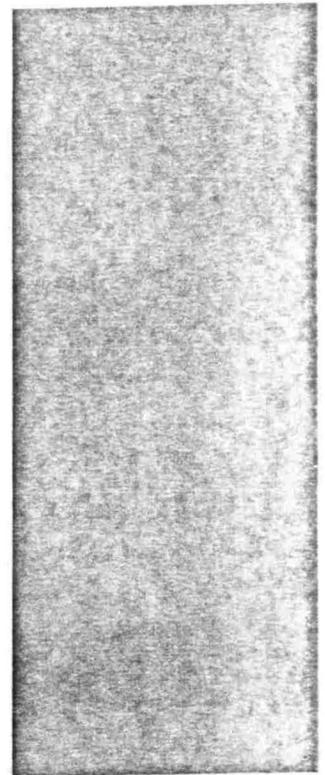


draft wild and scenic river report
draft environmental statement

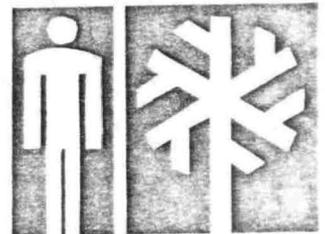
july 1982

*John
Haubert's
Comments*

WASO copy



BIRCH RIVER



WEST VIRGINIA

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 historical 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 Administration.

U.S.

THIS REPORT WAS PREPARED PURSUANT TO PUBLIC LAW 90-542, THE WILD AND SCENIC RIVERS ACT. PUBLICATION OF THE FINDINGS AND RECOMMENDATIONS HEREIN SHOULD NOT BE CONSTRUED AS REPRESENTING EITHER THE APPROVAL OR DISAPPROVAL OF THE SECRETARY OF THE INTERIOR. THE PURPOSE OF THIS REPORT IS TO PROVIDE INFORMATION AND ALTERNATIVES FOR FURTHER CONSIDERATION BY THE NATIONAL PARK SERVICE, THE SECRETARY OF THE INTERIOR, AND OTHER FEDERAL AGENCIES.

799/D-439

DRAFT REPORT
AND
ENVIRONMENTAL IMPACT STATEMENT

BIRCH RIVER
A WILD AND SCENIC RIVER STUDY
WEST VIRGINIA

July 1982

Prepared by:

Mid-Atlantic Regional Office
National Park Service
U.S. Department of the Interior

I. COVER SHEET

A. Responsible Agencies

National Park Service

Handwritten mark resembling a question mark or a large '2'.

B. Title of Proposed Action

~~Approval/disapproval by the Secretary of the Interior of a conceptual plan to designate the Birch River as a component of the National Wild and Scenic Rivers System under management by local government.~~

Handwritten notes: "action with management through Secretarial" and a question mark.

Jurisdictions Affected

The proposal covers the following counties and municipalities in part: Nicholas County: Hamilton District - Braxton County: Otter and Birch Districts (West Virginia)

C. Contact for Further Information or Copies of Environmental Impact Statement

David A. Kimball
Chief, Division of Planning
Mid-Atlantic Regional Office
National Park Service
143 South Third Street
Philadelphia, Pennsylvania 19106
(215) 597-9655

D. Draft Environmental Impact Statement

E. Abstract

A study of the Birch River was conducted pursuant to the Wild and Scenic Rivers Act (Public Law 90-542 as amended by Public Law 96-199) and found that the Birch River, between Cora Brown Bridge and its confluence with the Elk River, ~~qualifies as a component of the National Wild and Scenic Rivers System as a "scenic" river.~~ It is ~~recommended~~ that the 17.5 mile segment ~~become~~ ^{is to} become a component of the National Wild and Scenic Rivers System and be under the management of local government. ~~The protection boundary would encompass the visual corridor~~ ^{and result from a Section 2(b)(1) application to the Secretary of the Interior.} ~~would have to be established.~~

Handwritten note: "is eligible for addition" with a circled '2'.

F. Date by Which Comments Must be Received

Handwritten notes: "alternatives for the future of the Birch include NA 2(b)(1)"

MS
SUMMARY

is free flowing and with

SUMMARY

17.5 mile

The interagency study team has concluded that the Birch River Study segment ~~and~~ its immediate environment has outstandingly remarkable scenic values and is eligible for presentation as a component of the National Wild and Scenic Rivers System. The issues and controversies involving the river corridor are not insurmountable and are reconcilable. The study segment is already recognized by the West Virginia Natural Streams Preservation Act, and there is some local interest in protecting the entire river corridor as a component of the National System.

addition
to
cited
in the

for?

included in the West Virginia

Findings and Conclusions

The study team finds that the 17.5 mile segment of the Birch River and its immediate environment, between Cora Brown Bridge in Nicholas County and its confluence with the Elk River in Braxton County, qualifies as a component of the National Wild and Scenic Rivers System; meets the criteria for classification as a scenic river; and can best be protected by local units of government.

You're
regretting
yourself

Issues and Controversies

There are ~~only~~ two potential issues for the Birch.

conflicts involved with designation of the Birch in the National Wild & Scenic Rivers System.

Coal - Although there is some coal production in the upper Birch watershed none is within the study corridor. Designation of the lower corridor would not greatly affect coal production upstream if mining and reclamation regulations are enforced. Any new surface mining within the designated corridor would be prohibited by Section 522(e) of the Surface Mining and Reclamation Act of 1977.

Timber - Currently, timber is being harvested for the production of saw logs and mine timbers. As the existing timber matures and as logging techniques improve, logging within the river corridor could become more extensive. Logging conducted in accord with existing State regulations would not affect the outstandingly remarkable values.

within the river corridor

Proposal

Alternatives?

To protect the free-flowing condition and outstandingly remarkable values of the lower 17.5 miles of the Birch River and its immediate environment, ~~between Cora Brown Bridge and its confluence with the Elk River,~~ for the benefit and enjoyment of present and future generations, it is proposed that:

- the Governor of West Virginia ~~consider~~ ~~applying~~ to the Secretary of the Interior, in accordance with Section 2(a)(ii) of Public Law 90-542, ~~on behalf of the local units of government~~, to include the Birch River as a component of the National Wild and Scenic Rivers System.

- the entire qualifying segment be classified as SCENIC in accord with Section 2(b) of P.L. 90-542. *This is a finding - not really part of proposal.*

- the protection boundary include a 8,000 acre area within the visual corridor (line-of-sight from the river as illustrated on page 12).

- the private lands within the visual corridor be retained by private land holders subject to land use controls developed by the local government in cooperation with private owners.

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Preparers	45
People Consulted	45

LIST OF AGENCIES, ORGANIZATIONS, AND PERSONS TO WHOM COPIES OF THE STATEMENT WERE SENT

(will be)

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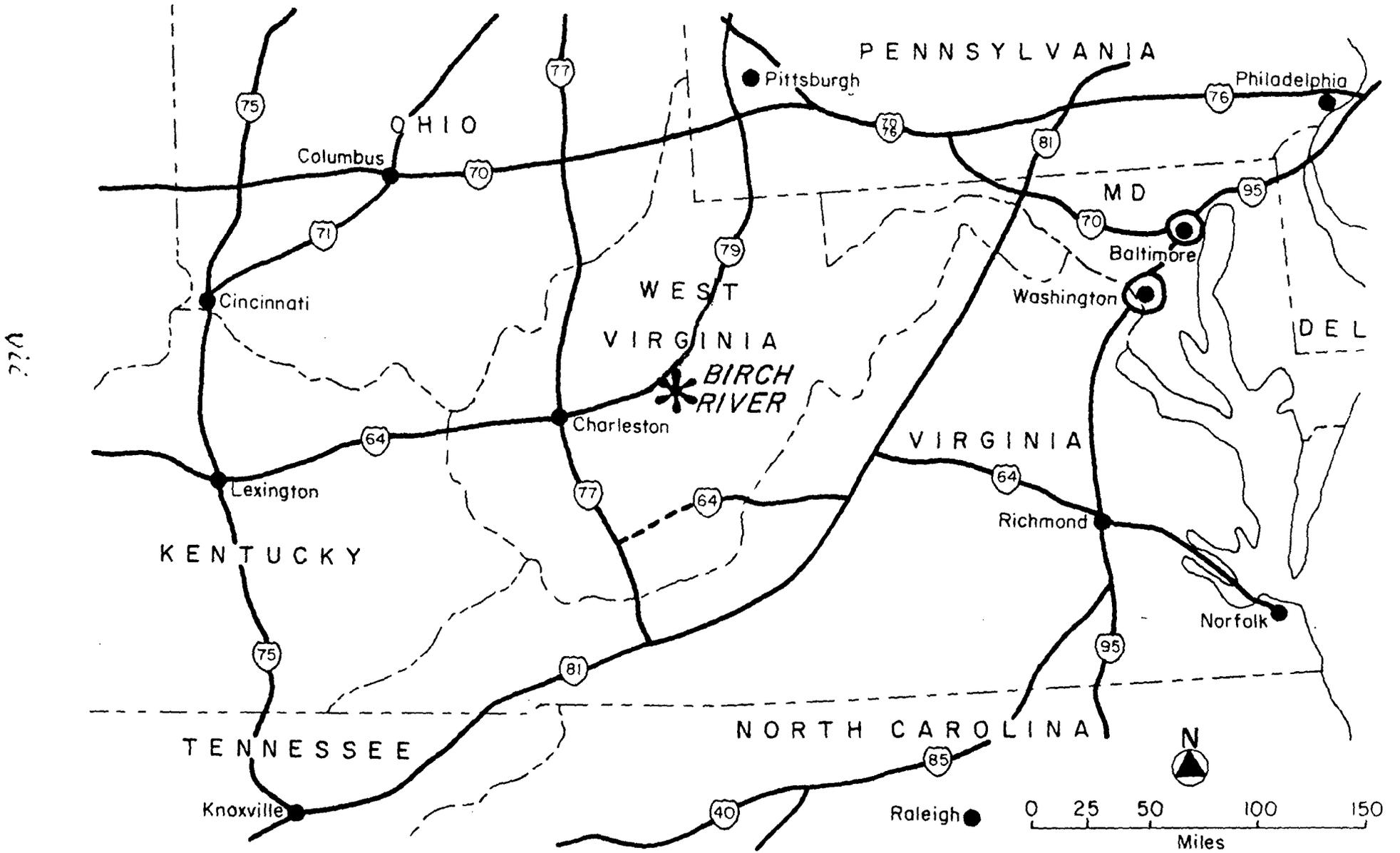
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THE REGION

BIRCH RIVER



I. PURPOSE OF STUDY AND CHARACTERISTICS WHICH MAKE THE AREA A WORTHY ADDITION TO THE NATIONAL WILD AND SCENIC RIVERS SYSTEM

Purpose of Study

This report, on the Birch River in West Virginia, was prepared under authority of the Wild and Scenic Rivers Act (Public Law 90-542) which was enacted in October 1968. Public Law 96-199 (March 5, 1980) amended Section 5(a) to add the Birch River, between Cora Brown Bridge and its confluence with the Elk River, to the study category.

An environmental impact statement is required under Section 102 of the National Environmental Policy Act of 1969 (Public Law 91-190).

This report deals only with the Birch River. The Bluestone, Gauley, Greenbrier, and Cacapon Rivers in West Virginia are subjects of separate study reports. All studies mentioned here are led by the National Park Service except for the Greenbrier, which is led by the U.S. Forest Service.

The Wild and Scenic Rivers Act (Public Law 90-542) declared it *stated*

It is hereby declared ...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.

The purpose of the study is to determine whether or not the Birch River possesses the outstandingly remarkable values which qualify it for inclusion in the National Wild and Scenic Rivers System; to classify any segments which qualify as either wild, scenic or recreational ~~or a combination of these~~; to determine whether any eligible segments are suitable for inclusion in the National System (based on whether there is a government agency willing and able to accept management responsibility); to present reasonable alternatives for the future of the river and to assess the environmental effects.

Characteristics Which Make the Area a Worthy Addition to the National Wild and Scenic Rivers System

The segment of the Birch River between Cora Brown Bridge and its confluence with Elk River has been evaluated to determine its eligibility, ~~classification~~, and suitability for inclusion in the National Wild and Scenic Rivers System in accordance with the requirements of the Wild and Scenic Rivers Act, Public Law 90-542, as amended.

Suggest rewording for comments on the study.

Eligibility - It has been determined that the 17.5 mile segment of the Birch River, between Cora Brown Bridge (2.4 miles downstream from the hamlet of Birch River) and its confluence with Elk River, is eligible for inclusion in the National Wild and Scenic Rivers System.

This determination is based on the following:

1. The qualifying segment is in a free-flowing condition.

There are no impoundments ^{or man made alterations to the river channel} and ~~therefore~~ no slack water within the qualifying segment. The river possesses a variety of natural flow conditions.

2. The qualifying segment and its immediate environment possess outstandingly remarkable scenic values, ~~as required by Section 1 (b) and 2(b) of the Act.~~ Its geologic values ~~may also be~~ ^{or considered} ~~significant.~~ ^{reassessed} ~~as~~

The interesting water course has a variety of flow types from deep calm pools to riffles and rapids (up to Class IV). The aesthetic value of the clear, blue-green waters is enhanced by stretches of sandy beaches and large boulders in the riverbed, some supporting vegetation. The river is framed by a gorge (with a steep local relief up to 500 feet) which contains a rich variety of vegetation, including hemlock and rhododendron thickets. ~~The overall impression is that of an aesthetically pleasing, largely unspoiled heavily wooded river gorge.~~ ^{It is really a local}

The gorge along with its exposed rock cliffs and caves ~~may be~~ ^{is} of local geologic significance.

^{Throughout the year} Also, the Birch River 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 canoeing, kayaking, swimming, and fishing. Stream flows have seasonal variations, with high and medium-high flows during late winter and spring. Summer and early autumn flows normally slacken and boating activity decreases accordingly, except after heavy rains.

Water quality is suitable for primary contact recreation, including swimming, wading, and fishing. It may not, in some cases, meet all of the criteria provided by the West Virginia Department of Natural Resources. A few homesteads ~~from the qualifying segment~~ may be discharging inadequately treated sewage and septic tank overflows into the river, but overall, the river's water quality appears to be improving.

Do we have data later in report to substantiate this? If not, we should dig.

The ~~qualifying~~ segment is long enough to provide a meaningful high quality recreation experience.

In summary, the lowermost 17.5 miles of the Birch River and its immediate environment is eligible ~~as a component of the National System and are worthy of preservation.~~ *for addition to* When viewed collectively, the river's overall qualities more than compensate for a few unfavorable conditions which are generally rectifiable or are now being improved.

Classification - Following a determination that the Birch River 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 river 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 ^{is} ~~was~~ concluded that the entire ~~qualifying~~ segment should be classified as SCENIC. *of the river area* The scenic classification is ~~primarily~~ based on the following factors:

1. It is free of impoundments.
2. The water quality generally meets minimum criteria for river recreation and is able to support the present range of animal and plant life, *in the stream.*
3. The shoreline is generally free of development. *with* There is only one small hamlet, *along the qualifying segment.*
4. The river is generally inaccessible by road. There is limited access by paved road at two locations and by several unimproved roads *at* jeep trails.

Suitability - Once a river and its immediate environment is found eligible for addition to the National System, a determination is made as to whether it is suitable for addition to the National System. A suitable river should have either (1) extensive land under federal administration in the study area or (2) state or local interest in protecting it. The Birch River has been found suitable because the local units of government have expressed an interest in managing it as a component of the National System.

See comments on Bailey.

letter of intent?

II. PROPOSAL AND ALTERNATIVES CONSIDERED

A realistic strategy for protection and use of the Birch River must consider the natural and cultural environment and significant uses which affect the resource.

The River Setting

Existing Conditions

Setting
The ^{study} qualifying segment of the Birch River flows through a relatively unspoiled, heavily wooded, narrow valley. The river ~~itself~~ is clean and unpolluted, ^{and} there is a good variety of flow types with an abundance of riffles and rapids (up to Class IV). Large boulders are numerous in many places, and sandy beaches are located in many places along the river. Plant life within the river corridor is varied and even covers some of the boulders. Bare rock cliffs and a few associated caves also provide a scenic setting for a river recreation experience.

Most of the recorded history in the valley involves the logging industry, which thrived in the late 19th century. Prehistoric mounds have been located near Diatter Creek in the study area.

A few farms border the upper section of the river. There are also a few scattered summer homes but no commercial or industrial development. Timbering and mining are almost non-existent in the corridor.

Recreational activities include canoeing, kayaking, tubing, fishing, and swimming in the river and sightseeing, hiking, and hunting within the river corridor. Overall, recreation use is light.

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Significant Issues

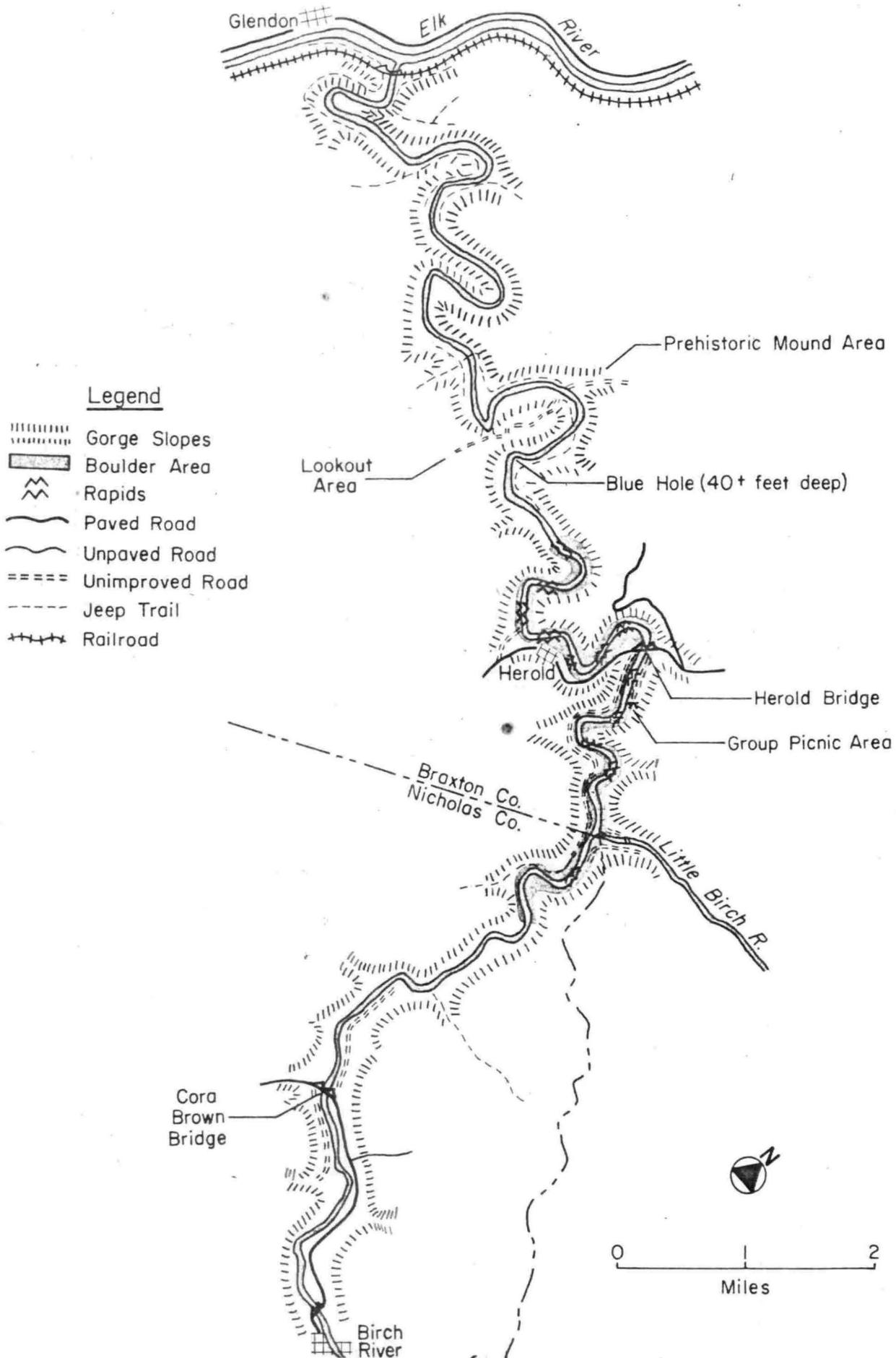
The issues outlined below provide a framework used to develop the planning proposal for the Birch River. These factors must be considered when developing realistic, long-term policies necessary to guide recreation use and conservation of the visual corridor.

Coal - There is some coal production in the upper Birch watershed, but none within the study corridor. Designation of the lower corridor would not greatly affect coal production upstream if mining and reclamation regulations are enforced. Any new surface mining within the designated corridor would be prohibited by Section 522(e) of the Surface Mining and Reclamation Act of 1977.

Timber - Currently, timber is being harvested for the production of saw logs and mine timbers. As the existing timber matures and as logging techniques improve, logging within the river corridor could become more extensive. Logging conducted in accord with existing State regulations would not affect the outstandingly remarkable values.

SIGNIFICANT FEATURES

BIRCH RIVER



ALTERNATIVES

Since it has been found that the 17.5 mile segment of the Birch River between Cora Brown Bridge and its confluence with the Elk River qualifies for inclusion in the National Wild and Scenic Rivers System, the next step is to decide whether the qualifying segment should be protected as a component of the National System, and if so, what agency should manage it. Three alternative plans for the Birch River corridor have been developed. They include:

- I. No Action
- ~~II. Local Control~~ *Protection by Local Government*
- ~~III. National System~~ *Addition to the with State/local administration*

I. No Action Alternative

This alternative is a projection of existing environmental, economic, and social trends ~~in order to~~ ^{to} characterize the future conditions expected to occur in the visual corridor without ~~designation of the river.~~ ^{FR} There would be ~~no action taken either to~~ ^{no} promote or discourage resource preservation or resource development. There would be no new planning framework or environmental control other than through existing laws. While it is true that the Birch River has no official scenic river management plan, the qualifying segment is recognized by the West Virginia Natural Streams Preservation act as a component of the State Rivers System. *Spill out what this means*

Future protection from Federal water resources projects is doubtful, since State law does not ~~now~~ ^{really could} provide such protection. Federal hydropower development ~~might~~ ^{could} proceed without any additional scenic river proposal considerations. Any activity that is ^{being} carried on at the present time ~~would~~ ^{is} continue. *although none have been proposed at present.*

II. Local Control Alternative

Amos (III)
Under this alternative the 17.5 mile segment of the Birch River, between Cora Brown Bridge and its confluence with the Elk River, would remain as a component of the West Virginia Natural Streams Preservation System and local controls would be placed on the land within the river corridor.

Some type of local authority would be established to protect the land areas within the river corridor, and would complement the existing protection of the waterway through the West Virginia Natural Stream Preservation Act. Local control would, therefore, extend protection to include the entire river corridor and not just the river from shoreline to shoreline. In other words, the combination of local controls and the existing State System would provide more protection than the No Action Alternative but less protection than the National System Alternative.

Advantages of local control in addition to the existing State designation over National designation include maintaining local decision-making power, and providing more flexibility of management (since local rather than National standards are to be met).

Add. how to be with State Local Administration
III. National System Alternative

Under this alternative, the qualifying segment would become a component of the National Wild and Scenic Rivers System as a scenic river. Designation of the river corridor would provide a means for resource protection in conjunction with Federal and State legislation (e.g. mining control laws and State scenic rivers legislation) and land use control where feasible.

already has this.

Generally, the advantages of National designation over State designation include: strong protection from federally licensed or funded water resources projects such as dams, water conduits, reservoirs, powerhouses, transmission lines and other project works; added incentives to improve water quality; and a prohibition of new surface mining activity by triggering Section 522(e) of the Surface Mining and Reclamation Act.

MANAGEMENT OPTIONS

There has been local interest in managing the Birch River as a component of the National Wild and Scenic Rivers System, and in accord with National Scenic River objectives. It would be necessary for local governments to prepare a comprehensive management plan for permanent protection and public enjoyment of the river. It ~~should~~ *would* not be necessary to acquire land within the corridor. Protection ~~could be~~ *is* provided through land use controls or owner agreements *as described under Alternative II.*

The local governments would bear the costs for operation, maintenance and land protection under the plan. The West Virginia annual apportionment from the Land and Water Conservation Fund may be applied to cover one-half of eligible costs of land acquisition and development, subject to State priorities.

State what form + extent to which this is local interest.
Put umbrella
In order to obtain National Scenic River status for the Birch, it ~~would be necessary for the local governments to first prepare a comprehensive management plan for the river. The State Legislature must then officially recognize the Birch as a scenic river. Afterward, the Governor would forward a letter to the Secretary of the Interior requesting that the river be added to the National System and document the measures that have been taken to protect the river. The Secretary would then determine whether all Federal requirements are met and that meaningful efforts are being made to protect the river corridor,~~ *he could add the river to the National System after consulting the heads of other potentially affected Federal agencies.*

Already done

*Put this stuff under
A.A. II - They apply 1st + format to
local control.*

Appendix material?

The following management options discuss several ways various groups could work together. These strategies are not mutually exclusive but can be combined and changed to suit the particular situation. They are designed to stimulate more ideas on how to best plan and manage the river corridor.

Public Agency - Control would be exercised through a land managing agency at the local level. There could be a bi-county agreement where the two counties could jointly design parallel regulations and controls, taking into account each jurisdiction's own development goals and needs, existing land use, and natural and scenic features deserving attention. This would create uniform standards for the preservation, management, development, and use of the river corridor.

~~Local management, with State cooperation, as a National Scenic River component would require application by the Governor, concurrence by the State Legislature and approval of a comprehensive management plan and designation by the Secretary of the Interior.~~

Interagency Authority - An intergovernmental organization, composed of a combination of concerned local, State or National agencies could be set up to manage the river. This could be a River Corridor Commission composed of representatives from the two counties, the three county districts, representative private landowners, local interest groups, the two regional planning and development councils, and the State of West Virginia.

The Commission would administer the corridor and be empowered to adopt, prepare and implement a river management plan; establish a planning and zoning commission; levy taxes and/or user fees; enter into contracts and agreements and accept all funds; acquire, dispose of and encumber real and personal property; participate in Federal/State loan and grant programs; operate and maintain areas and facilities to serve the purposes of the commission; appoint citizen advisory committees; control erosion and water pollution; approve, implement and enforce land use controls such as zoning and ordinances and subdivision regulations; and hire and retain employees and consultants.

Non-Profit Agency - A non-profit management agency or similar organization would oversee and resolve problems or resource protection and development opportunities within the corridor and resolve conflicts. This could be a River Corridor Foundation, a nongovernmental, tax-exempt, non-profit, private corporation organized and operated for the benefit of the general public. Generally a foundation is supported by donations, grants, gifts, loans, fund-raising efforts, and membership fees.

*Let's get organized soon
only have say
this one - under
A.A. III*

*These last two
may be fine for
A.A. II, but joint
not to give
anyone if
state for A.A. IV*

A foundation could offer permanent protection to selective areas along the river by accepting gifts of land or rights in land, offering tax benefits to those who donate land or rights in land, rendering technical assistance to landowners by helping them develop long-range plans for the conservation of part or all their property, accept gifts of land or rights in land, and then transfer them to a public managing agency, using gifts for matching purposes in obtaining grants, and setting up a revolving fund where the foundation purchases land, holds it for a time, and then sells it with certain restrictions at a profit.

Private Partnership - A compact between private interests in the river corridor would provide mutual notification of any resource protection or development actions. Concerned public officials would also be kept informed.

If there is enough interest, landowners and user groups could volunteer their time to clean-up the river. Any selling of second-home lots could have covenants designed to ensure that future development will be environmentally compatible. Homeowner associations could police development activities. Existing associations could tighten their codes and new associations could be formed.

PROPOSAL

After analyzing the various alternatives and taking into consideration the significant issues and findings, it is proposed that the qualifying segment be nominated for the National System and be managed by the local units of government.

The key to the preservation of the Lower Birch River lies in the development of a comprehensive management plan that will serve as a guide for protecting the natural resources and other special qualities of the river corridor. The adoption of such a management plan means that there will be a local agency formally committed to keeping the river and its immediate environment in a high quality condition and planning a course of action to attain that goal. The plan should be tailored to the capabilities of the river corridor owners and be prepared with the benefit of consultation between the local authorities who manage the river, private citizens who may be affected by the plan and private conservation groups. The comprehensive plan requires a level of detail and a knowledge of the local environment which are beyond the scope of this document. The following is intended to serve as a conceptual framework for the development of the plan.

*This is a good one
hope to implement it
this time we're going
for part I / J only
this would be part III*

redundant

TABLE 1

SUMMARY OF FACTORS OF THE RECOMMENDED PROPOSAL

Objective	To provide an environmental and recreational protection zone with little disruption to the area at a low implementation cost.
Corridor Protection (acres)	Visual Corridor
Existing Public Lands	0
Full Title Acquisition	0
Conservation Zoning	8,000
Total Protection Zone	8,000
Length of River (in miles) Proposed for Protection	17.5
Costs	
Management Plan Preparation	\$10,000
Access Site Development (five sites)	5,000
Operation & Maintenance (per annum)	5,000
Management	
Recreation	Local Governments
Land Use Controls	Agreements with landowners

all things under

Same as for Gandy.
I'm suspicious of the reality of the figures and the degree of thought put to them.

Comprehensive Management Plan

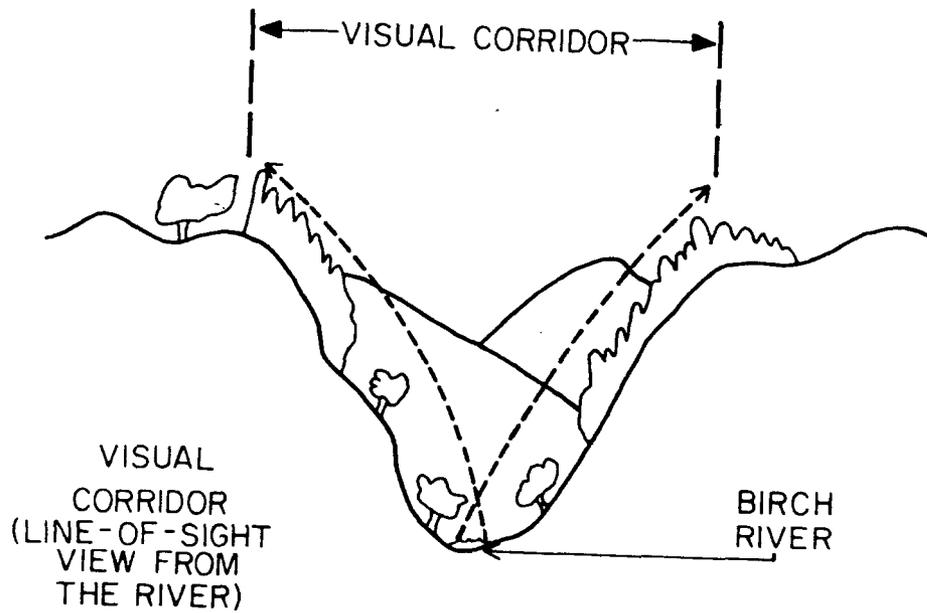
A comprehensive management plan for the Birch River would be developed with specific objectives in mind. In order to take into consideration the outstanding remarkable values which qualify the river for inclusion in the National System and the intent and purpose of the Wild and Scenic Rivers Act, the following objectives or goals for preservation, development, and use are suggested for the comprehensive plan and its implementation:

1. To preserve the river and its immediate environment in its natural setting.
2. To preserve the free-flowing condition of the waters.
3. To maintain and upgrade water quality
4. To provide high quality recreational opportunities for present and future generations.

5. To provide for a level of recreation and distribution that minimizes deterioration of land and water resources and safeguards the enjoyment of private landowners.
6. To assure the preservation of geologic features.
7. To maintain and enhance fish and wildlife resources.
8. To recognize the effects of the proposal on local residents.

Delineation of the River Corridor

The Wild and Scenic Rivers Act requires that each component of the National System be administered in such a manner as to protect and enhance the values which qualified it for designation. Since a river's values extend beyond the river itself to the adjacent land areas, it is necessary to determine the boundaries of those areas in order that a plan can be devised within a certain jurisdiction. This area is called the river corridor or visual corridor. It is determined by line-of-sight from the river to the immediate ridge tops.



A detailed survey is necessary to accurately define and map the corridor. This would be a function of the managing agency. A rough estimate of the corridor area would be 8,000 acres.

Resource Protection

In order to assure protection of the river corridor resources, the managing agency should prevent the destruction or deterioration of the qualities for which the rivers has been designated. Generally, the Birch River and its immediate environment should be protected from recreational overuse, air and water pollution, incompatible land uses, excessive vehicular traffic, unacceptable noise levels, or other threats to environmental quality.

Natural and aesthetic features should be identified and a detailed inventory of these features should be prepared to protect geologic formations, scenery, forestlands, fish and wildlife habitat. The county authority may also wish to consider protection of the Little Birch River, not as a component of the National System, but through local land use agreements.

Efforts should be made to maintain only compatible land uses. The good stewardship exercised in the past by private landowners suggests that voluntary efforts might continue to be an effective tool for protecting the river corridor's aesthetic appeal.

The State has laws and programs that provide some protection for the Birch River. It is unlawful to deposit any litter into or within 100 yards of a river or in a location where drainage conditions will cause any runoff of litter into a river. The Water Pollution Control Act authorizes the State to maintain and enforce reasonable standards of purity and quality of water consistent with public health and enjoyment and the propagation and protection of plant and animal life. The Division of Water Resources enforces a permit system to ensure that any development that discharges effluent into a river does not pollute the river above acceptable standards; water quality is monitored, and offenders are penalized according to the severity of their infraction.

The Natural Streams Preservation Act protects the Birch by prohibiting State, local, and private user activities that will materially affect or alter the free-flowing characteristics of the river.

Land and Water Resource Use

An effort should be made to maintain and enhance the economy of the area in a manner consistent with efforts to protect the recognized values of the river corridor. The objective of preserving a river

*All under
act II.
Whole thing
be structured
completely*

in a free-flowing condition is fundamental to the management of any designated river. Activities which impede the free-flowing condition of the river in the National System should be protected by Section 7 of the Wild and Scenic Rivers Act.

Appropriate timber management practices within the corridor should be promoted. Under Section 522(e) of the Surface Mining Control and Reclamation Act of 1977, no new surface mining activity shall be performed in a river area either under study or designated as a component of the National System.

The river corridor should be viewed as a unified resource. Additional residential and other development should be permitted only in accordance with the provisions of local plans and the Management Plan.

Visitor Use

Natural limitations on recreation use are imposed by the relatively narrow river and valley floor. Nevertheless, recreational experiences are possible for canoeists, kayakers, fishermen, hikers, sightseers, swimmers, and others in a manner consistent with the scenic values of the river. Therefore, the plan should secure appropriate, but limited, areas of public use and access, but prevent the deterioration of natural resource values through overuse.

Canoe and kayak use of the Birch during the limited period of high water flows should be controlled by designation of access points to limit unnecessary trespass on private property.

Recreation management could also include educational efforts by the managing authority through instructional brochures and announcements of boating conditions by the local media.

Recreation facilities should be located with primary emphasis upon retention of existing environmental conditions at selected sites and should not disrupt the scenic values of the corridor. The local managing authority would establish a code of conduct for recreation use of the corridor and promote information on river conditions, safety equipment requirements, facilities, and the location of access points.

Land Protection

Land in the corridor would normally be protected by land use controls, agreements with landowners, and other less-than-fee acquisition measures. Normally, there would be only two situations where it might be necessary for a managing agency to acquire real

property: (1) Where a specific parcel is threatened by development which would seriously threaten the river's special values and there is no other way to prevent development, and (2) where a specific parcel is needed for public access or use.

*Let's get specific
and suggest a package
plan for Birch
How about
Herald Bridge,
Cora Brown Bridge
+ Elk River*

It is possible that there will be some areas along the river which cannot be protected from incompatible development through land use controls, agreements, or similar techniques. In such cases it may be necessary to acquire a scenic easement or full title to the land. A priority list for acquisition of lands or interests in lands may be desirable but there may be occasions when less critical parcels of land become available for acquisition. An evaluation would then be needed to determine to what extent, if any, a parcel would help protect the river corridor.

The West Virginia Code, Chapter 8, Article 24, provides the legal basis for county and municipal planning, as well as land use controls such as subdivision zoning ordinances and regulations. These measures, when enforced, could provide a large degree of control over incompatible development.

Coordination

One of the most important functions of the plan would be to establish a means of coordinating planning and various regulatory activities.

The management authority would therefore develop positions on such issues as bridge crossings, road access, road improvements, mineral extraction, gas exploration, timbering, and landowner rights.

The local management authority centered in Braxton County should seek cooperation from Nicholas County to help preserve the upper four miles of the Birch qualifying segment which lies in Nicholas County. The local authority should also cooperate with the State in order to complement the existing West Virginia Scenic River designation.

Role of the U.S. Department of the Interior

If the Governor should apply to the Secretary of the Interior to have the Birch included in the National System, pursuant to Section 2(a)(ii) of the Wild and Scenic Rivers Act, the role of the Secretary would be to approve or disapprove the comprehensive management plan for the river. Technical assistance by the National Park Service may be provided in the preparation of the plan. With an accepted plan in effect, the Secretary may add the river to the National System.

*Redundant.
Already
DH*

When the river becomes a component of the National System, the Secretary's role would be to monitor activities proposed in the area to ensure that no department or agency of the United States assists by loan, grant, license or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which the river was designated. This review would extend to any dam, water conduit, reservoir, powerhouse, transmission line, or other project works for which a Federal Energy Regulatory Commission license might be necessary.

Environmental impact statements on all other Federal activities would be reviewed to be certain that the direct and indirect impacts on the river environment are addressed, and appropriate mitigative measures are included.

The Secretary's role would also include monitoring the performance of the management agency to ensure that the improved management plan and objectives of the Wild and Scenic Rivers Act are being carried out.

III. THE AFFECTED ENVIRONMENT

This section provides a description of the natural resources, cultural resources, existing public use, and status of land ownership and use. This information provides a background for understanding the issues, proposal, and alternatives and differences in environmental impacts among the alternatives.

Natural Resources

Only those aspects of the natural environment that would be affected by the proposal and alternatives are presented here. They include the river and its immediate environment, groundwater, water quality, air quality, geology, municipal resources, soils, vegetation, and fish and wildlife.

The River and its Environment - The Birch River watershed is located in Webster, Nicholas, and Braxton Counties in central West Virginia. It drains a 150 square-mile area and is the largest drainage area of the Elk River basin. It lies within the Allegheny Plateau where many hill and ridge summits represent the remains of an old peneplain.

The Birch River's source is near Cowen at an elevation of 2,280 feet above mean sea level and flows in a general northwesterly direction for 36.5 miles to its confluence with the Elk River (778 feet above mean sea level). Its overall gradient averages 41 feet per mile. From Cora Brown Bridge to its confluence with the Elk River, the descent is 17 feet per mile.

The Birch River is a swift, shallow, and narrow stream, seldom exceeding 80 feet in width, with exciting white water, ^{only during short period of high spring run off} wide meanders, and scenic views in a secluded atmosphere. The little torrent rushes through a deeply entrenched, V-shaped, forested valley with up to 500-foot slopes. Several of the white water stretches drop more than 40 feet per mile. The stream bottom is composed of steep gravel bars, boulder patches, eroded rock shelves, and various combinations of each. Occasional islands create narrow bifurcations that funnel concentrated chutes over the rock-lined bed.

Downstream from Cora Brown Bridge, the valley floor gradually narrows between converging inclines and the stream enters the gorge. The flow picks up and reaches Class III or IV difficulty at higher levels within the six-mile stretch between Feedtrough Run to approximately one and one-half mile downstream from the hamlet of Herold. This stretch is the heart of the white water boating stretch. The channel has many bends and loops around steep wooded promontories. Rocky islands and boulders are scattered throughout the river bed. Virtually the only visible development is a

TABLE 2. SUMMARY OF RIVER CHARACTERISTICS

The Birch River Watershed

Located in: Webster, Nicholas, and Braxton Counties

150 square miles in area

Birch River

Located in: Webster, Nicholas, and Braxton Counties

36.5 miles overall river length; elevation change 1,505 feet
17.5 miles of qualifying segment (scenic)

2,280 feet elevation at source

1,075 feet elevation at Cora Brown Bridge

775 feet elevation at mouth

41 feet/mile gradient between source and mouth

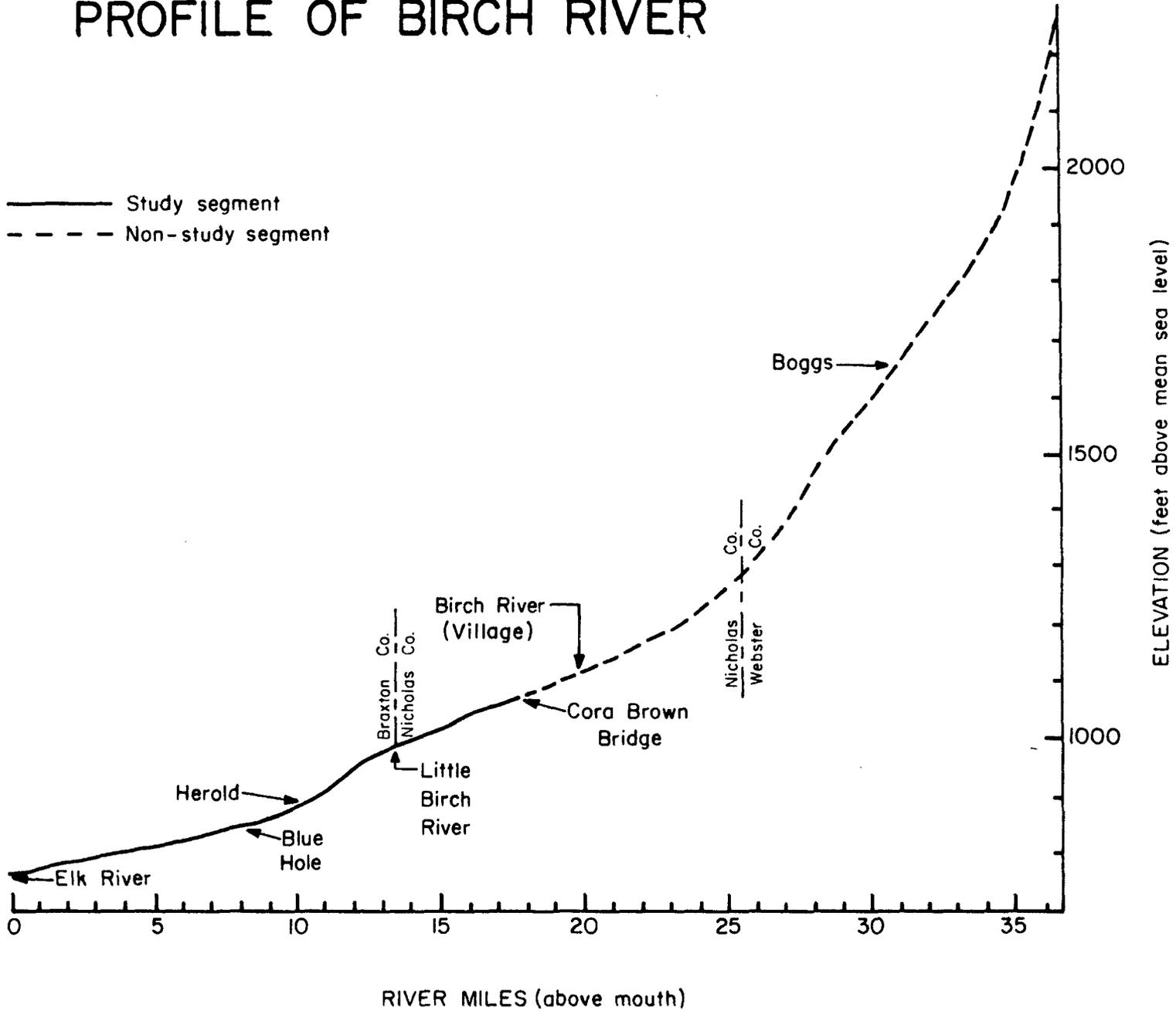
63 feet/mile gradient between source and Cora Brown Bridge

17 feet/mile gradient between Cora Brown Bridge and mouth

100 cfs average discharge at mouth

PROFILE OF BIRCH RIVER

— Study segment
- - - Non-study segment



bl

medium-duty road bridge and the few scattered dwellings which make up Herold. Downstream from Herold the river gradient lessens to 8 feet per mile and the waters become more peaceful. Blue Hole, at the neck of the largest loop of the river, is the deepest part of the stream, nearly 40 feet in depth. There are three more sizeable loops before the Birch's juncture with the Elk River.

The major tributaries of the study segment include: Slabcamp Run, Big Run, Feedthrough Run, Coalbed Run, Little Birch River, Long Run, Wolf Pen Run, Middle Run, Diatter Run, Big Run, Leatherwood Run, and Davis Run.

Ground Water - Ground water is the principal source of public water supplies for many communities and individual users. Most wells are drilled into rock aquifers which generally yield sodium-calcium bicarbonate water with iron, manganese, and other constituents which cause bad taste and stains.

Water Quality - The overall water quality of the Birch River is good. However, domestic sewage and a limited amount of acid mine drainage from upstream sources have some adverse effects on the river.

Domestic sewage is received by the main stem from the village of Birch River and from a few scattered residences along the river. A tributary of Little Birch River receives some acid drainage from coal mining operations.

The available water quality data is limited to two main stem samplings upstream from the study segment and one from Little Birch River. Nevertheless, the pH and dissolved oxygen readings are well within the range acceptable under the West Virginia Water Quality Standards. The study segment is well aerated and water is usually clear. The presence of May flies also indicates good water quality.

Air Quality - There are no major industrial pollution sources in the Birch River watershed and the air quality is good. Westerly winds over the industrialized Kanawha Valley may carry air pollutants eastward into the basin, however.

The subbasin has naturally poor atmospheric dispersion which would concentrate air pollutants at a source. Nevertheless, the transport and diffusion of pollutants may vary sharply over short distances in hilly terrain. In narrow, steep-walled valleys that experience frequent radiation inversions below the crest, transport of pollutants may be limited to lateral flows and diffusive mixing with other air masses is usually inhibited resulting in air stagnation. In the basin, stagnation conditions involving poor dispersion lasting four days or more occur once or twice a year, while a seven day stagnation occurs once in five to seven years. Nocturnal air movements in these valleys also play a role in allowing a high

pollution potential. The high frequency of daylight cloudiness in winter and spring tends to prolong the high pollution potential period.

The most recent EPA designations of attainment status with respect to meeting the National Ambient Air Quality Standards (NAAQS) show little differences throughout the basin. The basin has lower suspended particle concentrations than the NAAQS but is unclassifiable for oxidants due to a lack of data. The basin is regarded as better than the NAAQS for sulfur dioxide, but unclassifiable for carbon monoxide and nitrogen dioxide because of a lack of data. There are no standards for dustfall concentrations (settleable solids), but they have generally decreased significantly in the Kanawha Valley in the past decade. Ambient concentrations of total suspended particulates also have decreased over the past decade.

Geology and Mineral Resources - The entire subbasin lies within the Allegheny Formation and consists of cyclic sequences of sandstone, siltstone, shale, limestone, coal, and underclay. Thickness of the Allegheny strata ranges from approximately 100 to 300 feet.

The upper watershed is located in the Southern Coalfield with Pennsylvania-age and younger rocks of the Pocahontas Basin. The lower watershed is located in the Northern Coalfield with a thinner sequence of coal-bearing formations of the Dunkard Basin. Mineral resources pertinent to the study area include coal, gas and oil, and to a much lesser extent, clay and shale.

Coal - High volatile bituminous coal, generally low sulfur and of marginal to premium grade coking coal quality occurs in the region. Total coal reserves in the two county area exceed 900 millions tons. Coal production in 1980 exceeded 3 1/4 million short tons; underground mines accounted for 1.6 million short tons and surface mining nearly 1 million tons. The five coal beds along the Birch River reporting production in 1980 in ascending stratigraphic order are: Coalburg, Clarion, Lower Kittanning (or No. 5 Black), Middle Kittanning and Lower Kittanning. Other coal beds that may locally attain minable thickness include Winifrede, Stockton, and Lower Freeport.

The principal coal bed within the Birch River area is the Lower Kittanning. It is considered a premium grade coking coal along with Middle Kittanning and Stockton. Upper Kittanning, Coalburg, and Winifrede are considered marginal grade coking coals.

Oil and Gas - Since the early 1900's there has been a history of continuous oil and gas production in the area. Recent oil and gas activity has been predominantly developmental drilling to extend known producing fields in the upper watershed. In the river

corridor, production is limited to gas, mainly from the "Blue Monday" and "Big Injun" sands.

Clay and Shale - Underclay may be mined in conjunction with overlying coal beds. It is generally suitable for the manufacture of tile and brick mixtures, and some units for the manufacture of low-duty refractories. The shale may be suitable for structural tile but the low raw working strength limits the usefulness of this material.

Soils - The soils of the visual corridor fall into three categories: alluvial soils (stream-washed materials), colluvial soils (soils moved downslope through action of gravity, local wash, or freezing and thawing), and upland soils (developed in place from underlying parent materials).

The alluvial soils contain the Pope, Craigsville, Chavies, and Philo series. The Pope series, with a slope range of only 0 to 4%, consists of deep, well-drained soils on flood plains. They generally experience moderate to severe flooding and seepage, restricting development. The Craigsville Series, with a slope range of 0 to 5%, consists of deep, well-drained soils on flood plains. It generally experiences moderate to severe flooding and seepage. The Chavies series consists of deep, well-drained soils on terraces, with a slope range of 0 to 12%. It experiences moderate flooding and some seepage. The Philo series consists of deep, moderately well-drained soils on floodplains and has a slope of only 0 to 3%. It experiences severe flooding.

The colluvial soils contain the Buchanan and Ernest series. The Buchanan series, with a slope range of 0 to 25%, consists of deep, moderately well to somewhat poorly drained soils on uplands. It can experience severe wetness. The Ernest series, with a slope of 0 to 35%, consists of deep, moderately well-drained soils formed in colluvial material. Typically, these soils have a very stony or extremely stony dark grayish-brown silt loam surface layer with moderate wetness. They are highly erodible and may receive excessive sediment loss and induce slope failure during construction or mining.

The upland soils contain the Gilpin, Lilly, and DaKab series. The Gilpin series, with a slope range of 0 to 70%, consists of moderately deep, well-drained soils on uplands. It experiences slight to severe seepage. The Lilly series, with a slope range of 0 to 50%, consists of moderately deep, well-drained soils on uplands. It experiences moderate to severe seepage. The DeKab series, with a slope range of 0 to 80%, consists of moderately deep, well-drained soils on uplands. It experiences slight to severe seepage.

Vegetation - The forests of the watershed have been altered severely since ~~the~~ presettlement days due to logging, farming, and other activities. By the turn of the century, less than 10% of the watershed remained in virgin forest. Today, no virgin stands exist in the basin except, perhaps, for a few small isolated areas. The regrowth will mature within a few decades.

Forested land covers approximately 94% of the basin. Three-fourths of the forest is deciduous and one-fourth mixed forest. Mixed forest is the climax vegetation of the area and is found in all areas not developed by human activity.

The timber resources are of significant economic value. Currently, timber is being harvested for the production of saw logs and mine timbers. Commercial forest types, those capable of producing marketable timber, include Virginia pine, pitch pine, oak, hickory, maple, beech, and birch.

Fish and Wildlife - The Birch River supports a warm water fishery but is stocked with trout on a "put and take" basis. The fishery also includes large and smallmouth bass, sunfish, perch, darter, chub, sucker, catfish and walleye.

The Birch provides the necessary water quality and habitat diversity to support a population of benthic organisms. The aquatic insects present are typical of non-polluted waters. Several species of may flies, caddisflies and dobson flies found are intolerant of poor water quality.

The fauna of the river area include species which are common and widespread throughout the deciduous forests of central West Virginia.

Squirrels, wild turkey, white-tailed deer, rabbits, ruffed grouse, wild ducks, dove, crow, woodcock, woodchuck, raccoon, fox, and black bear are especially sought after by hunters. More than fifty species of mammals have been identified including opossum, otter, weasel, mink, skunk, bobcat, chipmunk, beaver, mouse, rat, vole, muskrat, mole, shrew, and bat.

The most common reptiles are turtles, lizards, skinks, and various snakes which include copperhead and rattlesnake. The most common amphibians include frogs, toads, and salamanders.

More than two hundred species of birds (including residents, migrants, and casual visitors) known or expected to occur at some season of the year include songbirds, raptors, and scavengers. Local permanent residents include various owls, hawks, woodpeckers, and nuthatches. Breeding residents which winter elsewhere include swifts, swallows, thrashers, vireos, and warblers. A large number

of species, particularly waterfowl, shorebirds, and certain passerine birds, occur only as migrants.

Threatened or endangered species in the area include the Indiana bat, bald eagle, peregrine falcon, Kirtland's warbler, flat-spined three-toothed snail, pink mucket, pearly mussel, and the tubercled-blossom pearly mussel. ^{A?}

Cultural Resources - Cultural resources within the river area are presented here, including archeology, history, economy, and population.

Archeology and History - Little research has been done on the prehistory and history of the Birch River corridor. Recovery of several flint chips and a projectile point from prehistoric mounds near Diatter Run indicate an Archaic occupation. While central West Virginia was frequented by various tribes between 1500 and 1650, little is known about the Birch in this period.

Settlement of the area began in the early 1800's by hunters and trappers who gradually turned to farming and eventually to lumbering.

Little visible evidence of the prehistory and history of the area remains. No nominations to the National Register of Historic Places have been made from within the corridor, although the mounds near Diatter Run may be eligible.

A study of the history and prehistory of the Birch prepared by the West Virginia Historic Preservation Science and Cultural Center under contract with the National Park Service is appended.

Economy - The economy of the area is strongly tied to natural resource extraction industries, such as coal production and timber resources, and does not have a strongly diversified employment base. During the past decade there has been a turnaround and revitalization of the economy due to an increased demand for coal. An improved highway system and a general "~~back-to-the~~ country" movement also contributed to this process.

Nevertheless, the study area has had an unemployment rate significantly higher than the State average. In 1979 Braxton County had the highest unemployment rate in the State (17%).

Although there is coal mining activity in the upper watershed, there is none within the study corridor of the Birch. In the past, a few individuals mined the coal outcroppings along the river.

While timber production within the visual corridor can be expected to increase in the near future, the young age of the existing

growing stock and the steep slopes found along the river make logging a marginal economic operation. However, as present stands mature, volumes increase and log quality improves, the present status will change to a profitable operation. It is anticipated that most of the area will be ready for harvesting after the turn of the century.

Much of the land in the river corridor is too steep and too confined to meet the extensive needs of industrial development. The absence of a large labor force, adequate industrial sites, highway facilities and immediate access to market areas are additional deterrents to the location of heavy industry in the area. While some light industry might be attracted to the basin, substantial economic growth appears to be in the development of the area's outstanding recreation and unique scenic qualities.

Historic settlement patterns have produced widely dispersed housing, making the provision of basic utility services in many instances prohibitive. The lack of these services has, to some extent, resulted in deterioration and dilapidation of housing. The low per capita incomes which are characteristic of the region have also contributed to the housing problem. The two counties rely heavily upon revenues generated by property and property transfer taxes.

Population - Throughout the area, population is concentrated near places of employment. Large areas are unsuitable for development due to the terrain and the population tends to be distributed and concentrated along major streams and valleys.

The two counties of the Birch River study corridor have a population of approximately 42,000, accounting for only 2% of the State's population. The population of the two-county area increased 19% between 1970 and 1980 and contains a density of 37 persons per square mile.

TABLE 3. POPULATION*

County	Population			Projected Population		Population Density (1980)	
	1970	1980	% Change	1990	2000	Land Area (sq. mi.)	Persons per sq. mile
Braxton	12,666	13,994	+11	15,000	16,800	520	27
Nicholas	22,552	28,126	+25	34,000	39,000	642	44
Total or Average	35,218	42,020	+19	49,000	56,800	1,162	37

*Source: U.S. Bureau of Census

?

Within the watershed there are three communities: Birch River (300), Little Birch River (100) and Herold (10). Herold comprises the only cluster of homesteads within the visual corridor of the study segment. There are approximately one hundred inhabitants within the visual corridor of the study segment.

The Northeast megalopolis lies within three hundred miles to the northeast and the Pittsburgh-Cleveland complex lies within two hundred miles to the north. Within a 250-mile radius of the watershed there are more than 30 million people.

Existing Public Use - The quantity and type of public use is presented here. This includes recreation and water supplies and water resources development.

Recreation - Recreational opportunities available throughout most of the study area include boating, swimming, water skiing, tennis, golf, wildlife viewing, fishing and hunting, skiing and other winter sports. Federal and State parks and forests and county and city parks provide excellent outdoor recreation opportunities and constitute one of the area's major assets.

Braxton County recreation facilities include two theaters, one indoor and one outdoor, a county park, a golf course, a baseball field, one auditorium, and twelve playgrounds. Sutton Reservoir and the Elk River Public Hunting area offer more than 11,500 acres of natural park, forest, hunting, and fishing areas.

Nicholas County contains numerous recreational facilities including indoor and outdoor theaters, a country club, swimming pools, ballfields, nine parks, and more than 40 playfields. A 23,540-acre portion of Monongahela National Forest offers camping, fishing, picnicking, hiking, and water sports. Summersville Lake Recreation Area, Carnifex Ferry Battlefield State Park, Nicholas County Memorial Park, and the Richmond Memorial Athletic Field and the Community Park provide various sport and game activities.

The Birch River, itself, offers boating and fishing. During the higher water levels of spring, the river can be canoed or kayaked. The stretch between Cora Brown Bridge and the Little Birch can be canoed or kayaked by users with intermediate skills. Between Little Birch and Blue Hole the river gradient is at its peak (28 feet per mile) and requires experience. Downstream from Blue Hole the river gradient slackens considerably and may be negotiated by canoeists in the beginner to intermediate class.

In addition to canoeing and kayaking, inner tube riding is popular. Swimming is popular in the Herold area and there is some camping and

*What happened to the red fish
suckers?*

picnicking. Fishing in the Birch River and its tributaries in spring and summer is quite good, consisting primarily of small mouth bass and walleye. The stream is classed as a warmwater stream but there is an annual stocking of trout. There is some hunting of deer, but mainly small game (squirrels, grouse, turkey). Sightseeing is limited to roads, jeep trails and overlooks.

TABLE 4. BOATING CONDITIONS

SEGMENT OF RIVER	DISTANCE (MILES)	DROP (FEET)	GRADIENT (FT/MI)	DEGREE OF DIFFICULTY	TYPE OF CRAFT	EXPERIENCE NEEDED BY USERS
Cora Brown Bridge to Little Birch River Junction	4	88	22	Easy Medium Difficult	Canoe Kayak	Intermediate
Little Birch River Junction to Blue Hole	5 1/2	159	28	Medium Difficult Very Difficult	Canoe Kayak	Intermediate Experienced
Blue Hole to Elk River Junction	8	55	7	Easy Medium	Canoe	Beginner Intermediate
Total or Average	17 1/2	302	17	Easy to Very Difficult	Canoe or Kayak	Beginner to Experienced

Water Supplies and Water Resources Development - Most of the domestic water comes from wells and not from the river itself. No impoundments exist on the Birch and no water resources development is planned for the river.

Status of Land Ownership and Use

Land and water use, land ownership, water rights and ownership, and transportation are as follows.

Land and Water Use - Land and water uses are limited due to the ruggedness of the terrain. Agriculture consists mainly of grazing, hay production, and home gardening. Logging and coal mining are active outside of the visual corridor. Outdoor recreation activities include hunting, fishing, boating, hiking, picnicking, sightseeing and camping.

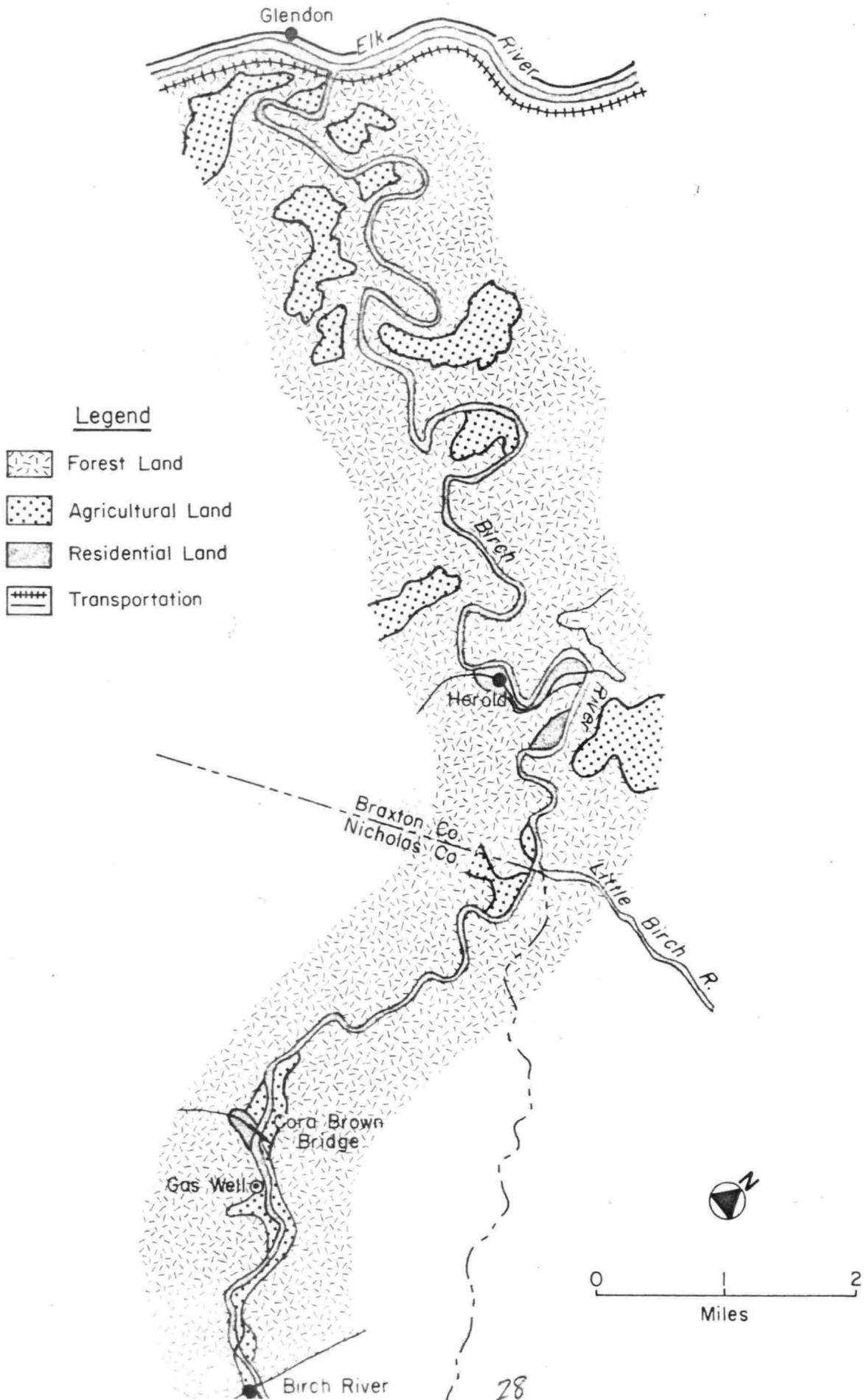
Most of the impacts on land and water resources have been in the form of logging, mining, agriculture, and highway construction. However, the general inaccessibility and relatively rapid plant and animal succession have allowed abandoned areas to recover to a near natural condition.

Today, 78% of the visual corridor is in forest land, 14% in pastureland, 4% in hayland, 0.3% in cropland, 0.7% in other agricultural land, and 3% in non-agricultural land (includes roads,

LAND USE

BIRCH RIVER AREA

011
TAPC C



Legend

-  Forest Land
-  Agricultural Land
-  Residential Land
-  Transportation

Glendon

Eik River

Birch

Herold

Braxton Co.
Nicholas Co.

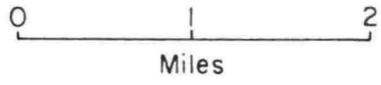
Little Birch R.

Cora Brown Bridge

Gas Well

Birch River

28



utility lines, non-farm residents, and idle non-farmland). There are no commercial, industrial, or service operations within the visual corridor. Land and water uses are expected to change very gradually from less agriculture to more summer home development and related activities.

Land Ownership - Virtually all of the visual corridor is in private ownership. Individual family properties on small tracts predominate. There are several large lumber and coal company tracts nearby. Public ownership is almost entirely limited to roadways and utility lines. Land ownership patterns are expected to remain stable with little foreseeable change.

Water Rights and Ownership- Under the West Virginia Constitution, Article XIII, ownership and control of the beds of navigable streams, such as the Birch River, is by the State through the public land corporation of West Virginia.

Sand, gravel, and coal lying between low watermarks on the bed of a navigable stream in West Virginia, are considered minerals. The title to and the right to develop and exploit these minerals are vested in the public land corporation of West Virginia, which may license individuals or private corporations to extract them.

Regional Transportation and Access- The major traffic artery in central West Virginia, Interstate 79, lies close to the study segment. Other major routes which serve as collectors with I-79 are U.S. Route 19, which crosses the river at the village of Birch River, and West Virginia Route 4 which follows the Elk River near its confluence with the Birch.

Average daily traffic counts for all vehicles on major routes in the subbasin are as follow: I-79, 4,000; U.S. Route 19, 3,500; and West Virginia Route 4, 400.

Secondary and unpaved roads reach or parallel a few short stretches of the river. Two paved road bridges ^{trans-}bisect the study segment - Cora Brown Bridge and Herold Bridge. A paved secondary road parallels the river for approximately one and one-half miles before crossing at Herold. Unpaved jeep trails reach or parallel the study segment for short stretches at a dozen locations.

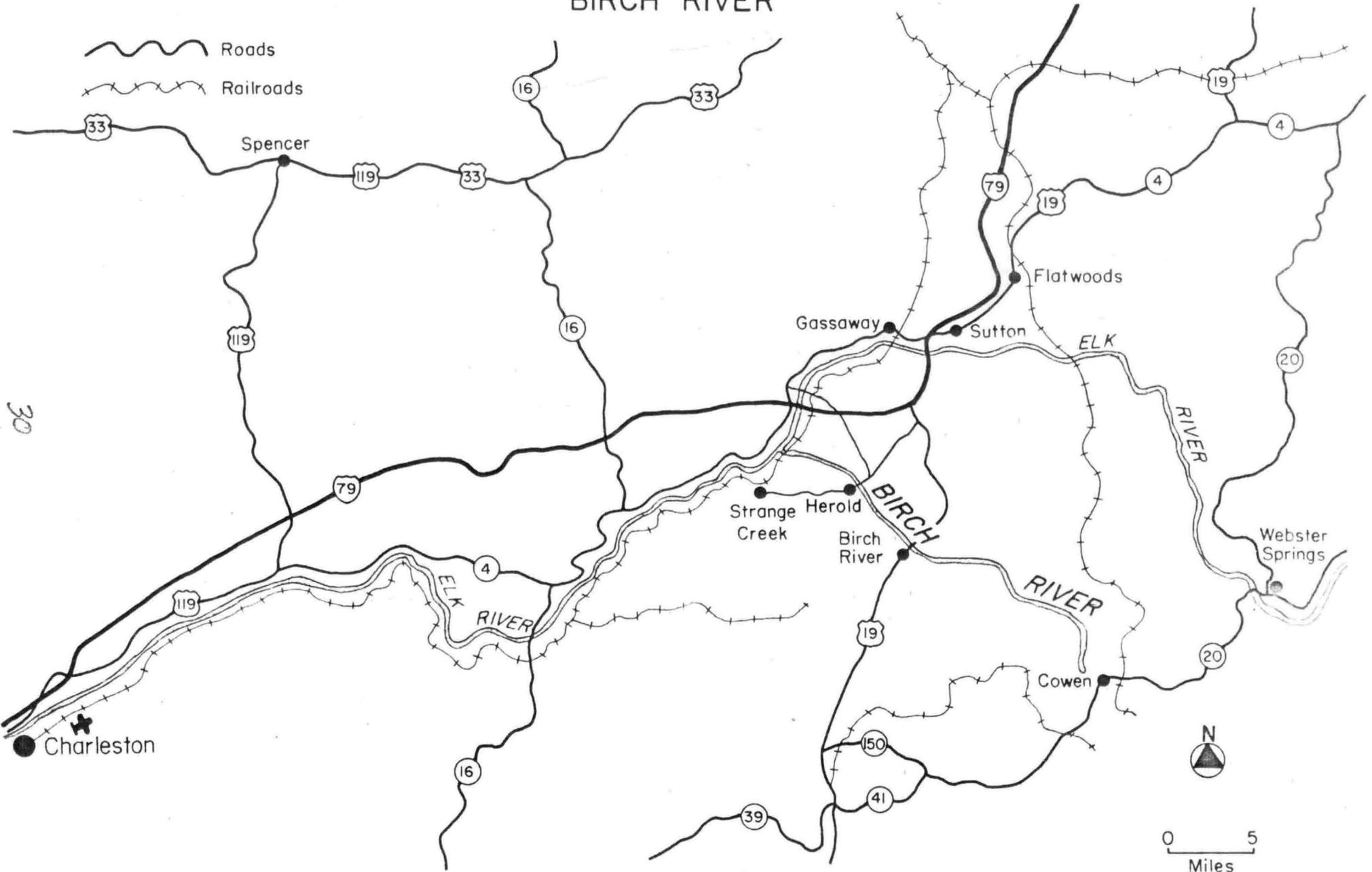
None of the study segment is paralleled by railroad tracks. A Chessie System railroad line used primarily for hauling coal parallels the Elk River and crosses the Birch at the Elk confluence.

Charleston is the only major transportation center providing long-distance access by air, bus, and rail. Less frequent long-distance bus connections can be made from Sutton and Summersville. A small airport is located near Summersville.

TRANSPORTATION NETWORK

BIRCH RIVER

-  Roads
-  Railroads



IV. ENVIRONMENTAL AND ECONOMIC CONSEQUENCES

This section deals with the impacts of the alternatives to the proposed action and the impacts of the proposed action on natural resources, cultural resources, and resource use. They include:

I. No Action (continuation of existing trends), II. Local Control, and III. National System (local management).

Change terminology per p. 7

Alternative I - No Action

Under this alternative, the Birch River would not receive any additional designation and existing trends would continue.

Natural Resources

Scenic Quality - A gradual deterioration of the aesthetic quality of the river corridor would occur as recreational uses increase and as development and economic pressures intensify.

Geology - Some deterioration of geologic values could occur if a future dam raises water levels or if construction or mineral extraction takes place. Generally, little or no adverse impact on the geology is expected.

Fish and Wildlife - no significant impact on fish and wildlife resources is expected if no action is taken. Future population pressures could, however, produce minor disturbances in wildlife habitat and causes some deterioration of the water quality that could in turn adversely affect the fishery.

human or animal?

Water Quality - The West Virginia Department of Natural Resources has water quality standards for the Birch River, which is designed to retain the good water quality of the river. Nevertheless, some deterioration of the water quality may result if these standards are not met.

It certainly would. But you haven't answered the question of what is likely to occur given no protection or (at all) designation!

Air Quality - No significant air quality problems are expected to develop within the river corridor if no action is taken.

Minerals - There is some coal mining activity in the upper watershed and some coal deposits lie within the visual corridor of the qualifying segment. Also, gas exploration is being carried out. No impact on mineral extraction is expected with this alternative.

Soils - Improper development ~~could~~ ^{would} cause erosion problems, if the entire corridor is not protected.

Your assumption is no protection under no action, right?

Same comment

Vegetation - Improper development ^{would} ~~could~~ cause vegetation losses, if ~~the entire corridor is not protected.~~ *Same as above*

Cultural Resources

Archeologic Values - Investigation of prehistoric remains along the qualifying segment has been minimal but prehistoric mounds have been found along Diatter Run near the Birch River. Existing trends could have an adverse impact on these archeological rem~~i~~nants.

Historic Values - There has been little activity of historical significance in the river corridor and the National Register of Historic Places does not list any sites along the qualifying segment of the Birch. Therefore, there would be no known impact on historical rem~~i~~nants.

Resource Use

Agriculture - Only a small amount of land along the qualifying segment is used for or is suitable for agricultural purposes. ~~Under existing trends~~ ^{shown} ~~agriculture would probably decline.~~ *declining in importance along the river*

Forestry - More than 85% of the land in the visual corridor is in forestland. While timber production within the visual corridor may increase within the next few years, the young age of the existing growing stock and the steep slopes along the river make logging a marginal economic operation for the next few decades. ~~No impact on logging is expected.~~

Water Resources - ^{since} No water resources projects are being considered for the Birch at the present time, ^{no action is not expected to result in any such developments.} The existing State designation would, however, prohibit most water resources projects, ^{but not Federal projects.}

Commerce/Industry - There are no commercial or industrial sites along the qualifying segment. The steep, narrow gorge and confined bottom lands make commercial or industrial site location unfeasible. This alternative would not have any impact on commercial or industrial development unless the water quality would be adversely affected.

Residential and Related Development - ^{The} ~~There is~~ little residential development along the qualifying segment, ~~and what there is, is~~ ^{found largely in the} virtually ~~confined~~ ^{will} to a middle few miles of the river corridor. This alternative ~~should~~ ^{will} not have any impact on existing residential development, ^{but may lead to additional developments.}

Recreation - The high quality outdoor recreation experiences associated with the Birch River corridor may deteriorate under existing trends as recreation related uses intensify and associated development increases. The gradual, nearly irretrievable, long-term resource loss resulting from no action would increase the cost to future generations for quality outdoor recreation opportunities.

Also, additional development other than that associated with recreational use.

Social/Economic Well-Being - If existing trends continue, there would be a gradual deterioration of the aesthetic and recreational values of the river corridor but this would not affect the economy of the area.

Based on this analysis, it is clear that there is any need for designation or extra protection measures.

Alternative II - Local Control

Under this alternative, a local authority would seek to preserve the land areas within the river corridor of the Birch River. This action would complement the existing protection of the waterway through the West Virginia Natural System Preservation Act. It would, therefore, extend protection to include the entire river corridor.

Protection of Birch River requires that state and federal action

Natural Resources

Scenic Quality - Protection of the scenic quality of the river would be extended from the shorelines to include the visual corridor. Any activities which substantially alters the existing setting would be discouraged.

I'm interested in how many buildings were built in last 15-20 years. May not be an area to development.

At least refer back to + summarize what "local control" would do.

An increase in the use of the Birch is expected whether or not there is local control. These increases could cause some damage to scenic qualities of the river, such as increased litter. Overall, added local control would be beneficial in the long-term.

what would be done to combat litter.

Geology - This alternative would have a positive impact on the geology but may not deter a Federal water resources project which could adversely affect geologic remnants. Overall, however, it would have a beneficial impact on geologic features with a policy to conserve and protect these features.

Unless there was a Federal water project,

Fish and Wildlife - This alternative would have a beneficial effect on the fishery with an added compulsion to adhere to water quality standards. The development of facility sites would cause some disruption to wildlife habitats but large tracts of land would remain in open space. The long-term benefits to be achieved on fish and wildlife resources is considered to be of major significance.

That's just speculation.

By protecting habitat,

Very hard to make statements here without a proposal or plan by local units(s).

No explanation why any of this would occur.

Water Quality - This alternative may not have a significant short-term impact on water quality. However, ~~the~~ long-term, water quality would be maintained. This added compulsion to the existing state designation would have a beneficial impact on water quality.

Air Quality - The small increase in the number of visitors and associated vehicles is not expected to significantly degrade the good air quality that now exists. Therefore, the overall impact of local management on air quality is considered insignificant.

Minerals - There is coal mining activity in the upper watershed but not along the qualifying segment. Implementation of the proposal is not expected to have any significant effect on coal mining or any future gas and oil extraction.

Is Act II the proposal?

Soils - Environmental damage to soils due to any facility development would be moderate. Concentrated visitor use can cause soil compaction and increase erosion at recreation sites. The impact of increased visitation on soil compaction is considered slight.

What about benefits from efforts to protect corridor?

Vegetation - Environmental damages to vegetation due to any facility development would be moderate. Vegetation losses can be expected due to clearing of underbrush in small areas and increased forest fire threat. Overall, the impact on vegetation would be moderate but beneficial in the long-term.

You've given reason only for it to deteriorate, but then come up with an overall impact of long term ^{has} moderately beneficial.

Cultural Resources

Archeology - Although investigation of prehistoric remains ^{has} been minimal in the corridor, prehistoric mounds have been found along Diatter Run. Overall, this alternative would have a beneficial impact on any remains that do exist because it is preservation oriented.

Let's do better. What specifically could or should be done.

History - There has been little activity of historical significance in the river corridor. There are no sites along the qualifying segment of the Birch on the National Register of Historical Places. Therefore, it would not have any known impact on historic values.

Resource Use

Agriculture - Only a small amount of land along the qualifying segment is under agricultural use. This use is compatible with scenic river designation and the overall impact on agriculture would be slight.

Forestry - As the existing growing stock of the extensive forestlands matures and as logging techniques improve, the potential for more logging of the corridor increases. This alternative would not impact logging in the river corridor, since logging would be recognized in the management plan as an acceptable activity under present state regulations.

Unlimited logging would not be protected if scenic values.

? Water Resources - There are no planned water resources projects for the Birch River. This alternative would have an adverse effect on water resources projects, unless they are federal projects.

Commerce/Industry - The steep, narrow gorge and confined bottom lands make present or future commercial or industrial site location infeasible. It is unlikely that this alternative would have a significant impact on commerce or industry.

Residential and Related Development - There is very little residential development along the qualifying segment. This alternative, by guiding future development to appropriate locations, would benefit existing and future residential use.

How do we know there would be no adverse impact on the river?

Recreation - Visitor use would cause minor environmental damage through overuse, vandalism, litter, undesirable noise or behavior problems. Maintenance, surveillance, visitor control and information services can keep environmental abuses attendant to visitor impact to a minimum. The impact of this alternative on public recreation use is considered to be beneficial.

Social/Economic Well-Being - The aesthetic and recreational values of the river corridor would be enhanced and the overall quality of the environment would be improved. There would be little effect on the economy. Overall, the quality of the life would be improved if the proposal is implemented.

Alternative III - National System (Proposal)

This alternative, to designate the Birch River as a ^{State/locally administered} component of the National System ~~as a scenic river~~, is the proposal. Under this alternative there would be local management of the river in the National System. Preservation of the entire river corridor would be sought.

*Limit Discussion here to
additional impacts of adding
State locally protected river to the
National System.*

*All the repetitive
garbage results from
a fuzzy view of the
2 (iii) process.*

Natural Resources

Scenic Qualities - The proposal is designed to preserve the attractiveness of the Birch River and its immediate environment. Any activities which would substantially alter the existing natural-like condition would be discouraged.

An increase in the use of the river is expected whether or not the proposal is implemented. These increases will no doubt cause some damages to the scenic qualities of the river. Overall, however, the proposal's impact on the scenic qualities of the Birch is of major significance and will be beneficial in the long-term.

Geology - The major geologic feature is the gorge, including exposed rock cliffs and caves and large riverbed boulders. Overall, the proposal would have a beneficial impact on geologic features with a general policy to conserve and protect these features.

Fish and Wildlife - The value of the Birch as a fishery resource is dependent upon the effectiveness of land and water protection measures. Even though annual supplemental stocking programs are necessary to maintain harvestable fish supplies, the proposal would have a beneficial impact on fishery resources.

Designation would cause some disruption to wildlife habitats but large tracts of land would remain in open space. The overall impact of the proposal on wildlife would be positive.

The long-term benefits to be achieved on fish and wildlife resources is considered to be significant.

Water Quality - Much of the qualifying segment's improving water quality could be preventive rather than corrective. Land and water uses incompatible with the purposes of National Designation would be discouraged.

Recreation use of the river can result in water pollution through indiscriminate disposals of human wastes and general littering. The proposal should not substantially aggravate the existing, uncontrolled impact of such carelessness, although some increases in the number of users are expected.

The overall impact of the proposal on water quality is not considered significant in the short-term. However, by providing for the long-term protection of the resource, water quality will be maintained, and this is considered of major significance.

Air Quality - Air quality is quite good throughout the Birch River area. Increased number of visitors and associated vehicles is not expected to significantly degrade the present air quality. Therefore, the overall impact of the proposal on air quality is considered insignificant.

Minerals - There is coal mining activity in the upper watershed but not along the qualifying segment. Implementation of the proposal is not expected to have any significant impact on coal mining. The proposal would not directly affect any future gas and oil extraction unless they occur in the river corridor; then it would depend upon the management plan.

Soils - Environmental damage to soils due to any facility development would be moderate. Soil erosion due to general construction on excessively sloped land would not occur. Concentrated visitor use can cause soil compaction and increased erosion at recreation sites. The impact of increased visitation on soil compaction is considered slight.

Vegetation - Environmental damage to vegetation due to facility development will be moderate. Vegetation losses can be expected due to clearing of underbrush and equipment movement but no large clearings are contemplated. The threat of forest fire is increased with the anticipated increase in visitation. Overall, the impact on vegetation would be moderate but beneficial over the long-term.

Cultural Resources

Archeology - Investigation of prehistoric remains along the qualifying segment has been minimal. Prehistoric mounds have been found in along Diatter Run. Overall, the proposal would have a beneficial impact on any remains that do exist because the proposal is preservation oriented.

History - There has been little activity of historical significance in the river corridor. There are no sites along the qualifying segment of the Birch on the National Register of Historic Places. Therefore, there is no known impact on historic values.

Resource Use

Agriculture - Only a small amount of land along the qualifying segment is under agricultural use. Agricultural uses, particularly pastoral uses, would be compatible with scenic river designation. The overall impact on agriculture would be slight.

Forestry - A very high percentage of land along the qualifying segment is in forestland. As existing growing stock of the timber matures and as logging techniques improve, the potential for logging the river corridor increases. The proposal would not significantly impact logging in the river corridor.

Water Resources - There are no planned water resources projects for the Birch River. Designation would have a direct impact on the development of any future water resources projects.

Commerce/Industry - There are no commercial or industrial sites along the qualifying segment. The steep, narrow gorge and confined bottom lands make commercial or industrial site location infeasible. It is unlikely that the proposal would have a significant impact on commerce or industry.

Residential and Related Development - There is very little residential development along the qualifying segment. Overall, the proposal should have a beneficial impact.

Recreation - Designation of the Birch in the National System will provide long-term protection of the river and its immediate environment while assuring access to the resource for recreation purposes. The 17.5 mile long river with about 8,000 acres of land within the visual corridor and will promote and maintain a high quality recreation experience.

Visitor use would cause minor environmental damages, both at recreation facility sites and throughout the corridor through overuse, vandalism, litter, undesirable noise or behavior problems. These problems should not become any more intense than they are under unregulated conditions. Superior maintenance, adequate surveillance, visitor control and information services can keep environmental damage based on visitor impact to a minimum.

The impact of the proposal on public recreation use is considered to be of major importance.

Social/Economic Well-Being - The aesthetic and recreational values of the river corridor would be enhanced and the overall quality of the environment would be improved. The economy of the river corridor would not be affected since most economic activity is outside the corridor.

Overall, the quality of life would be improved if the proposal is implemented.

Mitigating Measures Included in the Proposed Action

Measures to mitigate adverse environmental impacts resulting from designation would be as follows:

1. The detailed management plan, to be prepared by local and private interests with participation by State and Federal interests, will include provisions to prevent overuse and for development of modest, well-dispersed recreation facilities and access. Essential ecological data (e.g. fish and wildlife surveys, and surveys of any animal and plant species which may be determined as endangered or threatened at the time of designation) will be collected to determine and monitor increased public use so that the existing environment remains substantially unimpaired.
2. Recreation use will be regulated in consideration of the carrying capacity of the resource to prevent air, water, and noise pollution or degradation of the existing environment. Adequate policing, conscientious maintenance, and well-thought-out control policies will help to maintain the regulations.
3. Planning programs would also take account of fish and wildlife interests and losses or damage to these valuable resources.
4. Fire damage in heavily forested areas may be minimized through careful placement of fire-watch signs, fire control communication link-ups, and such controls and prohibitions as may be essential during high fire-risk periods.
5. Local governments, in cooperation with of the State of West Virginia, will develop measures to decrease the impact on soils and vegetation. Technical assistance from local county conservation districts is available for the erosion and siltation problems.
6. Littering by recreators will be controlled by an anti-littering program that stresses "carry-in, carry-out." Should this prove ineffective, more restrictive measures would be considered, such as banning certain types of containers (e.g., plastics, cans, and non-returnable bottles).
7. Pollution generated by recreators can be offset by adherence to the water quality standards of the State of West Virginia which will assure the continuation of acceptable water quality.
8. An initial increase in new development along the periphery of the scenic corridor can be expected. Encouragement of new development away from the scenic corridor will maintain the natural resources and scenic and recreational values while providing nearby visitor services.

Our study should identify any fish species.

Can't be offset by regs. - It has to be either prevented or cleaned up in compliance with regs.

Why? Bird River isn't going to attract much just because of pollution to West Virginia. It's to poor for that.

9. Any construction of access roads and parking areas can be offset by adherence to designs that will be aesthetically pleasing and not in conflict with the rustic character of the area.
10. The managing agency would maintain sealed vaults at the comfort stations and contract the pumping out of the latrines.

Unavoidable Adverse Environmental Impacts

Few immediate significant unavoidable adverse environmental impacts would result from maintaining the lower Birch River in a free-flowing condition and designating it as a component of the National System. No long-term significant unavoidable adverse environmental impacts are known. Some minor unavoidable adverse environmental effects can be expected.

1. Visitor use facility development will alter the environment in varying degrees. A certain amount of disturbance to plant and animal life and soil erosion must be expected in areas of concentrated use.
2. Problems of sanitation, litter, noise, and fire hazard are most likely to occur at the recreation facility sites where visitor use will be concentrated. Programs for controlling these problems will have to be devised by the recreation management agency.
3. Like all recreational resources, the river will be subjected to occasional misuse and abuse by some individuals. Minimal disturbance to plant and animal life must be anticipated along the stream banks and at facility sites due to human impact. Disruptive incidents along the river may be reduced by the managing agency through adequate policing.
4. Some reduction in environmental quality may occur as a result of marginal commercial development near the river if vigilant land management is not maintained.
5. Some reduction in environmental quality may result in areas outside of the river corridor as increased tourism and recreation related developments may occur on the periphery.

Relationship between Short-Term Use of the Environment and Long-Term Productivity

Under the proposal, the existing environment of the lower Birch River area would be protected by guidelines and regulations governing all land uses, and by the careful implementation of these guidelines and regulations by the managing agency. The intent is to preserve the river's scenic qualities and to enhance recreation opportunities for

present and future generations. Recreation facilities and services would be designed to distribute recreation use in balance with the capacity of the resource.

Currently there is very little agricultural and other short-term development along the qualifying segment. The proposal would guide and regulate limited future development so that short-term uses are compatible with long-term productivity. Uses which would seriously deteriorate the river environment would not be permitted.

Indiscriminate disposal of human waste and general littering degrade the water quality. If intensified it could adversely affect aquatic ecosystems and the desirability of the river for water contact recreation. Careful land management practices combined with strict enforcement of water quality standards could guarantee that such development would not impair long-term productivity.

To summarize, this proposal would preserve the long-term productivity of the river environment for the enjoyment of residents and visitors. Nevertheless, the consequences of long-term energy development in the watershed are not entirely predictable at this time. If in the future, a different use of the lower Birch is in the national interest, management objectives could be modified or even reversed.

Irreversible or Irretrievable Commitments of Resources which would be Involved in the Proposed Action

No major physical changes to the existing environment are planned. Accordingly, the proposal does not require the irreversible or irretrievable commitment of resources. Designation of a segment of the lower Birch River as a component of the National System would result in preservation of the river's free-flowing condition and protection of its natural resources and preclude future development of water resources projects.

The various forms of land control necessary to preserve the river scenery and assure a suitable recreation environment would preclude mining uses. Timber management would be allowed with certain constraints.

Protection of a free-flowing river experience in an area with high recreation use pressures is regarded as a principal contribution of this proposal toward environmental enhancement and improved resource use. However, should the State legislature determine at some future time that a substantially different use of the river is in the State interest, or should the Congress make a similar determination in the National interest, the management objectives associated with designation could be modified or reversed.

TABLE 5. IMPACTS OF THE PROPOSAL AND ALTERNATIVES ON THE BIRCH RIVER AND ITS IMMEDIATE ENVIRONMENT

	NO ACTION	LOCAL MANAGEMENT	NATIONAL SYSTEM (PROPOSAL)
<u>NATURAL RESOURCES</u>			
SCENIC QUALITY	Gradual deterioration of aesthetic quality of river corridor except for the waterway	Protection of the scenic qualities of the river would be extended from the shorelines to include the visual corridor	Impact of major significance and will be beneficial in the long-term
GEOLOGY	Little or no impact on geologic values	Beneficial impact on geologic values	Major long-term benefits
FISH & WILDLIFE	No significant impact; possible minor disturbances	Long-term beneficial impact	Significant long-term enhancement
WATER QUALITY	<i>Have to assume they will be.</i> Adverse impacts if State water quality standards are not met	Significant long-term benefits	Very significant long-term enhancement
AIR QUALITY	No significant impact	No significant impact	No significant impact
MINERALS	No impact on mineral extraction	No significant impact unless future mineral extraction would take place in river corridor, then a major adverse impact	No significant impact on current uses, but possible significant restrictions on any future extraction in designated area
SOILS	Improper development and use can cause soil erosion	No significant impact; some soil compaction from visitor use	No significant impact; some soil compaction from visitor use

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NO ACTION

LOCAL MANAGEMENT

NATIONAL SYSTEM
(PROPOSAL)

VEGETATION

Improper development and use can cause vegetation losses

Moderate adverse short-term effects; beneficial long-term effects

Moderate adverse impacts at any recreation facility sites; beneficial impacts in long-term

CULTURAL RESOURCES

ARCHEOLOGY

Prehistoric mounds along Diatter Run tributary could be adversely affected by this alternative

Beneficial impacts on any archeological remnants

Beneficial impacts on any archeological remnants

HISTORY

No known historical values exist in the visual corridor; therefore, no known impact

No known impacts

No known impacts

RESOURCE USE

AGRICULTURE

No significant impact

No significant impact

Little or no adverse impact

FORESTRY

No significant impact

No significant impact unless logging begins in the corridor; then an adverse impact

No significant impact unless logging takes place in the corridor, then an adverse impact

WATER RESOURCES

No impact because no water resources projects are being considered. Most future projects would be adversely affected by the existing State Designation

No impact on water resources projects because none are planned. Most future projects would be adversely affected by local management

No impact on water resources project because none are planned. All future projects would be adversely affected

	NO ACTION	LOCAL MANAGEMENT	NATIONAL SYSTEM (PROPOSAL)
COMMERCE/INDUSTRY	No impact unless the water quality would be adversely affected	No significant impact unless the water quality would be adversely affected	No impact unless future location of commercial or industrial development planned
RESIDENTIAL & RELATED DEVELOPMENT	No significant impact unless the water quality of the river is adversely affected	No significant impact unless the water quality of the river is adversely affected	No significant impact on present residential development but significant adverse impact on future development
RECREATION	Some deterioration of recreational opportunities along the river as recreation related uses intensify and its associated development increases	Minor beneficial impacts	Major beneficial impacts
SOCIAL/ECONOMIC WELL-BEING	Gradual deterioration of aesthetic and recreational values but no affect on the economy	Overall beneficial impacts on the quality of life	Beneficial impacts on the aesthetic and recreational values and no effect on the economy outside of the river corridor. The quality of life would be improved overall

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LIST OF AGENCIES, ORGANIZATIONS, AND PERSONS TO WHOM COPIES OF THE STATEMENT WERE SENT

(will be)

Consultation and Coordination in the Development of the Proposal and Preparation of the Environmental Statement

The study of the ^{Birch} River for potential addition to the National Wild and Scenic Rivers System was a cooperative effort under the leadership of the National Park Service.

On-site inspections and data collection were accomplished by an Inter-agency Field Task Force composed of the following representation:

Federal Energy Regulatory Commission
Division of River Basins

U.S. Department of Agriculture
Forest Service

U.S. Department of Defense
Army Corps of Engineers

U.S. Department of the Interior
Bureau of Mines
Fish and Wildlife Service
National Park Service

U.S. Environmental Protection Agency
Water Quality Office

State of West Virginia
Department of Natural Resources

The following were invited to participate as observers:

Braxton County Commission
Nicholas County Commission

Participation by State and Local Agencies, Concerned Individuals and Groups

The National Park Service has been working closely with the study team, which includes members of Federal and State agencies, and local agency representatives as observers. The field evaluation and writing of the study report were accomplished with participation by study team members and observers. Other specific actions to involve public and private interests include:

Initial public meetings to discuss the purpose of and plans for conducting the study ^{were} held near Sutton on October 22, 1981 and at Charleston on October 23, 1981. A public meeting was held near Sutton on May 5, 1982 to discuss findings of the study and possible alternative actions to protect segment eligible for the National System. On May 6, 1982 an interest group meeting was held in Sutton to determine local interest in river management.

A series of workshops were held in cooperation with the State to obtain the views of private interests in the river corridor. The first, with coal and timber interests, was held at Hawks Nest State Park on December 15, 1981. The second was held at Pipestem State Park on December 17, 1981 with conservationists and whitewater recreation outfitters. A follow-up workshop was held on January 27, 1982 for the outfitters who were unable to attend the earlier meeting.

There has been informal consultation with county and local government officials, conservation groups, private individuals and landowners in the study area.

State agencies were contacted with the assistance of the State Department of Natural Resources. The State Historical Preservation Officer (SHPO) prepared a short report on the cultural resources of the study area under contract with the National Park Service.

Coordination in Review of the Draft Environmental Statement

Copies of the draft environmental impact statement have been submitted to the following and to various interested organizations and individuals:

Department of Agriculture
Environmental Quality Activities

Department of Commerce
Office of Environment Affairs

Department of Defense
Army Corps of Engineers

Department of Housing and Urban Development
Office of Community and Environmental Standards

Department of the Interior
Bureau of Mines
Fish and Wildlife Service
Geological Survey

Department of Transportation
Office of Environmental Quality

Environmental Protection Agency
Office of Federal Activities

Federal Energy Regulatory Commission
Commissioner's Advisory on Environmental Quality

Tennessee Valley Authority

Water Resources Council

Advisory Council on Historic Preservation
Office of Architectural and Environmental Preservation

State Clearinghouse
Office of Federal-State Relations

Area Clearinghouse

Planning and Development Council, Region IV
Planning and Development Council, Region VII
American Conservation Association, Inc.
American Rivers Conservation Council
Appalachian Wildwater, Inc.
B.A. Coal Company
Brooks Run Coal Company
Buck Garden Coal Company
Cantrell Canoes

Class VI River Runners

Consolidation Coal Company
CSX Resources, Inc.
Fayette Plateau Chamber of Commerce
Flynn Coal and Lumber Company
Georgia-Pacific Corporation
Hamer Lumber Company
Island Creek Coal Company
Izaak Walton League of America, Inc.
Key Coal Company
Lionel Coal Company
Mid Allegheny Corporation
Mountain-Dominion RC&D
Mountain River Tours, Inc.
National Audubon Society
National Parks and Conservation Association
National Recreation and Park Association
National Wildlife Federation
Nature Conservancy (West Virginia Chapter)
New River Adventures
North American River Runners, Inc.
Pardee and Curtin Lumber Company
Pocahontas Land Corporation
Save Our Mountains, Inc.
Sewell Coal Company
Sierra Club
Trout Unlimited
Westvaco Corporation
West Virginia Coal Association
West Virginia Forests, Inc.
West Virginia Highlands Conservancy
West Virginia Surface Mining and Reclamation Association
West Virginia Wildwater Association
Wilderness Society
Wildwater Expeditions Unlimited

APPENDIX

WATER QUALITY DATA - BIRCH RIVER

Location	PH		Acidity (mg/l)		Alkalinity (mg/l)		Specific Conductance (umhos/cm at 25°C)		Dissolved Oxygen (mg/l)		Dissolved Solids (mg/l)		Total Suspended Solids (mg/l)	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Birch River (headwaters area)	6.6	6.0-7.3	3	2-5	8	4-19	52	29-92	12	10-14	54	34-76	61	1-340
Birch River (near Boggs)	6.6	5.9-7.2	3	2-5	7	4-16	58	30-89	11	9-14	59	37-98	85	1-620
Birch River (near Styles Creek)	6.7	5.9-7.3	3	1-5	10	5-23	72	38-151	12	9-14	66	30-140	67	1-530
Little Birch River (near L. Birch R.)	6.4	5.6-7.0	3	2-5	7	2-13	38	22-68	12	10-14	42	24-66	23	1-190

Location	Hardness (mg/l CaCO ₃)		Turbidity (NTU)		Temperature (°C)		Aluminum (mg/l)		Iron (mg/l)		Manganese (mg/l)		Sulfate (mg/l)	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Birch River (headwaters area)	20	12-40	21	2-73	10	1-19	0.3	0.1-0.9	0.2	0.0-0.4	0.0	0.0-0.2	24	12-55
Birch River (near Boggs)	24	14-41	30	1-140	11	2-22	0.5	0.1-2.2	0.2	0.0-0.8	0.1	0.0-0.2	26	6-60
Birch River (near Styles Creek)	31	16-81	21	1-140	11	3-21	0.4	0.1-2.6	0.2	0.0-0.9	0.0	0.0-0.1	30	13-84
Little Birch River (near L. Birch R.)	13	10-21	10	1-55	10	3-19	0.1	0.1-0.3	0.1	0.0-0.2	0.0	0.0-0.1	12	6-16

Source: D'Appolonia Consulting Engineers, Inc., Pittsburgh, PA.
(Based on nine monthly samples from October 1978 to June 1979)

WEST VIRGINIA WATER QUALITY CRITERIA FOR THE BIRCH RIVER

<u>Parameter</u>	<u>Standard</u>
Ammonia, un-ionized	≤50 ug/l
Arsenic	≤50 ug/l
Barium	≤1.0 mg/l
Cadmium, soluble	≤0.8 ug/l (hardness 0-35 mg/l CaCO ₃)
	≤2.0 ug/l (hardness 36-75 mg/l CaCO ₃)
	≤5.0 ug/l (hardness 76-150 mg/l CaCO ₃)
	≤10.0 ug/l (hardness >151 mg/l CaCO ₃)
Chloride	≤100 mg/l
Chromium, hexavalent	≤50 ug/l
Copper	≤5 ug/l (hardness 0-50 mg/l CaCO ₃)
	≤10 ug/l (hardness 51-80 mg/l CaCO ₃)
	≤15 ug/l (hardness 81-120 mg/l CaCO ₃)
	≤20 ug/l (hardness 121-160 mg/l CaCO ₃)
	≤25 ug/l (hardness 161-200 mg/l CaCO ₃)
	≤50 ug/l (hardness 201-260 mg/l CaCO ₃)
	≤60 ug/l (hardness 261-280 mg/l CaCO ₃)
	≤75 ug/l (hardness 281-300 mg/l CaCO ₃)
	≤85 ug/l (hardness 301-320 mg/l CaCO ₃)
	≤115 ug/l (hardness 321-340 mg/l CaCO ₃)
Cyanide	≤145 ug/l (hardness ≥341 mg/l CaCO ₃)
	≤5.0 ug/l
Dissolved Oxygen	≤5.0 mg/l
Fecal Coliform	≤200 organisms/100ml, 30-day geometric mean
	≤400 organisms/100ml, in 90% of sample over 30 days
Fluoride	≤1.0 mg/l
Iron (total)	≤1.0 mg/l
Lead	≤25 ug/l (hardness 0-100mg/l CaCO ₃)
	≤50 ug/l (hardness >101mg/l CaCO ₃)
Manganese	≤1.0 mg/l
Mercury	≤0.2 ug/l unfiltered (≤0.5ug/l body burden)
Nitrate	≤10 mg/l
Nitrite	≤1.0 mg/l

Organics:	Chlordane	≤.01 ug/l (1.0 ug/l fish burden)
	DDT	≤.001 ug/l (0.1 ug/l fish burden)
	Aldrin-Dieldrin	≤.003 ug/l (0.3 ug/l fish burden)
	Endrin	≤.004 ug/l (0.3 ug/l fish burden)
	Toxaphene	≤.005 ug/l (1.0 ug/l fish burden)
	PBC	≤.001 ug/l (2.0 ug/l fish burden)
	Methoxychlor	≤.03 ug/l
PH		6-9 ph units
Phenolic materials		≤5 ug/l
Radioactivity		≤1,000 pci/l gross beta activity ≤ 10 pci/l dissolved strontium-90 ≤ 3 pci/l dissolved alpha emitters
Selenium		≤10 ug/l
Silver		≤2 ug/l (hardness 0-50 mg/l CaCO ₃) ≤4 ug/l (hardness 51-100 mg/l CaCO ₃) ≤12 ug/l (hardness 101-200 mg/l CaCO ₃) ≤24 ug/l (hardness >200 mg/l CaCO ₃)
Temperature		≤5°F rise above natural ambient ≤87°F May-November ≤73° F December-April
Threshold Odor		≤8 at 104°F daily average
Total Residual Chloride		≤10 ug/l
Turbidity		Site specific basis
Zinc		≤40 ug/l (hardness 0- 50 mg/l CaCO ₃) ≤75 ug/l (hardness 51- 80 mg/l CaCO ₃) ≤90 ug/l (hardness 81-120 mg/l CaCO ₃) ≤110 ug/l (hardness 121-160 mg/l CaCO ₃) ≤130 ug/l (hardness 161-200 mg/l CaCO ₃) ≤150 ug/l (hardness 201-240 mg/l CaCO ₃) ≤175 ug/l (hardness 241-280 mg/l CaCO ₃) ≤225 ug/l (hardness 281-300 mg/l CaCO ₃) ≤275 ug/l (hardness 301-320 mg/l CaCO ₃) ≤325 ug/l (hardness 321-340 mg/l CaCO ₃) ≤375 ug/l (hardness 341-400 mg/l CaCO ₃) ≤600 ug/l (hardness ≥ 401 mg/l CaCO ₃)