

PINE CREEK

A Wild and Scenic River Study



As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historic places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interests of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.



U. S. DEPARTMENT OF THE INTERIOR

Cecil D. Andrus, Secretary

NATIONAL PARK SERVICE

William J. Whalen, Director

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FINAL REPORT

PINE CREEK

A WILD AND SCENIC RIVER STUDY

PENNSYLVANIA

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Prepared by:

U.S. Department of the Interior
Heritage Conservation and Recreation Service
(formerly Bureau of Outdoor Recreation)
Northeast Regional Office

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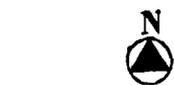
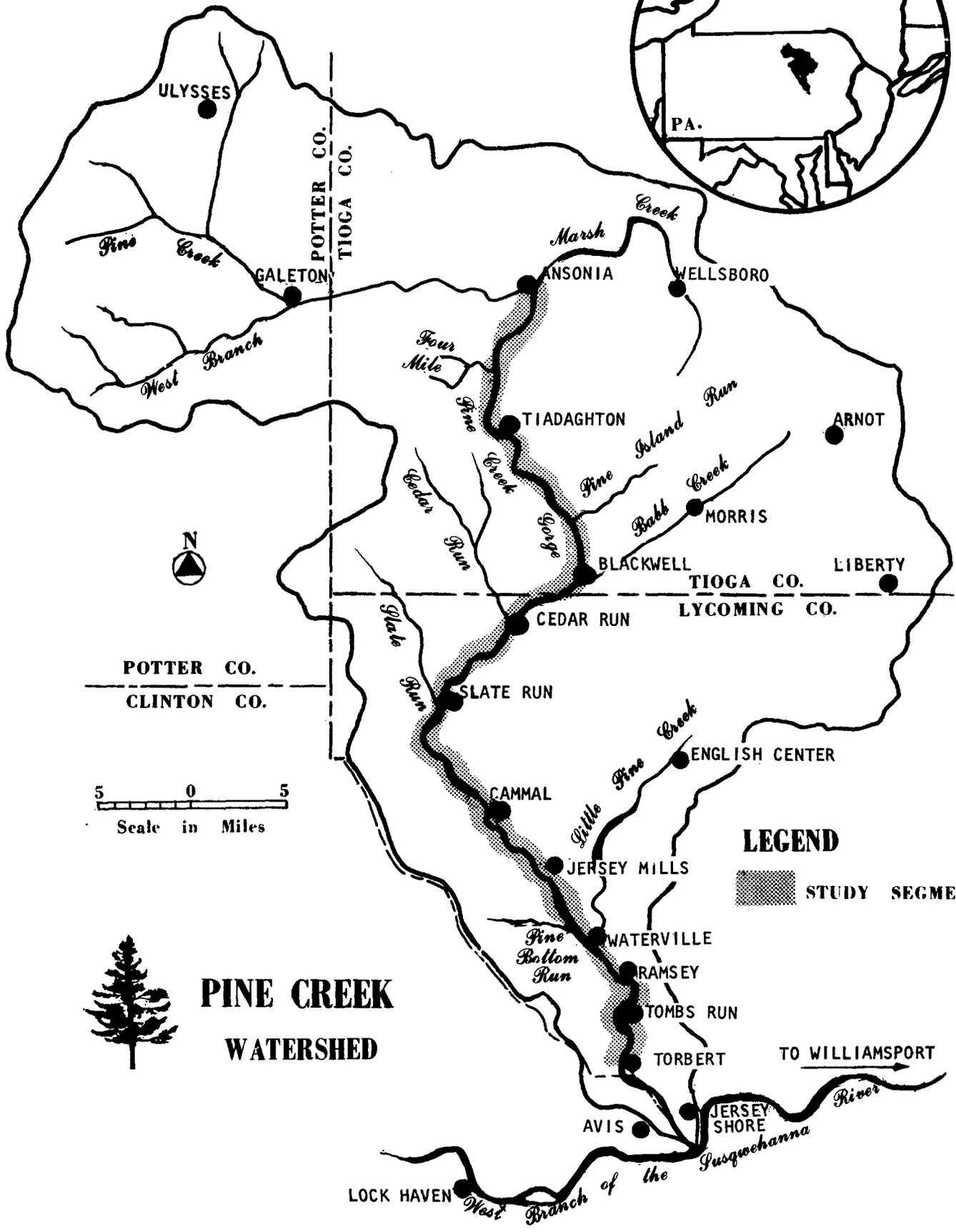
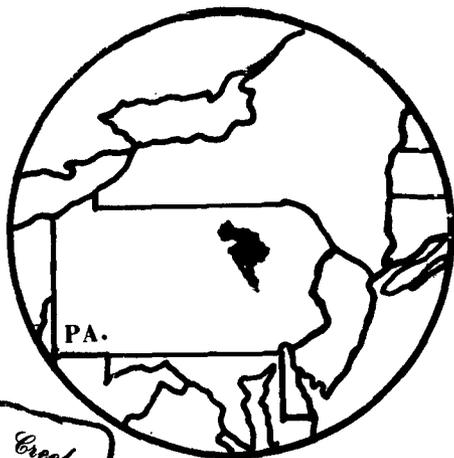
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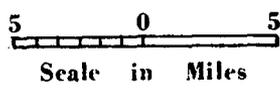
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POTTER CO.
CLINTON CO.



PINE CREEK WATERSHED

LEGEND

STUDY SEGMENT

TO WILLIAMSPORT

INTRODUCTION

This report, on the scenic and recreational qualities of Pine Creek in Pennsylvania, was prepared under authority of the National Wild and Scenic Rivers Act of 1968, Public Law 90-542, as amended. In the Act, the Congress declared it

...to be the policy of the United States that certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations.

45.6 miles of the Pine Creek were designated for study under the Act. In addition, other segments of the creek were examined for possible inclusion into the system. The Heritage Conservation and Recreation Service (formerly the Bureau of Outdoor Recreation) has led this study on behalf of the U.S. Department of the Interior. This report was prepared through the combined efforts of an Interagency Field Task Force composed of the Bureau of Mines, National Park Service, Fish and Wildlife Service, U.S. Forest Service, Environmental Protection Agency, Army Corps of Engineers, Pennsylvania Department of Environmental Resources, and the Susquehanna River Basin Commission. The Lycoming County Planning Commission and the Tioga County Planning Commission acted in the capacity of observers during the study effort. In addition, public information meetings were held in Wellsboro, Pennsylvania and Jersey Shore, Pennsylvania on May 23-24, 1972, and again on May 21-22, 1975. The meetings were conducted to promote and understanding of the Pine Creek Wild and Scenic River Study and to obtain public assistance in developing recommendations.

As a result of a redelegation of responsibilities by the Secretary of the Interior, the National Park Service will be responsible for the completion of this study.

SUMMARY

FINDINGS

It has been found that:

- the 51.7 mile segment of Pine Creek from Colton Road bridge at Ansonia to Short Mountain Gap near Torbert, Pennsylvania qualifies as a component of the National Wild and Scenic Rivers System.
- the entire study segment meets the criteria for classification as a scenic river.
- Pine Creek can best be protected and managed through limited acquisition and development of facilities by the Commonwealth of Pennsylvania and the implementation of land use controls by the local units of government.

RECOMMENDATIONS

To protect the free-flowing condition and outstandingly remarkable values of the Pine Creek study segment and its immediate environment for the benefit and enjoyment of present and future generations, it is recommended that:

- the 51.7 mile segment of Pine Creek from Ansonia, Pennsylvania to Short Mountain Gap near Torbert, Pennsylvania be designated as a component of the Pennsylvania Scenic Rivers System.
- the Governor of Pennsylvania apply for National designation to the Secretary of the Interior, in accordance with Section 2(a)(ii) of the Public Law 90-542, at such time as the Commonwealth of Pennsylvania would decide to include Pine Creek as a component of the National Wild and Scenic Rivers System.
- the entire study segment be classified as SCENIC in accord with Section 2(b) of P.L. 90-542.
- the protection boundary include the 28,700 acre area within the visual corridor (line-of-sight from the creek as shown on Map, p. vii).
- the Commonwealth of Pennsylvania complete its land acquisition program along Pine Creek (involving approximately 500 additional acres) with full title acquisition of the gorge section between Ansonia and Blackwell. Currently, 18,200 acres of the visual corridor are in State ownership.

-- the remaining private lands within the visual corridor be retained by private landowners subject to land use controls developed by local governments. Recommended land use control measures would include flood plain zoning, building code standards, industrial plant siting regulations, utility rights-of-way, and water and sewer line permits. The purpose of the land use regulations is to assure (1) preservation of the existing environmental values in the visual corridor, and (2) that permitted development within the corridor be compatible with designation of the stream as a scenic river and, at the same time, consider legitimate growth needs of the riverfront communities.

-- the Commonwealth of Pennsylvania develop and manage public access and egress points along the study segment together with facilities for low density recreational activities such as boating and camping in order to prohibit excessive damage to vegetation and soils, indiscriminate littering, and trespassing on private property.

-- water pollution abatement efforts be continued by the Pennsylvania Department of Environmental Resources in coordination with local and Federal concerns.

COSTS

Cost estimates for the 51.7 mile segment ('78 \$)

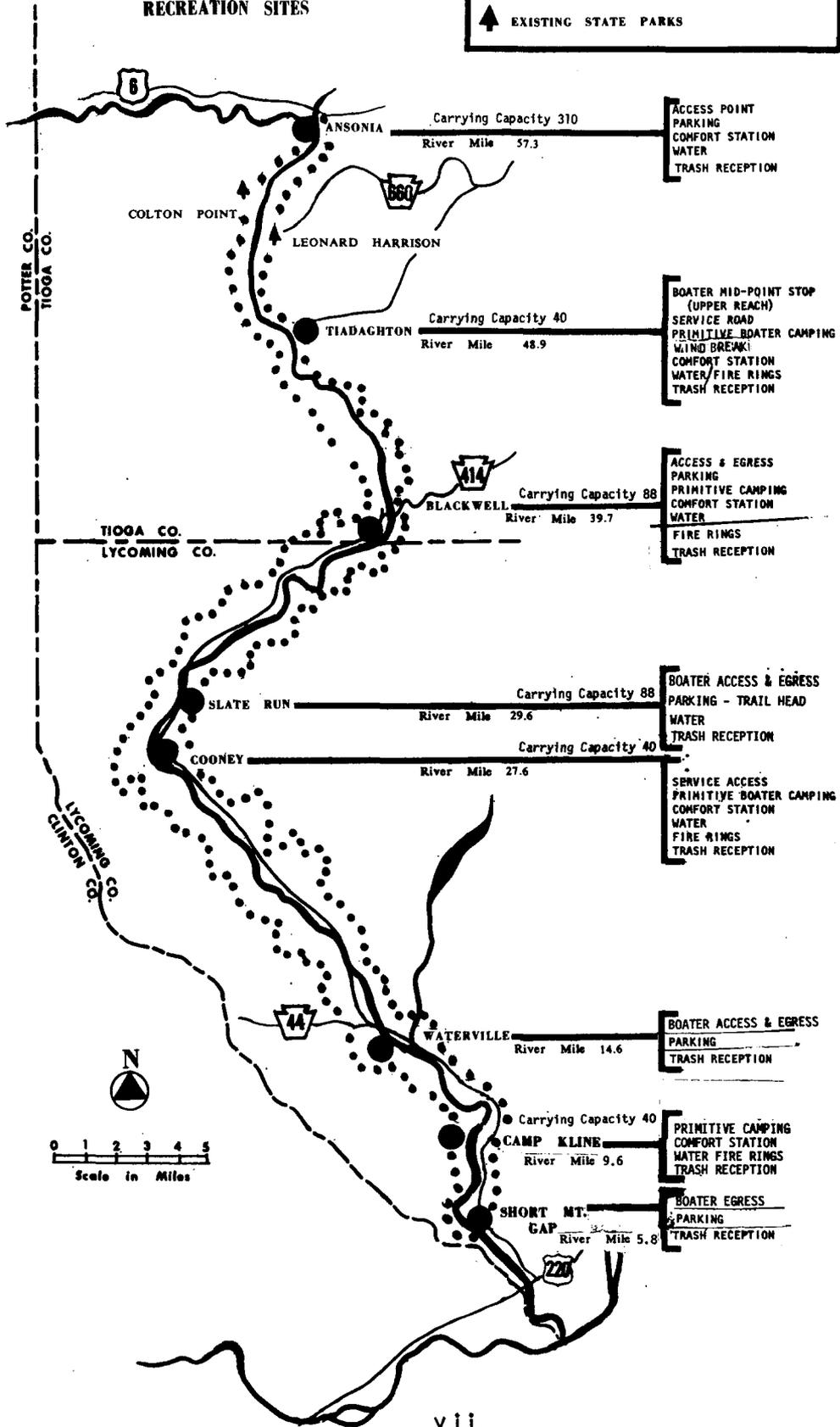
Land acquisition of 500 acres and ten seasonal dwellings	\$300,000
Development of eight recreation sites	<u>157,000</u>
	\$457,000
Annual Operation and Maintenance	\$ 23,000

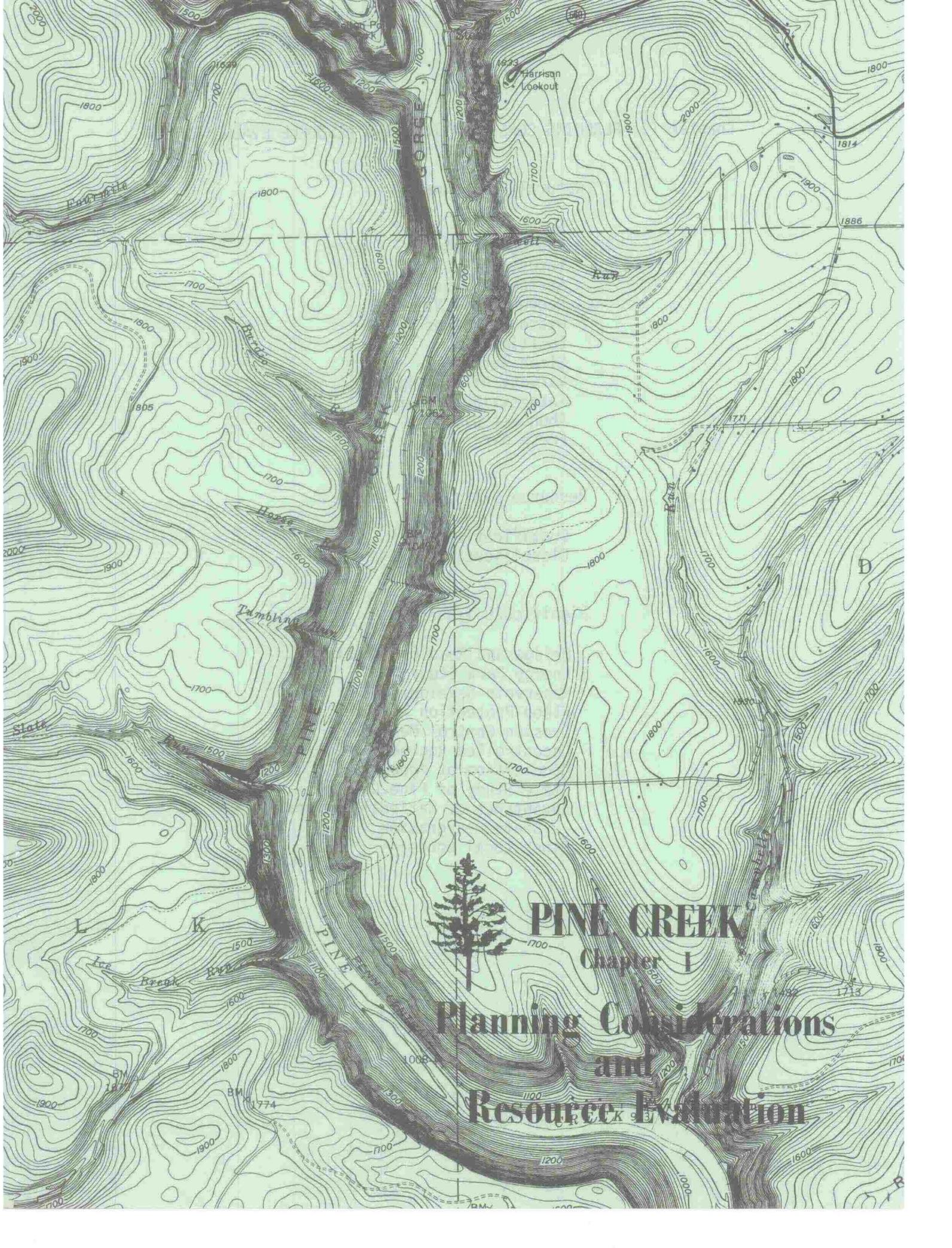
PINE CREEK
PROPOSED PROTECTION
BOUNDARY AND
RECREATION SITES



LEGEND

- PROPOSED PROTECTION BOUNDARY
- PROPOSED RECREATION SITES
- ▲ EXISTING STATE PARKS





PINE CREEK

Chapter I

Planning Considerations and Resource Evaluation

Chapter I. PLANNING CONSIDERATIONS AND RESOURCE EVALUATION

Natural Environment

- Scenic Gorge
- Geologic Features
- Forestlands
- Aesthetic Values
- Recreational Values
- Historic Values
- Location
- Clean Waters
- Variety of Flow Types
- Interesting Fishery
- Abundant Wildlife
- Fresh Air

Resource Evaluation

- Qualification
- Classification

Significant Issues

- Bridge and Road Construction
- Energy Park Study
- Reservoir Development
- Flood Protection Measures
- Erosion Control Measures
- Uncontrolled Recreation Activities
- Acquisition of Property
- State Study of Pine Creek
- Advantages of National Designation and
State Designation
- Other Local Concerns

A realistic strategy for adequate resource protection and use cannot be determined before considering Pine Creek's natural environment and significant issues which affect the resource. This chapter focuses on these considerations and issues.

A. Natural Environment

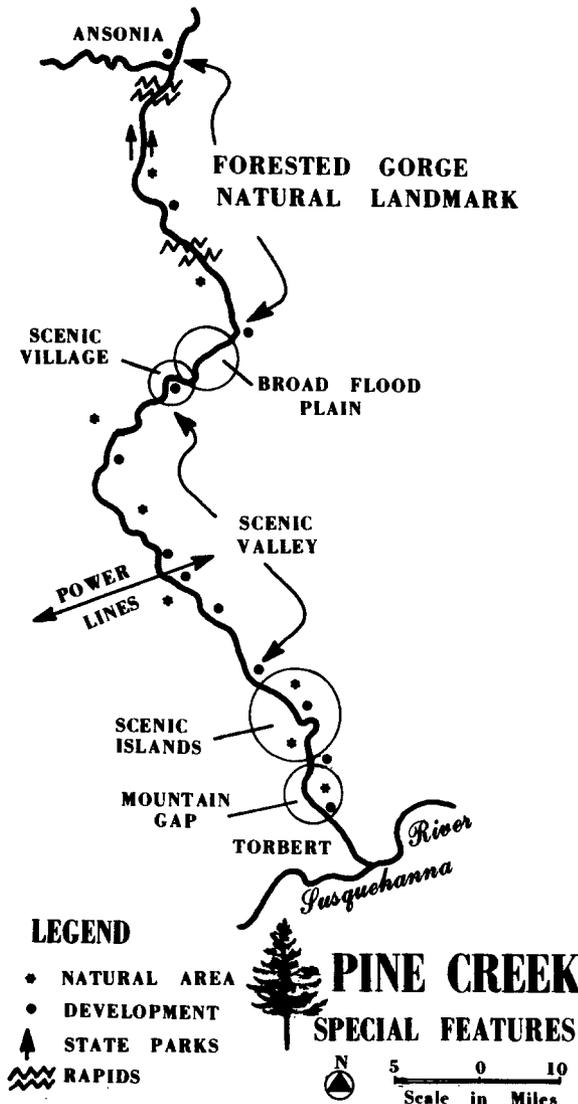
The natural environment of the Pine Creek Valley is unique in a number of respects. The most significant values and aspects are highlighted as follows:

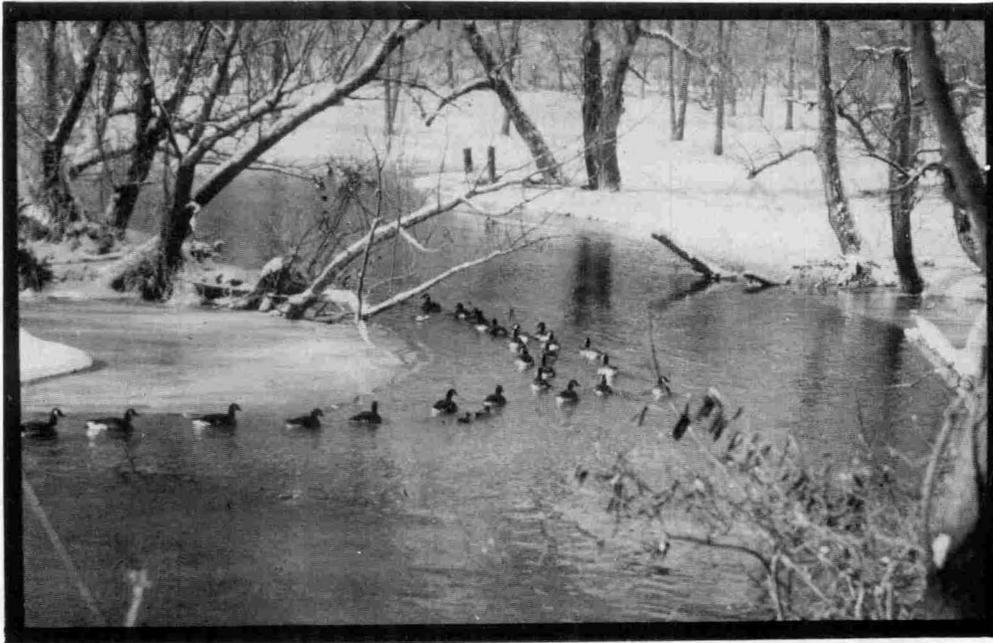
Scenic Gorge - The uppermost 17-mile stretch of the study segment is a true canyon which displays a distinctive rugged V-shaped valley, ranking among the best in the East. The National Park Service designated the gorge a Registered National Natural Landmark in 1969, and in 1970, the State Forest Commission designated it a State Forest Natural Area. It is a fine example of a gorge in a humid, mid-latitude climatic region with luxuriant vegetation, in contrast to the type of canyon located in dry regions, where exposed rock strata are typical.

Geologic Features - Significant geological features include the gorge which is of glacial origin and red and green shale outcroppings. These features add to the educational and scenic values of the resource that need to be protected.

Forest Lands - The visual corridor is a part of an extensive heavily forested region referred to locally as the Big Woods. This forest has recovered from past timber exploitation and is reaching maturity. Some of this forest is protected as State Natural Areas and Wild Areas as a part of the State Forest Lands System.

Aesthetic Values - The outstanding scenic quality is a big attraction due mainly to the canyon profile, the brilliant autumn foliage, and the white-water stream. Downstream, the valley widens and the ridges and cone-shaped hills provide rustic settings for scenic villages such as Cedar Run.





The Abundant Wildlife

Recreational Values - Recreation activities such as fishing and floating the creek, camping on the streambanks, hiking along the gorge walls, and sightseeing from the rims are featured.

Historic Values - Pine Creek was used as a boundary between Indians and white settlers, and many councils were held in the valley. Numerous Indian trails crossed the creek and later became major highway routes. During the logging era, the eastern white pine that grew in the area were prized as the world's finest masts for sailing ships.

Location - Pine Creek is located along the eastern fringe of the lightly populated north-central Pennsylvania high mountain area which is surrounded by the greatest concentrations of population in the Nation. The area is a large island in a sea of urban development.

Clean Waters - The water quality is in good to excellent condition, being suitable for swimming and wading. Pine Creek is reported by the Commonwealth to be a clean stream.

Variety of Flow Types - There are fine whitewater rapids in the gorge and slower moving waters in the lower segment. The frequent rapids and riffles are often interspersed with peaceful pools.

Interesting Fishery - Pine Creek is a good trout stream and tributary streams within the visual corridor provide an excellent native trout fishery. There is also a variety of other species.

Abundant Wildlife - It is part of one of the most notable deer and wild turkey ranges in the Nation.

Fresh Air - Due to large forested areas and little development, air quality is unusually clean.

- B. Resource Evaluation- The segment of Pine Creek between Ansonia and Short Mountain Gap near Torbert has been evaluated to determine its qualification and classification in accordance with the requirements of the National Wild and Scenic Rivers Act, Public Law 90-542 as amended, and the general criteria contained in the "Guidelines for Evaluating Wild, Scenic, and Recreational River Areas Proposed for Inclusion in the National Wild and Scenic Rivers System....", published jointly by the Department of the Interior and the Department of Agriculture in February 1970.



Pine Creek Gorge from Leonard Harrison State Park

Qualification - It has been determined that the 51.7 mile segment of Pine Creek extending from Colton Road bridge at Ansonia (river mile 57.9) to Short Mountain Gap near Torbert (river mile 5.8) qualifies for inclusion in the National Wild and Scenic Rivers System. Protection of the additional six miles of Pine Creek, between the downstream terminus of the study segment at English Island and the gap at Short Mountain, would complement the congressionally mandated study segment. Inclusion of this additional segment would extend protection of the visual corridor to the natural gateway to the Pine Creek Valley from the south and complement the upstream terminus at Ansonia, the northern entranceway into the gorge. This conclusion is based on the following:

1. The study segment and its immediate environment possesses outstandingly remarkable scenic, recreational, and fish and wildlife values, as required by Sections 1(b) and 2(b) of the Act. Its geologic values are also of significant interest.

The gorge between Ansonia and Blackwell, a Registered National Natural Landmark, ranks very high in scenic quality and possesses a rich variety of vegetative types. The lush vegetation effectively screens many of the widely dispersed communities. Occasional bare rock faces add variety to an already majestic landscape. The overall impression of the river corridor is of dramatic scenic beauty.

The area possesses a few private trailer camps and vacation homes and extensive public lands with state parks, forests, and game lands. The creek is an important part of this region's recreation resources, offering opportunities to raft, canoe, fish, swim, sightsee, and participate in related activities.

The stream provides an outstanding habitat for both a cold and warmwater fishery. The river corridor supports an abundant variety of large and small wildlife species. Both waterfowl and upland game populations abound, as do reptiles and amphibians common to the area.

The gorge has an interesting origin which is primarily due to the overflow of glacial lakes. Red and green shale outcroppings are exposed along the gorge walls, adding diversity to the forested areas.

2. The study segment is in a free-flowing condition.

Although three small Soil Conservation Service impoundments are located upstream from the main stem, there is no slack water within the study segment. The creek possesses a variety of natural flow conditions from fast white-water to deep calm pools.

3. Pine Creek normally has a water flow and level sufficient to permit full enjoyment of water-related outdoor recreation activities generally associated with comparable rivers such as kayaking, canoeing, rafting, swimming, and fishing.

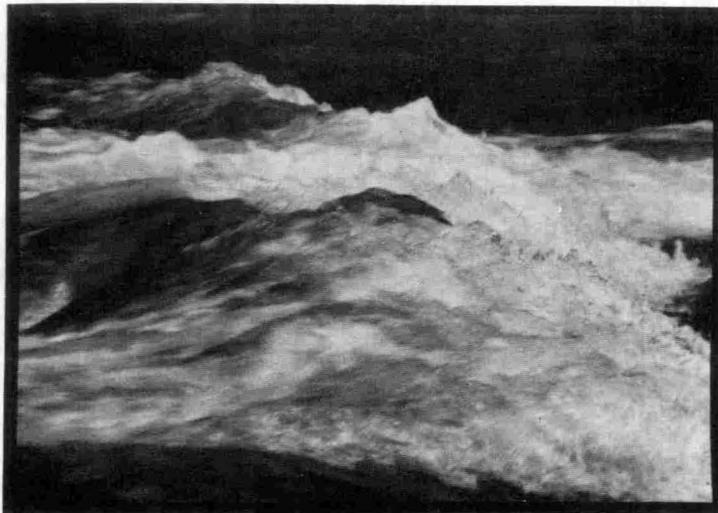
Stream flows have seasonal variations, with high and medium high flows during late winter and spring, increasing velocity and wave patterns. Summer and early autumn flows slacken and boating activity decreases markedly.

4. The overall condition of the creek's water quality is good to excellent, even though in some cases it does not meet all of the criteria provided by the Pennsylvania Department of Environmental Resources.

Water quality is good enough for swimming, wading, and fishing. However, a few communities are currently discharging inadequately treated sewage and septic tank overflows into the creek and its tributaries. Such discharges create localized concentrations of coliform bacteria. Also, the acid mine drainage received from Babb Creek has a negative effect on the mainstream fishery for a short distance. The water quality standards adopted by the Commonwealth would help to procure and maintain higher water quality.

5. The study segment is long enough to provide a meaningful high quality recreation experience.

In summary, Pine Creek and its immediate environment are worthy of preservation. When viewed collectively, its overall qualities more than compensate for the few unfavorable conditions which are generally rectifiable or are now being improved.



Owassee Rapids

Classification - Following a determination that Pine Creek qualifies for inclusion in the National Wild and Scenic Rivers System, the following classifications presented in Section 2(b) of the Act were taken into consideration:

Wild river areas - Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.

Scenic river areas - Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

Recreational river areas - Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

It was concluded that the entire study segment should be classified as SCENIC. None of the creek evaluated qualifies for wild designation because of closely paralleling railroad and road rights-of-ways. The scenic classification is primarily based on the following factors:

1. It is free of impoundments.
2. The water quality generally meets the minimum criteria for desired types of recreation and is generally capable of supporting the propagation of aquatic life normally adapted to the stream habitat.
3. The shoreline is generally free of development.
4. The lower segment is generally accessible by road. The railroad tracks which parallel the entire study segment are usually well-screened by vegetation.



A Peaceful Lower Stretch of Pine Creek

C. Significant Issues

The issues outlined below provide a significant part of the framework which was used to develop the planning proposal for Pine Creek. These factors must be considered when developing realistic, long-term policies necessary to guide recreation use and conservation of the visual corridor.

Bridge and Road Construction - The Pennsylvania Department of Transportation (PennDot) is planning a number of bridge replacements within the visual corridor to improve traffic safety. The impact of the construction upon the visual corridor would depend upon the type of construction planned. If performed with care, normal maintenance and upgrading of existing roadways would pose little problem. Inaccessibility has helped to protect the natural resources in the past but any new improved highway systems would bring increased pressure not only on the highway system but on the resource proposed for protection. New road construction would impact the natural character of the area and reduce its remoteness.

As a part of the preservation effort, the Lycoming County Planning Commission formed a Scenic Highways Task Force to implement rustic bridge designs and scenic roadways in the Pine Creek watershed when construction plans of PennDot were revealed. This effort, combined with that of the Interagency Field Task Force, resulted in the application of stone facing on the piers of a bridge replacement within the study segment. The application of stone facing provides a rustic appearance to a bridge which blends with the character of the visual corridor. This effort demonstrates how local, state, and federal agencies can work together for the aesthetic benefit of the resource.



Stone Facing on New Bridge near Waterville

Energy Park Study - A site near Cherry Flats, 15 miles to the east of the Pine Creek Gorge, had been one of the ten energy park sites under consideration for further study statewide by the Governor's Energy Council and four power companies. There were plans for a reservoir on location with water pumped from Pine Creek and Tioga Creek. A dam would not be required on Pine Creek, but an intake was to be located within the main stem just downstream from Blackwell. Water would be pumped from Pine Creek 73% of the time during high flows at the rate of 460 cubic feet per second. Air pollution would be increased around the site area and precipitation and severe storm activity would be somewhat increased up to 35 miles from the site. Local concern over the possible location of an energy park at Cherry Flats was also evident. Taking this and other concerns into consideration, the Governor's Energy Council, suspended investigations to locate energy park facilities in Pennsylvania.

Reservoir Development - The U.S. Army Corps of Engineers had considered and evaluated a multiple purpose demand lake site within the study segment near Cammal. Its purpose would be for flood control with some recreation. The Corps has recently reported, however, that at the request of the Commonwealth of Pennsylvania, the Baltimore District is no longer considering the Cammal Lake Project.

There was local concern over the Corps of Engineers' plans to construct the dam. Although the dam would have provided some flat water recreation, the creek's free-flowing condition would have been eliminated along with many of the existing scenic and recreational values.

Flood Protection Measures - The Pine Creek Preservation Association has expressed a concern that if Pine Creek is included in the National System, flood protection measures would not be permitted, such as the removal of islands or dirt and rock pile accumulation.

In general, the National Wild and Scenic Rivers Act precludes the removal of natural features, such as islands and soil and rock accumulations in a stream, except in those instances where public safety or where overriding considerations are paramount. Such removal would have to be considered on a case-by-case basis by the managing agency. Current research into flooding problems indicate that, where possible, the best long-term solution is to minimize development on and near streams in order to allow the flood plain to perform its natural function of accommodating periodic high flows.

Erosion Control Measures - The Soil Conservation Service recently constructed 810 cubic yards of rock riprap at a site near Cammal and excavated two tributary streams. The rock riprap is necessary to stabilize a rapidly eroding natural stream bank. The eroded material was deposited in one of the deep pools below the site. A natural appearing, vegetated riprap bank would not detract from the scenic qualities of Pine Creek. The excavation along two tributaries is to put the streams back to pre-Eloise condition.



Erosion of Railroad Embankment in the Gorge

Uncontrolled Recreation Activities - The peace and solitude provided by the steep canyon slopes and heavy forest cover are in danger of being lost due to use of motorbikes and snowmobiles and refuse left by visitors. In addition, the creek is threatened by the untreated sewage from cabins and vacation homes. This situation has led to the recent interest in preserving the area and controlling recreation use and development.

Acquisition of Property - The Commonwealth of Pennsylvania has acquired, and is still in the process of acquiring, all private lands in the gorge between Ansonia and Blackwell under the State Forest Lands System. There is local concern over the acquisition of property in the gorge stretch, but the Commonwealth is making every effort to acquire lands by means of mutual agreements between the buyer and the seller. The property owner must want to sell his or her property and the State must want to buy the property before any agreement can be reached.

Remaining private lands within the visual corridor will be retained by private landowners and subject to land use controls that are compatible with the purposes of river designation. Because of the limited amount of land needed for public access, the State would be able to acquire the needed acreage without using condemnation.

State Study of Pine Creek - The Pennsylvania Department of Environmental Resources has been conducting its own study of Pine Creek to determine whether it qualifies as a component of the Commonwealth's Wild and Scenic Rivers System. This study, which began in the spring of 1976, is recommending that Pine Creek, between Ansonia and Short Mountain Gap near Torbert, be managed as a Scenic River in the State System.

Advantages of National Designation and State Designation - There has been considerable discussion by involved agencies as to whether Pine Creek should be designated as a component of the National Rivers System and/or the State Rivers System. The advantages of each type of designation which assumes State management are summarized as follows:

1. Protection - National designation provides protection from federally licensed or funded water resources projects, such as dams, water conduits, reservoirs, powerhouses, transmission lines, and other project works (Section 7 of P.L. 90-542). In addition, the Secretary of the Interior can be an appellatant agency - thus two levels of review to help insure protection.

With State designation, Sections 2 and 5 of the Pennsylvania Scenic Rivers Act 283 may provide protection from encroachments, such as dams, water resources projects, major highway development, and power generating facilities. The Governor, through the Susquehanna River Basin Commission, would most likely determine the decision on project development. In addition, some initial decision-making power by a Federal agency could be eliminated by State designation.

2. Water Quality - National designation could provide an added compulsion to improve the water quality (Section 12(c) of P.L. 90-542).

Even without National designation, the Pennsylvania Department of Environmental Resources functions and cooperates with the U.S. Environmental Protection Agency and the Federal regulatory programs. The Commonwealth's water quality regulations are as stringent as those of the Federal Government.

3. Land Acquisition - There are no restrictions on land acquisition or regulation for a State managed river in the National System.

Full title acquisition is permitted under the State Forest Lands System; easements by Pennsylvania Scenic Rivers Act 283. Donations and property exchanges are permitted under Act 275, Section 1902-A; Forest Powers and Duties.

4. Funding - National designation may provide a better priority for financing from existing Federal programs of compatible projects which are improving the stream and its watershed.

Normally, the same amount of funds are available for State designation as National Designation. The State is more interested in adequate annual operation and maintenance support than with capital development or acquisition assistance.

5. Management - National designation may assist the State in better management programs by meeting certain Federal standards of management.

State system has flexibility of management, since no National Standards are required. State programs are tuned and refined to State requirements and citizen needs.

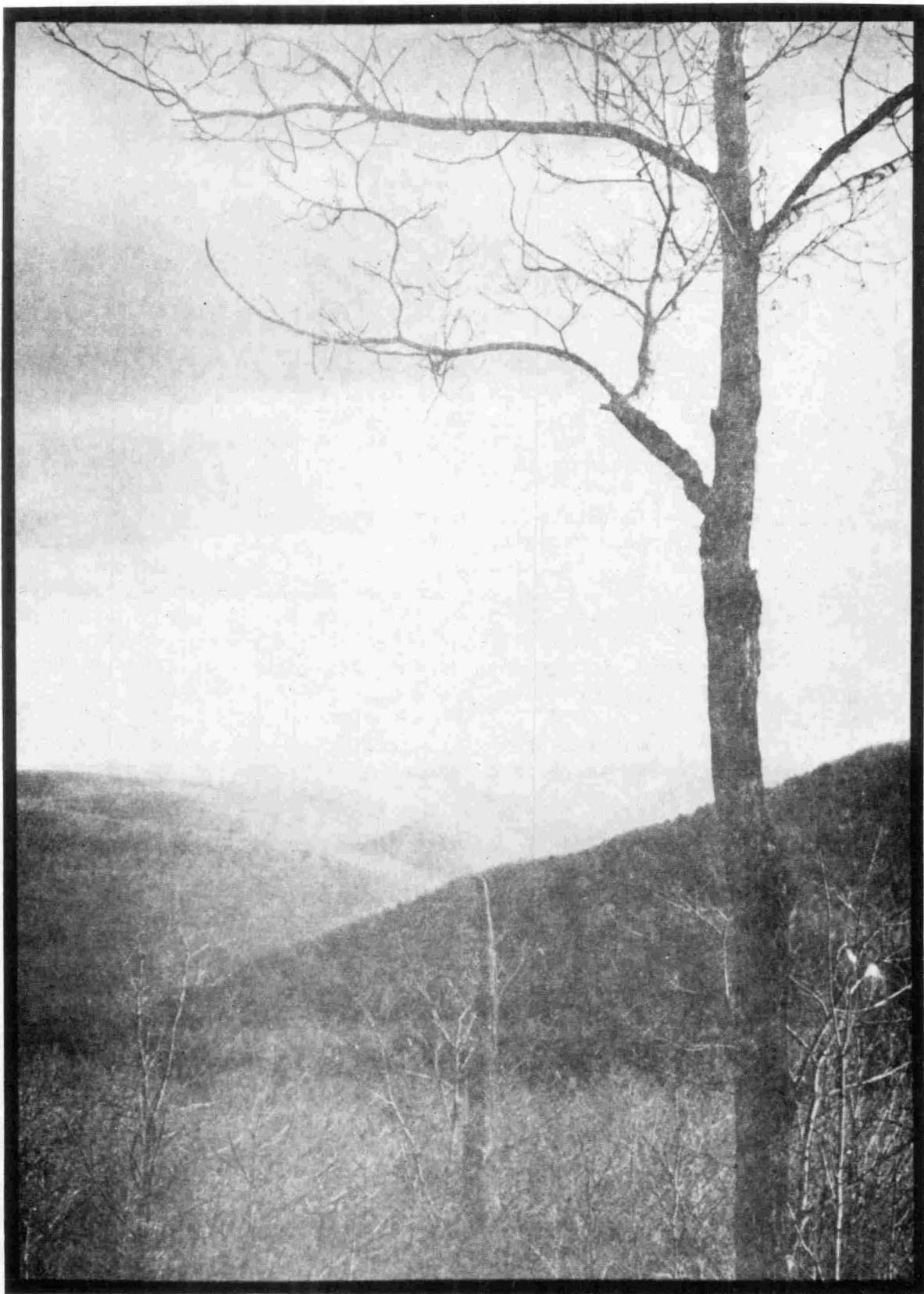
6. Recognition - National recognition would follow National designation; while statewide recognition would follow State designation.
7. Support - Some strong local support has been expressed for National designation. Local support and cooperation can best be assured in the long-term by the Commonwealth.
8. Permanency - The existing National Act is more permanent than the State Act because any change would involve the whole Nation rather than one state.

On the other hand, concern for Pine Creek is in Pennsylvania and in the Pine Creek area, is in the Department of Environmental Resources, in the Administration, in the General Assembly, and in many and varied organizations.

9. Expediency - The State System process is usually more expeditious than that for the National System.

Other Local Concerns - Local residents of the Pine Creek Valley have a lot of pride in their area and would like to see it retain its natural character. They are primarily concerned about overuse and lack of sufficient revenue, but are not against designation as long as their needs are met. Their concerns are summarized as follows:

1. Current road maintenance is the greatest expense to the riverfront townships where there is a general lack of revenue. Additional traffic with designation would add to the costs.
2. Tax assessments would lower when abandoned farms are reclassified as woodland or pasture. Absentee landowners with summer homes and camps request services which cost more than the taxes paid. The tourism revenues may not be enough to offset the loss to tax revenue.
3. The riverfront townships feel the burden meeting state water quality laws (sanitary treatment) and providing services to the private sector (recreators) with inadequate revenues.
4. Many snowmobilers, campers and hikers are inconsiderate of the rights of local residents. Local residents welcome the enforcement of regulations on recreators and assurance that the visual corridor will be protected by adequate management. There is a need to protect the local residents as well as the visitors.
5. Local governments welcome any commitments by the State to take over services at no extra expense such as trash collection, rescue, and policing. They would like evidence that the State has the funds and the manpower capabilities to manage Pine Creek.



Uplands of the Pine Creek Watershed

Chapter II. ANALYSIS OF ALTERNATIVE PLANS

Introduction

Summary of Alternatives

- Existing Trends Plan
- Visual Corridor Plan
- Maximum Environmental Protection Plan
- Economic Development Plan

Existing Trends Plan

- River Corridor Protection
- Conservation/Recreation Costs
- Recreation Analysis
- Fish and Wildlife Impact
- Social and Cultural Impact
- Environmental Quality Objective
- National Economic Development Objective

Visual Corridor Plan

- River Corridor Protection
- Conservation/Recreation Costs
- Recreation Analysis
- Fish and Wildlife Impact
- Social and Cultural Impact
- Environmental Quality Objective
- National Economic Development Objective

Maximum Protection Plan

- River Corridor Protection
- Conservation/Recreation Costs
- Recreation Analysis
- Fish and Wildlife Impacts
- Social and Cultural Impacts
- Environmental Quality Objective
- National Economic Development Objective

Economic Development Plan

- River Corridor Protection Plan
- Conservation/Recreation Costs
- Recreation Analysis
- Fish and Wildlife Impacts
- Social and Cultural Impacts
- Environmental Quality Objective
- National Economic Development Objective

Management Options

- State Management
- Joint State - Federal Management
- Federal Management

Introduction

This study was prepared in accordance with Water Resources Council's "Principles and Standards for Planning Water and Related Land Resources", dated October 25, 1973. Specific guidelines for implementing the Principles and Standards for Wild and Scenic River Studies conducted by the Bureau of Outdoor Recreation were revised in June 1976.

The Principles and Standards provide improved planning criteria to achieve the goal of wise use of the Nation's water and related land resources giving full consideration to the protection and enhancement of environmental values. They place environmental concerns on a basis equal to economic development, and allow decisionmakers to identify and evaluate tradeoffs between the national economic development and environmental quality objectives. They can be used to determine alternative solutions that make best use of the resource.

Three alternative plans for the Pine Creek area have been developed and analyzed. Each plan has a summary and is compared to the "Existing Trends" plan which reflects a continuation of existing environmental, economic, and social trends.

Information was provided by Federal, State, and local agencies, organizations and individuals, as well as through public meetings and field inspections. Examination of current laws, other plans, regulations, and policies regarding resource use supplemented these sources. A case study approach was taken in those instances where precise data were unavailable (see Appendix 2).

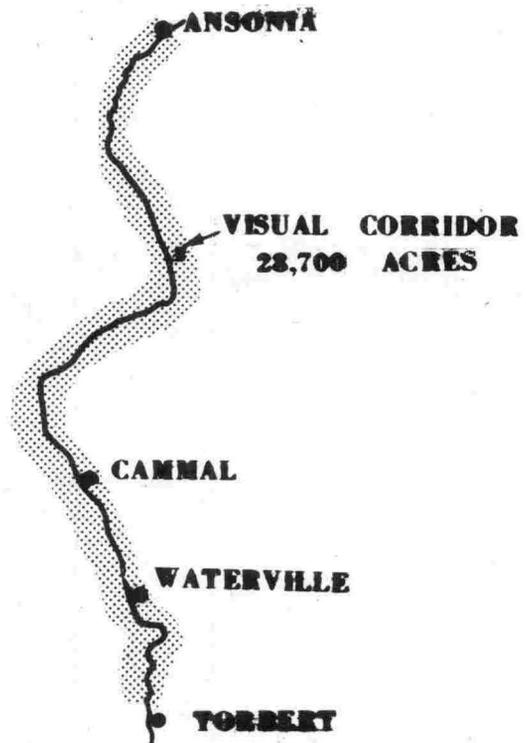


Pine Creek at Camma1

SUMMARY OF ALTERNATIVES

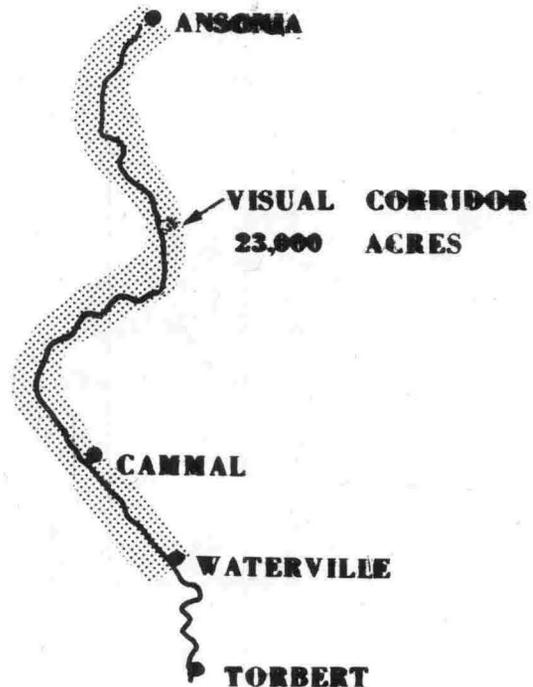
EXISTING TRENDS PLAN

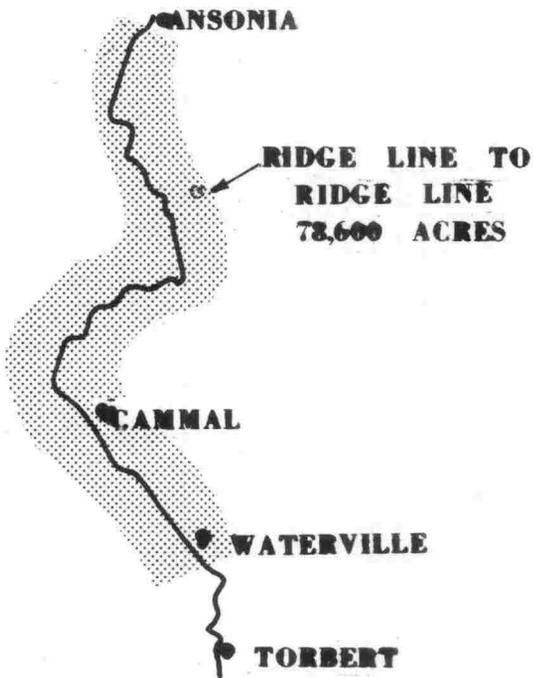
This alternative is a projection of existing trends to characterize the future conditions expected to occur in the study area without a formal management plan. While it is true that Pine Creek presently has no official scenic river management plan, there are other significant resource management plans affecting the study area. Currently, the Pennsylvania Department of Environmental Resources maintains and will expand their forest and park land programs along Pine Creek and the Pennsylvania Game Commission's game management program. Pine Creek is expected to become a component of the Pennsylvania Scenic Rivers System.



VISUAL CORRIDOR PLAN

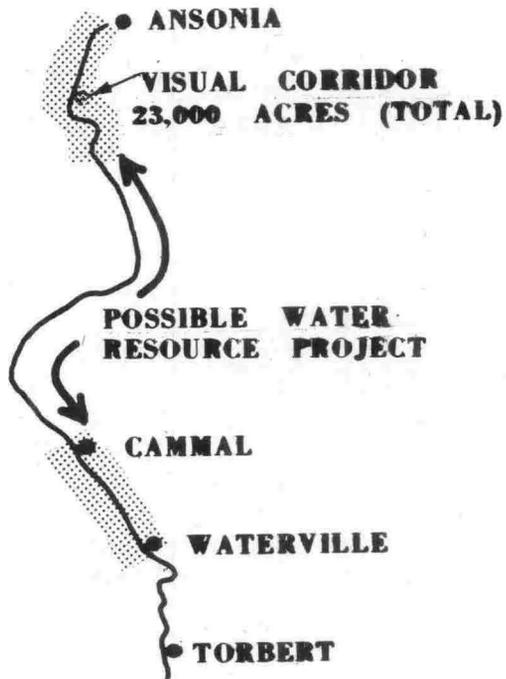
This alternative calls for the establishment of Pine Creek as a State scenic river, ultimately to be added to the National System. It involves a plan of protection and use for the visual corridor from Ansonia to Waterville.





MAXIMUM ENVIRONMENTAL PROTECTION PLAN

This plan calls for the maximum feasible environmental protection for Pine Creek and its immediate environment. Management considerations would be more protective of the natural resources than the Visual Corridor Plan, and would provide for a more stabilized use of the resource values of the Pine Creek area.



ECONOMIC DEVELOPMENT PLAN

This plan is an estimate of optimum feasible economic development for Pine Creek and its immediate environment. A more intense use of the natural resources would be anticipated, i.e., a hydro-power project, increased timber harvesting, promotion of tourism, or development of industry.

EXISTING TRENDS PLAN

The Existing Trends Plan would have the same considerations and effects as the Visual Corridor Plan, but would apply to 52 miles of Pine Creek. The numbered items which follow correspond to those in the Principles and Standards Display Accounts in Appendix 2.

River Corridor Protection

1. Total Protected River Miles: Scenic Free-Flowing - 52 miles of Pine Creek and its immediate environment with its scenic values would be protected. This segment from Ansonia, Pennsylvania downstream to the gap at Short Mountain near Torbert would be designated as a state-administered component of the Pennsylvania Scenic River System, first, and the National Wild and Scenic Rivers System, second. The Commonwealth has classified this segment of Pine Creek as a Conservation "B" stream to be kept in relatively primitive condition.
2. Total Land Acreage Protected - 28,700 acres of Pine Creek's visual corridor would be protected. This includes the area which is in the line of sight from the creek to the top of the slope of the far shore. The Pennsylvania Department of Environmental Resources, (DER), with local assistance, is currently drafting a Pine Creek Scenic River Management Plan.
3. Existing Public Lands - 18,200 acres or 63% of the river corridor is under public ownership through the Pennsylvania DER forest and park lands programs and the Pennsylvania Game Commission's game management program.
4. Fee Acquisition - 500 acres within the gorge, mainly at Tiadaghton, would be acquired in fee on a willing-seller, willing-buyer basis. The Pennsylvania DER, through the State Forest Lands System program, has been engaged in an active land acquisition program in Pine Creek since the early 1960's. The Pennsylvania DER has made it known to the local people of their intent to acquire the remaining acreage in the Pine Creek Gorge. Any other land in the visual corridor would also be acquired on a willing-seller, willing-buyer basis. DER can receive donations and make property exchanges under the State Act 275, Section 1902-A; Forest Powers and Duties.
5. Conservation Zoning - 10,000 acres or 35% of the visual corridor would be protected through local zoning. The eight townships along Pine Creek have the authority to develop and administer zoning guidelines. Local land control measures would include flood plain zoning, building code standards, plant siting regulations, utility rights-of-way, and water and sewer line permits. Conservation zoning benefits the individual's health, safety, and welfare. Developable land for buildings and structures are identified as well as lands for open space and recreation uses.

An overall goal of local zoning (land use) would be to assure (1) protection of the existing environmental values in the visual corridor, and (2) that allowable development within the corridor be compatible with State and Federal designation of the stream as a scenic river and, at the same time, consider real growth needs of the communities in the visual corridor. The DER states in this policy statement that land use controls by local government are encouraged.

6. Land Ownership Patterns: % Public - 63% of the river corridor would be under public ownership. It is significant to note, that this is only a 2% increase above the existing public ownership pattern. This is because the DER would be relying on and encouraging local land use regulations of privately owned lands within the river corridor.
7. Flood Plain Protected - 2200 acres of land along Pine Creek would be considered flood plain. The riverfront communities have signed up for flood plain insurance. At present, these communities are developing flood plain zoning as required under the Federal Flood Plains Insurance Program. Flood damage is significant in the Pine Creek bottom lands since these plains, being the only flat areas in places, attract second home and residential development along a scenic river. Flood plains are generally unsuitable for extensive building development because problems may arise from soil erosion, sewage disposal, lack of facilities, etc. Flood plain zoning prevents development of those areas which cannot be safely developed.

Conservation/Recreation Costs (1978 \$)

8. Capital Expenditures (Total \$) - \$457,000 would be the total capital expenditures under this plan. Funds would be appropriated under the Bureau of Forestry.
9. Land Acquisition - \$180,000 would be the cost to acquire the 500 acres of land in the gorge. DER, while actually acquiring land in Pine Creek Gorge during the early 1960's, has actually been securing property since 1901. The intent has been to protect a most outstandingly remarkable natural area of Pennsylvania between Ansonia and Blackwell popularly known as the "Grand Canyon of Pennsylvania". Acquisition and protection of this 17 mile river corridor was recently accelerated with the establishment of the area as a Registered National Natural Landmark in 1969 and as a State Natural Area in 1970. Any further expenditures for land acquisition would occur between Blackwell and Short Mountain on a willing-seller, willing-buyer basis.

10. Seasonal Dwellings Acquisition: Numbers/Dollars - 10 seasonal dwellings, hunting and fishing camps and second homes would be purchased by DER for \$120,000, if the owners are willing to sell. Only full time residents are eligible for any relocation costs, therefore, relocation costs are not a part of this capital expenditure.
11. Recreation Development - \$157,000 is the cost estimate for the development of 8 public recreation facility sites along the river. These facilities would be designed to accomodate boaters, fishermen, and hikers.
12. Annual Operation and Maintenance - \$23,000 would be the cost of operating and maintaining the 8 recreation facility sites along 52 miles of Pine Creek. The Pennsylvania DER's Bureau of Forestry would operate and maintain these sites. Duties include garbage pick-up, pumping out latrines, road maintenance, painting, and general repairs.
13. Annual County Real Estate Tax Foregone - \$175 would be the annual county real estate tax foregone due to the currently planned acquisition of 500 acres of land at Tiadaghton in Tioga County. The Land Records Section of DER did a 1972 study, part of which determined an annual average tax rate for unimproved or unseated mountain land, like that in the Pine Creek Gorge. The annual average tax rate for Tioga County is \$.55 per acre. By Commonwealth law, in lieu of taxes payment is made for land converted from private to public ownership of \$.20 per acre. Therefore, in calculating actual tax foregone, there is an actual loss of \$.35 per acre for 500 acres or \$175.
14. Commercial Timber Value Foregone - The dollar value of timber would not be foregone as a result of this plan. The Bureau of Forestry has commercial and non-commercial classifications for the public's forests. In the river corridor 25% of the total area is classified as commercial, and 75% is classified as non-commercial. The Bureau of Forestry would practice timber harvesting on the public lands with strict environmental controls. Much of the terrain is too steep (25% or greater) to allow economic harvesting of the timber. Selective cutting would be practiced in buffer zones along streams and roads and in those areas of commercial forest designated as sensitive areas due to aesthetic considerations. Limited clearcutting would be permitted in the commercial forest zone, primarily for wildlife purposes.

Recreation Analysis

15. 1980 Annual Number of Floaters/% Increased Over Existing Use - 10,000 floaters are expected to canoe, raft, or kayak the 52-mile segment of Pine Creek in 1980. This is a 25% increase over the 8000 floaters in 1975. User surveys and commercial outfitters' records recognize the growth of this water sport on Pine Creek: 300-400 floaters in 1960, 3000-4000 floaters in 1964, 6000-8000 floaters in 1974 and 1975. Adequate flows for floating usually begin in late March and run as late as early June. Twelve weeks of float trips is considered good. Weekends are the peak periods. In 1974, a Pennsylvania State University student observed 300 float trips or nearly 1000 people on one weekend. With the increasing popularity of white water canoeing and rafting, more use has been observed during the weekdays.

16. 1980 Number of Recreators - 415,000 recreators would be visiting Pine Creek in 1980 for outdoor recreation purposes. The Bureau of State Parks has recorded the attendance at the state parks along Pine Creek. Two, Leonard Harrison and Colton Point, are within the river corridor and one, Little Pine, is adjacent to it. The 1975 total attendance for these three parks was 377,000 recreators who spend their time sightseeing, camping, hiking, picnicking, fishing, and canoeing or rafting. The Bureau of State Parks estimate a 10% increase in attendance by 1980. High intensity use occurs for floaters on weekends, for fishermen on the opening day of the seasons, weekends, and on the days the trout are stocked, for hunters on opening days of big game seasons, and for campers and sightseers on major holidays and the colorful times of the fall.

17. 1990 Number of Recreators - 457,000 recreators would be visiting the Pine Creek area in 1990. The Bureau of State Parks estimate a 10% increase in use between 1980 and 1990. A more stabilizing effort on visitation would occur as more urban parks near large population centers are developed in the next decade.

18. 1980 Recreator Expenditure - \$4,980,000 would be the recreation expenditure of the 415,000 recreators in the Pine Creek area. A 1973 U.S. Travel Data Center, National Travel Expenditure Study found an \$18 per person day expenditure in Pennsylvania. However, due to the limited number of places that a recreator could spend money, it is estimated that \$12 per day expenditure is more realistic. Generally, lodging, food and gas are leading expenses.

19. 1990 Recreator Expenditure - \$5,484,000 would be the estimated recreation expenditure of the 457,000 recreators in the Pine Creek area.

20. 1980/1990 Recreation Jobs - 150 and 200 recreation related jobs would occur in 1980 and 1990 respectively under existing trends. At present, 100 recreation related jobs exist in the Pine Creek area. These jobs are found in restaurants, service stations, general stores, state parks, private outfitters and other services.
21. Number of Public Recreation Facility Sites - 8 public recreation sites would occur under this plan. (See Map, p. vii). These sites serve as access and egress to Pine Creek with limited primitive overnight camping for the floaters, fishermen, and backpackers. These sites are considered adequate to handle weekend day users and a lesser number of primitive overnight campers.

Fish and Wildlife Impacts

22. Productivity of Fishery - Highly Protective. Currently, DER has established water quality standards for the protection of present and future water uses. The water quality is in good to excellent condition. Pine Creek from Ansonia to its mouth at Jersey Shore has been designated by the Commonwealth as Conservation Area "B". Such an area is described as "water used within an area now or in the future to be kept in a relatively primitive condition and suitable for warm water fishes and trout stocking". Pine Creek does receive some inadequately treated sewage limited industrial uses, and intermittent acid mine drainage. The overall water quality is good enough to offset these conditions and still maintain a productive fishery.
23. Productivity of Wildlife - Highly Protective. The rugged terrain does provide natural protection of the wildlife in the river corridor, even for deep-woods species such as black bears. The more rugged, steep sloped, valley between Ansonia and Blackwell offers protection to certain species requiring the near absence of man. The fisher, martin, cougar, coyote, and other species could possibly return to this area, as they are doing in other wild areas of the East. Below Blackwell there is more of a diversity of habitat and a wider flood plain with food-bearing plants and more deer, raccoon, rabbit, woodchuck and other mammals are found. Mink, beaver, fox, bobcat, bear, and the snowshoe hare are rare but present. The Pine Creek Valley does offer protection and suitable habitat for eagles and osprey which have already come back into the area. The Pennsylvania Game Commission and the Bureau of Forestry would continue to manage the public game lands for wildlife productivity.

Social and Cultural Impacts

24. Scenic Values - Highly Protective. Evidence by past and present actions by DER to acquire lands in the upper segment of Pine Creek known as the "Grand Canyon of Pennsylvania" and with the establishment of this area as a Registered National Natural Landmark in 1969, and as a State Natural Area in 1970, the protection of the scenic value is assured. Also, the scenic value is further enhanced in the river corridor below

Blackwell with the designation of two state wild areas and another state natural area. Pine Creek has been chosen as one of the three initial streams in the Commonwealth for possible inclusion in the Pennsylvania Wild and Scenic Rivers System. With all of these programs of protection for Pine Creek and its environment, the people, by continuing to voice their feelings for preserving the area in its present rustic, rural and scenic state, would maintain their strong voice in the development of any management programs or river designations.

25. Diversity of Recreation - No Significant Effect. There would be no increase or decrease in the diversity of recreation under existing trends. There would be influences on regulating these activities so as not to take away from the interest of the State and Federal scenic river programs to maintain the scenic and cultural values. A significant success of this plan would be to keep the basic lifestyle in Pine Creek unchanged with perhaps an opportunity for local residents to have a very real part in the management of the area for the protection of the resource, their lifestyle, and for outdoor recreation that is becoming increasingly more important to their economy. Hunting and fishing seasons could bring thousands of people to the area. The State parks alone had 377,000 recreators in 1975 who contributed to the economy of the area as a result of the diversity of recreation in the area. Existing trends indicate a significant increase in visitors in years to come.

The impacts listed above can be summarized as follows under the two major objectives of the Principles and Standards.

Environmental Quality Objective

Under this objective the overall effects of the river would be favorable. Currently, DER maintains and will expand their forest and park land programs along Pine Creek, and the Game Commission, the game management program. Pine Creek is expected to become a component of the Pennsylvania Wild and Scenic Rivers System.

National Economic Development Objective - Also under existing trends, the overall effects of this plan with regards to the National Economic Development Objective would be insignificant. Measurable land and water resource developments resulting in a significant increase in the protection of goods and services to the user would not occur. The existing recreation expenditure for visitors of Pine Creek is \$6,786,000. The combined travelers expenditure for visitors of Tioga and Lycoming Counties is \$28,800,000. Recreators to Pine Creek expend 24% of the travel money for both counties for hotels, motels, inns, restaurants and other food services, auto garages and gas stations, recreational and tourist attractions, retail tax and commercial services, and other businesses. The \$28,800,000 travel expenditure, however, is 43% of the total travel economic impact for both counties of \$67,900,000. The total economic impact of the travel-related industry for the two county area is a measure of local, state, and federal taxes, personal income and payroll, purchases from supplies

and industry, and business services (power, fuel, etc.). The combined Tioga and Lycoming counties total travel-related economic impact is a .0329% share of the United States Travel Business in 1972. Therefore, the effects of its Existing Trends Plan on the National Economic Development Objective is insignificant. Primary economic benefits would be local, with the region having secondary benefits.



The Gorge in Winter

VISUAL CORRIDOR PLAN

The Visual Corridor Plan would have the same considerations and effects as the Existing Trends Plan, but would apply to 46 miles of Pine Creek as authorized by the National Wild and Scenic Rivers Act.

River Corridor Protection

1. Total Protected River Miles: Scenic Free-Flowing - 46 miles of Pine Creek and its immediate environment with its scenic values would be protected. This segment from Ansonia, Pennsylvania to the downstream end of English Island near Waterville, Pennsylvania would be designated as a State-administered component for the Pennsylvania Scenic Rivers System and the National Wild and Scenic Rivers System. This segment is 6 miles less than the Existing Trends Plan, the other scenic river option.
2. Total Land Acreage Protected - 23,000 acres of Pine Creek's immediate river environment would be protected. This area, like the Existing Trends Plan, would be the river corridor, but only to Waterville where this plan ends.
3. Existing Public Lands - 15,200 acres or 66% of the river corridor is under public ownership through the Pennsylvania Department of Environmental Resources' forest and parkland programs and the Pennsylvania Game Commission's game management program.
4. Fee Acquisition - 500 acres of land within the visual corridor at Tiadaghton would be acquired in fee.
5. Conservation Zoning - 7,300 acres or 32% of the river corridor would be protected through local zoning. Pennsylvania DER would encourage local government to enact zoning regulations in order to protect scenic values along Pine Creek.
6. Land Ownership Patterns: % Public - 68% of the river corridor would be under public ownership. This would be a 2% increase over existing public ownership in the visual corridor.
7. Flood Plain Protected - 1800 acres of land along Pine Creek would be considered as flood plain, and would be managed for conservation purposes.

Conservation/Recreation Costs (1978 \$)

8. Capital Expenditures (Total \$) - \$417,700 would be the total capital expenditure under the Visual Corridor Plan. The breakdown of this cost is as follows:
9. Land Acquisition - \$180,000 would be the cost of acquiring 500 acres of land at the gorge. There is no other land acquisition planned. This acquisition would complete the DER's program to protect the "Grand Canyon of Pennsylvania".
10. Seasonal Dwellings Acquisition: Numbers/Dollars - 10 seasonal dwellings, hunting and fishing camps and second homes, would be purchased by DER for \$120,000. No relocation costs are expected.
11. Recreation Development - \$117,700 would be the cost to develop 6 public recreation facilities sites along Pine Creek from Ansonia to Waterville.
12. Annual Operation and Maintenance - \$17,200 would be the cost of operating and maintaining the six recreation facility sites along the 46 miles of Pine Creek. The Bureau of Forestry would be primarily responsible to operate and maintain these sites. The Game Commission and Fish Commission would assist in enforcement of rules and regulations of these sites.
13. Annual County Real Estate Tax Foregone - \$175 would be the annual county real estate tax to be foregone as a result of the transfer of 500 acres of private land into public ownership states at Tiadaghton in Tioga County.
14. Commercial Timber Value Foregone - No timber harvesting dollars would be foregone as a result of this plan. Timbering on public lands would be managed under strict environmental controls so as not to destroy the outstanding scenic values of the Pine Creek river corridor.

Recreation Analysis

15. 1980 Annual Number of Floaters/% Increase Over Existing Use - 10,000 recreators would float the 46 mile segment in 1980. This is a 25% increase over 8000 floaters in 1975.
16. 1980 Number of Recreators - 415,000 people would be visiting Pine Creek in 1980 for outdoor recreation purposes. The Bureau of State Parks projects this five year increase over the 1975 visitation of 377,000 people at these state parks in the Pine Creek area.

17. 1990 Number of Recreators - 457,000 people would be visiting Pine Creek in 1990 for outdoor recreation purposes. The Bureau of State Parks projects a 10% increase in recreators in the ten years between 1980 to 1990.
18. 1980 Recreator Expenditure - \$4,980,000 would be recreator expenditure of the 415,000 recreators visiting Pine Creek in 1980.
19. 1990 Recreator Expenditure - \$5,484,000 would be the estimated recreation expenditure of the 457,000 recreators visiting Pine Creek in 1990.
20. 1980/1990 Recreation Jobs - 150 and 200 recreation related jobs would occur in 1980 and 1990 respectively.
21. Number of Public Recreation Facility Sites - 6 public recreation facility sites would be needed in this plan. These sites would be developed on riverfront lands already owned by the DER.

Fish and Wildlife Impacts

22. Productivity of Fishery - Highly Protective. The Fish Commission would be responsible for maintaining and enhancing fish habitat and stocking programs, while water quality would be the responsibility of the Department of Environmental Resources.
23. Productivity of Wildlife - Highly Protective. A wide range of habitats in the Pine Creek area provide for an abundance of wildlife. With public ownership of 68% of the river corridor, the Game Commission and the DER would continue to provide effective wildlife conservation.

Social and Cultural Impacts

24. Scenic Values - Highly Protective. Existing DER programs would continue to provide protection of the outstanding natural features in the interest of all the citizens of the Pine Creek area as well as the Commonwealth. It is the objective of the DER to protect the unique, natural, pristine and scenic values of Pine Creek.
25. Diversity of Recreation - No Significant Effect. Although the type of outdoor recreation activities would not change from existing opportunities, the regulation of these activities would be better enforced for the enhancement of safety, health and welfare of both residents and the visiting recreators.

The impacts listed above can be summarized as follows under the two major objectives of the Principles and Standards.

Environmental Quality Objective

Under the Visual Corridor Plan the effects on the environmental quality objective are the same in policy as the Existing Trends Plan. The difference is only in the quantity of land and water resource protection and not the quality. Table 2 on page 43 is a summary comparison the few differences that exist. This plan, like the Existing Trends Plan, would provide for the management, preservation, and enhancement of the outstanding land and water resources of Pine Creek, and would assure the present and future rights of and freedoms of all residents and property owners. The social well-being of the residents would be maintained by preserving the Pine Creek visual corridor in its present rustic, rural and scenic condition, and to have the residents maintain a strong voice in the development of any management programs.

National Economic Development Objective

The effects of the Visual Corridor Plan with regard to the National Economic Development Objective would, like the Existing Trends Plan, be insignificant. The difference between these two plans regarding conservation/recreation costs and recreator expenditures is negligible. The economic benefit would be primarily local with the regional economy having a minimal benefit.



Narrow Valley of Pine Creek below Blackwell

MAXIMUM ENVIRONMENTAL PROTECTION PLAN

The Maximum Environmental Protection Plan provides for maximum feasible protection.

River Corridor Protection

1. Total Protected River Miles: Scenic Free-Flowing - 46 miles of Pine Creek and its immediate environment plus selected buffer area along the ridges with its scenic values would be given maximum environmental protection. This segment, like the Visual Corridor Plan, would be from Ansonia to Waterville, Pennsylvania. Pine Creek would be designated as a State-administered component of the Pennsylvania Wild and Scenic Rivers System.
2. Total Land Acreage Protected - 78,600 acres of Pine Creek's river corridor and additional buffer acreage for maximum protection of that river corridor would be the expense of this plan. The outer boundaries would be along a general topographic "ridge" line.
3. Existing Public Lands - 63,800 acres or 80% of this total acreage is under public ownership through the DER's forest and parkland programs and the Game Commissions's game management program.
4. Fee Acquisition - 4,000 acres of land would need to be acquired to make this plan effective. These lands would include the river front, and the moderately sloped areas that are in the most danger of being developed.
5. Conservation Zoning - 10,800 acres or 14% of the area would be zoned for protection by local authorities, i.e., townships. Steep sloped areas, relatively inaccessible and not in danger of being developed would be areas where conservation zoning would be effective and not necessarily subjected to the usual political or economic pressure to obtain variances. A large acquisition program would not be acceptable by the Commonwealth, local governments, and citizens.
6. Land Ownership Pattern: % Public - 67,800 acres or 86% of the ridge to ridge boundary would be under public ownership. Public ownership would then increase only in cases where local zoning efforts were not acceptable and the steep sloped areas were in danger of development.
7. Flood Plain Protected - 1800 acres of land along Pine Creek would be considered flood plain and subject to strict flood plain zoning. Present efforts by townships to obtain flood plain insurance and zoning would be accelerated. While this would provide insurance to the resident in the flood plain, flooding will not be prevented. Therefore, homes in the flood plain would become a high priority acquisition on a willing-seller, willing-buyer basis.

Conservation/Recreation Costs (1978 \$)

8. Capital Expenditures (Total \$) - \$3,165,300 would be the total capital expenditures under this plan. 95% of this cost is land acquisition for maximum environmental protection through effective ongoing public environmental programs.
9. Land Acquisition - \$2,997,600 would be the cost to acquire the 4,000 acres of land in the ridge to ridge boundary. Only vacant lands subject to development other than agricultural uses would be acquired. Residents would not be asked to relocate and would remain.
10. Seasonal Dwellings Acquisition: Numbers/Dollars - 10 seasonal dwellings, hunting and fishing camps and second homes would be put into public ownership at a cost of \$120,000. No relocation of residents would be expected.
11. Recreation Development - \$47,700 would be the development cost of 3 public recreation facility sites. These sites would be located at Ansonia, Blackwell, and Waterville. Facilities would include river access and egress, parking facilities, comfort stations, water, trash reception, service roads, primitive boater camping, and fire rings. The plan is to channel recreators to areas already moderately developed. The recreator would be educated to "visit" the resource and only remain at designated areas that are managed by officials.
12. Annual Operation and Maintenance - \$5,400 would be the cost to operate and maintain the 3 public recreation facility sites along the 46 miles of Pine Creek.
13. Annual County Real Estate Tax Foregone - \$440 would be the annual county real estate tax foregone.
14. Commercial Timber Foregone - \$862,500 would be the value of commercial timber foregone under this plan. Maximum protection of the river and its immediate environment means that 5,750 acres of commercial timber in the visual corridor would not be harvested. Beyond the visual corridor and up to the ridges, timber harvesting under strict environmental regulations would be permitted.

Recreation Analysis

15. 1980 Annual Number of Floaters/% Increase Over Existing Use - 8000 recreators would float Pine Creek in 1980. Under this plan, existing use of the river would be maintained for maximum protection of the resource.

16. 1980 Number of Recreators - 377,000 recreators would be permitted to visit Pine Creek in 1980 for outdoor recreation purposes. The policy of existing use to be maintained would be enforced.
17. 1990 Number of Recreators - 377,000 recreators would be permitted to visit Pine Creek in 1990. Under the existing use policy, greater attention would be placed on the enforcement of the high environmental quality standards, as pressure to develop the area would increase.
18. 1980 Recreator Expenditure - \$4,524,000 would be the recreation expenditure of the 377,000 recreators permitted in the Pine Creek area.
19. 1990 Recreator Expenditure - \$4,524,000 would be the recreation expenditure of the 377,000 recreators permitted in the Pine Creek area.
20. 1980/1990 Recreation Jobs - 100 recreation related jobs would occur in 1980 and 1990. This is the existing estimated employment under existing conditions.
21. Number of Public Recreation Facility Sites - 3 public recreation facility sites would occur under this plan. No new developments would be planned. The facilities include river access and egress, water, primitive camping, fire rings, parking, trash reception, and a comfort station.

Fish and Wildlife Impacts

22. Productivity of Fishery - Highly Protective. The cold water and warm water fisheries would be maintained. Enhancement of the water quality through continued enforcement of water quality standards would significantly improve the productivity of native trout and natural producing warm water species. Fishing would continue.
23. Productivity of Wildlife - Highly Protective. The variety of habitat throughout the ridge to ridge boundary is excellent for supporting an abundance of wildlife. Hunting would not be recommended in the visual corridor part of this area, but would be under regular state game laws between the visual corridor and the ridges. Hunting is necessary to healthy productive game animals and birds.

Social and Cultural Impacts

24. Scenic Values - Highly Protective. The area currently exhibits outstanding scenic qualities which would be protected under this plan.

25. Diversity of Recreation - No Significant Effect. There would be no change in the variety of recreation activities. The intensity of use would be maintained. Strict enforcement of environmental quality standards would require increased management of recreation programs.

The impacts listed above can be summarized as follows under the two major objectives of the Principles and Standards.

Environmental Quality Objective

Under the Maximum Environmental Protection Plan resource preservation is the dominant objective. Actions would consider the fullest possible preservation of the land and water resources from the river to the first general line of ridges beyond the rim of the corridor. Within the ridge to ridge boundary, the Commonwealth presently manages 63,800 acres of land or 80% of the total land acreage recommended for protection under this plan. Partially included are two wild areas, Algerine and Wolf Run, and two natural areas, Pine Creek and Miller Run. Of the 13,400 acres within the ridge to ridge boundary, 4300 acres are managed under a Wild Area Policy.

National Economic Development Objective - Under the Maximum Environmental Protection Plan the local and regional economic and development trends would be stabilized. Travel and tourism programs and developments would not be encouraged to expand beyond existing conditions. There would be no need to increase goods and services as the 1980 and 1990 projected number of recreators would be the same.



Mixed Forest Along the Lower Stretch

ECONOMIC DEVELOPMENT PLAN

The Economic Development Plan provides for maximum feasible economic development for Pine Creek and its immediate environment.

River Corridor Protection Plan

1. Total Protected River Miles: Scenic Free-Flowing - 23 miles of Pine Creek and its immediate environment with its scenic values would be protected. The U.S. Army Corps of Engineers had considered and evaluated a multiple purpose demand lake site at Cammal, within the study segment of Pine Creek*. However, at the request of the Commonwealth of Pennsylvania, the Baltimore District is no longer considering the Cammal Lake Project. Under Principles and Standards, this plan must estimate optimum feasible economic development within the constraints of the resource. Therefore, for the 46 mile segment of Pine Creek, there is to be considered a lake near the community of Cammal that would transfer 23 miles or 50% of the free-flowing stream to flat water status. Free-flowing status would be maintained for 12 miles from Ansonia to an area around Pine Island Run which is below Tiadaghton, and for 11 miles from the spillway of the dam located 1 mile northwest of Cammal to the downstream end of English Island near Waterville.
2. Total Land Acreage Protected - 23,000 acres of Pine Creek's immediate river environment would be protected. This includes the area identified as the river corridor.
3. Existing Public Lands - 15,200 acres or 68% of the river corridor is owned under the DER's forest and park land programs and the Game Commission's game management program.
4. Fee Acquisition - 3,400 acres would be acquired in fee. Envision that the total Cammal site would encompass 10,000 acres of land along an 85 mile shoreline occurring at maximum flood pool conditions. 6600 acres of the 10,000 acres is in public ownership.
5. Conservation Zoning - 1900 acres in private ownership would be zoned by townships for a balanced land development between protection of the resource and utilization for the tourism economy.
6. Land Ownership Pattern: % Public - 18,600 acres or 81% of the river corridor would be under public ownership.
7. Flood Plain Protection - 340 acres of land along Pine Creek would be considered flood plain.

*The U.S. Army Corps of Engineers figures for the Cammal site are preliminary and therefore subject to revision.

Conservation/Recreation Costs (1978 \$)

8. Capital Expenditures (Total \$) - \$7,296,500 would be the total capital expenditures under this plan. The breakdown of the cost is as follows.
9. Land Acquisition - \$1,010,100 would be the cost to acquire the 3,400 acres of land needed to complete public ownership of the Cammal sites.
10. Seasonal Dwellings Acquisition: Number/Dollars - 215 dwellings, not seasonal dwellings, would be purchased and the residents would be relocated at a cost of \$5,155,800. Blackwell, Cedar Run, Cedar Pines, Hillborn, Slate Run, and Ross Siding are the six communities to be relocated as they are in conflict with Cammal Lake. Costs are not available for the relocation of 23 miles of railroad and 17 miles of highway that would be inundated by the Cammal Lake.
11. Recreation Development - \$1,130,500 would be the cost of developing 6 public recreation facility sites on the river and in the lake. The 4 river sites would be located at Ansonia, Tiadaghton, Blackwell, and Waterville. Facilities would include river access and egress points, parking, primitive camping for boaters, comfort stations, service roads, fire rings, trash reception, and water. The two lake sites would include beach area, camping, picnic areas and a launch ramp. Future facilities would include primitive areas and nature trails.
12. Annual Operation and Maintenance - \$48,100 would be the annual operation and maintenance costs for maintaining the six recreation facility sites. The DER through the Bureau of Forestry would manage the 4 river sites. The U.S. Army Corps of Engineers would manage the 2 lake sites.
13. Annual County Real Estate Tax Foregone - \$950 would be the annual county real estate tax foregone under this plan. The U.S. Army Corps of Engineers would acquire the land in fee. Because the Federal land acquisition policy does not offer an in lieu of taxes benefit like the Commonwealth, there is no supplemental relief in taxes foregone.
14. Commercial Timber Foregone - Timber harvesting would be encouraged under this plan and therefore there is no dollar value foregone. The local economy would benefit from increased employment and the harvesting of a renewable resource.

Recreation Analysis

15. 1980 Annual Number of Floaters/% Increase Over Existing Use - 21,000 recreators, a 103% increase over existing use, would float the two free-flowing sections of Pine Creek. Although the upper segment of free-flowing water would be subject to the natural flows during the spring time or after heavy rains, the lower segment below the lake could be managed for regular releases during the summer and fall, thus increasing the use for floaters.
16. 1980 Number of Recreators - 528,000 recreators would be visiting Pine Creek in 1980 for a variety of outdoor recreation purposes. Tourism would be promoted. State park visitors, public use at Cammal Reservoir, and spillover from the Tioga-Hammond Lakes are significant factors. Tioga-Hammond Lakes is a Corps of Engineers flood control and recreation project. The project includes 7,700 acres and has two lakes. Tioga Lake has 570 surface acres. Hammond Lake has 640 surface areas. This compares to the Cammal Lake surface acreage for the recreation pool of 4,613 acres. Total visitation at this site for 1982 is 447,000 and for 2032 the figure is 677,000. The presence of the "Grand Canyon of Pennsylvania" within one hour's driving distance of the Tioga-Hammond site will undoubtedly have a "spillover" effect.
17. 1990 Number of Recreators - 2,195,000 recreators would be visiting the Pine Creek area in 1990 under this plan. A comparison may be drawn with the nationally known "Poconos" area in Pennsylvania about 100 miles to the east. This area was once like the Pine Creek area. Here, the natural resource capability was utilized to promote for recreation and tourism. In 1974, recreation and tourism in the Pocono area attracted 9.3 million visitors.
18. 1980 Recreator Expenditure - \$9,500,000 would be the recreation expenditure of the 528,000 visitors. A 1973 U.S. Travel Data Center National Expenditure Study found an \$18.00 per person day expenditure in Pennsylvania. A greater emphasis would be placed on extending the length of stay to more than one day and one night.
19. 1990 Recreator Expenditure - \$39,500,000 would be the estimated recreation expenditure of the 2,195,000 recreators in the Pine Creek area. Under this plan, there is the greatest potential to develop a program to assist local interests in an orderly growth of the area and achieve maximum economic benefits. For comparison purposes, visitors of all types of facilities were estimated to spend \$201.5 million during their stay in 1974. This region includes 4 counties. It is significant to note that tourists in Tioga and Lycoming Counties have similar expenditures in order of where the dollars are spent: hotels, motels, and inns are first, restaurants and other food services second, auto garages and gas stations third, recreational and tourism attractions fourth, retail stores and commercial services fifth, and other business services sixth.

20. 1980/1990 Recreation Jobs - 175 and 200 recreation related jobs would occur in 1980 and 1990 respectively under this plan. If tourism is promoted, most jobs would be found in lodging, food and auto services.
21. Number of Public Recreation Facility Sites - 6 public recreation facility sites would occur under this plan. These include 4 river sites and 2 lake sites. The 4 river sites would be for access and egress to the stream with overnight camping facilities. The 2 lake sites would be for high intensity day and overnight use with a beach area, a camping area, two picnic areas, and a launch ramp. Development of additional facilities would increase to meet demands.

Fish and Wildlife Impacts

22. Productivity of Fishery - Moderately Protective. Fishery resources within Pine Creek and its tributaries are good. A popular coldwater fishery includes rainbow, brook, and brown trout. The warmwater sport fishery includes smallmouth bass, walleye, and catfish. The disruption of the stream during the construction of the dam structure would alter the natural flow conditions and destroy fishery habitat. The inundation of 23 miles of Pine Creek would forever destroy this stretch of coldwater fishery. Extreme drawdowns would harm the fishery population upstream as well as the intense flow into the stream downstream. The Fish Commission would implement a fishery management plan to create and maintain a lake and stream fishery habitats that are ecologically desirable. Optimum fishing opportunities would be a high priority for residents and visitors alike. The Fish Commission reports that fishing is very popular on Pine Creek. Total fishing license in Tioga and Lycoming County exceed 23,000 annually in recent years.
23. Productivity of Wildlife - Moderately Adverse. The hardwood and conifer forests, vegetated flood plains and lowlands support a variety of habitat benefitting an abundance of wildlife. Significant is the rugged terrain which provides an ideal natural protective habitat. The development of a lake would inundate 23 miles of wildlife habitat and force the species to beyond the protection of the corridor. Less common species such as mink, beaver, red fox, grey fox, black bear, bobcat, and snowshoe hare would become less protected. These and other wildlife species would find their habitat in competition with the development of second homes and residential developments. A wildlife management plan would be implemented to maintain and enhance an ecologically balanced, natural environment, highly productive for wildlife and to maintain hunting opportunities for residents and visitors. 35,000 hunting licenses are sold annually in Tioga and Lycoming Counties.

Social and Cultural Impacts

24. Scenic Values - Moderately Adverse. The river corridor is of high scenic value, displaying a free flowing stream enclosed in impressive high walls and steep forested slopes which occasionally extend 1,200 feet from the valley floor. Scenic features are considered outstanding when compared to other Pennsylvania rivers and the eastern United States. A significant loss of these values would occur to 23 miles inundated for Cammal Lake. A man-made lake contains scenic values, but there is a relative degree of loss in value when a resource irreversibly loses its variety of natural features and impressions.
25. Diversity of Recreation - Moderately Protective. Existing recreational activities on the river would be maintained. These include fishing, canoeing, rafting, kayaking, and swimming. Cammal Lake would increase general boating activities and possibly include power boating. Recreational activities along the river would continue. These include hunting, hiking, cross country skiing, camping, sightseeing, snowmobiling, trail bike riding, all terrain vehicle operation, trapping, snowshoeing, horseback riding, bicycling, photography and outdoor education. The intensity of these activities would increase in direct proportion to the increase in visitors.

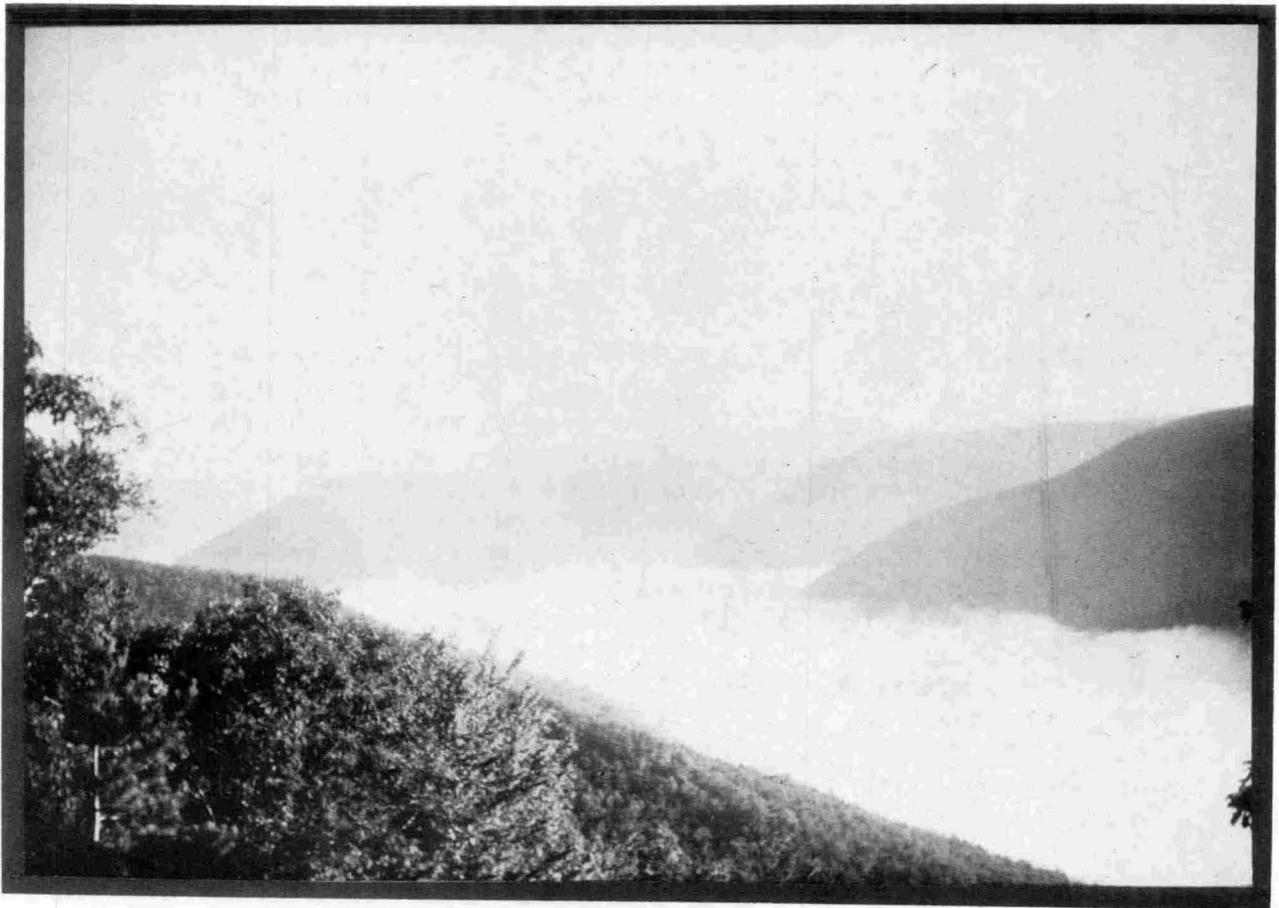
The impacts listed above can be summarized as follows under the two major objectives of the Principles and Standards.

Environmental Quality Objective

Under the Economic Development Plan, the land and water resources would be significantly impacted. The inundation of 23 miles of Pine Creek would disrupt and, in some instances, destroy portions of outstanding natural and scenic resources. The most significant impact would be on the river corridor general ecology and on specific bottom land plant and animal ecosystems. These impacts would be irreversible. Regarding the social well-being of the residents, the most significant impact would be the loss of quiet, rustic, rural and almost pastoral setting of the Pine Creek area. The relocation of 215 residences, including six communities that would be inundated, would be a significant negative impact on the social and psychological well-being of the residents. The community structure would change as the influx of tourists converge on the area in response to intensive travel and tourism promotions. A possible trade-off to the loss of a quiet rural atmosphere would be the stimulation to the local economic growth.

National Economic Development Objective

Benefits derived from a more intensive utilization of the land and water resources would be expected to have a significant beneficial impact on the regional economy. The natural resource capabilities would be promoted for tourism and recreation. Just as the Cammal Reservoir would adversely effect the scenic natural resources for 23 miles of the river corridor, the remaining land and water resources would influence the types, intensities, locations, and the future management of development in and around the Pine Creek area. The Economic Development Plan would have the greatest economic impact on the regional development and national economic development objectives, of the four alternatives presented. The U.S. Army Corps of Engineers are nearing completion of the feasibility study to evaluate the multi-purpose dam lake at Cammal. At that time a better measure of this plan's effect on the National Economic Development Objective would be better understood as beneficial and adverse trade offs of hydropower, flood control, and recreation calculations would be complete.



Fog Setting In on the Pine Creek Valley

Management Options

Three principle management options for the future of the Pine Creek Study segment were also studied in the Analysis of Alternatives. They are as follows:

1. State Management - The study segment would be protected as a State managed stream in the National Wild and Scenic River System. Section 2(a) (ii) of the Wild and Scenic Rivers Act provides that State rivers which are designated as wild or scenic river areas by or pursuant to an Act of the State Legislature and which are permanently managed as such by an agency or political subdivision of the States at no cost to the United States and which meet the criteria in the Act and Guidelines may, upon application by the Governor or his appointee, be included as State managed components in the National System by the Secretary of the Interior.

Federal matching funds from the Land and Water Conservation Fund could be used for acquisition and development. State management of the resource would also complement private recreation concerns.

2. Joint State-Federal Management - The study segment would be jointly administered by the Commonwealth of Pennsylvania and the U.S. Department of the Interior. Written cooperative agreements between the State and the Federal Government would be entered into which would outline specific responsibilities of each party for acquisition, development, and management of specific portions of the river segments. Under this alternative, the study segments would be included in the National System by an Act of Congress. Joint State-Federal management would complement private recreation concerns.
3. Federal Management - The study segment would be administered as a Federal component of the National system by the Secretary of the Interior. Costs for planning, acquisition, development, and management would be provided by the Federal Government. Federal management would complement State, local, and private recreation concerns.

Because the Pennsylvania Department of Environmental Resources is already managing 63% of the Pine Creek corridor under the forest game and park lands programs, and because DER has requested to be designated the managing agency for the Pine Creek study segment, DER, through the Bureau of Forestry, would be the managing agency for each of the alternatives. The Economic Development Plan would recommend a cooperative agreement between the Pennsylvania Department of Environmental Resources and the U.S. Army Corps of Engineers.

TABLE 1
PINE CREEK
SUMMARY OF IMPACTS OF ALTERNATIVES

COMPONENTS	WILD AND SCENIC RIVER OPTIONS		MAXIMUM ENVIRONMENTAL PROTECTION	**ECONOMIC DEVELOPMENT	
	*EXISTING TRENDS	VISUAL CORRIDOR			
RIVER CORRIDOR PROTECTION	1. Total Protected River Miles: Scenic-Free Flowing ***	52	46	46	23
	2. Total Land Acreage Protected	28,700	23,000	78,600	23,000
	3. Existing Public Lands	18,200	15,200	63,800	15,200
	4. Fee Acquisition	500	500	4,000	3,400
	5. Conservation Zoning	10,000	7,300	10,800	1,900
	6. Land Ownership Pattern: % Public	63	68	86	81
	7. Flood Plain Protected	2,200	1,800	1,800	340
CONSERVATION RECREATION COSTS (1978 \$)	8. Capital Expenditures (Total) \$	457,000	417,700	3,165,300	7,296,500
	9. Land Acquisition	180,000	180,000	2,997,600	1,010,100
	10. Season Dwellings Acquisition Number/Dollar	10/120,000	10/120,000	10/120,000	215/5,155,800
	11. Recreation Development	157,000	117,700	47,700	1,130,600
	12. Annual Operation	23,000	17,200	5,400	48,100
	13. Annual County Real Estate Tax Foregone	175	175	440	950
	14. Commercial Timber Value Foregone	0	0	862,500	0
RECREATION ANALYSIS	15. 1980 Annual Number of Floaters/ % Increase Over Existing Use	10,000/25%	10,000/25%	8,000/0%	21,000/163%
	16. 1980 Number of Recreators	415,000	415,000	377,000	528,000
	17. 1990 Number of Recreators	457,000	457,000	377,000	2,195,000
	18. 1980 Recreator Expenditure	4,980,000	4,980,000	4,524,000	9,500,000
	19. 1990 Recreator Expenditure	5,484,000	5,484,000	4,524,000	39,500,000
	20. 1980/1990 Recreation Jobs	150/200	150/200	100/100	175/200
	21. Number of Public Recreation Facility Sites	8	6	3	6
FISH AND WILDLIFE IMPACTS	22. Productivity of Fishery	HP	HP	HP	MP
	23. Productivity of Wildlife	HP	HP	HP	MA
SOCIAL AND CULTURAL IMPACTS	24. Scenic Values	HP	HP	HP	MA
	25. Diversity of Recreation	NE	NE	NE	MP

Degree of Impact

HP = Highly protective
MP = Moderately protective
NE = No significant effect
MA = Moderately adverse
HA = Highly adverse
N = No significant difference

*Recommended Plan

** Economic Development: Line 9 - Costs does not include relocation of 23 miles of railroad and 17 miles of highway that would be inundated by a proposed reservoir. Line 10 - Costs include four recreation facility sites on the river and two recreation facility sites on the reservoir. It does not include the cost of the construction of the dam. Line 15 - Recreation use would be adversely effected during construction, but would significantly increase after completion of the reservoir.

TABLE 2

PINE CREEK

COMPARISON OF IMPACTS OF ALTERNATIVES WITH THE RECOMMENDED PLAN*

COMPONENTS	WILD AND SCENIC RIVER OPTIONS		MAXIMUM ENVIRONMENTAL PROTECTION	**ECONOMIC DEVELOPMENT	
	*EXISTING TRENDS	VISUAL CORRIDOR			
RIVER CORRIDOR PROTECTION	1. Total Protected River Miles: Scenic-Free Flowing ***	52	-6	-6	-29
	2. Total Land Acreage Protected	28,700	-5,700	+49,900	-5,700
	3. Existing Public Lands	18,200	-3,000	+45,600	-3,000
	4. Fee Acquisition	500	N	+3,500	+2,900
	5. Conservation Zoning	10,000	-2,700	+800	-8,100
	6. Land Ownership Pattern: % Public	63	+5	+23	+18
	7. Flood Plain Protected	2,200	-400	-400	-1,860
CONSERVATION RECREATION COSTS (1978 \$)	8. Capital Expenditures (Total) \$	457,000	-40,000	+2,708,300	+6,839,500
	9. Land Acquisition	180,000	N	+2,817,600	+830,100
	10. Season Dwellings Acquisition Number/Dollar	10/120,000	N	N	+205/5035800
	11. Recreation Development	157,000	-39,300	-109,300	+973,600
	12. Annual Operation	23,000	-5,800	-17,600	+25,100
	13. Annual County Real Estate Tax Foregone	175	N	+265	+775
	14. Commercial Timber Value Foregone	0	N	+862,500	N
RECREATION ANALYSIS	15. 1980 Annual Number of Floaters/ % Increase Over Existing Use	10,000/25%	N	-2,000/-25%	+11,000/+138%
	16. 1980 Number of Recreators	415,000	N	-38,000	+113,000
	17. 1990 Number of Recreators	457,000	N	-80,000	+1,738,000
	18. 1980 Recreator Expenditure	4,980,000	N	-456,000	+4,520,000
	19. 1990 Recreator Expenditure	5,484,000	N	-960,000	+34,016,000
	20. 1980/1990 Recreation Jobs Number of Public Recreation Facility Sites	150/200	N	-50/-100	+25/N
FISH AND WILDLIFE IMPACTS	22. Productivity of Fishery	HP	N	N	Unfavorable
	23. Productivity of Wildlife	HP	N	N	Very Unfavorable
SOCIAL AND CULTURAL IMPACTS	24. Scenic Values	HP	N	N	Very Unfavorable
	25. Diversity of Recreation	NE	N	N	Favorable

Degree of Impact

- HP = Highly protective
- MP = Moderately protective
- NE = No significant effect
- MA = Moderately adverse
- HA = Highly adverse
- N = No significant difference

Interpretation

A positive number indicates the amount by which the alternative exceeds the Recommended Plan. A negative number shows that the alternative has a value less than that of the Recommended Plan.

Chapter 3. THE RECOMMENDED PLAN

Goals for Preservation and Use

State Policy on Pine Creek

The Recommended Plan

Acquisition and Development

Boating

Camping

Fishing and Hunting

Hiking and Nature Study

Other Facilities

Protection and Management

Zoning

Agency Responsibility

Master Plan

Impact of the Recommended Plan on the Local Economy

Environmental Impact

A 45.6 mile segment of Pine Creek is authorized for study under the National Wild and Scenic Rivers Act. However, an additional six-mile segment immediately downstream from the study segment also qualifies for the National System and can be classified as a scenic river. In addition, the Commonwealth of Pennsylvania has shown a special interest in protecting Pine Creek downstream to Short Mountain Gap - a natural gateway to the Pine Creek Valley. This proposal therefore also recommends that the additional six mile segment be protected.

A. Goals for Preservation and Use

Objectives under which Pine Creek would be managed as a component of the Pennsylvania Scenic Rivers System are:

1. To preserve the stream and its immediate environment in its natural setting
2. To preserve the free-flowing condition of the waters
3. To maintain and continue to upgrade the water quality
4. To provide high quality recreational opportunities associated with a free flowing river for present and future generations
5. To maintain and enhance the outstanding quality of fish and wildlife resources
6. To provide for a level of recreation and distribution that minimizes deterioration of land and water resources
7. To redirect recreational use to the segments of the stream in public ownership
8. To assure preservation of geologic values
9. To provide a safe but scenic transportation system by maintenance or improvement of the existing system within the affected areas
10. To recognize the needs and effects of the proposal on local residents



Pine Creek as it Winds through the Gorge

These objectives are equally compatible with National designation of the stream.

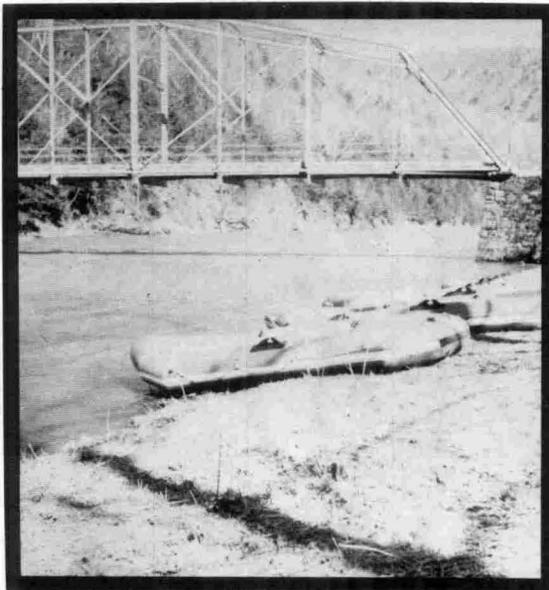
B. State Policy on Pine Creek

The Pennsylvania Department of Environmental Resources recognizes three distinct segments of Pine Creek; headwaters to Ansonia, Ansonia to Blackwell, and Blackwell to the West Branch of the Susquehanna River.

The segment from the headwaters to Ansonia is a scenic area of intermingled farm and forest land. In this area the objective of the Department of Environmental Resources is to maintain and improve water quality under the Clear Streams Act and to encourage local governments to enact zoning regulations in order to protect the scenic values along Pine Creek and U.S. Route 6.

The segment of Pine Creek from Ansonia to Blackwell is of significant statewide interest and is of critical concern to the Department of Environmental Resources. This segment of the stream, referred to as the Grand Canyon of Pennsylvania, is one of the best known land forms in the Commonwealth. The canyon has a unique geologic history, is an area of outstanding and unusual scenic beauty, and contains several rare plant communities which include stands of old growth hemlock, native red pine and American yew. In the interest of all of the citizens of the Commonwealth, it is the objective of the Department of Environmental Resources to protect the unique, natural, pristine and scenic values of the canyon area from overuse impacts and development and restore the area to as near a natural condition as possible.

The Department of Environmental Resources has been actively engaged in acquiring land affecting the Grand Canyon of Pennsylvania since 1901. In 1969, the canyon area was recognized by the Federal government as a National Natural Landmark and in 1970 the State Forest Commission designated all state-owned land within the canyon as one of twelve State Forest Natural Areas.



Pine Creek is a
Popular Rafting Stream

The scenic and natural qualities of the canyon area are being threatened by overuse and development. Access to the heart of the canyon by way of a steep, narrow township road at Tiadaghton constitutes a constant threat, therefore the Department of Environmental Resources has initiated a program to acquire the private lands at Tiadaghton.

Acquisition of seasonal homes and vacant lots at Tiadaghton will further control development. Even though life tenancies may be granted in some cases, the area gradually will be restored to a more natural condition.

The segment of Pine Creek from Blackwell to Short Mountain Gap (near its confluence with the Susquehanna River) is a distinct area from the canyon. Whereas the canyon has steep walls, no roads paralleling the stream, no permanent residences and is almost entirely in public ownership, the segment below Blackwell has several small villages, many permanent residents, open farm land, a state highway and numerous private land holdings.

The objective of the Department of Environmental Resources in this segment of Pine Creek is to insure the integrity of the existing natural, recreational, and cultural values by protecting and maintaining the present character of the area. To this end, the DER will continue to acquire land on a willing-seller, willing-buyer basis (willing sellers must approach the State), hoping particularly to acquire those lands adjacent to the stream that are as yet undeveloped but which have high development potential and the most highly visible and scenic areas. However, no acquisition will be done within the communities or developed areas along this segment of Pine Creek, so that the permanent villages, which provide evidences of the past and cultural enhancement in this valley, can continue as an integral part of the Pine Creek conservation objectives.

The Department of Environmental Resources will develop parking areas and stream access areas on existing state-owned lands in an effort to control use and to protect private property. Development by the DER will be limited to low density recreation facilities such as fisherman parking areas, canoe access areas, several primitive canoe camping areas, and hiking trails. The intent of the DER is not to develop facilities that will greatly increase the recreational use of the area, but rather, to develop facilities that will provide a pleasant recreation experience, and at the same time protect the natural, scenic, and cultural values of the valley.

The Department of Environmental Resources intends to complete its study, and will probably recommend to the Governor and the State Legislature, that the canyon area and the Blackwell to Short Mountain segment be included in the State Scenic River's Program. State Scenic River designation will protect the area, as intended in Section 2 of Act 283, from encroachments upon the aesthetic and recreational values, such as dams, water resource projects, major highway development and power generating facilities. The DER does not oppose improvement of the existing road system, but would insist that the Pennsylvania Department of Transportation consider the scenic, recreational, cultural and natural values of the area when undertaking any road improvement projects within or contiguous to this important scenic area.

The Department of Environmental Resources will continue to work closely with the residents of the Pine Creek Valley to assure that both local and statewide objectives can be achieved.

The Recommended Plan

- C. Acquisition and Development - Under the proposal, the initial effort of the Commonwealth of Pennsylvania would be to acquire up to 500 additional acres of land and develop eight recreation sites on existing public lands (Map, p.vii). The acquisition of approximately 500 acres would cost an estimated \$180,000, and the purchase of ten seasonal dwellings, \$120,000. The villages and hamlets along the study segment will not be acquired. In Tiadaghton, owners of eight seasonal dwellings have received acquisition notices from the Commonwealth, however, these are seasonal dwellings only, with no year-around residents.

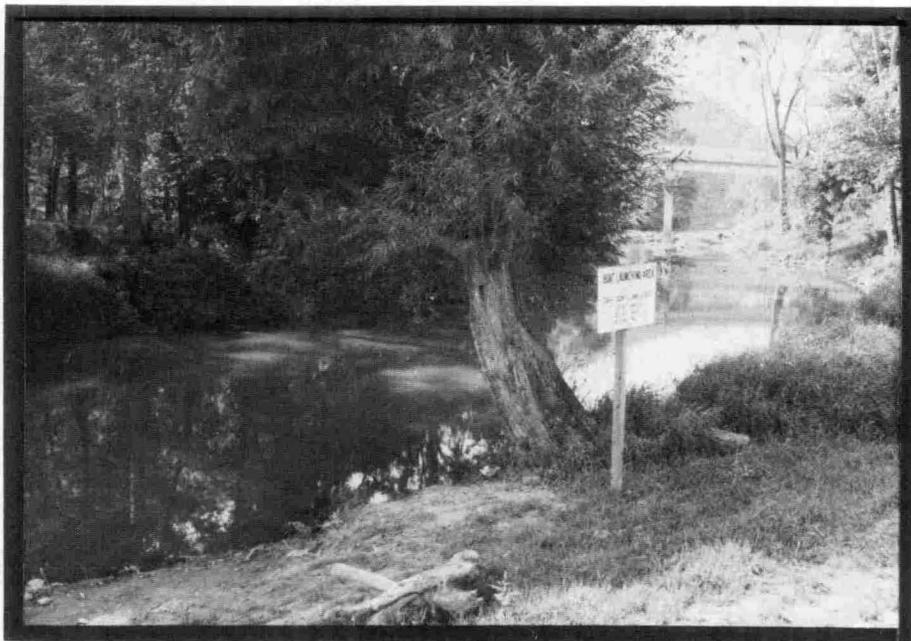
TABLE 3

SUMMARY: FACTORS OF THE RECOMMENDED PLAN

Objective	To provide an environmental and recreational protection zone with little disruption to the area at a low implementation cost
Corridor Protection (acres) Existing Public Lands Full Title Acquisition Conservation Zoning Total Protection Zone	Visual corridor 18,200 500 <u>10,000</u> 28,700
Length of Creek (miles) Recommended for Protection	51.7
Recreation Sites (number) Existing Proposed	0 8
Cost Estimates ('78 \$) Land Acquisition Purchase of Ten Seasonal Dwellings Development of Facilities TOTAL Capital Expense Annual Operation and Maintenance	\$180,000 120,000 <u>157,000</u> \$457,000 \$23,000
Management Recreation Land Use Control Measures	Commonwealth of Pennsylvania Local Governments

The recreation facilities will be placed at the eight access and egress points. Certain facilities will be available only at specific sites as shown on Map, p. vii. They include primitive boater camping, shelter, comfort stations, parking, water, fire rings, trash reception, trail head, and service road. The cost for the development of these facilities at eight recreation sites is estimated at \$157,000.

Extreme care would be taken in the location of facilities, with primary emphasis upon retention of the existing environmental setting at the selected sites. Access and public facilities would not be developed to the extent that they would disrupt the scenic values, which are unique, particularly in the gorge area. Some stretches will remain in their natural condition with only the barest essentials in access trails and remote parking facilities. The Commonwealth would establish a code of conduct for boating, hiking, and use of this scenic area and promote information at all access and egress points on creek conditions, safety equipment requirements, where facilities are located, and what activities can take place.



Boating Opportunities of
Intermediate Difficulty are
Provided by Pine Creek

The proposed recreation facilities would be developed with the preservation of the resource in mind. These proposed facilities will be discussed below as they relate to the various recreation activities which are planned for Pine Creek. Outfitter concession arrangements would be made near Ansonia or Blackwell where the user can leave his personal auto and be transported to and picked up from selected points.

Boating - The intermediate canoeing waters between Ansonia and Tiadaghton are considered easy to difficult. Hazardous rapids are encountered at Owassee, two miles downstream from Ansonia. Between Tiadaghton and Blackwell the waters are easy to difficult. To facilitate access to these areas, put-ins and take-outs could be provided at Ansonia and at Blackwell. The waters between Blackwell and Short Mountain Gap are considered easy to medium difficult with occasional rapids. Access and/or egress will be provided at Ansonia, Blackwell, Slate Run, Waterville, and Short Mountain Gap.

Rafting is most common along the gorge stretch, but is also practiced on the lower stretch. White-water kayaking is best on the gorge stretch, but can also be enjoyed on the lower stretch.

Camping - Primitive camping facilities will be provided at Tiadaghton, Blackwell, Cooney, and Camp Kline. No automobile access will be provided to the camping areas, except for a service road. Walk-in camping as well as boat-in camping will be allowed. Primitive boater camping and shelter will be provided at Tiadaghton. Access and egress facilities will be provided at all sites except Tiadaghton and Cooney, but service roads will be provided at these two sites. Fire rings will be provided at all four of these sites with camping facilities.

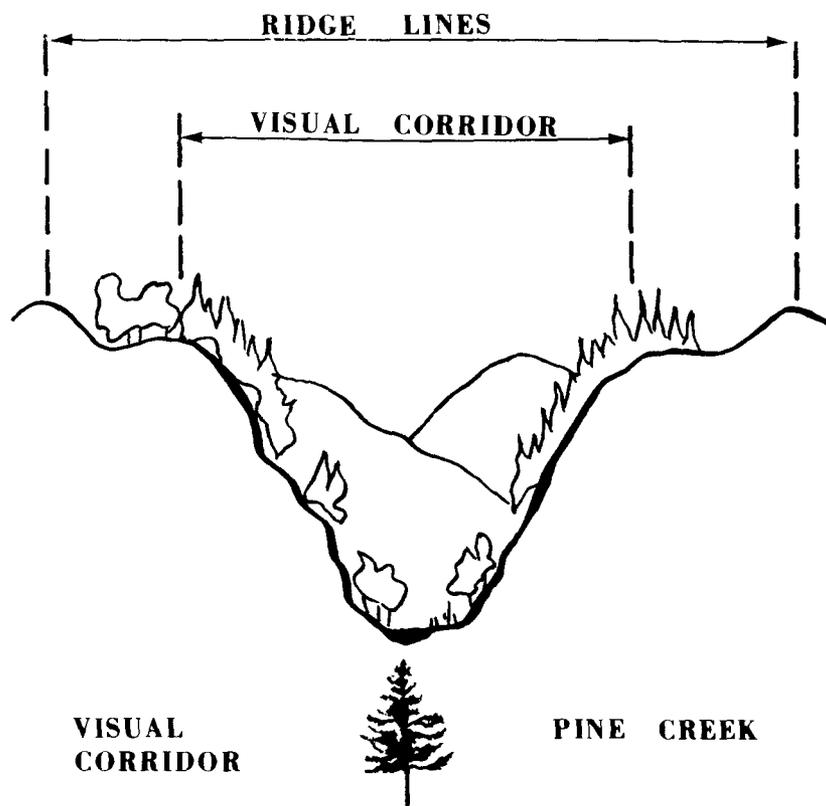
Fishing and Hunting - Fishing pressures are expected to increase as water quality of the river is improved over the next few years. Except for a few trails leading into the gorge, this stretch is relatively inaccessible. The lower segment is more accessible, being paralleled by a highway. Competition between fishermen and boaters for use of the creek is not uncommon.

Hunting will be permitted on lands within the preservation zone in compliance with State regulations, except near developed areas or where there are heavy concentrations of visitors. Safety zones will be identified by the managing agency so that conflicts of use will be kept at a minimum.

Hiking and Nature Study - A number of short hiking paths exist in the gorge area. Where significant scenic sites exist, trail overlooks would be provided.

Other Facilities - Comfort stations are planned for five recreation sites and trash receptacles at all sites. Although no swimming facilities are planned, the water quality is generally acceptable for primary contact recreational activities.

Protection and Management - Boundaries of the river protection zone would include all of the visual corridor within line-of-sight from the creek (Map, p. vii). All of the main stem islands would be included in the boundary, and lands extending along tributaries, when located within the visual corridor. An estimated 28,700 acres would be included within the protection boundary. Protection of the visual



corridor would primarily be the responsibility of the Commonwealth of Pennsylvania and local governments. Further protection of the resource would be provided through a State-managed land protection program. Under this program, the Commonwealth would continue its land acquisition program under the State Forest Lands System, develop recreation sites, and provide technical assistance to local units of government in the adoption of local zoning.

Zoning - The 52-mile segment of Pine Creek between Ansonia and Short Mountain Gap could become a component of the Pennsylvania Scenic Rivers System. Inclusion in the National System as a State-administered component, however, is contingent upon the Governor's application to the Secretary of the Interior indicating that adequate protective use control measures have been or will be undertaken within the visual corridor. The local governments would take the lead in developing and implementing necessary land use control measures to provide an acceptable level of protection. Technical assistance would be available from State, and if National designation is sought, also Federal agencies. Such a system would provide a framework within which land use patterns can be evaluated and effective land use decision-making implemented. This system would help assure that land use practices within the protection boundary do not conflict with the scenic river designation. All land use management techniques, (such as building codes, flood plain zoning, utilities rights-of-way, water and sewer line permits, plant and dwelling siting regulations, signs, refuse and sanitary landfills, farming, lumbering, etc.) would be integrated so that development and growth patterns can be effectively and efficiently channeled in a manner which conforms with adequate land use principles. New construction would be prohibited within hazardous areas, i.e., on slopes exceeding 15% on the 100-year flood plain. This would preserve the scenic quality of the ridges and land close to the water's edge. Flood plain zoning would prevent development of those areas which cannot be safely developed.

A variety of land use controls can be used to protect (conserve) the outstandingly remarkable values of Pine Creek. An important first step would be for each township to pass special resource protection zoning on lands adjacent the creek. The Commonwealth of Pennsylvania law provides for special resource protection zoning by the townships. This would permit local landowners to continue existing use of their properties and permit townships to channel new developments to those areas most suitable. In this way, the basis scenic qualities of Pine Creek can be protected without any relocation of existing residents and without any acquisition of basic property rights. Details on zoning from the Municipalities Planning Code and a status report on zoning along Pine Creek is contained in Appendix 3. In addition to Act 247, Pennsylvania Municipalities Planning Code, The Pennsylvania Sewage Facilities Act also can be used as an effective land use control. Pennsylvania does not permit any municipality (except counties) which enacts a zoning ordinance to leave any part of such municipality unzoned.

The cost for the operation and maintenance of the proposed sites is estimated at \$22,000 annually of \$120,000 during the first five-year period. The intent of the proposal is to protect the river corridor through existing public holdings, by limited additional land acquisition, and by land use control measures. This valuable resource will be improved, managed, operated, and protected through the Pennsylvania Bureau of Forestry.

Agency Responsibility - The Commonwealth of Pennsylvania, through the Department of Environmental Resources, would be responsible for developing recreation sites, patrolling of river-oriented recreational uses, development and administration of comprehensive recreation management policies and procedures, and participation in programs which assure the integrity of the visual corridor. Mutual protection will be sought through a cooperative management program to be developed between the Pennsylvania DER's Bureau of Forestry and Bureau of State Parks, the Pennsylvania Fish Commission, the Pennsylvania Game Commission, regional agencies, Tioga and Lycoming Counties, and riverfront townships. The DER will continue to work closely with the Pennsylvania Department of Transportation on scenic road specifications for the Pine Creek area. As a part of this effort, the Department of Environmental Resources - Department of Transportation task force on scenic road criteria has been recently formed. The newly-formed Scenic Rivers Advisory Committee, with representatives from both State and local interests, could provide the means for the coordination of efforts in developing and managing the area. Table 4 highlights the various interest groups and their major area of responsibility or interest.

The Bureau of Forestry, who will be the principal managing agency, will develop the eight recreation sites on existing State land and thus take the pressure of local government services. Consolidating State ownership will provide immediate access to the creek on State land and will permit improved supervision of recreators on foot, boat, and car.

The District Foresters will arrange for the deposit of all solid wastes found on State forest lands at a planned disposal site in Lycoming County, and support the counties for the disposal of solid waste found on private lands. The Bureau of Forestry would maintain sealed vaults at the comfort stations and contract the pumping out of the latrines. Other Bureau of Forestry duties would include road maintenance, painting, and general repairs. Sanitary facilities, site improvement, and trash collection have been installed at Tiadaghton. This would become a walk-in site, with floaters stopping for a break. This is the only road access to the gorge between Ansonia and Blackwell. It will be taken off township expense and put under State authority for use as a service road.

Camping permits from the Bureau of Forestry will be required for camping of State Forest land. Regulations will be placed on the boating outfitters who promote the use of the creek. Pamphlets on recreational use of the designated stream corridor will be available at information sites located at the termini.

Timber harvesting would be permitted on State forest lands, consistent with existing management practices. An erosion and sediment control plan must be prepared prior to any logging on both public and private forest land. The existing policy on State Forest land prohibits timber cutting in the Pine Creek Gorge between Ansonia and Blackwell

TABLE 4.
AGENCY RESPONSIBILITY

AGENCY TASK	FEDERAL	STATE	REGIONAL*	LOCAL**
Scenic River Plan	Technical Assistance	Preparation, Technical Assistance, Implementation	Technical Assistance	Preparation, Technical Assistance
Acquisition	Cost Sharing	Implementation		
Zoning	Technical Assistance	Technical Assistance	Technical Assistance	Implementation
Recreation Development	Cost Sharing	Implementation		Coordination
Management		Implementation	Cooperation	Coordination
Water Quality	Technical Assistance	Standards Enforcement	Technical Assistance	Coordination
Road & Bridge Designs	Funding, Technical Assistance	Implementation		Technical Assistance

* Includes Susquehanna River Basin Commission, Northern Tier Regional Planning Commission, and Susquehanna Economic Development Authority.

** Includes Lycoming County Planning Commission, Tioga County Planning Commission, Upper Pine Creek Council of Governments, Pine Creek Preservation Association, and riverfront townships.

Includes the Pine Creek Task Force and the Scenic Rivers Advisory Committee which are state-local groups.

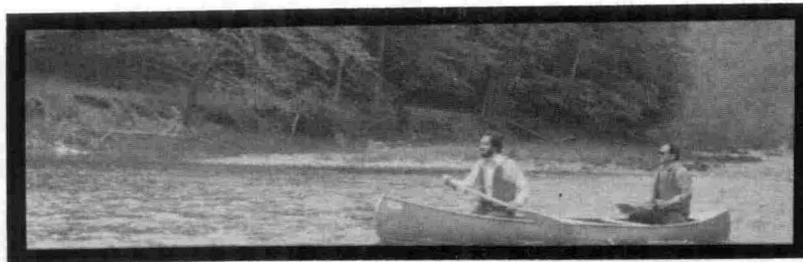
The Pennsylvania Department of Community Affairs receives HUD 701 planning assistance and could be a source of assistance to local governments.

and Miller Run Natural Area near Cammal, permits timber salvage and sanitation cuts in Algerine and Wolf Run Wild Areas near Slate Run, and zones the commercial forest for either even-aged or uneven-aged management. Twelve percent (or 2040 acres) of the State forest land in the visual corridor is zoned for clearcutting, mainly to benefit wildlife. However, no more than 1% is clear-cut during any given year. At the present time, only a very limited amount of logging takes place on private lands in the visual corridor.

The Pennsylvania Fish Commission and the Pennsylvania Game Commission will provide enforcement support to the managing agency. The Fish Commission would continue to stock all suitable waters and enforce litter and boating safety laws. The Game Commission will enforce game laws on all lands. Safety zones would be placed in the vicinity of the planned recreation sites where other recreation activities are concentrated.

At present, fire protection is available from the Bureau of Forestry, Cammal, Waterville, Avis, and Jersey Shore. Wellsboro and Jersey Shore have medical services and police stations. State police serve the area, operating from Montoursville.

Master Plan - The Commonwealth will prepare a master plan outlining the acquisition, development, and management plan for the recreation sites. The master plan will also determine the optimum "carrying capacity" of the river and its environment. This master plan will be prepared by the State in-house and then taken to local officials and interest groups for reaction and input.



Pine Creek Provides Excellent Canoeing Opportunities

D. Impact of the Recommended Plan on the Local Economy

Implementation of the recommended proposal would not result in major economic changes within the two counties bordering the study segment. Presently, recreation-oriented businesses, catering to the demand of tourists, vacationers, and sportsmen, predominate in the visual corridor. It is expected that the proposal would be an impetus to continued growth in the recreation, retail trade, and services sectors.

While this study's recommendations do not affect the operation of any existing commercial enterprises such as general stores, taverns, gas stations, etc., they would prohibit new development which is incompatible with the purposes of either the State or the National Wild and Scenic Rivers Act. In fact, the existing recreation-oriented businesses are expected to receive an impetus for continued growth. Thus, the proposal would not affect current economic standards within the visual corridor. Since high quality development would be permitted within existing communities, and since the amount of buildable land (i.e., land not excessively sloped and outside the flood plain) within the protection boundary is limited, the proposal's impact on jobs and incomes should be minor.

A small boost to the local economy is expected from the infusion of capital to construct, operate, and maintain the recreation facility sites. Matching funds would be available upon implementation of the proposal from Federal and State sources.

Certain types of emergency services would continue to be provided by the counties and municipalities. These include hospital services and fire protection. Insofar as the proposal generates greater recreation use along the creek, the incidence of personal accidents and fires is expected to increase. The monitoring and policing of river-oriented recreation uses by the managing agency should offer some preventive assistance, however, much of the expense of providing emergency services is likely to be borne by local governments and institutions.

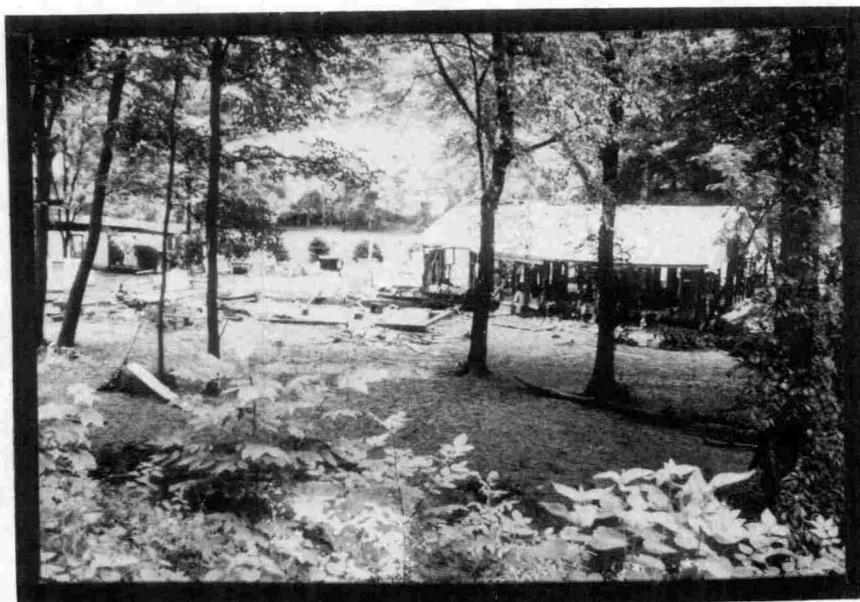
Designation of Pine Creek as a component of the Pennsylvania and/or National Wild and Scenic Rivers System would not have a significant impact on the property tax structure of river municipalities. The primary cost to the counties involved is an annual loss of an estimated \$175 in property tax revenues. The Commonwealth currently provides a 20 cent per acre payment in lieu of taxes to defray the loss for all State holdings except parklands. However, peripheral development just beyond the designated area may follow as it has in other places, offsetting the tax loss due to withdrawal by an increase in tax revenue from new development. Only about 500 acres of the initial full title purchase will result in ownership transfer from private individuals to the public ownership.

All of the local units of government along the study segment have signed up for flood insurance. By protecting the flood plain from overdevelopment, the proposal would eliminate the potential for economic disaster resulting from extensive development on the flood plain.

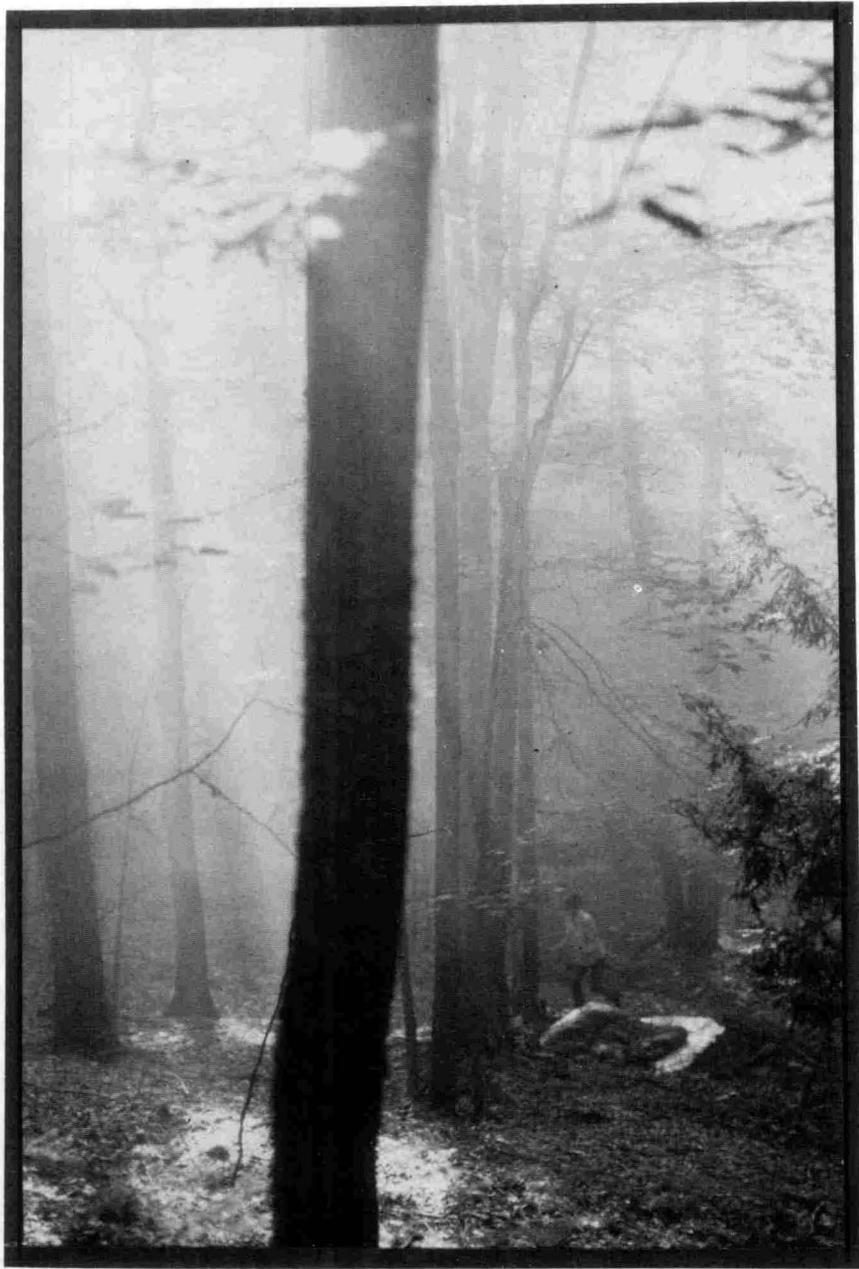
The overall impact that the proposal will have on the local economy is considered to be of minor significance.

E. Environmental Impact

Inclusion of Pine Creek in the Pennsylvania and/or National Wild and Scenic Rivers System will have an overall effect of preserving existing scenic, recreational, geologic, fish and wildlife, and water quality values of the stream. No significant adverse effects are anticipated on ecological systems. The present land use patterns would be stabilized. Some minor environmental damage to the terrain and vegetation may be expected as a result of visitor use. An environmental impact statement has been prepared concerning the proposed action.



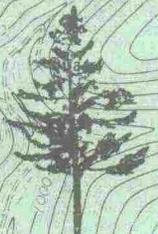
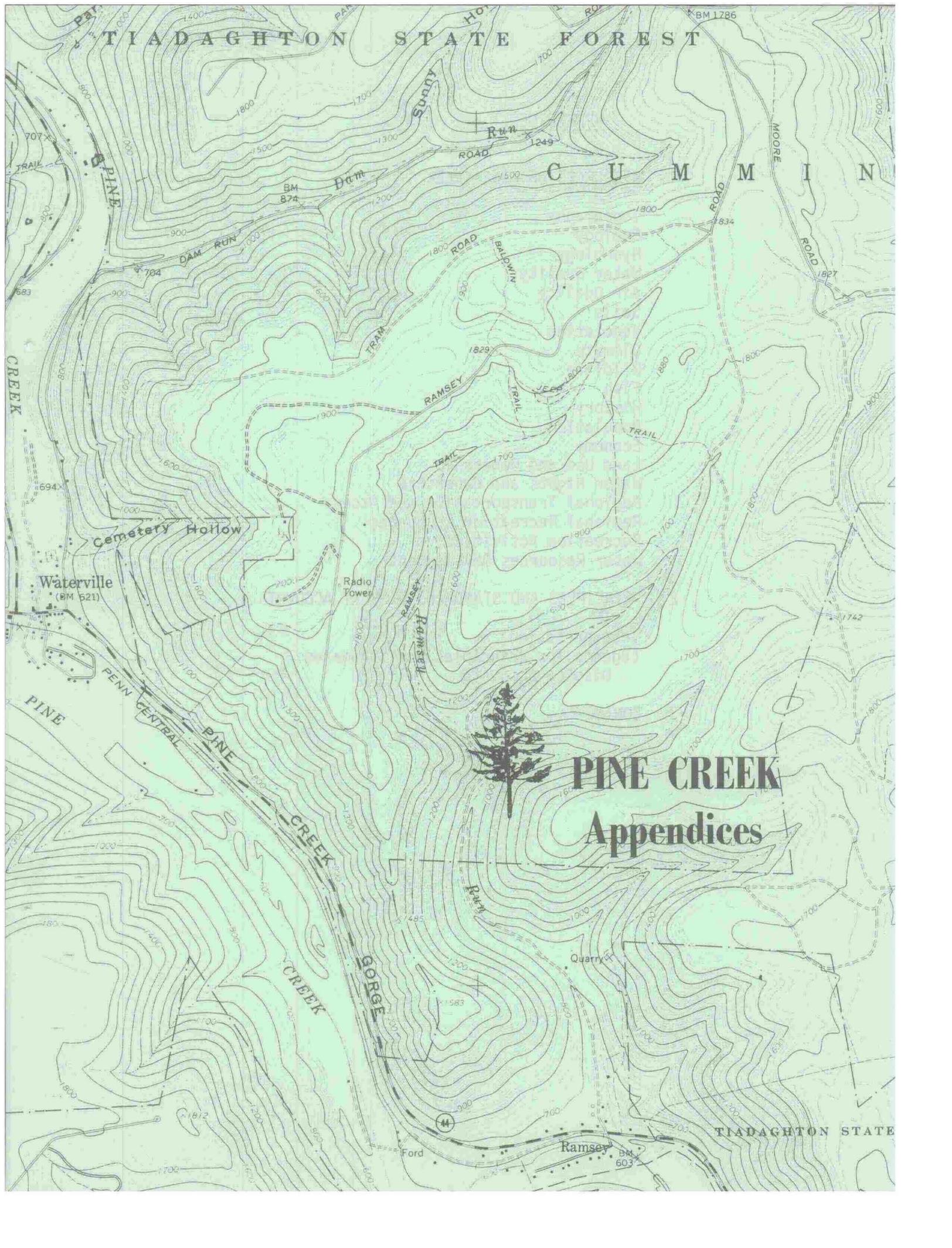
Flood Damage Along Pine Creek



A Forest Wonderland

TIADAGHTON STATE FOREST

C U M M I N



PINE CREEK
Appendices

APPENDICES

1. RESOURCES OF PINE CREEK

- Topography
- Geology
- Hydrology
- Water Quality
- Air Quality
- Soils
- Vegetation
- Climate
- Wildlife
- Fish
- History
- Population
- Economy
- Land Use and Ownership
- Water Rights and Ownership
- Regional Transportation and Access
- Regional Recreation Resources
- Recreation Activities
- Water Resources Development

2. PRINCIPLES AND STANDARDS DISPLAY ACCOUNTS

- Interpretation
- Legends for Principles and Standards
- Display Accounts

3. ZONING

APPENDIX I

RESOURCES OF PINE CREEK

The segment of Pine Creek from Ansonia to Torbert is an area of outstanding scenic quality and high recreational value. These qualities are best reflected in a review of the ecological and socio-economic factors which contribute to the fine character of this area.

Topography

Pine Creek is located in the Allegheny Plateau, which is characterized by horizontal rock strata and a dendritic drainage pattern. Generally, the land form of the entire watershed consists of rugged mountains of approximately 2000 feet elevation, and steep forested valleys, which often have slopes exceeding 25%.

The most impressive land form of the area is the Pine Creek Gorge, which comprises the upper 17 miles of the study segment. Its width is approximately 2500 feet from rim to rim, and its height occasionally extends 1200 feet above the valley floor. In 1969, this gorge was declared a Registered National Natural Landmark in recognition of its outstanding scenic qualities, and declared a State Forest Natural Area in 1970.



The Pine Creek Valley Was Carved Out of the Allegheny Plateau

Geology

The formation of the Pine Creek Gorge through time is most interesting. Since the end of the Triassic Period, about 180 million years ago, "old Pine Creek" developed and enlarged a pattern which drained to the northeast. This was due mainly to the influence of the geologic structure of the area. About two million years ago, the advancing glaciers effectively dammed the streams flowing northward, creating a large chain of lakes across the area. An arm of the glacial lake formed by the damming of the Cowanesque and Tioga Rivers found a new outlet through a tributary of "old Pine Creek" near the village of Ansonia. The overflow continued long enough to cut the "Grand Canyon of Pennsylvania". Another major overflow route was into Babb Creek from the Tioga River lake near the town of Arnot. This joined with the overflow from Ansonia and continued southward toward Waterville. Several successive glacial lakes were filled and drained during the Pleistocene. The final retreat of the ice left the north flowing valleys dammed and filled with debris and the south flowing valleys cut much deeper than before. Pine Creek did not return to its northern courses, but continued to flow southward on its present course, draining parts of the old lake basin. Glacial material along Pine Creek extends to a short distance south of the Tioga-Lycoming County line.

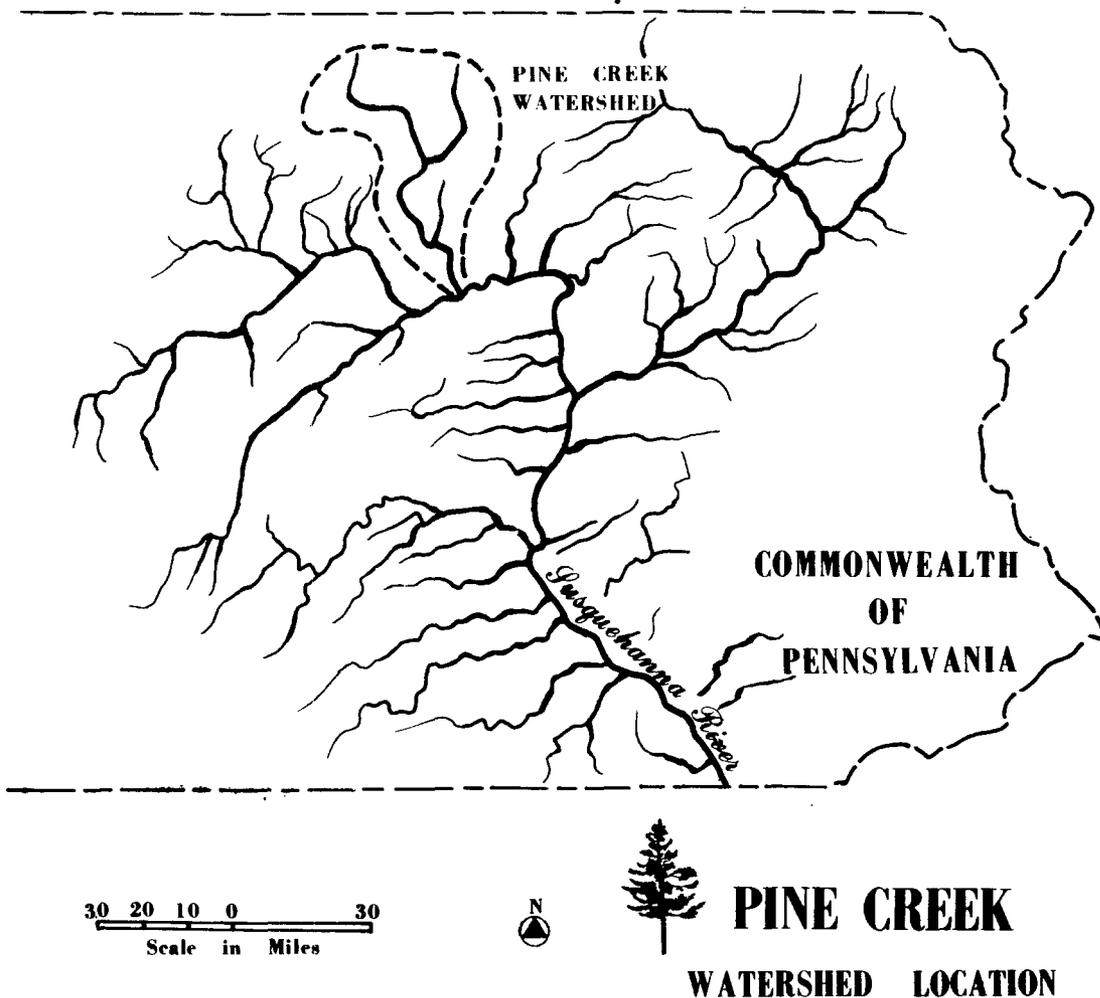
Rocks occurring in this area range from Devonian to Pennsylvania in age, 400 million to 300 million years respectively. The oldest rocks are exposed in the valley bottom and walls throughout the length of the gorge. These rocks are mainly red shales and sandstones. Above these rocks can be found the red and green shales and sandstones of the Pocono Formation. The remainder of the rocks in the area are sandstones, siltstones, shales and some thin limestones.

Coal of Pennsylvania age formation outcrops at higher elevations in the northern portion of the study area. Mining operations are active along the upper tributaries of Babb Creek, and inactive at a flagstone quarry located above Slate Run. Oil is also present in the study area in a minor oil field located about six miles west of Ansonia. Recent gas discoveries south of Pine Creek indicate a potential for gas under the study area in the Tuscarora sandstone.

Ground water supplies are controlled by the geology of the area. The geological formations present have a wide range of yields, not only from one formation to another, but also within a particular formation. Nevertheless, water supplies are generally potable and usually more abundant in the lowlands than along the steep valley slopes. The seasonal high water table varies from about 1½ to 2 feet in the lowlands to at least three feet along the valley walls.

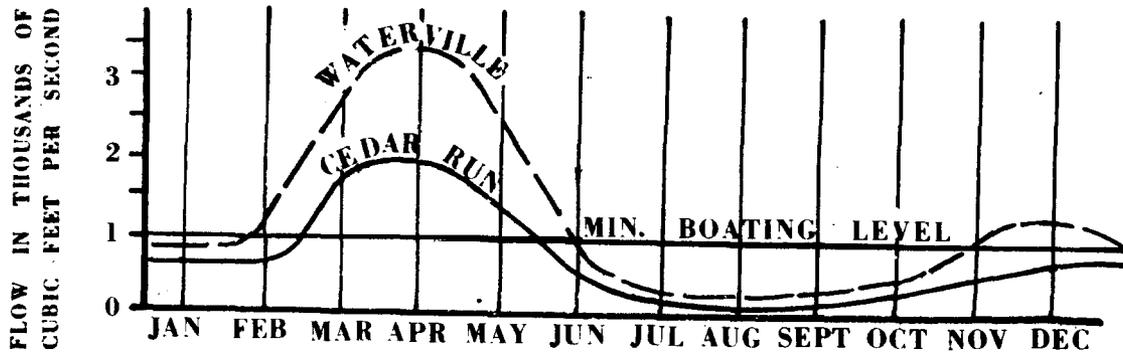
Hydrology

Pine Creek is the second largest tributary of the West Branch of the Susquehanna River. Its watershed contains 635,200 acres, which encompass the 73 tributaries flowing into the Creek. The largest of these tributaries are Marsh Creek, Babb Creek, Cedar Run, Slate Run and Little Pine Creek.



The flow of Pine Creek varies with the seasons, being greatest in the spring when melting snow brings additional waters. Lowest flows occur in late summer and early autumn (Chart, p. A1-6).

The gradient of Pine Creek from Ansonia to Short Mountain averages 11 feet per mile. In the gorge area above Blackwell, the gradient reaches almost 17 feet per mile, while it is only 9 feet per mile in the valley area below Blackwell (Chart, p. A1-6).

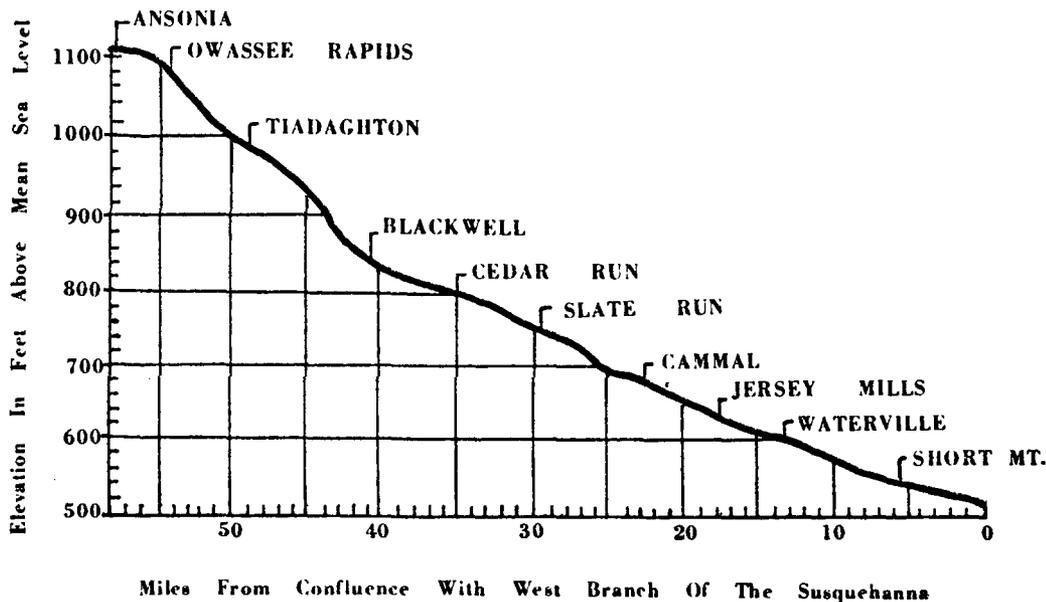


MEAN MONTHLY FLOW



PINE CREEK

The flow of the Creek is quite variable, depending on the stream bed, water depth and width, and the rate of flow. Eroding ledges expose boulders which cause waves. In places where the Creek narrows to 30 feet, the flow is impeded by huge boulders causing chutes which terminate in heavy whitewater. The best known whitewater stretches are Owassee Rapids at Barbour's Bend and the Narrows. In other places there are large, long riffles and pools that sometimes exceed 10 feet in depth. Long runs are not infrequent. Several small islands occur throughout the Creek, which shift from shore to shore due to variations in flow.



STREAM PROFILE



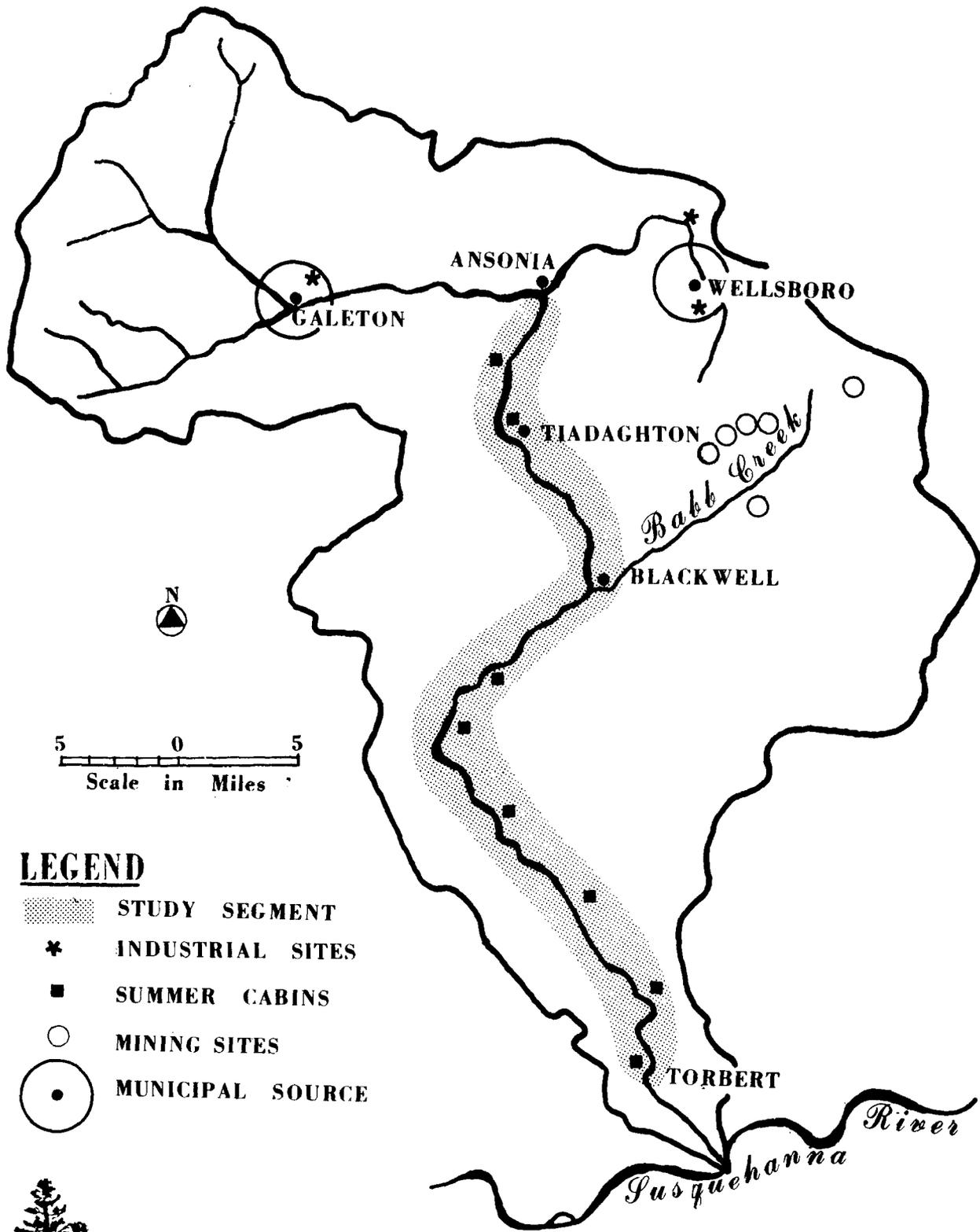
PINE CREEK

Water Quality

Pine Creek is relatively free of pollution within the study segment and generally meets the water quality criteria defined for it by the Pennsylvania Department of Environmental Resources. These criteria classify Pine Creek as a Conservation "B" Stream; this classification requires keeping the stream in a relatively primitive condition and suitable for warmwater fishes and trout stocking.

Although the study segment is in good to excellent condition, there are a few pollution sources within the watershed which effect the study segment to varying degrees (Map, p. A1-8). A summary of these issues, as reported by the Pine Creek Task Force Enforcement Committee Report of March 1972, the Lycoming County Planning Commission, and the U.S. Environmental Protection Agency is as follows:

1. Sewage disposal problems are evident from several upstream communities, as well as individual homes and cabins. On-site sewage disposal into soils incapable of assimilating wastes adds to the pollution load in the mainstream. None of the communities, except Galeton and Wellsboro, have sewage treatment facilities and do not discharge raw sewage. Galeton does, however, have combined sewers and is conducting studies to correct infiltration/inflow into its sewer system. The Northeast Dairy Corporation has gone out of business in Galeton. A new company has taken over the building and is recycling tannery wastes. These residual wastes have the potential of lowering the dissolved oxygen to levels in violation of the water quality criteria, however, this has not been shown to occur in the study segment. Fecal coliform and total coliform count violations have been shown to occur due to these sources. However, a recent report from the Pennsylvania Department of Environmental Resources indicates stream recovery for this criteria. The collection and proper treatment of wastes, including disinfection, from the populated areas would insure that water quality conditions meet the criteria for National Wild and Scenic Rivers, and the standards established by the Commonwealth of Pennsylvania.
2. Industrial wastes are discharged from an agricultural establishment in Potter County and two manufacturing firms. All are located above Ansonia and have had no apparent effects on the study segment of Pine Creek.
3. Acid mine drainage from active and inactive deep mines and inactive strip mines along Babb Creek, adversely affect the pH of Pine Creek, for a short distance, primarily during rainstorms. The run-off caused by the rains adds more acid from the coal mines. In Babb Creek, however, fishery has been eliminated by the low pH value. An effort should be made by the Commonwealth to correct the mine drainage problem by assigning a high priority to the area in any State or Federal remedial program. Little Pine Creek adds a small amount of acid mine drainage to the mainstream.
4. Sedimentation is evident in Pine Creek during periods of high flow due to streambank erosion. Other sources of sedimentation are farmlands in Tioga and Potter Counties, unpaved roads, and development on steep slopes.



LEGEND

-  STUDY SEGMENT
-  INDUSTRIAL SITES
-  SUMMER CABINS
-  MINING SITES
-  MUNICIPAL SOURCE



PINE CREEK

WATER POLLUTION SOURCES

5. Recreationists, mainly boaters, cause minor solid waste pollution problems at sites of concentrated use, while other users, such as fishermen, leave more dispersed solid waste along the creek. Also, summer cabins contribute to water quality problems due to the use of inefficient on-site sewage system. Latrines, to be provided at five of the recreation facility sites, will be pumped out by the managing agency.
6. National Fishery Research Development Center is under construction near Marsh Creek, by the Fish and Wildlife Service. Any discharges from this facility will be treated by lagoons before entering the Pine Creek drainage.

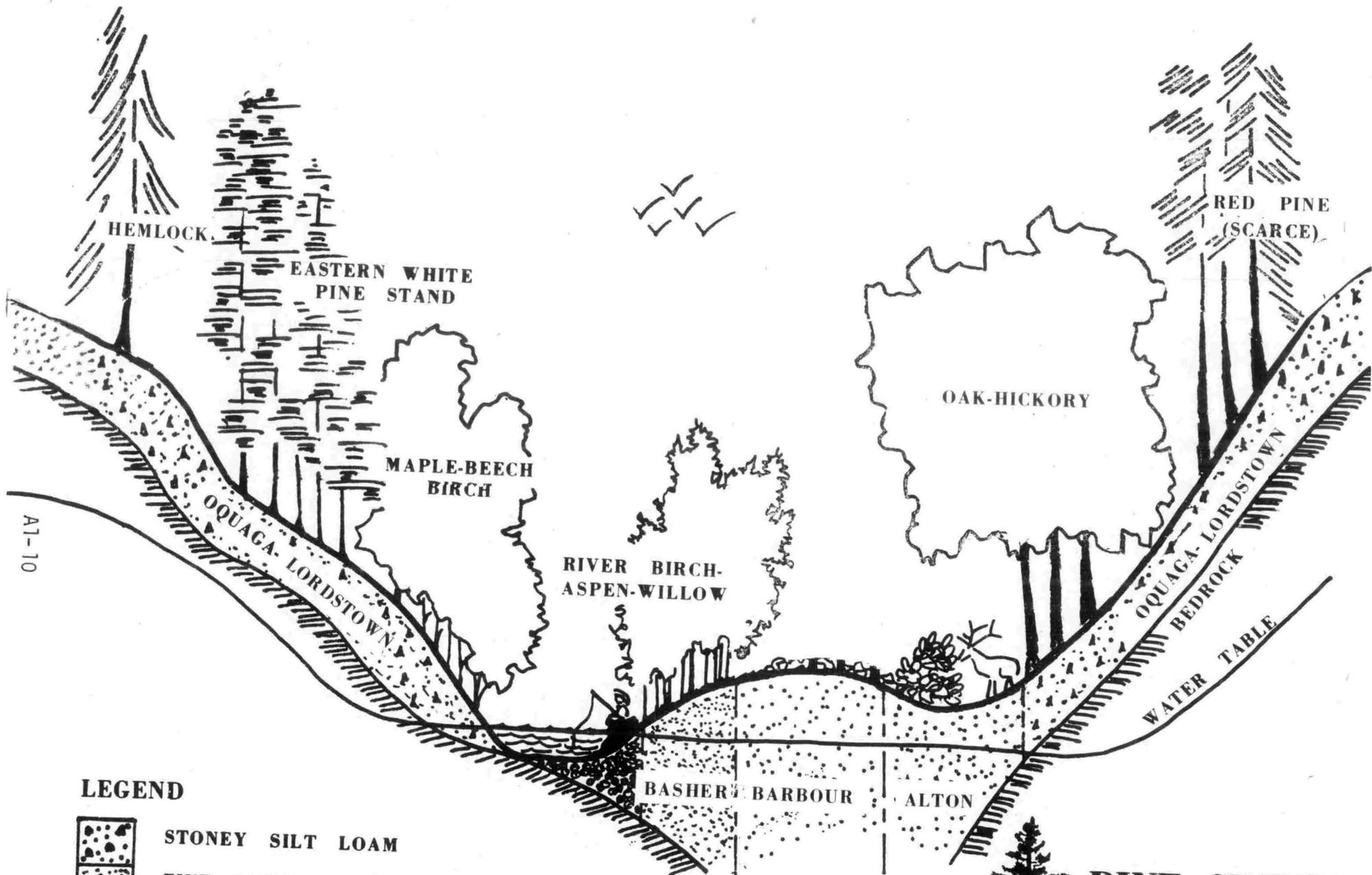
Air Quality

A 1970 Pennsylvania Department of Health air quality study of a portion of the lower Pine Creek Valley indicates that the air quality in the study corridor is excellent. Industrial pollution of any type is virtually nonexistent. The only measurable pollutants are small amounts of suspended particulates from space heating and municipal and domestic incineration, and small quantities of carbon monoxide, hydrocarbons, and nitrogen oxides from a limited number of motor vehicle exhausts. Overall, the Pine Creek Valley has some of the cleanest air in Pennsylvania.

Soils

The soils in the Pine Creek Gorge fall within two soil associations -- the Alton-Barbour-Basher Association and the Oquaga-Lordstown Association (diagram, p. 26). The Alton-Barbour-Basher Association consists of deep, well to poorly drained soils on terraces and flood plains. Alton are deep, well drained soils on terraces and side slopes adjacent to the flood plain; Barbour are deep, well drained soils generally occupying the higher areas of the flood plain, and Basher are deep, moderately well drained soils occurring on lower flood plain areas adjacent to the stream channel. These soils are well adapted for cultivated crops, but place severe limitations on the development of residential and industrial buildings, septic tanks and sewage effluents, and dam sites (because of flooding). Limitations on parking lots range from light to severe, and on general outdoor recreation, moderate to severe.

The Oquaga-Lordstown Association consists of moderately deep, well drained soils occurring on steep slopes. Oquaga and Lordstown are moderately deep, well drained soils containing many sandstone fragments. Oquaga are reddish colored soils. Oquaga and Lordstown are underlain by sandstone bedrock at about thirty inches. Other soils included in the association are Lackawanna and Wellsboro. Tree growth is fair on the steep area and good on the sloping areas. Steep slopes and moderate depth to bedrock are the main use limitations. These soils are poorly suited for agriculture and poorly to moderately suited for residential and industrial building and septic tanks. There are severe limitations on dams and parking lots and only slight to severe limitations on general recreation.



AL-10

LEGEND

-  STONEY SILT LOAM
-  FINE SANDY LOAM
-  SILT LOAM



PINE CREEK
 VEGETATION-SOILS
 WILDLIFE-GEOLOGY

Vegetation

Approximately 77% of the two county area is in woodland, while 92% or 21,400 acres of the visual corridor is in woodland. Although a great variety of vegetative types are present, hardwood stands predominate.

The most common forest types are oak-hickory and maple-beech-birch. Aspen-birch and elm-ash-red maple types are also notable. A few native stands of red pine exist on the ridges. Other important conifers are eastern hemlock and white pine. Extremely dense growths of rhododendron flourish in tributary stream valleys and mountain laurel are abundant throughout. Small stands of virgin hemlock lie near Colton Point.



Typical Forest Scene

This area was extremely important during the logging era. Nearly all of the original forest was cut-over but is now recovering and maturing. The species composition and growth in the canyon have been influenced by repeated fires in the past 60 years. Only 25% of the timber is classified as commercial because of the steep terrain in the canyon.

Climate

The humid, mid-latitude climate is characterized by frequent changes in weather. The higher elevations are usually cold enough to retain a snow cover throughout winter and are cool and refreshing in summer. In the valleys, summer days are warm to hot, but generally cool at night. Forty inches of precipitation is fairly evenly distributed throughout the year, providing a dependable and adequate source of moisture. Annually, about one-half of the days are cloudy; one-third, partly cloudy; and the remainder, clear. Winds are westerly and usually moderate.

Wildlife

State and privately owned hardwood and conifer forests support a large variety of forest related wildlife species common to northern Pennsylvania and southcentral New York. The rugged terrain, many natural spring seeps, numerous denning areas, and limited access, characteristic of the upper gorge of Pine Creek, make this an ideal protective habitat for many wildlife species.

White-tailed deer, black bear, wild turkey, and gray and black squirrel are abundant in most forest areas within the Pine Creek basin. Deer, bear, and turkey are especially sought after by resident and non-resident hunters. Hunter success is high. In 1975, the deer harvested in Tioga and Lycoming Counties ranked second and fourth respectively, statewide. In harvesting bear, Lycoming County was third and Tioga County, sixth the turkey harvest showed Lycoming, fourth and Tioga, fifth. Ruffed grouse, woodcock and morning doves are also harvested within the basin in their respective habitat and are frequently observed in or near the river corridor. Beaver, muskrat, mink and raccoon are harvested along Pine Creek and its numerous tributaries. Pelts of these animals supplement the income of families within the basin.

Other species hunted or trapped to lesser degrees are cottontail rabbit, woodchuck, striped skunk, red squirrel, red and gray fox and opossum. Porcupine are common. Bobcat, once widespread in the State, is now found in only a few remote areas such as this. This animal is now protected by the State game laws.

Rattlesnakes and black snakes are common in the more remote areas of the basin. Annual rattlesnake roundups are popular in the area. Copperheads are rarely encountered.



Deer are Abundant in the Area

Pine Creek serves as a resting area for several species of waterfowl that migrate the nearby Atlantic Flyway. Species commonly observed during migration include Canada geese, mallard, black duck, pintail, bufflehead, American goldeneye, ruddy duck, blue-winged teal, and mergansers. Whistling swans are also occasionally observed. The river corridor also serves as a propagation area for wood ducks, hooded mergansers, and mallards. The southern bald eagle and peregrine falcon, both considered endangered species by the U.S. Department of the Interior, are migrants of the Pine Creek Basin, but are not reported to nest in the area. Ravens nest in the Canyon. Rookeries of great blue heron inhabit the valley.

A wildlife problem within the Pine Creek watershed is the inability of the vast mature forest lands to supply the food necessary to carry large numbers of deer through severe winters, although annual cropping of both antlered and antlerless deer has helped reduce winter losses.

The opportunity and experience to hunt, fish, photograph, and observe nature is outstanding and rewarding within the Pine Creek watershed. Many species of wildlife, both game and non-game species, provide recreational opportunities for the hunter as well as those who enjoy viewing or studying wildlife in its natural surroundings. Continuous expansions of public lands will offer additional protection to plant and animal life.



Black Bear Inhabit the Area

Fish

Fishery resources of Pine Creek and its tributaries between Ansonia and Waterville are good, harboring a diverse population of at least 38 species of fish. Annual stocking programs, however, localize fish populations. This free flowing body of water, associated steep gradients, abundant riffles and pools, and wilderness setting associated with these streams contribute to fishing and aesthetic appeal. When compared with other streams of similar size, it is subjected to a rather small amount of degradation from organic wastes, industrial effluents, and acid mine drainage.

The study segment supports a popular coldwater fishery composed of rainbow, brook, and brown trout and a warmwater sport fishery consisting of small mouth and large mouth bass, chain pickerel, and brown bullhead catfish. Other species present include carp, sunfish, banded kelly fish, rock bass, fall fish, suckers, chubs, shiners, and American eel. Bait fish such as ducks, darters, minnow, sculpins, stone-roller, margined madton, and branded killfish are also present. The 100-plus miles of tributary streams which enter the study segment are also well known for their excellent brook or brown trout fishing.

The trout fishery receives heavy use during spring and early summer, requiring supplemental trout stocking to maintain harvestable supplies. Fishing is also popular during late summer and autumn when coldwater fishes are found near the mouth of the tributaries.

Acid coal mine drainage has eliminated the fishery in Babb Creek and lower portion of Stony Fork, but the problem is localized and does not significantly affect the Pine Creek fishery. Natural periodic extreme high and low flows, however, are factors limiting fish production and fishing opportunity.



Pine Creek is a Popular Fishing Stream

History

The history of Pine Creek includes several periods of Indian occupation, followed by hunters, trappers and settlers. Logging was the primary industry in the mid-1800's, followed by quarrying and mining. Today, Pine Creek accommodates tourists, retirees, vacationers and sportsmen.

The earliest occupants of the valley formed by the West Branch of the Susquehanna River were known as Paleo-Indians. These people, descendants of the original Indian migrants to North America around 8,000 B.C., were nomads who lived by searching out game for food. Relics of this early culture are limited to a few spear points and cutting tools.

The people of the Archaic Epoch, beginning about 6,000 B.C., could not survive solely by hunting and began to be dependent upon plant foods. Their tools were formed by grinding rather than chipping. The late Archaic peoples had more diversified food sources that included game animals, fish, shellfish, wild nuts and berries.

About 2,000 B.C., when the Woodland period began, life was centered on the rivers, facilitating the invention of the dug out canoe. Fishing and farming became a way of life, making permanent village settlement possible. Dwellings were sheathed with bark and villages were often surrounded by a palisade of logs driven into the ground. Warfare among tribes determined rights to good hunting and fishing territories.

The vicinity of the mouth of Pine Creek is a rich area in Indian remains from the Archaic and Woodland periods. The remains extend on all sides of the Old Pine Creek Cemetery for a short distance down to the West Branch of the Susquehanna River. Other Indian remnants of the area include the trails of the Canyon, which are the major highway routes and railroads today.

More recent Indians who inhabited this area were the powerful Susquehannocks and the Senecas. When the first white man came into the valley in the late 1700's, the Susquehannocks had disappeared, but the Senecas still lived in small villages along the creek.

At first, white men came as hunters and trappers, and Pine Creek was just a place to pass through. Then, permanent white settlers came as farmers. The first known white man to settle in the valley was John English in 1784. He had been aid-de-camp to General George Washington during the Revolutionary War.

In these early times, Pine Creek was used as a boundary between the Indians and white settlers, who were forbidden to pass beyond its waters. Many councils were held at Waterville, as well as Slate Run, Cedar Run, Tiadaghton, and Ansonia. Eventually, the settlers forced the Indians northward and settled on the sites of the Indian villages.

An interesting historical marker of the early settlers in the Pine Creek area is located near the mouth of Pine Creek. This marker tells of an important but little known event of American History. On July 4, 1776, the people of Pine Creek met under the old Tiadaghton elm, and decided to declare their independence from England. The Fair Play Men, as the local group was called, did not know that others in Philadelphia were doing the same thing at the same time. The messengers dispatched with the news from the two meetings are supposed to have met near Harrisburg.

Another historical figure of Pine Creek is George Washington Sears, a famous naturalist and world traveler. He wrote poetry and prose under the pen name Nessmuk, and painted the wilderness beauty of Pine Creek.

The loggers followed the early settlers into Pine Creek, but extensive logging did not begin until the mid-1800's. In 1838, a sawmill was built at Williamsport, the first enterprise in a logging era that, within two decades, established Pennsylvania as the world's leading producer of lumber. Williamsport became known as the "Lumber Capital of the World". The eastern white pine that grew in the Pine Creek area were prized as the world's finest masts for sailing ships. At first, the logs were rafted down river; later free floating logs



Virgin Hemlocks on the Steep Slopes

were caught in a boom at Williamsport before it was broken open by the great flood of 1889. After the railroad tracks were laid along the Creek in 1883, the production of lumber increased. By 1910, the forests were gone and the mountains were bare. The loggers abandoned the valley, leaving ghost towns behind. The State bought up some of the logged-over lands to preserve them for future forests. Only a few areas were replanted; most of the denuded woodlands grew up again naturally to become healthy second-growth forests due to protection through State management.

There are a few historical landmarks from the 19th century in the area. The Pine Creek Church, built in 1838 in Ansonia, is the oldest church in the county. Another interesting church, located west of Wellsboro on Route 660, is known as the Little Red Church. The Primitive Baptist Church of Cammal is a simple frame church constructed in 1897. The Cedar Run General Store, built in 1895, is still operated in a 19th century manner. The Cedar Run Inn, a cross-gabled frame building, was important during the region's lumber and railroad days. It burned down in 1900, but was rebuilt along original designs.

Other industries flourished briefly in the valley. Quarries opened up around the turn of the century to obtain flagstones for sidewalks. These quarries died out, but have reopened in recent years. Coal mines opened and closed, leaving behind ghost towns. Now strip miners rework the coal seams, but there are fewer people along Pine Creek today than in the heydays of logging and coal mining. It is tourists, retirees, vacationists, hunters, and fishermen who are filling the valley with people again.



The Little Red Church

A more recent historical landmark is the Canyon Lodge, which was the former Leonard Harrison family lodge. Leonard Harrison State Park bears the name of its donor. A short distance from it stands a lodge which was the summer home of former Pennsylvania Governor William Stone and was reported to be one of Teddy Roosevelt's frequent outing spots for fishing.

Population

The Pine Creek study area, comprised of Tioga and Lycoming Counties, contained 152,987 people in 1970, a density of 64 persons per square mile. The area is primarily rural, with only 39% of the people living within the urban centers.

Not far from Pine Creek, however, are several major urban centers of the United States, including the Northeast megopolis to the east and the Pittsburgh-Cleveland-Buffalo population center to the west. In fact, 45 million people (23% of the U.S. population) are within a 250 mile radius of Pine Creek.

As indicated in Table A1.1, the population of the two-county area increased 4.7% in the 1960-1970 decade, while the statewide increase was 4% and the nationwide increase was 13%. Population projections for the area indicate continued growth through the year 2020.

TABLE A1.1

POPULATION

County	Land Area (sq.mi.)	Persons (sq.mi.)	Pct. Urban	Population		Projected Population		
				1960	1970	1980	2000	2020
Tioga	1,150	34	21	36,614	39,691	42,100	52,100	65,000
Lycoming	1,215	93	58	109,367	113,296	124,200	151,700	187,900
Total or Average	2,365	64	39	145,981	152,987	166,300	203,800	252,900

Within the study segment of Pine Creek, there are fifteen small settlements: Ansonia, Tiadaghton, Blackwell, Cedar Run, Cedar Pines, Hilburn, Slate Run, Ross Siding, Cammal, Bluestone, Jersey Mills, Waterville, Ramsey, Tombs Run, and Torbert. Together, these minor civil subdivisions contain about 4,000 people in an extremely light density.

Economy

Incomes in the two-county study area are slightly lower than the regional and national averages. Most of the employment is centered along the West Branch of the Susquehanna River where industrial development is concentrated, 12 miles downstream from the entrance of Pine Creek.

From 1850 to the turn of the century, lumber was the primary basis for the area's prosperity. However, overcutting of the forests and increasing competition from western timber lands diminished the importance of local sawmills. Today, the economy of the area is more diverse. Most of the labor force is involved in manufacturing; wholesale and retail trade; government services; transportation, communications, and public utilities; construction; farming; and forest products. The most important manufactures are fabricated metal products, textile mill products, electrical machinery, and furniture and fixtures. Within the visual corridor, however, only one sawmill is in operation. Tourism is on the increase, while the major economic activities on the decline are agriculture and mining.

According to the U.S. Forest Service, little of the land along the study segment meets the 5% slope and the size characteristics needed for industrial development. The shortage of a large labor force, industrial sites, industrial base, highway facilities, and immediate access to market areas are additional deterrents to heavy industrialization. Within the total study area, however, light industry, such as apparel and small specialized machinery parts manufacturing, could be attracted. Substantial economic growth lies in the development of the area's outstanding recreation and unique scenic qualities.

Employment and personal income projections by the Heritage Conservation and Recreation Service indicate continuous increases through 2020.

TABLE A1.2
EMPLOYMENT AND PERSONAL INCOME*

County	1970		1980		2000		2020	
	Employment	Personal Income \$						
Tioga	14,900	106,939	16,800	162,615	20,900	359,213	26,300	787,612
Lycoming	42,100	282,086	47,200	421,987	59,200	903,581	73,300	1,932,260
TOTAL	57,000	389,025	64,000	584,602	80,100	1,262,794	99,600	2,719,872

*Personal Income is in thousands of dollars.

Land Use and Ownership

Land uses along Pine Creek have been relatively stable but there is now an acceleration in cabin and residential development. The general trend is from agricultural land to forest land.

Within the study corridor of Pine Creek the major land uses are characterized as follows:

Residential land is clustered in the villages along Pine Creek. There are no permanent residences in the Canyon areas, however, there are several summer cabins. Most of the summer homes in the study area are located between Blackwell and Torbert. These developed areas account for 500 acres or 2% of the visual corridor.

Commercial land is located in the villages along Pine Creek and totals less than 10 acres in the study corridor.

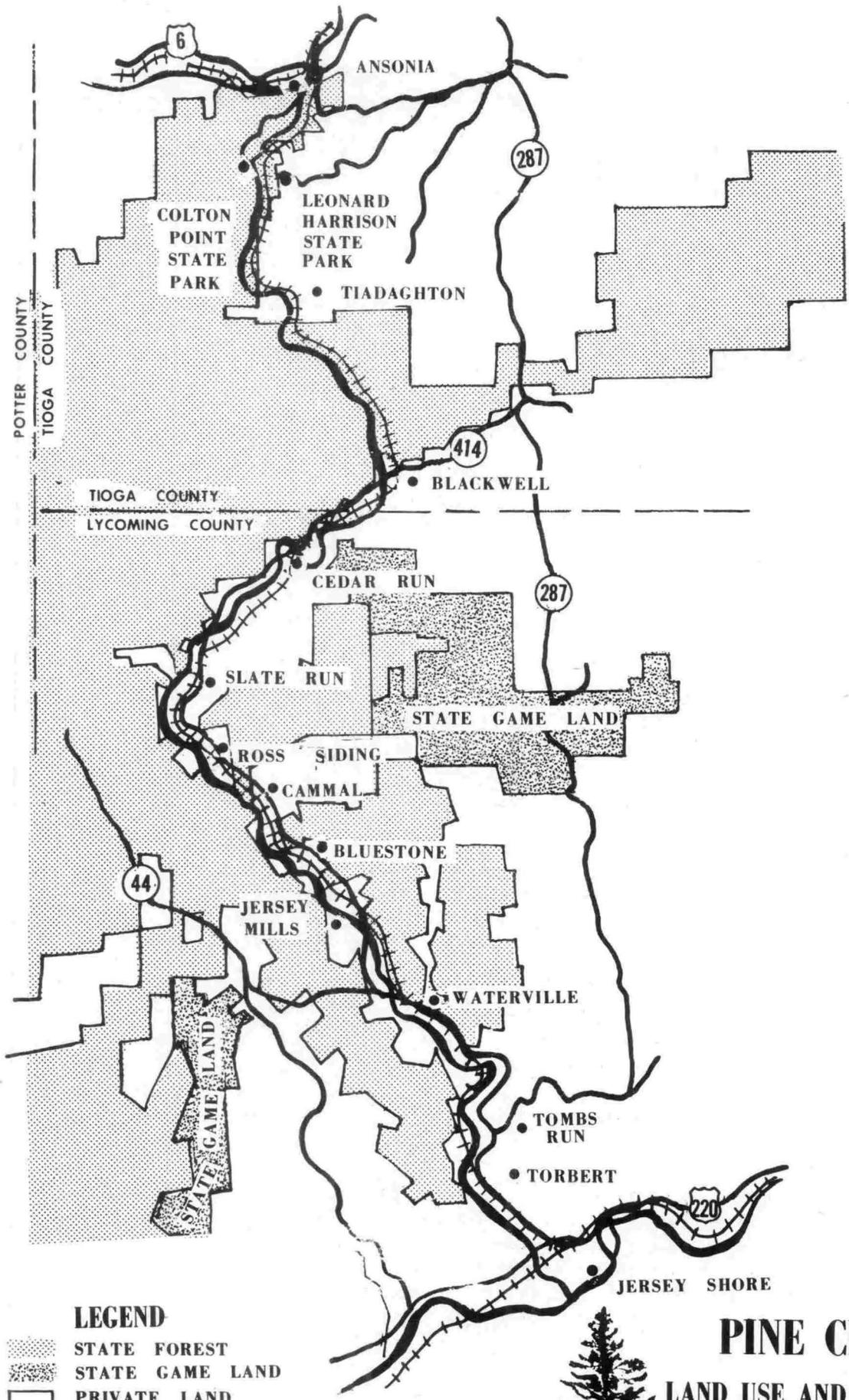
Industrial land is limited to one sawmill in Waterville which occupies less than one acre.

Agricultural lands account for 5% or 1,112 acres in the Pine Creek study segment which are located in the broad flood plains in the lower portions of the Creek. Agricultural uses include row crops, grazing, hay production, and poultry production for local consumption. A turkey farm, however, supplies outside communities.

Utility Companies' lands include Pennsylvania Electric Company and New York State Electric and Gas Corporation, with 230-kilovolt and 345-kilovolt transmission powerlines below Cammal. A 24-inch diameter natural gasline north of Tombs Run is owned by the Transcontinental Gas Pipeline Corporation.

Recreational lands in Pine Creek corridor include the forest, game lands and parks owned by the Commonwealth of Pennsylvania, which accounts for approximately 18,200 acres or 63% of the visual corridor. Access by road to much of the area along Pine Creek is very limited. This gives the recreationist a sense of being in a primitive or wilderness area.

Transportation within the study corridor is limited in the Canyon areas to the state park access roads, unpaved township roads and narrow winding rails. Below the Canyon, PA Route 414 parallels the Creek from Blackwell to Waterville and bridges the Creek four times. From Route 414, a few secondary roads and jeep trails extend to the Creek. A Con Rail line parallels the entire study segment, however, there is no passenger service. Approximately six freight trains pass through the corridor daily.

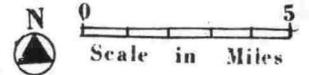


LEGEND

-  STATE FOREST
-  STATE GAME LAND
-  PRIVATE LAND
-  RAILROAD
-  DEVELOPED AREAS

PINE CREEK

LAND USE AND OWNERSHIP



Land Ownership within the Pine Creek visual corridor is 63% public and 37% private. Within the Canyon stretch, 87% of the land is in State ownership while in the lower reaches of the Creek, the State owns 57% of the land (Map, p. A1-21).

TABLE A1.3
LAND OWNERSHIP IN PINE CREEK STUDY CORRIDOR

State Forest Lands	17,000 acres
State Game Lands	800
State Park Lands	400
Private Land	10,500
Total	<u>28,700</u> acres

The largest block of private land is owned by Con Rail, which controls a 60 foot right-of-way along most of the east bank of the Creek for the entire study segment. The remainder of the private land is concentrated in the communities of Blackwell, Cedar Run, Slate Run, Cammal, Jersey Mills, and Waterville.

A survey of land owned along Pine Creek was conducted in 1970 by the Agricultural Experiment Station of the Pennsylvania State University. This survey indicated that 47% of the properties along Pine Creek are 1 to 2 acres in size with 31% being less than one acre and 22% being more than 21 acres. Length of ownership was 6 to 20 years in 52% of the cases, less than 5 years in 22% of the cases, and more than 21 years in 26% of the cases.

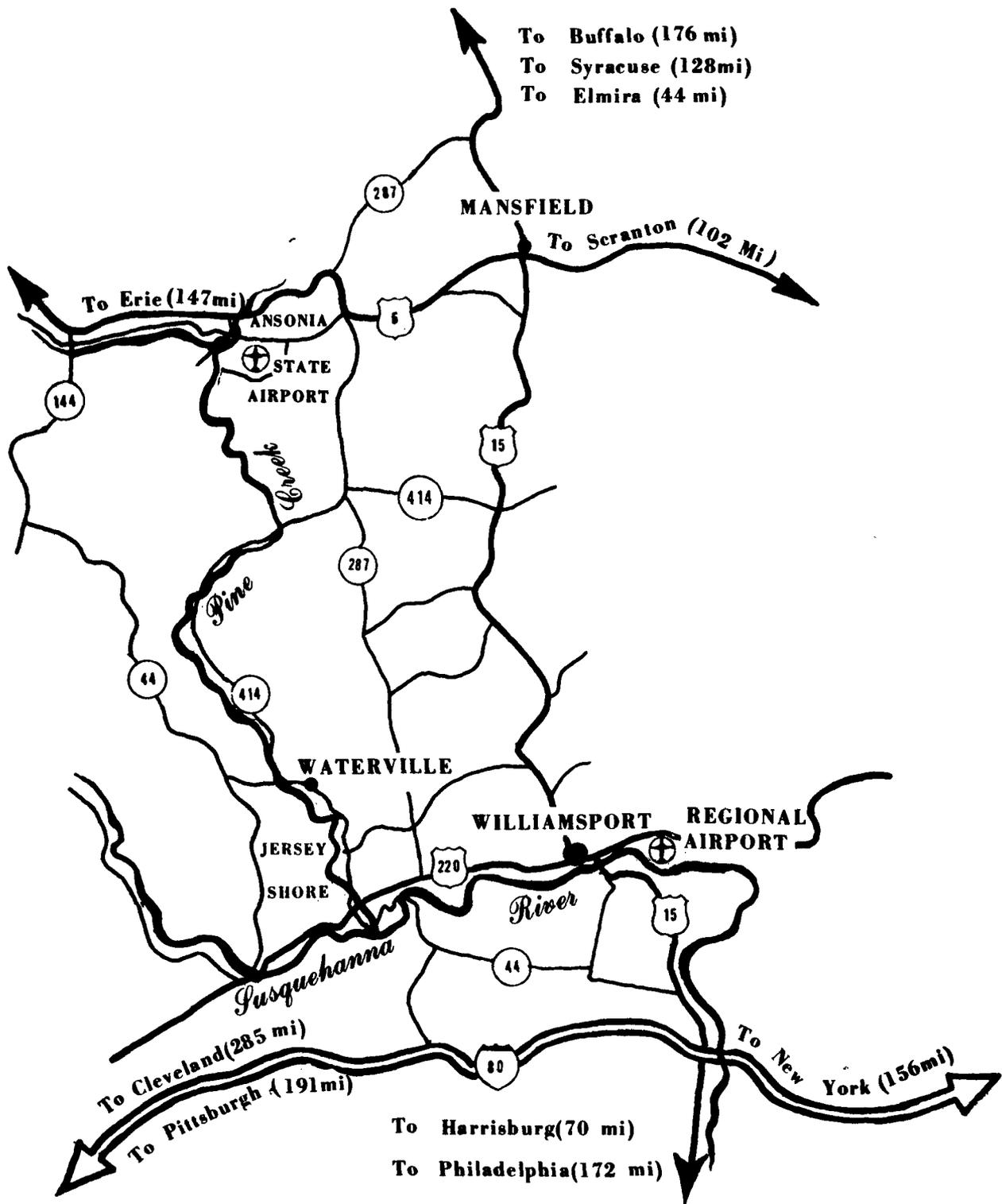
Water Rights and Ownership

The ownership of the entire river bottom of Pine Creek appears to belong to the Commonwealth of Pennsylvania. This is concluded from a review of the Commonwealth's statutes which state that all public highway waters were originally reserved from patent by the State. Thus, the Commonwealth has the water rights and has ownership of the entire river bottom of Pine Creek from low water mark to low water mark. The Commonwealth may, however, lease out subsurface mineral rights.

Regional Transportation and Access

Four major east-west highways and one north-south highway lie within 25 miles of Pine Creek (Map, p. A1-23). These are:

- NY Route 17 which passes to the north of Pine Creek
- US Route 6 which lies along the upstream terminus of the study segment
- US Route 220 which traverses Pine Creek near its mouth
- Interstate 80 which passes to the south, and
- US Route 15 which lies to the east of the area.



LEGEND

-  INTERSTATE HIGHWAY
-  U.S. HIGHWAY
-  STATE HIGHWAY
-  AIRPORT



PINE CREEK

REGIONAL TRANSPORTATION



With the exception of unpaved township roads to Owassee Rapids and Tiadaghton, the gorge is virtually inaccessible. A road leads to Colton Point Lookout along the west rim and Pennsylvania Route 660 reaches Leonard Harrison lookout on the east rim. Pennsylvania Route 414 parallels the creek from Blackwell to near Waterville, where it connects Pennsylvania Route 44. One road bridges the creek four times in the lower stretch and a few secondary roads and jeep trails extend to the creek. Although a Con Rail line parallels the entire study segment, there is no passenger service.

The Pennsylvania Department of Transportation has initiated or has plans to replace seven bridges in the visual corridor. The replacement of a bridge and road widening over Little Pine Creek at Waterville has priority. There are short-term plans (within 6 years) for bridge replacements over Pine Bottom Run, located 1.7 miles upstream from Waterville, and over Pine Creek at the community of Cedar Run. There are long-term plans (within 12 years) for bridge replacements over Cedar Run, over Pine Creek at Blackwell, and over Babb Creek at Blackwell.

Routes US 15 and US 220 are included in the proposed Appalachian Thruway which would extend from Cumberland, Maryland to Cortland, New York. This proposal includes the widening of these roads through Tioga and Lycoming Counties.

Williamsport is the major transportation center for the study area and provides long distance access by air and bus. Other transcontinental bus connections can be made from Wellsboro and Jersey Shore although the schedules are less frequent than from Williamsport. Also, two smaller airports located near the Canyon and Jersey Shore supplement the air service at Williamsport.



PA Route 414 Parallels the Lower Segment

Regional Recreation Resources

The 1972 Public Outdoor Recreation Area Inventory of the Heritage Conservation and Recreation Service identifies 427,995 acres of land and water as State and local recreation areas within the two-county area (Table 7). These lands include six impoundments totaling 363 acres of water surface which range in size from a surface area of 137 acres to small ponds and pools. In total, these public lands represent 27% of Tioga and Lycoming Counties and are 99% in State ownership.

The State owned recreation areas include 20,479 acres which are classified as Natural or Wild Areas in the State Forest System. A Natural Area is an area of unique scenic or ecological value which will be maintained in a relatively undisturbed manner for passive recreational activities. Wild areas also have an undeveloped character and will be maintained for active recreation, such as hunting, fishing, and hiking.

According to the Heritage Conservation and Recreation Service's system of classifying recreation resources, more than 99% of the recreation land is classified as natural environmental areas (Table 6). This type of area provides for activities that are most compatible with the natural environment, such as sightseeing, hiking, boating, camping, and picnicking. The remaining land, which is less than one percent of the total, is classified as primitive areas, general outdoor recreation areas, unique natural areas, and high density recreation areas.

TABLE A1.4
CLASSIFICATION OF RECREATION LAND (in acres)

County	High Density Recreation Areas	General Outdoor Recreation Areas	Natural Environmental Areas	Unique Natural Areas	Primitive Areas	Total
Tioga	13	227	181,178	300	500	182,218
Lycoming	30	150	245,597			245,777
Total	43	377	426,775	300	500	427,995
Percentage of Total	> 0.0%	> 0.0%	< 99.9%	> 0.0%	> 0.1%	100%

TABLE A1.5
PUBLIC OUTDOOR RECREATION AREAS

County	Recreation Areas	Land (Acres)	Wetlands & Water (Acres)	Total (Acres)
Tioga	Colton Point State Park	357	---	357
	Leonard Harrison State Park	585	---	585
	Hills Creek State Park	259	137	396
	Tioga State Forest	159,364	---	159,364
	State Game Land No. 37	12,920	100	13,020
	State Game Land No. 208	8,496	---	8,496
	TOTAL	181,981	237	182,218
Lycoming	Little Pine State Park	2,068	90	2,158
	Susquehanna State Park	20	---	20
	Tiadaghton State Forest	201,706	---	201,706
	State Game Land No. 68	3,035	---	3,035
	State Game Land No. 75	24,528	---	24,528
	State Game Land No. 114	2,311	---	2,311
	State Game Land No. 126	592	---	592
	State Game Land No. 133	2,349	---	2,349
	State Game Land No. 134	6,623	---	6,623
	State Wild Turkey Farm	1,552	---	1,552
	Loyalsock Game Farm	399	---	399
	Local Park & Recreation Area	504	---	504
TOTAL	245,687	90	245,777	
GRAND TOTAL		427,668	327	427,995

NOTE: The acreage of the Pine Creek Natural Area (5,720 acres) is included in the total for Tioga State Forest, while the acreage for Miller Run Natural Area (4,987 acres), Algerine Wild Area (4,077 acres), and Wolf Run Wild Area (7,716 acres) are included in the total for Tiadaghton State Forest.

Sources: U.S. Department of the Interior, Bureau of Outdoor Recreation, Public Outdoor Recreation Area Inventory -- Pine Creek Study, July 1972

Commonwealth of Pennsylvania, Department of Environmental Resources, Office of Resources Management, Pennsylvania Recreational Areas, September 1974

The public outdoor recreation supply in the two-county area includes the following:

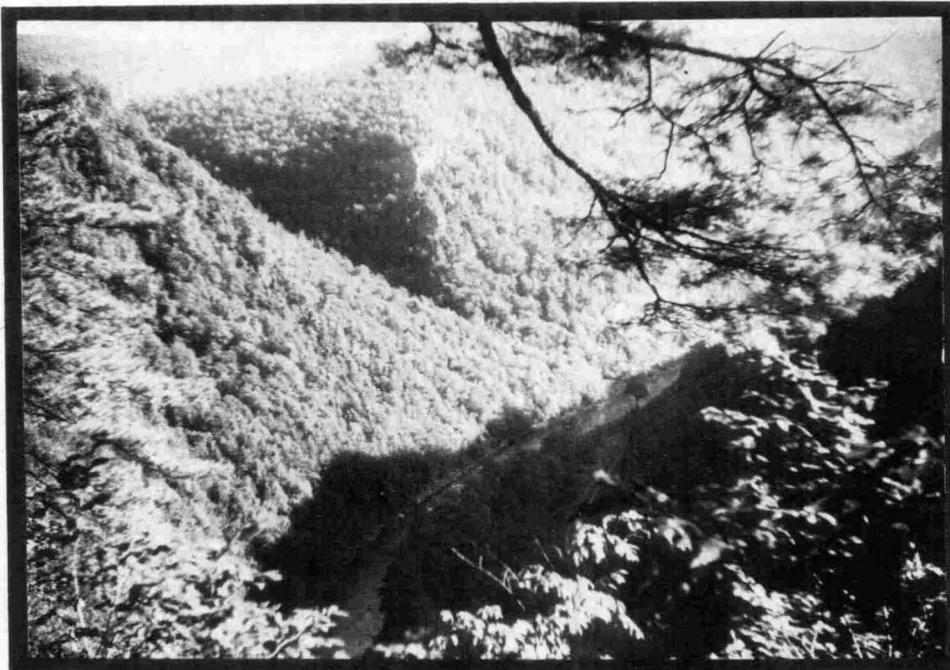
- 45 acres of campsites
- 235 acres of picnicking grounds
- 3 acres of boating access
- 7 acres of beach for swimming
- 2 acres for skiing
- 4 golf courses
- 40 miles of foot trails

Visitors are estimated at 1.2 million annually for the two counties. Only 42 thousand of these visitors stay overnight in the area.

A few of the special attractions in Tioga and Lycoming Counties are (1) the State Laurel Festival sponsored by the Wellsboro Chamber of Commerce which attracts over 40,000 people; and (2) the Annual Rattlesnake Hunt in Morris, sponsored by the National Rattlesnake Association of America which is attended by more than 10,000 people. Other features include bus, auto and airplane tours of the Pine Creek Canyon and a local museum and animal land.

Recreation Activities

Recreation in the study segment of Pine Creek includes water oriented activities and outdoor activities generally associated with State Park lands. According to the 1970 landowners survey by Penn State University, hunting, relaxing, or fishing were the first choice of 78% of the creek-front landowners. The popular second choices included fishing, swimming, boating, walking, hiking and hunting. It is believed that visitors to the area preferred camping, hunting and fishing.



The Rugged Scenery of the Gorge

A description of the major recreational activities in the Pine Creek area is as follows:

Canoeing, rafting, and kayaking are popular in the Canyon area of Pine Creek in the spring. This area receives 5,000 boaters annually. Although its flow is not extreme, the Creek offers a good opportunity to navigate a free-flowing stream with outstanding aesthetic values. Various portions of the stream have varying degrees of navigational difficulty. Table A1.6 estimates the difficulty and type of craft most likely to use that reach.

Hunting is very popular in the State game lands in Tioga and Lycoming Counties, especially for deer, bear and turkey. In 1975, the deer harvest in Tioga and Lycoming Counties ranked second and fourth in Pennsylvania respectively. In harvesting bear, Lycoming County was third and Tioga County was sixth statewide. The turkey harvest showed Lycoming Fourth and Tioga fifth in the state. Beaver, muskrat, mink and raccoon are harvested along Pine Creek as well as cottontail rabbit, woodchuck, striped skunk, red squirrel, red and gray fox, and opossum.

Fishing in Pine Creek and its tributaries is very good, consisting primarily of trout and bass. Annual stocking of trout is necessary in the spring and early summer to maintain harvestable supplies. Fishing is also popular during late summer and coldwater fishes are found near the mouths of tributary streams.

TABLE A1.6

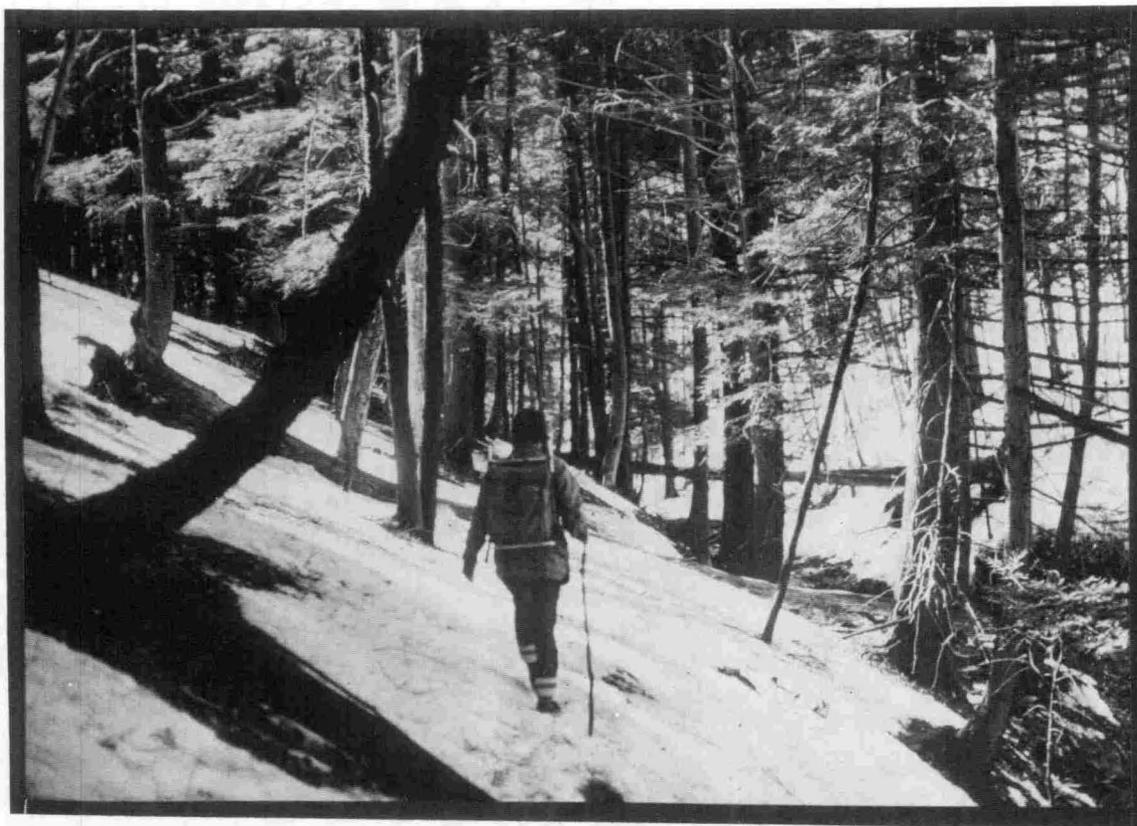
BOATING CONDITIONS

SEGMENT OF RIVER	DISTANCE (MILES)	DROP (FEET)	DEGREE OF DIFFICULTY	TYPE OF CRAFT	EXPERIENCE NEEDED BY USERS
Ansonia to Tiadaghton	9	245	Easy Medium Difficult	Canoe Kayak Raft	Intermediate
Tiadaghton to Blackwell	8	34	Easy Medium Difficult	Canoe Kayak Raft	Intermediate
Blackwell to Slate Run	11½	118	Easy Medium	Canoe Raft	Beginner
Slate Run to Cammal	6½	63	Easy Medium	Canoe Raft	Beginner
Cammal to Waterville	10	64	Easy Medium	Canoe Raft	Beginner
Waterville to Torbert	8	50	Easy Medium	Canoe Raft	Beginner

Sightseeing and hiking are very popular along the many trails and lookout points in the area. Turkey Park Trail at Colton Point State Park and Turkey Path at Leonard Harrison State Park are very popular and have picnicking facilities as well. The Golden Eagle Trail covers an eight mile loop on the east side of Pine Creek south of Slate run. Other trails in the area include the Black Forest Trail which parallels the valley to the west of Slate Run and connects with other westward trails, and the Loyalsock Trail which connects Lycoming County with Worlds End State Park to the east. Many old logging-roads, railroad grades and fire roads provide undesigantated trails for exploring the area and represent opportunities to establish trails along the river in some of the roadless areas.

Camping in the Pine Creek corridor is participated in by canoeists and backpackers. There are many campsites along the Creek, and its trails and camping appear to be quite popular.

Although the Pine Creek area is already popular for recreation activities and contains much publicly owned recreation lands, the necessity for inclusion of Pine Creek in a wild and scenic rivers system is in no way lessened. Protection of the river in a free-flowing condition and natural state is warranted. Heavy recreation use of the surrounding area dictates that protection is needed to prevent overuse. Also, Pine Creek as a scenic river would serve as a focal point for the region.



Winter Scene in a Tributary Valley

Water Resources Development

Reservoir Development - The Corps of Engineers had considered and evaluated a multiple purpose dam site near Cammal as part of the Susquehanna River Basin Flood Control Review Study. Preliminary evaluations indicate that the project purposes would be flood control, low flow augmentation downstream, and recreation. Recently, however, the Corps has reported that at the request of the Commonwealth of Pennsylvania, the Baltimore District is no longer considering the Cammal Lake Project. Should hydropower facilities be established, river recreation opportunities would be foregone due to excessive and periodic draw downs required for power production. The dam would have eliminated the free-flowing condition of the stream from one-half mile upstream from Cammal to the vicinity of Pine Island Run, a distance of 23 miles. At a storage level of 947 feet mean sea level, the pool area would have been over 4,900 acres. It would have had a capacity of 85,000 kilowatts and an annual generation of 130 million kilowatt hours.

Erosion Control Measures - In September 1977, the Soil Conservation Service constructed 810 cubic yards of rock riprap near Cammal. The streambank stabilization project involved approximately 410 feet of rock riprap of the east bank of Pine Creek. The streambanks were graded and filled to a 1.5:1 slope to accommodate one yard of rock riprap. A cut along the stream's edge was also required. It also included gravel removal from Bluestone Run and Truman Run near the confluence with Pine Creek.

Energy Park Site - A site near Cherry Flats, 15 miles to the east of the Pine Creek Gorge, was one of the ten energy park sites under consideration for further study statewide by the Governor's Energy Council and four power companies. There were plans for a reservoir on location with water pumped from Pine Creek and Tioga Creek. A dam would not be required on Pine Creek, but an intake would be located within the main stem just downstream from Blackwell. Water would be pumped from Pine Creek 73% of the time during high flows at the rate of 460 cfs. This rate of withdrawal would be approximately one-fourth of the mean monthly flow. Air pollution would be increased around the site area and precipitation and severe storm activity would be increased up to 35 miles from the site. This is a result of the large amount of water vapor and waste heat injected into the atmosphere above a relatively small area. However, investigations to locate a facility site for an energy park in Pennsylvania have been suspended indefinitely.

APPENDIX 2

PRINCIPLES AND STANDARDS DISPLAY ACCOUNTS

The system of public information accounts is a concise summary of the discussion in the body (pp. 42 and 43) of the report, presented in tabular form. The four accounts display gains and losses of each alternative plan on Environmental Quality, National Economic Development, Regional Economic Development, and Social Well-Being. The systematic comparison of the performance of the given alternatives with each other allows a decision maker to make an informal choice of the most desirable alternative plan.

The following five tables are provided in accord with the informational requirements of the U.S. Water Resources Council's Principles and Standards for Water and Related Land Planning.

- Table 1. Gross Effects of the Alternative Plans
- Table 2. Proposal and the Net Effects of the Alternative Plans
- Table 3. Visual Corridor Plan and the Net Effects of the Maximum Environmental Protection Plan
- Table 4. Visual Corridor Plan and the Net Effects of the Economic Development Plan
- Table 5. Maximum Environmental Protection Plan and the Net Effects of the Economic Development Plan

Interpretation

As an example, the display account for the Recommended Plan and the Net Effects of the Alternative Plans would be interpreted as follows:

Total land acres protected: 28,700 (Existing Trends Gross Effect); -5700 (Visual Corridor Net Effect); +49,900 (Maximum Environmental Protection Net Effects) and -5700 (Economic Development Net Effect). This indicates that the Existing Trends Plan would protect 28,700 acres of land and that the net effect of the Visual Corridor Plan alternative would protect 5700 fewer acres of land than the Existing Trends Plan (the Proposal). The Maximum Environmental Protection Plan would protect 49,900 more acres of land, The Economic Development Plan would protect 5700 fewer acres of land.

Several of the measurements are qualitative rather than quantitative. These have been rated according to the degree of impact, ranging from "high adverse" (HA) to "highly Protective" (HP). For example:

Impact on Scenic Values: Existing Trends Cross Effects - HP. Visual Corridor Net Effect - N. Maximum Environmental Protection Net Effect - N. Economic Development Net Effect - Very Unfavorable.

HP indicates that the Existing Trends Plan would have a highly protective effect on the scenic values of the Pine Creek area. In comparison, the Visual Corridor Plan and the Maximum Environmental Protection Plan indicate that there is (N) no significant difference between their respective effects and the Existing Trends Plan. By comparison, the Economic Development Plan would have, to a degree, a very unfavorable effect in the scenic values.

Legends for Principles and Standards Display Accounts

A positive number in the Net Effect column indicates the amount by which that plan exceeds the Gross Effects of the plan in comparison. A negative number in the Net Effects column indicates the amount by which that plan has a value less than the value of the Gross Effects of the plan in comparison.

Degree of Impact

HP = Highly protective
MP = Moderately protective
NE = No significant effect
MA = Moderately adverse
HA = Highly adverse
N = No significant difference

DISPLAY ACCOUNTS: GROSS EFFECTS OF ALTERNATIVE PLANS

ACCOUNT	COMPONENTS	EXISTING TRENDS GROSS EFFECT	VISUAL CORRIDOR GROSS EFFECT	MAXIMUM ENVIRONMENTAL PROTECTION GROSS EFFECT	ECONOMIC DEVELOPMENT GROSS EFFECT
ENVIRONMENTAL QUALITY	1. Total Protected River Miles: Scenic-Free Flowing	52	46	46	23
	2. Total Land Acreage Protected	28,700	23,000	78,600	23,000
	3. Existing Public Lands	18,200	15,200	63,800	15,200
	4. Fee Acquisition	500	500	4,000	3,400
	5. Conservation Zoning	10,000	7,300	10,800	1,900
	6. Land Ownership Pattern: % Public	63	68	86	81
	7. Flood Plain Protected	2,200	1,800	1,800	340
	8. Productivity of Fishery	HP	HP	HP	MP
	9. Productivity of Wildlife	HP	HP	HP	MA
NATIONAL ECONOMIC DEVELOPMENT	10. TOTAL CAPITAL EXPENDITURES (1978 \$)	457,000	417,700	3,165,300	7,296,500
	11. Land Acquisition	180,000	180,000	2,997,600	1,010,100
	12. Seasonal Dwellings Acquisition Number/Dollars	10/120,000	10/120,000	10/120,000	+215/5,155,800
	13. Recreation Development	157,000	117,700	47,700	1,130,500
	14. Annual Operation and Maintenance	23,000	17,200	5,400	48,100
	15. Commercial Timber Foregone (1978 \$)	0	0	862,500	0
	16. Year 1980 Recreator Expenditure	4,980,000	4,980,000	4,524,000	9,500,000
	17. Year 1990 Recreator Expenditure	5,484,000	5,484,000	4,524,000	39,500,000
	18. Year 1980 Recreation Jobs	150	150	100	175
19. Year 1990 Recreation Jobs	200	200	100	200	
REGIONAL ECONOMIC DEVELOPMENT	20. TOTAL CAPITAL EXPENDITURES (1978 \$)	210,000	191,750	1,445,750	135,600
	21. Land Acquisition	82,500	82,500	1,368,750	0
	22. Seasonal Dwellings Acquisition Number/Dwellings	10/55,000	10/55,000	10/55,000	0
	23. Recreation Development	72,500	54,250	22,000	135,600
	24. Annual Operation and Maintenance	22,000	16,500	5,200	21,000
	25. Year 1980 Expenditures by Out-of-State Visitors	2,490,000	2,490,000	2,262,000	4,750,000
	26. Year 1990 Expenditures by Out-of-State Visitors	2,742,000	2,742,000	2,262,000	19,750,000
	27. Year 1980 Recreation Jobs from Out-of-State Visitor Spending	75	75	50	88
	28. Year 1990 Recreation Jobs from Out-of-State Visitor Spending	100	100	50	100
29. Annual County Real Estate Tax Foregone (1978 \$)	175	175	440	950	
SOCIAL BEING	30. Impact on Scenic Values	HP	HP	HP	MA
	31. Diversity of Recreation	NE	NE	NE	MP
	32. Year 1980 Number of Recreators	415,000	415,000	377,000	528,000
	33. Year 1990 Number of Recreators	457,000	457,000	377,000	2,195,000
	34. Recreation Facility Sites Available	8	6	3	6

DISPLAY ACCOUNT: RECOMMENDED PLAN* AND THE NET EFFECTS OF THE ALTERNATIVE PLANS

ACCOUNT	COMPONENTS	EXISTING* TRENDS GROSS EFFECT	VISUAL CORRIDOR NET EFFECT	MAXIMUM ENVIRONMENTAL PROTECTION NET EFFECT	ECONOMIC DEVELOPMENT NET EFFECT
ENVIRONMENTAL QUALITY	1. Total Protected River Miles: Scenic-Free Flowing	52	-6	-6	-29
	2. Total Land Acreage Protected	28,700	-5,700	+49,900	-5,700
	3. Existing Public Lands	18,200	-3,000	+45,600	-3,000
	4. Fee Acquisition	500	N	+3,500	+2,900
	5. Conservation Zoning	10,000	-2,700	+800	-8,100
	6. Land Ownership Pattern: % Public	63	+5	+23	+18
	7. Flood Plain Protected	2,200	-400	-400	-1,860
	8. Productivity of Fishery	HP	N	N	Unfavorable
	9. Productivity of Wildlife	HP	N	N	Very Unfavorable
NATIONAL ECONOMIC DEVELOPMENT	10. TOTAL CAPITAL EXPENDITURES (1978 \$)	457,000	-40,000	+2,708,300	+6,839,500
	11. Land Acquisition	180,000	N	+2,817,500	+830,100
	12. Seasonal Dwellings Acquisition Number/Dollars	10/120,000	N	N	+205/5035800
	13. Recreation Development	157,000	-39,300	-110,300	+973,500
	14. Annual Operation and Maintenance	23,000	-5,800	-17,600	+25,100
	15. Commercial Timber Foregone (1978 \$)	0	N	+862,500	N
	16. Year 1980 Recreator Expenditure	4,980,000	N	-456,000	+4,520,000
	17. Year 1990 Recreator Expenditure	5,484,000	N	-960,000	+34,016,000
	18. Year 1980 Recreation Jobs	150	N	-50	+25
19. Year 1990 Recreation Jobs	200	N	-100	N	
REGIONAL ECONOMIC DEVELOPMENT	20. TOTAL CAPITAL EXPENDITURES (1978 \$)	210,000	-18,250	+1,235,750	-74,400
	21. Land Acquisition	82,500	N	+1,286,250	-82,500
	22. Seasonal Dwellings Acquisition Number/Dwellings	10/55,000	N	N	-10/-55,000
	23. Recreation Development	72,500	-18,250	-50,500	+63,100
	24. Annual Operation and Maintenance	22,000	-5,500	-16,800	+5,500
	25. Year 1980 Expenditures by Out-of-State Visitors	2,490,000	N	-228,000	+2,260,000
	26. Year 1990 Expenditures by Out-of-State Visitors	2,742,000	N	-480,000	+17,008,000
	27. Year 1980 Recreation Jobs from Out-of-State Visitor Spending	75	N	-25	+13
	28. Year 1990 Recreation Jobs from Out-of-State Visitor Spending	100	N	-50	N
29. Annual County Real Estate Tax Foregone (1978 \$)	175	N	+265	+775	
SOCIAL BEING	30. Impact on Scenic Values	HP	N	N	Very Unfavorable
	31. Diversity of Recreation	NE	N	N	Unfavorable
	32. Year 1980 Number of Recreators	415,000	N	-38,000	113,000
	33. Year 1990 Number of Recreators	457,000	N	-80,000	+1,738,000
	34. Recreation Facility Sites Available	7	+1	-4	1

ACCOUNT	COMPONENTS	VISUAL CORRIDOR GROSS EFFECT	MEP GROSS EFFECT	MEP NET EFFECT
ENVIRONMENTAL QUALITY	1. Total Protected River Miles: Scenic-Free Flowing	46	46	N
	2. Total Land Acreage Protected	23,000	78,600	+55,600
	3. Existing Public Lands	15,200	63,800	+48,600
	4. Fee Acquisition	500	4,000	+3,500
	5. Conservation Zoning	7,300	10,800	+3,500
	6. Land Ownership Pattern: % Public	68	86	+18
	7. Flood Plain Protected	1,800	1,800	N
	8. Productivity of Fishery	HP	HP	N
	9. Productivity of Wildlife	HP	HP	N
NATIONAL DEVELOPMENT ECONOMIC	10. TOTAL CAPITAL EXPENDITURES (1978 \$)	417,700	3,165,300	+2,747,600
	11. Land Acquisition	180,000	2,997,500	+2,817,500
	12. Seasonal Dwellings Acquisition Number/Dollars	10/120,000	10/120,000	N
	13. Recreation Development	117,700	47,700	-70,000
	14. Annual Operation and Maintenance	17,200	5,400	-11,800
	15. Commercial Timber Foregone (1978 \$)	0	862,500	+862,500
	16. Year 1980 Recreator Expenditure	4,980,000	4,524,000	-456,000
	17. Year 1990 Recreator Expenditure	5,484,000	4,524,000	-960,000
	18. Year 1980 Recreation Jobs	150	100	-50
19. Year 1990 Recreation Jobs	200	100	-100	
REGIONAL DEVELOPMENT ECONOMIC	20. TOTAL CAPITAL EXPENDITURES (1978 \$)	191,750	1,445,750	+1,254,000
	21. Land Acquisition	82,500	1,368,750	+1,286,250
	22. Seasonal Dwellings Acquisition Number/Dwellings	10/55,000	10/55,000	N
	23. Recreation Development	54,250	22,000	-32,250
	24. Annual Operation and Maintenance	16,500	5,200	-11,300
	25. Year 1980 Expenditures by Out-of-State Visitors	2,490,000	2,262,000	-228,000
	26. Year 1990 Expenditures by Out-of-State Visitors	2,742,000	2,262,000	-480,000
	27. Year 1980 Recreation Jobs from Out-of-State Visitor Spending	75	50	-25
	28. Year 1990 Recreation Jobs from Out-of-State Visitor Spending	100	50	-50
29. Annual County Real Estate Tax Foregone (1978 \$)	175	440	+265	
WELL BEING	30. Impact on Scenic Values	HP	HP	N
	31. Diversity of Recreation	NE	NE	N
	32. Year 1980 Number of Recreators	415,000	377,000	-38,000
	33. Year 1990 Number of Recreators	457,000	377,000	-80,000
	34. Recreation Facility Sites Available	6	3	-3

DISPLAY ACCOUNT: VISUAL CORRIDOR PLAN/ECONOMIC DEVELOPMENT PLAN

ACCOUNT	COMPONENTS	VISUAL CORRIDOR GROSS EFFECT	ECONOMIC DEVELOPMENT GROSS EFFECT	ECONOMIC DEVELOPMENT NET EFFECT
ENVIRONMENTAL QUALITY	1. Total Protected River Miles: Scenic-Free Flowing	46	23	-23
	2. Total Land Acreage Protected	23,000	23,000	N
	3. Existing Public Lands	15,200	15,200	N
	4. Fee Acquisition	500	3,400	+2,900
	5. Conservation Zoning	7,300	1,900	-5,400
	6. Land Ownership Pattern: % Public	68	81	+13
	7. Flood Plain Protected	1,800	340	-1,460
	8. Productivity of Fishery	HP	MP	Unfavorable
	9. Productivity of Wildlife	HP	MA	Very Unfavorable
NATIONAL ECONOMIC DEVELOPMENT	10. TOTAL CAPITAL EXPENDITURES (1978 \$)	417,700	7,296,000	+6,878,300
	11. Land Acquisition	180,000	1,010,100	+830,100
	12. Seasonal Dwellings Acquisition Number/Dollars	10/120,000	215/5,155,800	+205/5,035,800
	13. Recreation Development	117,700	1,130,500	+1,012,800
	14. Annual Operation and Maintenance	17,200	48,100	+30,900
	15. Commercial Timber Foregone (1978 \$)	0	0	N
	16. Year 1980 Recreator Expenditure	4,980,000	9,500,000	+4,520,000
	17. Year 1990 Recreator Expenditure	5,484,000	39,500,000	+34,016,000
	18. Year 1980 Recreation Jobs	150	175	+25
19. Year 1990 Recreation Jobs	200	200	N	
REGIONAL ECONOMIC DEVELOPMENT	20. TOTAL CAPITAL EXPENDITURES (1978 \$)	191,750	135,600	-55,150
	21. Land Acquisition	82,500	0	-82,500
	22. Seasonal Dwellings Acquisition Number/Dwellings	10/55,000	0	-10/55,000
	23. Recreation Development	54,250	135,600	+81,350
	24. Annual Operation and Maintenance	16,500	21,000	+4,500
	25. Year 1980 Expenditures by Out-of-State Visitors	2,490,000	4,750,000	+2,260,000
	26. Year 1990 Expenditures by Out-of-State Visitors	2,742,000	19,750,000	+17,008,000
	27. Year 1980 Recreation Jobs from Out-of-State Visitor Spending	75	88	+13
	28. Year 1990 Recreation Jobs from Out-of-State Visitor Spending	100	100	N
29. Annual County Real Estate Tax Foregone (1978 \$)	175	950	775	
SOCIAL BEING	30. Impact on Scenic Values	HP	MA	Very Unfavorable
	31. Diversity of Recreation	NE	MP	Favorable
	32. Year 1980 Number of Recreators	415,000	528,000	+113,000
	33. Year 1990 Number of Recreators	457,000	2,195,000	+1,738,000
	34. Recreation Facility Sites Available	6	6	N

ACCOUNT	COMPONENTS	MEP GROSS EFFECT	ECONOMIC DEVELOPMENT GROSS EFFECT	ECONOMIC DEVELOPMENT NET EFFECT
ENVIRONMENTAL QUALITY	1. Total Protected River Miles: Scenic-Free Flowing	46	23	-23
	2. Total Land Acreage Protected	78,600	23,000	-55,600
	3. Existing Public Lands	63,800	15,200	-48,600
	4. Fee Acquisition	4,000	3,400	-600
	5. Conservation Zoning	10,800	1,900	-8,900
	6. Land Ownership Pattern: % Public	86	81	-5
	7. Flood Plain Protected	1,800	340	-1,460
	8. Productivity of Fishery	HP	MP	Unfavorable
	9. Productivity of Wildlife	HP	MA	Very Unfavorable
NATIONAL ECONOMIC DEVELOPMENT	10. TOTAL CAPITAL EXPENDITURES (1978 \$)	3,165,300	7,296,500	+4,131,200
	11. Land Acquisition	2,997,500	1,010,100	-1,987,400
	12. Seasonal Dwellings Acquisition Number/Dollars	10/120,000	215/5,155,800	+205/5035,800
	13. Recreation Development	47,700	1,130,500	+1,082,800
	14. Annual Operation and Maintenance	5,400	48,100	+42,700
	15. Commercial Timber Foregone (1978 \$)	862,500	0	-862,500
	16. Year 1980 Recreator Expenditure	4,524,000	9,500,000	+4,976,000
	17. Year 1990 Recreator Expenditure	4,524,000	39,500,000	+34,976,000
	18. Year 1980 Recreation Jobs	100	175	+75
19. Year 1990 Recreation Jobs	100	200	+100	
REGIONAL ECONOMIC DEVELOPMENT	20. TOTAL CAPITAL EXPENDITURES (1978 \$)	1,445,750	125,000	-1,320,750
	21. Land Acquisition	1,368,750	0	-1,368,750
	22. Seasonal Dwellings Acquisition Number/Dwellings	10/55,000	0	-10/55,000
	23. Recreation Development	22,000	135,600	+113,600
	24. Annual Operation and Maintenance	5,200	21,000	+15,800
	25. Year 1980 Expenditures by Out-of-State Visitors	2,262,000	4,750,000	+2,488,000
	26. Year 1990 Expenditures by Out-of-State Visitors	2,262,000	19,750,000	+17,488,000
	27. Year 1980 Recreation Jobs from Out-of-State Visitor Spending	50	88	+38
	28. Year 1990 Recreation Jobs from Out-of-State Visitor Spending	50	100	+50
29. Annual County Real Estate Tax Foregone (1978 \$)	440	950	+510	
WELL BEING SOCIAL	30. Impact on Scenic Values	HP	MA	Very Unfavorable
	31. Diversity of Recreation	NE	MP	Favorable
	32. Year 1980 Number of Recreators	377,000	528,000	+151,000
	33. Year 1990 Number of Recreators	377,000	2,195,000	+1,818,000
	34. Recreation Facility Sites Available	3	6	+3

APPENDIX 3

ZONING*

The municipality is given the power to regulate by zoning ordinance the uses of land and water, the height, bulk, and location of structures, the area of yards and other open spaces, and density of population, and to divide the municipality into uniform districts for different situations, uses and structures, such as trades and residences 1/. Normal provision is made for non-conforming uses and variances. Additional classifications may be made within zoning districts which must otherwise be uniform for the purpose of making transitional provisions at or near boundaries of district and to regulate non-conforming uses and in certain special areas.

Special resource protection zoning districts are possible because of provision for the regulation, restriction, or prohibition of uses and structures at or near bodies of water, places of relatively steep slopes, flood plains, historic sites, and at places having a special character or use affecting and affected by their surroundings 2/. Municipalities have recently been authorized to establish Environmental Advisory Councils which could assist them to manage such zoning districts 3/.

Criteria are set down which limit the use of zoning power to questions concerning the health, safety, morals, and welfare of the citizens of the municipality 4/. Regarding safety, the danger of fire and flood and disaster are the prime concerns. The availability of light, air, access and avoidance of overcrowding are considerations for public health. Under the more general scope of public welfare, community development, avoidance of blight and the character of the municipality are questions to be considered.

Sections 11101 to 11107 of the Municipalities Planning Code are designed to coordinate municipal zoning and planning actions of contiguous municipalities. The governing bodies of two or more municipalities may establish a joint planning commission and pay its staff and operating expenses. The commission may receive government grants and must prepare a comprehensive plan.

1/ Pa. Stat. Ann. tit. 53, 106013.

2/ Pa. Stat. Ann. tit. 53, 10605(2)

3/ Pa. Gen. Assemb. Act of Dec. 21, 1973 (1973 PN 1957, No. 208)

4/ Pa. Stat. Ann. tit. 53, 10604.

*Source: T. M. Schmidt, Laws which Regulate Land Use in Pennsylvania
Prepared for the Pennsylvania Office of State Planning and
Development, February 1975.

The status of local zoning is summarized as follows:

Tioga County - All townships have a building permit ordinance; a permit is needed to build. No residents are being built in the flood plain. All townships are participating in the Federal Flood Insurance Program. Most of the land in the townships is in State forest.

Shippen Township - no zoning

Delmar Township - in the process of developing a comprehensive plan with zoning regulations and subdivision regulations.

Elk Township - no zoning

Morris Township - no zoning

Lycoming County - All townships are under county subdivision ordinance and are participating in the Federal Flood Insurance Program. Building permits are required from the county to build. Restricted development may occur in flood plain.

Brown Township - no zoning

McHenry Township - no zoning

Cummings Township - no zoning

Watson Township - no zoning

PHOTOGRAPHY CREDITS

Heritage Conservation and Recreation Service

Pages 5, 9, 11, 30, 46, 47, 50, 56, 58, A1-4, A1-11, A1-14, A1-16,
A1-17, A1-24, A1-27

Timothy Palmer, Lycoming County Planning Commission

Pages 4, 7, 8, 14, 17, 26, 34, 40, 59, A1-3, A1-12, A1-13, A1-29



COMMONWEALTH OF PENNSYLVANIA
OFFICE OF THE GOVERNOR
HARRISBURG

MILTON J. SHAPP
GOVERNOR

December 14, 1977

The Honorable Cecil D. Andrus
Secretary of the Interior
U. S. Department of the Interior
Washington, D. C. 20240

Dear Secretary Andrus:

Thank you for the opportunity to comment on the U. S. Department of the Interior's draft report and draft environmental impact statement on the proposed Pine Creek Wild and Scenic River in Pennsylvania.

The Commonwealth of Pennsylvania generally concurs with the conclusions and recommendations forwarded in these plans. I note, however, that in the statement of the State Policy on Pine Creek on pages 47 and 48 of the Pine Creek study draft, the next to the last paragraph of Pennsylvania's March 15, 1976 statement has been omitted. This is a very important paragraph with regard to Pennsylvania's position and should be included.

Pennsylvania's Department of Environmental Resources has been working closely with Interior's Bureau of Outdoor Recreation, Northeast Regional Office.

I, therefore, am including a copy of the detailed comments which have been provided to Mr. Maurice Arnold of Interior's Northeast Regional Office, Bureau of Outdoor Recreation by Pennsylvania's Department of Environmental Resources.

Sincerely,

A handwritten signature in cursive script, reading "Milton J. Shapp".

MILTON J. SHAPP
Governor



DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
WASHINGTON, D.C. 20310

19 DEC 1977

Honorable Cecil D. Andrus
Secretary of the Interior
Washington, D.C. 20240

Dear Mr. Secretary:

This is in reply to your letter to the Secretary of the Army requesting our comments on your proposed report and draft environmental impact statement on the addition of a 51.7 mile segment of Pine Creek, Pennsylvania, to the National Wild and Scenic River System.

We have reviewed the documents and find that your proposal will not have any significant impact on the Corps of Engineers program for the area.

We appreciate the opportunity to review your proposed report and draft environmental impact statement.

Sincerely yours,

A handwritten signature in cursive script that reads "Charles R. Ford".

Charles R. Ford
Acting Assistant Secretary of the Army
(Civil Works)





DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1715
BALTIMORE, MARYLAND 21203

REPLY TO ATTENTION OF:

NABPL-E

2 November 1977

Mr. Maurice D. Arnold
Regional Director
Bureau of Outdoor Recreation
Federal Office Building - Room 9310
600 Arch Street
Philadelphia, Pennsylvania 19106

Dear Mr. Arnold:

The Baltimore District, Corps of Engineers, has reviewed the Revised Draft Report for the Pine Creek Wild and Scenic River Study forwarded to our office. As we commented to your office, 13 January 1976, on the Draft Report on the Pine Creek Wild and Scenic River Study, we find the Revised Draft Study to be very well written and comprehensive in covering the Pine Creek Study. We concur with the overall substance and conclusions contained in the draft Pine Creek Study, but inclose the following comment to assist your office in preparing the final report.

The second sentence in item 1 on page 35 should be revised as follows, "The U.S. Army Corps of Engineers had considered and evaluated a multiple purpose lake site at Cammel within the study segment of Pine Creek. However, at the request of the State of Pennsylvania, the Baltimore District is no longer considering the Cammel Lake Project."

We appreciate this opportunity to comment and if we can be of further assistance to you in the future, please feel free to contact us.

Sincerely yours,


WILLIAM E. TRIESCHMAN, Jr.
Chief, Planning Division



UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
1500 North Second Street
Harrisburg, PA 17102

DES-77/31

NOV 9 1977

MEMORANDUM

TO: Regional Director, Bureau of Outdoor Recreation
Philadelphia, PA

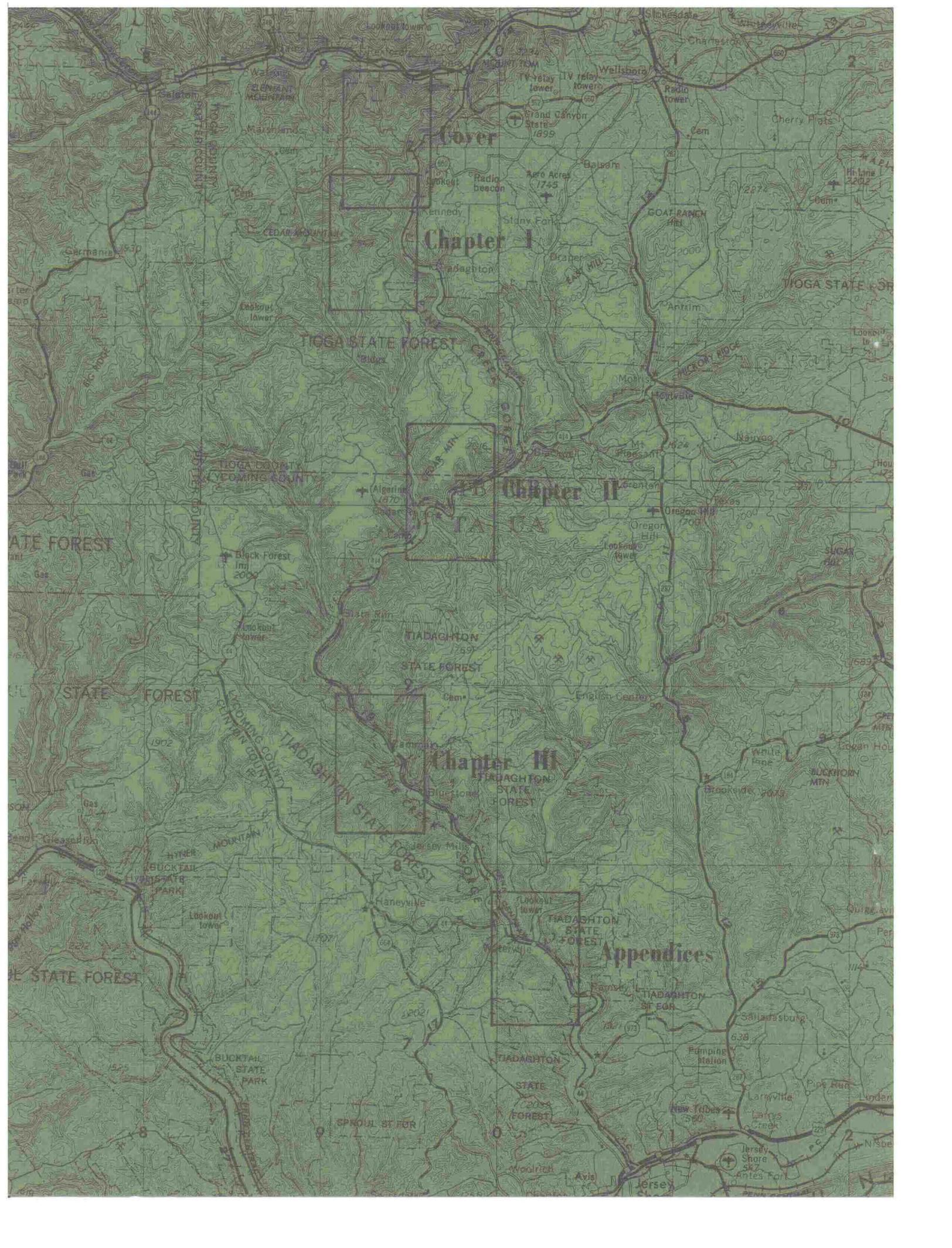
FROM: Area Manager, Fish and Wildlife Service
Harrisburg, PA

SUBJECT: Review of draft report, Pine Creek Wild and Scenic Rivers Study

The Service concurs with the basic substance, conclusions and recommendations of the draft report. We have no further comments to offer.

Norman R. Chapp





Cover

Chapter I

Chapter II

Chapter III

Appendices