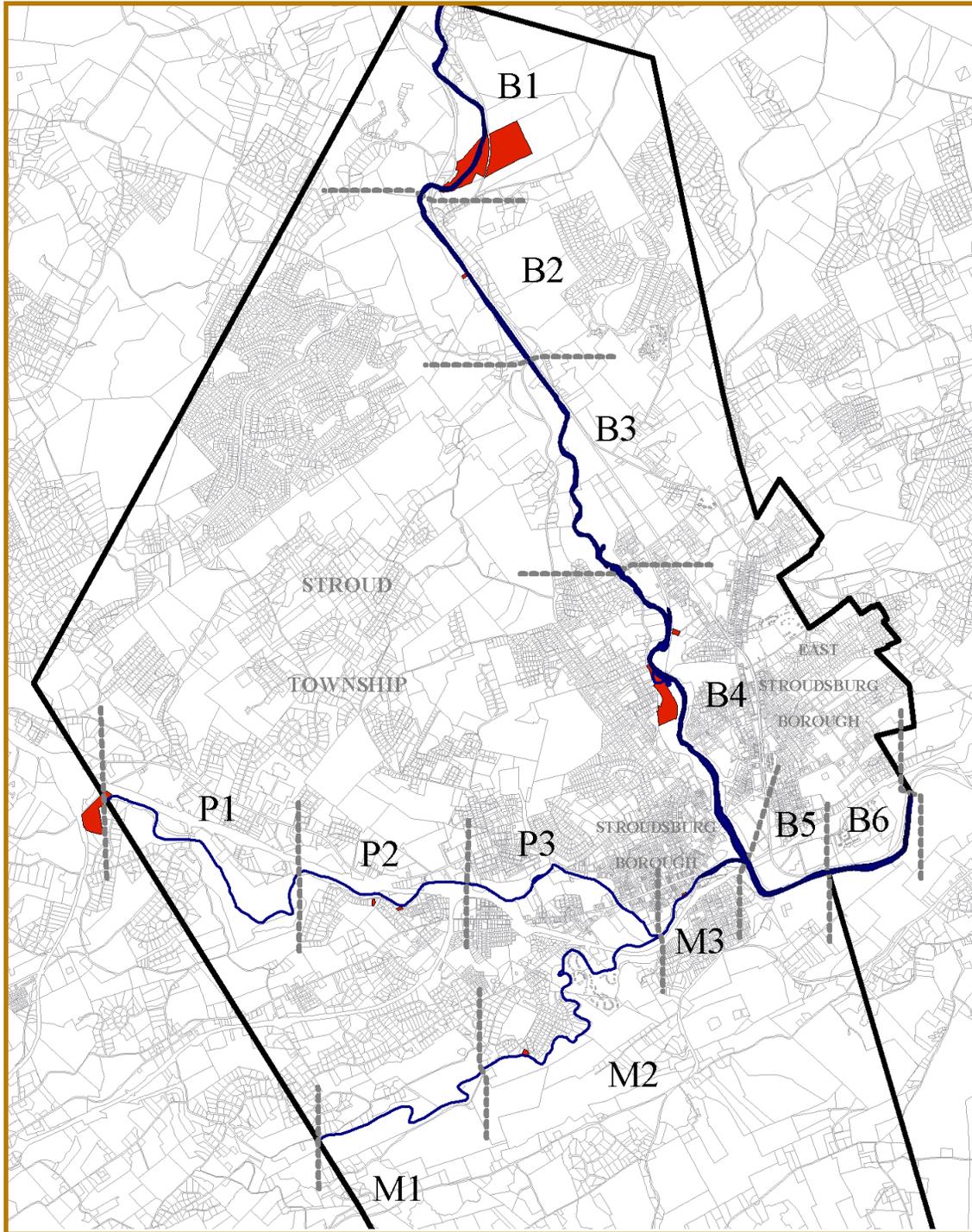
Landowner Survey

would like to see trail developed within greenways, including their property



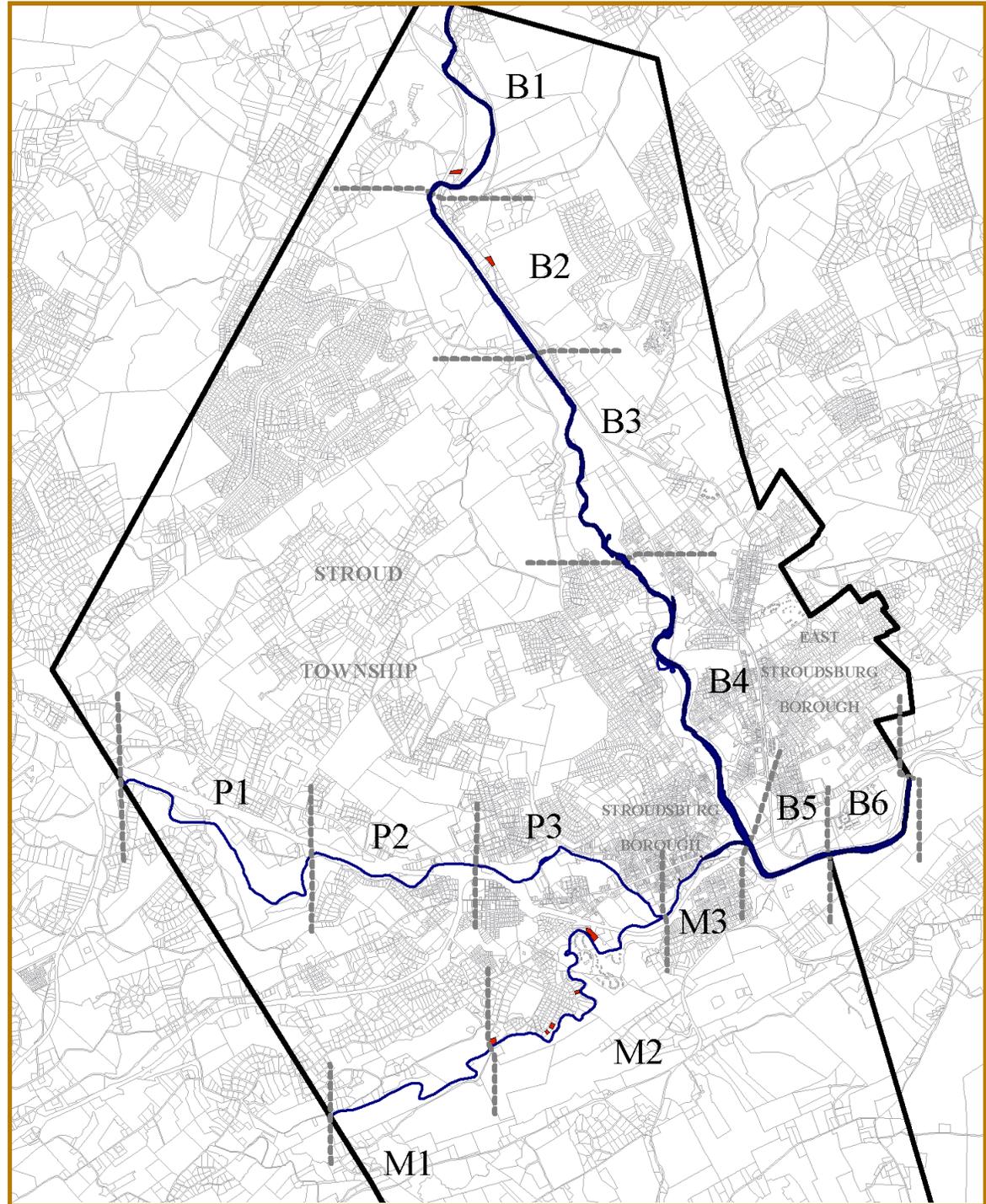
Landowner Survey

would not like to see trails developed within greenways and on their property



Landowner Survey

would like additional information on trail development



Focus Group Meetings

Two focus group meetings were held to provide an additional opportunity for landowners to gain an understanding of the greenway plan and give input. The date, time, and location of the meetings were provided in the introductory text of the landowners survey. This information was also included in a newspaper article regarding the greenways plan printed a few days before the meeting.

The meetings were held on November 7th and 8th at the Stroud Township Municipal Building. The meetings were run as in a public open house format from 4:30 to 6:30pm. Preliminary maps were displayed and available for use in discussion.

November 7th, 2001 - 4:30pm to 6:30pm

ATTENDEES:

Dennis Slauton, Landowner
Anthony Maula, Landowner
William Eyer, Landowner
William Serfass, Landowner
Richard Gaunt, Landowner
Matt Volitis, ESU Student
David Marchese, ESU Student
Joe Manley, ESU Student

DISCUSSIONS:

- Richard Gaunt owns property at the eastern edge of the Stokes Mill Bridge along Brodhead Creek. The small, one acre parcel includes land on either side of bridge's end. Mr. Gaunt indicated that residents use the area for swimming from the bank and jumping from the bridge to creek. Mr. Gaunt will consider selling the property for inclusion in the greenway system.

In addition to a number of ESU students from professor Arlene Rogers' recreation and parks curriculum, landowner and builder Dennis Slayton who lives on the western terminus of the Pocono Creek corridor

approached me. His major concern was privacy and public access through his lands.

Mr. Slayton opened our discussion by posing the question - how did we get public out of private? His private residential property is on the Stroud Township and Hamilton Township border. Considerable time was spent with Mr. Slayton explaining the concept of greenways and the various levels of development of a greenway plan and the typical private vs. public issues. It was made clear that we were working with a conceptual corridor at this point in the process. By the end of our discussion Mr. Slayton had a better understanding of what we were doing and did not feel as threatened. He also asked if he could have one of the maps showing his property with the other information we had collected. He was also somewhat familiar with the Godfrey Ridge study/ proposal and mentioned it by name.

After Mr. Slayton's initial concerns were addressed, we then talked over the map. Mr. Slayton has five (5) contiguous parcel totaling approximately 29 acres. The majority of his tract is in Hamilton Township. Of approximately 1800' of stream corridor through his property 150' fall in Stroud Township. We also noted that part of the abandoned WB&E rail corridor ran through his property and of approximately 1700' of abandoned rail bed corridor on his lands, 500' fall in Stroud Township. He said that he was already using it as a trail. He thought the greenway and trail concept was a very interesting but he fell short of suggesting the opening his land to public access. It was my feeling that if this were to occur it would not be in the near future. We then discussed other aspects of trail development including the development of a rail trail extension through Camelback ski area along the base of Big Pocono and into the State Game Lands. He was concerned that the SGL were not open enough.

Anthony Marla then joined our discussion. Mr. Marla noted another property within the project corridor next to Mr. Slayton's and mentioned the owner as being Carl Yost tract (2 acre tract - however a follow-up examination of parcel data did not reveal a tract listed with this owner in the vicinity). It was noted that Mr. Yost does not live locally anymore and has moved to West Virginia. It was also noted that Jack Mulahan of Mulahan and Yost auctioneers in Stroudsburg may have some properties in the corridor. Mr. Marla owns land along the McMichael Creek but outside the Stroud Twp boundary. It was revealed that Mr. Slayton and Mr. Marla were business partners who own several other tracts in the county but all except Mr. Slayton's private residence discussed above are outside the current study area. In general Mr. Marla expressed interest in greenways and environmental stewardship but as a businessman was guarded with these issues, i.e. he has experienced that when you give an inch a mile is taken especially

with the state (DEP).

Mr. Slayton gave me his business card:
Dennis left his card:
Clearview Builders Inc.
P.O. Box 1236Brodheadsville, PA 18322-1236
570-992-4045
800-535-4479
570992-1811 fax

November 8th, 2001 - 4:30pm to 6:30pm

ATTENDEES:

Zack Doll, ESU Student
Brian Keet, ESU Student
John Sunshine, ESU Student
Frank Tropea, ESU Student
Peter Costa, ESU Student
Wade Chilmanik, ESU Student
Aishling Stevens, ESU Student
Jen Zimpfer, ESU Student
Beth Sinnott, ESU Student
Edward Brecht, E.S.Q., Inc.
Irene Besecker, Landowner
Vanessa Murphy, Landowner
William Carson, Landowner
Linda Snyder, Citizen

DISCUSSIONS:

- Irene Besecker owns a large parcel of property at the northern end of Stroud Township along Brodhead Creek. The parcel is approximately eighty-eight (88) acres in size. A small portion of the property is immediately adjacent to the creek. Mrs. Besecker indicated that she would consider selling the land and will allow access to the property to allow an evaluation. She provided contact information and indicated she is open to further discussing potential options.
- Edward Brecht attended the open house as a representative of **, which administers land that was previously a quarry in Smithfield Township, adjacent to East Stroudsburg, along the Brodhead Creek. He recommended that Alice Morrisey, a member of the family that owns

the land, be contacted and interviewed regarding the greenway plan.

Again, several ESU students from professor Arlene Rogers' recreation and parks curriculum attended the forum. After some initial general discussion with the students Mr. William C. Carson approached me. Mr Carson is a major land owner on the west side of the Brodhead Creek between Analomink and Pinebrook church camp having approximately 4,00 linear feet of stream frontage and a total of approximately 76 contiguous acres (5 parcels) except for a small 5 acre out parcel in the middle of his tract along the creek. Like Mr. Slayton, Mr. Carson's concern was privacy and public access through his lands and I had a similar discussion explaining our interests and process. Additionally Mr. Carson was concerned with the reintroduction of rail service on the active line across the creek from his properties and would like to see landscape buffers installed to lessen the impact of active train service. I pointed out how this might be achieved through development of a trail and or riparian park on the opposite shore and Mr Carson seemed to like this idea. Mr. Carson gave his phone number as (570) 223-4251. He would like to stay informed.

Key Person Interviews

At the first meeting of the Brodhead, McMichael, Pocono Creeks Greenways Plan Study Committee, the members generated a list of potential key persons that could provide input on the future of the greenways plan. As the consultant conducted the inventory and analysis of the existing conditions, additional key persons were identified and added to the list as well.

Twenty people were contacted by members of the consulting team over a several month period. The interviews were conducted as phone conversations, meetings, or forums with persons of similar interests. The extent of the study corridor was provided to each interviewee as a means to focus comments to a specific spatial area.

The interview questions were used as a guide and starting point to help draw out relevant information for each individual to determine their ideas regarding greenways, trails, bikeways, and blueway and to identify issues, opportunities, and potential threats. It is recommended that these individuals be contacted regularly as this plan is implemented.

The following individuals were identified as important contacts, but were not interviewed as part of this project. It is recommended that they be interviewed following the adoption of this plan.

- Kenneth Barthold (Barthold Property)
- Irene (Metzger Property)
- Penny Miller (near Karmillowitz Property)
- Diane Reimer (East Stroudsburg Savings Association)
- Victor Rievera (Hampton Inn, General Manager)
- Clintan Methan (Hampton Inn, Owner)
- Scott McLarin (East Stroudsburg Businessmen's Alliance)
- Tom Bordigon (Kiwanis Club, President)
- Lions Club Representative
- Elks Club Representative
- Rotary Club Representative
- Monroe County Park Board
- Clarion Hotel Representative
- Alice Morrisey (Ureka Stone, contacted during Monroe County Greenway Study, dialogue should continue)

Name	Title	Organization
Kristina Anzini	Executive Director	Jacob Stroud Corp.
Bill Yaden	Site Manager	Kirkwood Camp
Hal Greene	Acting Site Manager	Kirkwood Camp
Ron Miskin, Esq.	President	Trout Unlimited
Andy Forte	Owner	Stroudsmoor Country Inn
Ken Brown	Authority Manager	Stroudsburg Municipal Authority
Bob Mudrick	County Maintenance Manager	PennDOT
Jeff Wilkins	Code Enforcement Officer	Stroudsburg Borough
John Motz	President	Pocono Outdoor Club
Craig Todd	Director	Conservation District
Orianna Richards	Resource Conservationist	Conservation District
Daryl Speicher	Watershed Specialist	Conservation District
Ann Pilcher	Community Relations Director	Pocono Mountains Vacation Bureau
Candace McGrevey	Exec. Director	Monroe County Historical Association
Jim Phillips	Borough Manager	East Stroudsburg
Bob Francis	Borough Manager	Stroudsburg
Kay Fordham	Spokesperson	LaBar Village
Phillip Perazio	Archaeologist	Kittatinny Archaeological Research
Art Zulick	Monroe Co. Open Space Board	Chair, Recreation Committee
Uli Geib	Physical Plan Director	East Stroudsburg Savings Association

Interview questions:

1. What opportunities or concerns are you aware of that might help or hinder the planning of a greenway with trails and/or bikeways in the corridor?
2. Do you or people that you know currently use the corridor for non-motorized travel or recreation?
3. Do you have any specific ideas for the protection of lands within or near the corridor?
4. Do you see opportunities for tourism promotion?
5. What special places are you aware of within the corridor (historical, cultural)?
6. Are you aware of any special needs that should be addressed in the planning process?
7. How do you envision the operation of a successful greenway with trails and bikeways in the corridor over the next five to ten years?

Summary of Key Points, by Question

The following information is a summary of responses received during the key person interviews.

What opportunities or concerns are you aware of that might help or hinder the planning of a greenway with trails and/or bikeways in the corridor?

Opportunities:

- The community supports the development of a greenway system. Open space planning and greenway development has strong backing from municipal government, the business community, and residents. Recreation support businesses can be viewed as a partner in the greenway development process.
- Any available land can be viewed as an opportunity to further the Region's open space and greenway development effort.
- Roads can be made more bicycle and pedestrian friendly through

upgrades. Striping plans for road widening and improvements can be used to increase bicycle and pedestrian compatibility. A bicycle/pedestrian decking can be added to the downstream side of the Stokes Avenue Bridge. PennDOT funds may be available to study roadways.

- The Brodhead, McMichael, and Pocono Creeks Greenways can link important communities, resources, and facilities:
 - The state welcome center in Delaware Water Gap;
 - The Delaware Water Gap National Recreation Area trail system;
 - The Stroudsburg Family YMCA;
 - The Appalachian Trail in Delaware Water Gap;
 - Stroudsmoor Inn property;
 - Cherry Valley;
 - Hamilton Township;
 - Quiet Valley Historical Farm;
 - LaBar Village Senior Community;
 - Godfrey Ridge as a connecting or parallel trail system;
 - Existing trail systems and state lands beyond the Stroud Township border;
 - Pocono Township;
 - Big Meadow Run; and
 - Flagler Run.

- The greenway can create a "circle of green" -- a continuous corridor for recreation -- around the Stroud Region. The Brodhead, McMichael, and Pocono Creek Greenways can create a lasting legacy for Monroe County residents: joined corridors of green areas with water that are easily accessible to the majority of the county's population. The corridors can be connected to create continuous loops.

- The Greenway can be used for environmental education and historical interpretation. The channelized section of the Brodhead Creek and stretches of the Pocono Creek along I-80 can be interpreted in terms of man's impact on the stream. Numerous opportunities for historical interpretation also exist, including the 1955 flood & subsequent levee construction, historic homes, historic districts, and Quaker Alley. The Stroudsburg area played a significant role in colonial America and in pre-colonial Native American occupations (e.g. the Shawnee-Minisink site is one of the most important prehistoric sites in Eastern North America.)

- Greenways can help preserve and maintain important natural resources. Purchase of lands or easements of open space lands along riverways will help maintain floodplains and wetlands in their natural state. The greenway can help maintain the unique and historic forested

floodplain along the Brodhead Creek.

- Greenways provide increased recreational opportunities for fishing, hiking, bicycling, and nature appreciation. They also provide alternative modes of transportation, spur economic development, and provide exercise opportunities.
- Some specific ideas for development of the Greenway include:
 - Pursue conservation easements, public access and trails through Kirkwood Camp;
 - Pursue public access through the Stroudsburg Municipal Authority property;
 - Restore the wooden bridge across the Little Sambo Creek in back of Dansbury Park connecting to the Salvation Army property for a looping opportunity with the levee and Washington Street;
 - Pursue a bridge crossing from Rotary Park to the Barthold property near the Hampton Inn to connect to the flat floodplain area behind the outlet stores;
 - Develop the flood control levee along the Brodhead Creek for a walkway or bikeway; and
 - Develop biking or walking trails from above the High Bridge.

Concerns:

- The greenway needs to link all the way through. Key landowners need to cooperate with municipalities so a continuous greenway with trails can be developed. Much of the open space of the region has already been lost to development. Greenway development through the most developed part of the county will be difficult.
- Municipalities need to work together to plan and implement the greenway.
- Need to form partnerships or inter-municipal agreements to oversee maintenance of the greenway. Inter-municipal agreements between Stroudsburg, Stroud Township, and East Stroudsburg are a good model.
- The municipalities do not have a lot of money for purchasing land. Grants or other kinds of funding will probably be needed to purchase land - so that the cost is not directly borne by the taxpayers of each municipality.
- Change in the environment since September 11. Security concerns may affect property owners' willingness to allow access.

- Shifting priorities for state-level funding. State funding could be pulled out of environmental projects over the next few years for security issues and other economic programs. Environmental issues, greenway planning, and other types of funds/grant programs may be put on the back burner. Also, there may be little PennDOT funding for improvements/projects during the years when the Marshalls Creek bypass is being built.
- Urbanization/changing values. We're starting to get the city problems, ... but with the rural mentality; and we have rural funding with urban problems.
- Lack of volunteers. The volunteer base is not what it used to be. There's a different attitude nowadays. People want to be paid.
- ATV use on the greenways. Four-wheelers on the levee are a concern.
- Safety. Parts of the corridor are being used for partying. Street people sleep under bridges along the creeks, particularly along the Pocono Creek. The greenway needs to be safe for users.
- User conflict/compatibility. Need to have compatible uses on the greenways to avoid user conflict. Many people find equestrian use incompatible with jogging or hiking.
- Need for more fishing access areas. Need more stream access points and parking areas.
- The use of greenways for recreation or transportation should be tempered by the primary use of a greenway for the conservation of important natural resources.
- Increased traffic. There may be an increase in traffic associated with recreational tourism and the greenway.
- Environmental concerns.
 - Need to monitor sewage treatment plant outfalls and elevated levels of heavy metals in the lower Brodhead.
 - An important wildlife corridor crosses I-80. Need a way for wildlife to move across I-80 in this area.
 - Main Street bridge over Pocono Creek (across from the Wawa) is badly designed. The widened channel results in gravel deposition downstream (loss of habitat) and requires continuous maintenance activity.
 - Lots in a subdivision along the McMichael's extend all the way to the creek. This is an active, meandering section of the creek and is a critical area to keep intact.
 - Erosion and compaction from dirt bike use could destroy

some of the hemlocks in the hemlock ravines of Glen Park.

- The location of the bicycle/pedestrian bridge across the Brodhead has some problems, including pedestrian safety, location, and environmental concerns. There have been reports of leachate in the water on the East Stroudsburg side. That might be a concern when footers are sunk for the bridge.
- Need to preserve the area's historic and archaeological sites. One prehistoric archaeological site has been registered in the study area near the water treatment plant. The potential for early Native American village sites in the Stroudsburg area is high. Historic home in East Stroudsburg is up for sale.
- Roads are difficult to widen for bicycle/pedestrian compatibility because of trees, stone rows, and old buildings.
- Need for a bike/ped-friendly crossing south of Broad Street and the inter-borough bridge. May be able to do an underpass under the bridge. The safest way might be to ramp down off the levee in front of Friendly's down to the existing traffic signal that has a pedestrian crossing.

Do you or people that you know currently use the corridor for non-motorized travel or recreation?

- The corridor is used for everything from walking to bird watching.
 - Running. The East Stroudsburg levee system is used for running. People run the loop from the back of the little league field by Sambo Creek up to Rudy's then through town. Loop on North Courtland Street by Wendy's.
 - Biking. Glen Park is used for biking, as are the levees and roads. Many roads are still nice for biking; they aren't terribly busy and offer beautiful views.
 - Walking. Quite a few people use the corridor for walking. Many people walk on the levee from Dansbury Park to the high school. People would probably like to have more various walking experiences. People walk by the McMichael's Creek behind the Hampton Inn area.
 - Hiking. The Glen Park area is used for hiking.
 - Fishing. People fish the Brodhead, the McMichael's and the Pocono.
 - ATVs. People ride ATVs on the levee.
- Specific places in the corridor that receive use:
 - Glen Park. Glen Park is widely used for biking and walking.
 - The YMCA uses Glen Park for soccer and softball.

- Levee system. People walk, run, and bicycle on the levee system for recreation. ATVs also use the levee system.
- Pinebrook Park, Stroud Township. Pinebrook Park is used for walking and nature appreciation.

• The corridor is a good place to get off the streets and away from cars. The greenway needs to tie to the streets. Right now people have to drive a car to get to a place where they can walk. Need to provide easy access to the trails for the main populous of the corridor area.

• All age groups use the corridor. A lot of teens and young adults use the corridor. If there were a proper place to go, you would find more family activity and elderly. Many seniors utilize the facilities at the YMCA.

Do you have any specific ideas for the protection of lands within or near the corridor?

- Many specific properties in the corridor were mentioned for acquisition or easements:
 - Barthold property - opportunities for trail development and easements behind the ribbon outlet;
 - Barthold property - floodplain land along the creek behind the Hampton Inn;
 - Best Supply property - across from the Stroudsburg Wawa, would connect the Stroudsburg high school property to the Main Street bridge;
 - Christman tract;
 - Felker tract;
 - Glenbrook East apartment complex - walking trail alongside Wawa on private land;
 - GPU property - connected to Glen Park;
 - Kirkwood Camp - owned by presbytery of Philadelphia, every attempt should be made to purchase development rights or secure permanent easements;
 - LaBar Village - seven-acre parcel along McMichael Creek, connects to Stroud Township Park, primarily floodplain;
 - Serfass property - towards Siebring's Powerhouse on the Brodhead Creek;
 - Shiffer properties - possible easement, two Shiffer properties in Glen Park area. Stroudsburg Borough is in ongoing discussion with the Shiffers to acquire;
 - Walker property - the missing link needed to extend the greenway all the way up to Stokes Avenue, East Stroudsburg Borough has contacted owners.
 - Triangular piece of property across from the McDonalds;
 - Vacant lot on Main Street, in the 600 block - could be a

small park or trailhead;
- Property between the water company and the Moose Lodge along the Brodhead - good fishing access;
- Forested floodplain remnants along Brodhead (segment B-3)
- currently zoned commercial/industrial, this area is a unique/historic forested floodplain.

- Potential bridge crossings:
 - Old bridge abutment on LaBar Village land across McMichael's Creek. The concrete base of the bridge is still there.
 - Small bridge over the McMichael's could connect the Hampton Inn side of the creek to the Rotary Park side - there's a large, flat open area which could be used for a skate park.
- Other ideas for acquisition/easements:
 - Preserve any areas on the McMichael Creek, especially tracts contiguous with township-owned lands and lands behind the Hampton Inn. Need to connect Stroudsburg Borough Park with Glen Park by trail.
 - Preserve viewpoints along Godfrey Ridge.
 - Develop more fishing access areas along the creeks.
 - Protect lands in the floodplain through easements.
 - Protect the Brodhead/Paradise confluence. Potential development site or acquisition pressure at Brodhead/Paradise confluence (segment B-1). Elevated sand mound (ESM) has been installed - could signify intent to develop site in the future.
 - Protect all of section B3 as a significant natural area (great natural trout habitat). Proposed 50-foot easement along the creek is too limited to adequately protect this area.
- Ideas for greenway development:
 - Ann Street area, McMichael's Creek/Rotary Park area. Could have a "river walk" with staging area or amphitheater on Ann Street.
 - Bike path on Main Street. Make the whole downtown more bicycle/pedestrian friendly.
 - Recreation area/outdoor concerts at Brodhead & McMichael Creeks confluence.
- General ideas:
 - Follow the Monroe County Open Space Plan; acquire any available land for open space.
 - The BWA conservation plan complements the greenway plan, e.g. riparian corridor preservation and streambank

restoration projects.
- Need to plan for protection of wildlife/habitat. Need to educate about habitat as part of the greenway interpretation.
- Old rail embankment near LaBar Village. Would tie downtown to McMichael Creek conservation lands.
- Old embankments should be established closer to substation & removed to allow floodplain to function along the Brodhead, restore the original cross-section of the floodplain (segment B-3).
- Make more use of the open space we have - the levee and each side of the levees. Develop levee parks like in Wilkes-Barre.

Do you see opportunities for tourism promotion?

- Developing a bicycling system in the county is a tourism promotion opportunity. Tie it all together with improved roadways.
- Local users will also be looking for local mountain biking opportunities (instead of going to the state game lands).
- The greenway could be a draw to the downtown.
- Opportunity for eco-tourism.
- The greenway will give everyone more options for spending time outdoors.
- Additional outdoor activities would benefit residents and visitors alike.
- We offer outdoor recreation to city dwellers and that should be a prime tourism draw.
- The greenway will mostly be used by local people.
- Ideas for promoting the greenway:
 - Promote the greenway to health care facility staff, i.e. Pocono Medical Center and East Stroudsburg University.
 - List on the Poconos Northeast Discovery Map (updated every year).
 - Familiarize staff of PennDOT's I-80 Welcome Center with the greenway.
 - Take Jacob Stroud Corp, local business leaders/VIPs on a "familiarity tour" of the greenway to create awareness.
 - List on seasonal outdoor recreation websites hosted by the Pocono Mountains Vacation Bureau, e.g. springoutdoors.com and Poconoski.com.
 - Could use the greenway for cross-promotion with other

types of tourism promotions, such as an Inn-to-Inn biking tour. Tie into the local accommodations.

- Tie into other recreational opportunities, such as "bike for a day, kayak for a day, walk for a day, walk and shop" - through the historic downtown.
- Downtown associations could use the greenway as a marketing opportunity.
- The economic development council could use the greenway for marketing purposes.
- Need to develop a map/brochure that points out features such as historical spots, fishing holes, etc.
- Develop a greenway walking tour of environmental and historical sites of interest with signage.

• Tourism concerns:

- Maintenance/upkeep of the greenway.
- Marketing of the greenway and tourism promotion should come very near the end of the planning process and be specific to the greenway as it is planned.
- In terms of historic interpretation, it's important to raise awareness about what resources are in the area. However, if we start identifying locations of archaeological or historic sites, that opens them up to the potential of looting.
- Need both historical and natural interpretation of the trail. Proximity (walking distance) to historic downtown is an asset to the trail.
- Outdoor activities can't be the only thing you provide - you need that balance of indoor and outdoor activities.
- If the greenway gets too crowded, no one will want to use it.

What special places are you aware of in the corridor (historic, cultural, etc.)?

• Historic sites/areas:

- All of downtown Stroudsburg;
- Fort Penn, Fort Hamilton;
- Old bottling area, in back of First Street, Stroudsburg;
- Water plant;
- Area between the East Stroudsburg sewer plant and the paper mill (historic area on the Brodhead);
- Underground entrance to the Sherman theatre - used to be part of Fort Penn;
- The Dreebie train station;
- Glass factories and tanneries all along the McMichael's - the Hampton Inn is where the last tannery stood in Stroudsburg;
- Sprague mills by Analomink;
- Raceway under the Holland Thread Mill;

- Millrace from ninth street to the creek;
- Old trolley line to Delaware Water Gap;
- All of Delaware Water Gap;
- Remnants of the first East Stroudsburg Borough water system facility;
- Quaker Alley;
- The Stroud Cemetery;
- Original building from Fort Hamilton, behind St. Luke's parking lot;
- The old railroad trestle on McMichael Creek;
- Prehistoric Native American sites, e.g., the Shawnee-Minisink site is one of the most important prehistoric sites in Eastern North America;
- Old dam/mill site on Brodhead Creek.

• Cultural sites/areas:

- Big Rock - traditional swimming hole;
- Red Rock swimming hole - heavily used by the public;
- Informal public access to the Brodhead (segment B-2) from the east side.

• Scenic sites/areas:

- Creeks - any of the trail sections that are along the water;
- Scenic and unique railroad and tunnel features where Paradise Creek joins the Brodhead;
- Large boulder below the Hampton Inn - could be a glacial deposit;
- Glen Park - hemlock grove area/glacial moraine.

• Other comments:

- Need to research and interpret the corridor as a separate project from the greenway plan.
- Any historic structure has interest both architecturally and has the potential to have archaeological deposits in the ground surrounding it.

Are you aware of any special needs that should be addressed in the planning process?

• Accessibility.

- Need to make portions of the greenway trail system handicap accessible.
- Downtown Stroudsburg and the levee system could be made handicap accessible.
- Need to provide fishing access areas for the handicapped.

- Signage.
 - Need interpretive signage. Use signs as a tool to educate people about what kinds of trees they're seeing on the greenway.
 - Need wayfinding signage. Need to mark the trails that are already established clearly (in the corridor, along the creek) so people can use them.
 - Put lines on roadways to create awareness, or get "Share the Road" signs. Signs help increase awareness of cyclists.
 - If PennDOT is made aware of signage needs ahead of time, they can integrate the signs into an upgrade project.
 - Need information kiosks, signage, and orientation.
 - Need trail identity/way-finding signage. Well-designed signage establishes identity and helps build respect for the greenway.
- Loops. The key to a greenway project is to create interesting loops on the road system associated with the greenways.
- Awareness. Need to create more awareness about the greenway and the planning process.
- Health benefits. A greenway with trails gets people a little more active.
- Tourism/economy. The tourism industry has to get involved and support the greenway. The old resorts are gone or faded in popularity and we need this kind of thing (to keep tourism up).
- Safety. Usually the more use there is, the more safety there is, the less litter...
- Litter control. Litter definitely needs to be addressed. Need to have a "pack it in pack it out" trash policy - no garbage cans.
- Trail etiquette/user conflict. Need to have some special use trails, for horseback riding or biking. Biking and walking are usually compatible, but hard-core mountain biking may not be compatible with walking, especially on narrow trails.
- Provide for multiple users. Get input from various portions of the population: bikers, walkers, joggers, and all user groups. Provide opportunities for fishing along the trail and places to picnic. Need more bicycling trails.
- Maintenance. Who will maintain the greenway?

- Access. Start with green infrastructure without public access - distinguish the green infrastructure from the trail system which overlays the green infrastructure.
- Bicycle/pedestrian-friendly roads and facilities. Need to make all roads bike/ped compatible. Need safe family biking areas. Consider stream type in bridge design. Environmental issues with the proposed bridge over the Brodhead at the landfill.
- Historic preservation.
 - Could get federal funds for historic/archaeological investigation. If you are doing any ground-disturbing activity related to improvements of trails, historic resources should be inventoried and taken into consideration.
 - Municipalities need to adopt their own cultural resource regulations. Contact the Bureau for Historic Preservation in Harrisburg for help.
 - Need to raise local awareness of what kinds of historic resources are in the area.
 - Archeological sites are fragile entities. There's always the potential for looters to go in and start looking for things.
 - Need to enact local ordinances so that investigation/preservation of important sites can occur, even when there is no other entity/agency requiring surveys of tracts of land.
 - Need to update the Historic Legacy Report periodically, at least every decade. Need to keep it current with updated status of historic buildings, missed buildings, etc.
 - Need to encourage maintenance of historic buildings and renovations to be done in a historically appropriate manner.
 - Need a historic overlay zoning district in some areas.

How do you envision the operation of a successful greenway with trails and bikeways in the corridors over the next 5-10 years?

- Need to establish an entity/partnerships to oversee and maintain the greenway.
 - Greenway commission should be appointed. Either a collaborative effort amongst the recreation commission members or the study team.
 - Develop partnerships with recreation departments, tourism promotion agencies, and recreational service providers. Get the ESU tourism promotion department more involved. High schools, Pocono Outdoor Club...
 - Possible membership program, "Friends of the Greenway" to do trail maintenance, organize workshops, raise money for upkeep. Strong volunteer corps, local-buy-in. Organization could also be a

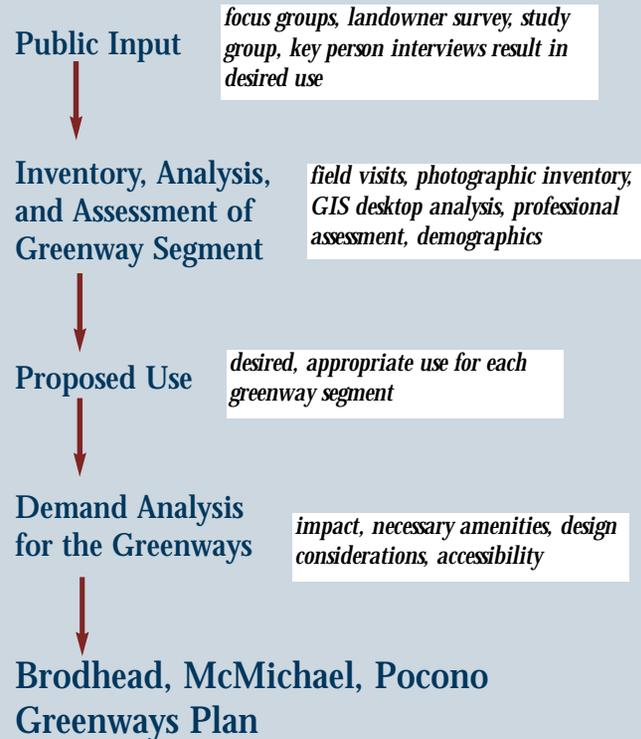
watchdog.

- Will need a regional overseeing body as a separate entity, with staff. It would be nice to see a regional parks & recreation body implement the joint planning process of the three municipalities.
- The three municipalities - Stroudsburg, East Stroudsburg, and Stroud Township - are looking at the possibility of forming a joint recreation commission out of the regional open space plan. That body would be the logical one to be in charge of the maintenance and operation of the greenway trail system. Getting that up and running and staffed would be key to the success of the system. That body could be the applicant for grant money for development of the trail.
- Need an inter-municipal group to do maintenance, policing, upkeep, etc.
- Maintaining trails through both volunteers and paid maintenance staff needs to be done if the greenway is to be successful.
- Need to secure the commitment of the community and also the finances to build improvements.
- If you don't have monitoring and maintenance systems in place, then instead of being something to enjoy, the greenway becomes a liability. Could have some kind of courtesy patrol.
- Need a plan for handling downed trees.
- Regional planning is an important goal. Not simply allowing development to occur willy-nilly.
- Linkages, connections, loops, and access. A successful system has to link together.
- Need bridges in key places. There should be two bridges across the Brodhead: one at Glen Park and one at Stokes Avenue to make a loop trail.
- Some bridges should be designated as "low flow" structures.
- Rotary Park would be another area for a crossing.
- The levee is good for looping. A small loop could use the inter-borough bridge at the north end and the pedestrian bridge at the south end. Would be nice to get rid of the fenced area on the levee - could make a small loop just by moving the fence.
- If you can't make the expensive connections (like the walking bridges across the Brodhead), then utilize the existing bridges through town. Get PennDOT to include some kind of marker (colored brick or something) on the bridge so that people can follow the greenway.
- Need to have public access. You can't get the public interested in protecting the streams and water quality unless you have accessibility.
- Need to connect people through the boroughs across the bridges.
- Need maps, brochures, and signage.
- Have to keep the trail well signed or people will get lost, especially through the borough. Need a good signage plan.
- Utilize little signs or painted spots on the sidewalks.
- Need some type of little map with a description to promote the greenway.

- Signs create awareness for motorists so that they're aware that there are hikers and bikers.
- Need "Share the Road" signs.
- You could make something unique to the trail for walkers and bikers rather than putting a bunch of signs up that get lost with all the other signs that are up. Something to give the trail identity, like the white blazes on the Appalachian Trail.
- Need to have sanitation facilities. Need porta-potties and drinking fountains at certain locations. Would be easy to do in East Stroudsburg and Stroudsburg - could just tap into the water main.
- Provide for mixed uses. Need to appeal to all age groups and skill levels. There has to be places for every type of user; some of the trails should be hard-surfaced, some nothing more than a blaze.
- Don't focus on the greenway as a transportation corridor. However, certain stretches may be appropriate for bikes. The primary user group should be hikers or walkers.
- Protect open space. The protection of green space is an important goal from both an environmental and tourism perspective.

Chapter 2

Demand and Potential Use



The Brodhead, McMichael and Pocono Creeks connect to rural countryside to the north, the downtown areas in the Boroughs, and the communities surrounding the Stroud Region. As a result, residents with a wealth of different background, abilities, and interests will interact with the corridors, generating demand for a variety of recreation opportunities and open space conservation techniques. The characteristics of these users (particularly the demands they generate) and the physical attributes of the greenway corridor influence the greenway's potential use.

A demand analysis of potential greenway development began with public input. The input collected through key person interviews, focus group meetings, and a landowner survey were used to identify resident's desired use of each greenway segment. The consultant also conducted a detailed inventory, and assessment of the existing conditions within the greenway corridor. This was accomplished during several field visits, the creation of a photographic inventory, and desktop analysis. Analysis of the desired uses identified through the public input within the context of the professional assessment resulted in the actual use for the greenways. The proposed use is intended to be a guide for future management and development of the greenway corridors.

“The proposed use is intended to be a guide for future management and development of the greenway corridors.”

Desired Uses

On November 8th, 2001, the consultant team met with the project Study Committee to identify desired uses for the greenways. For ease of reference, the group discussed use according to predetermined stream segments. Similar discussions were conducted at the Focus Group Meetings and during the key person interviews. The following is a list of preferred uses for each corridor segment.

Brodhead Creek

B1: open space preservation

B2: stream restoration, rail with bicycle trail

B3: fishing, curb ATV use (explore possibility of formal facility), in-line skating (on levee)

B4: fishing, in-line skating (on levee), trail head, biking, environmental education

B5: trail head, biking, cross-country skiing, environmental education

B6: open space preservation

McMichael Creek

M1: open space preservation

M2: fishing (from township property)

M3: fishing (at Rotary Park), fitness walking, downtown connections, exercise stations

Pocono Creek

P1: stream restoration, open space preservation, trail head, boating access

P2: open space preservation

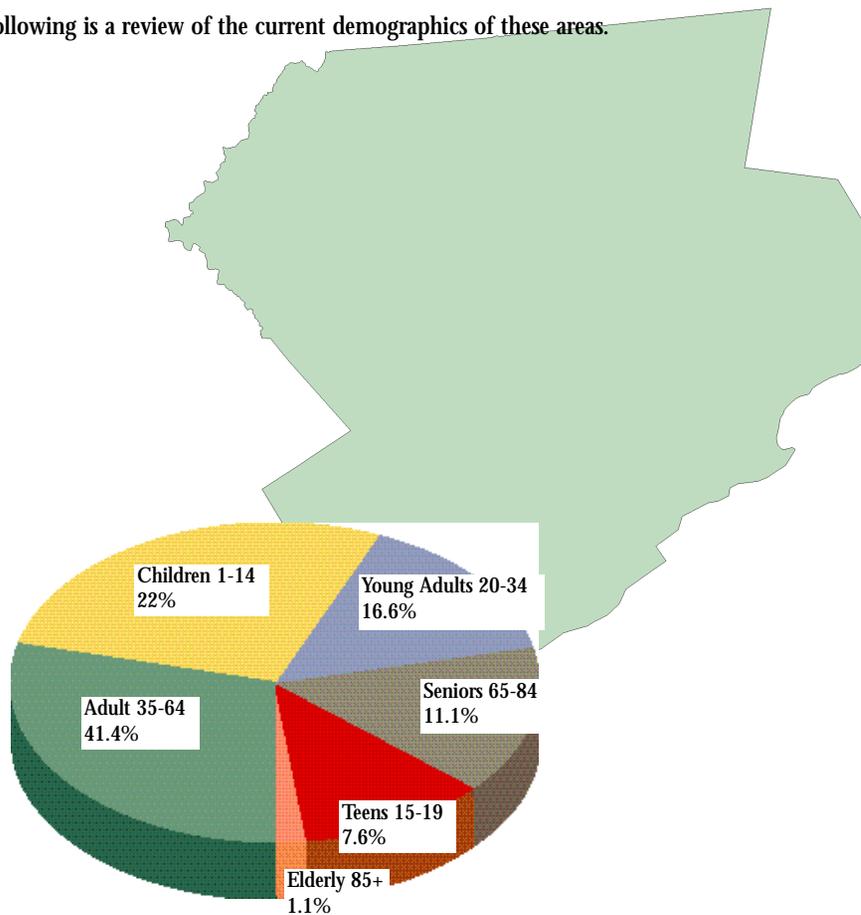
P3: environmental education

Demographics

The population demographics of the areas surrounding the greenways will play an important part in their future development, management, and protection. The study area falls within Stroud Township and the Boroughs of Stroudsburg and East Stroudsburg, all of which are within Monroe County, Pennsylvania.

Generally, age groups within an area's population will take part in certain activities related to the greenways. For example: seniors will use flat, paved trails as part of their daily walking routine; parents will want to take their children to playgrounds and fishing holes; a group of teens may be looking for a place to bike; college students could focus on studying natural areas as part of a class project.

The following is a review of the current demographics of these areas.



Monroe County, Pennsylvania

The largest percentage of the County's population falls within ages 25 to 54. Seventy-four percent of households are family households, 36 percent of which include children under eighteen.

Population

Age	Number	Percent
Under 5 years	8,280	6.0
5 to 9 years	10,676	7.7
10 to 14 years	11,574	8.5
15 to 19 years	10,574	7.6
20 to 24 years	7,777	5.6
25 to 34 years	15,186	10.9
35 to 44 years	24,778	17.9
45 to 54 years	19,858	14.3
55 to 59 years	7,057	5.1
60 to 64 years	5,711	4.1
65 to 74 years	9,916	7.1
75 to 84 years	5,549	4.0
85 years and older	1,571	1.1
Total Population	138,687	100.0

Households

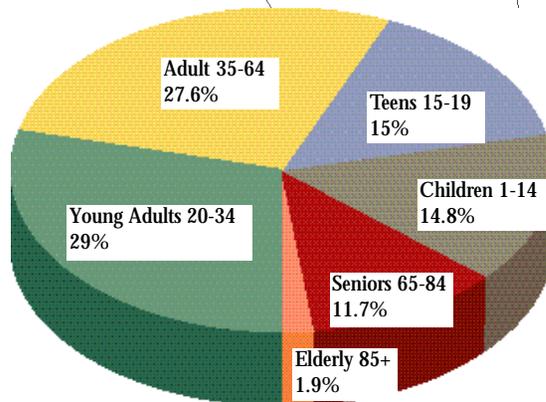
Type of Household	Number	Percent
Family Households	36,459	73.7
With own children under 18 years	17,890	36.2
Married Couple	30,021	60.7
With own children under 18 years	14,121	28.6
Female householder, no husband present	4,339	8.8
With own children under 18 years	2,605	5.3
Non-family Households	12,995	26.3
Householder living alone	9,998	20.2
Householder 65 years and over	3,866	7.8
Total Households	49,454	100.0

East Stroudsburg Borough, Pennsylvania

The Borough's total population in 2000 was 9,888. The greatest percentage of residents were 20 to 24 years of age (18.4%). Residents ranging from 15 to 24 years of age combine to comprise 33.4% of the population. The needs of this large group of teens and young adults within the Borough will impact the use of the greenway corridors.

One of the favorite activities among children and teens is skateboarding. Given the percentage of residents ages 10 to 19 years (20%), this need should be addressed by the municipal regional partners. Given the construction requirements and impacts on surrounding use, the development of a skate park would most likely be inappropriate for development within or immediately adjacent to a the stream corridor. However, lack of such a facility may result in unwanted informal use of the greenway for skateboarding. An appropriate site within the greenway system (avoiding close proximity to the creeks) or within the Stroud Region as a whole should be explored.

East Stroudsburg University is located within the Borough. The University is an important factor when planning for greenway and trail development, given the large number of young adults living in the area for a majority of the year. The greenway system and associated recreation facilities may support the athletic programs of the college. For example, the cross country running team could use portions of the greenway trail system for training.



Population

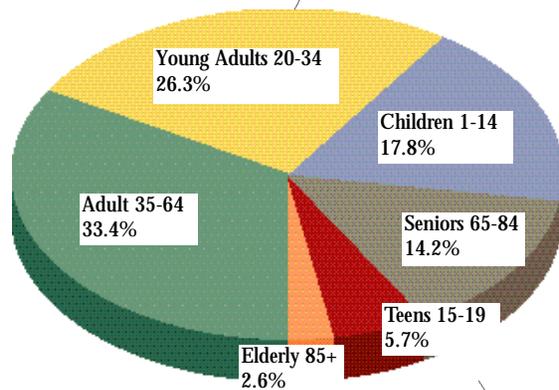
Age	Number	Percent
Under 5 years	487	4.9
5 to 9 years	477	4.8
10 to 14 years	503	5.1
15 to 19 years	1,487	15.0
20 to 24 years	1,824	18.4
25 to 34 years	1,040	10.5
35 to 44 years	1,138	11.5
45 to 54 years	936	9.5
55 to 59 years	346	3.5
60 to 64 years	313	3.2
65 to 74 years	630	6.4
75 to 84 years	523	5.3
85 years and older	184	1.9
Total Population	9,888	100.0

Households

Type of Household	Number	Percent
Family Households	1,856	59.0
With own children under 18 years	873	27.8
Married Couple	1,318	41.9
With own children under 18 years	545	17.3
Female householder, no husband present	393	12.5
With own children under 18 years	245	7.8
Non-family Households	1,289	41.0
Householder living alone	977	31.1
Householder 65 years and over	424	13.5
Total Households	3,145	100.0

Stroudsburg Borough

The Borough's total population in 2000 was 5,756. The age distribution of the Borough's population is more even than that of the other regional partners. There is, however, a large number of adults ages 35 to 64. This age group outnumbers the teens and seniors in the community by a significant margin. Therefore, efforts to protect, promote, and develop the greenway within Stroudsburg Borough should acknowledge the recreation activities and facilities most commonly undertaken by this age group (walking, jogging).



Population

Age	Number	Percent
Under 5 years	314	5.5
5 to 9 years	331	5.8
10 to 14 years	382	6.6
15 to 19 years	328	5.7
20 to 24 years	727	12.6
25 to 34 years	785	13.6
35 to 44 years	845	14.7
45 to 54 years	649	11.3
55 to 59 years	233	4.0
60 to 64 years	196	3.4
65 to 74 years	401	7.0
75 to 84 years	416	7.2
85 years and older	149	2.6
Total Population	5,756	100.0

Households

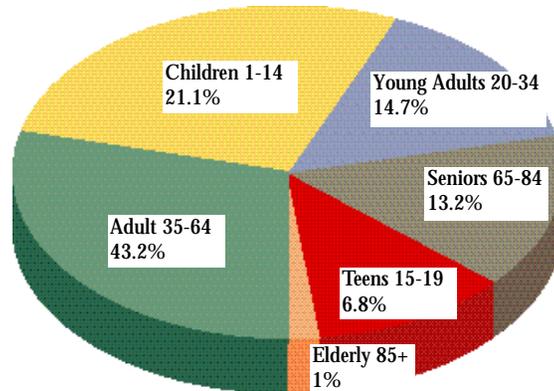
Type of Household	Number	Percent
Family Households	1,237	51.1
With own children under 18 years	608	25.1
Married Couple	844	34.8
With own children under 18 years	366	15.1
Female householder, no husband present	316	13.0
With own children under 18 years	202	8.3
Non-family Households	1,185	48.9
Householder living alone	843	34.8
Householder 65 years and over	392	16.2
Total Households	2,422	100.0

Stroud Township, Pennsylvania

Population

Age	Number	Percent
Under 5 years	853	6.1
5 to 9 years	1,021	7.3
10 to 14 years	1,068	7.6
15 to 19 years	957	6.8
20 to 24 years	581	4.2
25 to 34 years	1,475	10.6
35 to 44 years	2,353	16.8
45 to 54 years	2,229	15.9
55 to 59 years	802	5.7
60 to 64 years	654	4.7
65 to 74 years	1,171	8.4
75 to 84 years	669	4.8
85 years and older	145	1.0
Total Population	13,978	100.0

Children, ages 1-14, comprise a large portion of the Township's population (21%). This is an important consideration when planning for the future of the greenway system. Playgrounds provide additional recreation opportunities for families with children of all ages, and also present opportunities for children to interact with the greenway system. As the greenway trail system is developed, consideration should be given to the design requirements that accommodate strollers and young children. Providing parents with a trail their whole family can use exposes a broad audience to the greenway system.



Households

Type of Household	Number	Percent
Family Households	3,878	75.0
With own children under 18 years	1,763	34.1
Married Couple	3,245	62.7
With own children under 18 years	1,434	27.7
Female householder, no husband present	471	8.1
With own children under 18 years	221	4.3
Non-family Households	1,296	25.0
Householder living alone	1,025	19.8
Householder 65 years and over	439	8.5
Total Households	5,174	100.0



Potential User Profiles

Before one begins to establish design requirements for a trail it is important to have a thorough understanding of who will be using the trail. Each trail user is unique and may desire a certain experience. It is incorrect to assume each trail user will desire the same type of facility or experience.

The purpose of this section to provide background on the various types of trail users, and, to identify the desired experience of each. Once an understanding is gained, only then can it be determined which classifications a trail system will be designed to accommodate. Subsequently, appropriate trail design decisions can be made to meet the needs of the intended users.

PEDESTRIANS

Pedestrians are typically accommodated with other trail users such as bicyclists and in-line skaters, within a multi-use corridor. In some cases, however, pedestrians may be accommodated on an exclusive trail, as a means of separating pedestrians from faster moving bicyclists and in-line skaters.

Where pedestrian use is expected, facilities should be accessible to a variety of people with a broad range of abilities, skill levels, and desired experiences, and should be designed to accommodate all persons. New and reconstructed trails should be made as accessible as possible while maintaining the essential character of the resource. Furthermore, all trail amenities, such as restrooms, drinking fountains, and picnic tables, should comply with the ADA accessibility guidelines.

FITNESS WALKERS

Walkers are often looking for a short outdoor experience. They can be accommodated by short trail segments and tend to like direct paths from one destination to another.

HIKERS

Hikers are usually more familiar with the outdoors and like a more strenuous walk. They can negotiate difficult terrain and steep grades. Hikers will generally stay on trails that are direct yet appealing enough to keep their experience interesting.

ROCK CLIMBERS

Climbers use trails to access climbing areas. Contour trails may meander too much for their needs. This group prefers fall-line trails that provide quick, direct access to climbing areas. However a sustainable fall-line trail must be armored with rock or have a sturdy staircase with excellent drainage.

CROSS COUNTRY SKIERS

Cross country skiers will utilize a variety of trail types during the winter. Open fields are also considered skiing opportunities.

FISHERMEN

Fishing is an important aspect of the three creeks that should be protected and augmented. Fishing requires minimal amenities, other than access to appropriate stream areas. In the rural segments of a fishing stream, parking may also be necessary if pedestrian access is not feasible.

BOATERS

The Brodhead, McMichael, and Pocono Creeks present opportunities for kyaking and canoeing. Similar to fishing, non-motorized boat use of a stream requires minimal amenities. The primary needs are a boat launch area and parking. Point to point routes are desirable.

ENVIRONMENTAL EDUCATORS

This study identifies several physical ties with school district facilities in the region. Whether a corridor runs immediately adjacent to a school or is a few blocks or miles away, greenways offer opportunities for environmental education. These opportunities are facilitate by the development of a greenway trail system, which provides access to greenway areas. Trails and interpretive signs provide the necessary facilities for educators to successfully run environmental programs.

BACKPACKERS

This group yearns for a backcountry experience, and will travel many miles to reach it. Even though they have an intended destination they are less apt to shortcut because they carry heavy loads that hinder maneuverability. Gentle trail grades linking natural features help keep long distance foot travel interesting. Water sources should be regularly spaced

and near suitable camping sites.

TRAIL RUNNERS

Runners enjoy several miles of connecting trail loops that provide variety for their workouts. Rolling contour trails with occasional difficult sections for challenge are desirable.

IN-LINE SKATERS

In-line skaters are typically accommodated along with other modes. They will be commonly found along with bicyclists and pedestrians on multi-use trails.

EQUESTRIANS

Horses (and their riders) are the heaviest, widest and tallest non-motorized users. Trails designed to accommodate horses have a great deal of flexibility in design. Trails for equestrians usually call for a wider corridor and a higher ceiling. The most important consideration for equestrian trails is the surface, which should be designed to reduce injuries to animals and riders. The placement of obstacles is also a key issue for designing equestrian trails. Some people with mobility impairments are able to travel by horseback but are not able to walk a horse around obstructions. Therefore, equestrian trails should not require the rider to dismount to avoid obstacles while on the trail. In all design elements, the safety of the horse and rider is paramount.

ENDURANCE ATHLETES

Some trail runners, mountain bikers and equestrians like to push the limits of their endurance. These types of visitors will look for trail networks that are as much as 50 or 100 miles in length. A large network of trails will be more appealing than multiple laps of a short trail. Disabled Trail Users: The Americans with Disabilities Act is a federal law enacted in 1990 that protects the rights of people with disabilities to have equal access to public facilities. With increasing levels of skill and endurance, and more efficient off-road wheelchairs, physically disabled trail users are seeking more trail opportunities. They require an average trail grade of no more than 5 percent, a wide, relatively smooth tread surface and no staircases.

BIKERS

As with other user classifications, there are several classifications of mountain bikers. Each classification is based upon the rider's technical abilities, as well as their desired experience. The classic mountain bike trails is the "single track," which is a narrow pathway with many hills and sharp turns. Mountain bike trails vary greatly in difficulty.

Biking classifications include:

Beginner Cross-Country Riders:

Casual cyclists like gentle, relatively short trails. As riders become more skilled, they usually seek longer, more difficult trails. Rough, arduous or twisty sections will satisfy the need for technical challenge and can help control speed. Mountain bikers tend to stay on trails if they are fun to ride.

Avid Cross-Country Riders:

Experienced cyclists who are comfortable in the backcountry and typically carry tools, water, food, clothing and sometimes a first aid kit. Avid riders seek medium-to-long distance rides covering from 10 to 100 miles in a day and are prepared to take care of themselves. Solitude, nature and challenge are key elements of the allure. Several miles of connecting loops with exciting natural obstacles are desirable.

Downhillers:

Technically advanced riders with very sophisticated equipment who desire steep, very difficult downhill trails. Downhill bikes are function specific and are geared mostly for going down hills. Rocky contour trails with many grade reversals are the most sustainable for this segment of the sport. Downhill riders will seek trails that have vehicle shuttle access from the top and bottom. Ski areas that provide summer lift service and amenities are popular with this user group.

Technical/Trails Riders:

This group seeks very technical trails, incorporating features such as rock face drops, log rides, elevated bridges, stone ledges, dirt jumps, and seesaws. The experience this type of rider looks for varies - some riders prefer to incorporate technical features into longer cross-country rides, while others look for these challenges as a stand-alone experience. One solution is special use technical areas, similar to snowboard parks at ski resorts that focus use. On backcountry trails, these technical features should be well built, blend with nature and flow with the trail.

On-Road Bicyclists:

The Federal Highway Administration categorizes On-road bicyclists as follows:

Advanced or experienced riders are generally using their bicycles as they would a motor vehicle. They are riding for convenience and speed and want direct access to destinations with a minimum of detour or delay. They are typically comfortable riding with motor vehicle traffic; however, they need sufficient operating space on the traveled way or shoulder to eliminate the need for themselves or motor vehicles to shift positions.

Basic or less confident adult riders who may use their bicycles for transportation purposes, for example, to get to the store or visit with friends, but prefer to avoid roads with fast or busy motor vehicle traffic unless there is ample roadway width to allow easy overtaking by the faster motor vehicles. Thus, basic riders are comfortable riding on neighborhood streets and multi-use paths and prefer designated facilities such as bike lanes or wide shoulders on busier streets

Children, riding on their own or with parents, may not travel as fast as their adult counterparts but still require access to key destinations in their community, such as schools, convenience stores and recreation facilities. Residential streets with low motor vehicle speeds, like those with multi-use paths, and busier streets with well defined pavement markings between bicycles and motor vehicles can accommodate children without encouraging them to ride in the travel lane of major arterial roads.

There is extensive literature relating to guidelines for on-road bicycle facilities. AASHTO and FHWA, as well as many states, offer a wide range of guidelines for various types of bicycle accommodations. There are essentially three types of on-road bicycle facilities: paved shoulders, shared roadways (including wide curb lanes), and bicycle lanes. All on-road bicycle facilities should be designed so bicyclists travel in the same direction as motorists.

Safety is of great concern in the design of on-road bicycle facilities. Conflicts with pedestrians, automobiles, or other bicyclists can lead to serious injury. Poorly maintained pavement, snow build-up and debris can also lead to safety problems. The guidelines listed below are minimum recommendations only, and site-specific conditions may dictate variations for safety purposes.

FAMILIES

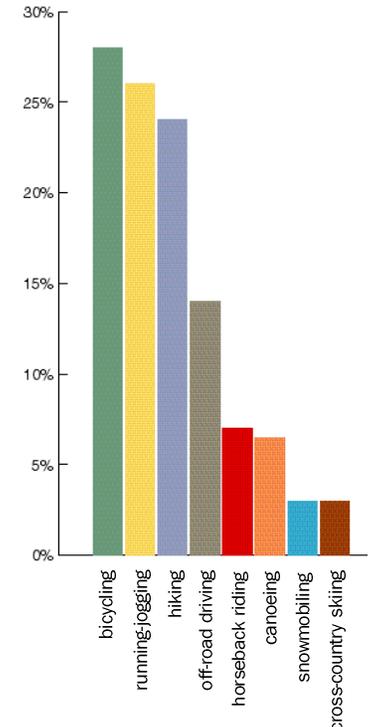
Families will be important users of the greenway system. Consideration should be given to the variety of ways families interact with the greenways. Parents with very young children like to push strollers on a

paved trail. Parents will utilize a safe and easily accessible area to take children fishing.

Motorized Use

Use of off-road motorized vehicles is popular in the Stroud Region. This recreation activity may have significant environmental, aesthetic, and social impacts. Public input collected as part of the Stroud Regional Open Space Plan, as well as this Greenway Plan, indicates support for motorized off-roading, but an acknowledgement of its incompatibility with greenway conservation efforts. The potential negative impact is particularly apparent within the the creeks' riparian zones.

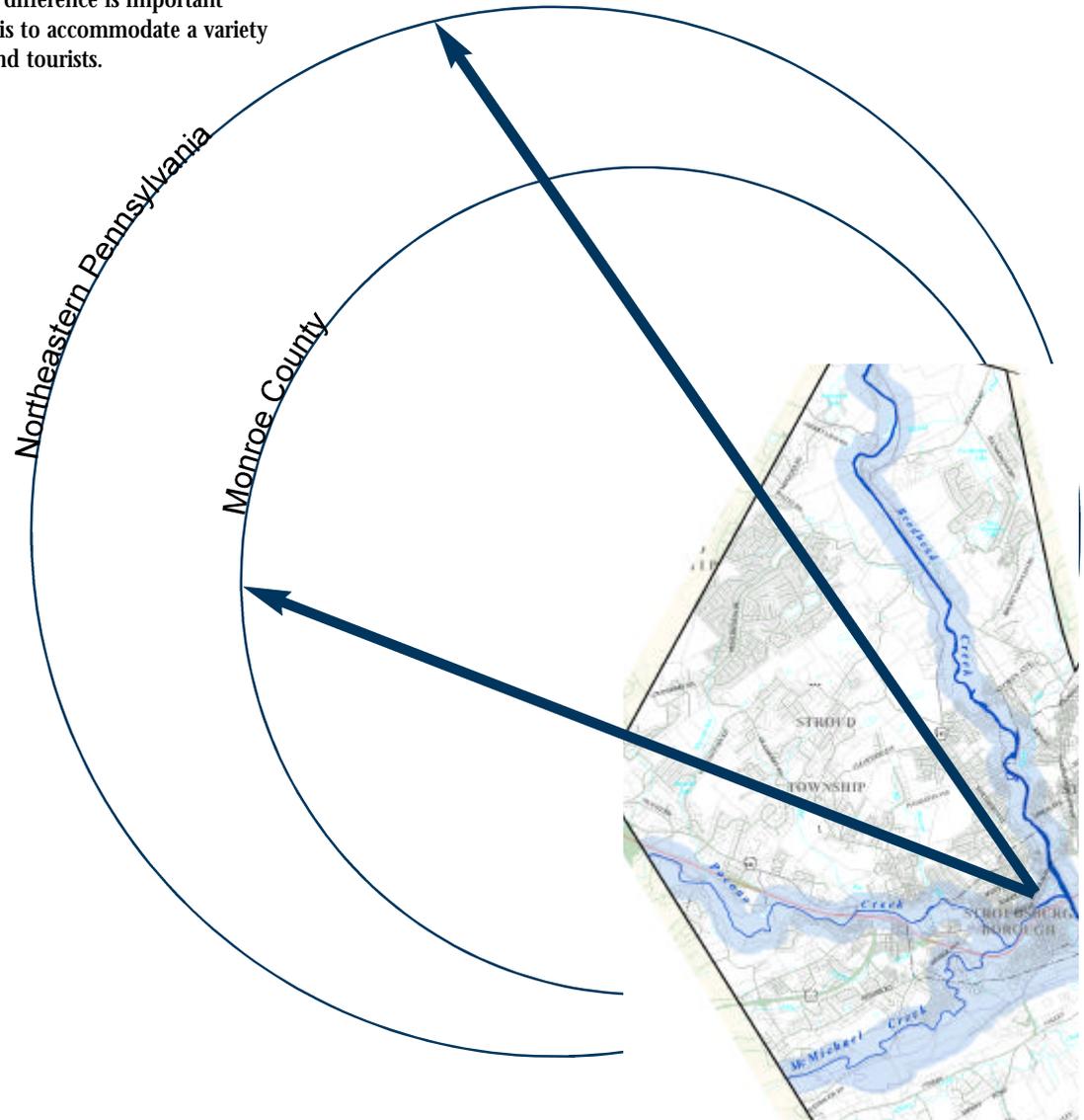
The limiting of motorized off-road activities from the creek corridors does not preclude any such activity within the region. In fact, opportunities to provide a formal area for motorized activity should be explored.



From 1994 to 1995, the United States Forest Service conducted a survey of participation in outdoor recreation activities across the country.

Service Area

The service area of the Brodhead, McMichael, and Pocono Creek greenway system encompasses the entire Stroud Region and beyond. Individual elements of the system will have varying service areas. For example, a trail within Pinebrook Park may be used by local residents visiting the park. On the other hand, hikers of the Appalachian Trail may take a side trip to the Stroud Region and use the proposed trails on the Godfrey Ridge. Recognizing this difference is important because the goal of the greenway system is to accommodate a variety of users, including both local residents and tourists.



Key Community Elements and Potential Connections

The Brodhead, McMichael and Pocono Creeks Greenways are an important part of the local community fabric. This study acknowledges key community elements that may have an influence upon or be influenced by the greenways. Several of these elements may serve as destinations or starting points as part of the trail system associated with the greenways. These potential connections will be an important part of residents' interactions with the greenways.

KEY ELEMENTS:

Pinebrook Park

Facilities at this Stroud Township Park include picnic areas, trails, and multi-purpose fields. These recreational opportunities will add to the park's use as a "stop" along the greenway. Conversely, the parking and facilities at the site may lend to the park's use as a starting point for use of the greenway trail. Additionally, resident's use of the park will increase opportunities for interaction with the stream corridor, which runs directly through the site. This visibility may increase the potential success of efforts to provide opportunities for environmental interpretation.

Christman Property

This site is currently under evaluation to determine the feasibility of its use as a regional recreation facility. Should the site be developed as such, because of its proximity to the greenway corridor, connections to the possible recreation and conservation opportunities will arise.

Clearview Elementary School

This school is in the center of a residential pocket along Route 191, within Stroud Township. Given its location, the site may serve as a trail head for residents. If trail head facilities and a connecting pedestrian/bicycle trail to the Brodhead Creek Greenway were developed, the school could serve as a starting point, increasing awareness and directing residents to the greenway. Additionally, the development of a trail connecting the site to the greenway would physically emphasize the opportunities for the use of the greenway by school administrators as an outdoor classroom.

Arlington Elementary School

Given its location, the site may serve as a trail head for residents. If trail head facilities and a connecting pedestrian/bicycle trail to the Pocono Creek Greenway were developed, the school could serve as a starting point, increasing awareness and directing residents to the greenway. Additionally, the development of a trail connecting the site to the

greenway would physically emphasize the opportunities for the use of the greenway by the school administration as an outdoor classroom.

Stroudsburg Middle School

The Middle School may serve as an important connection between the Pocono Creek Greenway. Use of the greenway for educational purposes by middle school classes will increase the awareness of the greenway system and the current conservation efforts.

Library

Use of the library by a significant portion of the general population provides opportunities to connect the greenway to cultural elements of the community, increase awareness of greenway conservation efforts, and direct users to the trail and greenway access points.

YMCA

The facility's location in the downtown area present the opportunity for the site to serve as a trail head for the nearby Pocono and McMichael Greenways. Given that the facility is in the heart of downtown, a formal trail will not connect the site to the greenway. More likely, a system of directional signs from the downtown area to the greenways will direct users. Therefore, the YMCA facility may serve as a distribution point for information regarding the greenways and trails. The large number of residents that use the facility will offer an opportunity to increase residents' awareness of the greenways.

McMichael Creek Conservation Lands

The Stroud Township Conservation Lands is a key community element and an integral part of the McMichael Creek Greenway. The site will serve as a starting and ending point for trail use and provide opportunities for environmental education. Another important aspect of this site is the opportunities to make connections to Hamilton Township.

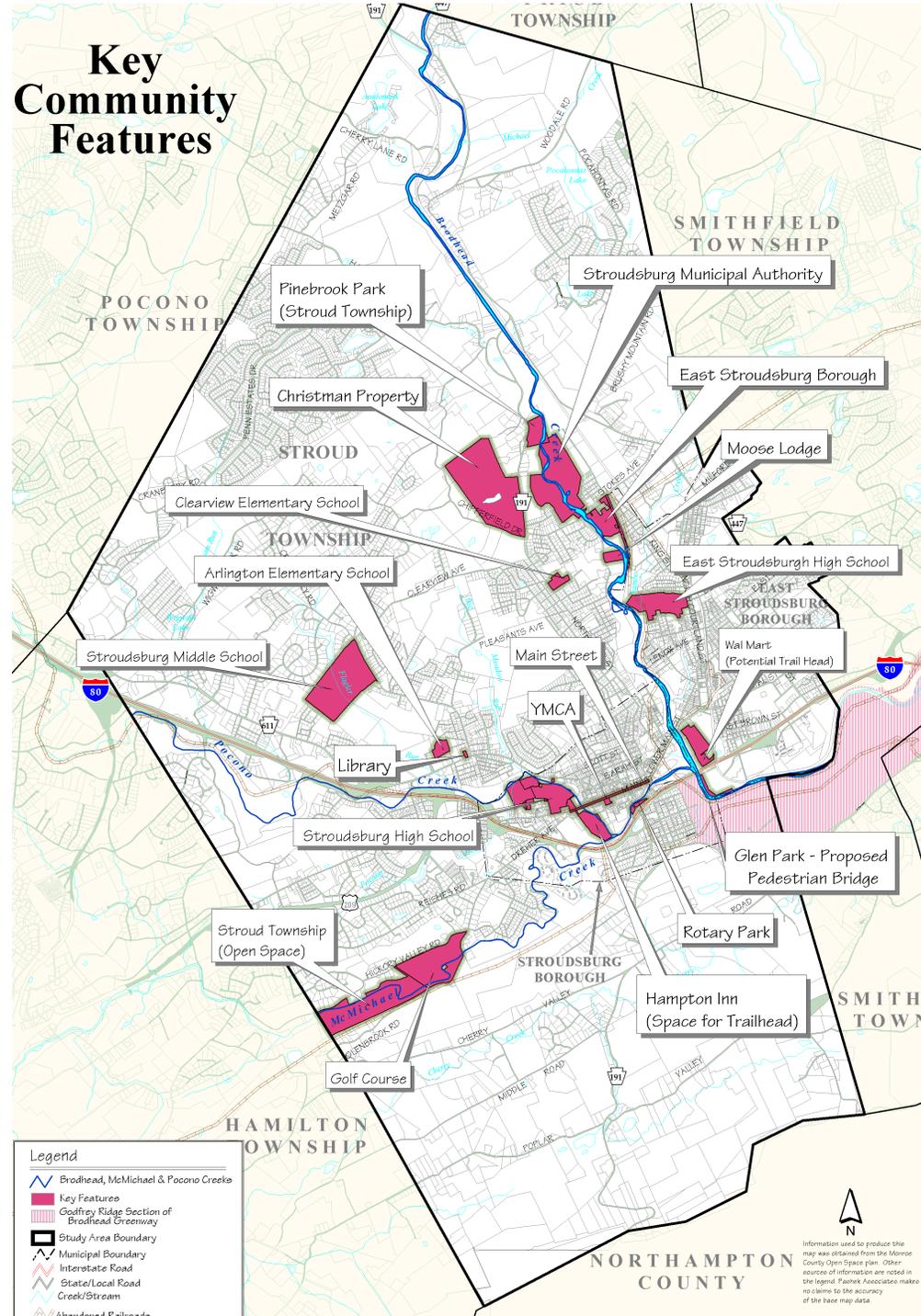
Glenbrook Golf Course

McMichael Creek runs through and adjacent to the golf course. Heavy use of the course and the high visibility of the stream will provide opportunities to increase awareness of the stream corridor, the greenway system, and nearby trails.

East Stroudsburg High School

The High School site is located near the Brodhead Greenway Corridor. This location offers several opportunities for the School District's property to become an important aspect of the greenway system. Current or future recreation facilities at the site will contribute to the recreational aspect of the greenway. The site may also offer an opportunity for the construction of a trail head, strengthening the tie between the greenway and school. The greenway will also be used by students and teachers for educational

Key Community Elements and Potential Destinations



purposes.

Glen Park

Glen Park is a well-known recreation area that may serve as a connection to a regional trail system (including the Appalachian Trail), as well as the local greenway trail system. The park site is adjacent to the large tract of open space lands owned by Monroe County. A pedestrian bridge over the Brodhead Creek is proposed in the area of the park and will increase accessibility to the park.

Rotary Park

Rotary Park could serve as the key connection between the greenway system and the downtown Stroudsburg area. The park provides access to the McMichael Creek and may provide opportunities for the development of trail head facilities and trail connections to the greenway trail system.

Stroudsburg High School

The Stroudsburg High School Complex is immediately adjacent to Pocono Creek. The site's location, size, and existing facilities make it an important part of the greenway system. The opportunities for educational programs, streambank enhancement projects, and the development of recreational trails will prove beneficial as the greenway system is developed.

Main Street, Stroudsburg

Main Street Stroudsburg is the commercial and cultural hub of the region. A connection between the Main Street Area and the McMichael Creek greenway will increase awareness of the greenway and further incorporate the greenway system as an important component of the overall community fabric. This will also provide numerous opportunities for historical interpretation of the downtown area.

Existing Land Use and Utility Corridors

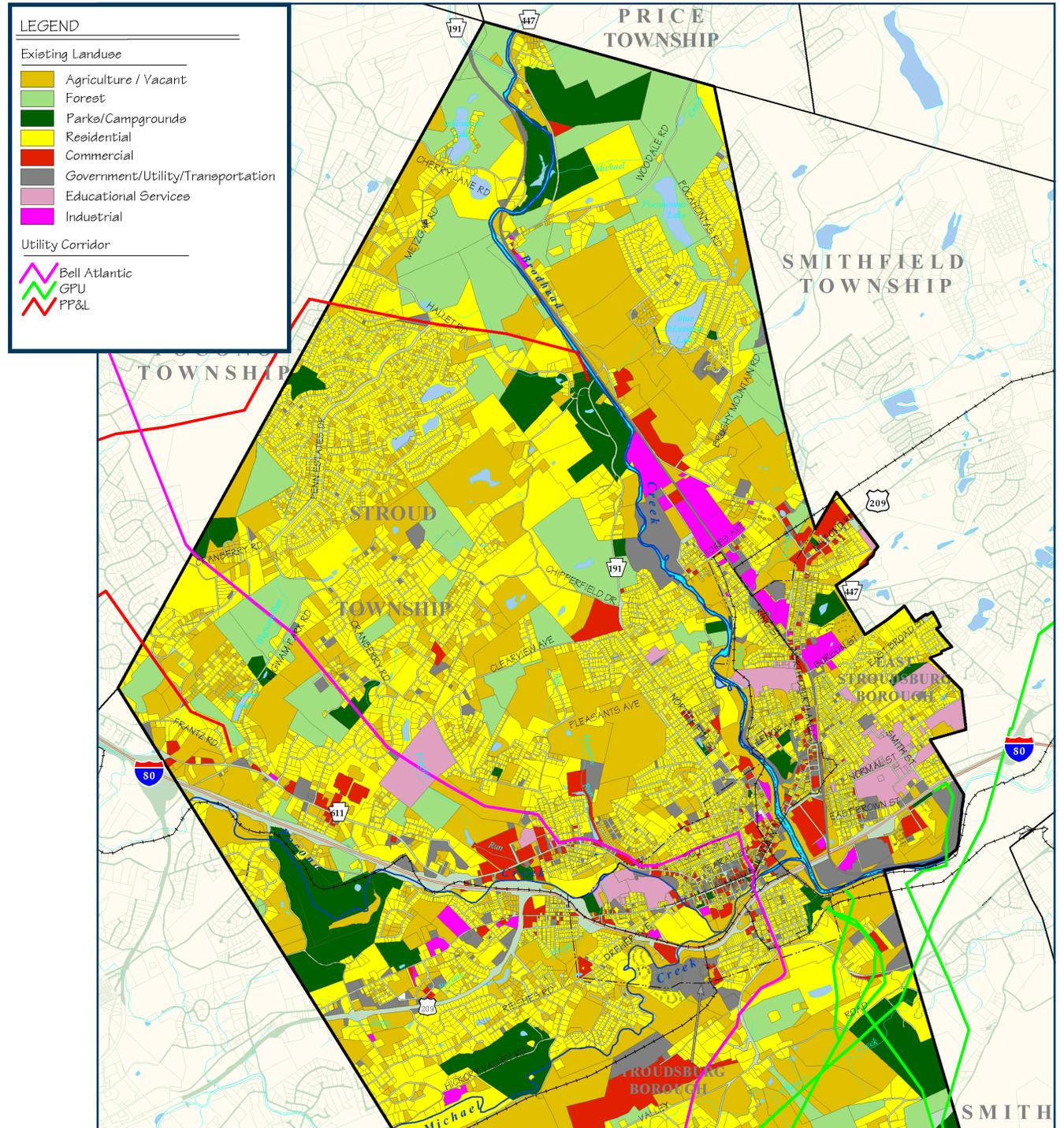
Several factors will contribute to the success of the Brodhead, McMichael and Pocono Creeks Greenways System. Among them are public support and compatibility with surrounding land uses, which often go hand in hand. With regard to privately owned property, an undesirable use of greenway land may influence landowners to consider the greenway project as a negative undertaking. Conversely, an existing use on private property may negatively impact a proposed use within the greenway corridor. Therefore, proper consideration should be given to land use compatibility as the Brodhead, McMichael, and Pocono Creeks Greenways Plan is implemented.

There are several parcels of public lands that will serve as assets throughout implementation. However, current and permissible uses on publicly-owned lands should be considered as well. For example, the large parcel owned by the Stroudsburg Municipal Authority is an important link in the Brodhead Greenway. However, there are limitations with regard to the development of recreation facilities and public access that should be reviewed with the appropriate officials before implementation occurs.

The majority of remaining lands within or adjacent to the three greenway corridors are privately owned residential properties. Some indication of residents' views toward the greenway project were indicated through the public input component of this study. However, those implementing the plan should be aware that some greenway projects may directly affect an adjacent property owner and their views must be considered. Similarly, the owners of privately-owned commercial properties within or adjacent to the corridor should be contacted to determine their level of support for a specific greenway project that may directly impact their property. Both residential and community land owners should be considered partners as the greenway is developed.

Utility corridors are another land use that may serve as an important asset as the greenway system is developed. Several utility rights of way run through the area, intersecting or running parallel with the greenway corridors. Where opportunities exist to utilize the corridors for the construction of trails or the designation of a key open space link, the appropriate representatives of the utility company should be contacted.

Existing Land Use and Utility Corridors



Vision for the Future of the Brodhead, McMichael, and Pocono Creek Greenways

The Brodhead, McMichael, and Pocono Creeks Greenway System is the backbone of the Stroud Region. A significant portion of the corridor is protected for future generations to enjoy. Strong cooperative relationships with private landowners ensure open space protection and sensitive land use.

The Greenway System is closely tied to the region's recreation assets. The greenway trail system accommodates a variety of users and connects the community to the greenway corridor. The Levee Loop Trail is packed every day with fitness walkers, rollerbladers, and parents with strollers. The greenways incorporate elements of the recreation and cultural resources within the region. The New Stroud Regional Park, which is connected to the Brodhead Greenway, attracts residents from throughout the area who use the sports fields, skateboard park, trail, and other facilities. The shelters at Pinebrook Park are often rented for family picnics and office parties. The McMichael Creek Conservation Area offers one of many opportunities for residents to fish, boat, and interact with nature.

The Brodhead, McMichael and Pocono creeks are the region's green infrastructure, which builds upon the enhancement and protection of the riparian corridors. They are the living classrooms that teach conservation and sensitivity to nature. They are the visual backdrop for residents' everyday lives. They are representatives of the community's character, signifying a strong commitment to a bright future.



Chapter 3

Protection, Enhancement, and Development

Building upon the results of the detailed data collection and analysis, this study addresses the potential for several different types of uses within the three greenway corridors. Natural habitat, recreational trails, and environmental interpretation were all considered.

The Vision for the Future describes the greenway system as it exists several years from now, following successful implementation of several recommendations. It will focus conservation and recreation efforts and serve as a guide as these recommendations are implemented.

The development and designation of a greenway system may include a variety of actions including: construction, acquisition, easement designation, interpretation, and education. These varying aspects of a greenway system are all equally important, but may be implemented in a variety of ways. This chapter outlines specific recommendations for the protection, enhancement, and development of the Brodhead, McMichael, and Pocono Creeks Greenways.

Regarding the development of trails, potential routes and locations for stream and major roadway crossings are located. Locations for primary and secondary trailheads, interpretive stations, and information stations are identified as well. Opportunities for the accommodation of other greenway uses are also addressed.

The Vision will guide conservation and recreation efforts.

The Brodhead, McMichael, and Pocono Creek Greenway System

The recommendations of the Greenways Plan include proposals for trail development, open space protection, and environmental education. The following information describes the elements of the proposed greenways system.



Trails

The trail routes identified create key connections within the region and provide important opportunities for recreation and interpretation.



Primary Trail Heads

These sites are the users' main points of interaction with the greenway trail system. The following facilities may be included in the development of a primary trail head, depending on the size and condition of the proposed sites.

- vehicular access
- parking (gravel or bituminous), 15 - 25 spaces
- bike racks
- ADA accessible route
- water fountain
- restroom
- trail head sign
- information station, including greenway trail system maps



Secondary Trail Heads

The secondary points of access serve to supplement the primary trail heads and provide a designated point of interaction for regular trail use by local residents. The following facilities may be included in the development of a secondary trail head.

- vehicular access (optional)

- parking (gravel), 5-10 spaces (optional)
- trail head sign
- greenway trail system map dispenser



Interpretive Sites

The greenway system encompasses areas of cultural and environmental interest. To highlight these important features, interpretive sites are proposed at various locations throughout the system. This may involve one sign describing an event, historic site, or ecological feature. Or it may include a services of signs throughout a noteworthy section of the system.



Key Parcels

Several privately-owned parcels within the greenway corridors will be significant components of this Plan's implementation. These key parcels are designated as such because of the land's importance to the construction of a trail, protection of open space, or enhancement to the creeks' riparian corridors. Detailed information on these properties can be found in Chapter 4.



Road Crossings

The safety of pedestrians and bicyclists is an important consideration in the development of a trail system. Significant road crossings are identified on the plan to ensure proper considerations are made in areas where pedestrian-vehicle conflicts will be present.



Accessible Trails

The greenway trail system should accommodate residents of all abilities. Therefore, segments of the system should be constructed within accessibility guidelines, where appropriate.



Easement Consideration

Acquisition will not always be feasible or necessary as this Plan is implemented. Therefore, areas were identified where easements would be appropriate for riparian zone conservation or trail development.



Stream Restoration

Segments of the creeks riparian zones have been negatively impacted by channelization, development, or stormwater runoff. Specific areas are identified where restoration efforts should be concentrated.



Information Station

These information points are proposed at key points of potential resident or visitor interaction with the greenway system. The station may include information on nearby trail routes, preservation efforts, or environmental education opportunities.



Boating Access



Blueway

Non-motorized boating is a potential use of the creek corridors. The areas identified are accessible by vehicle and will provide opportunities for the safe launching of kayaks and canoes. These stream segments are not entirely navigable year-round, but are passable by boat during several months of the year for boaters to enjoy. Boating and fishing access points should be constructed in a manner that minimizes potential conflict between fishermen and boaters.



Swimming Area

Historically, several spots along each of the creek were used by residents as fishing holes. This is an important use that offers an opportunity for residents to interact directly with the creeks. It is recommended that this use be promoted at designated areas. Considerations must be given to safety and access.



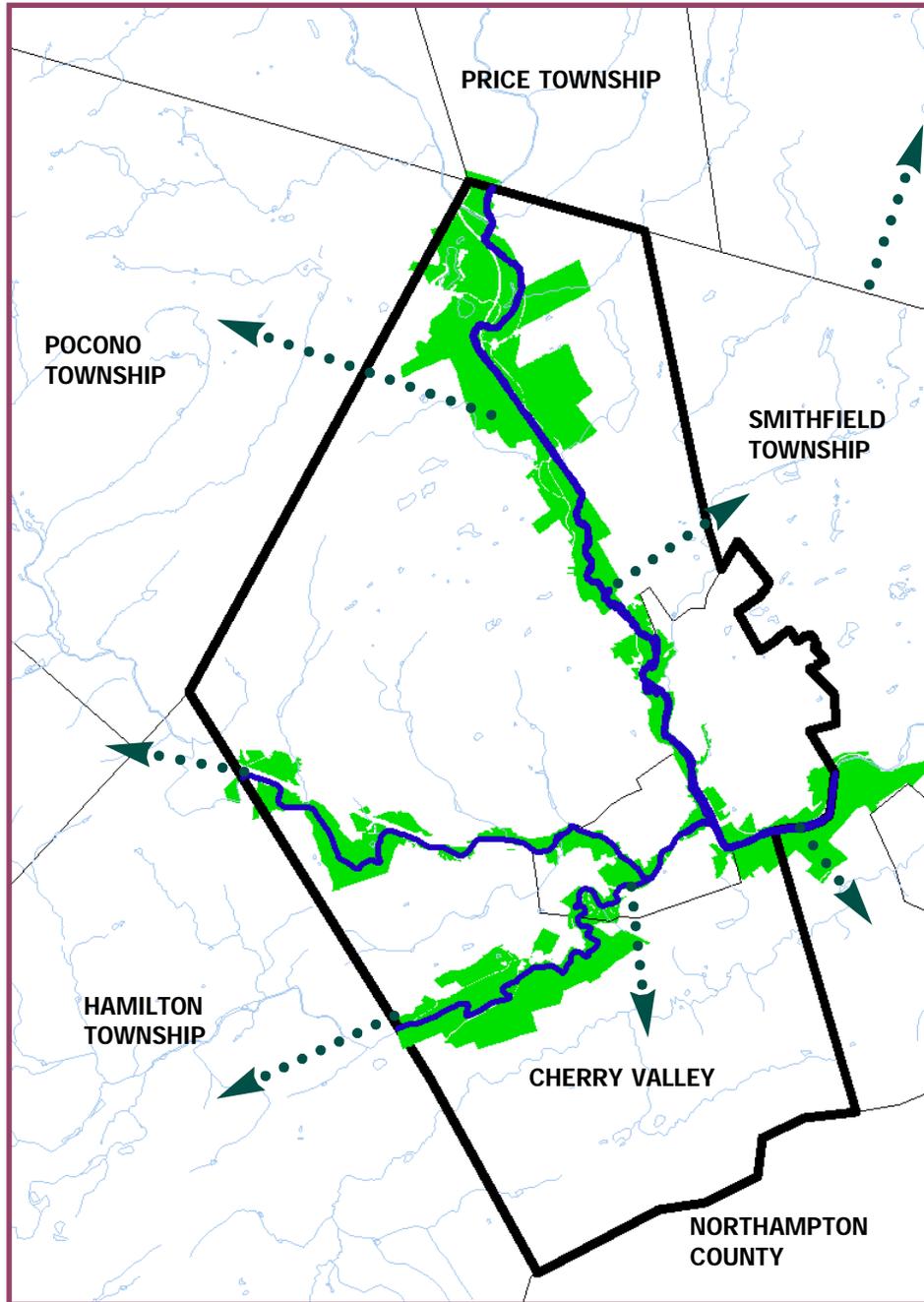
Fishing Access

Fishing access points are identified to provide safe and easy access for fishermen.

Regional Connections

Implementation of this plan will require a strong commitment to the preservation and enhancement of these greenway corridors within the Stroud Region. While these efforts should focus within Stroud Township, Stroudsburg, and East Stroudsburg boundaries, opportunities to extend the greenway preservation and trail development efforts beyond the area of study for this plan and beyond municipal borders.

For example, the trail through the Stroud Township conservation property along McMichael Creek may extend across the Township border into Hamilton Township and connect to the Quiet Valley Farm nearby.

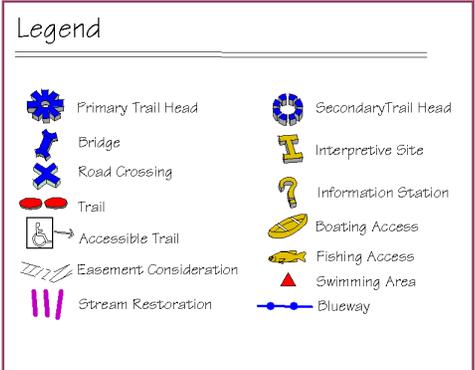
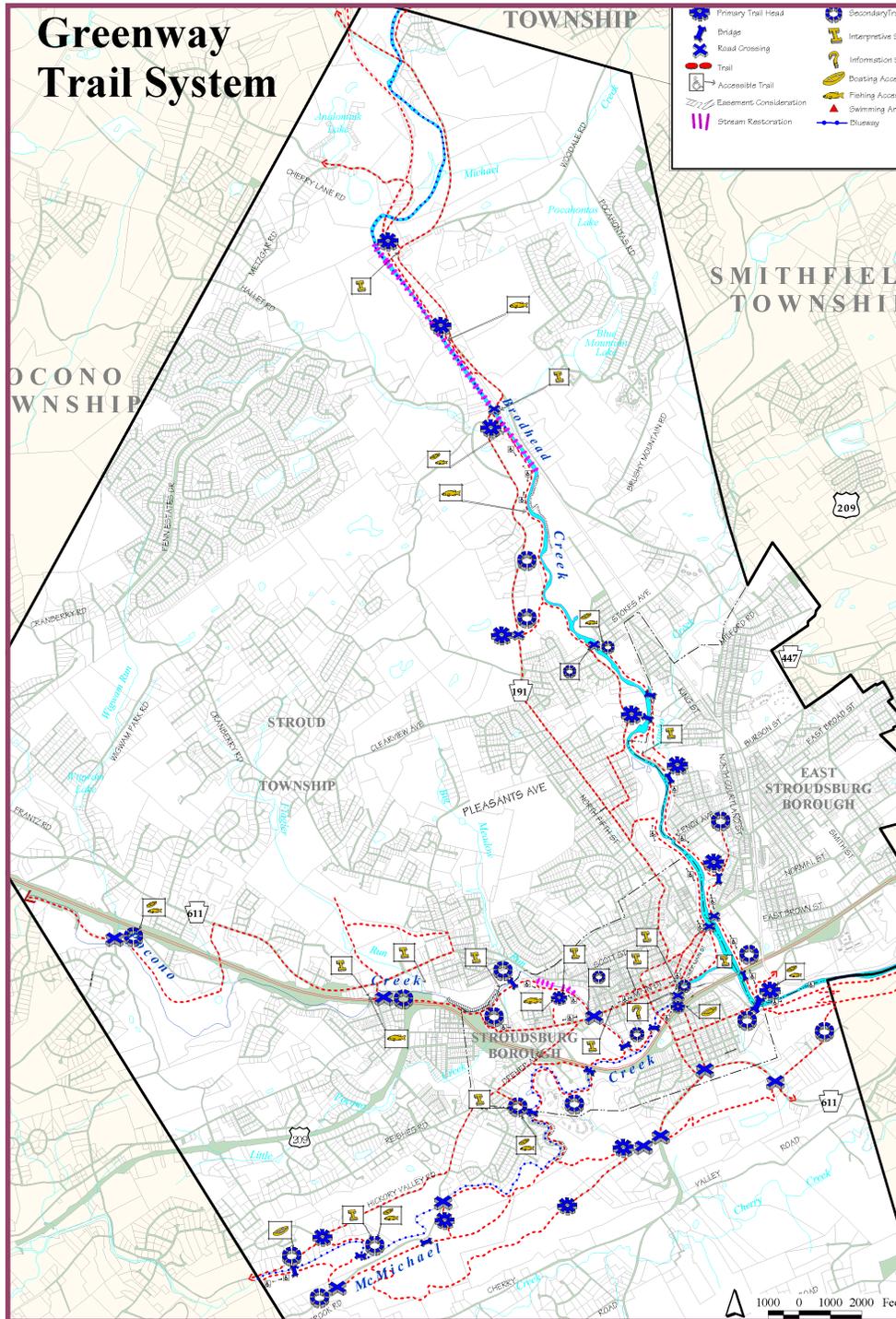


This greenway plan focuses on the Brodhead, McMichael, and Pocono Creeks corridors. However, there are several opportunities to expand the greenway system following stream corridors that intersect with these creeks. Conservation efforts within adjoining riparian corridors should be explored.

STREAM CONNECTIONS

segment	intersecting stream	direction
B1	unnamed trib.	east
B2	none	n/a
B3	unnamed trib. (fr. Blue Mountain Lake)	east
B4	Sambo Creek unnamed trib.	east south
B5	unnamed trib.	south
B6	none	n/a
M1	none	n/a
M2	unnamed trib.	south
M3	Pocono Creek	north
P1	Wigwam Run unnamed trib.	north north
P2	Flagler Run	north
P3	Little Pocono Creek Big Meadow Run	south north

Greenway Trail System



Brodhead Creek

The Brodhead Creek could be considered the “spine”, or main open space artery, of the Stroud Region. The Creek traverses the sparsely populated areas of northern Stroud Township, the small town of Analomink, the downtown areas of the Boroughs and abuts the Monroe County conservation lands south of Stroudsburg Borough. The stream’s location and length provide opportunities for a variety of development and protection options.

Each of the corridor segments illustrated at the right is discussed in detail.

Segment B-1

The Brodhead Greenway begins in the northern reaches of Stroud Township and runs through a rural area, as compared to the downtown areas within the twin boroughs. Therefore, the frequency of regular interaction by residents will be low.

CONSERVATION

An important part of the conservation efforts will be education of owners of property within the greenway corridor. The creek abuts several large parcels of privately owned, undeveloped land, potentially easing the task of communicating with landowners within the greenway corridor. An aggressive educational effort is recommended, including the use of phone communications, mailings, and the posting of informational signs within the public right of way along Route 191. Should additional commercial or residential development occur within the greenway area, the developer should be contacted and a dialogue opened about conservation development techniques.

Currently there are no parcels that may potentially be sold in the foreseeable future for conservation purposes, or any parcels that are critical to the success of the Brodhead Greenway. Although no acquisition is recommended, the municipal regional partners should monitor the sale of properties in the area and be prepared to act, if an opportunity arises.

RECREATION

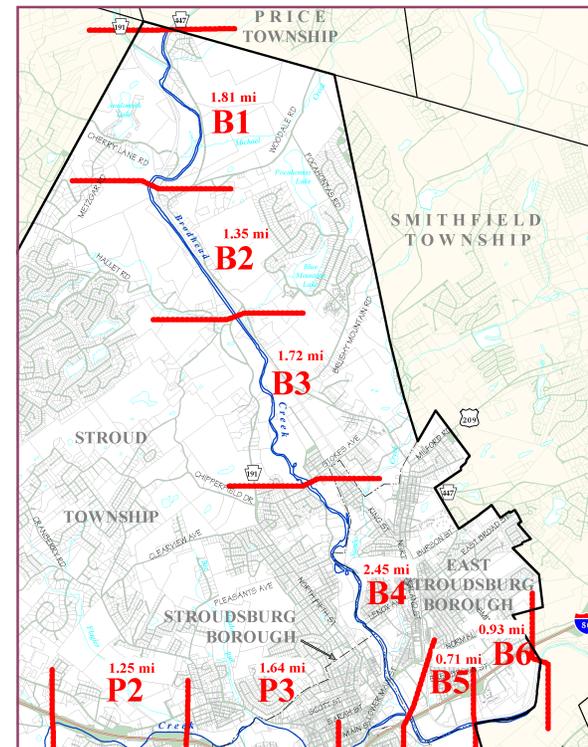
Within the corridor, Routes 191 and 447 offer unique opportunities to provide a scenic bicycle route that would be part of a regional, on-road

bicycle network. This recommendation should be a point of discussion with officials of Paradise Township. As with all recommendations of this study, no trail is intended to end at the municipal borders of Stroud Township, Stroudsburg, or East Stroudsburg. Rather, opportunities where a logical and potentially feasible trail connection can be made with surrounding communities should be explored.

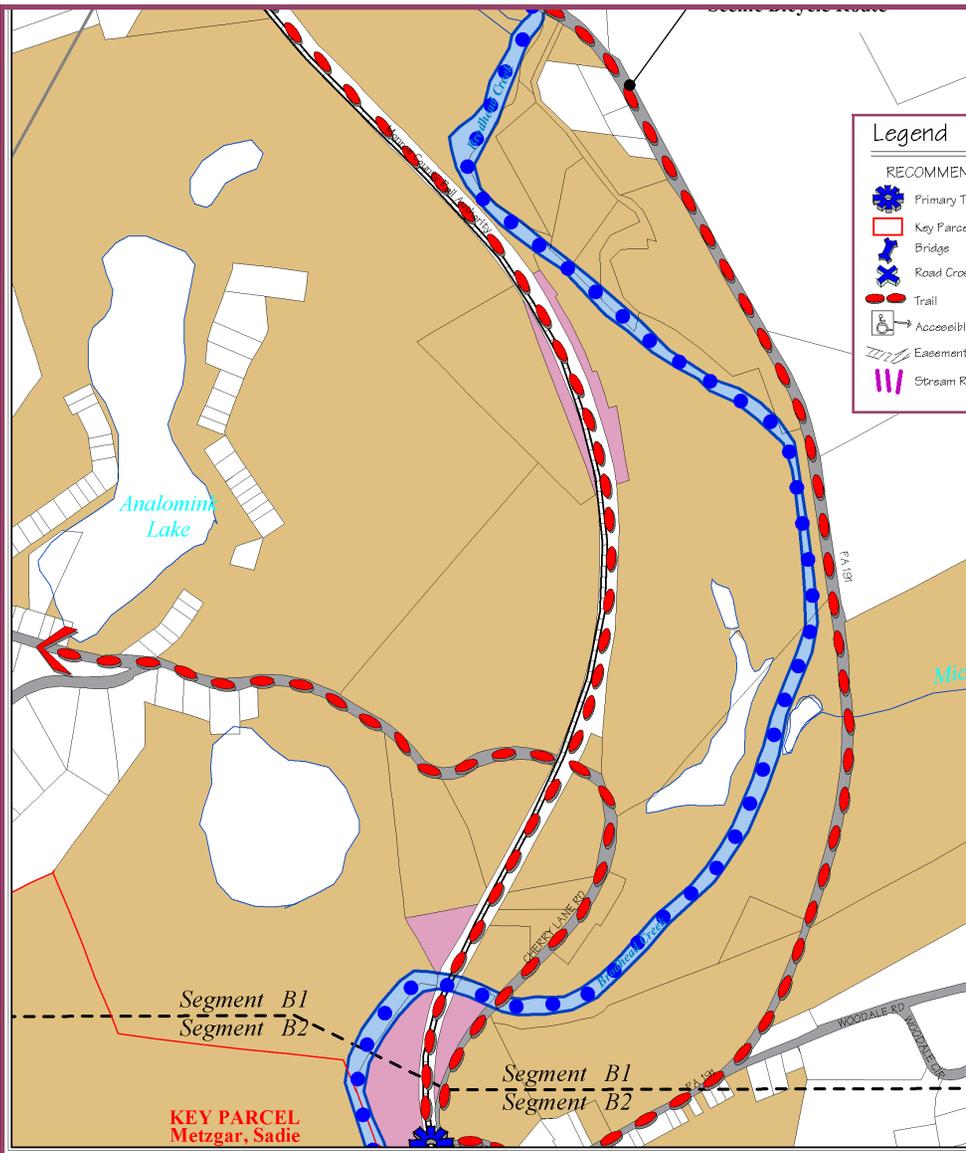
A large pocket of residential development exists to the west of the creek. Cherry Lane Road connects this residential area to the greenway. Therefore, an on-road bicycle connection is proposed from within this area in the northwest portion of the township to the on-road trail on Route 191, which will provide access to the rest of the greenway system, to the south.

Opportunities should be explored to develop a trail within the nearby rail corridor, as described for segment B-2.

Because there are limited off-road bicycle or pedestrian routes within this segment of the greenway, the focus should be on greenway conservation and riparian zone enhancement.



Brodhead Creek RECOMMENDATIONS Segment B-1



Legend

RECOMMENDATIONS		OWNERSHIP	
	Primary Trail Head		East Stroudsburg Borough
	Key Parcel Boundary		Stroudsburg Borough
	Bridge		Stroud Township
	Road Crossing		School District
	Trail		Stroudsburg Municipal Authority
	Accessible Trail		Other Public Lands
	Easement Consideration		Private
	Stream Restoration		Monroe County
	Secondary Trail Head		Flood Control
	Interpretive Site		
	Information Station		
	Boating Access		
	Fishing Access		
	Swimming Area		
	Blueway		

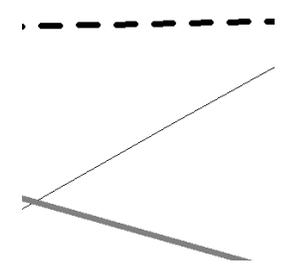
Brodhead, McMichael & Pocono Creeks Greenways Plan
Stoud Township
Stroudsburg Borough & East Stroudsburg Borough
Monroe County, Pennsylvania

Recommendations - Brodhead Creek
not to scale - (1.81 miles)

Legend

RECOMMENDATIONS	OWNERSHIP	BASE

Brodhead Creek



Segment B-2

CONSERVATION

This segment of the greenway is unique in that the creek was channelized in the 1950's for flood control purposes. As a result of this channelization, however, the habitat of the stream bed itself is in poor condition. An important part of the greenway efforts in this segment should focus on the establishment and enhancement of aquatic habitats and the riparian zone.

To the west of the creek, the land is divided into a few large parcels, many of which are owned by one private landowner (William Carson). This **key partner** should be contacted as this may help to facilitate the process of educating the surrounding landowners about greenway conservation. To the east of the creek, an active rail line sits immediately adjacent, and to its east sit several smaller private parcels.

The property owned by Sadie Metzgar is a **key parcel** within the greenway corridor. This large tract of land to the west of the creek is approximately ninety acres and directly abuts the stream. Preliminary contact with representatives of the landowner (at a Focus Group Meeting) indicate that the sale of the parcel for conservation purposes may be a possibility.

RECREATION

Trail Option A

The rail corridor running parallel with the creek accommodates a double line, one of which is abandoned. Upon preliminary assessment, this right of way appears to be wide enough to accommodate a trail along the abandoned portion of the bed (rail with trail).

Trail Option B

An option to consider is the construction of a trail between the rail bed and the stream's edge. A preliminary field evaluation indicated that construction of a trail would be possible, although it would lie primarily within the streams floodplain and there are some areas of limiting slope. Further evaluation of this option is necessary.

Trail Option C

The rail right of way extends beyond the edge of the abandoned line on the double rail bed. There may be an opportunity to construct a trail off of the abandoned bed but still within the rail right of way.

Trail Option D

If design and development of an off-road a trail is not feasible within an appropriate time frame (and the development of other trails in the area are moving forward, leaving this area unconnected), an on-road bicycle trail should be developed within the Route 191 right of way.

Primary Trail Heads

To allow trail users to access the amenities available within the town of Analomink, a trail head is proposed within the town.

If the proposed commuter rail station is developed, a second primary trail head would be ideally located nearby to tie into this alternative transportation system.

Road Crossings

If a trail is constructed within or near the rail corridor, a link will still have to be made to the Route 191 Bridge, so that trail users can cross the creek. Therefore, detailed consideration should be made for pedestrian safety along Route 191 from the point the off-road trail connects to it, to the bridge.

As trail development within this segment of the greenway occurs, safe bicycle/pedestrian crossing of the Route 191 bridge over the creek will be important. This is a vital link that connects the northern trail system to the lower portions of the greenway.

Interpretive Stations

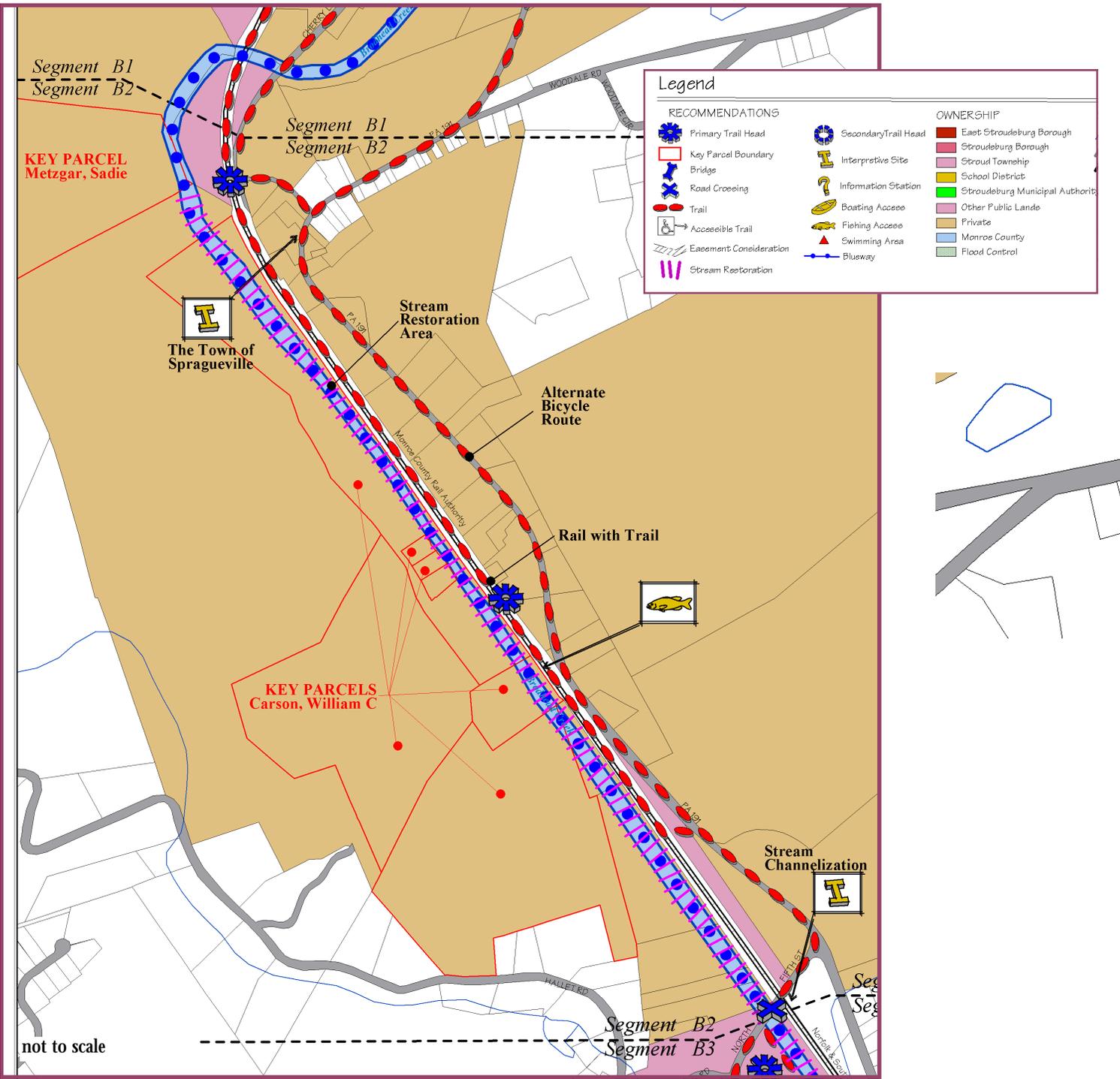
The town of Analomink (formerly Spragueville) sits within this segment of the greenway. The town should be incorporated into the development of a regional bicycle trail system as a destination point. The town's rich history could be highlighted by the construction of an interpretive station, which ties into the trails proposed nearby.

The Route 191 bridge over the creek (High Bridge) offers a unique view up and down the creek. This section of the creek was channelized in the 1950's for flood control purposes. This vantage point could be used for interpretation of the 1950's flood and stream channelization.

Fishing Access

As stream bed enhancements improve the habitat of this stream segment, opportunities for fishing within this corridor should be explored.

Brodhead Creek RECOMMENDATIONS Segment B-2



Seament B-3

The large amount of publicly owned land within this segment of the greenway offers a wealth of opportunities. A majority of the land surrounding the creek is leased or owned by Stroud Township or owned by the Stroudsburg Municipal Authority.

CONSERVATION

One key exception to the public lands is a small (4 acre) parcel owned by David DeAngelis, which bisects the property owned by the Township and crosses the creek. This **Key Parcel** is important because it is the only barrier to a large, contiguous area of publicly owned land within the greenway and an interconnected trail system. Therefore, landowner education is a high priority and the possibility of acquisition or easement should be explored.

A second private parcel within the greenway is owned by Diversey Lever, a **Key Partner** in the greenway efforts. Acquisition of this parcel is not a possibility, nor a necessity. However, it would be beneficial to gain an a conservation easement along the stream's edge to ensure permanent protection of the riparian zone.

The 177 acres owned by Robert Christman is another **Key Parcel**. The land is on both sides of Route 191 and abuts property owned by the Stroudsburg Water Authority, which surrounds the creek. Stroud Township is considering acquisition of this property for the development of a regional park. This large parcel, which is directly connected to the greenway corridor, has potential to become a key element of the greenways system. A trail head on the site is proposed, which will connect the property directly to the trails along the creek. This will require a safe pedestrian/bicycle crossing at the trail's intersection with Route 191.

RECREATION

A trail is proposed to closely follow the western edge of the creek. It runs from the northern edge of the Township property to the end of the Stroudsburg Water Authority property. It is recommended that opportunities for construction of ADA accessible trails within Pinebrook Park and Brodhead Greenway Park be explored. A loop is created by a proposed bicycle trail along Route 191.

After the trail crosses the Stokes Mill Bridge, it runs through a **Key Parcel** owned by Richard Gaunt (1 acre). Mr. Gaunt attended the Focus Group meeting and indicated that the property could potentially be sold for

conservation and recreation purposes. Fishing, swimming, and boating access opportunities are proposed.

Primary Trail Heads

A primary trail head is proposed along Route 191, within the Township's Pinebrook Park. This location will provide easy vehicular access to the trail system and capitalize on existing facilities within the park. All trail head facilities developed at the site should consider Americans with Disability Act standards, given the proposed construction of the nearby accessible trail segment.

A second trail head is proposed to the west of Route 191, on property owned by Robert Christman, which is identified by this plan as a **Key Parcel**. This property is being considered for acquisition and development as a regional park. Should this occur, the site's proximity to the greenway make this high-profile location ideal for the construction of a primary trail head, tying nearby recreation facilities into the greenway system.

Secondary Trail Heads

Two secondary trail head are proposed along Route 191 to provide access to the stream-side trail.

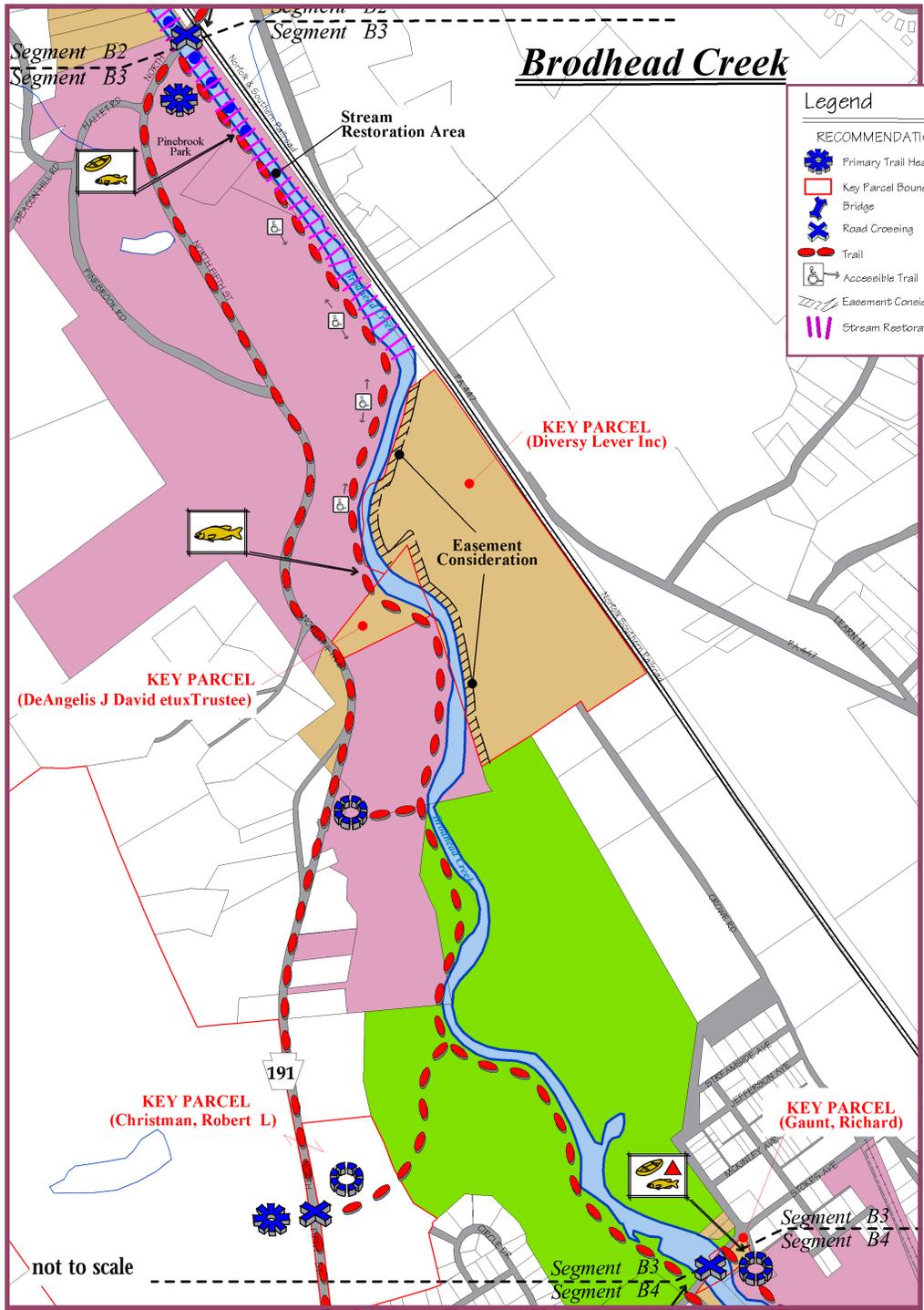
Road Crossings

The development of a trail connection with the proposed new regional park site (Christman Property), will require safe pedestrian crossing of Route 191.

From the end of the Stroudsburg Water Authority property, on the western side of the creek, a proposed trail continues south along Stokes Mill Road and a second trail crosses the Stokes Mill Bridge and continues south on the eastern side of the creek. This trail segment will require safe bicycle/pedestrian access across the bridge.

Brodhead Creek
RECOMMENDATIONS
Segment B-3

Creek



not to scale

Segment B-4

CONSERVATION

The greenway corridor is narrower due to surrounding development and the potential for frequent use of the corridor is much more intense because of the concentration of residents. The combination of these two factors highlight the unique opportunities this greenway presents, as well as the need for restoration, management, and conservation efforts.

RECREATION

This segment of the greenway corridor runs through the densely developed Boroughs. Therefore, resident interaction will be at a high level. To promote and accommodate this, trails on both sides of the creek are proposed, with a few additional side-routes. The primary trails on either side of Brodhead Creek create a loop from the Interborough Bridge to the Stokes Mill Bridge. A significant portion of the may be constructed on top of the levee system. This trail, much of which may be accessible, would become an important community asset for East Stroudsburg, Stroudsburg, and Stroud Township.

The trail runs on the eastern edge of the creek through property owned by the Township and East Stroudsburg Borough, including Dansbury Park, where a trail head is proposed. It connects to a proposed primary trail head on the Key Parcel owned by Thomas Joyce. A short segment of the trail may run through a privately owned **Key Parcel** (Walker), which is an important part of the greenway corridor.

The proposed trail to the east then runs through the East Stroudsburg High School property, where a trail head is proposed. To the west, on-road bicycle connections are proposed.

The proposed trail alignments are within flood control property, from this point until the confluence of the Brodhead and McMichael Creeks. An on-street connection is proposed along Lower Main Street in Stroudsburg. This may include sidewalk paths and on-road bicycle lanes.

ADA Accessibility

A majority of the length of trail on both sides of the creek follows the publicly owned land of the flood control project. On the portions of trail that are able to developed on top of the levee, the trails may be constructed to be ADA accessible. It may be possible to extend this accessible route from the Stroudsburg levee along Lower Main Street to Rotary Park.

Primary Trail Heads

The East Stroudsburg High School complex will be an important point of interaction with the greenway trail system. A trailhead at this location will provide access for area residents, as well as school students taking environmental education classes.

The property owned by Joyce (**Key Parcel**) may provide an additional key access point for residents living to the west of the creek. The importance of this trail head will be dictated by the limitations to the use of the Water Authority property as a trail head, to the north.

Dansbury Park presents an opportunity for development of a key trail head that provides access to the nearby levee trail.

Secondary Trail Heads

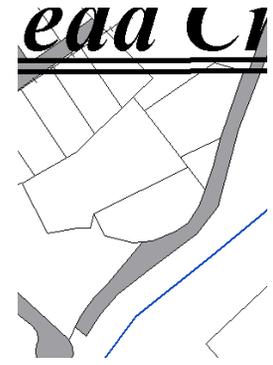
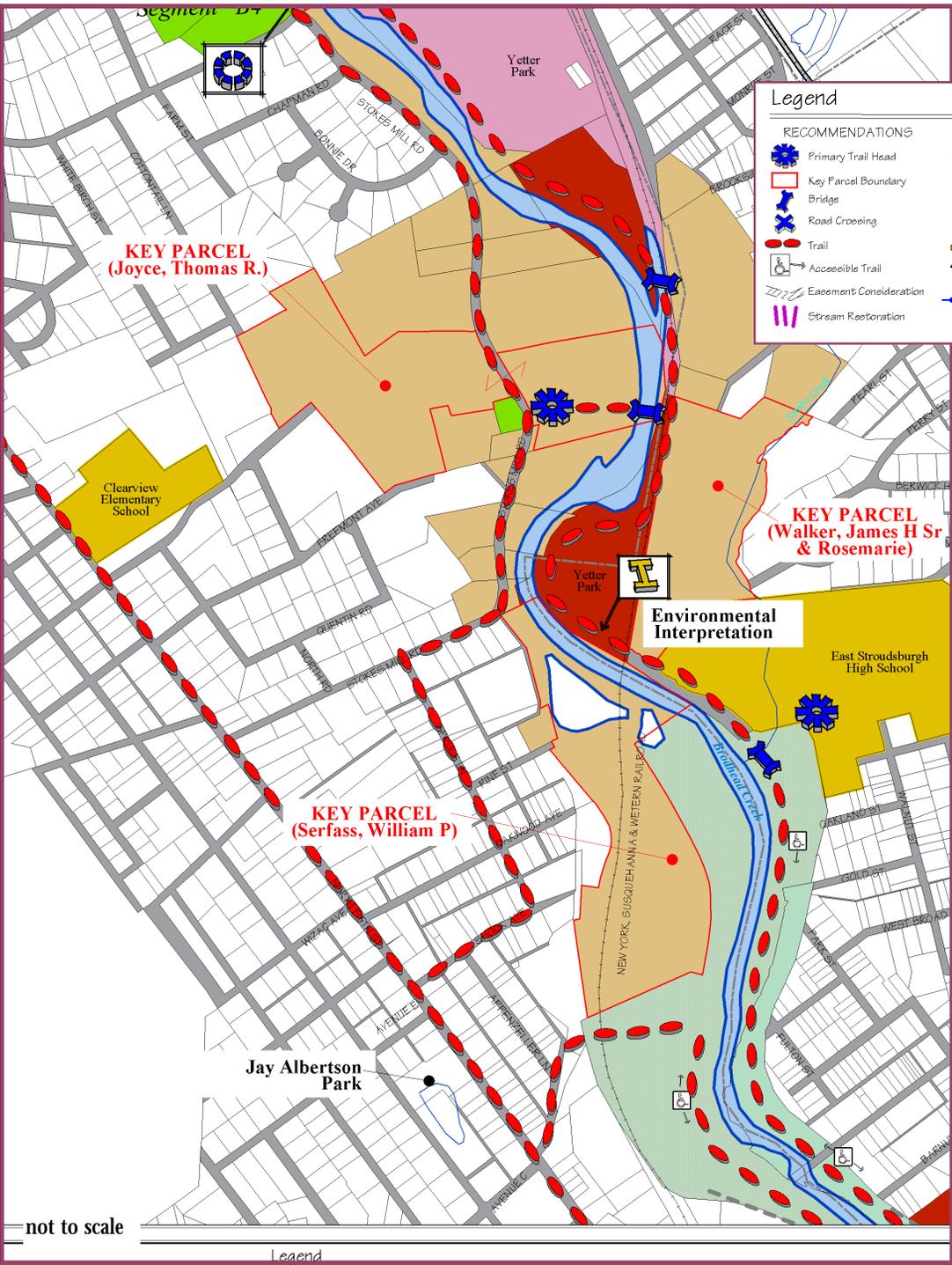
A secondary trail head is proposed at the southern end of the Water Authority property. This site is the northern end of the loop trail that continues south on either side of the creek. Use of the area must be discussed with the Authority and may be limited, due to safety restrictions. An alternative trail head location is proposed at the eastern end of the Stokes Avenue Bridge.

The five points intersection in Stroudsburg Borough is an important juncture of vehicular and pedestrian traffic. The proposed greenway trail system includes routes through this area. Therefore, a formal access to the trail system is necessary. The beginning of the levee is the proposed site. No vehicular parking is possible, but the downtown area should provide ample pedestrian traffic that would benefit from the trail head.

Road Crossings

A key road crossing will be where the trails cross Lower Main Street/Washington Street. The majority vehicular throughways will require significant improvements for safe pedestrian/bicycle travel.

Brodhead Creek
RECOMMENDATIONS
Segment B-4
north



not to scale

Legend

Interpretive Sites

The location of the former Fort Penn site is known to be at the corner of Fifth Street and Main Street. Although no physical remnants of the Fort exist, the history of the site could be posted on a sign at a nearby location.

The proposed trails on top of the levees will provide opportunities for interpretation of the history of the levee system.

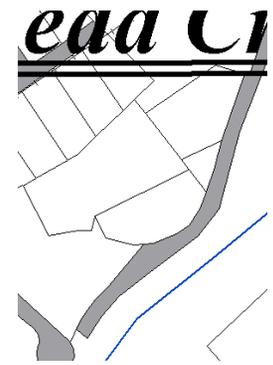
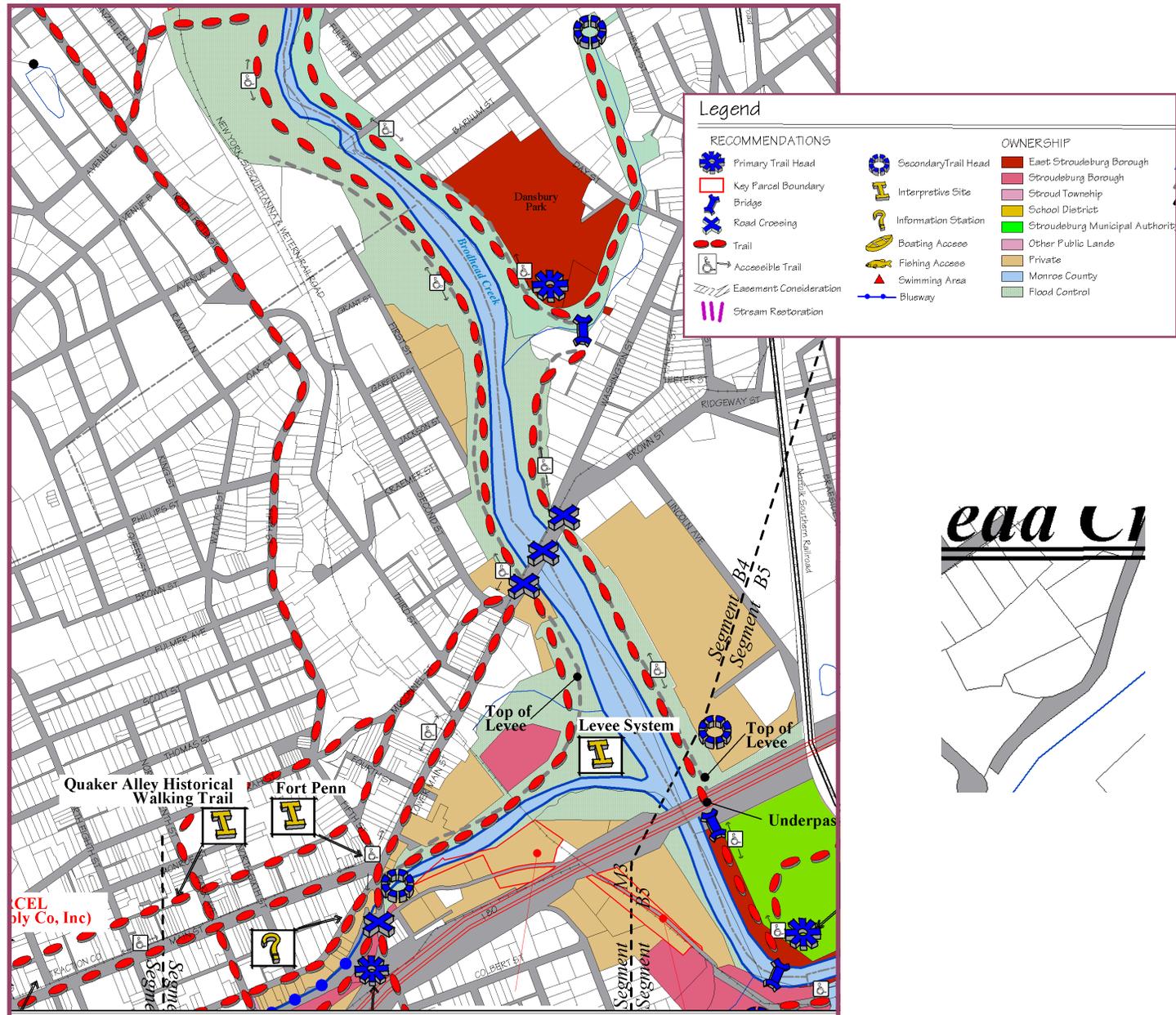
Information Station

The proposed parking garage at Anne Street could serve as a primary trailhead and information station. The ample parking at the site will provide a starting point for trail users traveling by vehicle. In addition, the heavily trafficked downtown location of the site makes it a logical location for an information station.

Swimming Area

This property owned by Richard Gaunt is currently used by residents as a swimming area. Should this property become publicly-owned, this should continue in a formalized manner.

Brodhead Creek RECOMMENDATIONS Segment B-4 south



Segment B-5

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CONSERVATION

Monroe County recently purchased a large (96 acres) parcel of undeveloped land to the south of the creek for open space conservation purposes. The municipal regional partners should work closely with the County Open Space Board as the future of this land in planned.

RECREATION

The proposed trail runs on top of the levee and continues underneath Interstate 80. The rear parking lot of Wal-Mart, near the levee, may be utilized as a trail head facility.

The trail on the eastern side of the creek ends on property owned by the Borough of East Stroudsburg and the Municipal Authority that is currently used as a recycling facility. At this point, a pedestrian bridge will be constructed (currently in planning stages). This bridge will cross the stream to Glen Park, where trail head facilities are proposed.

Several existing trails run through the Monroe County Conservation Lands to the south of the creek. Maintenance and/or expansion of this system should be explored in conjunction with the Monroe County Open Space Board.

Also within this segment, trail connections to the adjacent residential area and the Godfrey Ridge are proposed.

ADA Accessibility

The accessible trail on the East Stroudsburg levee continues to the levee's end and may extend further. Here the accessible route may cross the proposed bridge across the creek and continue through the Monroe County conservation lands, along an abandoned rail bed.

Primary Trail Heads

The recycling center property (owned by the Municipal Authority) and the adjacent property owned by East Stroudsburg Borough presents an opportunity for the development of an important trail head. The location connects users to the East Stroudsburg levee trail as well as to Glen Park and the trails in Stroudsburg, across the proposed bridge.

Secondary Trail Heads

A secondary trail head is proposed at Glen Park. The proposed primary trail head on the opposite side of the creek will handle a greater portion of

the trail user traffic to reduce the vehicular traffic through the residential area adjacent to Glen Park.

A trail head is proposed at the southern edge of the Monroe County conservation lands, off Godfrey Ridge Drive.

A trail head may be designated at Wal-Mart in East Stroudsburg. The existing parking area at the rear of the building, which is underutilized, could be used. The trail head would provide access to the levee trail in East Stroudsburg. Development of the trail head would be dependent on the wishes of Wal-Mart officials.

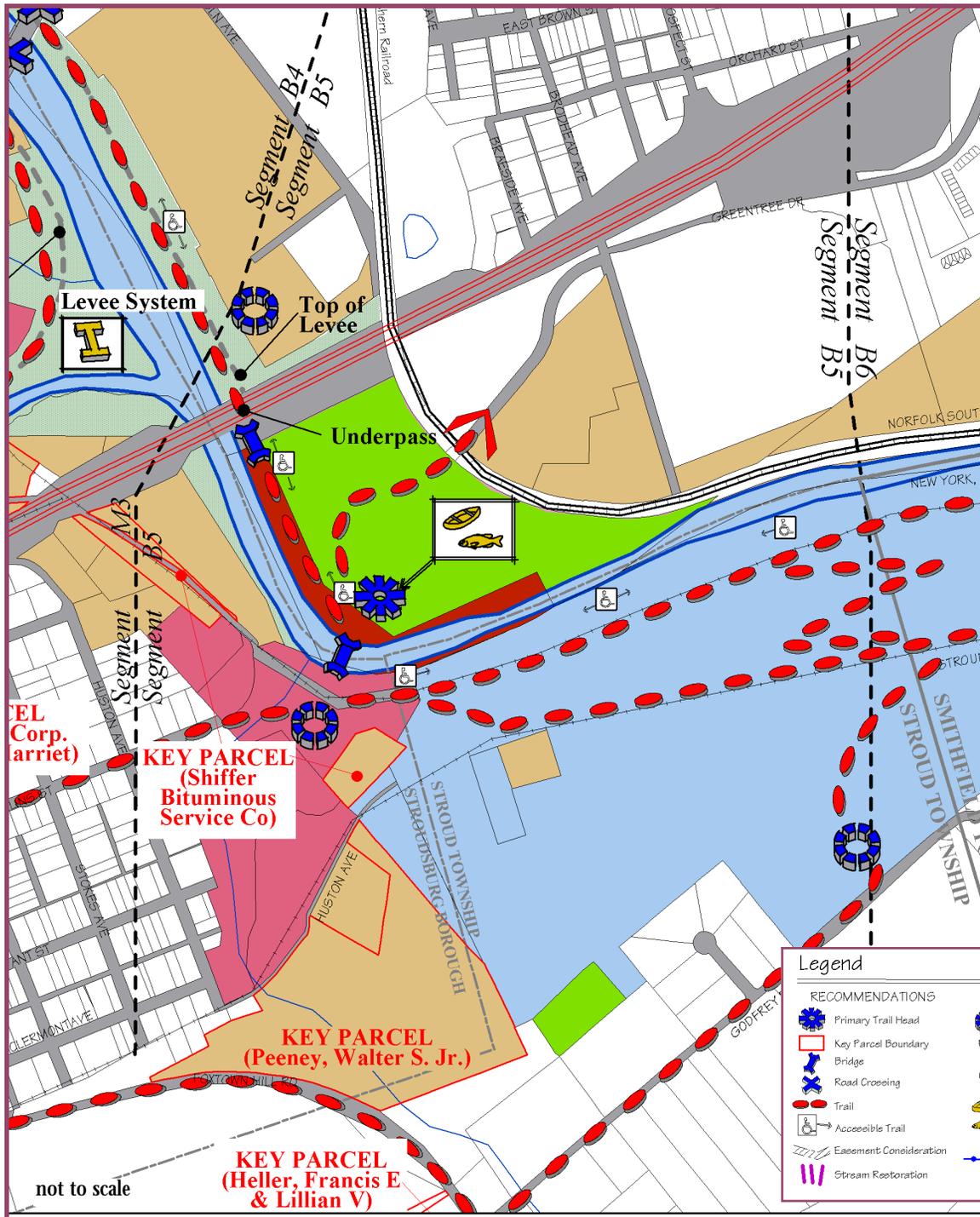
Road Crossings

There are no significant road crossings within this segment. However, several trail routes are proposed along existing roads. Further examination will determine the appropriateness for on-sidewalk pedestrian trails and on-street bicycle trails. Consideration must be given to safety concerns related to combining vehicular, pedestrian, and bicycle traffic within the same corridor.

Brodhead Creek

RECOMMENDATIONS

Segment B-5



- Brodhead, McMichael & Crocono Creeks
- Municipal Boundary
- Interstate Road
- State/Local Road
- Creek/Stream
- Lakes / Ponds
- Active Railroads
- Abandoned Railroads

Information used to produce this map was obtained from the Monroe County Open Space plan. Other sources of information are noted in the legend. Pashek Associates makes no claims to the accuracy of the base map data.



Legend

RECOMMENDATIONS		OWNERSHIP	
Primary Trail Head	Secondary Trail Head	East Stroudsburg Borough	Stroudsburg Borough
Key Parcel Boundary	Interpretive Site	Stroud Township	School District
Bridge	Information Station	Stroudsburg Municipal Authority	Other Public Lands
Road Crossing	Boating Access	Private	Monroe County
Trail	Fishing Access	Flood Control	
Accessible Trail	Swimming Area		
Easement Consideration	Blueway		
Stream Restoration			

not to scale

Segment B-6

CONSERVATION

The creek is bounded to the north by an active rail line and several privately owned parcels of land. To the south, however, lie Monroe County's Open Space parcel and two large, undeveloped parcels. The two privately-owned **Key Parcels**, totalling 275 acres, are owned by Eureka Stone Quarry. An possibility of acquisition or permanent protection of these large parcels should be explored, given their adjacency to the Monroe County property and the creek.

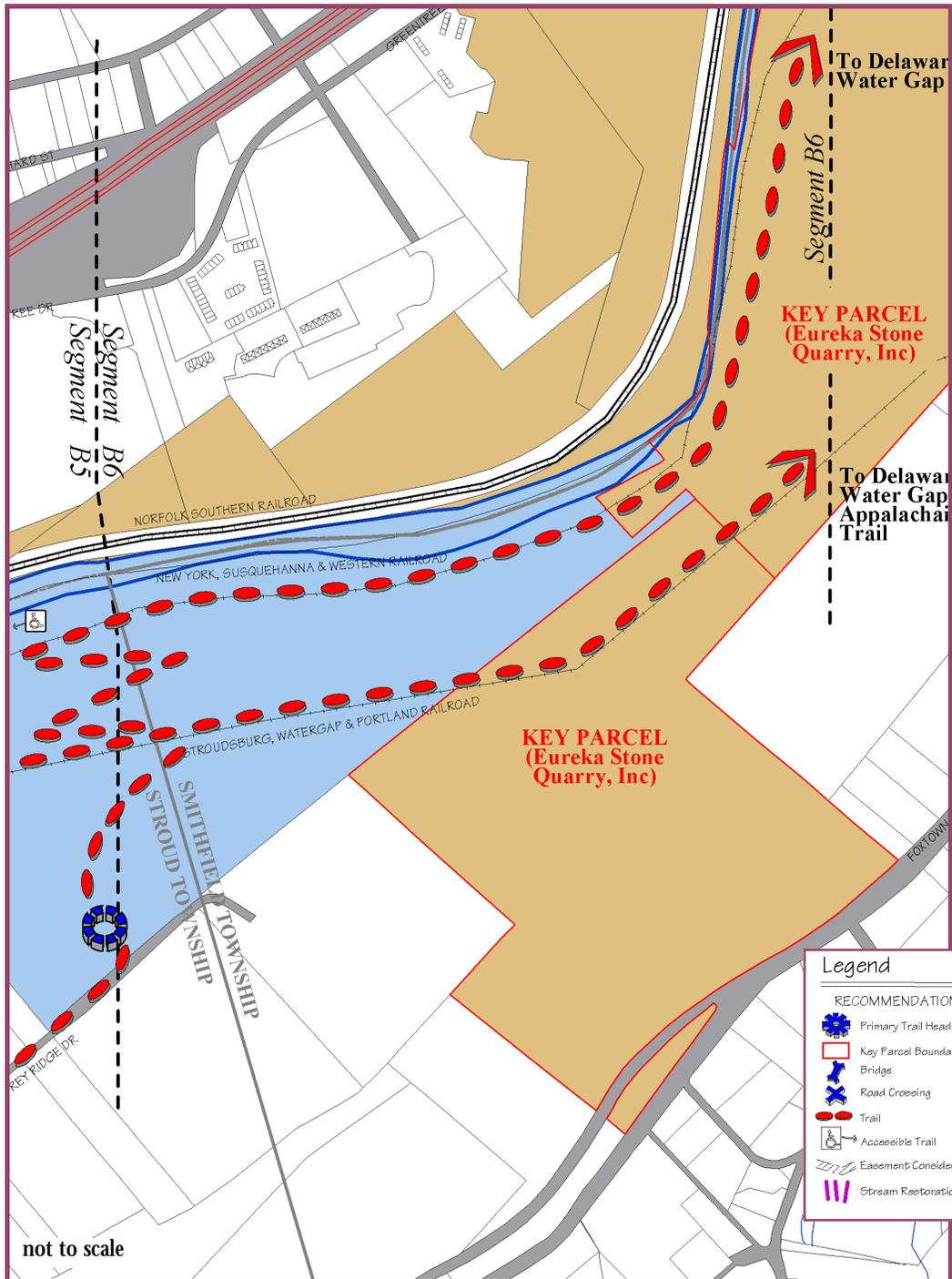
RECREATION

A variety of trails currently exist in this area. Two opportunities to develop regional trails following abandoned rail lines (one along the creek and one traveling up slope) should be explored. These could be regional connections to the Delaware Water Gap and the Appalachian Trail.

Brodhead Creek

RECOMMENDATIONS

Segment B-6



- ✓ Brodhead, McMichael & Pocono Creeks
- Municipal Boundary
- Interstate Road
- State/Local Road
- Creek/Stream
- Lakes / Ponds
- Active Railroads
- Abandoned Railroads

Information used to produce this map was obtained from the Monroe County Open Space plan. Other sources of information are noted in the legend. Pashek Associates makes no claims to the accuracy of the base map data.



Legend

RECOMMENDATIONS		OWNERSHIP	
	Primary Trail Head		East Stroudsburg Borough
	Key Parcel Boundary		Stroudsburg Borough
	Bridge		Stroud Township
	Road Crossing		School District
	Trail		Stroudsburg Municipal Authority
	Accessible Trail		Other Public Lands
	Easement Consideration		Private
	Stream Restoration		Monroe County
	Secondary Trail Head		Flood Control
	Interpretive Site		
	Information Station		
	Boating Access		
	Fishing Access		
	Swimming Area		
	Blueway		

not to scale

McMichael Creek

The McMichael Creek corridor includes natural and cultural features that are important to the character of the Stroud Region. The recommendations for this corridor include conservation efforts, trail routes, and access points. The protection, enhancement, and development options for each of the Creek's segments are described below.

Segment M-1

CONSERVATION

Stroud Township recently purchased 107 acres along the McMichael Creek for the purpose of conservation. The Township, in cooperation with Hamilton Township (part of the property crosses the township border) should continue to manage this property as a key component in the greenways system and work to protect the creek's riparian zone.

In addition, the Glenbrook Golf Course should be considered a **Key Parcel** (Knickman) in the development of the McMichael Greenway. The municipal regional partners should work with the owners to protect the creek's riparian zone and explore opportunities for purchase of land or easement. Another large open space **Key Parcel** in the area is owned by Alfred Iadevaio.

RECREATION

The development of trails near the creek is difficult because a large segment of the creek runs through the privately owned Glenbrook Golf Course and steep slopes are found through a large portion of the Township property. However, at the western and northern ends of the Township property, there are opportunities for trail development. An accessible loop trail, pedestrian/bicycle bridge and trail head are proposed at the western end. In addition, a trail segment running along the southern edge of the creek and then crossing it, would end in a trail head at the eastern end of the property, where a second access point to Hickory Valley Road could be constructed, along which a bicycle connection is proposed.

A second trail climbs the moderate to seep slopes to the south of the creek and crosses Glenbrook Road and follows an abandoned rail line within a large privately owned parcel. This **Key Parcel** (Alfred Iadevaio, owner) is 123 acres in size. The property contains existing trails that may be utilized for future trail alignments. The property encompasses the top of the ridge, providing opportunities to take advantage of scenic views.

ADA Accessibility

The Township's McMichael Creek conservation lands include large level areas that may accommodate accessible trail routes.

Primary Trail Heads

The eight acre site adjacent to the Township's McMichael Creek conservation property, previously operated as a meat processing plant, offers an opportunity for the development of an important trail head. The size and location of this parcel (recently purchased by the Township) may include trail head facilities such as a rental station, information station, and parking. Another trail head is proposed along Glenbrook Road. The site is currently used as an informal golf driving range. The **Key Parcel**, owned by Knickman, includes proposed trail routes, to which the trail head will provide access.

Secondary Trail Heads

Three secondary trail heads are proposed on the Township's property along McMichael Creek. The first is along Hickory Valley Road. This site provides boating access and a connection to the Township property. Another trail head is proposed at the bend in the creek on the Township property. The site provides access to the greenway trail system and to the McMichael Creek blueway. A third trailhead is proposed off Glendale Road at the southern edge of the Township property.

Road Crossings

The proposed trail along the vacant rail bed parallel to Glenbrook Road crosses the road and continued into the Township's conservation property. Additionally, at the Glenbrook Bridge, the trail may need to follow the road shoulder for a short segment.

Interpretive Sites

A weekend cabin was built at a bend in the creek in the 1950's. The structure presents a unique opportunity to interpret the site's past. It may also be restored for use as an environmental education center.

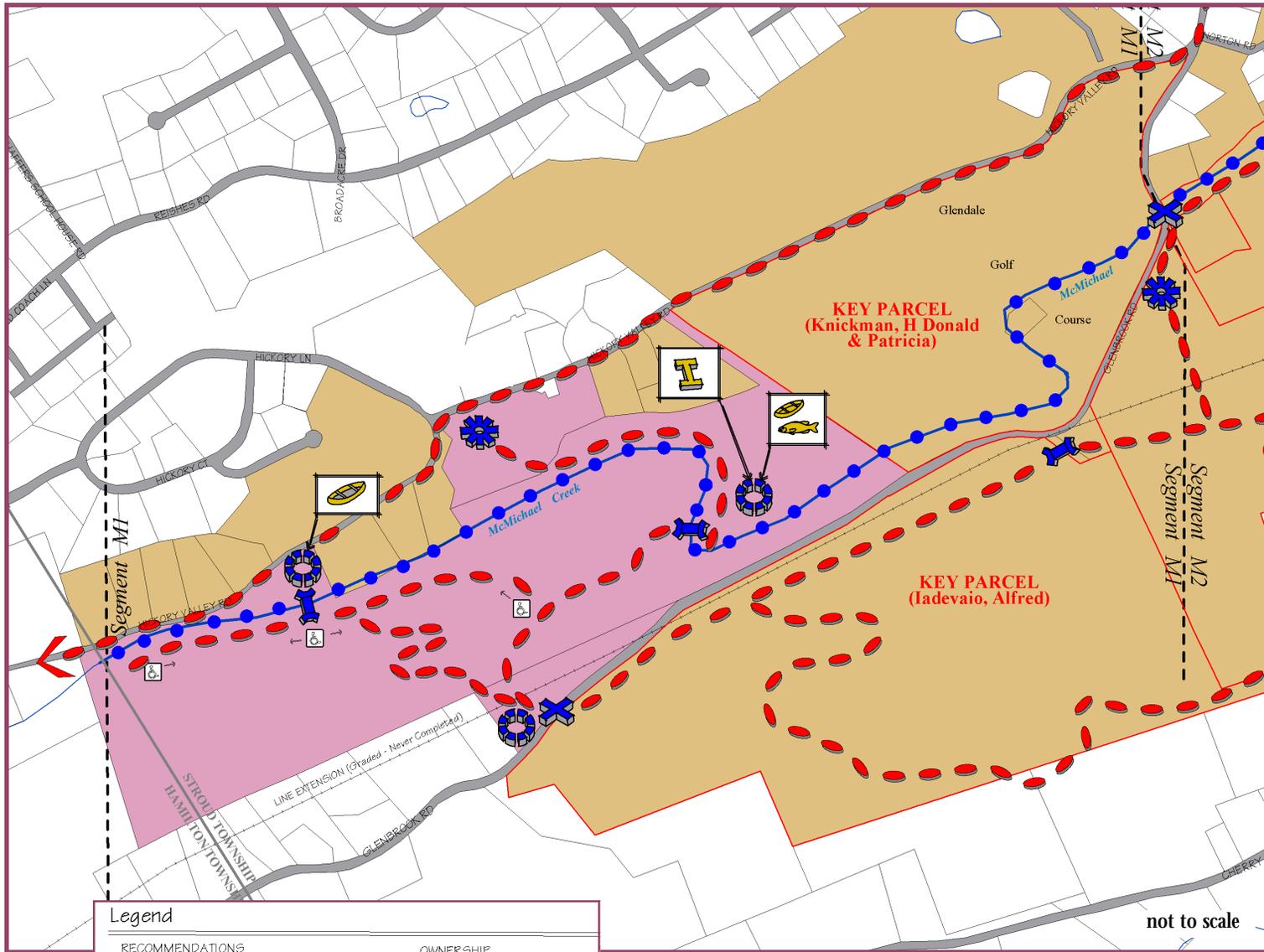
Blueways

The McMichael Creek is suitable for non-motorized boating, depending on water level. To promote the use of the creek as a blue trail, or blueway, it is recommended that it be designated as such from the Township's conservation lands to Rotary Park. Boat access areas are proposed at two locations. Signs should be posted regarding permitting types of boating and safety regulations.

Swimming Area

The portion of the creek adjacent to the proposed secondary trail head area on the Township's conservation property was used in the past as a swimming hole. This use may be continued in a formal manner.

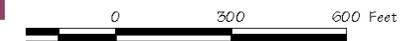
McMichael Creek RECOMMENDATIONS Segment M-1



RECOMMENDATIONS		OWNERSHIP
	Primary Trail Head	
	Secondary Trail Head	
	Key Parcel Boundary	
	Bridge	
	Road Crossing	
	Trail	
	Accessible Trail	
	Easement Consideration	
	Stream Restoration	
	Interpretive Site	
	Information Station	
	Boating Access	
	Fishing Access	
	Swimming Area	
	Bluesway	

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Information used to produce this map was obtained from the Monroe County Open Space plan. Other sources of information are noted in the legend. Pashek Associates makes no claims to the accuracy of the base map data.



Prepared by Pashek Associates

not to scale

Segment M-2

CONSERVATION

Along the north side of the creek are several small private residential properties. These landowners should be involved in a landowner education program about riparian zone preservation. The land to the south of the creek is primarily composed of three large **Key Parcels**. The parcels are owned by Norton Road Associates, Forte, Inc., and VFG Labar. A dialogue should be opened with the owners of these parcels regarding the possibility of acquisition, easements, or other greenway conservation possibilities.

Labar Village, an existing senior residential development sits adjacent to the creek, to the south. The individual homeowners within this community should be offered an opportunity to learn more about conservation efforts within the greenway corridor. Any expansion of this community should be sensitive to the riparian corridor and incorporate trail easements.

RECREATION

The topography becomes less limiting in this section of the greenway, therefore the proposed trail runs along the southern edge of the creek through most of this segment.

Given the fact the Labar Village is a gated community, the development of a public trail along the creek through this property may be difficult. Therefore, an alternative on-road is suggested, which follows Kautz Court, Dreher Avenue, and Katz Road to bypass the development and reconnect to the trail on the southern side of the creek near Interstate 80. This would require the construction of a pedestrian/bicycle bridge across the creek near Interstate 80. The proposed trail then continues to the creek's confluence with Pocono Creek.

ADA Accessibility

Vehicular access to the proposed trails is limited, decreasing potential for ADA accessible trails.

Primary Trail Heads

A primary trail head along Stroudsmoor Road will provide an important link between the trail along McMichael Creek and the proposed trail along Godfrey Ridge.

Another important trail head may be constructed near the Stroudsmoor Inn, which would link visitors to the trail system. This connection to the

proposed Godfrey Ridge Trail should be considered as an alternative to the previously mentioned primary trail head, should its development not occur.

Secondary Trail Heads

A trail head and bridge are proposed on the northern side of the creek at the end of Creekwood Drive to provide access to the trail residents from the neighborhood to the north of the creek. At the Stroud Township/Stroudsburg Borough border, Stroud Township owns several small parcels of land. Here a trail head, fishing access, and a bridge are proposed.

Road Crossings

The proposed trail from McMichael Creek to Stroudsmoor Road continues by briefly following the roadway and then crossing Route 191.

Interpretive Sites

The proposed trail head at the end of McMichael Drive will provide opportunities for residents of the nearby neighborhood to interact with the creek on a regular basis. The potential exists to utilize this interaction to educate residents about stream ecology.

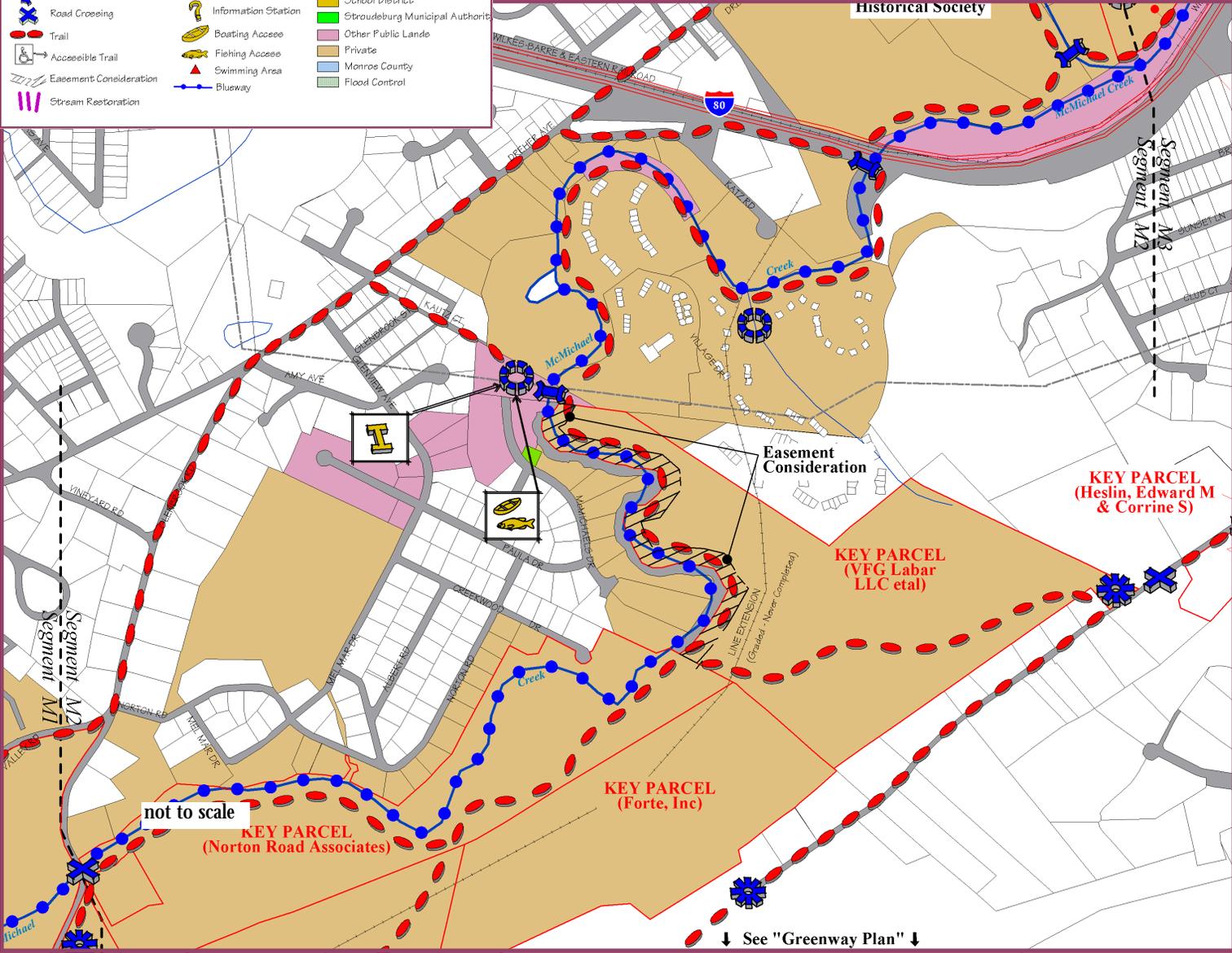
McMichael Creek

RECOMMENDATIONS

Segment M-2

Legend

RECOMMENDATIONS		OWNERSHIP
	Primary Trail Head	
	Secondary Trail Head	
	Key Parcel Boundary	
	Bridge	
	Road Crossing	
	Trail	
	Accessible Trail	
	Easement Consideration	
	Stream Restoration	
	Interpretive Site	
	Information Station	
	Boating Access	
	Fishing Access	
	Swimming Area	
	Blueway	



McMichael & Pocono Creeks
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Information used to produce this map was obtained from the Monroe County Open Space plan. Other sources of information are noted in the legend. Esch Associates makes no claims to the accuracy of the base map data.

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road McMichael &

Segment M-3

CONSERVATION

This segment of the greenway runs through the downtown area and as a result is fairly narrow. This narrow form and the potential for a large degree of interaction by residents will necessitate close management, restoration, and conservation of the greenway and the creek's riparian zone.

RECREATION

Recommendations for this portion of the McMichael Creek corridor include a variety of recreation opportunities. The McMichael Creek Blueway Route, which began at Stroud Township's conservation lands, ends at Rotary Park.

The trail running along the Pocono and McMichael Creeks continue to a proposed bridge, which connects to Rotary Park. Construction of the trail on the northern side of the creek may involve a privately owned **Key Parcel** (Monroe Silk Co.) From the bridge, a single trail continues through the park, to a primary trail head.

From the Godfrey Ridge, trails continue along Route 191, along Broad Street to downtown and along the ridge, connecting with the trails in the Brodhead Creek corridor.

ADA Accessibility

A spur from the Levee Loop Trail extends into Downtown Stroudsburg and into Rotary Park. This trail segment is proposed to be ADA accessible.

The trail that runs through the downtown area is indicated as ADA accessible. This trail route may have two different forms: on-street bicycle lanes and/or sidewalk trails. Efforts should be made for the latter of the two to be ADA accessible.

Primary Trail Heads

Rotary Park will provide the site for an important trail head location. The high profile park will make connections between the greenway trail system, the park, and the downtown area. Existing parking at the site could be utilized.

Secondary Trail Heads

The undeveloped area at the end of Palmer Street, near the Hampton Inn may serve as a secondary trail head. Several connecting points in the

downtown areas will be important to the success of the trail because of increased use and visibility.

A secondary trail head is also proposed at the start of the levee along McMichael Creek, near the intersection of Broad Street and Main Street. This area is not large enough for vehicular parking. However, this well-traveled intersection will be a highly visible component of the trail. Therefore, this pedestrian access point may include an entrance sign and information on the overall trail system.

Road Crossings

The "five points" intersection is a major vehicular throughway. It is also an important trail hub, where several routes converge. Every effort should be made to improve pedestrian access and safety.

Interpretive Sites

Although Fort Penn no longer exists, a descriptive marker at this location could provide the opportunities for trail users to learn about the area's past.

A proposal for a historic walking trail along Quaker Alley is in progress. This route would connect well to the downtown trail segment.

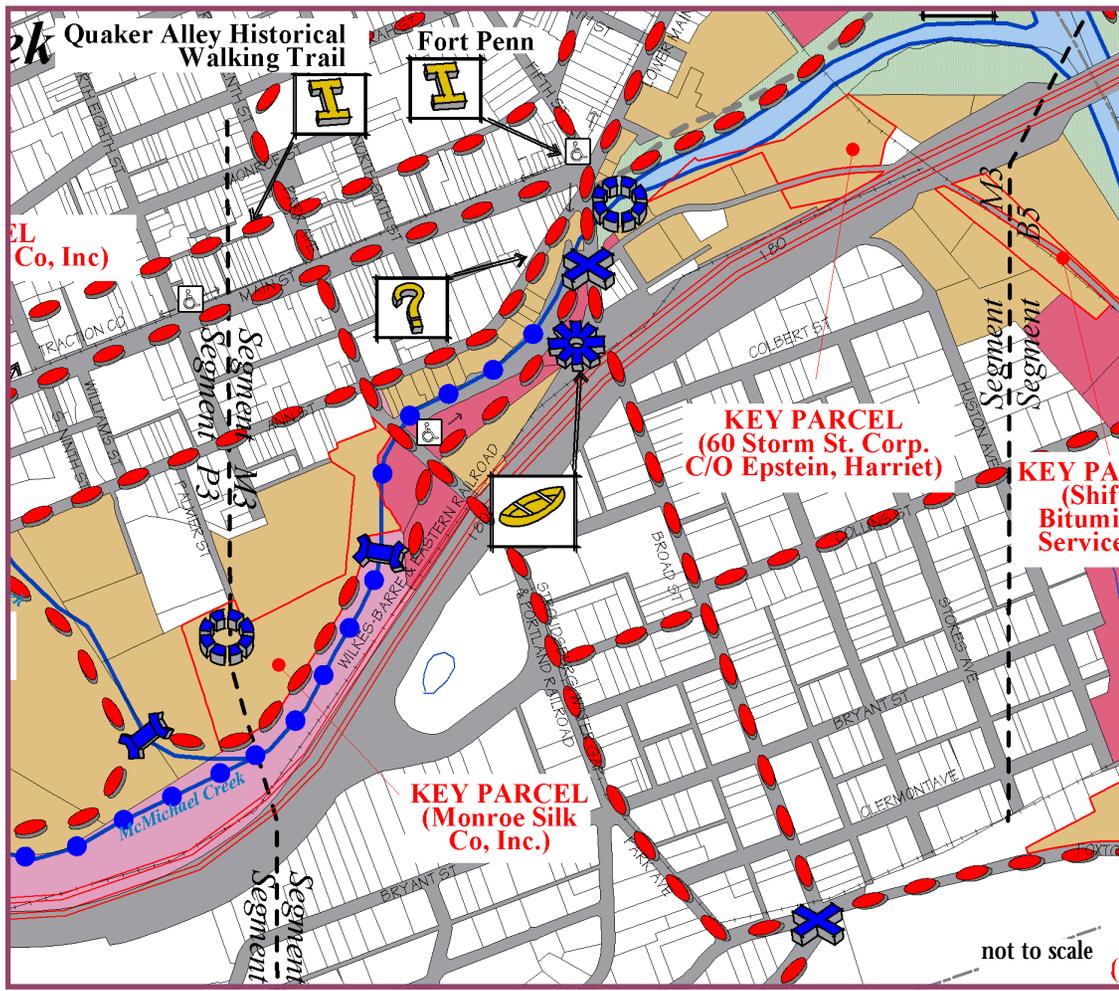
Information Stations

This station is the proposed location of a new downtown parking garage. This well-trafficked site may offer an opportunity for dissemination of information regarding the nearby trail system. Additionally, the trail system brochure may identify this garage as a convenient parking area for trail users who travel to the trails by car.

McMichael Creek

RECOMMENDATIONS

Segment M-3



- rad, McMichael & Pocono Creeks
- al Boundary
- ate Road
- Local Road
- Stream
- Ponds
- Railroads
- med Railroads

Information used to produce this map was obtained from the Monroe County Open Space plan. Other sources of information are noted in the legend. Pashek Associates makes no claims to the accuracy of the base map data.



Legend	
	Primary Trail Head
	Key Parcel Boundary
	Bridge
	Road Crossing
	Trail
	Accessible Trail
	Easement Consideration
	Stream Restoration
	Secondary Trail Head
	Interpretive Site
	Information Station
	Boating Access
	Fishing Access
	Swimming Area
	Blueway
	East Stroudsburg Borough
	Stroudsburg Borough
	Stroud Township
	School District
	Stroudsburg Municipal Authority
	Other Public Lands
	Private
	Monroe County
	Flood Control

Pocono Creek

The character of the Pocono Creek corridor is unique. The creek traverses undeveloped natural areas as well as the Route 611 commercial corridor. This context provides a variety of unique opportunities, as well as some limitations.

Segment P-1

CONSERVATION

The remaining natural areas within the Pocono Creek corridor are important open spaces that should be protected. Cooperative conservation efforts involving the owners of these lands are key. In particular, the large open space area owned by Presbyterian Church of Philadelphia (**Key Parcel**).

Opportunities for cooperation with Hamilton Township on conservation and recreation efforts should be identified and explored.

RECREATION

From Route 161, the trail follows White Stone Corner Road to the Kirkwood Camp property, where it follows the abandoned rail bed. The rail bed is intact and fairly clear.

After crossing Shaffer School House Road, the trail again follows the abandoned rail line, which appears to primarily fall within one Key Parcel (Diane Zeitz), until it enters the Interstate 80 right of way.

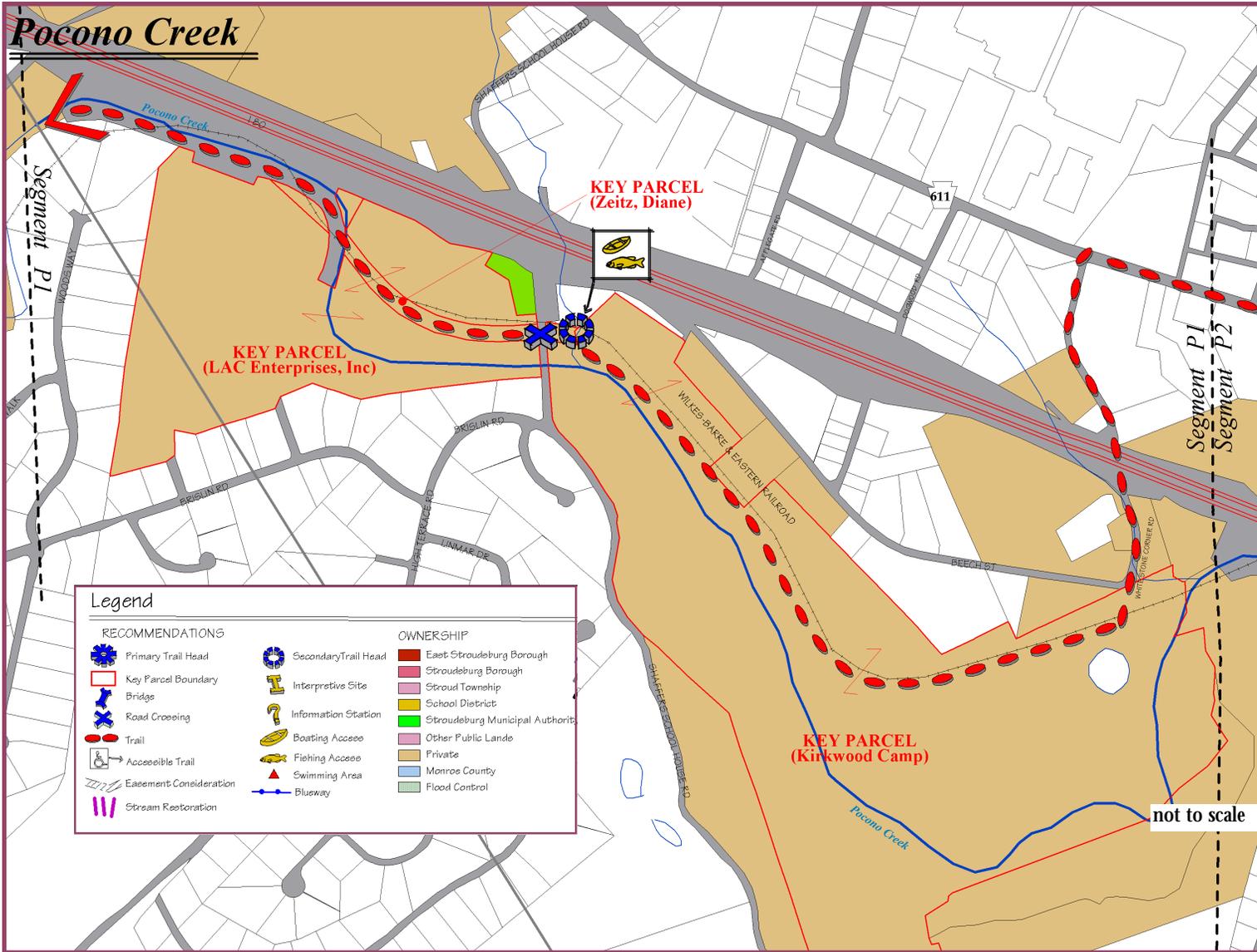
Secondary Trail Heads

This trail head may be a small car “pull-off” along Shaffers School House Road.

Road Crossings

The abandoned rail bed is cut by Shaffers School House Road. Safe pedestrian access must be provided from the rail bed, across the road, and back onto the rail bed.

Pocono Creek RECOMMENDATIONS Segment P-1



McMichael & Pocono Creeks
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roads
Railroads

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McMichael & Pocono Creeks

Segment P-2

CONSERVATION

Within this segment, the most developed portions of the creek corridor begins. In many areas, development exists on both sides of the creek and undeveloped natural areas are small and segregated. However, the natural areas that do exist should be protected and managed. These areas will also present important opportunities to educate the public about the creek corridors and methods for preservation and environmentally sensitive development.

RECREATION

A majority of the trail through this segment follows Route 611 as a bicycle route. Commercial development and steep slopes limit opportunities for trail development immediately adjacent to the creek. The bicycle lane reconnects with the creek corridor via Bridge Street.

Along Bridge Street, adjacent to Interstate 80, a vacant **Key Parcel** (Peter Andrews) may be used to provide stream access. This small area could provide opportunities for fishing, picnicking, and interpretation of the creek corridor's natural elements.

Proposed trails also connect to the Flagler Run greenway.

Secondary Trail Heads

There may be an opportunity to provide a few parking spaces and other trail head facilities along the creek, to the east of Bridge Street.

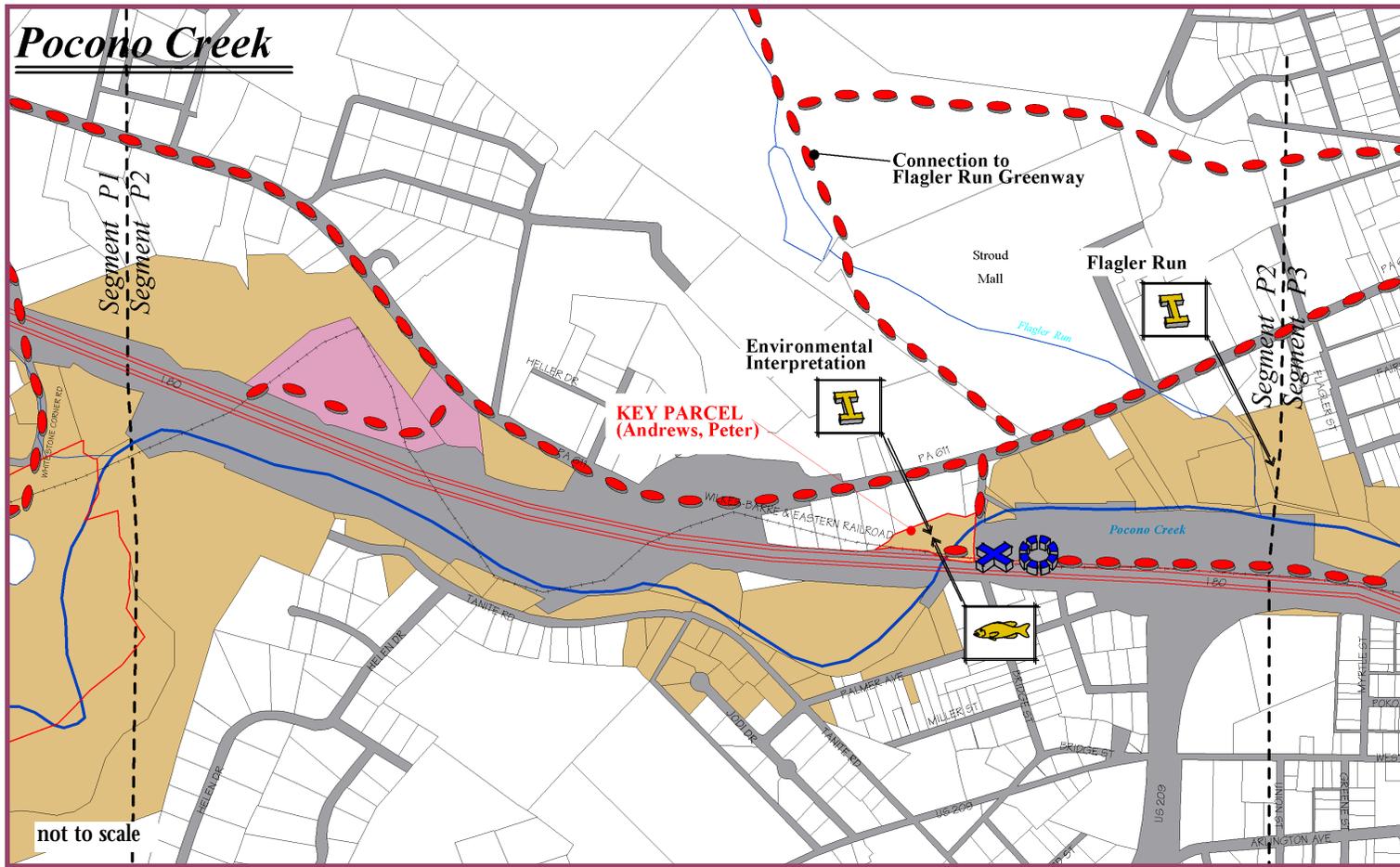
Road Crossings

If the proposed Bridge Street trail head and the key parcel across the street are developed, a safe pedestrian crossing must be provided between the two.

Interpretive Sites

The Key Parcel (Peter Andrews) adjacent to the creek is undevelopable and may offer an opportunity to provide pedestrian access to the creek for fishing and interaction with the creek in this highly developed area.

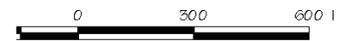
Pocono Creek RECOMMENDATIONS Segment P-2



McMichael & Pocono Creeks

- Boundary
- Road
- Oil Road
- Stream
- Trails
- Roads
- Railroads

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RECOMMENDATIONS		OWNERSHIP
	Primary Trail Head	
	Key Parcel Boundary	
	Bridge	
	Road Crossing	
	Trail	
	Accessible Trail	
	Easement Consideration	
	Stream Restoration	
	Secondary Trail Head	
	Interpretive Site	
	Information Station	
	Boating Access	
	Fishing Access	
	Swimming Area	
	Blueway	

Segment P-3

CONSERVATION

Very few large, undeveloped areas exist within this segment. However, there are opportunities for restoration and protection of the stream corridor. The downtown location, which includes the Stroudsburg school complex, emphasizes opportunities for environmental education related to the creek corridors.

RECREATION

Within this segment, the “downtown spine” trail begins, following Main Street through the heart of town to the levee trails at the Interborough Bridge. Additionally, a proposed trail runs immediately adjacent to the creek.

ADA Accessibility

The portions of the creek corridor adjacent to the creek near the School District property is fairly level at the top of the bank. The physical characteristics of this area and the heavy use associated with the Stroudsburg Borough Park and the School District facilities make ADA accessibility important.

Primary Trail Heads

A primary trail head is proposed along the creek on the School District’s property. This location capitalizes on stream access, existing vehicular access and the adjacency of the Stroudsburg Borough Park.

Secondary Trail Heads

Secondary trail heads are proposed within this segment. One utilizes the existing parking lot behind the Clarion Hotel. The trail head would be used by vacationers staying at the hotel and provide limited parking in an underutilized portion of the hotel’s existing parking lot for those who drive to the trail.

A trail head near Park Street to the north of the creek would provide access for residents in this area. Its development will necessitate cooperation with the Knights of Columbus, the property owner. Development of the trail head will only be useful if the proposed bridge is constructed as well. The bridge would connect the trail head to the School District property.

The Best Supply property (**Key Parcel**), may offer an opportunity for the development of a highly visible trail head along Main Street.

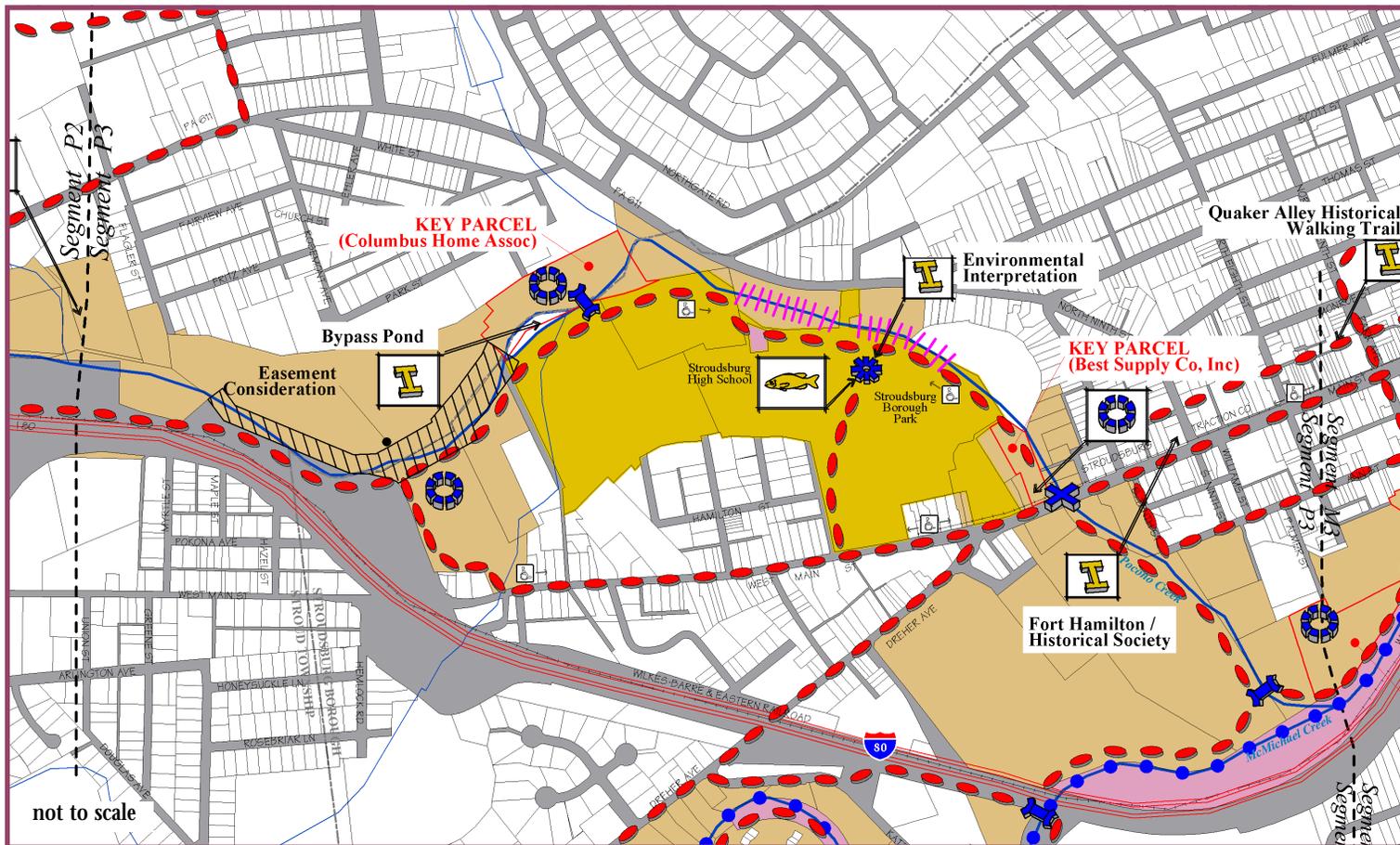
Road Crossings

Pedestrian safety along Main Street is a high priority. At the intersection of the street and the creek, a proposed trail crosses the road.

Interpretive Sites

The Brodhead Watershed Association plans to complete a stream restoration project in the area adjacent to the School District Property. The implementation of this project and the results may be used for educational purposes.

Pocono Creek
 RECOMMENDATIONS
Segment
P-3



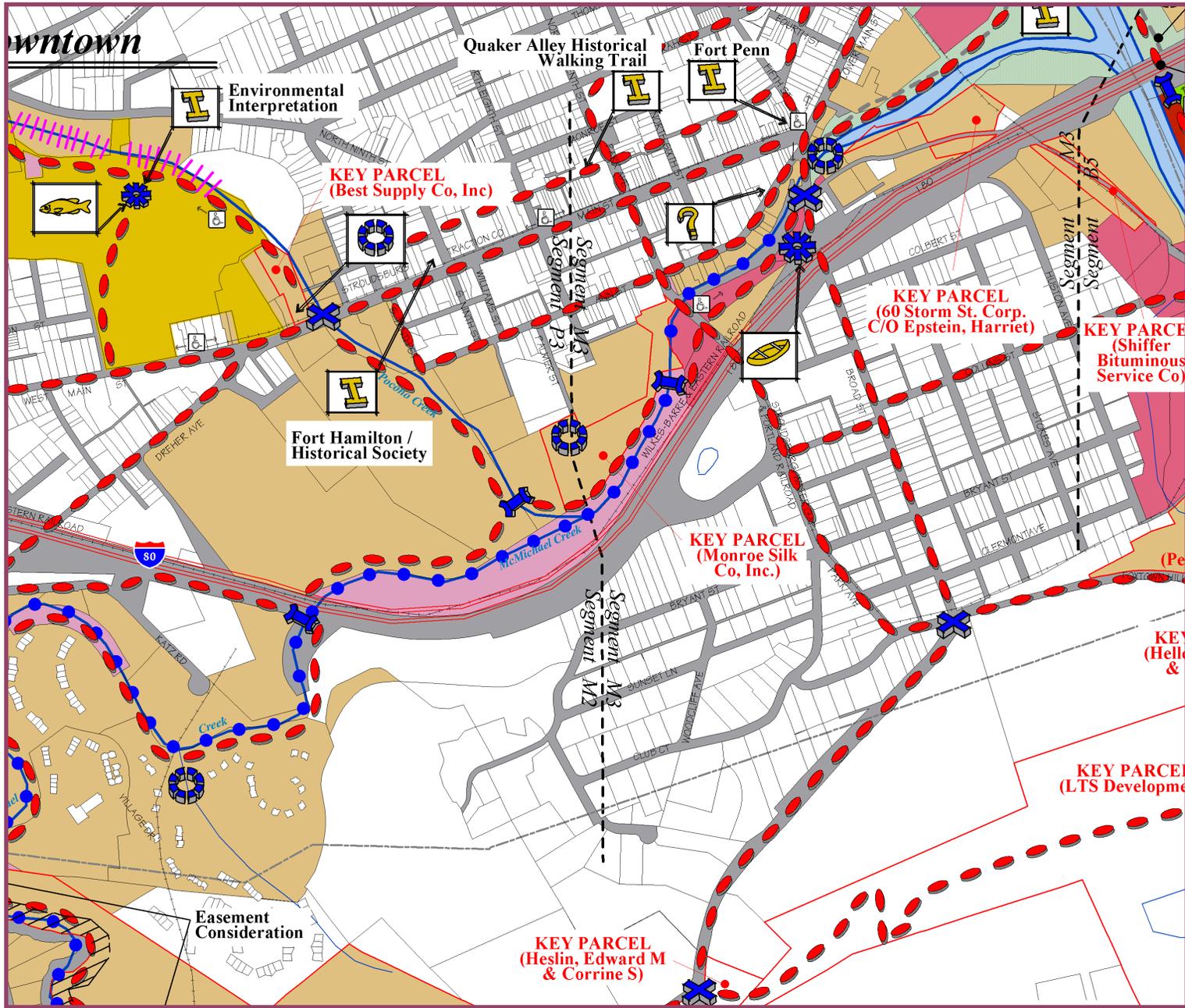
McMichael & Pocono Creeks
 Boundary
 Road
 Rail Road
 Stream
 Trail
 Utility Lines
 Railroads

RECOMMENDATIONS		OWNERSHIP
	Primary Trail Head	
	Key Parcel Boundary	
	Bridge	
	Road Crossing	
	Trail	
	Accessible Trail	
	Easement Consideration	
	Stream Restoration	
	Secondary Trail Head	
	Interpretive Site	
	Information Station	
	Boating Access	
	Fishing Access	
	Swimming Area	
	Blueway	

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Chapter 3
Protection, Enhancement, and
Development

Pocono/McMichael
Creeks
RECOMMENDATIONS
Downtown
Area



Summary of Proposed Recreational Uses

The Brodhead, McMichael, Pocono Creek Greenway System may accommodate a variety of uses. Existing conditions and demand influence the potential for the realization of a particular use. An important pattern of use to recognize is that all three streams flow from less developed portions of the region toward the densely populated downtown area, where all three converge.

A. The northernmost portion of the Brodhead Creek study area is best suited for bicycle trail use. The creek corridor is not near major user populations and will serve as a regional trail corridor, for longer trail rides. Potential uses of this greenway area may include:

- on-road bicycling
- education
- fishing

B. The use of this portion of the Brodhead Creek corridor will be varied. This area may be suitable for regional bicycle trails as well as local park use. Pinebrook Park and adjacent public lands offer opportunities for a variety of uses. Potential uses of this greenway area may include:

- rollerblading
- walking
- cross country skiing
- biking
- education
- fishing
- on-road biking
- picnicking
- boating
- jogging

C. The lower section of the Brodhead Creek corridor includes the proposed multi-use trails that will utilize the levee system. The corridor runs through the densely populated boroughs and uses may include:

- rollerblading
- jogging
- on-road biking
- fishing
- education
- walking

D. The small portion of the Brodhead Creek corridor running east to west is surrounded by primarily undeveloped land. A significant amount of which is owned by Monroe County. Potential recreational uses for this land should be explored further, in conjunction with County officials. Potential uses of this greenway area may include:

- mountain biking
- equestrian
- hiking

- regional hiking (connecting to the Appalachian Trail)

E. The southwestern half of the McMichael Creek corridor includes large areas of undeveloped land may accommodate the following uses:

- equestrian
- boating
- hiking
- mountain biking

F. The eastern half of the Pocono Creek Study area is surrounded primarily by undeveloped lands. Off-road access to the creek corridor is limited in areas. Potential uses within the corridor may include:

- jogging
- biking
- hiking
- fishing
- boating

G. The middle section of the Pocono Creek corridor is constrained in some areas by development and the Interstate 80 corridor. Off-road trail and other recreation opportunities are limited. Potential uses within the corridor may include:

- on-road bicycling
- boating

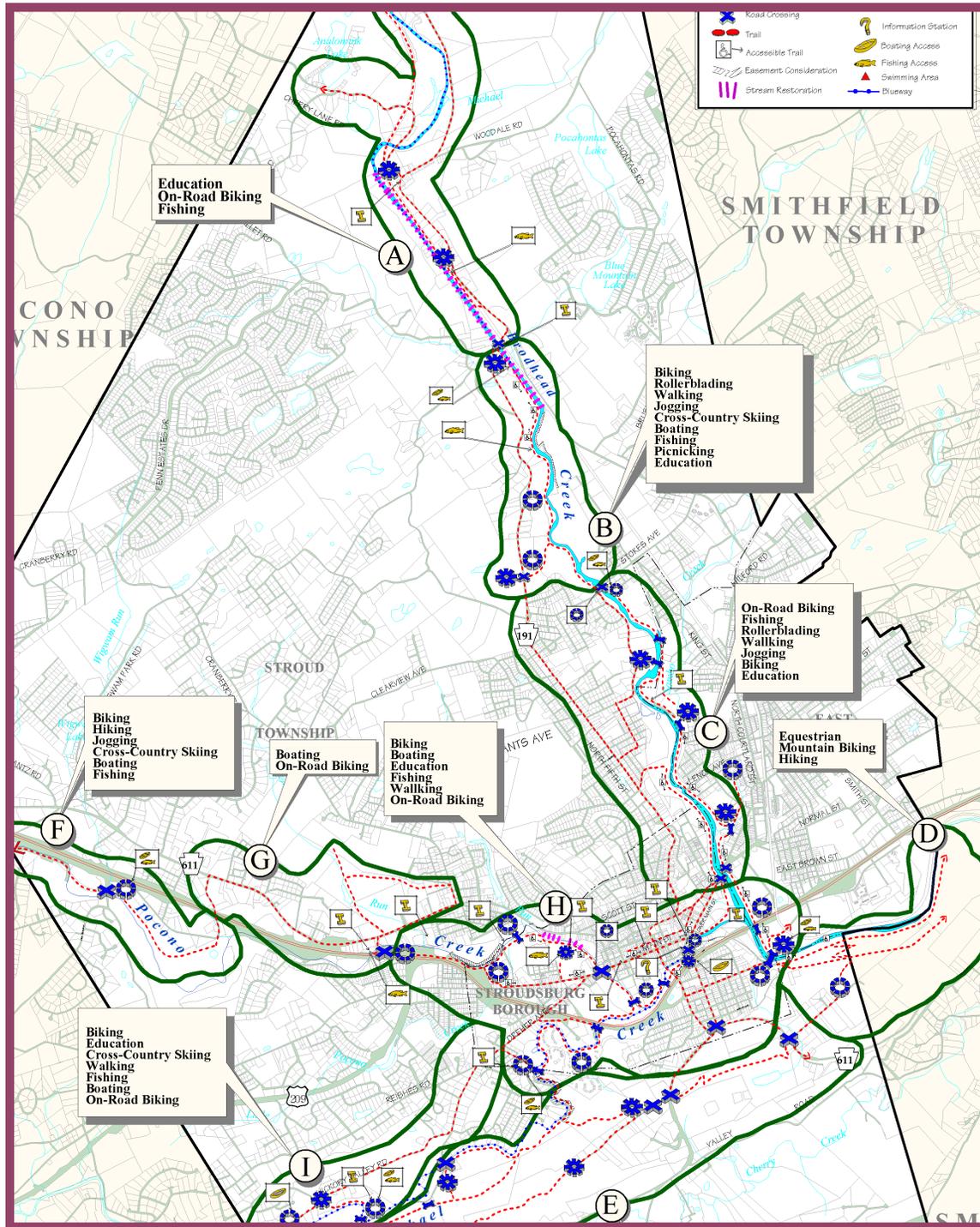
H. The lower portion of the Pocono Creek corridor study area is unique. The corridor is surrounded by commercial and residential development, however, the corridor itself is not densely developed, in most areas. School district property and public lands provide the setting for potential opportunities for recreational uses. They may include:

- education
- walking
- fishing
- biking
- boating
- on-road biking

I. The northeastern half of the McMichael Creek corridor includes the Township Conservation Property, which holds the potential for a variety of uses. The uses of this greenway area may include:

- environmental education
- hiking
- fishing
- boating
- cross-country skiing
- biking
- on-road biking

Proposed Uses



Chapter 3

Protection, Enhancement, and
Development

*Greenways are
outdoor classrooms*

Green Infrastructure

The concept of Green Infrastructure emphasizes that a successful greenway serves as the base for all development or preservation within the greenway corridor. The environmental, cultural, scenic, and recreational value of the Brodhead, McMichael and Pocono Creeks cannot be overstressed. Therefore, the use of this generalized concept of “green infrastructure” allows the incorporation of the guiding principles for the future of these creeks into the fabric of the region.

The “green infrastructure” concept may be used to guide future development within the region and educate people about greenways and the natural environment.

Guide Future Development

This concept and associated illustration sets forth a basis of greenway conservation that is easily transferrable to land use, recreation activities, and water quality control. Increased awareness of preservation techniques and the impacts of certain actions will help to capitalize on the positive role the public can play in greenway conservation.

Following the adoption of this Greenways Plan, the information illustrated on the green infrastructure map should be incorporated into a Regional Comprehensive Plan, should one be developed.

Education

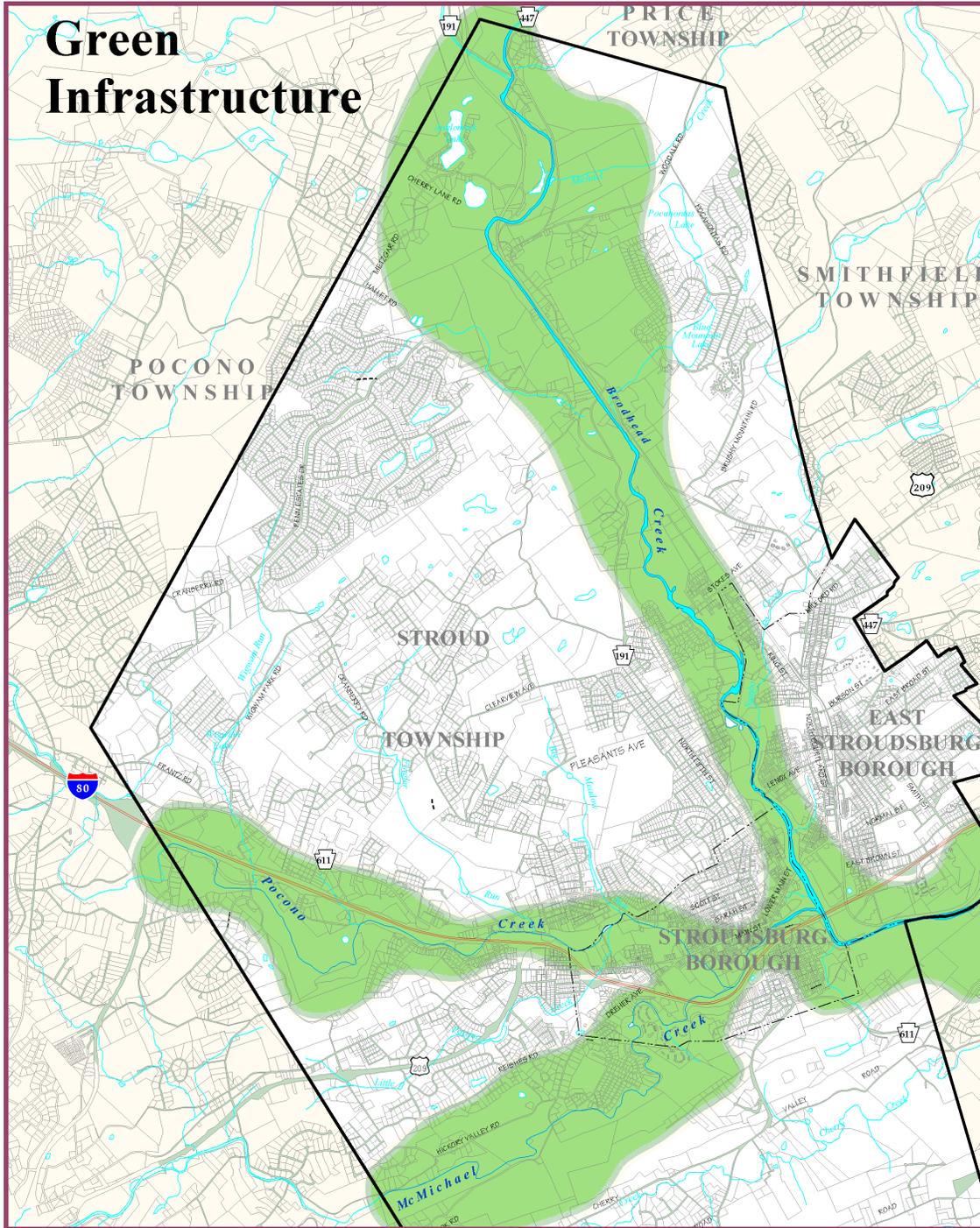
A successful greenway system is an integral part of the Stroud Region's community fabric. While certain sensitive areas may need to be preserved in a restrictive manner, greenways as a whole encourage interaction with nature.

Recreational trails provide residents with access to the greenways. These interactions increase awareness of the greenways' natural beauty and importance to the community's visual character. As a result, those with a strictly recreational interest may become greenway proponents because of their regular interaction as they jog, walk, or bicycle.

There are a variety of more direct possibilities to provide educational opportunities within greenways. A system of informational signs regarding the stream, stream bank, riparian vegetation, aquatic habitat, and wildlife, provide information to those interested, at an individually-set pace.

Additionally, greenways make excellent “outdoor classrooms.” Local organizations and school districts benefit from the potential use of the greenway corridor. As conservation techniques are implemented, students can witness the implementation of the project and monitor its success. Similarly, the natural components of a greenway can be used as “real-life” examples to illustrate textbook learning in the traditional classroom.

Green Infrastructure Map



Zoning Overlay District

Overlay zoning is a technique that may be used in instances when there is special public interest that doesn't coincide with the traditional zoning in that geographic area. It is a mapped area with restrictions in addition to or less than those in the underlying traditional zone. The overlay is superimposed over the traditional area and establish the regulations, or reducing the extent of existing uses. While the underlying zone or zones identify permitted land uses, the overlay zone might provide design restrictions, additional setbacks, or other exceptions to the base district regulations.

The requirements of an overlay supersede those of the base zoning district.

The following is a draft of a Greenway Overlay Zone, the language of which may be used to amend the Zoning Codes of the regional partners. The following information is included for use as a starting point for evaluation of the potential amendment of one or more of the Zoning Codes. Each municipality must evaluate this information, and information from other sources to determine an appropriate amendment, if desired.

DRAFT Greenway Overlay Zone

TITLE

Brodhead, McMichael, and Pocono Creeks Greenways Overlay Zone

PURPOSE

The purpose of this district to preserve areas that are associated with the Brodhead, McMichael and Pocono Creeks, that are environmentally sensitive, or that have severe limitations for development. It is the purpose of this district to protect the ecology of the stream beds, preserve riparian zones, and promote the goals of clean water quality and pollution prevention. Only open space uses that do not involve structures and do not contain impervious surfaces (as defined in section ** of this Ordinance) are intended for this district. Structures shall be defined as in section ** of this Ordinance with exceptions noted in section **. Any application for a permitted or conditional uses that required review by ** shall require review and recommendations by the Stroud Region Greenway Advisory Board.

BOUNDARIES

- A. The Greenway Overlay Zone shall be defined as the areas illustrated on the *** map, adopted as part of this Ordinance.
- B. All lands within 150 feet of the top of the bank of the Brodhead, McMichael, and Pocono Creeks.
- C. All lands within 50 feet of the top of the bank of all tributaries to the Brodhead, McMichael, and Pocono Creeks.

RESTRICTIONS OF THE OVERLAY ZONE

A. Permitted Uses

- i. Agricultural or forestry activities not involving the use of structures or toxic chemicals unless such chemicals are part of accepted agricultural practices such as approved by ***.
- ii. Outdoor recreation areas not involving the use of structures or playing fields.
- iii. Recreation paths which are open to the public, and bridges associated with such paths.
- iv. Crossings by roads, access drives, and/or utility lines to serve land on the other side of the Greenway District, granted that such access cannot be provided reasonable without crossing the district.

B. Conditional Uses

- i. None

C. In cases of dual applicability, the stricter restriction shall prevail.

D. Site Plan Approval

- i. Site Plan Approval by the *** is required for all uses in accordance with Section ** of these regulations.

E. Buffer Requirements

- i. Use Standards: Uses granted under Section ** shall be subject to the following limitations:
 - 1. No structures shall be permitted within this district with the exception of crossings, agricultural and forestry activities, recreation paths and bridges along with related accessories as approved by **.
 - 2. Pavement associated with public recreation paths shall be

located and constructed to minimize runoff into the adjacent stream. It shall not be located less than 25' from the top of the stream bank, except where necessary for bridge crossings. It is recommended that pavement be located 50-100' from the top of the stream bank. **trail routes to waters edge constructed of compacted limestone??**

3. Pavement associated with parking areas shall be constructed to minimize runoff into the adjacent stream.

4. No use shall be permitted that will adversely affect soils or vegetation, impair the quantity and quality of surface and ground water, erode soil, alter stream banks or stream beds, or divert watercourses.

5. Excavation of earth materials or filling with earth materials or other substances will be permitted only to the extent necessitated by a permitted or conditional use, or for the re-vegetation and restoration of the streambank and buffer.

6. The cutting or removal of trees and other natural vegetation shall be allowed only to the extent necessitated by a permitted use.

7. Forestry activities should be conducted in accordance with ***.

8. Agricultural activities shall be conducted in accordance with the Pennsylvania ****.

9. Criteria for District crossings, including recreation path bridges, roadways or access drives, and utilities.

- a. Utility line crossings shall, where possible, cross the District via road crossings under the pavement or on the bridge.
- b. The width of the crossing shall be the minimum necessary to allow for maintenance access.
- c. The crossing shall occur at a right angle to the District so as to minimize impact on the riparian buffer.
- d. Except for the area taken by the road or path, the disturbed area associated with the crossing shall be re-vegetated with native plantings similar to those in the adjacent undisturbed buffer.
- e. Underground utility crossings should be located at least three feet below the streambed, so that future

channel erosion does not expose them.

f. All bridges should be capable of passing a 100-year peak discharge.

g. The conveyance of stormwater to a stream through a pipe shall occur at the invert elevation of the streambed, wherever possible, and shall be stabilized by a stone outfall.

10. Buffer restoration, as set forth in ***, shall be encouraged.

ii. Encroachment on 50 Foot Tributary Buffers

It is the intent of this section to protect the watercourses in the Stroud Region. No encroachment may be approved in the 150 foot buffers identified in section ** or **. Encroachment of the 50 foot tributary buffers identified in section ** of this section is an option only if there is no practical and reasonable method of avoiding a modification to the buffer area and if the applicant meets all of the conditions listed below. In such cases, the ** Board may, as part of the site plan approval, waive the regulations and allow encroachment on the 50 foot tributary buffers, but shall also require the applicant to prove a mitigation plan as set forth in Section **.

1. The application is one or more of the following Zoning Districts:

2. The site has the following physical characteristics.

- a. The slope or grade of the buffer zone is less than 10 percent;
- b. The soils are not soils that have a slow permeability.
- c. The land above the streambank is level;
- d. Current use of the buffer is low (e.g. no lawns, paved bicycle paths, existing structures, or parking areas);
- e. Velocity of runoff entering the buffer is less than or equal to 1 foot per second;
- f. Infiltration rate of the soils is greater than .25"/hour.

3. There are unique physical circumstances or conditions, including irregular topography, narrowness, or shallowness or lot size or shape, or exceptional topographical or other physical conditions peculiar to the particular property, and that unnecessary hardship is due to such conditions, and not the circumstances or conditions generally created by the provisions of the Zoning Regulations in the neighborhood or district in which the property is located.

Chapter 3

Protection, Enhancement, and Development

4. That because of such physical circumstances or conditions, there is no possibility that the property can be developed in strict conformity with the provisions of this zoning regulation and that an encroachment on the stream or tributary buffer is therefore necessary to enable the reasonable use of the property.

5. The unnecessary hardship has not been created by the applicant.

6. The buffer encroachment, if authorized, will not result in:

- a. An alteration of the essential character of the neighborhood or district in which the property is located;
- b. Substantial or permanent impairment of the appropriate use or the development of adjacent property(ies);
- c. An adverse impact on a wetland;
- d. Degradation of water quality;
- e. Infringement within the banks of a creek;
- f. Otherwise impair attainment of the purpose of this section: the preservation of areas that have physical characteristics, that are environmentally sensitive, that have severe limitations for development, the protection of non-nuisance aquatic habitat or promote the goals of clean water quality.

7. The buffer encroachment, if authorized, will represent the minimum encroachment that will afford relief and will represent the least deviation possible from the Zoning Regulation and from the plan.

8. If a waiver is granted by the *** to allow the applicant to encroach on the buffer zone, the maximum allowable encroachment shall be 25 feet from the top of the bank for areas protected by the 50 foot tributary buffer.

iii. Mitigation Plan for Encroachment on 50 Foot Tributary Buffers
In order to qualify for encroachment on 50 foot buffers per Section **, the applicant must provide a mitigation plan that includes the following:

1. The applicant shall provide the *** Board and the Greenway Advisory Board with a mitigation plan for tributary buffer encroachment. The mitigation plan shall be prepared in consultation with the ** or other such agency and/or consultant as approved by the ** Board. It shall include, but is not limited

to, the following:

- a. A statement as to why the buffer needs to be encroached and how the mitigation will meet the purpose of this section: the preservation of areas that have physical characteristics, that are environmentally sensitive, that have severe limitations for development, or promote the goals of clean water quality.
- b. A site plan showing the type and location of temporary and permanent stormwater best management practices that shall be used for mitigation purposes, during site construction and after site construction. Said BMP's include, but are not limited to, infiltration, detention and retention basin, constructed wetlands, porous pavement, and oil-grit separators. Buffer averaging, which would permit the buffer to be narrower than the regulation at some point along the stream, as long as the average width of the buffer meets the minimum requirements of this regulation, may also satisfy the mitigation requirements. Best Management Practices shall be designed, constructed and retained to minimize erosion, failure, and turbidity of adjacent waters, and meet the requirements of the physical and biological characteristics of the site.
- c. A maintenance schedule for all proposed permanent stormwater best management practices.

F. Buffer Requirements in *** Districts

- i. Non-Residential Uses: Non-residential uses, except agricultural uses, in the ** Districts, shall be subject to the provisions of section **.
- ii. Residential Uses: Except as may be allowed below, structures and impervious surfaces shall not be located within the buffer area, lawn and chemicals (pesticides, herbicides, fertilizers, etc.) shall not be applied within the buffer areas.

1. Existing structures and/or impervious surfaces:

- a. Existing structures and/or impervious surfaces that currently encroach on the buffer areas may continue to be used and may be modified or enlarged, provided that the degree of encroachment is not increased.
- b. If there is no alternative but to increase the encroachment, the *** Board may approve such

encroachment if the applicant demonstrates that stormwater runoff will be retained and treated before entering the adjacent stream. It is the applicant's responsibility to demonstrate conclusively that no adverse impacts to water or habitat quality in the stream will result from the increased encroachment.

2. Existing lots that are too small and/or are located and/or shaped so as to allow no alternatives to construction in the buffer:

a. If an applicant demonstrates that a lot is so small or is located or shaped in such a way that it is impossible to use that lot for its intended purpose without locating part or all of the structure or impervious surface within the buffer area, the ** Board may approve such encroachment if the applicant demonstrates that storm water run-off will be retained and treated before entering the waterbody. It is the applicant's responsibility to demonstrate that not adverse impact to water or habitat quality in the waterbody will result from increased encroachment.

3. Existing lots not demonstrating the limitations described in section ** and lots created by subdivision after the effective date of this section shall be subject to all requirements of section ** without the relief set forth in sub-paragraphs ** and **.

DEFINITIONS

Impervious Surface: A surface that prevents penetration of rainfall and snowmelt into the ground.

Structure: An assembly of materials for occupancy or use, which has a fixed location on the ground, or an attachment to something having a fixed location on the ground, including but not limited to a building or addition to a building, mobile home, carport, garage, porch, or satellite dish, fence wall, billboard or sign, except a wall or fence on an operating farm. The term structure shall also include transportable non-residential units such as tractor-trailers, etc.

Top of Bank: The line on shore established by the maximum elevation of the water surface in a stream flowing at channel capacity.

Trail and Greenway Toolbox

The success of a greenway depends on a variety of factors. Two key issues, public support and ecological health, can enhance or deflate a greenway project. This Greenway Toolbox was developed to briefly address several issues that may positively influence the ecological health of the greenway and assist in efforts to build public support.

Economic Development

Undeveloped lands and recreation facilities are often regarded as having no quantifiable economic value. This is not the case. Numerous studies on the effect of recreation facilities and open space support the assertion that they do make a positive contribution to economic development.

OPEN SPACE

The environmental and aesthetic benefits of open space are well-known. However, as land development is pitted against open space conservation, it is important to recognize the economic value of undeveloped land in conjunction with natural and scenic values. Numerous studies indicate that open space has a positive effect on the value of nearby properties. Particularly, undeveloped lands and greenways can increase the value of a residential property from 5 to 8 percent. (Scenic America Technical Bulletin Vol. 1, No. 1 - *Trees Make Cents*)

TRAILS

Although creating or expanding a trail system can deliver significant economic benefits by itself, communities can do more to capitalize on the economic potential of trails. Trail generate economic impacts by delivering additional spending to businesses. As businesses become more productive, new jobs and tax revenues follow. The additional spending may result from increased visitation or by changing the behavior of an existing pool of resident shoppers.

The trail system represents a vehicle for influencing how both residents and outsiders view a community. More importantly, the trail system can become a way to persuade recreational visitors to think about the community from a business perspective. Conversely, if business visitors already travel to the community, the trial system can be used to influence business visitors to consider returning for leisure purposes.

TOURISM DEVELOPMENT

The greenway system is an asset that will attract visitors and even residents to take part in open space activities, thereby utilizing hotels, restaurants, and other tourism-related businesses. About 77 percent of the United States' population 16 years of age and older enjoys some form of wildlife-related recreation. A variety of positive economic impacts result from these activities. Observing, photographing, and feeding fish and wildlife provided enjoyment for 134.7 million Americans in 1985. These participants spent over \$14.3 billion on these activities. (Scenic America Technical Bulletin Vol. 1, No. 3 - *The value of Nature and Scenery*)

MAIN STREET REVITALIZATION

The proposed greenway trail system identifies several connections to the downtown areas of the Boroughs. Linking trails with historic business districts in order to channel demand retail shops, restaurants and services.

BUSINESSES

Trail-related businesses include outfitters, lodging places, restaurants, and other merchants. A wide range of businesses are positively effected by trail development, whether they opened as a direct result of demand created by trail recreation or transformed as a response to new markets presented by trail users.

The handbook suggest the following guidelines as opportunities for trail-based economic development are explored.

1. Understand Community Capacity and Desires
2. Identify Target Markets Based on Trail Characteristics
3. Determine Community's Relationship to the Trail System
4. Choose Trailhead Sites Based on Desired User Markets and Impacts
5. Locate Trailheads Within Town Boundaries to Concentrate Economic Impacts
6. Build Off Existing Markets

Trail Development

BICYCLE TRAILS

When planning for bicycle trails, it is important to recognize and comply with current guidelines and standards related to bicycle planning and design. The primary guide, recognized by the Pennsylvania Department of Transportation, is the “Guide for the Development of Bicycle Facilities” published by the American Association of State Highway Transportation Officials. This document is generally recognized for establishing the design requirements for shared roadways, paved shoulders, bike lane symbols, and other factors. Consideration of on-road facilities should include research conducted, and subsequently published, by the Federal Highway Administration (FHA) regarding the Bicycle Compatibility Index (BCI). The title of the publications are “The Bicycle Compatibility Index: A Level of Service Concept, Implementation Manual”, 1998, and the “Development of the Bicycle Compatibility Index: A Level of Service Concept, Final Report”, 1998. The Federal Highway Administration’s Bicycle Compatibility Index allows the determination of a roadway segment’s compatibility with the average adult bicyclist.

Level of Service

To determine whether a road corridor can accommodate a bicycle trail, the Bicycle Level of Service Model and Compatibility Index should be utilized. The purpose is to evaluate the capability of specific roadway segments to accommodate both motorists and bicyclists. This model incorporates geometric and operational variables considered by bicyclists to be important to their level of comfort when riding on streets in the presence of vehicular traffic.

TRAIL HEADS

Trail heads are an important aspect of a successful bicycle or pedestrian recreational trail. They can provide safe access, mark the location of the trail or trails, provide information on other trail or surrounding facilities, and offer amenities for trail users. Trail heads act as the starting and ending points for trail users; provide restroom facilities, bike racks and water fountains; and include an information station that provides detailed information about the trail, as well as information on other area recreation opportunities.

Trail Accessibility

Trail planning and development efforts should always take into consideration the issue of accessibility to some degree. Currently, no national requirements exist in regards to accessible trail development. However, the final report of the Regulatory Negotiation Committee on Accessibility Guidelines for Outdoor Developed Areas includes soon to be proposed ADA Accessibility Guidelines for trails, outdoor recreational access routes, beach access routes, and picnic and camping facilities. The report is currently under review by the Access Board, the federal agency responsible for developing minimum accessibility guidelines under the Americans with Disabilities Act.

The following is a summary of key guidelines proposed. Given that the ADA will soon include requirements related to trail development, all current trail planning efforts should take ADA issues into consideration.

- Clear tread width: 36 inches, minimum
- Tread obstacles: 2 inches high, maximum. (up to 3 inches high where running and cross slopes are 5% or less)
- Cross slopes: 5%, maximum
- Running slopes (trail grade) meetings one or more of the following
 - 5% or less for any distance
 - Up to 8.33% for 200 feet maximum. Resting intervals no more than 200 feet apart.
 - Up to 10% for 30 feet maximum. Resting intervals 30 feet.

The proposed guidelines encourage the provision of the greatest degree of access possible. Variance from the accessibility guidelines for any portion of a trail where compliance would:

- Cause substantial harm to cultural, historic, religious, or significant natural features or characteristics
- Substantially alter the nature of the setting or the purpose
- Require construction methods or materials that are prohibited by Federal, State, or local regulations or statutes
- Not be feasible due to terrain or the prevailing construction practices

Trail Construction

The proposed greenway trail system will provide a variety of recreation and transportation opportunities. Several types of trails should be included within the system. Some trail types are more appropriate for development within a given context than others. Sensitivity to the surrounding land use, natural elements, and cultural features should influence the type of trail construction completed. The typical cross sections on the next page outline the general attributes of several trail types.

ON-ROAD BICYCLE TRAIL

To create several key connections, on-road trails are proposed. To implement these on-road trail segments, factors such as on-road parking and road width must be considered. As previously discussed, a level of service evaluation must be performed for all potential on-road segments. Following the appropriate assessment of the trail segments, their construction may include road striping, shoulder stabilization and share-the-road bicycle signs.

PARK TRAIL

Park trails are an important aspect of the greenway trail system. The emphasis of these trails is not making connections. These trails provide a variety of local recreation opportunities for residents and visitors to enjoy. The width of these trails may vary from eight to ten feet. Their surfaces may be compacted limestone or bituminous paving. They are to be constructed to accommodate rollerblading, walking, and jogging. Portions of park trail systems should be constructed in accordance with ADA accessibility guidelines.

MULTI-PURPOSE TRAIL

Multi-purpose trails are constructed to accommodate a variety of uses. Heavy use often requires well-stabilized and paved construction. The necessary minimum width of a this trail type is ten feet. The construction impact of a multi-purpose trail may be significant, so particular attention must be given to trail alignment within sensitive natural areas.

HIKING TRAIL

Hiking trails are most appropriate within large natural areas. Construction of these trails does not always require stabilization of the entire trail route. Pavement is not necessary either. Most hiking trails are cleared pathways marked with signs or tree markings.

MOUNTAIN BIKE TRAIL

These trails are often constructed by trail users themselves through rugged terrain within wooded areas. Designation of specific trail routes with directional signs will concentrate use within these corridors and help prevent construction of duplicate routes that cover an entire natural area. Erosion and damage to natural elements should be considered as mountain bike trails are developed.

CROSS-COUNTRY SKIING TRAIL

Cross-country skiing is trail use that is compatible with most others, primarily because it occurs during the winter months. The construction of park trails and multi-purpose trails that have limited change in topography are ideal.

EQUESTRIAN TRAIL

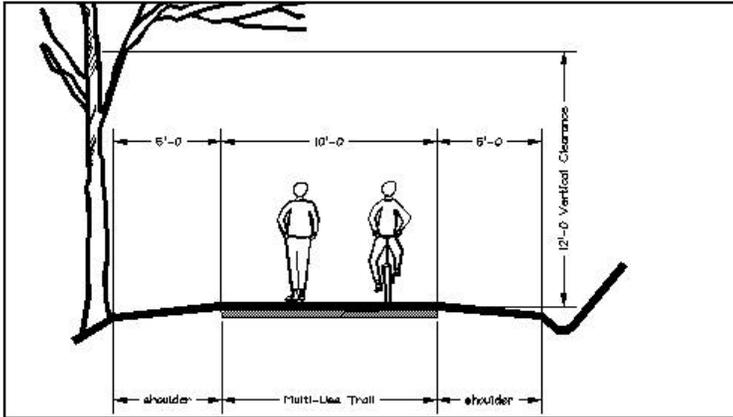
Equestrian trails must be constructed to withstand the weight and damaging hooves of horses. Stabilization of the trail corridor is essential, given the likelihood of erosion cause by this type of trail use. This trail type should be constructed within a corridor that is separate from other uses or within a corridor wide enough to prevent user conflicts.

NATURE TRAIL

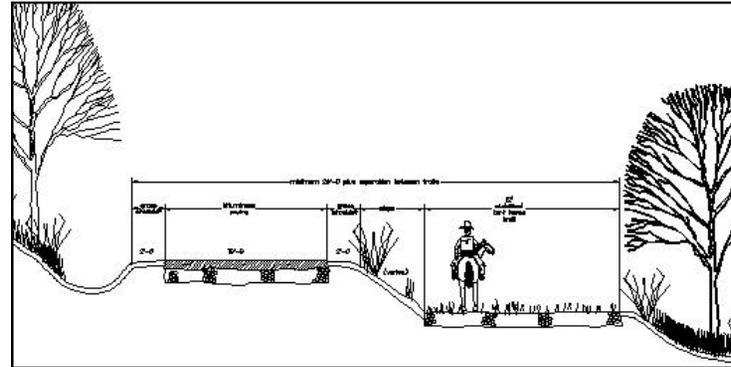
Nature trails may simply be adaptations to any one of the other trail types (with the exception of on-road bicycle). Construction may entail the addition of environmental educational signs and markings along other trail types within areas of natural significance. A natural trail within an environmentally sensitive area could be constructed of wood chips.

LEVEE TRAILS

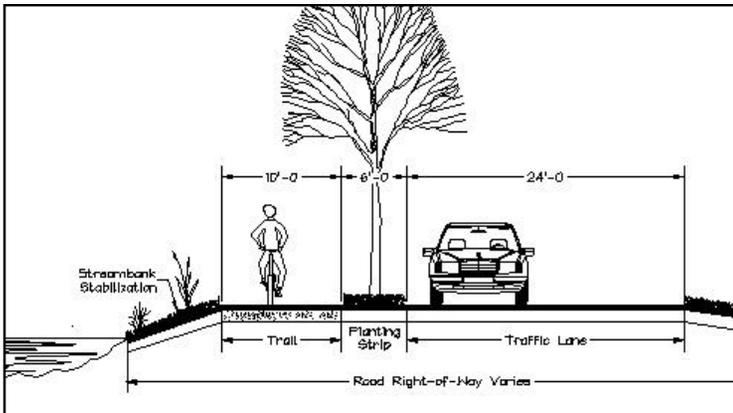
The levee system surrounding portions of the Brodhead Creek is an important part of the region's history and character. The incorporate the levees into the Greenway System, some proposed trail segments follow the tops of levees.



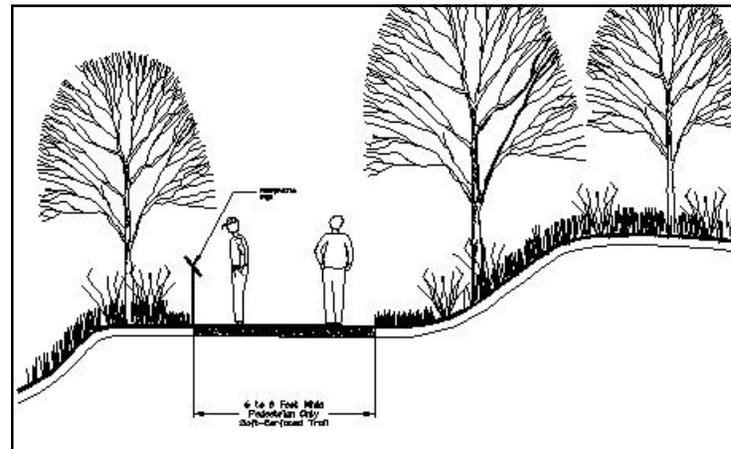
multi-purpose trail



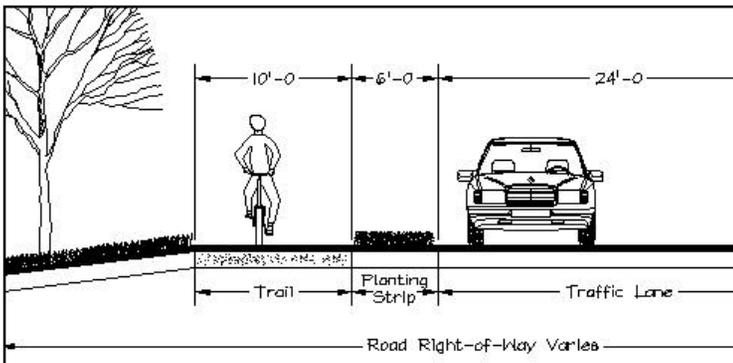
equestrian trail



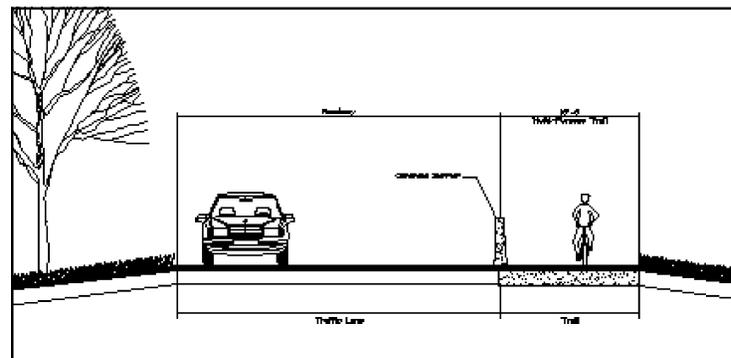
stream-side trail



nature trail



road shoulder multi-purpose trail



on-road bicycle trail

T o o l b o x

Conflicts in Trail Use and Development

The following twelve principles are identified in the Federal Highway Administration's 1994 report on multi-purpose trails:

- 1. Recognize Conflict as Goal Interference** - Do not treat conflict as an inherent incompatibility among different trail activities, but goal interference attributed to another's behavior.
- 2. Provide Adequate Trail Opportunities** - Offer adequate trail mileage and provide opportunities for a variety of trail experiences. This will help reduce congestion and allow users to choose the conditions that are best suited to the experiences they desire.
- 3. Minimize Number of Contacts in Problem Areas** - Each contact among trail users (as well as contact with evidence of others) has the potential to result in conflict. So, as a general rule, reduce the number of user contacts whenever possible. This is especially true in congested areas and at trailheads. Disperse use and provide separate trails where necessary after careful consideration of the additional environmental impact and lost opportunities for positive interactions this may cause.
- 4. Involve Users as Early as Possible** - Identify the present and likely future users of each trail and involve them in the process of avoiding and resolving conflicts as early as possible, preferable before conflicts occur. For proposed trails, possible conflicts and their solutions should be addressed during the planning and design stage with the involvement of perspective users. New and emerging uses should be anticipated and addressed as early as possible with the involvement of the participants. Likewise, existing and developing conflicts on present trails need to be faced quickly and addressed with the participation of those affected.
- 5. Understand User Needs** - Determine the motivations, desired experiences, norms, setting preferences, and other needs of the present and likely future users of each trail. This "customer" information is critical for anticipating and managing conflicts.
- 6. Identify the Actual Source of Conflict** - Help users to identify the specific tangible causes of any conflicts they are experiencing. In other words, get beyond the emotions and stereotypes as quickly as possible, and get the roots of any problems that exist.
- 7. Work with Affected Users** - Work with all parties involved to reach mutually agreeable solutions to these specific issues. Users who are not involved as part of the solution are more likely to be part of the problem now and in the future.

8. Promote Trail Etiquette - Minimize the possibility that any particular trail contact will result in conflict by actively and aggressively promoting responsible trail behavior. Use existing educational materials or modify them to better meet local needs. Target these educational efforts, get the information into users' hands as early as possible, and present it in interesting and understandable ways (Roggenbuck and ham 1986).

9. Encourage Positive Interaction Among Different Users - Trail Users are usually not as different from one another as they believe. Providing positive interactions both on and off the trail will help break down barriers and stereotypes, and build understanding, good will, and cooperation. This can be accomplished through a variety of strategies such as sponsoring "user swaps," joint trail-building or maintenance projects, filming trail-sharing videos, and forming Trail Advisory Councils.

10. Favor "Light-Handed Management" - use the most "light-handed approaches" that will achieve area objectives. This is essential in order to provide the freedom of choice and natural environments that are so important to trail-based recreation. Intrusive design and coercive management are not compatible with high-quality trail experiences.

11. Plan and Act Locally - Whenever possible, address issues regarding multiple-use trails at the local level. This allows greater sensitivity to local needs and provides better flexibility for addressing difficult issues on a case-by-case basis. Local action also facilitates involvement of the people who will be most affected by the decisions and most able to assist in their successful implementation.

12. Monitor Progress - Monitor the on-going effectiveness of the decisions made and programs implemented. Conscious, deliberate monitoring is the only way to determine if conflicts are indeed being reduced and what changes in programs might be needed. This is only possible within the context of clearly understood and agreed upon objectives for each trail area.

Safety and Maintenance

Safety and maintenance of the greenway trail system must be addressed in a cooperative manner. As the Stroud Region Recreation Commission is formalized, a maintenance plan should be outlined. The plan will be clearly defined as trail projects are completed. Involvement of the Commission will ensure cooperation between the regional partners and efficient maintenance. Safety concerns must be addressed during the design and construction of the trail projects, including input from safety officials as trail alignments and details are finalized.

Open Space Protection Options

All three municipalities of the Stroud Region have completed Growing Greener Audits of their existing ordinances. At the writing of this report, Stroud Township officials are working to update their Subdivision and Land Development Ordinance to incorporate the recommendations that resulted from the audit. Township officials are in the process of amending the Township's zoning ordinance to strengthen environmental and performance standards related to natural resources. Additionally, a four-municipality Regional Planning Commission was formalized and a Regional Comprehensive Plan is planned, which will address open space protection.

The following land use options are discussed in "Land Use in Pennsylvania: Practices and Tools", Governor's Center for Local Government Services, 2000.

OPEN SPACE ZONING/CONSERVATION DESIGN

- **Description:** The purpose of this technique is to preserve a larger amount of land for conservation uses, while still allowing full-density development. In contrast to cluster zoning, where the emphasis is more often placed on providing active recreation areas, open space zoning is more suited for protecting farmland, woodland habitat, historic sites, and scenic views. Subdivisions area required to dedicate a significant portion of their unconstrained land to permanent open space uses. The open space is typically owned and managed (according to an approved management plan) by a homeowner association. Other possible owners include land trusts, the municipality, or individuals with large "conservancy lots", which are a form of non-common open space.
- **Benefits:** This technique preserves large open spaces while allowing full-density development. When done, the open space in each new subdivision will ultimately join together to form interconnected systems of conservation lands.
- **Implementation:** This technique can be implemented through a municipality's zoning ordinance. The number of dwellings permitted is based on the net acreage of buildable land and the underlying density in the zoning district. Easements are then placed on the open space to ensure that it will not be further subdivided or developed.

OVERLAY ZONING DISTRICTS

- **Description:** An overlay zoning district applies regulations to and are

in addition to and superseding the requirements of the underlying zoning district(s). Such a district may recognize unique features, either natural or man-made, requiring special attention, or may facilitate development of a special character.

- **Benefits:** Overlay zoning allows regulations to be tailored to specific conditions. Administration is the same as any zoning district.
- **Implementation:** In general, the provisions of a zoning district must apply uniformly to each class of uses or structures within each district. However, Section 605 of the Municipal Planning Code authorizes additional classifications, potentially through the use of overlay zoning, for:
 - Making transitional provisions at and near the boundaries of districts.
 - Regulating non-conforming uses and structures.
 - Regulating, restricting, or prohibiting uses and structures at, along or near:
 - * Major thoroughfares, their intersections and interchanges, transportation arteries and rail or transit terminals.
 - * Natural or artificial bodies of water, boat docks and related facilities
 - * Places of relatively steep slope or grade, or the areas of hazardous geological or topographic features
 - * Public buildings and public grounds
 - * Aircraft, helicopter, rocket and spacecraft facilities
 - * Places having unique historical architectural, or patriotic interest or value
 - * Floodplain areas, agricultural areas, sanitary landfills, and other places having a special character or use affecting and affected by their surroundings.
 - Encouraging innovation and the promotion of flexibility, economy and ingenuity in development, including subdivisions and land developments, and for the purpose of authorizing increases in the permissible density of population or intensity of a particular use based upon expressed standards and criteria set forth in the zoning ordinance.
 - Regulating transferable development rights on a voluntary basis.

OPEN SPACE AND NATURAL AREAS ACQUISITION

- **Description:** This practice is based on the acquisition of land by a municipality or any governmental agency for the purpose of preservation of open space and natural areas. The purchase can be of fee simple title or conservation easements and is usually done by a governmental or public agency or a non-profit land trust organization. Land acquisition can be made at every level of government.

- **Benefits:** Acquisition of fee simple title or a conservation easement on land provides a more permanent long-term protection of open space and natural areas than through other methods such as zoning or subdivision requirements. Acquisition provides a means to enable nonprofit groups in partnership with communities to protect open space and natural areas at minimal or not cost and little administrative burden to local governments.
- **Implementation:** Pennsylvania's Department of Conservation and Natural Resources have sources of funding to help communities and non-profit groups implement acquisition of open space and natural areas projects.

FOREST LAND CONSERVATION EASEMENTS

- **Description:** Conservation easements on working forests are a market-driven tool used to preserve open space, like those used to protect working farmland. Easements can be used to protect forests for present and future economic benefit, with subsequent attendant benefits such as wildlife habitat, watershed protection, outdoor recreation, and soil conservation.
- **Benefits:** As open space diminishes while development advances, economically valuable forest land is lost. Timber is one of the top five sectors in Pennsylvania's economy, and its continued availability is dependent upon the existence and preservation of open space and forests. The benefits are economic as well as environmental. Site benefits of easements include lower property taxes for landowners.
- **Implementation:** Some non-profit organizations, such as conservancies and land trusts, provide financial support for purchasing easements from landowners; they also accept tax-deductible donations of easements from landowners. The U.S. Forest Service's Forest Legacy initiative provides funding to state governments to help purchase easements on private forestland.

AGRICULTURAL PROTECTION ZONING

- **Description:** Agricultural Protection Zoning ordinances designate areas where farming is the primary land use, and discourage other land uses in those areas.
- **Benefits:** Agricultural Protection Zoning stabilizes the agricultural land base by keeping large tracts of land relatively free of non-farm development. This can reduce the likelihood of conflicts between farmers and their non-farming neighbors. Maintaining a critical mass of agricultural land can ensure that there will be enough farmland to support local agricultural services.

- **Implementation:** Agricultural Protection Zoning can be economically viable by using such tools as Transfer of Development Rights and Purchase of Development Rights.

TRANSFER/PURCHASE OF DEVELOPMENT RIGHTS

- **Description:** Transfer of Development Rights (TDR's) is a zoning tool that allows conservation and development to coexist within a municipality. Growth is directed to preferred locations through the sale and purchase of development rights. Development rights are established for a given piece of land and can be separated from the title of that property. The sale of TDR's leave the rural landowner in possession of title to the land and the right to use the property as a farm, open space or for some related purpose. However, it removes the owner's right to develop the property for other purposes. The transfer of development rights allows the purchaser of the development rights to then develop another parcel more intensively than would otherwise be permitted.

Purchase of Development Rights (PDR's) operate in a similar manner. However, with PDRs, an entity (either alone or jointly) buys the right to develop land from the landowner. The landowner retains the use of the land, and receives tax benefits. The municipality can pass a bond issue to buy the rights and "bank" them. A developer may purchase the development rights from the municipality when he wished to develop an area with high density. The municipal bond financing which was entered into to purchase the rights is paid off over the years by the purchase of the development rights, as development occurs.

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

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

- In Pennsylvania, TDR programs can only be used to transfer development rights within a single municipality or among

municipalities with a joint ordinance. It is up to each municipality implementing TDR to set up a mechanism to accomplish this transfer.

AGRICULTURAL TAX INCENTIVES

AGRICULTURAL SECURITY AREAS

- **Description:** A landowner or group of landowners whose parcels together comprise at least 250 acres may apply to their local government
- **Benefits:** Agricultural Security Designation encourages the preservation of agricultural land. Security Areas give a landowner protection from local ordinances that restrict farm practices unless those ordinances have a direct relationship to public health or safety. These areas also protect an area from nuisance ordinances. Additionally the designation limits land condemnation procedures - eminent domain by the Commonwealth and local agencies - unless approval is gained from the Agricultural lands Condemnation Approval Board. The designation also qualifies the land (if it is an area of 500 acres or more) for purchase of conservation easements under the Pennsylvania statewide program. An attractive feature of the ASA designation is that it is not a permanent designation and this may be suitable for some communities and landowners.
- **Implementation:** The process to designate an ASA must be initiated by a landowner or a group of landowners.

AGRICULTURAL CONSERVATION EASEMENTS

- **Description:** Conservation easements permanently protect farms from development. Landowners voluntarily sell conservation easements to a government entity or private conservation organization or land trust. The agency or organization usually pays them the difference between the value of the land for agricultural use, and the value of the land for its "highest and best use" which is generally residential or commercial development.
- **Benefits:** Conservation easements permanently preserve land for agricultural use. Purchase of easements by municipalities on their own can be done more selectively and expeditiously as they do not have to conform to the county or State guidelines.
- **Implementation:** County Agricultural Land Preservation Boards have primary responsibility for developing application procedures. They also establish priority for easement purchases based on a numerical ranking system. The ranking system is modeled upon state regulations that require consideration of soil quality, conservation practices, development pressures in the County, and the location of other permanently preserved farmland and open space.

- **Description:** Differential assessment laws direct local governments to assess agricultural land at its value for agriculture, instead of at its full market value, which is generally higher. Differential assessment laws are enacted in the state, and implemented at the local level.
- **Benefits:** These programs afford protection to farmers to continue operating an agricultural operation in the face of development, thus helping to ensure the economic viability of agriculture. These tax laws align agricultural property taxes with what it actually costs local governments to provide services to the land.
- **Implementation:** Landowners must apply to the County Assessment Office.

OPEN SPACE DEDICATION AND FEE IN LIEU OF DEDICATION

For Stroud Township, a land dedication and fee in-lieu-of ordinance may be a useful conservation tool. The built-out nature of Stroudsburg and East Stroudsburg Boroughs makes this option less viable, but as Stroud Township continues to experience the pressures of residential and commercial development, such an ordinance may be beneficial as the greenways system is developed.

Township officials may require of developers a dedication of undeveloped land for open space conservation purposes. The amount of open space dedication required is often reflective of the type, amount, and intensity of development to occur on the site.

Fees in lieu of dedication are cash payments that may be required of an owner or developer as a substitute for a dedication of land, usually calculated in dollars per lot, and referred to as in-lieu fees or in-lieu contributions. (California Planning Round Table)

Liability

As trail development occurs within the greenway corridors, land ownership will vary along any given trail route. In most instances, a proposed trail will traverse, to some degree, privately owned lands. Landowners are often resistant to trail development on their property (or on an easement through their property) because of liability concerns. The proposed trail routes identified in this plan were identified with this potentially limiting factor in mind. However, the involvement of private landowners (homeowners, farmers, business owners) in the development of a trails within the tree greenway corridors is inevitable.

Many state governments, including Pennsylvania, have enacted statutes that limit the liability of a landowner with regard to the users of his land. These statutes insulate landowners from liability for injuries for users of their land for recreational purposes.

PENNSYLVANIA'S RECREATION USE OF LAND AND WATER ACT

Purpose

The purpose of the act is to encourage owners of land to make land and water areas available to the public for recreational purposes by limiting their liability toward persons entering thereon for such purposes.

Definitions

Land:

land, roads, water, watercourses, private ways and buildings, structures and machinery or equipment when attached to the realty.

Owner:

means the possessor of a fee interest, a tenant, lessee, occupant or person in control of the premises.

Recreational Purpose:

includes, but is not limited to: hunting, fishing, swimming, boating, camping, picnicking, hiking, pleasure driving, nature study, water skiing, water sports, cave exploration and viewing or enjoying historical, archaeological, scenic, or scientific sites.

Charge:

means the admission price or fee asked in return for invitation or permission to enter or go upon the land.

Overview of Act Provisions ("Landowner's Liability for Land Users and Statutory Protection for Landowners")

- The Act generally provides that an owners of land owes no duty to keep the premises safe for entry or use by others for recreational purposes, or to give any warning of a dangerous condition, use, structure or activity on the premises.
- The Act protects landowners from liability when their land is used for recreational purposes by the public without charge, whether or not the landowner has invited or permitted the public to enter his land.
- The only time a landowner's liability is not limited under the Act is for willful or malicious failure to guard or warn against a dangerous condition, use, structure, or activity or if the landowner charges for entry onto his land.
- The Act only provides liability protection to individuals who have a legal interest in the land.
- Absent a legal interest in a particular parcel of land, the act provides no protection.
- However, the definition of "owner" and court interpretations have allowed for a broad concept of landowner. An owner of land, under the Act includes not only fee holders of land title, but lessees, occupants, or even persons who are simply in control of the land. This broad-sweeping definition helps to encourage greater recreational use of land because the liability risk for recreational groups such as leasing hunt clubs is significantly reduced.
- Generally, the more restrictions the landowner places upon his land, the less likely he is to be protected by the Act.

Restoring Streamside Buffers

Landowners

- plant native species of trees and shrubs
- stop mowing to the stream's edge
- join your local watershed association
- protect buffers through conservation easements

Farmers

- fence streams
- enroll buffers in set aside programs
- partner with local watershed and sporting associations
- consider alternatives to cropping that also provide economic returns while preserving buffers

Developers

- avoid removing streamside trees and shrubs
- incorporate conservation into your subdivision designs

Business Owners

- plant native species of trees and shrubs
- consider sponsoring a school or community organization that wants to plant trees
- consider options for limiting business activities that impact buffers

Volunteers

- plant native species of trees along streams
- partner with agricultural landowners and municipalities
- organize volunteers and work parties to help maintain buffers

Municipal Officials

- adopt zoning that protects and improves stream corridors
- support landowners who protect their buffers
- partner with neighboring municipalities to promote consistent ordinances
- create recreational greenways

Teachers and Students

- conduct research to help further define buffer values and maintenance techniques
- incorporate buffer protection activities into lesson plans
- establish a buffer on school premises if you have a stream or pond

Regional, State, or Federal Agency

- develop new information and act as a clearinghouse for existing information
- develop guidelines for establishing and maintaining buffers, and provide technical assistance
- establish incentives for participation

source: "Pennsylvania Stream ReLeaf Plan, A Plan for Restoring, and Conserving Buffers Along Pennsylvania Streams," Pennsylvania Department of Environmental Protection

Riparian Zone Protection and Enhancement

The Brodhead, McMichael and Pocono Creek Greenways highlight the importance of riparian zones. These three creeks are major elements of an intricate hydrologic system that covers the entire region. Area residents are tied to the creeks as water sources, recreation opportunities, and scenic beauty. The environmental, cultural, and scenic importance of the creeks underscore the importance of their protection.

STREAM BANK/RIPARIAN BUFFER

Riparian buffers are areas of vegetation along waterways that protect water quality and stabilize stream channels. Vegetated areas along streams are of significant ecological importance as they:

- slow flood waters and reduce the volume of water through root absorption
- improve water quality by filtering runoff and promoting sediment deposition
- allow water storage in plant roots and provide pathways to ground water layers
- provide canopy cover, which shades and cools streams, thus improving habitat conditions for in-stream organisms, while providing relief from the extreme heat for terrestrial animals
- provide habitat for a variety of birds and small mammals, while acting as corridors to similar habitat, providing food, shelter and nesting sites
- provide great opportunities for recreational activities such as fishing, hiking, bird watching, wildlife observation, picnicking and camping

Streambank habitat restoration can include three techniques: structural (i.e. installing riprap to reduce erosion), vegetative (i.e. planting vegetation to absorb water, filter pollutants, and reduce erosion), and bioengineering, which combines both structural and vegetative approaches (i.e. bundles of willow cuttings tied together and inserted in streambank trenches).

SURROUNDING LAND USE

Stream bed and stream bank improvements can improve the ecological health of the riparian zone, but they cannot compensate for land abuses affecting the stream. Land use management techniques may include fencing to keep livestock out of the creeks or the installation of storm water management structures.

“A river or lake is almost never dead. If you give it the slightest chance...then nature usually comes back.”

- Rene Dubos

Greenway Sign System

Insufficient marking of the greenway may result in mis-directed and frustrated greenway users. A decline in use, may result in a decline in support. Proper identification of greenway elements will increase public awareness of this important community element. A greenway sign system must be implemented in a clear, consistent manner throughout the region to ensure future success.

The following are potential elements of a greenway sign system:

1. ROADWAY DIRECTIONAL SIGNS

These signs will aid visitors in finding their way to the greenways. They also present the opportunity to increase the awareness of the greenways and attract potential visitors.

2. ENTRANCE SIGNS

Signs for the parks within or adjacent to the greenways should indicate that they are part of the Brodhead, McMichael, or Pocono Creeks Greenways. This will increase the awareness of the greenways among the users of community recreation facilities connected to the greenway system. Park signs and entrance signs at greenway access points represent a users first point of interaction with the greenway. This starting point leads visitors into the greenways where they are then informed of their location and the location of other elements within the greenway.

3. TRAIL HEAD SIGNS

Trail head signs offer information regarding a specific portion of the greenway trail system. They provide information on the entire system as well as information specific to the trail where the sign is located. The following may be included on trail head signs:

- trail type
- trail length
- degree of difficulty
- degree of accessibility

4. DIRECTIONAL SIGNS

These signs direct users once they are within the greenway system. They may mark trail routes, directions to recreation facilities (trails, pavilions,

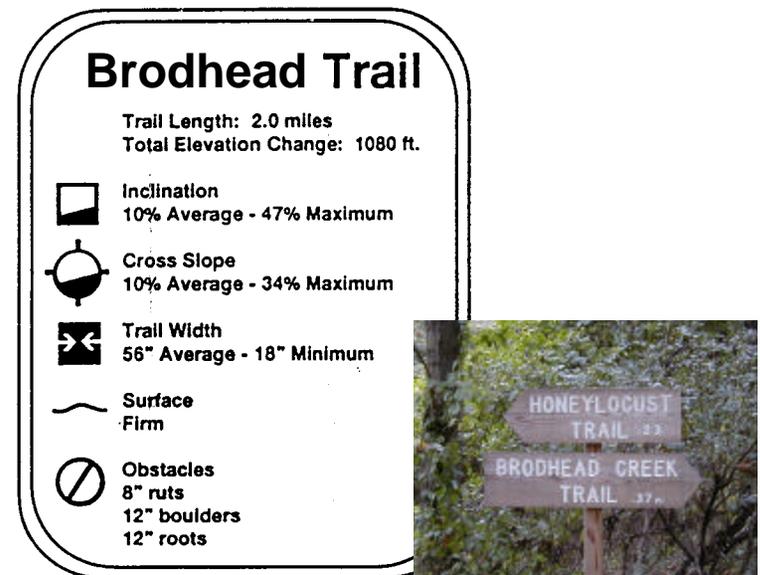
etc.), points of interest, or opportunities to exit the greenway.

5. FACILITY IDENTIFICATION SIGNS

Recreation facility signs identify individual facilities within the greenways and adjacent parks to help visitors with orientation.

6. INTERPRETIVE SIGNS

Interpretive signs are not directional, but are used to inform greenway visitors about the site and its historical, environmental, or cultural significance of a site.



Wildlife Habitat Protection and Enhancement

Thriving wildlife is an important component of the greenway system. Conservation of open space along the creek corridors should include a systematic approach to improving wildlife habitat. The potential impacts of recreational trail development should be considered. Negative impacts should be avoided, where possible, and habitat improvement options following all construction within the corridor should be evaluated. The Pennsylvania Game Commission can provide recommendations for habitat improvement for specific animal species.

Chapter 4

Implementation Plan



This chapter contains detailed recommendations for the protection, enhancement, and development of the Brodhead, McMichael, and Pocono Creeks Greenways.

The recommendations were built upon a detailed inventory of existing conditions; professional assessment; and input from landowners, the public, and the project Study Committee.

Goals

The following goals address the future of the three greenways. They are broad in nature and intended to provide guidance to future efforts related to the greenways.



Education

Inform residents and visitors of the streams' importance as part of the larger watershed, an important community resource, and an educational tool.



Recreation

Support the development of passive and active recreational opportunities within the greenway corridors in a manner sensitive to the ecological and aesthetic importance of the creeks.



Conservation

Work to protect the greenway corridors as key components of a regional open space system through acquisition, easements, streambank enhancement and other protection options.



Funding

Continually explore creative methods to implement the recommendations of this plan.

Trail Construction Projects

Miles of new trails are proposed in this plan. Construction of the entire Brodhead, McMichael, and Pocono Creeks Greenways trail system will take years to complete. To assist with the implementation of the plan, the trail system was divided into several “projects”, which may be more manageable. The Trail Projects Map is to be used as a guide during implementation. Several “projects” may be implemented together or an individual project could be divided into smaller items if funding or manpower is not available.

Each project is numbered below, corresponding to the numbers on the map. These numbers are not indicative of priority. Detailed implementation strategies for trail construction are included on the following pages of this chapter. Priorities must be evaluated on a regular basis, taking into consideration political climate, public support, and available funding.

PROJECT 1: MCMICHAEL CREEK CONSERVATION LANDS
(approximately 1.5 mile of trails)

PROJECT 2: GODFREY RIDGE EXTENSION
(approximately 2 miles of trails)

PROJECT 3: GLENBROOK TRAIL
(approximately 3 miles of trails)

PROJECT 4: GODFREY RIDGE TRAIL CONNECTOR
(approximately 2 miles of trails)

PROJECT 5: GLEN PARK/GODFREY RIDGE TRAILS
(approximately 5 miles of trails)

PROJECT 6: STROUDSBURG SCHOOL DISTRICT
(approximately .5 miles of trails)

PROJECT 7: MCMICHAEL CREEK TRAIL
(approximately 2.5 miles of trails)

PROJECT 8: DOWNTOWN TRAILS
(approximately 5.5 miles of trails)

PROJECT 9: POCONO CREEK TRAIL
(approximately 6 miles of trails)

PROJECT 10: LEVEE LOOP TRAIL
(approximately 4 miles of trails)

PROJECT 11: PINEBROOK PARK
(approximately 2 miles of trails)

PROJECT 12: NEW REGIONAL PARK CONNECTION
(approximately 5.5 miles of trails)

PROJECT 13: ANALOMINK TRAIL
(approximately 7 miles of trails)

PROJECT 14: MCMICHAEL CREEK BICYCLE CONNECTIONS
(approximately 3 miles of trails)

Pilot Project - The Levee Loop Trail

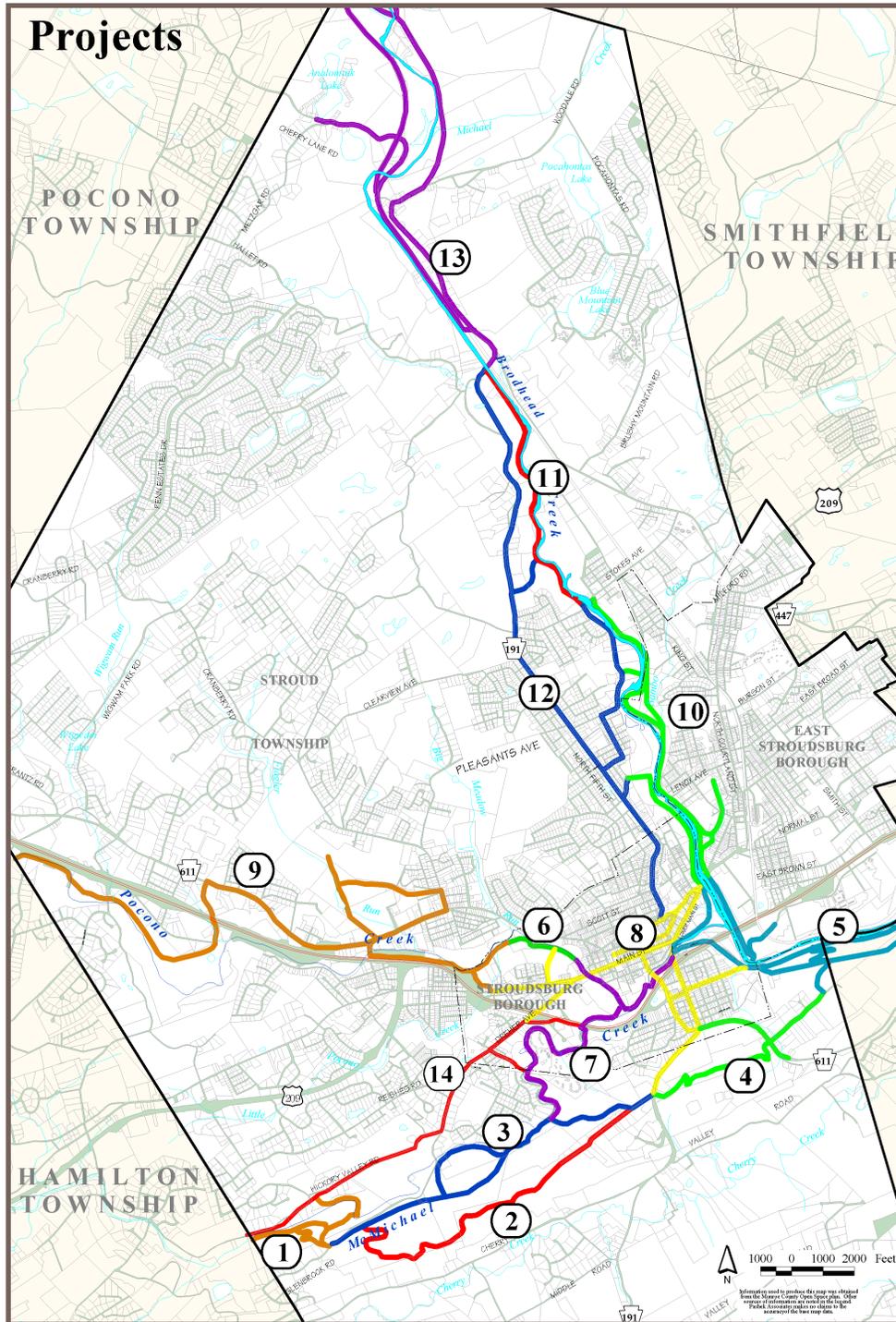
The recommendations of this plan for the future of the Brodhead, McMichael, and Pocono Creeks Greenways are wide in scope. Implementation strategies were developed for completion over next ten or more years. To lay the groundwork for successful implementation, a Pilot Project is recommended.

Highlighting one specific project on which efforts would focus has a variety of benefits, because this project will:

- serve as the kick-off project
- be implemented in a realistic and achievable manner
- quickly result in a success story
- increase public support
- build momentum for continued implementation of this plan's recommendations

The recommended Pilot Project is the Levee Loop Trail, which runs on both sides of the Brodhead Creek between the Interborough Bridge and the Stokes Avenue Bridge. The levees are currently used by residents for walking and jogging. This project, will serve as a successful Pilot Project for several reasons. First, the proposed trail is centrally located, in the heart of the populated areas. The trail traverses all three municipalities (Stroud Township, Stroudsburg, East Stroudsburg). The construction of the trail will increase access to the Brodhead Greenway, thus increasing awareness of the greenway system. The proposed trail route is highly visible, adding to the publicity of the greenway system.

Trail Projects Map



Intergovernmental Cooperation

The Brodhead, McMichael, and Pocono Creeks Greenways encompass the three communities of Stroudsburg, East Stroudsburg, and Stroud Township. The streams, riparian zones, and open spaces follow natural corridors, not municipal boundaries. The successful implementation of this plan will hinge on the cooperation of the three regional partners.

The region has a strong commitment to parks, recreation and open space. At the writing of this plan, the region is building upon a history of cooperation by exploring opportunities for formalizing an intergovernmental cooperation agreement for recreation and open space within the region. The development, protection, and management of the Brodhead, McMichael, Pocono Creeks Greenways system would fall under this agreement.

There are many benefits to approaching the development, protection, and management of the greenway system, including:

- the three communities work toward a common vision
- greenways, trails, and natural resources cross municipal boundaries
- cooperation increases efficiency and effectiveness
- there are financial incentives to cooperating at a regional level

While it would have a very positive effect on efforts related to the greenways, their success does not hinge on the adoption of a intergovernmental agreement. The regional partners are were involved in the development of this plan and should continue to cooperate as the recommendations are implemented. The Regional Greenway Advisory Board should include representatives from each municipality to ensure all issues are addressed.

Greenway Advisory Board

The recommendations for the future of the Brodhead, McMichael, and Pocono Creek Greenways are wide in scope. Their implementation will involve officials from the three regional partners, local organizations, the Stroud Region Park Commission, and Monroe County agencies. The Study Committee formed to assist in the development of this Greenways Plan should be formalized as the Greenway Advisory Board to assist with coordinate implementation efforts. The Board will report to the Stroud Region Park Commission. The focus of the Board will be coordination, communication, and cooperation.

- **The Board should regularly communicate with the Stroud Township Environmental Advisory Council.**
- **Board members should include an advertising firm representative.**
- **Board members should include a representative from the Delaware Water Gap area.**
- **The Stroud Region Park Commission Director should serve as liaison between the Greenway Advisory Board and municipal officials.**

Action Strategies

The implementation strategies set forth a step-by-step plan for the protection, enhancement, and development of the three greenway corridors. The strategies are organized into tables on the following pages, according to priority. The information provided includes categories for cost estimate, responsible partners, and status (to keep track of progress).

The strategies are organized in four tables. This organization represents a prioritization of the recommendations as the writing of this report. As discussed below, each strategy's priority should be reviewed on an annual basis. The first (immediate) table lists strategies to be implemented within the first year following the approval of this plan. The short-term strategies are intended to be completed during years two through four; mid-term strategies during years 5-10; and long-term strategies after ten years.

The cost estimates contained in the strategy tables are wide-ranging and should only serve as a starting point for project evaluation. Detailed costs will be developed as a particular project or strategy would be selected for implementation.

The responsible partners column of the strategy tables is used to identify individual(s) or groups(s) that may assist with a strategy's implementation.

It is suggested that the status column of the strategy tables be used to indicate the degree of completion of each strategy. For example, "I" would indicate "in-progress" and "C" would indicate completed.

These implementation strategies are intended to provide guidance to the Regional Park Commission, Greenways Advisory Board, responsible partners identified, and the decision makers of the region. The successful implementation of these strategies will depend upon the fiscal and political climate in any given year. Therefore, it is essential that a Greenway Advisory Board monitor, review, and prioritize the strategies on an annual basis.

Potential funding and support sources for completion of the implementation strategies are identified in the Appendix. The opportunities identified do not constitute an exhaustive list and other possible resources should continually be sought. It will be important for the Greenway Committee and the Municipal Partners to be up-to-date on potential funding sources.

ACTION STRATEGIES SUMMARY

On-Going

These are strategies with no to minimal cost associated with implementation. These strategies may be completed at any time throughout implementation of the plan. Several strategies may be completed on a repetitive basis.

Short-Term (1-3 years)

The pilot project of this study is the Brodhead Creek Loop Trail (or Levee Loop Trail). The efforts of the regional partners in the immediate future should focus on the implementation of this project. However, this doesn't preclude the completion of other recommendations by local organizations, with appropriate assistance of the Regional Greenway Advisory Board and the municipal partners.

Strategies focus on building support for greenway projects, exploring opportunities, and constructing smaller trail heads.

Mid-Term (3 -7 year)

Implementation of the Levee Loop Trail will continue to be a high priority. Public input, outlining a plan for construction, and some trail construction projects are proposed.

Long -Term (7+ years)

These strategies focus on construction of major trail projects.

Annual Review of Strategies

- Formalize a process for maintaining an up-to-date summary of implementation accomplishments.
- Meet with municipal and school district officials on a regular basis to discuss progress, road blocks and opportunities.
- Establish regular meetings with volunteer organizations and interested individuals who are committed to assisting with implementation of the strategies.
- Review and revise project priorities based upon accomplishments of the past year, public input, and opportunities for the future.

ON - GOING STRATEGIES					
		Goal	Cost Estimate	Responsible Partners	Status
1.	Work with the developers of properties within creek corridors toward the designation of trail and conservation easements within areas of new development.	education, conservation, recreation	n/a	Greenway Advisory Board, Stroud Park Commission Director	
2.	Continue dialogue with Andy Forte (Key Partner) to explore possible trail connections to the Stroudsmoor Country Inn from the creek along Godfrey Ridge (Segments M-1 & M-2).	recreation	n/a	Greenway Advisory Board	
3.	Hold public meetings to provide and update on the status of greenway projects, inform residents of upcoming projects, build support for the greenway system, encourage volunteerism, and collect input.	education	n/a	Stroud Region Park Commission Director	
4.	Work with PennDot and the Vacation Bureau to create trail connections between the Delaware Water Gap Visitor Center and the Brodhead Greenway.	recreation	to be determined	Stroud Region Park Commission, PennDOT, Pocono Mountain Vacation Bureau	
5.	Contact the Norfolk Southern Railroad Company and begin discussion of the possibility of constructing a rail with trail segment of bicycle trail running from the Route 191 bridge to the town of Analomink.	recreation	n/a	Stroud Region Park Commission Director, PA Rails to Trails Conservancy	
6.	Develop and implement a greenway sign program based on the information provided in this plan. This program should include the installation of directional signs, environmental informational signs, cultural site description signs, and environmental awareness signs. The sign program should help create an identify for the greenways.	recreation, education, conservation	\$15,000 / year / 3 years	Stroud Region Park Commission, Greenway Advisory Board	
7.	Contact PennDOT and begin discussion of the possibility of incorporating intermodale access, facilities and creating trail for the proposed rail station to be located within the segment between Route 191 bridge and the town of Analomink.	recreation, transportation	n/a	Stroud Region Park Commission Director, PA Rails to Trails Conservancy	

8.	As facilities are developed and greenways designated, develop an informational brochure that highlights the greenway education and recreation opportunities in the region. Make the brochure available at several tourist destination in the area. Also provide this information to the PMVB for the annual update of the Poconos and the Northeast Pennsylvania Outdoors Discovery Map.	education	\$5,000 (development) \$5,000/year (printing)	Greenway Advisory Board, Pocono Mountain Vacation Bureau	
9.	Consider acquisition opportunities for the Walker Property.	conservation, recreation	to be determined	Stroud Region Park Commission, East Stroudsburg School District, East Stroudsburg Officials	in-progress
10.	Maintain a dialogue with officials from neighboring municipalities regarding the continuation of regional trail and greenway projects across municipal boundaries.	recreation, conservation	n/a	Greenway Advisory Board, Stroud Region Park Commission Director	
11.	Provide the owners of Key Parcels with available material on greenway conservation and stream restoration efforts and gain and understanding of their willingness and ability to participate in the greenway development efforts. Phone and in-person interviews should be conducted.	education	n/a	Greenways Advisory Board	
12.	Building upon the Key Person Interviews conducted throughout the development of this study, conduct follow-up conversations with those previously contacted and make the first contact with the individuals identified in the Key Person Interview section of the document, but were not contacted.	education	n/a	Stroud Region Park Commission Director, Greenways Advisory Board	
13.	Host workshop conducted by North American Water Trails, Inc. to promote interest in and an appreciation for the values and benefits associated with water trails. Begin to develop partnerships and seek out volunteers for the development of water trails.	recreation, conservation	to be determined	Municipalities, Monroe County Conservation District	
14.	Utilizing the list of key parcels identified in this plan, begin a dialogue with each landowner to inform them of this plan's recommendations, identify conservation and recreation opportunities, and gauge their support for the project.	education	n/a	Stroud Region Park Commission Director, Greenway Advisory Board	

Chapter 4
Implementation Plan

*O n - G o i n g
S t r a t e g i e s*

SHORT - TERM STRATEGIES

SHORT - TERM STRATEGIES				
GENERAL (Years 1-3)	Goal	Cost Estimate	Responsible Partners	Status
<p>1 . Continue and formalize the study committee formed for this project as an advocacy group for greenways within the region (Rename to the Stroud Region Greenway Advisory Board). Assistance in establishing the group as a formal organization to support and manage the greenways may be obtained, at no cost, by submitting a request for assistance to the National Park Service's River, Trails, and Conservation Assistance Program. The board would serve as a subcommittee to the Stroud Region Park Commission. The Board will communicate with surrounding communities, specifically the Delaware Water Gap area. The Board's efforts should evolve to include other greenways in the region, as they evolve.</p>	n/a	n/a	Greenways Plan Study Committee, Stroud Region Park Commission, Stroud Region Municipal Officials	
<p>2 . Following adoption of this plan, hold a public meeting to publicize its results. This meeting should be widely publicized to encourage attendance. The goals of the meeting are to inform the public about the plans for the future of the greenways and build excitement for implementation of greenway projects.</p>	education	n/a	Stroud Region Park Commission, Greenways Advisory Board	
<p>3 . Following adoption, undertake additional efforts to publicize the results of this Greenways Plan. Possibilities include additional public meetings, newspaper articles, meetings with local organizations, and distribution of an informational brochure and the executive summary of this report.</p>	education	n/a volunteers, donations	Greenways Advisory Board	
<p>4 . Building upon the recommendations of the Stroud Region Open Space Plan, develop and adopt a Open Space Dedication and Fee-in-Lieu-of Ordinance. Its provisions should be consistent with the recommendations of this plan and promote the conservation of land within the creek corridor.</p>	conservation	n/a	Greenways Advisory Board, Stroud Region Park Commission, Stroud Region Municipal Officials	
<p>5 . Use the information from this plan, including the Green Infrastructure Map, to develop an official conservation lands map, to be adopted by the regional partners.</p>	conservation	\$5,000-\$10,000	Stroud Region Municipal Officials, Greenway Advisory Board	

Chapter 4
Implementation Plan

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6	Conduct a comprehensive interpretive study of historic and archaeological resources in the corridor area especially the downtown areas. Known resources include: 1787 log home on North Courtland Street, East Stroudsburg; Quaker Alley; mills and tanneries; and Native American and colonial occupation sites (forts, homes).	education	to be determined	Greenways Advisory Board, Monroe County Historical Association	
7	Building upon the draft ordinance outlined in this Plan, develop and adopt the Greenway Overlay District as part of zoning regulations in the region.	conservation	\$5,000	Stroud Township Officials	
BRODHEAD CREEK (Years 1-3)		Goal	Cost Estimate	Responsible Partners	Status
1	Approach the owners of Diversy Lever regarding the purchase/donation of a conservation easement on their property along the creek.	conservation	to be determined	Greenway Advisory Board	
2	Develop and implement construction documents for phase one of the "Levee Loop Trail" (trail project #10) from the interborough bridge to the East Stroudsburg High School (Segment B-4).	recreation	\$35,000 - design; \$400,000 - construction	Stroud Region Park Commission Director	
3	Continue support of planning and implementation of the Glen Park bicycle/pedestrian bridge project.	recreation	approx. \$400,000+	Monroe County Planning Commission, Municipal Officials, Stroud Region Park Commission, PennDOT	in-progress
4	Design and construct a trail head adjacent to the East Stroudsburg recycling center, near the Glen Park bridge site. Facilities may include parking, restrooms, water fountain and signs.	recreation	\$50,000-\$100,000	Monroe County Planning Commission, Municipal Officials, Stroud Region Park Commission	
5	Evaluate and implement options for providing safe pedestrian/bicycle crossing where the "Levee Loop Trail" crosses Lower Main Street and Washington Street, at either end of the interborough bridge.	recreation	to be determined	Stroud Region Park Commission, Stroudsburg/East Stroudsburg Officials, PennDot	

6.	Apply to ACOE funding program for habitat restoration of Segment B-2.	funding	n/a	Stroud Township Officials, Trout Unlimited, Monroe County Conservation District, Brodhead Watershed Association	
7.	Develop and implement a plan for the restoration of habitat in the channelized portion of the creek.	conservation	to be determined - donations, volunteers	Greenway Advisory Board	
8.	Construct a trail head at Dansbury Park.	recreation	\$5,000-10,000	East Stroudsburg Officials, Stroud Region Park Commission	
9.	Construct a trail head at East Stroudsburg High School.	recreation	\$5,000-10,000	East Stroudsburg School District, Stroud Region Park Commission	
10.	Develop an open space management plan for the County's conservation area south of the Brodhead Creek.	conservation	\$5,000	Monroe County Open Space Board, Greenway Advisory Board	
11.	Develop a plan for the improvement of existing trails and/or new trails within the County-owned conservation area south of the Brodhead Creek.	recreation	\$15,000	Monroe County Open Space Board, Stroud Region Park Commission	
12.	Explore the possibility of extending the Townships lease of the Pinebrook Park property for a longer term.	recreation, conservation	n/a	Stroud Region Park Commission Director, Stroud Township Officials	
13.	Act on the recommendations of the feasibility study completed for the 175-acre Christman property.	recreation, conservation	\$6-7 million	Stroud Region Park Commission, Stroud Township Officials, Stroudsburg/East Stroudsburg Officials, Monroe Open Space Board	on-going
MCMICHAEL CREEK (Years 1-3)		Goal	Cost Estimate	Responsible Partners	Status
1	Pursue offer from LaBar Village Association to trade approximately 7 acres of land along the creek for stream bank stabilization improvement of associated lands.	conservation	to be determined	Stroudsburg Borough Officials, Stroud Region Park Commission	
POCONO CREEK (Years 1-3)		Goal	Cost Estimate	Responsible Partners	Status
1.	Complete the proposed stream improvements project at the Stroudsburg School District complex.	conservation	\$0 - grants, volunteers	Brodhead Watershed Association, Stroudsburg School District, Greenway Advisory Board	

MID-TERM STRATEGIES				
GENERAL (Years 3-7)	Goal	Cost Estimate	Responsible Partners	Status
1 . Utilize existing historical study report developed for Stroudsburg Borough street lighting project by Tom Jones of Grennon, Wall, and Jones of Easton (phone 610-252-9902) for development of the Quaker Alley loop walking trail.	recreation, education	n/a	Stroud Region Park Commission, Historical Society	
2 . Develop an informational brochure for landowners within the region explaining what greenways are and ways that private landowners can be a positive part of the greenway system. The brochure should also introduce the Regional Greenways Advisory Board to residents.	education	\$5,000 + donations, volunteers	Greenway Advisory Board	
3 . Complete a study to evaluate the bicycle level of service and appropriate design for the on-road bicycle lanes within the system.	recreation	\$15,000	Stroud Region Park Commission Director	
4 . Design and construct trail project #8. This "on-street" portion of the trail system connects trails within the Brodhead, McMichael, and Pocono Creek Corridors. This trail project will link the downtown area with the greenway system, increasing its visibility. The trails may include on-road bicycle lanes, sidewalk markers, directional signs, and pedestrian crossings.	recreation	\$50,000-\$150,000	Stroud Region Park Commission, Park Commission Director	
5 . Redistribute the Landowner Survey to gauge property owners' views regarding the proposed greenway improvements and build support for upcoming projects.	education	\$150 + volunteers	Greenway Advisory Board	
6 . Develop a program to increase bicycle and pedestrian awareness along roadways in the corridor and encourage the provision of facilities for the same.	education, recreation	to be determined	Monroe County Planning Commission & Safety Coordinator, Municipal Officials, Stroud Regional Committee	
7 . Encourage the development of water trail boating access points in adjacent municipalities (e.g. Beaver Valley).	recreation	n/a	Stroud Region Park Commission Director, Greenway Advisory Board, Monroe County Conservation District, Monroe County Planning Commission	

BRODHEAD CREEK (Years 3-7)		Goal	Cost Estimate	Responsible Partners	Status
1 .	Design and construct phase two of the "Levee Loop Trail" (trail project #10).	recreation	to be determined	Stroud Region Park Commission Director	
2 .	Develop a master plan for Brodhead Creek Park, a key link in the Brodhead Greenway. Facilities may include an amphitheater, pavilions, trails, and camping.	recreation, conservation	\$30,000	Park Commission Director, Stroud Township	
3 .	Construct the on-road trails illustrated in Segment B-1.	recreation	to be determined	Stroud Region Park Commission, Municipal Officials	
4 .	Expand upon existing stream walk/assessment of Brodhead Creek, similar to the one completed for Pocono Creek.	conservation	\$5,000 + volunteers	Stroud Township Officials, Greenway Advisory Board, Volunteers	
5 .	Evaluate and implement options for improvements to the Stokes Avenue Bridge to allow for safe pedestrian and bicycle crossing.	recreation	to be determined	Stroud Region Park Commission, Stroud Township and East Stroudsburg Officials, PennDot	
6 .	Develop a detailed trail design and construction documents for a trail connecting the Levee Loop Trail to Brodhead Creek and Pinebrook Parks (trail project #11) from the Stroudsburg Water Authority property at Stokes Avenue.	recreation	\$30,000	Stroud Region Park Commission, Stroud Township Officials	
7 .	Develop a trail head and associated amenities at the Stroudsburg Municipal Authority property near Stokes Avenue.	recreation	\$15,000 - 20,000	Stroudsburg Municipal Authority, Stroud Region Park Commission	
8 .	Design and construct park trails through Brodhead Creek Park that connect to the Brodhead Greenway Trail System.	recreation	\$500,000 - 700,000	Stoud Township, Stroud Region Park Commission	
9 .	Expand upon existing trail connection through Pinebrook Park along the creek.	recreation	\$200,000	Stroud Region Park Commission	

MCMICHAEL CREEK (Years 3-7)		Goal	Cost Estimate	Responsible Partners	Status
1 .	Complete a stream walk/assessment of McMichael Creek, similar to the one completed for Pocono Creek.	conservation	\$5,000 + volunteers	Greenway Advisory Board, Volunteers	
2 .	Develop a master plan for the Stroud Township McMichael Creek Conservation Lands. The proposed improvements may include trails, stream access, environmental education facilities, and open space conservation.	recreation, conservation	\$30,000	Stroud Region Park Commission Director	
3 .	Work to improve pedestrian and bicycle safety at the "five points" intersection (intersection of Main Street and Route 191 in Stroudsburg).	recreation	to be determined	PennDot, Stroud Region Park Commission, Stroudsburg and East Stroudsburg Officials	
4 .	Explore the possibility of the designation of a conservation/trail easement along the Pocono Creek near the Glenbrook East apartment complex.	conservation, recreation	n/a	Stroud Region Park Commission Director, Stroudsburg Officials	
5 .	Evaluate the possibility of revitalizing the abandoned cabin on the Township-owned conservation lands. The site could be used for historical and/or environmental education programs.	education	to be determined	Stroud Region Park Commission, Stroud Township Officials	
6 .	Construct trail head amenities at Rotary Park, including bike racks, informational/directional signs, brochure stand, water fountain.	recreation	\$25,000	Stroudsburg Officials, Stroud Region Park Commission	
POCONO CREEK (Years 3-7)		Goal	Cost Estimate	Responsible Partners	Status
1 .	Building upon stream restoration efforts in the area, design and construct trail project #6, near the Stroudsburg School District Property and the Borough Park.	recreation	\$100,000 - \$125,000	Stroudsburg School District, Stroudsburg Borough, Brodhead Watershed Association, Stroud Region Park Commission	
2 .	Explore the possibility of the designation of a conservation/trail easement along the McMichael Creek near the Hampton Inn.	conservation, recreation	n/a	Stroud Region Park Commission, Stroudsburg Officials, Hampton Inn Representatives	

LONG-TERM STRATEGIES

LONG-TERM STRATEGIES					
BRODHEAD CREEK (Years 7+)		Goal	Cost Estimate	Responsible Partners	Status
1.	Develop a Stream Restoration Plan for Brodhead Creek, based upon the previously completed stream assessment.	conservation	\$0 - volunteers	Greenway Advisory Board	
2.	Construct the final phase of the "Levee Loop Trail."	recreation	to be determined	Stroud Region Park Commission, Stroudsburg and East Stroudsburg Officials	
3.	In conjunction with the construction of trail from the Glen Park Bridge to Washington Street, develop trail head amenities at the southwestern most corner of Wal-Mart's back parking lot.	recreation	\$10,000	Wal-Mart Representatives, Stroud Region Park Commission	
4.	Design and construct trail project #5, incorporating Glen Park, the Monroe County Conservation Lands, the Levee Loop Trail, and regional recreation opportunities to the east.	recreation	\$1m - 1.25m	Stroud Region Park Commission, Monroe County Open Space Board	
5.	Begin phase one implementation of the Brodhead Creek Restoration Plan.	conservation	to be determined	Brodhead Watershed Association, Greenway Advisory Board	
6.	Construct a pedestrian bridge across the creek from Stokes Mill Road to Yetter Park.	recreation	to be determined	East Stroudsburg Borough Officials, Stroud Region Park Commission	
7.	Design and construct trail project #13, connecting the greenway trail system with the Town of Analomink.	recreation	\$1m - 1.25m	Stroud Township Officials, Stroud Region Park Commission	
8.	Design and construct trail project #4, the Godfrey Ridge Trail, connecting the McMichael Creek trails with the Monroe County Conservation Lands.	recreation	\$375,000 - 425,000	Stroud Township Officials, Monroe County Open Space Board, Stroud Region Park Commission	
9.	Design and construct trail project #2, the Godfrey Ridge Trail extension, connecting the Godfrey ridge with the Brodhead and McMichael Creeks.	recreation	\$400,000 - 500,000	Stroud Township Officials, Monroe County Open Space Board, Stroud Region Park Commission	

10.	Work with PennDOT to evaluate and remedy the pedestrian and bicycle accessibility of the Route 191 Bridge across the creek (High Bridge).	recreation	to be determined	Stroud Region Park Commission, Stroud Township Officials	
11.	If the Christman property is purchased and developed as a regional park, construct trail project #12 to connect the park with the greenway trail system.	recreation	\$400,000 - 500,000	Stroud Township Officials, Stroud Region Park Commission	
MCMICHAEL CREEK (Years 7+)		Goal	Cost Estimate	Responsible Partners	Status
1.	Develop a Stream Restoration Plan for McMichael Creek based upon the previously completed stream assessment.	conservation	\$0 - volunteers	Greenway Advisory Board	
2.	Implement the recommendations of the McMichael Creek Conservation Lands master plan.	recreation, conservation	to be determined	Stroud Township Officials, Stroud Region Park Commission	
3.	Begin phase one implementation of McMichael Creek Restoration Plan.	conservation			
4.	Design and construct trail project #7, completing the link between downtown and the McMichael Creek Conservation lands and linking the Stroudsburg Borough park and adjacent trail with the overall system. Evaluate the feasibility of constructing trail project #14.	recreation	\$550,000 - 690,000	Stroud Township and Stroudsburg Officials, Stroud Region Park Commission	
5.	Design and construct trail project #3, capitalizing on the vacant rail bed and beginning the trail connection between the McMichael Creek Conservation Lands and the downtown area.	recreation	\$600,000 - 750,000	Stroud Region Park Commission	
POCONO CREEK (Years 7+)		Goal	Cost Estimate	Responsible Partners	Status
1.	Develop a Stream Restoration Plan for Pocono Creek, based upon the previously completed stream assessment.	conservation			
2.	At the Stroudsburg School Complex, following construction of the streamside trail proposed in this study, continue improvements to the area, which may include picnic tables, fishing dock, stream access point, informational and directional signs.	recreation	\$15,000	Greenway Advisory Board, Borough of Stroudsburg, Stroudsburg School District	

3.	Design and construct trail project #9.	recreation	\$400,000 - 800,000		
4.	Begin phase one implementation of the Pocono Creek Restoration Plan.	conservation			

Key Stakeholders

The Brodhead, McMichael, and Pocono Creek Greenway System will effect and be effected by numerous groups and individuals. Cooperative efforts will be important components of this plan's implementation. Several recommendations will depend on partnerships. Collaboration and pooling of resources will greatly benefit the development of the greenway system. As this Greenway Plan is implemented, the roles of the following key stakeholders should be considered.

SCHOOL DISTRICTS

Role:

Two school district properties are within the greenways system and the entire greenway system offers opportunities for outdoor classrooms. Therefore, school officials should be considered important partners throughout implementation of this plan. Their role may be to promote awareness of the corridors, educate children, and remain open to collaborative projects within the greenway that may involve school district property.

Contact:

Stroudsburg School District
1100 West Main Street
Stroudsburg, PA 18360

East Stroudsburg Area School District
321 North Courtland Street
East Stroudsburg, PA 18301

STROUD TOWNSHIP, STROUDSBURG, AND EAST STROUDSBURG

Role:

The most important role of the three municipalities is to continue to build upon the cooperative relationship developed as a result of the Comprehensive Recreation, Park, and Open Space Plan. Recommendations for the greenway system fall within each of the three areas. Municipal officials should acknowledge their municipality's equal responsibility in implementing this plan.

Contact:

Borough of East Stroudsburg
24 Analomink Street
P.O. Box 303
East Stroudsburg, PA 18301
(570) 421-8300

Stroud Township
1211 North Fifth Street
Stroudsburg PA 18360
(570) 421-3362

Stroudsburg Borough
700 Sarah Street
Stroudsburg, PA 18360

STROUD REGION PARK COMMISSION BOARD

Role:

A recommendation of the Stroud Region Open Space and Recreation Plan was that the group appointed to assist in the development of the plan be formally continued. Their role is to guide the implementation of the Open Space Plan and address open space and recreation issues in the region.

STROUD REGION GREENWAY COMMITTEE

Role:

It is recommended that the Greenway Steering Committee appointed for the development of this plan continue. Members should be formalized as a subcommittee of the Regional Park Commission and meet on a regular basis to review the plan's implementation. The Committee's duties should expand to address all greenway issues within the region, in addition to those related specifically to the Brodhead, McMichael, and Pocono Creek corridors. The committee may serve as a clearinghouse of greenway information, used by residents and local organizations.

BRODHEAD WATERSHED ASSOCIATION

Role:

The Watershed Association undertakes conservation efforts throughout the region. As a grant applicant, the organization is able to identify and utilize a variety of funding opportunities for conservation and restoration projects. The organization is an important partner in watershed education efforts.

Contact:

PO Box 339
Henryville, PA 18332-0339
(570) 839.1120
Group Leader: Charles Baughman

NATURE CONSERVANCY

Role:

The Nature Conservancy was established in 1951 and works in conjunction with communities, businesses and individuals to protect land around the world. In accordance with its Mission Statement, the Conservancy works "to preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive." Over 88 percent of the funding it receives is directly used for conservation. To date, the Nature Conservancy has established 1,400 preserves and has one million members.

Contact:

<http://nature.org>
The Nature Conservancy
4245 North Fairfax Drive, Suite 100
Arlington, VA 22203-1606
E-mail: comment@tnc.org
(800) 628-6860

POCONO HERITAGE LAND TRUST

Role:

The Pocono Heritage Land Trust was founded in 1984 and is in the process of growing. The organization may assist with easement and land acquisition and financial support. Its ability to hold land in public trust as an alternative to municipal ownership may be utilized. The trust may also monitor public open space properties.

Contact:

PO Box 553
Pocono Pines, PA 18350-0553
(570) 992.1112
(570) 643.7922 (fax)
E-mail: MEADAVID@aol.com

TROUT UNLIMITED

Role:

Trout Unlimited seeks to conserve, protect, and restore the fisheries and watersheds of North America's trout and salmon. It operates on local, state, and national levels and is based on a grassroots network. The national office is located outside of Washington, DC.

Contact:

www.tu.org
1500 Wilson Boulevard, #310
Arlington, VA 22209-2404

(703) 522.0200
(703) 284.9400 (fax)
E-mail: trout@tu.org

POCONO OUTDOOR CLUB

Role:

This active outdoor organizations will utilize proposed improvements to the greenway system and may provide support for future projects.

Contact:

RR 8 PX 8142A
Stroudsburg, PA 18392
E-mail: pocoutclub@entermail.net

POCONO SKI CLUB

Role:

This active outdoor organizations will utilize proposed improvements to the greenway system and may provide support for future projects.

Contact:

Big Pocono Ski Club
Stroudsburg, PA 18392
President: Bill Wenton
(717) 629.2428
E-mail: bwenton@sunlink.net

EAST STROUDSBURG UNIVERSITY

Role:

East Stroudsburg University, established in 1893, rests in the foothills of the Pocono Mountains. It is located on 165 acres in the East Stroudsburg community and educates 5,000 undergraduate students and 1,000 graduate students. The University will benefit from the greenway system and could positively influence its development. Specifically, as the greenway trail system is developed, it will be used by the University's athletic programs for organized activities and by students for regular exercise. The University should offer input to the development of such trails, so that the needs of students are considered. In addition, the University may be a source of funding for the construction of trail facilities.

Contact:

200 Prospect Street
East Stroudsburg, PA 18301-2999
(570) 422.3211

www.esu.edu

YMCA

Role:

The Pocono Family YMCA was established on July 17, 1914 and now has 6,000 members and participants. It offers a variety of programs including those for youth and older adults, and in aquatics and fitness. The YMCA serves all of Monroe County. Its main facility is on Main Street in Stroudsburg, but an extension is located in Paradise Township and programs are provided throughout the County.

YMCA members will utilize new trails that may be developed. The organization may present opportunities to support future project through fundraisers, labor, and a strong volunteer base. Its non-profit status open opportunities for unique funding sources and offers the possibility of circumventing grant requirements placed on local governments when working with grant monies.

Contact:

809 Main Street
Stroudsburg, PA 18360
(570) 421.2525
www.poconoy.org
E-mail: poconoy@ptol.et

POCONO MOUNTAIN VACATION BUREAU

Role:

The Pocono Mountain Vacation Bureau is the "tourist promotion agency" for the Pocono Mountains. It provides an abundance of information about the Pocono Mountains, including services, attractions, a calendar of events, directions, room reservation, maps, and the weather.

Contact:

1004 Main Street
Stroudsburg, PA 18360
(800) POCONOS
(570) 476.8959 (fax)
www.poconos.org
E-mail: pocomts@poconos.org

STROUDSBURG MUNICIPAL AUTHORITY

Role:

The Water Authority is an important landowner. In particular, it owns a significant number of acres within the Brodhead Greenway. Here the

Authority property is an integral part of the greenway and considered as such. Opportunities for the development of trails and protection of the greenway should be discussed.

Contact:

410 Stokes Avenue
East Stroudsburg, PA 18301
(570) 421-3232

CLARION HOTEL

Role:

The hotel is located off West Main Street, adjacent to the Pocono Creek. An important aspect of the greenway in this downtown area is visibility. Several access points are recommended to provide ample opportunity for residents to interact with the greenway system. Trail head, in particular, are important in attracting users. Where possible, utilization of existing facilities for the development of a trail head should be explored. The rear parking lot of the Clarion Hotel is very close to the creek and the proposed trail that would run along side it. Collaborative opportunities should be explored for the designation of a trail head that uses existing parking and the construction of the creek trail, as well as a short connection to the trail head. The greenway trail system will gain increased awareness in this location and the hotel will benefit from the development of a recreational asset.

KIRKWOOD CAMP

Role:

This group owns a significant portion of land surrounding the Pocono Creek. Its current use as a campground/retreat is consistent with the goals for the greenway system. Existing trails and an abandoned rail bed may be incorporated into the Pocono greenway trail system. Discussions regarding the feasibility of this opportunity and the possibility of a collaborative relationship should take place.

Contact:

(570) 421-8625

GLENBROOK GOLF COURSE

Role:

The Glenbrook Golf Course sits alongside the McMichael Creek and adjacent to Stroud Township's McMichael Creek Conservation Property. Because of this important location and the open spaces encompassed by the course, its owners must be considered key stakeholders in greenway projects along the McMichael Creek.

Contact:
(570) 421-3680

POCONO RUNNERS ASSOCIATION

Role:
The association uses existing trails and would welcome the opportunity to use additional trails in the region. The association may be a source of financial support for future project.

JACOB STROUD ASSOCIATION

Role:
This organization is involved with downtown revitalization and vitality. Because of the downtown connections to the greenway system, Jacob Stroud will be a key stakeholder.

Contact:
10 North 7th Street
Stroudsburg, PA 18360
(570) 424-9131

EAST STROUDSBURG COMMUNITY ALLIANCE

Role:
The alliance is involved with the revitalization of downtown East Stroudsburg. This project has a potential to be mutually beneficial for this organization and those implementing the greenway project.

Contact:
(570) 424-2980

LANDOWNERS

Role:
The private property owners adjacent to the three creeks and within the greenway corridors are integral to the success of the greenway system. Landowners must be regularly updated on the status of greenway projects and provided with opportunities to give input. Landowners can contribute to the success of the greenways through sensitive land use and a willingness to collaborate.

EAST STROUDSBURG SAVINGS ASSOCIATION

Role:
The Savings Association is planning to construct new offices on vacant property along the McMichael Creek, near the Hampton Inn. There may be an opportunity to enlist the Associations' financial support for nearby trail construction projects.

Contact:
744 Main Street
Stroudsburg, PA 18360
(570) 421-0531

MONROE COUNTY HISTORICAL ASSOCIATION

Role:
The Historical Association will be a key stakeholder in the development of downtown connections to the greenway trail system.

Contact:
Driebe Freight Station
537 Ann Street
Stroudsburg, PA 18360
(570) 424-1776

MONROE COUNTY

Role:
Monroe County offers opportunities for support through the open space program, conservation district, and recreation and parks programs.

Contact:
Administrative Center
1 Quaker Plaza, Room 106
Stroudsburg, PA 18360-2169
(570) 517-3100

SERVICE CLUBS

Role:
There are several service clubs throughout the region. These community organizations may provide support for trail construction, maintenance, and monitoring.

Key Parcels

Significant areas of land are publicly owned within the greenways, particularly along Brodhead Creek. However, the several miles of stream run through or adjacent to hundreds of properties, most of which are privately owned. To assist in the coordination and prioritization of open space conservation within the greenways, several key parcels within or adjacent to the corridors were identified (see chart below). The key parcels are identified because of the impact of their ownership on the recommendations of this Plan. The information provided for each parcel will assist municipal officials in setting acquisition priorities and identifying easement corridors. The “recommended action” column of the key parcel table lists one or more of each of the following related to ownership of the individual parcels:

ACQUISITION

- outright purchase by Stroud Township, Stroudsburg, East Stroudsburg, Monroe County, conservation organization, or any combination thereof

PARTIAL ACQUISITION

- acquisition by one or a combination of the above mentioned parties of a portion of a property

EASEMENT

- as described earlier, this purchase permits a specific use within a defined corridor, precluding and the outright purchase of an entire parcel

COOPERATIVE CONSERVATION

- no ownership change is proposed, rather an increased awareness on the part of the private landowner of conservation methods on private property

Land acquisition efforts should not be limited to the Key Parcels identified. The list is to serve as a guide. A variety of factors will influence opportunities and may bring to light additional properties.

PARCEL OWNER	ACREAGE	GREENWAY	MUNICIPALITY	CURRENT USE*	RECOMMENDED ACTION
James Walker	17	Brodhead	East Stroudsburg	undeveloped	ACQUISITION
Eureka Stone Quarry, Inc. (2 properties)	270.5	Brodhead	Smithfield Township	undeveloped / manufacturing	EASEMENTS
Alfred Iadevaio	123	McMichael	Stroud Township	undeveloped / subdivision prop.	ACQUISITION / EASEMENTS
Diane Zeitz	4.5	Pocono	Stroud Township	undeveloped	ACQUISITION
Donald Knickman	83	McMichael	Stroud Township	undeveloped	ACQUISITION
Peter Andrews	9	Pocono	Stroud Township	household	PARTIAL ACQUISITION
William Carson (6 properties)	85	Brodhead	Stroud Township	undev. / mobile home / forest reserve (Act 319)	COOPERATIVE CONSERVATION
Robert Christman	176	Brodhead	Stroud Township	forest reserve (Act 319)	ACQUISITION
Sadie Metzger	87	Brodhead	Stroud Township	forest reserve (Act 319)	ACQUISITION

* = source: Land Use Codes for Monroe County, PA

Key Parcels, continued

PARCEL OWNER	ACREAGE	GREENWAY	MUNICIPALITY	CURRENT USE	RECOMMENDED ACTION
Forte, Ince	44	McMichael	Stroud Township		ACQUISITION / EASEMENT
Labar	43.5	McMichael	Stroud Township	undeveloped	EASEMENT
Francis Heller	1.7			household	
Norton Road Associates	82.15	McMichael	Stroud Township	undeveloped	ACQUISITION
Edward Heslin	5.25	McMichael	Stroud Township	household	EASEMENT
LTS Development, Inc.	82	McMichael/ Brodhead	Stroud Township	development	ACQUISITION
Richard Gaunt	1	Brodhead	Stroud Township	undeveloped	ACQUISITION
Thomas Joyce	27	Brodhead	Stroud Township	household	ACQUISITION/PARTIAL ACQUISITION
William Serfass	23.5	Brodhead	Stroud Township	apartments	EASEMENT / COOPERATIVE CONSERVATION
Diversey Lever	43	Brodhead	Stroud Township	industrial	EASEMENT
David Deangelis	4	Brodhead	Stroud Township	household	ACQUISITION / EASEMENT
Best Supply Co.	1.4	Pocono	Stroudsburg Borough	retail	ACQUISITION
Shiffer Bituminous Service (2 properties)	4	Brodhead	Stroudsburg Borough	undeveloped / construction service	ACQUISITION
M J SR, Inc	8.15	McMichael	Stroud Township	food and kindred products manuf.	ACQUISITION

Key Parcels, continued

PARCEL OWNER	ACREAGE	GREENWAY	MUNICIPALITY	CURRENT USE	RECOMMENDED ACTION
Columbus Home Assoc.	6.44	Pocono / McMichael	Stroudsburg Borough	household units	EASEMENT
60 Storm Street Corp.	2.78	McMichael	Stroudsburg Borough	business services	EASEMENT
Monroe Silk Mills, Inc.	5.5	McMichael		undeveloped and unused	ACQUISITION
Walter Peeney	16.68	Brodhead	Stroudsburg Borough	household units	EASEMENT
Presbyterian of Philadelphia Corporation	82	Pocono	Stroud Township	group camp	EASEMENT, ACQUISITION, COOPERATIVE CONSERVATION

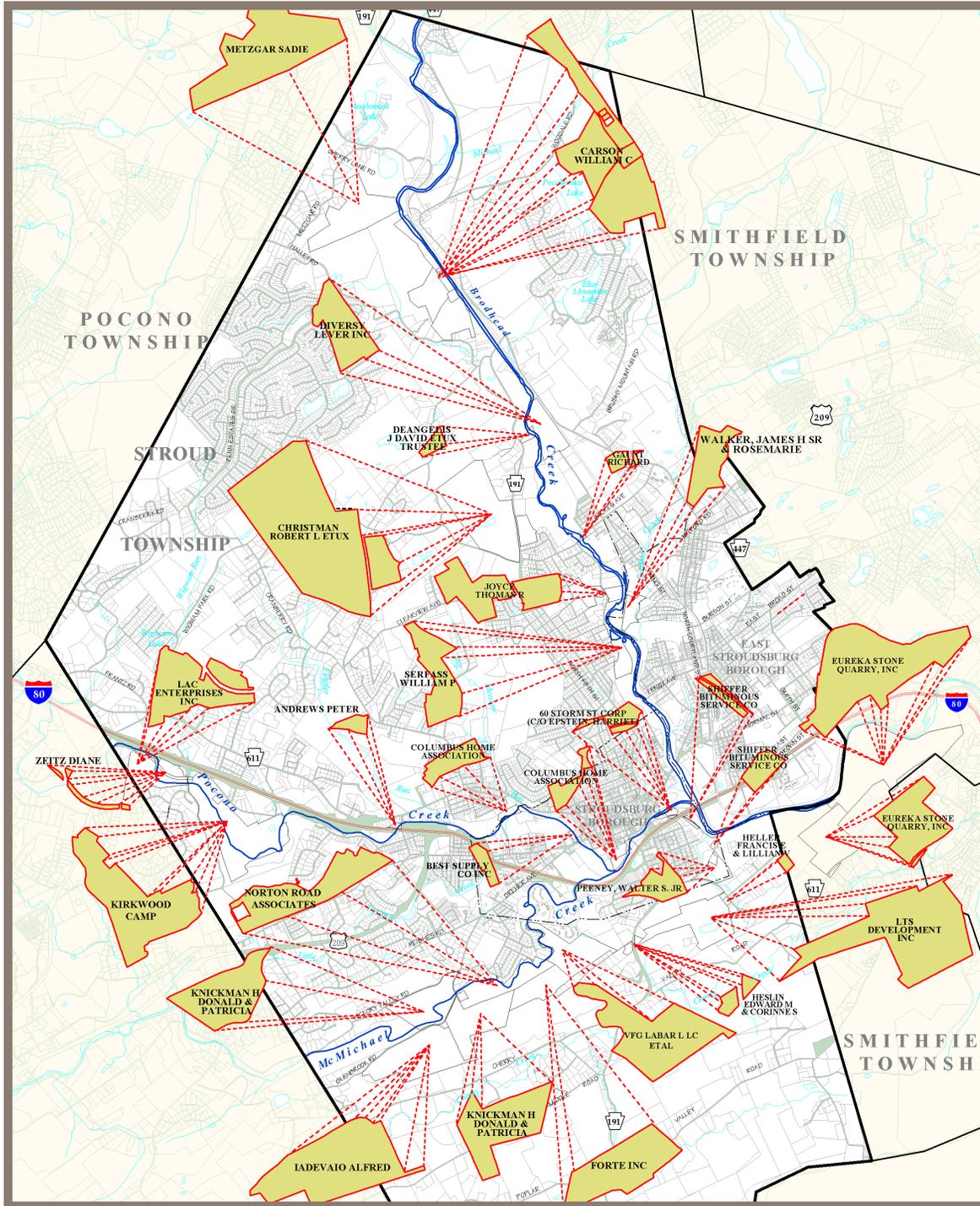
Recommendations are not made for every parcel of land within the study area. Therefore, the municipal regional partners should monitor the sale of properties in the area and be prepared to act, if an opportunity presents itself.

ABANDONED RAIL LINES

The abandoned rail lines running east-west through the study area have been long abandoned, c. 1930 and have largely fallen into private ownership. Portions of it were also used for public street systems and for the building of Interstate 80. In Segments M-1 and M-2 the abandoned bed was graded in some portions but track was never laid. Subsequent development for a senior housing project (Labar Village) re-graded the line extension which would have meet up with the old Wilkes-Barre and Eastern (WB&E) line at the old rail depot (now Katz's scrap yard - Katz/Leamoar, Inc). The WB&E through this section falls largely within the I-80 corridor and also has been largely lost. The remains of the still visible rail bed falls on three private properties along the McMichael Creek and shows signs of trail use. However the visible bed is lost as it crosses Glenbrook Road traveling in a westerly direction. Major private owners of the traces of the old rail bed through these sections include: Iadevaio, Knickman, and Forte. A title search might possibly reveal a separate entity that still retains some ownership interest of the bed/corridor but this could only be reviled through a comprehensive title search conducted

on these properties. In Segments P-1 through P-3 ownership falls within the I-80 corridor and on one major land owner (Presbytery of Philadelphia Corp.). Another smaller but significant parcel that still reflects the corridor shape is under the ownership of Diane Zeitz toward the western boundary of Stroud Township. The Greenway Project Feasibility Study of the Godfrey Ridge Section of the Brodhead Greenway address ownership in Segments B-5 and B-6. The recent acquisition of a key parcel by the County should also be noted. Also as part of this study additional title work was done and indicated that a separate entity does retain some ownership interest of a portion of the old trolley line. This was provided to the county in a separate technical memorandum.

Key Parcels



Successful Implementation

The successful implementation of this plan depends on a variety of factors.

1. PUBLIC SUPPORT AND EDUCATION

Residents' support of future efforts to preserve open space and develop recreation opportunities within the three greenway corridors is critical to the future of a successful system. Immediately following the approval of this planning document, efforts should be made to publicize its findings.

2. ESTABLISHMENT OF FORMAL ADVOCACY GROUP

The project Study Committee played an important role in the development of this plan. This group's interest in the greenways' future and knowledge of the plan's recommendations will serve as important assets through implementation. Therefore, the municipal regional partners should formally recognize the Study Committee as the Stroud Region Greenway Advisory Board. The Board could be responsible for tracking the plan's implementation, updating the plan, and general coordination of efforts. The Board's role could logically expand beyond the implementation of this Plan to deal with general greenway issues throughout the Stroud Region.

3. INVOLVEMENT OF ELECTED OFFICIALS

As the primary decision-makers of the region, elected officials should be updated on a regular basis regarding the recommendations of this plan, the status of implementation, public support, and related issues as they arise.

4. INTERGOVERNMENTAL COOPERATION

The successful development of the Brodhead, McMichael and Pocono Creeks Greenways will be one of several current and future opportunities for the regional partners to work together. The base of cooperation that was created as part of the Stroud Region Open Space and Recreation Plan will allow a pooling of resources for the implementation of this plan's recommendations.

At the writing of this report, an intergovernmental agreement to create the Stroud Region Park Commission is being developed. If this agreement is adopted, it calls for all new properties within the Brodhead, Pocono, and McMichael Creeks to fall under the jurisdiction of the Stroud Region Park Commission, including ownership and maintenance. In addition, property within the greenway currently owned by Stroudsburg, East Stroudsburg, or Stroud Township will fall under the jurisdiction of the Commission upon adoption of the agreement.

5. FINANCIAL SUPPORT

The Stroud Regional Partners continue to show their commitment to a recreation and open space system. Commitment to funding recreation and open space projects will greatly influence the success with which the recommendations of this plan are implemented. Alternative funding sources should be continually explored to supplement contributions of local governments and the efforts of local organizations.

6. VOLUNTEER EFFORTS

A strong volunteer base will make a large contribution to the physical implementation of the plan's recommendations for the future of the greenways. The Stroud Region is fortunate to have several environmental and recreational organizations in the area that are aware of the greenways' importance. Should the Stroud Region Greenway Board be created, one of its duties will be to organize an efficient volunteer system specifically for this plan's implementation.

