

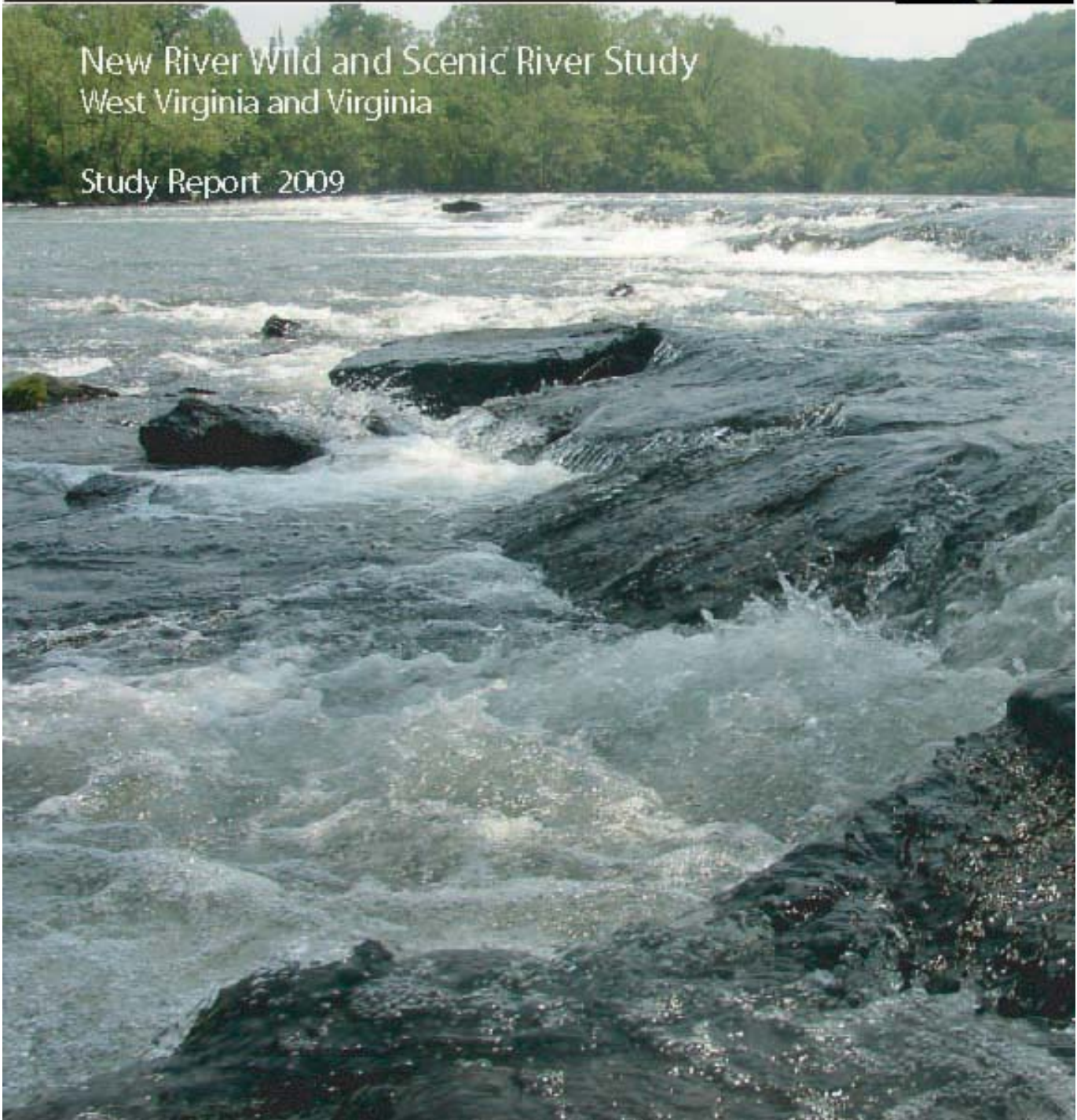
National Park Service
U.S. Department of Interior

National Wild and Scenic Rivers Program
Northeast Region



New River Wild and Scenic River Study
West Virginia and Virginia

Study Report 2009



New River Wild & Scenic River Study West Virginia and Virginia

Study Report 2009

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Acronyms and Abbreviations

ACE	U.S. Army Corps of Engineers
APCO	Appalachian Power Company (subsidiary of the American Electric Power Company)
BMP	Best management practices (management practices generally recognized to be effective and practicable in minimizing the impacts of land management activities such as agriculture and forestry)
CFS	Cubic feet per second (measurement of river flow)
DCR	Virginia Department of Conservation and Recreation
DGIF	Virginia Department of Game and Inland Fisheries
DNR	West Virginia Division of Natural Resources (includes the Wildlife Resources Section and the Parks and Recreation Section)
DNR-Parks	The Parks and Recreation Section within the West Virginia Division of Natural Resources
DNR-WRS	The Wildlife Resources Section within the West Virginia Division of Natural Resources
DOI	United States Department of the Interior
EA	Environmental Assessment (report required by the National Environmental Policy Act)
FERC	Federal Energy Regulatory Commission
NEPA	National Environmental Policy Act
NERI	New River Gorge National River (internal National Park Service acronym used for administrative purposes)
NERO	Northeast Regional Office of the National Park Service, headquartered in Philadelphia, PA
NPS	U.S. National Park Service
NRA	National Recreation Area (examples: Gauley River NRA, Mt. Rogers NRA)
NSR	National Scenic River (example: Bluestone NSR)

ORV	Outstandingly remarkable value (criterion for eligibility for National Wild and Scenic River designation)
RM	River mile (refers to the distance in miles upstream of the Bluestone Dam, measured along a center-line in the river)
SHPO	State Historic Preservation Office
SONR	Virginia Secretariat of Natural Resources (includes the Department of Conservation and Recreation and the Department of Game and Inland Fisheries)
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
VA	Commonwealth of Virginia
WASO	National headquarters of the National Park Service in Washington, DC (internal NPS acronym used for administrative purposes)
WMA	Wildlife Management Area (example: Bluestone WMA in West Virginia)
WRS	Wildlife Resources Section (of West Virginia DNR)
WSR	National Wild and Scenic River
WSRA	National Wild and Scenic Rivers Act
WV	State of West Virginia
WVDNR	West Virginia Division of Natural Resources

EXECUTIVE SUMMARY

The Study of the New River in West Virginia and Virginia was authorized by the U.S. Congress to evaluate whether a 19.3-mile section of the river and adjacent federal lands from the U.S. Route 460 Bridge in Glen Lyn, Virginia, downstream to the maximum summer pool elevation of Bluestone Lake, south of Hinton, West Virginia, should be designated as a national wild and scenic river. Public Law 102-525, which was enacted on October 26, 1992, authorized the study by amending Section 5(a) of the Wild and Scenic Rivers Act (WSRA)(16 U.S.C. 1276(a)).

The entire study area is located within a block of federally owned land that was purchased to construct the Bluestone Lake Project, a federal flood control project operated by the U.S. Army Corps of Engineers (ACE). The Bluestone Dam is located on the New River one mile upstream of the point where the Greenbrier River joins the New River in Hinton, West Virginia. Except for lands immediately around and downstream of the dam, all lands within the Bluestone Lake Project Area in the State of West Virginia are licensed to the West Virginia Division of Natural Resources (DNR). Most of these lands form the state's Bluestone Wildlife Management Area (WMA), although an area near the mouth of the Bluestone River is managed separately by DNR as Bluestone State Park. There is no similar agreement with the Commonwealth of Virginia for management of Bluestone Lake Project Area lands in that state.

Public interest in a wild and scenic river study of this segment of the New River was motivated in part by a proposal for a new high voltage electricity transmission line that would have crossed the river in the Virginia portion of the study area. The U.S. Forest Service was given responsibility for conducting an environmental assessment of the proposed transmission line project. The National Park Service, U.S. Department of the Interior, was given responsibility for conducting this wild and scenic river study and preparing a report for the President to submit to Congress.

The Wild and Scenic Rivers Act prohibits the federal government from taking any action that could preclude the river's eligibility for designation during the study period or while the Congress considers whether to actually designate the river. Because of this provision, the environmental impact statement prepared for the proposed transmission line could not identify a preferred alternative that involved crossing the New River within the wild and scenic study area. That process ultimately resulted in a preferred alternative being selected that routed the transmission line outside of the New River study area.

Study Findings:

Eligibility

The Wild and Scenic Rivers Act and associated federal guidelines define the criteria to be used in determining whether a river is eligible for inclusion in the National Wild and Scenic Rivers System. These include free-flowing condition and outstandingly remarkable resource values.

Free-flowing condition. The river segment must be free-flowing. Free-flowing is defined in federal guidelines as "flowing in a natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway. The existence of low dams, diversion works, and other minor structures at the time any river is proposed for inclusion in the national wild and scenic rivers system shall not automatically bar its consideration for such inclusion...."

Outstandingly Remarkable Values. The river segment must possess one or more outstandingly remarkable values, often referred to as "ORVs." An ORV is defined as a natural, cultural, or recreation resource feature that is unique or especially significant when considered in a regional or national context. The determination of whether a river area possesses an ORV is a professional judgment on the part of the study team.

The New River study segment meets specified criteria for the Wild and Scenic Rivers Act requirement of a free-flowing condition. In addition, the study area exceeds WSRA requirements for outstandingly remarkable values by possessing six categories of resources that meet the ORV threshold; including geology/hydrology, scenery, fish and other aquatic species, wildlife, cultural resources and recreation.

FINDING: In light of its free-flowing condition and array of outstanding resource values, the study area is eligible for inclusion in the National Wild and Scenic Rivers System.

Classification

The river is free-flowing throughout the segment with no significant alterations to the river channel that change the pattern of flow. The shore lands are largely in a natural condition.

Scenic Rivers. The criteria for scenic river areas include:

1. The river segment must be free of impoundments.
2. The shorelines should be largely undeveloped.
3. The river may be accessible in places by road.

FINDING: The New River study area is most appropriately classified as a "scenic" river.

Suitability

This section of the New River was evaluated under four criteria to determine its suitability for federal designation as a national wild and scenic river; 1) justification of protection, 2) conservation of river values, 3) management agency commitment and capability and 4) support for designation. While this section of the New River met two of the criteria for suitability, there were questions concerning the support for designation

and commitment on the part of proposed management entities to implement resource management as envisioned by the study.

Criterion 1: Justification for Protection

There appears to be a national public interest in designating the study area of the New River as a federal wild and scenic river under any of the action alternatives for the following reasons:

- (1) the river and surrounding public lands possess resources of national and regional significance, and these resources would be further protected and potentially enhanced through designation;
- (2) the New River would make a distinctive contribution to the National Wild and Scenic Rivers System;
- (3) there do not appear to be any competing public interest uses that would be foreclosed; some uses may be curtailed; and
- (4) designation would be consistent with ongoing and planned regional initiatives.

Criterion 2: Conservation of River Values

The study area's outstanding resource values (fish and other aquatic species, wildlife, recreation, geology/hydrology, scenery, and cultural resources) would be protected by the combination of:

- (1) the instream protections of the Wild and Scenic Rivers Act;
- (2) existing state and federal laws;
- (3) public ownership of the lands in the area for conservation purposes; and
- (4) management that would be in accordance with the goals and management standards developed during the study with the specific intent of protecting these outstanding values.

Criterion 3: Management Agency Commitment and Capability

This factor considers the likelihood that the agencies involved in implementing each of the action alternatives would be committed to implementation and would have the capability to follow through with the commitment.

The agencies that would be involved in administration and management under each alternative have the skills and experience to effectively implement the designation and manage the area for specified conservation purposes; however, there is not a demonstrated commitment by all of the agencies to manage the area as provided for in this study report. Cost also influences agency positions toward wild and scenic designation. The cost of implementation of any of the action alternatives would be similar to other areas of this size and resource character; however, without assurances that the necessary funding would be available, agencies became reluctant to commit to the designation.

Criterion 4: Support for Designation

The extensive public involvement during the course of the study and the work of the Interagency Work Group revealed a serious lack of support by state and local interests for any of the action alternatives prepared as part of this study. In addition, many stakeholders stated that federal wild and scenic river designation would not bring any additional benefits to this section of river. Many state and local interests also expressed the view that this section of river was already adequately protected and that no further government intervention was necessary. NPS therefore concluded that there was insufficient support at the state and local level for federal wild and scenic designation at this time.

FINDING: Although this section of the New River is eligible for inclusion in the National Wild and Scenic Rivers System, it has been found not suitable. This conclusion was reached given the lack of state and public interest and support for federal wild and scenic river designation at this time. Support for designation often weighs heavily in suitability determinations, and it did in this case. Other suitability factors which heavily influenced a non-suitable determination in this case were the lack of immediate threats to the river and its resources and a lack of commitment by all of the management agencies to implement all of the resource management proposals as envisioned by this study report.

Given the finding of not suitable, the NPS does not find wild and scenic designation appropriate for this section of the New River at this time.

FINDING: The National Park Service finds that Alternative #1, the “No -Action” Alternative, is the only appropriate alternative at this time, given the lack of suitability.

The fact that the river has been found not suitable for wild and scenic river designation does not necessarily mean that it will not be designated. It simply means that the river and the management regimes envisioned under the three action alternatives did not meet essential public policy tests. The Secretary of Interior will make a recommendation regarding designating the river, and that recommendation will be forwarded to the President and Congress. The President and Congress will make the final decision as to whether to designate the river.

TABLE OF CONTENTS

CHAPTER 1: INTRODUCTIONERROR! BOOKMARK NOT DEFINED.

Study Background Error! Bookmark not defined.

- Purpose and Need **Error! Bookmark not defined.**
- Legislative Background **Error! Bookmark not defined.**
- Study History **Error! Bookmark not defined.**
- Public Involvement and Study Scoping **Error! Bookmark not defined.**

The National Wild and Scenic Rivers Act Error! Bookmark not defined.

- The National Wild and Scenic Rivers System **Error! Bookmark not defined.**
- The Wild and Scenic River Study Process **Error! Bookmark not defined.**
- Implications of Wild and Scenic River Designation **Error! Bookmark not defined.**

Structure of this Document..... Error! Bookmark not defined.

CHAPTER 2. DESCRIPTION OF THE STUDY AREAERROR! BOOKMARK NOT DEFINED.

Overview Error! Bookmark not defined.

Regional Setting Error! Bookmark not defined.

- Description of the Region **Error! Bookmark not defined.**
- Nearby Public Lands..... **Error! Bookmark not defined.**

History..... Error! Bookmark not defined.

Management Error! Bookmark not defined.

- The Bluestone Lake Project Area **Error! Bookmark not defined.**
- Management in West Virginia..... **Error! Bookmark not defined.**
- Management in Virginia **Error! Bookmark not defined.**

Land Use Error! Bookmark not defined.

- Land Uses Adjacent to the Study Area **Error! Bookmark not defined.**
- Primary Land Uses Within the Study Area..... **Error! Bookmark not defined.**
- Other Land Uses Within the Study Area **Error! Bookmark not defined.**

Regional Initiatives Error! Bookmark not defined.

- New River American Heritage River..... **Error! Bookmark not defined.**
- New River Blueway..... **Error! Bookmark not defined.**
- New River Parkway..... **Error! Bookmark not defined.**
- Virginia Birding and Wildlife Trail **Error! Bookmark not defined.**
- Mary Draper Ingles Trail **Error! Bookmark not defined.**
- Branding Initiatives **Error! Bookmark not defined.**

Socio-economics Error! Bookmark not defined.
Population..... Error! Bookmark not defined.
Economy..... Error! Bookmark not defined.

Physical Resources Error! Bookmark not defined.
Geology and Hydrology Error! Bookmark not defined.
Soils Error! Bookmark not defined.
Landscape Character..... Error! Bookmark not defined.

Water Resources Error! Bookmark not defined.
Streamflow..... Error! Bookmark not defined.
Bluestone Lake Pool Elevation..... Error! Bookmark not defined.
Water Quality Error! Bookmark not defined.
Floodplains and Bottomlands Error! Bookmark not defined.

Vegetation Error! Bookmark not defined.
Plant Communities Error! Bookmark not defined.
Plant Species of Special Concern Error! Bookmark not defined.

Fish and Other Aquatic Species Error! Bookmark not defined.
Fish Species Error! Bookmark not defined.
Other Aquatic Species Error! Bookmark not defined.
Aquatic Species of Special Concern Error! Bookmark not defined.
Aquatic Habitat..... Error! Bookmark not defined.

Wildlife Error! Bookmark not defined.
Wildlife Species..... Error! Bookmark not defined.
Wildlife Species of Special Concern Error! Bookmark not defined.
Wildlife Habitat Error! Bookmark not defined.

Cultural Resources Error! Bookmark not defined.
Prehistoric Resources..... Error! Bookmark not defined.
Historic Resources Error! Bookmark not defined.
Management of Prehistoric and Historic Resources Error! Bookmark not defined.

Recreation and Public Use Error! Bookmark not defined.
Traditional Public Uses..... Error! Bookmark not defined.
Other Public Uses Error! Bookmark not defined.
Access and Facilities..... Error! Bookmark not defined.

CHAPTER 3. ELIGIBILITY AND CLASSIFICATIONERROR!
BOOKMARK NOT DEFINED.

Background Error! Bookmark not defined.

Eligibility Error! Bookmark not defined.
Criteria..... Error! Bookmark not defined.
Evaluation of Free-flowing Condition Error! Bookmark not defined.
Evaluation of Outstandingly Remarkable Values..... Error! Bookmark not defined.
Eligibility Findings Error! Bookmark not defined.

Classification Error! Bookmark not defined.
Criteria **Error! Bookmark not defined.**
Classification Findings **Error! Bookmark not defined.**

Summary and Conclusions Error! Bookmark not defined.

CHAPTER 4. ISSUES**ERROR! BOOKMARK NOT DEFINED.**

Background Error! Bookmark not defined.

Scoping Error! Bookmark not defined.

Range of Issues Error! Bookmark not defined.

Key Study Issues Error! Bookmark not defined.
Management in West Virginia **Error! Bookmark not defined.**
Management in Virginia **Error! Bookmark not defined.**
River Protection **Error! Bookmark not defined.**
Contribution to the Region **Error! Bookmark not defined.**
Other Concerns about Wild and Scenic River Designation **Error! Bookmark not defined.**

CHAPTER 5. ALTERNATIVES FOR FUTURE MANAGEMENT
.....**ERROR! BOOKMARK NOT DEFINED.**

Background Error! Bookmark not defined.
Process for Identifying Alternatives **Error! Bookmark not defined.**
Alternatives Not Considered in Detail **Error! Bookmark not defined.**
Treatment of Opportunities Involving the Larger Region **Error! Bookmark not defined.**
Foundations for Future Management **Error! Bookmark not defined.**
Goals **Error! Bookmark not defined.**
Management Principles **Error! Bookmark not defined.**
Assurances **Error! Bookmark not defined.**
Elements Common to All Action Alternatives **Error! Bookmark not defined.**
Purpose **Error! Bookmark not defined.**
Wild and Scenic River Designation **Error! Bookmark not defined.**
Management Guidance **Error! Bookmark not defined.**
Wild and Scenic River Implementation **Error! Bookmark not defined.**
Suggested Wild and Scenic River Boundaries **Error! Bookmark not defined.**
Management of the River and Adjacent Federal Lands Upstream **Error! Bookmark not defined.**

Summary of Alternatives Error! Bookmark not defined.
Alternative 1: Continuation of Current Management (No-Action Alternative) **Error! Bookmark not defined.**
Alternative 2: National Wild and Scenic River administered by the Army Corps of Engineers **Error! Bookmark not defined.**
Alternative 3: National Wild and Scenic River administered by the National Park Service **Error! Bookmark not defined.**
Alternative 4: National Wild and Scenic River Administered by the States of Virginia and West Virginia **Error! Bookmark not defined.**

Comparison of Alternatives Error! Bookmark not defined.
Introduction **Error! Bookmark not defined.**
Major Similarities and Differences Among the Alternatives..... **Error! Bookmark not defined.**
Comparison of Resource Management Standards for the Four Alternatives.....**Error! Bookmark not defined.**
Comparison of Agency Responsibilities, Missions, and Management Experience .**Error! Bookmark not defined.**

CHAPTER 6. SUITABILITY...ERROR! BOOKMARK NOT DEFINED.

Background Error! Bookmark not defined.
Methods..... Error! Bookmark not defined.
Analysis Error! Bookmark not defined.
Criterion #1: Justification for Protection: **Error! Bookmark not defined.**
Criterion #2: Conservation of River Values **Error! Bookmark not defined.**
Criterion #3: Commitment and Capability **Error! Bookmark not defined.**
Criterion #4: Support for Designation **Error! Bookmark not defined.**
Conclusions Error! Bookmark not defined.

CHAPTER 7. CONCLUSIONS .ERROR! BOOKMARK NOT DEFINED.

Summary of Findings Error! Bookmark not defined.
Eligibility and Classification **Error! Bookmark not defined.**
Issues **Error! Bookmark not defined.**
Alternatives for Future Management..... **Error! Bookmark not defined.**
Suitability..... **Error! Bookmark not defined.**
Appropriate Alternative
.....**Error! Bookmark not defined.**

**CHAPTER 8. CONSULTATION AND COORDINATIONERROR!
BOOKMARK NOT DEFINED.**

Agency Consultation **Error! Bookmark not defined.**
Federal Agency Consultation..... **Error! Bookmark not defined.**
State Agency Consultation **Error! Bookmark not defined.**
Interagency Work Group Consultation..... **Error! Bookmark not defined.**
Local Government Consultation..... **Error! Bookmark not defined.**
Consultation with Counties..... **Error! Bookmark not defined.**
Consultation with Cities and Towns **Error! Bookmark not defined.**
Public Participation..... **Error! Bookmark not defined.**
Public Meetings **Error! Bookmark not defined.**
Other Consultations **Error! Bookmark not defined.**
Study Participants **Error! Bookmark not defined.**
Study Team..... **Error! Bookmark not defined.**

APPENDIX 1. Questions and Answers about the New River Wild and Scenic River Study (Revised: Summer 2004).....	125
APPENDIX 2. Summary of Current Resource Management	130
APPENDIX 3. Detailed Criteria for Determining Wild and Scenic River Classification.....	138
APPENDIX 4. List of Issues... ..	140
APPENDIX 5.A. Detailed Description of Management Alternatives..	151
APPENDIX 5.B. Summary of Possible Regional Connection Strategies.....	162
APPENDIX 5.C. Resource Management Standards for the Action Alternatives.....	167
APPENDIX 5.C.1. Resource Management Standards for Alternatives Two and Four.....	168
APPENDIX 5.C.2. Resource Management Standards for Alternative Three.....	175
APPENDIX 5.C.3. Comparison of Resource Management Standards for Alternatives Two, Three and Four	181
APPENDIX 5.D. Potential Management Plan Components	187
BIBLIOGRAPHY	190

CHAPTER 1: INTRODUCTION

This chapter provides an introduction to the New River Wild and Scenic River Study and to the Wild and Scenic Rivers Act.

Study Background

Purpose and Need

New River Wild and Scenic River Study was authorized by the U.S. Congress to evaluate whether a 19.3-mile section of the New River and adjacent federal lands from the U.S. Route 460 Bridge in Glen Lyn, Virginia, downstream to the maximum summer pool elevation of Bluestone Lake, south of Hinton, West Virginia, should be designated as a national wild and scenic river. This document provides interested parties with the information necessary to make informed choices about whether the river should be designated and how the New River and adjacent federal lands should be managed in the future.

The study report provides information for interested citizens, organizations, and ultimately Congress on alternative approaches for future conservation and use of the New River study area and its significant natural, cultural, and recreational values. While the question of designation as a wild and scenic river is central, the report recognizes that decisions regarding the conservation and management of the study area also must consider the full range of its diverse and significant resources and public uses, as well as the socio-economic realities of the surrounding region such as the continuing need to provide flood control for downstream communities and the potential for the study area to contribute to sustaining the regional economy and quality of life.

Legislative Background

Public interest in a wild and scenic river study of this segment of the New River was motivated in part by a proposal for a new high-voltage electricity transmission line that would have crossed the river in the Virginia portion of the study area. The U.S. Forest Service was given responsibility for conducting an environmental assessment of the proposed transmission line project.

On April 29, 1992, Congressman Nick Rahall, 3rd District West Virginia, introduced H.R. 5021 to authorize a study of this portion of the New River as a potential addition to the National Wild and Scenic Rivers System. Public Law 102-525, which was enacted on October 26, 1992, authorized the study by amending Section 5(a) of the Wild and Scenic Rivers Act (16 U.S.C. 1276(a)) with the following new paragraph:

The segment defined by public lands commencing at the U.S. Route 460 Bridge over the New River in Virginia to the maximum summer pool elevation (one thousand four hundred and ten feet above mean sea level) of Bluestone Lake in West Virginia; by the Secretary of the Interior. Nothing in this Act shall affect or

impair the management of the Bluestone project or the authority of any department, agency or instrumentality of the United States to carry out the project purposes of that project as of the date of enactment of this paragraph. The study of the river segment identified in this paragraph shall be completed and reported on within one year after the date of enactment of this paragraph.

The National Park Service, U.S. Department of the Interior, was given responsibility for conducting the study and preparing a report for the President to submit to Congress.

The Wild and Scenic Rivers Act prohibits the federal government from taking any action that could preclude the river's eligibility for designation during the study period or while the Congress considers whether to actually designate the river. Because of this provision, the environmental impact statement prepared for the proposed transmission line could not identify a preferred alternative that involved crossing the New River within the wild and scenic study area. That process ultimately resulted in a preferred alternative being selected that routed the transmission line outside of the New River study area.

Study History

The National Park Service (NPS) started the New River Wild and Scenic River Study in 1993 and completed several initial steps, including a draft "eligibility and classification report" that was released for public review in 1994. The study was subsequently put on hold in 1997 to allow the NPS and the West Virginia Division of Natural Resources (WVDNR) to focus on developing a new license agreement for the Bluestone National Scenic River (NSR).¹ The NPS and WV DNR came to an agreement on the new license for the Bluestone NSR in the fall of 2002.

Staffing constraints delayed reactivation of the New River Wild and Scenic River Study until the summer of 2003. At that time a new study team was formed, consisting of a project manager from the NPS Northeast Regional Office and two independent planning consultants with extensive experience in wild and scenic river studies.

Public Involvement and Study Scoping

During the summer and fall of 2003, the study team met with public agencies involved in the management of the study area and surrounding areas, as well as with local stakeholders. The purpose of the study was discussed and preliminary issues were identified.

¹ The Bluestone River flows into Bluestone Lake downstream of the New River study area. The lower portion of the Bluestone River was designated as a National Scenic River pursuant to an act of Congress in 1988. A portion of the designated area is within the Bluestone Wildlife Management Area, which also encompasses the West Virginia portion of the New River Wild and Scenic River study area. The legislation that designated the Bluestone River as a national wild and scenic river also re-assigned administrative responsibility for the federal lands along the designated segment from the Army Corps of Engineers to the NPS. The Bluestone NSR is administered by the NPS headquartered in Glen Jean, WV. Consistent with the enabling legislation, the WVDNR continues to manage fish, wildlife and wildlife habitat under the terms of a lease agreement with the NPS. (Additional information on the Bluestone Wildlife Management Area and WVDNR management is presented in Chapter 2).

In the fall of 2003, an interagency work group was formed consisting of representatives from the following:

- NPS New River Gorge National River
- U.S. Army Corps of Engineers' Bluestone Dam and Project Area
- U.S. Army Corps of Engineers' Huntington District
- Virginia Department of Game and Inland Fisheries
- Virginia Department of Conservation and Recreation
- West Virginia DNR Parks and Recreation Section
- West Virginia DNR Wildlife Resources Section

Members of the Interagency Work Group are identified in Chapter 8. The work group served as the forum for discussing technical and policy issues and for developing draft versions of the various components that collectively make up this report. Individual work group members also served as key contacts for their agencies and as facilitators for discussions and information collection within those agencies.

The Interagency Work Group served as the decision-makers for (1) the definition of goals, principles, and assurances related to future management of the study area, (2) the identification of management alternatives, and (3) the definition of management standards that would apply under each alternative. These products are presented in Chapter 5 and associated appendices. The work group also facilitated the agencies' technical review of a preliminary draft of this document.

In December, 2003, public meetings were held in Glen Lyn, Virginia, and Hinton, West Virginia. The purpose of these meetings was to broaden awareness about the study and to identify key issues involving the study area and its management. Several informational handouts were distributed at these meetings, including the following:

- A question-and-answer handout that provided background information on the Wild and Scenic Rivers Act and addressed questions specific to this study.
- A summary of findings related to the study segment's eligibility for wild and scenic river designation and its potential classification under the Wild and Scenic Rivers Act.
- A preliminary summary of issues identified by the study team up to that point.
- A draft summary of preliminary management goals and options.

A second round of public meetings was held in July, 2004, this time in Rich Creek, Virginia, and Hinton, West Virginia. These meetings were intended to further broaden public awareness of, and participation in, the study; and to solicit initial feedback on draft management goals and alternatives. To that end, in addition to an updated version of the question-and-answer handout and the eligibility summary, two other documents were distributed at these meetings:

- A refined draft of management goals, principles, and assurances, prepared in consultation with the Interagency Work Group.
- A summary of a preliminary set of six management alternatives, which also was prepared in consultation with the work group.

Meetings also were held in 2003 and 2004 with city, town, and county officials and with private organizations and citizen groups. The purpose of these meetings was to provide information on the project and identify issues that should be considered. Copies of the handouts distributed at the public meetings were provided to the participants of these other meetings. A complete list of these meetings is presented in Chapter 8.

The National Wild and Scenic Rivers Act

The National Wild and Scenic Rivers System

Enacted in 1968, the Wild and Scenic Rivers Act (WSRA) was created to balance long-standing federal policies promoting construction of dams, levees, and other river development projects with one that would permanently preserve selected rivers, or river segments, in their free-flowing condition. Section 1(b) of the WSRA states:

It is hereby declared to be the policy of the United States that certain selected rivers in 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 original Act designated eight rivers into the National Wild and Scenic Rivers System, and specified two processes by which other rivers could be added to the system. The more frequently used approach involves a legislative designation through an Act of Congress, usually following a formal study process that is also authorized by Congress. The second approach involves an administrative designation by the Secretary of the Interior, following a formal application for designation by the governor of the state through which the river flows and provided that the state has already included the river in its own protected rivers system.

To date, one hundred sixty-two rivers or river segments totaling more than 11,300 miles have been included in the national system. Of these, only one is located in West Virginia – the segment of the Bluestone River described in “Study History and Scoping” on page two of this document. There are no national wild and scenic rivers in Virginia. Beyond the Bluestone, the nearest designated river area is a 26.5-mile segment of the New River near its headwaters in North Carolina. Other designated rivers in adjacent states include the Horsepasture River, Lumber River, and Wilson Creek in North Carolina, the Obed River in Tennessee, the Red River in Kentucky, the Little Miami River, Little Beaver River, and Big and Little Darby Creeks in Ohio, and the Allegheny River, Clarion River, multiple segments of the Delaware River, and the White Clay Creek in Pennsylvania and Delaware.

The Wild and Scenic River Study Process

The Wild and Scenic Rivers Act and associated federal guidelines provide a process for determining whether rivers are “eligible” and “suitable” for inclusion in the National Wild and Scenic Rivers System. To be eligible, a river or river segment must be free-flowing and possess at least one “outstandingly remarkable” scenic, recreational, geologic, fish and wildlife, historical, cultural, or other similar value. If eligible, the river then is given a proposed classification as “wild,” “scenic,” or “recreational,” based on established criteria, including existing water quality, the amount of development along the river corridor, and accessibility. If the river ultimately is designated into the national system, this classification serves as guidance for future management by the administering and managing agency or agencies.

The suitability determination involves an evaluation of whether wild and scenic river designation would be an appropriate element of long-term management of the river or, in other words, whether designation makes sense from a public policy perspective. This evaluation includes consideration of several important questions, including:

1. Should the river’s free-flowing character, water quality, and outstandingly remarkable values be protected, or are one or more other river uses important enough to warrant continuing existing management?
2. Would the river’s free-flowing character, water quality, and outstandingly remarkable values be protected through designation?
3. Is there a demonstrated agency commitment and capability to protect the river and its associated values following designation?
4. Is there demonstrated support for or opposition to designation of the river by federal, state, local or tribal governments; national, state, or local non-profit organizations; or local residents?

Beyond the essential eligibility and suitability requirements, it is important that a range of management-related concerns be addressed in the study process. Issues of concern to affected parties and the general public need to be defined, understood, and considered. Goals for management of the river and its significant resources need to be established. Alternative approaches for managing the river and the rest of the study area must be articulated and evaluated to determine if they are realistic and would be effective in achieving stated goals.

Meaningful public involvement is a fundamental part of how the NPS conducts its business as a public agency. It is also wise practice for any study involving important environmental resources. In the case of river management studies, public involvement is essential because rivers invariably have diverse resources, support varied public uses, and flow through multiple jurisdictions with numerous authorities. It is, therefore, all but impossible to achieve effective river management without a participatory process involving a range of players and interests.

While there are several ways for the public to participate in a wild and scenic river study, the opportunity to comment on the study report (this document) provides the most important moment for interested individuals and organizations to make known their views about how the

river and adjacent lands should be managed into the future. The WSRA requires that the study report be made available for public and agency review for a period of at least ninety days.

After the mandatory ninety-day review and comment period, the NPS will respond to any comments and submit a final study report, along with its findings regarding eligibility and suitability for designation, to the Secretary of the Interior. Following departmental review, the final report will be forwarded to the President, who will transmit it with a recommendation to the Congress. It is then up to the Congress to decide whether to designate the study area into the National Wild and Scenic Rivers System through federal legislation. If the Congress decides not to designate the river, no legislative action is required. This is the defined formal process. In practice, Congress sometimes proposes legislative action prior to the completion of a final study report and/or a Presidential recommendation.

Implications of Wild and Scenic River Designation

This section of the report summarizes key aspects of the WSRA that would apply to the New River study area if it were designated into the national system.

Core Protections for River Values. The heart of the WSRA is the permanent protection provided to the free-flowing condition and identified “outstandingly remarkable” resources of all designated rivers through Section 7 of the Act. Specifically, Section 7 prohibits the Federal Energy Regulatory Commission (FERC) from licensing any new “dam, water conduit, reservoir, powerhouse, transmission line, or other project works” on or directly affecting a designated river segment.² In addition, it prohibits other federally-assisted water resources projects that would have a direct and adverse effect on the river’s free-flowing condition and identified special resources. The term “federally assisted” refers to projects requiring any type of license, permit, grant, loan, or other assistance from the federal government. The term “water resources project” refers to any construction within the bed or banks of the river, either within the designated segment or upstream, downstream or on a tributary to that segment if the construction would affect the segment’s free-flowing condition or the special values for which it was designated.³ While new FERC-licensed projects on or directly affecting the designated area are categorically prohibited, other proposed federally assisted water resources projects are not automatically precluded. Instead, they must be evaluated by the federal agency charged with administering the designation to determine whether they would have a “direct and adverse effect” on the river’s free-flowing condition and special features.

Section 7 provides the strongest protection available from the potential adverse effects of specified projects (i.e., new FERC-licensed projects and other water resources projects). This

² The prohibition on FERC-licensed projects in Section 7 does not prohibit the licensing of new projects upstream or downstream of a designated segment if they would not directly affect the designated area, nor the relicensing of existing projects upstream or downstream if they would not have an adverse effect on the free-flowing condition and outstandingly remarkable resources of the designated segment.

³ Examples of water resources projects include dams, diversions, bank stabilization, channelization, and bridge construction/reconstruction if there is activity within the river’s bed and banks; that is, within the ordinary high water mark.

same protection is provided on a temporary basis for rivers that are under formal, legislatively authorized study for potential addition to the national system (including the New River study segment). The interim protection remains in effect from the date of study authorization until Congress makes a decision on whether or not to designate the river into the national system, or until three years after a final study report is transmitted to Congress by the President, whichever comes first.

Other Protections for River Values. In addition to the core protections of Section 7, other aspects of the WSRA further protect the free-flowing condition and outstanding resources of designated rivers. Section 10(a) of the WSRA states the following:

Each component of the national wild and scenic rivers system shall be administered in such a manner as to protect and enhance the values which caused it to be included in said system without, insofar as it is consistent therewith, limiting other uses that do not substantially interfere with public use and enjoyment of these values.

This section of the WSRA is interpreted in associated federal guidelines (*Federal Register*, vol. 47, no. 173, p. 39454-39461) as establishing a non-degradation and enhancement policy for all rivers in the national system. In other words, each designated river area must be managed so that its free-flowing character and outstandingly remarkable resources are not diminished over time and are enhanced wherever possible. In addition, the non-degradation and enhancement policy implies that each designated area must be managed in a way that will sustain its classification as either a “wild,” “scenic,” or “recreational” river. This does not mean that land use in the designated area cannot change over time, but rather that the overall character of the river and surrounding lands must remain generally consistent with the established criteria for the river’s assigned classification.

Within the non-degradation and enhancement policy, there is an implicit recognition that conditions may not always be ideal. For example, water quality problems resulting from upstream uses may exist. Under the non-degradation and enhancement policy, those upstream uses could continue if the river in question was designated, but water quality would not be allowed to decline below the levels that existed at the time of designation. In addition, enhancement/improvement of water quality would be a management objective (as would be the case under existing water quality statutes, with or without wild and scenic river designation).

It is important to stress that the requirements discussed above apply only to federal actions. The WSRA cannot compel others (for example, states, municipalities, or private entities) acting outside of the purview of federal law to adhere to the same requirements. However, one objective for engaging a broad range of non-federal stakeholders in the wild and scenic river study process is to work collaboratively in defining a proposed course of action that is acceptable to those at all levels who may be involved in management and use of the river.

Management Plan Requirements. Section 3(d)(1) of the WSRA requires that a “comprehensive river management plan” be developed for each designated river area to “provide for the protection of the river values.” The plan should address such issues as resource

protection, development of lands and facilities, user capacities, and other management practices needed to protect the river and its recognized resources. The agency (or agencies) assigned responsibility for administering a given river's designation has lead responsibility for developing the plan. However, the WSRA specifies that the plan must be developed in consultation with the affected states, local governments, and the public.⁴ The Act also requires the plan to be completed within three years of designation. (For specific discussion of management plan considerations that would apply if the New River study area were designated as a wild and scenic river, see Chapter 5, page 86, "Elements Common to All Action Alternatives.")

Cooperative Management. Section 10(e) of the WSRA, augmented by Section 12(a), states that a federal agency charged with administering any component of the national system may enter into a cooperative agreement with a state, a state agency, or a local government that would provide for state or local participation in administration and management. Further, the WSRA does not require that a federal agency be directly involved in on-the-ground management. However, the federal administering agency identified in the designation legislation must retain responsibility for conducting reviews of proposed water resources under Section 7 of the WSRA.

Assurances

Section 13 of the WSRA provides assurances regarding existing uses, authorities, and regulatory functions for rivers designated into the National Wild and Scenic Rivers System. Section 13(a) provides the following assurances regarding state jurisdiction over fish and wildlife:

Nothing in this Act shall affect the jurisdiction or responsibilities of the States with respect to fish and wildlife. Hunting and fishing shall be permitted on lands and waters administered as parts of the system under applicable State and Federal laws and regulations unless, in the case of hunting, these lands or waters are within a national park or monument. The administering Secretary may, however, designate zones where, and establish periods when, no hunting is permitted for reasons of public safety, administration, or public use and enjoyment and shall issue appropriate regulations after consultation with the wildlife agency of the State or States affected.

Sections 13(b), (c), (d), and (f) provide assurances that the states will continue to have jurisdiction over state water rights, water quality laws, and navigable waterway laws. In addition, Section 12(b) provides assurances to private parties concerning existing rights, privileges, and contracts affecting federal lands. For an expanded discussion of assurances that would apply if the New River study area were designated as a wild and scenic river, see Chapter 5, page 83, "Foundations for Future Management."

Structure of this Document

This section provides an overview of the chapters that make up the remainder of this report.

⁴ In addition, NEPA and associated regulations require substantial involvement of affected federal, state and local agencies in these types of planning efforts, including the possibility of other agencies serving as "joint lead" or "cooperating" agencies for the process.

Chapter 2, *Description of the Study Area*, describes the immediate study area and how it fits into the broader context of the surrounding region. The natural, cultural, and recreational resources of the study area are described, as are land use, management, and socio-economic considerations.

Chapter 3, *Eligibility and Classification*, considers whether the New River study area meets the requirements to be eligible for designation as a national wild and scenic river. It also proposes a classification for the river should it be designated.

Chapter 4, *Issues*, identifies and describes issues raised during the study process related to current and future use and management of the New River study area.

Chapter 5, *Alternatives for Future Management*, identifies goals and other key provisions for the study area and describes a series of alternative approaches for how the area might be managed in the future.

Chapter 6, *Suitability*, considers whether the New River study area meets the requirements to be suitable for designation as a national wild and scenic river.

Chapter 7, *Conclusions*, summarizes what has been learned through the study and indicates the alternative that NPS finds appropriate at this time.

Chapter 8, *Consultation and Coordination*, documents the public involvement efforts conducted during the study and identifies principal participants in the process.

The *Appendices* provide detailed information on specific topics related to several of the chapters.

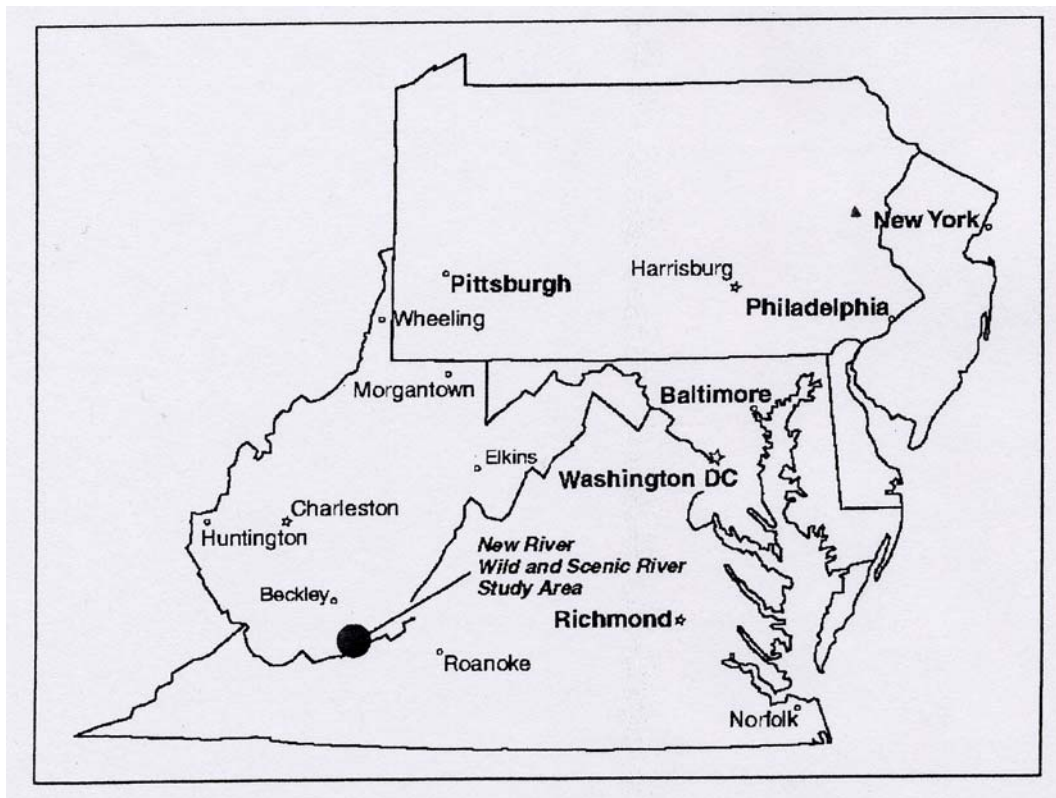
CHAPTER 2. DESCRIPTION OF THE STUDY AREA

This chapter provides an overview of the character and resources of the study area. The purposes of the chapter are (1) to familiarize the reader with the natural, cultural and recreational resources of the study area, the broader context of the surrounding region, and how the area is managed, and (2) to provide a basis for the eligibility assessment presented in Chapter 3.

Overview

The New River Wild and Scenic River Study Area straddles the border between southwestern Virginia and southeastern West Virginia. It includes portions of Giles County in Virginia and Summers, Monroe, and Mercer counties in West Virginia. The largest portion of the study area is located in Summers County, followed by Giles County. Figure 2.1 shows the location of the study area in the context of the surrounding region.

Figure 2.1. The location of the study area within the greater region.



The entire study area is located within a block of federally owned land that was purchased during the late 1930s and 1940s to construct the Bluestone Lake Project, a federal dam project operated by the U.S. Army Corps of Engineers (ACE) for flood control, hydropower, recreation, fish and wildlife management and downstream recreation. The Bluestone Dam is located on the New River one mile upstream of the point where the Greenbrier River joins the New River in Hinton,

West Virginia. Bluestone Lake was formed by the Bluestone Dam's impounding of the New River. Normally the lake extends approximately 10.5 miles upstream from the dam. During extreme flood conditions, the dam is capable of impounding water upstream along the New River to Narrows, Virginia, a distance of approximately 25.5 miles beyond the upper end of the lake. In all, including the lake and the flood storage area, the dam is capable of inundating thirty-six miles of the New River as well as a portion of the Bluestone River, a tributary to the New River that enters Bluestone Lake from river left approximately 2.5 miles upstream of Bluestone Dam.¹

The dam, the area immediately downstream from the dam, the lake, the river area upstream of the lake that is subject to occasional inundation, and surrounding uplands owned by the federal government or subject to federally-owned flowage easements are collectively referred to as the Bluestone Lake Project Area. Most of the lands in the Bluestone Lake Project Area are owned outright by the federal government and administered by either the ACE or, in the case of the lands within the Bluestone National Scenic River area, the NPS. The ACE administers approximately 85% of the lands within the Bluestone Lake Project and NPS administers approximately 15%. Also included are shorelands and islands in Virginia upstream of the Route 460 Bridge that are privately owned but subject to ACE-controlled flowage easements for flood control.

Except for lands immediately around and downstream of the dam, all lands within the Bluestone Lake Project Area in the State of West Virginia are licensed to the West Virginia Division of Natural Resources (DNR). The original license was signed in 1950. Most of these lands form the state's Bluestone Wildlife Management Area (WMA), although one small area near the mouth of the Bluestone River is managed separately by DNR as Bluestone State Park. There is no similar agreement with the Commonwealth of Virginia for management of Bluestone Lake Project Area lands in that state.

Relating this ownership, administration, and management arrangement to the New River Wild and Scenic River Study area, all of the study area is owned by the federal government and is within the ACE Bluestone Lake Project Area. The West Virginia portion of the study area is within the DNR-managed Bluestone Wildlife Management Area.²

¹ The terms "river left" and "river right" are used throughout this report. "River left" refers to the left side of a river from the perspective of someone looking downstream. In the case of the New River within the study area, the river generally runs south to north. Looking downstream a person is generally looking north, so river left generally refers to the west side of the river while river right generally refers to the east side.

² The terms "ownership," "administration," and "management" are used throughout this report, and distinctions between them are important to keep in mind. As used in this report, ownership refers to a government or private party having legal title to a given parcel of land. Administration refers to the oversight responsibility for that parcel of land being assigned to a particular party by the owner of the land. (For example, the federal government owns lands within the Jefferson National Forest that are administered by the U.S. Forest Service on behalf of the federal government.) Management refers to on-the-ground decisions and operations. It is possible for land to be owned by one party, administered by another, and managed by a third. That is the case within the Bluestone Wildlife Management Area, where the federal government owns the property and delegates administration to the ACE. ACE, in turn, delegates management to the West Virginia DNR through a license.

As authorized by P.L. 102-525, the New River study segment begins at the U.S. Route 460 Bridge in Glen Lyn, Virginia and proceeds downstream to the maximum summer pool elevation of Bluestone Lake, south of Hinton, West Virginia. The maximum summer pool elevation is defined in the authorizing legislation as 1,410 feet above mean sea level.³ This point is approximately 10.5 miles upstream of the Bluestone Dam at the mouth of Buffalo Creek, a small tributary that enters the New River from river right. The study segment is approximately 19.3 miles in length.

As described above, the study area also includes federal lands on both sides of the river that are included within the Bluestone Lake Project Area. The width of the study corridor varies from a few hundred feet (including the river) to over two miles. This corridor includes all of the river shorelands that are subject to occasional inundation during times when the Bluestone Dam is holding water to control downstream flooding. In many locations the corridor also includes adjacent uplands. The width of the corridor is greatest within the WMA in the downstream portion of the study area and less in the upstream portion. The study area is shown in Figures 2.1A & 2.1B.

Regional Setting

Description of the Region

The New River originates in the Appalachian Mountains in northwestern North Carolina and flows generally northward for 320 miles through southwestern Virginia and southeastern West Virginia to its confluence with the Gauley River in West Virginia, where it forms the Kanawha River. The Kanawha continues to flow toward the northwest past Charleston, West Virginia, until it enters the Ohio River, south of Point Pleasant, WV. Overall, the New River's watershed, which includes the Gauley River and all waters in the Kanawha-New River Basin upstream of the Gauley, encompasses a total of 6,920 square miles in the three states. The area included in the wild and scenic river study lies in the lower half of the watershed, beginning approximately 225 miles downstream of the river's headwaters and ending approximately 75 miles upstream of the confluence with the Gauley. Figure 2.2 shows the location of the study area within the Kanawha-New River Basin.

³ As will be described later in this chapter, the summer high pool actually fluctuates between 1,409.5 and 1,411.5 feet.

Figure 2.1.A. The New River Wild and Scenic River Study Area (South Section)

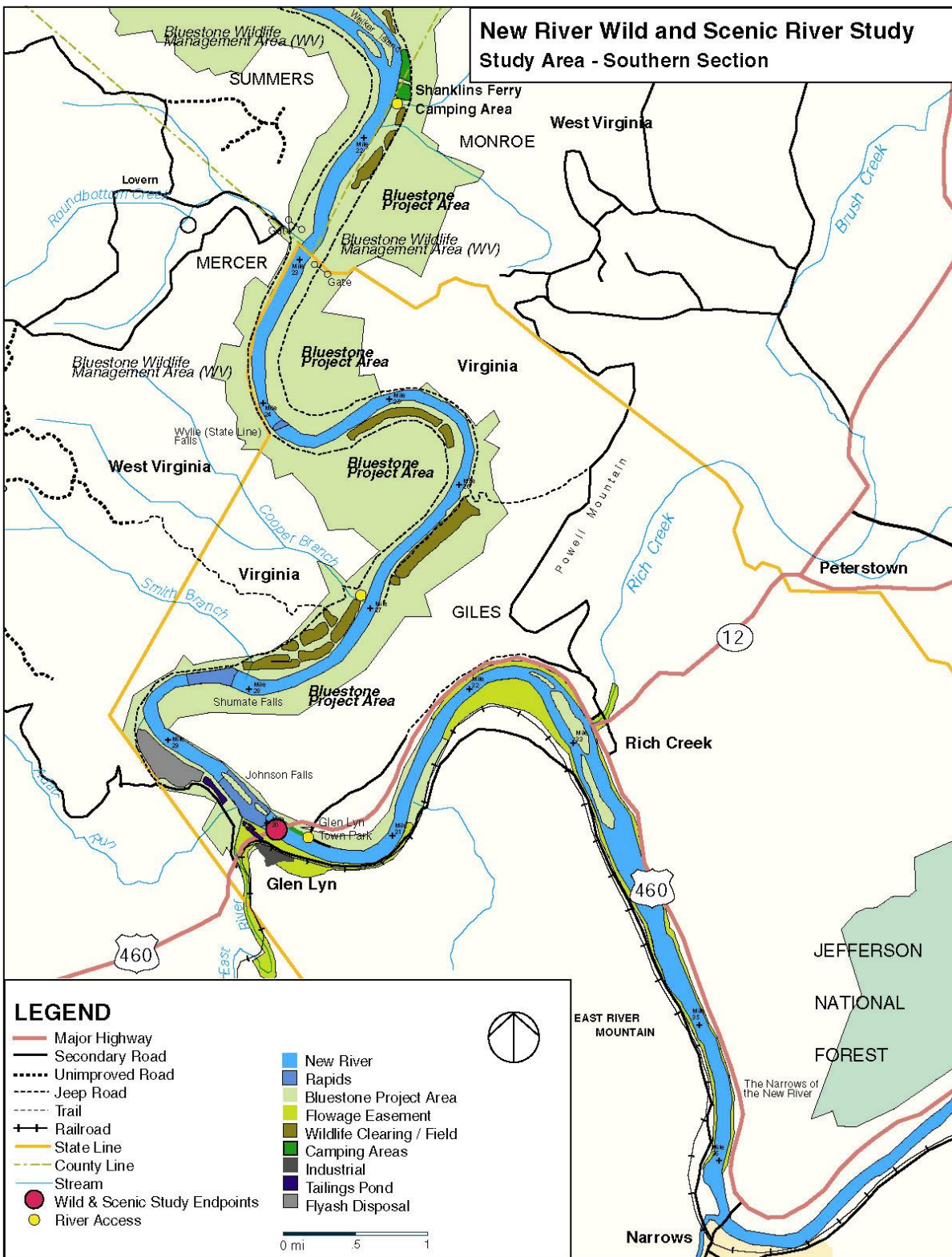


Figure 2.1.B. The New River Wild and Scenic River Study Area (North Section)

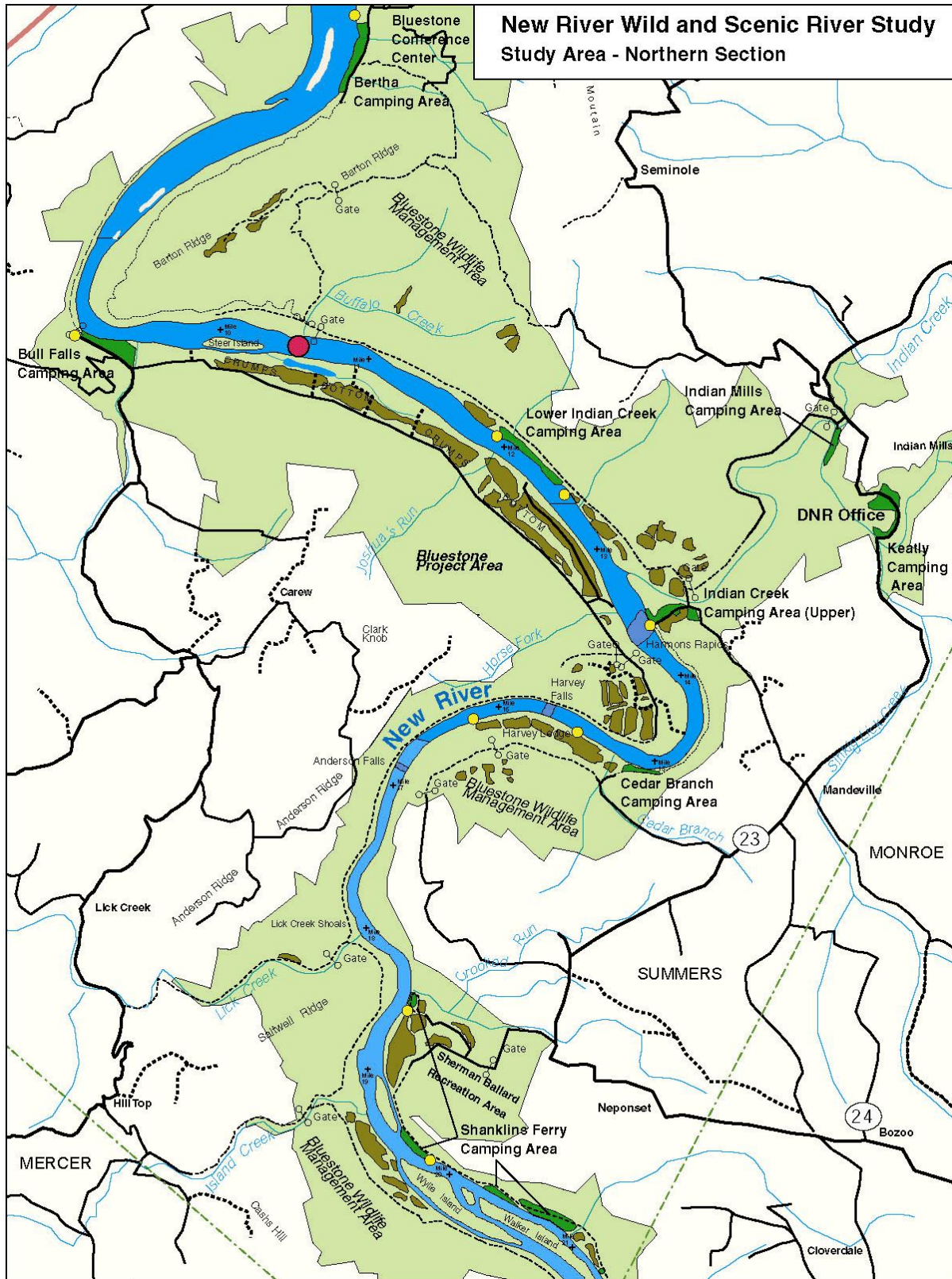


Figure 2.2. The Kanawha-New River Basin.



Base from U.S. Geological Survey digital data, 1:2,000,000, 1992 and National Park Service digital data, 1:24,000, 1996

The southwestern Virginia/southeastern West Virginia region is dominated by the Appalachian Mountains. Both the mountains and the adjacent lowlands are largely forested. In the lowlands the landscape is dotted with small rural agricultural, forest products, and service communities. Several of these communities are historically significant, or, at the least, have buildings and districts that are historically significant. The New River is the most prominent waterway in the area. Historically the New River corridor provided the major avenue for penetrating the otherwise imposing Appalachian Mountain chain, initially by boat and trail, and later by railroad and highway. Although the region surrounding the study area is generally quite rural, the entire study area is within a two-hour drive from Charleston, West Virginia, and Roanoke, Virginia, and within a five-hour drive from Washington, D.C.

Throughout this report frequent reference is made to “the region.” There is no one definition for a region. At its most basic level, a region is a geographic area with a set of unifying physiographic and/or human activity features. In reality, one location may be part of several overlapping or concentric regions, each defined by its purpose. The following regions, listed from larger to smaller, encompass and provide useful context for the New River study area:

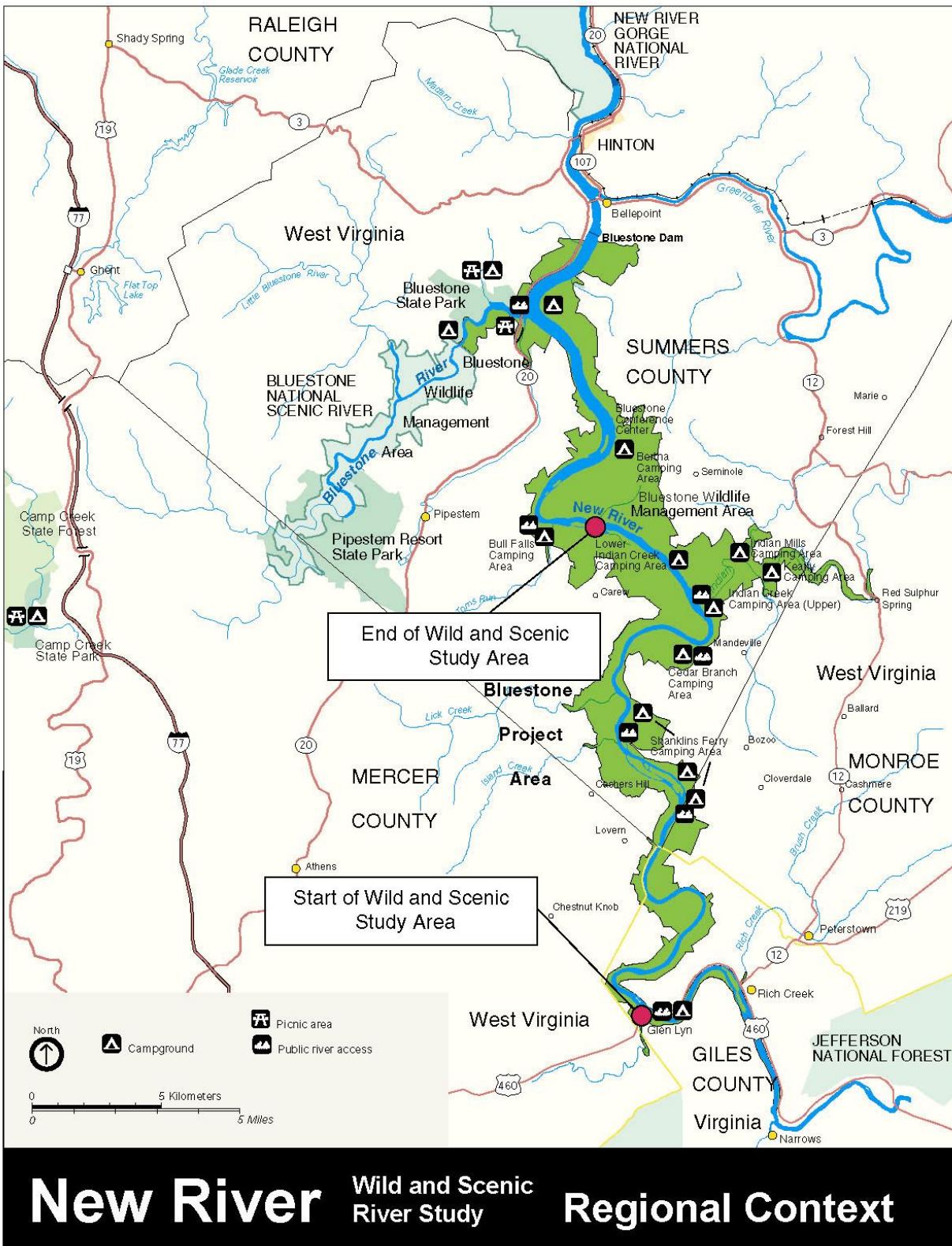
1. The eastern deciduous forest region, an ecological region covering the eastern United States from Maine to Georgia, westward to the Great Lakes and the Ohio River;
2. The Appalachian Mountain region, a physiographic region encompassing much of New England and portions of several mid-Atlantic and southeastern states;
3. The Ridge and Valley and Appalachian Plateau physiographic regions;
4. The Kanawha-New River Basin, a hydrologically-based region;
5. The New River watershed, a component of the larger Kanawha-New River Basin;
6. The Virginia-West Virginia region, which is based on the political boundaries of the two states that encompass the study area;
7. The southwestern Virginia/southeastern West Virginia region, a geographic and socio-political region that includes upwards of twenty counties surrounding the state border, and
8. The four-county region through which the New River flows within the study area (that is, Giles County in Virginia, and Summers, Monroe, and Mercer counties in West Virginia).

While all of these “regions” help to provide a context for the New River Wild and Scenic River Study, this report will focus mainly on three – the New River watershed, the southwestern Virginia/southeastern West Virginia region, and the four-county region. When regional concepts are discussed, the region will be clearly identified.

Nearby Public Lands

The study area is adjacent to, nearby, or part of several other blocks of public land. The relationship between the study area and nearby lands is shown in Figure 2.3. Adjacent to the study area downstream is Bluestone Lake, formed by the Bluestone Dam in Hinton, West Virginia. As described in the “Overview” section above, the lands surrounding the lake are owned by the federal government and administered by the ACE and actively managed by the West Virginia DNR as a WMA. Immediately downstream of the dam are additional ACE-administered lands along the New River in Hinton, West Virginia. These lands provide access to

Figure 2.3. The study area in the context of surrounding public lands.



the river, principally for fishing and hunting. At the mouth of the Bluestone River where it flows into Bluestone Lake is Bluestone State Park, which was created in the late 1960s and early 1970s and comprises approximately 2,100 acres. The park, which is located partially on federal lands administered by the ACE and partially on state lands, is managed by the West Virginia DNR Parks and Recreation Section.

Bluestone State Park offers a range of camping and boating amenities. Upstream of Bluestone State Park, the lowermost ten miles of the free-flowing portion of the Bluestone River is designated as the Bluestone National Scenic River (NSR). The designation extends from the maximum summer pool elevation of Bluestone Lake (1,410 feet above mean sea level) to approximately two miles upstream of the Summers and Mercer County line, and includes adjacent federal lands. New River Gorge National River and Bluestone NSR are two units of the National Park System within West Virginia, and host many outdoor recreational opportunities including whitewater boating, hiking, hunting, fishing, rock climbing, horseback riding and camping. The Bluestone NSR is administered by the NPS through its New River Gorge National River office in Glen Jean, WV. The upper portion of the Bluestone NSR flows through Pipestem Resort State Park, which was also created in the late 1960s and early 1970s and comprises approximately 4,073 acres. The part of the Bluestone NSR within Pipestem is administered by the State of West Virginia, not the NPS. Pipestem Resort State Park is one of West Virginia's most luxurious state parks, offering camping, lodging, and an array of recreational activities including golfing, horseback riding, hiking, and fishing.

As described earlier, the West Virginia portion of the study area, the lands surrounding Bluestone Lake, and lands within the Bluestone National Scenic River outside of Pipestem Resort State Park comprise the Bluestone Wildlife Management Area (WMA). Most of the WMA is managed by the West Virginia DNR Wildlife Resources Section in collaboration with DNR Parks and Recreation Section, which manages recreation facilities within the WMA. In the Bluestone NSR portion of the WMA, West Virginia DNR and the NPS share management responsibilities. The WMA is managed primarily for fish, wildlife, and associated public uses including hunting, fishing, trapping, camping, boating, and wildlife observation.

All told, the Bluestone Wildlife Management Area and Bluestone and Pipestem Resort State Parks comprise a contiguous block of more than 25,000 acres of high quality public conservation land offering a significant diversity of recreational opportunities.

Downstream of the Bluestone Dam and the confluence with the Greenbrier River, the New River enters the New River Gorge National River, which is administered and managed by the NPS. This area encompasses 72,189 acres between Hinton and Fayetteville, West Virginia. Near the downstream end of the New River Gorge National River is the 11,507-acre Gauley River National Recreation Area, also administered and managed by the NPS. These two NPS areas provide opportunities for limited and restricted camping, fishing, hiking, and whitewater boating, among other activities.

Moving upstream along the New River into Virginia, the U.S. Forest Service-administered and managed Jefferson National Forest (690,000 acres) begins within a few miles of the upper end of the study area in Giles County and extends along the Appalachian Mountain Range, abutting

both the George Washington National Forest in Virginia and the Monongahela National Forest in West Virginia. The Appalachian National Scenic Trail, which is administered and managed by the NPS, runs through this area and crosses the New River upstream of the study area at Pearisburg, Virginia.

Some thirty miles upstream of the study area near Radford, Virginia, is Claytor Lake State Park. The park is on the shorelands of Claytor Lake, a reservoir formed when Claytor Dam was constructed across the New River. Further upstream in Virginia, the New River Trail State Park flows for forty miles through Grayson, Carroll, Wythe, and Pulaski counties. West of the New River near the North Carolina border is Mt. Rogers National Recreation Area, which is part of the Jefferson National Forest.

In North Carolina, sections of the New River main stem and South Fork totaling 26.5 miles have been designated as a national wild and scenic river. This area includes New River State Park, managed by the North Carolina Division of Parks and Recreation.

In sum, considering both immediately adjacent public lands and others in the surrounding area, the New River study area is strategically situated at the center of a region that contains a state wildlife management area, several state parks, a national forest, two national recreation areas, a national river, a national scenic trail, and two national wild and scenic rivers.

History

The earliest known Native American peoples lived in the New River region from 10,500 to 8,000 B.C. and used the study area as hunting grounds for mammoth, musk ox, mastodon, and caribou. Approximately 6,000 years ago, there was a shift toward more reliance on agriculture. By 1,000 years ago the use of agriculture had matured to where people lived in villages and relied intensively on corn production. During this village period, as earlier, the Crump's Bottom area and the Indian Mills area along Indian Creek were favored locations, though there is evidence of use throughout the area.

Prior to European settlement the area had been home to the Creek, Cherokee, Choctaw, and Shawnee tribes. No permanent Native American communities existed in the region at the time of European settlement, but the area was still heavily used as a transportation corridor and hunting grounds. European settlement of the area began in the early 1750s. Conflicts between settlers and Native Americans ensued, and Native Americans soon vacated the area. As with the Native Americans, the Europeans' major center of activity was the Crump's Bottom area and the Indian Mills area along Indian Creek. Families living in the region survived by hunting and by farming in the narrow bench of lowlands near the river. Soon the river also supported several mills. Adjacent lands provided salt, an invaluable commodity that supported both wildlife and local residents. The Mercer Salt Works were established near Lick Creek in 1850, and became the most prominent industry in the area. Surplus salt was exported out of the region via the river and the Red Sulphur Turnpike, which ran near the river. Colonel (and later President) Rutherford B. Hayes burned the salt works during the Civil War.

Until the mid-19th century, the river was the most reliable source of transportation. Travel and transport of agricultural products down the river was accomplished using "batteau boats," narrow flat-bottomed wood carved boats that were poled along the river. Ledge drops that formed rapids inhibited use of the river for transportation, especially at lower flow levels. During the 19th century, "batteau chutes" were blasted through bedrock ledges to provide a means for batteau to navigate through the ledge drops.

Also during the 19th century, several ferry sites were established to transport people and goods across the river. Shanklin's Ferry was the most notable. Its popularity led to the development of a small business district.

During the 19th century road systems began to expand, often superimposed on the major Native American trails. The rugged terrain of the study area made travel and construction of roads extremely difficult, so roads typically skirted the area and only a few unpaved roads were constructed in the study area's river valley. While other parts of the New River Valley became a major railway route, the terrain of the study area was not conducive to tracks, leaving this the only section of the New River from Pulaski, Virginia, to Gauley Bridge, West Virginia, without railroad development in the river corridor.

By the beginning of the 20th century, several small settlements had been established in the study area, complete with homes, businesses, and cemeteries. A substantial estate had been developed at Crump's Bottom, and agriculture was practiced in several locations concentrated along the fertile river bottomlands.

The Bluestone Lake Project was authorized by Executive Order of the President, September 12, 1935, and the Flood Control Acts of June 22, 1936, and June 28, 1938, for the purposes of flood control and power development. The authorization included the construction of a dam on the New River at Hinton, West Virginia, and acquisition of land within the New River Valley from the dam upstream to Narrows, Virginia, for a reservoir. The stated purposes of the project were later expanded under the Flood Control Act of 1944 (PL 78-534) to include recreation activities and under the Fish and Wildlife Coordination Act of 1958 (PL 85-624) to include fish and wildlife enhancement.

The Bluestone Dam was configured to contain a maximum flood storage pool of 1,520 feet above sea level. (With completion of the Dam Safety Assurance construction, the maximum pool elevation will increase to 1542 feet.) Looking upstream, the 1,520-foot elevation included all bottomlands along the river between the Hinton dam site and Narrows, Virginia. In order to have the right to flood shorelands, the ACE needed to either purchase or secure flowage easements on all lands upstream of the dam site that were below the 1,520-foot elevation. In actuality the ACE set an objective of acquiring rights up to the 1,530-foot elevation. Prior to the completion of dam construction in January 1949, the ACE acquired fee title to most of the lands in the project area downstream of approximately the Route 460 Bridge in Glen Lyn, Virginia, and flowage easements on much of the remaining project area lands further upstream in Virginia. Ultimately the ACE acquired ownership or rights to all of the lands to at least the 1,520-foot elevation. While the focus was on lands that would be subject to flooding, in some cases the ACE also purchased higher adjacent uplands when this proved necessary or prudent. This was

particularly the case in the West Virginia portion of the project area. This is why the federal lands in many locations within the project area extend beyond the 1,520-foot or 1,530-foot contour lines.

As the ACE assumed ownership of the New River corridor above Hinton, residents were relocated, structures removed, and roads abandoned. Under federal ownership since that time, the Bluestone Lake Project Area has been isolated from residential, commercial, and industrial development, thus allowing much of the area to revert to forest. The foundations of several houses and some roadways and other developments can still be seen within the project area. Other visible vestiges of the pre-dam era include a number of agricultural fields that have continued to be worked by local farmers under agreements with the government.

Since 1950, the ACE has had a license agreement with the State of West Virginia allowing the state's DNR to manage lands in the Bluestone Lake Project Area within West Virginia, primarily for fish and wildlife and related recreational activities. Originally called the Bluestone Public Hunting and Fishing Area, the name was later changed to the Bluestone Wildlife Management Area. The WVDNR management program is discussed in greater detail later in this chapter (see "Management" section, below). No similar arrangement has been established with the Commonwealth of Virginia for management of the portion of the Bluestone Lake Project Area within that state.

Since the early 1950s, residents of the southwestern Virginia/southeastern West Virginia region have used the area for recreational purposes, especially hunting, fishing, trapping, and camping. Boating has also been popular, especially in conjunction with smallmouth bass fishing. The area has been especially popular as a place for low-cost, close-to-home vacations. Several examples have been cited of three generations of the same family coming back to the same camping location year after year.

Management

The Bluestone Lake Project Area

As described previously, the segment of the New River under study for potential addition to the National Wild and Scenic River System is upstream of the Bluestone Dam and within the Bluestone Lake Project Area. Since the construction of the dam, all of the lands in the study area have been owned by the federal government and administered by the ACE and managed by the WVDNR-WRS. The ACE's Huntington District prepared an overall master plan for the Bluestone Lake Project Area in 1949 that is still in effect. Specific parts of the plan address resource management, forest management, recreation, and fish and wildlife management. The "physical plan of development" section allocates project lands into areas for Bluestone Dam operations, intensive use recreation, low-density use recreation, wildlife management, group use, and natural preserves. The plan also outlines a list of initial and ultimate facilities to be developed. For more contemporary guidance the ACE prepares operational management plans, the latest approved in 1997. Water use restrictions include an unlimited speed zone, no wake zone and a no ski zone. The relationship between ACE and WVDNR-WRS has been successful.

Management in West Virginia

Most of the federal lands administered by the ACE within the Bluestone Lake Project Area in West Virginia, including the West Virginia portion of the study area, are managed by the West Virginia DNR under license from ACE. (The only Bluestone Lake Project Area lands in West Virginia not licensed to DNR by ACE are lands downstream of the Bluestone Dam, lands near the dam that are necessary for its operation, and lands within the Bluestone National Scenic River for which DNR has a separate license agreement with the NPS.) There are two licenses between ACE and DNR. One provides for state management of the federally-owned portion of Bluestone State Park. The other authorizes DNR to manage 90% of the lands as the Bluestone Wildlife Management Area. The original license between ACE and DNR was for fifty years and was signed in 1950. A new twenty-five-year license was signed in 2000 and will expire in June 2025.

The Bluestone WMA is the second largest public facility of its kind in West Virginia, totaling approximately 17,893 acres. Roughly 14,990 acres are bottomlands and uplands surrounding the New River and Bluestone Lake, of which approximately two-thirds are within the New River study area. The remaining 2,903 acres are adjacent to the Bluestone River. These lands, referred to by DNR as the “Bluestone River Unit” of the WMA, lie within the boundary of the Bluestone National Scenic River administered by the NPS. A new ten-year license between NPS and DNR was signed in 2002.

DNR’s initial interest in the Bluestone Lake Project Area was its potential value as habitat for eastern wild turkey. Today, after more than fifty years of active management, the area reportedly has some of the highest densities of wild turkeys per square mile in the eastern U.S. The management objectives for the area have expanded significantly since 1950 and today the area is managed for a wide range of game and non-game species.

For the portion of the WMA under license from the ACE, DNR-Wildlife Resources Section prepares formal five-year wildlife management plans for the WMA and annual operating plans that outline management activities for the next year. These plans are reviewed and approved by the ACE. These plans reflect DNR’s management emphasis that fish and wildlife and associated public uses are the highest priority objectives for the area. Other uses of the area such as camping, boating, hiking, and horseback riding are allowed as long as these activities are consistent with wildlife management.

DNR uses an integrated system of wildlife, agricultural, and forest management practices to enhance wildlife habitat primarily for game species, particularly wild turkey, white-tailed deer, bear, squirrel, and grouse. Active habitat management activities include vegetation control through mowing, prescribed burning in both field and forest, and forest management; planting of trees, shrubs, and herbaceous plants; and creation and maintenance of wetlands. Passive management is used in areas that are too steep for timber management or areas identified by ACE as sensitive viewsheds. In a given year DNR may be involved in active management on roughly twenty percent of the study area’s upland habitat. Over a ten-year period it is estimated that active management practices occurs on roughly forty percent of the upland area. The remainder of the area is passively managed; that is, natural processes are allowed to proceed.

Passive management is used when the objective is to allow vegetation to evolve toward a mature forest.⁴ A number of cooperative research projects are undertaken in the Bluestone Wildlife Management Area including research on brood range creation, mast ecology, wildlife diseases, older age deer management, and black bear productivity. DNR activities related to public use include management of five camping areas and law enforcement, including the enforcement of state regulations for hunting, fishing and trapping.

Summaries of DNR management practices are presented in Boxes 2.1 and 2.2. For a more thorough treatment of DNR management, see Appendix 2.A, or consult DNR's 2001-2006 Bluestone WMA Wildlife Management Plan, cited in the references and bibliography section of this report.⁵

⁴ The terms "old growth" and "climax condition" are often used to characterize a mature forest. A mature forest is termed "late-successional" vegetation, while a cleared area that is just beginning to re-vegetate is "early-successional" vegetation.

⁵ Most of the readily available information about the Bluestone WMA is for the WMA as a whole, and is not specific to the portion of the WMA within the New River study area. Reasonable efforts have been made to extract information specific to the study area portion, but much of the information presented in this report for West Virginia relates to the WMA as a whole.

Box 2.1. WVDNR fish and wildlife management activities on the Bluestone WMA.

Game Management Activities

- DNR-WRS constructed and maintains a 15-acre marsh in Crump's Bottom that is flooded in the fall to provide habitat for waterfowl. A smaller water control structure on Steer Island and numerous waterholes and potholes have been established and are maintained.
- 4 miles of road are maintained annually, as are 28 informational and area signs. 35 road closures are maintained to restrict vehicular access and reduce wildlife disturbance.
- 200 acres of land in crop and hay leases are managed annually to provide wildlife habitat. DNR-WRS mows, plants, disks, or burns 334-384 acres of herbaceous vegetation per year to provide brood range for wild turkey, the featured game species of the area. DNR-WRS plants a mixture of legumes and grasses in forest clearings and fields to provide forage for a variety of wildlife species. In 2003, 28 acres were planted on the area – 8 acres of native warm season grasses, 16 acres of cool season grasses and legumes, and 4 acres of small grain (for doves). In 2004, 64 acres were planted – 4 acres were legumes and 60 acres were small grains. In 2005, 87 acres of small grains and 5 acres of legumes were planted. In 2006, 97 acres of small grains and 19 acres of legumes were planted. DNR-WRS planted 65 shrubs and 124 trees on the area in 2003, 65 shrubs and 234 trees in 2004, 156 trees in 2005, and over 204 trees in 2006. Five acres of old field were reclaimed in 2005 and ten acres of field edge were cut in 2006.
- Prescribed burning and timber stand improvement projects have been completed on the area as part of general management and as part of a research effort designed to enhance brood range for wild turkey. 100 acres in Crumps Bottom were burned in 2005 and 175 acres burned in 2006.
- River otter were successfully reintroduced into the New River watershed in the 1980s. DNR-WRS continues to monitor progress of this species.

Fisheries Management Activities

- DNR-WRS does not currently stock the New River above Bluestone Lake. The fisheries consist primarily of smallmouth bass, flathead and channel catfish, and hybrid striped bass.
- DNR-WRS is collaborating with the Virginia Department of Game and Inland Fisheries (DGIF) to assess walleye populations in the New River.
- DNR-WRS stocks Indian Creek with rainbow, golden rainbow, brown, and brook trout.

Wildlife Diversity Activities

- DNR-WRS monitors and protects the habitat of rare terrestrial species, including Black-bellied Salamander, River Cooter, Northern Red-bellied Cooter, and Meadow Jumping Mouse. DNR-WRS monitors rare mussels including Purple Wartyback, Northern Lance, Plain Pocketbook, Wavy-rayed Lampmussel, and Pistolgrip. DNR-WRS monitors the presence of Virginia Spirea, a federally-listed threatened plant species.

Box 2.2. WVDNR public use management activities on the Bluestone WMA.

Camping Area Management

- DNR-Parks manages five camping areas, with over three hundred individual campsites. Management includes policing and maintaining campsites, enforcing public use regulations, collecting fees, and visitor contact. DNR-Parks monitors these areas daily. Most are open year-round.

Road Management

- DNR-Parks and DNR-WRS collaborate in patrolling WMA roads and making plans for road repair when needed. Roads are monitored on a daily basis.
- DNR-Parks and DNR-WRS collaborate in enforcing road closures and off-road vehicle use.

Hunting and Fishing Management

- DNR-Parks and DNR-WRS collaboratively manage hunting and fishing on the WMA. DNR-Parks focuses on management of concentrated public use areas (such as camping areas and boat launches), while DNR- Law Enforcement focuses on enforcement of state hunting and fishing laws.

River and Dispersed Recreation Management

- DNR-Parks and DNR-WRS have developed and currently maintain ten public boat access sites, including carry-down areas and boat ramps with vehicular access.
- DNR-Parks is increasing its efforts to plan for and manage river recreation.
- DNR-Parks and DNR-WRS collaborate in identifying roadways and trails that are open or restricted for hiking, biking, horseback riding, and motor vehicles, and in monitoring use of these areas.

Public Safety and Law Enforcement

- DNR-Parks and DNR-WRS collaborate in enforcing WMA and state park laws and regulations. These agencies collaborate with county sheriffs in the enforcement of public safety laws.

Public Information and Coordination

- DNR-Parks maintains a visitor contact station at WMA headquarters to answer questions in person or by telephone regarding road conditions, camping area availability, etc.
- DNR-Parks and DNR-WRS coordinate with Pipestem Resort and Bluestone State Parks, the Bluestone NSR, the ACE, local governments, and other federal and state resource management agencies in the development of collaborative programs and activities.

Management in Virginia

The Virginia portion of the Bluestone Lake Project Area includes a total of 1,650 acres. Most of these lands (1,481 acres) are within the New River study area downstream of the Route 460 Bridge. Project lands upstream of the Bridge include 64 acres leased to the Town of Glen Lyn and managed as a riverfront park, some additional shorelands, and a few islands. Upstream of the town park, ACE holds flowage easements on privately owned shorelands up to at least the 1,520-foot elevation, which extends to the City of Narrows.

Unlike the situation in West Virginia, the ACE has retained responsibility for the management of Bluestone Lake Project Area lands in Virginia. In the past the ACE inquired about the potential for the Virginia Department of Game and Inland Fisheries (DGIF) to enter into a management agreement similar to that between the ACE and the West Virginia DNR. At that time DGIF declined to take on management responsibilities due to the cost and the size of the area, which DGIF considered to be small and somewhat linear from a wildlife management perspective. (While small for a wildlife management area, the area does meet the Commonwealth of Virginia's size standards for a state park.)

The only management plan for the Virginia portion is the ACE's dated overall master plan for Bluestone Lake Project Area from 1949, which does not focus significant attention on the area in Virginia. In addition, ACE's management in the area is limited due to budget and staffing limitations, and staff is unable to visit the area in Virginia on a regular basis. DGIF does conduct fisheries research in the study area and monitors hunting and fishing use. Also, the Giles County Sheriff's Office and DGIF game wardens assist in providing general law enforcement.

The ACE leases 192 acres of land on both sides of the river in Virginia to local farmers for agricultural use. This equates to approximately thirteen percent of the federally owned project lands in Virginia. The primary purpose of this arrangement is to provide habitat and forage for wildlife.

There are no developed recreational facilities downstream of the Route 460 Bridge in Virginia. There is no public vehicular access to the river from river right, and problems associated with public use on that shoreline are therefore minimal. On river left, the shoreline area is accessible by an unimproved road that parallels the river. While this road is steep near its upper end and the surface rough, it is used extensively as access for fishing, boat launching, and informal camping.

The lack of a regular management presence has resulted in a number of problems in the Virginia portion of the study area. Problems are most pronounced on river left because of the greater vehicle access on that side. Problems include four wheel-drive and all-terrain vehicle use of bottomland fields, parking and camping on eroding shorelands, and launching boats in areas without boat ramps, which compacts vegetation and increases erosion. Littering and sanitation are significant problems, as is unruly and, at times, illegal behavior. Many local residents view this area as a very important recreational resource, but express concerns about safety and a need for increased law enforcement.

The ACE's Bluestone Lake Project Area master plan recognizes the need for development of recreation facilities in this area and calls for additional coordination with the Commonwealth of Virginia.

Land Use

Land Uses Adjacent to the Study Area

The study area begins at the Route 460 Bridge in Glen Lyn, Virginia, a divided highway with moderate to high traffic volume. Just downstream from the bridge on river right is a steep-banked area. Above the bank, beyond the extent of the Bluestone Lake Project Area boundary, is an open bench area of private land that is used for dispersed housing and agriculture, primarily pasture. This area is zoned for commercial and industrial use. The Town of Glen Lyn is concerned that conservation of the river not detract from its plans for development of this area.

On river right immediately upstream of the Route 460 Bridge (and outside of the study area), the Town of Glen Lyn leases lands from the ACE for park and recreation purposes. The lease covers 64.16 acres that runs in a narrow band between Route 460 and the river. It starts immediately upstream of the Route 460 Bridge and extends upriver toward Rich Creek. Within this 64 acres is an 18.4-acre parcel that is designated for a developed town park. Development in the park includes camping and picnic areas, restrooms, and a boat ramp. The lease expires in April 2031.

On river left, immediately upstream of the Route 460 Bridge, the Appalachian Power Company (APC) maintains a coal-fired power plant. APC owns this land along the shoreline, but ACE holds a flowage easement. The plant withdraws water from the river for cooling and discharges this water back into the river at a somewhat elevated temperature in accordance with permits from the Commonwealth of Virginia. APC also has permits that authorize the company to pump water out of the river and discharge water into the river in conjunction with its operation of the fly ash facility downstream of the Route 460 Bridge on river left.

In West Virginia, immediately downstream of the study area are Bluestone Lake and the surrounding federal lands that, like the study area, are part of the Bluestone Wildlife Management Area. To the west and east, private lands, principally farms, forest, and rural and low-density residential housing abut the study area.

Primary Land Uses Within the Study Area

In accordance with the executive order and subsequent legislation that authorized the Bluestone Lake Project, flood control is a primary purpose of the lands within the study area. While the Bluestone Lake summer pool is normally maintained at or near 1,410 feet above sea level (the downstream terminus of the study area), the river and shorelands upstream of this point to an elevation of 1,520 feet are subject to inundation during times that Bluestone Dam is retaining water to reduce downstream flooding. The extent and frequency of this inundation is discussed in the "Bluestone Lake Pool Elevation" section below. Consistent with the Bluestone Lake

Project's authorization, the other primary land uses within the study area are fish and wildlife, and recreation. These uses are supported by a system of unpaved roads and several camping areas.

Other Land Uses Within the Study Area

Given that the study area is owned by the federal government, private uses for project waters and lands require a lease, license, or special use permit from the ACE or, where applicable, its primary licensee, the West Virginia DNR. Uses for which leases, licenses, or special use permits have been granted include the following:

Agriculture. As referenced previously, in West Virginia the DNR issues special use permits to local farmers for agricultural use of several areas. These plots, totaling 200 acres in 2005, are located principally on river bottomlands. In Virginia, the ACE leases 192 acres for agricultural purposes, primarily on bottomlands on river right, but also on the flatlands just above the state line on river left. The objective of these agreements is to create and maintain open spaces, forest-field edge, and forage for the benefit of wildlife. The farmers involved must meet a variety of conditions, including leaving a percentage of the crop as food for wildlife.

Industrial use. A short distance downstream of the Route 460 Bridge on river left in Virginia, the ACE granted an easement to the Appalachian Power Company for an emergency fly ash treatment pond, fly ash landfill, and a landfill runoff collection pond. These lands are located between River Mile 29.8 and River Mile 28.8.⁶ During the spring, summer, and fall seasons the fly ash facility is screened from the river by trees in the riparian corridor. The only evidence of the fly ash facility is the presence of a portable water pump located at mile 28.8. The twenty-five-year easement for the fly ash facility runs through 2027. The fly ash facility is nearing capacity and the Appalachian Power Company is moving forward with plans to establish a new facility on private lands further away from the river and outside of the study area. As part of the existing easement contract, Appalachian Power is obligated to stabilize and re-vegetate the area at the end of its useful life as a fly ash disposal area. The potential exists to reuse this area to benefit the river and the public, either as open space or for some other creative and compatible public use.

Transmission line rights-of-way. The Appalachian Power Company holds rights-of-way from the ACE to maintain a 345kV transmission line that crosses the New River at River Mile 27 and a 168kV transmission line that parallels the river between River Miles 26 and 27.

⁶ River miles typically are measured going upstream from a prominent hydrologic feature, in this case the Bluestone Dam. Thus, in the case of the New River study segment, River Mile 29.8 is 29.8 miles upstream of the Bluestone Dam. On 1:24,000-scale topographic maps of the area, river miles along the New River are indicated by a cross next to the word "Mile" followed by a number. Not all river miles within the study area are indicated on these maps, but those that are serve as useful reference points.

Regional Initiatives

While this report focuses primarily on the study area, it is important to consider the broader regional context within which decisions regarding the study area will be made. There are several initiatives under way within the New River watershed and the greater southwest Virginia / southeast West Virginia area that could affect – or be affected by – actions that are taken in the study area. These are described below.

New River American Heritage River.

The American Heritage Rivers Initiative was established in 1997 by Executive Order 13061 to target financial assistance and technical support resources toward select rivers to further community-based conservation, restoration, economic development, tourism, and other river-related objectives. The New River was one of fourteen rivers throughout the nation that was designated as an American Heritage River. The ACE's Huntington District provides staff to help coordinate the initiative on the New River. Most of the efforts to date have focused on areas upstream of the study area.

New River Blueway.

The New River Blueway was initiated as a project of the New River American Heritage River Initiative. The Blueway is a three-state effort to establish a paddling trail on the New River. The Blueway project seeks to improve existing public access to the river, establish new access where needed, develop informational and educational materials such as a map and guide to the paddling trail, and create links with related conservation and tourism-related activities. Most of the attention has focused on the river in North Carolina, and the upstream portion of the river in Virginia within the New River Trail State Park. All of the agencies represented on the New River Wild and Scenic River Study's Interagency Work Group are also partners in the Blueway. Appalachian Power Company, which operates the power plant along the river in Glen Lyn and the Claytor Dam upstream, is a corporate partner.

New River Parkway.

In 1985, the West Virginia Legislature passed legislation creating the New River Parkway Authority to oversee the planning of a scenic roadway that would aid visitors in accessing and enjoying recreational and scenic amenities associated with the New River. Through the Surface Transportation and Uniform Relocation Assistance Act of 1987, Congress authorized federal funding of \$17.6 million toward planning and construction of the portion of the Parkway from Interstate 64 to Hinton, West Virginia as a demonstration project. If constructed, the scenic roadway would utilize existing road alignments along the New River wherever possible. In addition to work on roadways, the project could include boat and river access points, overlooks, trailheads, and multiple-use facilities.

While the current focus is on the area north of Hinton and away from the study area, future plans call for continuing the parkway to include Route 20 south of Hinton and to the immediate west of the study area. Route 20 provides access to Pipestem Resort and Bluestone State Parks, the

Bluestone National Scenic River, and the west side of the study area in West Virginia. Ultimately Route 20 leads to other roads that connect with Route 460, which in turn leads to the Virginia portion of the study area in Glen Lyn.

Virginia Birding and Wildlife Trail.

The Virginia Birding and Wildlife Trail is a Virginia DGIF trail system that aims to both educate the public about Virginia wildlife and spur wildlife-related tourism. This is accomplished through the designation of several automobile travel routes (or “loops”), each focused on a central geography-based theme and highlighting points along the way where wildlife can be viewed. The system includes a New River loop. While this loop currently focuses on the 53-mile roadway between Claytor Lake, Pearisburg, and Pulaski, an extension is planned that follows the New River from Pearisburg to Glen Lyn.

Mary Draper Ingles Trail.

The Mary Draper Ingles Trail seeks to commemorate the “long walk home” of Mary Draper Ingles following her escape from Native American captors in 1755. This walk followed the west bank of the New River through the study area. The initial phase of the trail would focus on the portion of the trail between Glen Lyn, Virginia, and Hinton, West Virginia. The trail is envisioned as a multi-use bicycling, horseback riding and hiking trail. The National Committee for the New River and the Town of Glen Lyn are the main sponsors, though there are other cooperators as well.

Branding Initiatives.

“Branding” is a marketing strategy whereby interested entities seek to highlight the significance of an area based on geographic or other features in an effort to increase tourism and other commercial activity. Branding can be a private sector initiative, a public sector initiative, or, more often, a combination. The concept of promoting “gateway communities” on the periphery of well-known public lands is an example. Several ideas for branding within the southwest Virginia/southeast West Virginia area have been proposed. Downstream of the study area, a branding initiative focused on the region’s NPS sites is being considered. This would highlight the significant recreational opportunities available at the New River Gorge National River, the Gauley River National Recreation Area and the Bluestone NSR. Another branding initiative that would focus on history and heritage has been proposed in Summers, Monroe, and Mercer counties in West Virginia. In addition, Giles County has considered a multiple gateway concept – to the New River, the Jefferson National Forest, and the Appalachian Trail. A broader natural resource/heritage theme has also been suggested for the bi-state/four-county region.

Socio-economics

Population

The area most directly affected by decisions regarding the study area is the four-county region of Giles County in Virginia, and Mercer, Monroe, and Summers counties in West Virginia. Cities and towns most directly affected are Glen Lyn and Rich Creek, Virginia, and Hinton, West Virginia. Table 2.1 shows the population of these counties and communities as of the 2000 census.

Table 2.1. Population of the four-county region and affected cities and towns in 2000.

	Population	Persons/ Sq. Mile
Giles County, Virginia	16,956	46.6
Mercer County, West Virginia	62,113	149.0
Monroe County, West Virginia	13,503	30.8
Summers County, West Virginia	13,917	36.0
Total for four counties	106,489	
City of Hinton, West Virginia	2,880	
Town of Glen Lyn, Virginia	151	
Town of Rich Creek, Virginia	665	
Total for affected city and towns	3,696	

Mercer County in West Virginia is by far the most populated of the four counties, primarily because of the cities of Princeton and Bluefield. However, the portion of Mercer County near the study area is similar in population density to the other counties.

Economy

Traditionally the economy in the four-county region was based largely on agriculture, forestry, industry, and the railroad. Proximity to coal country played a significant role in the economy. More recently the regional economy has shifted to more diverse service-oriented businesses. Quality of life is considered an important factor in attracting new residents and commerce, and tourism is recognized as an important component of the regional economy.

As described earlier in the “Regional Setting” section, the four-county area is home to several prominent public-land resources including several state parks, a national river, a national wild and scenic river, a national forest, and a state wildlife management area. The New River serves as a unifying element for all of these areas. The four-county region is also strategically located in the center of several additional recreation and conservation areas that, while outside of these counties, are within an easy drive. Again, the New River is a unifying theme for these areas.

Together, these areas are an important part of the tourism and recreation sector of the four-county region's economy.

Hinton, West Virginia, was at one time a thriving railroad center and during that time built up an infrastructure similar to any thriving small city. While the railroad trade has dwindled, Hinton retains the infrastructure and is poised to be a regional hub in the future. Hinton officials actively work to enhance the city's economic position by encouraging development of a diversified economy that includes service, technology, and tourism. The city is active in the development of tourism strategies and sees value in using the New River as an organizing principle in positioning the city as a recreation hub and gateway to nearby areas and opportunities. The three basic elements in this strategy are the New River Gorge National River (Hinton is the upstream terminus of this national park area), the New River Parkway (connecting Hinton with I-64), and the Bluestone Wildlife Management Area and adjacent conservation areas upstream of the Bluestone Dam, including Bluestone NSR, and Bluestone and Pipestem Resort State Parks. As part of its economic development strategy, Hinton also is pursuing local development opportunities that have a connection to the river, including a new technology center, new lodging, and a river walkway.

Glen Lyn, Virginia, and its immediate neighbor, Rich Creek, Virginia, are both small towns with agricultural and industrial foundations and emerging diversified economies. The Appalachian Power Company is the largest employer in Glen Lyn and is recognized as a major contributor to the community. Glen Lyn actively courts recreation-based tourism, as evidenced by the town's sponsorship of both a rail-to-trail project and the Mary Draper Ingles Trail discussed earlier in this chapter. Glen Lyn and Rich Creek view their proximity to the New River, and to the Jefferson National Forest, as significant assets in positioning themselves as gateways to important outdoor recreation resources. Glen Lyn uses the riverfront town park as a core element of the town's New River strategy and views the Appalachian Power Company's fly ash facility as a potential component of this strategy once the facility closes. Giles County has initiated a tourism development project that seeks to strengthen the area's position as a recreational destination. The county and towns work collaboratively on these efforts.

Physical Resources

Geology and Hydrology

The study area is located in a transition region where the New River leaves the Ridge and Valley physiographic province and enters the Appalachian Plateau province. Long, parallel mountain ridges separated by valleys distinguish the Ridge and Valley province, while the Appalachian Plateau is a dissected plateau of rolling uplands with a strong, well-defined drainage pattern.

Considered one of the oldest rivers in the world, the New River predates the mountain ranges that surround it. Instead of the river carving downward through the mountains and plateaus, as is typically the case, the lands were thrust up around the river. This superimposition of the river on surrounding land formations explains how the New River was able to penetrate the Appalachian Mountains, while the mountains confined other younger rivers in the region. The New River is

therefore unique. It is the only river in the Appalachian region to actually cut through this massive range flowing east to west. The fact that it cuts through the mountains in a northern and westerly direction makes this all the more unique. All other large rivers in eastern seaboard states flow to the Atlantic. Only the New River drains to the Gulf of Mexico. On a smaller scale, the river’s age and geologic history also help to explain the meandering of the river's course in loops and oxbows, instead of a swift, straight-line tumble of water from mountaintop to valley below.

The region's surface rocks have a sedimentary origin. Gently- to strongly-folded rocks of the Mauch Chunk Group of Mississippian shale and sandstone underlie the river’s course. This bedrock layer is responsible for the many ledge drops that boaters experience when navigating the New River through the study area.

The average drop of the river is roughly three to five feet per mile. Boating enthusiasts classify these rapids as class I and II, with infrequent class III and, at certain water levels, class IV. Significant rapids are identified in Table 2.2, listed from upstream to downstream.

Table 2.2. Rapids in the study area.

Name	Approximate River Mile (above Bluestone Dam)	Location
Johnson Falls	30.0	In Virginia, immediately downstream of the Route 460 Bridge
Shumate Falls	28.3	In Virginia, past first major bend
Wylie (State Line) Falls	24.2	In Virginia, where Giles County, VA, meets Mercer County, WV on river left
Anderson Falls	16.8	In West Virginia, between Shanklin’s Ferry and Cedar Branch camping areas
Harvey Falls	15.8	In West Virginia, upstream of Cedar Branch camping area
Harmon’s Rapids	13.6	In West Virginia, at Indian Creek Camping Area

Soils

The soils of the Bluestone WMA are mostly deep and well drained. Erosion concerns range from slight to moderate. Most are productive forest soils. Floodplain soils are generally suitable for cultivation, as demonstrated by the use of these lands over many generations by pre-contact

Native Americans and, later, European settlers. The soils found within the Bluestone WMA are indicative of those found in the study area overall, and are listed and described in Table 2.3.

Table 2.3. Soil series of the Bluestone Wildlife Management Area.

Series	Description	Location
Calvin	Moderately deep, well drained	Slopes
Chagrin	Deep, well drained	Flood plains
Coolville	Deep, moderately well drained	Ridge tops, benches
Dekalb	Moderately deep, well drained	Ridge tops, benches, side slopes
Ernest	Deep, moderately well drained	Foot slopes, colluvial fans, drainage ways
Gilpin	Moderately deep, well drained	Ridge tops, benches, side slopes
Jefferson	Deep, well drained	Foot slopes of steep slopes, drainage ways, coves
Kanawha	Deep, well drained	High flood plains, low terraces
Lobdell	Deep, moderately well drained	Flood plains
Orrville	Deep, somewhat poorly drained	Flood plains
Monongahela	Deep, moderately well drained	High terraces
Shouns	Deep, well drained	Foot slopes, drainage ways
Udifluent	Deep, well drained and moderately well drained	Flood plains

Landscape Character

Topography. The study area consists of a large river running through mountain and rolling hill terrain. The river is the dominant feature. Landforms are diverse, including ridge tops, cliffs, steep to moderate slopes, small side valleys, bottomlands, and islands.

Development. The combination of the rugged landform and federal land ownership are largely responsible for the study area being one of the least developed areas in the four-county region. No major roads or railroads parallel the river within the study area. Once downstream of the Route 460 Bridge and the adjacent development in Glen Lyn, Virginia, the only notable forms of development visible from the river are sections of unimproved roads that parallel the river, agricultural sites, the two Appalachian Power Company transmission lines in Virginia, and three riverside camping areas in West Virginia. The areas managed for agriculture tend to blend with their surroundings, and only a few have fencing.

The only other visible signs of human activity include a portable water pump associated with the Appalachian Power Company fly ash landfill on river left in Virginia, scattered informal use sites on river left in Virginia, and trash that has accumulated at many locations, particularly the aforementioned informal use sites in Virginia and island and bottomland backwaters.

Visual Resources. The landforms and undeveloped character discussed above contribute to the high visual quality of the river area. Within the study area, and especially from the river, there are a variety of near, mid, and long views. Visual complexity is high due to both vegetation cover and diverse landforms. The green deciduous forest transforms into a carpet of color in the fall. Floodways, islands, meanders, and tributary streams all add significantly to the visual appeal. The only noteworthy visual intrusion is the transmission line that crosses high above the river. From the river, the views are more open in Virginia, with views of surrounding ridgelines being particularly striking. Views narrow in West Virginia, with distant ridgelines far less prevalent. If anything, this tends to concentrate one's focus on complex and interesting foreground and mid-ground views.

While several rivers and streams in this region could be considered scenic, this segment is distinguished from the others by its large size – both in terms of volume of water and corridor width – and the degree of its natural condition. This natural condition is especially important in the context of other nearby segments of the New River. While many of these are very scenic, none are as undeveloped.

Water Resources

Streamflow

The New River is among the Appalachian Mountain region's highest volume rivers. Flow varies greatly by season and year. Hurricanes often occur in the fall and other storm events can occur at any season. These can result in significant short-term increases in flow.

The United States Geological Survey maintains a streamflow gauging station in the New River in Glen Lyn, Virginia. (The station is next to the town park on river right.) Continuous data are available from 1927 to 2003. In some cases earlier data are also available. The immediate past year's data (in this case 2004) are not incorporated into the data system until these data have undergone verification procedures. This typically takes a year or longer. Tables 2.4, 2.5, and 2.6, and Figure 2.4 present summary information derived from Glen Lyn stream gauging station data. Table 2.4 shows the ten highest instantaneous streamflows since 1927.⁷ Table 2.5 shows the ten lowest monthly mean streamflows since 1950 (when the Bluestone Dam became operational). Figure 2.4 shows the monthly mean streamflow for all years between 1927 and 2003.

⁷ "Instantaneous" flow refers to the flow at any one moment in time. This is different from mean flow, which defines an average over a given unit of time (e.g., day, week, month, year).

Table 2.4. Ten Highest instantaneous streamflows at the Glen Lyn, Virginia, USGS Gauging Station, 1927-2003.

	Date	Cubic feet/second
1	August 14, 1940	226,000
2	November 7, 1977	110,000
3	January 20, 1996	106,000 (est.)
4	June 22, 1972	105,000
5	September 23, 1989	103,000
6	February 23, 2003	100,600
7	April 5, 1977	98,900
8	May 29, 1973	93,600
9	April 25, 1987	85,200
10	December 8, 1950	79,000

Table 2.5. 10 lowest monthly mean streamflows at the Glen Lyn, Virginia, USGS Gauging Station, 1950-2003.

	Date	Cubic feet/second
1	August 2002	1,040
2	August 1999	1,093
3	September 1998	1,127
4	October 1988	1,204
5	November 1981	1,258
6	November 2001	1,286
7	December 1997	1,305
8	October 2000	1,338
9	September 1963	1,361
10	July 1999	1,373

Figure 2.4. Monthly mean streamflow at Glen Lyn, Virginia, USGS Gauging Station, 1927-2003.

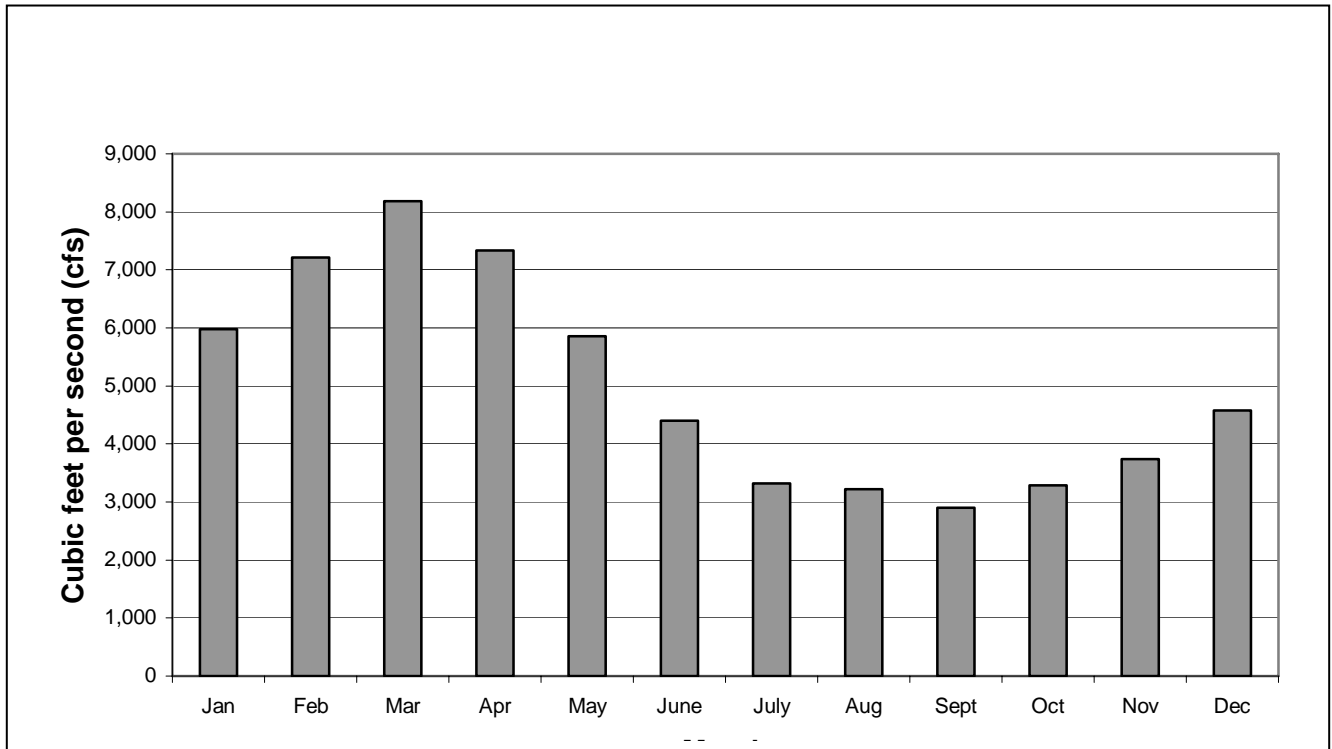


Table 2.6 shows the high and low monthly mean streamflows over the past twenty years of record. The essential conclusion from the above streamflow data is that this section of the New River experiences considerable variability in flow, both annually and monthly. Generally the first half of the year (January to June) has relatively higher flows than the last half of the year, though there are enough exceptions at both ends (particularly spring and fall) that it is difficult to make predictions with any confidence. For example, in 1989 September had the year’s highest monthly mean flow, while the next year September had the lowest. Hurricanes play a role in this unpredictability, as do variable spring and fall jet stream patterns. If anything can be stated with confidence, it is that monthly mean low flow will be above 1,000 cfs, but only rarely will it exceed 2,500 cfs.⁸ Monthly mean high flow is far more variable, ranging from just over 4,000 cfs to over 20,000 cfs over the past twenty years.

Table 2.6. High and low monthly mean streamflow over twenty years at Glen Lyn, Virginia Gauging Station, 1984-2003.

Year	Low flow month	Mean low flow (cfs)	High flow month	Mean high flow (cfs)
1984	September	2,223	April	11,650
1985	September	1,663	February	6,585
1986	October	1,732	December	6,790
1987	August	1,813	April	20,890
1988	October	1,204	January	4,064
1989	January	3,080	September	11,500
1990	September	2,010	February	10,690
1991	October	1,414	March	10,780
1992	September	2,600	June	12,850
1993	October	1,620	March	18,650
1994	November	2,222	February	13,500
1995	August	1,574	January	11,540
1996	July	2,577	January	13,289
Year	Low flow month	Mean low flow (cfs)	High flow month	Mean high flow (cfs)
1997	December	1,305	March	10,250
1998	September	1,127	February	15,520
1999	August	1,093	March	5,719
2000	October	1,338	April	6,223
2001	November	1,286	May	7,680
2002	August	1,040	March	5,669
2003	September	4,733	February	12,800

⁸ Instantaneous flow does drop below 1,000 cfs during some low flow months but, as shown in Tables 2.2 and 2.3, such extreme low flows typically are not sustained over an entire month.

Gaining an understanding of the study segment's instream flow regime is made more complex by the fact that flow is influenced by releases from Appalachian Power Company's Claytor Dam, some thirty miles upstream on the New River. Claytor Dam is a 75,000-kilowatt store-and-release facility. As is the case with all store-and-release facilities, releases can vary depending on energy needs and storage capacity behind the dam. Typically a store-and-release project will be operated so as to generate more power when demand is high and less when demand is lower. Daily fluctuation is therefore common. Releases at Claytor Dam are governed by a license with the FERC, which expires in 2011. Appalachian Power intends to start developing its re-licensing application in the near future in order to have a new license in place before the current license expires. The current license requires a minimum instantaneous discharge from the dam of 750 cfs. High discharge through the dam's four turbines is 8,000 cfs. The facility can also operate using three turbines (6,000 cfs), two turbines (4,000 cfs), or one turbine (2,000 cfs, or, during, times of low inflow, less than 2,000 cfs). In other words, when water is available the outflow from the turbines can fluctuate between 8,000 cfs and 2,000 cfs. Less fluctuation is the norm.

Since 1991, Appalachian Power Company has operated Claytor Dam as a "run-of-the-river" project during the recreation season of April 15 to October 15. In a run-of-the-river project, the outflow from the dam is the same, or nearly the same, as the inflow into the reservoir. The result is that the river downstream of a run-of-the-river project flows in a near-natural pattern. Natural flows into the reservoir normally exceed the license-mandated minimum release 750 cfs. In extremely low flow years, inflow in late summer can drop below 750 cfs. In these rare cases, Appalachian Power Company consults with the Virginia Department of Game and Inland Fisheries to determine whether the 750 cfs outflow should be retained (which would result in a lower reservoir level, which, in turn, may adversely affect lake fisheries) or whether the outflow should correspond to the lower than 750 cfs inflow.

Given its April 15 to October 15 run-of-river operation, Claytor Dam has no effect on the study segment during that time period. Store-and-release operations during the rest of the year can result in fluctuation in water levels down-river from Claytor Dam. However, by the time water discharged from Claytor Dam reaches the study area, it has been joined by flow from several tributaries. Also, discharge pulses tend to diminish as river flows proceed downstream. The broad width of the river within the study area further moderates the effect of release fluctuations, in contrast to a river of similar size that is confined to an incised canyon. The net effect is that, while still detectable at some water levels, daily fluctuation is largely attenuated by the time the water reaches the study area. This effect diminishes the further the flow moves through the study area. It is important to note that under normal conditions the New River fluctuates considerably due to weather events. As suggested earlier, a month that is dry one year can be wet the next. Even in a given month, flows can rise quickly and drop just as quickly, especially during hurricane season. As a result, the New River's natural and biological systems have become accustomed to a certain amount of flow variability.

Bluestone Lake Pool Elevation

The impoundment level of Bluestone Lake above the Bluestone Dam varies over the course of any given year. The lake pool is maintained at approximately elevation 1,410 feet above mean sea level from April through October for recreation and fish and wildlife purposes. In other words, the 1,410-foot elevation defines the point where the flowing river meets the still water of the lake during the summertime. This level is commonly referred to as the “summer high pool elevation.”⁹ During the remainder of the year, the base level of the pool is dropped to approximately 1,406 feet to provide additional flood control capacity. The maximum flood control pool is 1,520 feet. The net result is that all lands below 1,406 feet in the winter period and 1,410 feet in the summer period are inundated on a regular basis, and lands between those levels and 1,520 feet are subject to temporary inundation during flood control events (that is, periods of high precipitation or runoff during which additional water is retained behind Bluestone Dam to moderate downstream flooding).

At the 1,520-foot level, temporary flood storage would extend 36 miles upstream of the dam, an area that includes the entire length of the wild and scenic study area and additional areas upstream to Narrows, Virginia. Based on the ACE’s theoretical calculations, the “probable maximum flood” is 1,548 feet, or thirteen feet higher than the top of the existing dam.

The ACE records high pool information on a daily basis and has done so since the Bluestone Lake Project became operational. The maximum pool level recorded was 1,506 feet in April 1960. The highest pool elevation in the past ten years was in March 1996, when the pool elevation reached 1,493 feet. Table 2.7 shows the number of flood control events over the past twenty years in which the maximum extent of the high pool exceeded 1411.5 feet (which is the upper end of the range of the summer high pool).

⁹ The 1,410-foot level is a reference point that represents the average summer high pool elevation of Bluestone Lake. The actual summer high pool elevation varies between 1,409.5 feet and 1,411.5 feet.

Table 2.7. Number of flood control events from 1985-2004 in which the maximum Bluestone Lake pool elevation exceeded 1,411.5 feet.

Year	1,411.5-1,420	1,420-1,430	1,430-1,440	1,440-1,450	1,450-1,460	1,460-1,470	1,470-1,480	1,480-1,490	1,490-1,500	Total
1985	2		1							3
1986	2									2
1987	2			1	1		1			5
1988										0
1989	3	2		1						6
1990	2		1							3
1991	2	1	1							4
1992	2			2						4
1993	1		1				1			3
1994	2	1	2	1						6
1995						1				1
1996	2		2						1	5
1997						1				1
1998	2	1	2							5
1999										0
2000										0
2001	2	1								3
2002	1	1								2
2003	2	1	1			1	1			6
2004	1	1								2
Total	28	9	11	5	1	3	3	0	1	61
Avg.	1.40	0.45	0.55	0.25	0.05	0.15	0.15	0	0.05	3.05
Range	0 - 3	0 - 2	0 - 2	0 - 2	0 - 1	0 - 1	0 - 1	0	0 - 1	0 - 6

As Table 2.7 illustrates, there is significant variability between years. In three of the twenty years there were no events that exceeded 1,411.5 feet, and there were two years with only one such event and one year with only two events. At the other extreme, there were three years with six events and three years with five events. Five of the twenty years witnessed pool elevations that temporarily exceeded 1,450 feet. Table 2.7 demonstrates that it is difficult to predict high pool variability for any given year. However, it is safe to surmise that downstream portions of the New River study segment are likely to be affected by flood control events to some degree in most years, while the furthest upstream portions are likely to experience any inundation far less frequently, perhaps once a decade.

Recognizing the importance of the fact that flood control events and associated upstream inundations are temporary, Table 2.8 shows the number of days since the Bluestone Dam became operational in 1950 that the pool reached given elevation ranges.

Table 2.8. Summary of Bluestone Lake pool elevations by day from January 1950 to September 2004.

Pool Elevation Range	# of Days	% of Time
1390.00 - 1400.00	147	0.74
1400.01 - 1410.00	12,175	61.37
1410.01 - 1420.00	7,124	35.91
1420.01 - 1430.00	154	0.78
1430.01 - 1440.00	106	0.53
1440.01 - 1450.00	33	0.17
1450.01 - 1460.00	34	0.17
1460.01 - 1470.00	25	0.13
1470.01 - 1480.00	24	0.12
1480.01 - 1490.00	12	0.06
1490.01 - 1500.00	4	0.02
1500.01 - 1510.00	2	0.01
Total	19,840	100.00

Of the total of 19,840 days from January 1950 through September 2004, the impoundment level of Bluestone Lake was below 1,410.0 feet for 12,322 days. This is equivalent to 62.11 percent of the total days. On 6,774 days the pool was between 1,410.0 and 1,411.5 feet, or 34.15 percent of the total number of days. The pool level exceeded the normal summer range of 1,409.5 to 1,411.5 feet on 744 days, or 3.75 percent of the time. Conversely, the pool elevation did not exceed 1,411.5 on 19,096 days, or 96.25 percent of the time.

The data confirm that flood control inundations are short-term in nature, typically lasting from a few days to one or, in a more limited number of instances, two weeks. Sharp peaks during flood events are typical. That is, in all but a very few instances, flood events reached their peaks and quickly receded to the normal summer or winter pool elevation. The record high pool of 1,506 feet that occurred in April of 1960 was part of a major event where the pool elevation exceeded 1,410 feet for sixteen days. However, during that event the pool elevation exceeded 1,500 feet for only two days. The longest duration for one event was March of 1963, when the pool elevation exceeded 1,410 feet for twenty-five days. The maximum pool elevation during that event was 1,489 feet.

Table 2.9 demonstrates the relationship between the pool elevation of Bluestone Lake and the occasional inundation in the study area. The downstream boundary of the study area is at pool elevation 1,410 feet, or River Mile 10.5. The table lists pool elevations in ten-foot increments starting at that elevation and ending at 1,520 feet, the maximum flood control elevation for the Bluestone Lake Project. For each increment, an approximate river mileage is given indicating the upstream point that would be inundated by that pool elevation. A description of that location is also provided to help the reader locate this point on a topographic map. To correlate pool elevations to actual inundation events, the table indicates the number of days since the Bluestone Dam went into operation in 1950 that the pool was above a given elevation (out of the total of 19,840 days during that period). Also indicated is the number of flood control events that have occurred in the past twenty years in which a given elevation was inundated. The inundation

numbers in the two right-hand columns of Table 2.9 come from the same data that were used to create Tables 2.7 and 2.8, and correlate directly to those tables. However, Table 2.9 reflects aggregated data, so the numbers shown are not identical those in Tables 2.7 and 2.8.

Table 2.9. Relationship between Bluestone Lake pool elevation and inundation of the New River upstream.

Bluestone Lake Pool Elevation	River Mile	Location	Days above this elevation (1950 – 2004)	Events above this elevation (1985 – 2004)
1,410	10.5	Mouth of Buffalo Creek (river right)	7518 (37.9%)	61 (above 1411.5 ft)
1,420	14.5	Where river bends sharply to the left at the upper end of Crump’s Bottom (river left) and upstream of Indian Creek (river right)	394 (1.99%)	33
1,430	18.0	Mouth of Lick Creek (river left)	240 (1.21%)	24
1,440	19.8	100’ above the mouth of Island Creek (river left)	134 (0.68%)	13
1,450	21.5	Upper end of Walker Island, which is just upstream of Wiley Island (West Virginia)	101 (0.51%)	8
1,460	24.8	3,000 feet upstream from Wiley Falls (Virginia)	67 (0.34%)	7
1,470	27.0	Mouth of Cooper Branch (river left)	42 (0.21%)	4
1,480	27.9	Downstream of Smith Branch (river left)	18 (0.09%)	1
1,490	29.7	500’ downstream of the mouth of the East River (river left)	6 (0.03%)	1
1,500	33.0	Near mouth of Rich Creek (river right)	2 (0.01%)	0
1,510	34.8	Upper end of upstream-most island adjacent to the Town of Rich Creek	0	0
1,520	36.0	1,200’ downstream of the mouth of Wolf Creek (river left)	0	0

To place Table 2.9 in context, the maximum-recorded pool level of 1,506 in March 1960 backed water to River Mile 34.1, roughly one mile above the mouth of Rich Creek in the Town of Rich Creek, Virginia. Effects of the highest pool of the past ten years, 1,493 feet in March 1996, were evident at the Route 460 Bridge in Glen Lyn, Virginia. However, such events are extremely rare

and of short duration. Over the past fifty-plus years, the pool elevation has moved above the Virginia state line only one-third of one percent of the time, or on 67 of the total 19,840 days. Over the past twenty years, only seven flood events have backed the pool into Virginia. Looking further downstream in the study area, since 1950 the pool has reached the upstream-most part of Crump’s Bottom only two percent of the time. Over the past twenty years, the pool reached this point a total of thirty-three times.

Understanding Bluestone Lake pool elevations and their effects is admittedly difficult. To aid in understanding, Table 2.10 presents a simple summary of the various pool elevations discussed above.

Table 2.10. Important Bluestone Lake pool elevations.

Bluestone Lake Pool Elevation	Description
1,406 feet	Winter pool
1,410 feet	Typical summer high pool; downstream boundary of study area
1,409.5-1,411.5 feet	Range of summer high pool
1,455 feet	Pool reaches VA/WV state line (approximate)
1,493 feet	Highest pool in the past decade; pool reaches Rt. 460 Bridge in Glen Lyn, VA (approximate)
1,500 feet	Pool reaches Rich Creek, VA
1,506 feet	Pool of record (highest pool since 1950)
1,520 feet	Maximum flood control pool; pool reaches Narrows, VA
1,535 feet	Top of existing dam
1,548 feet	Probable maximum flood (ACE estimate)

Water Quality

The water quality within the study area generally is very good. Conventional pollutants fall within each state’s standards. Water quality supports the Federal Clean Water Act’s swimmable goal and supports the fishable goal except for elevated zinc and polychlorinated biphenyls (PCB 1254) levels in carp tissue. Because of PCB levels, the Virginia Department of Health advises fishermen not to consume carp caught in the New River from Radford downstream to the Virginia/West Virginia state line. The State of West Virginia also has recently issued a fish consumption advisory for the New River. A water quality monitoring station is located just upstream of Appalachian Power’s Glen Lyn plant near the Route 460 Bridge. In one two-year sampling period, including twenty-four samples, a single violation was reported for fecal coliform.

The Commonwealth of Virginia’s water quality standard for the New River in Giles County is Class IV (Mountainous Zones Waters). This reach of the New River has a special water quality

standard requiring a maximum temperature of 27 degrees Centigrade (81 degrees Fahrenheit), unless caused by natural conditions. This maximum temperature limit was established to ensure Virginia temperature standards for the New River would be consistent with those in West Virginia.

Sedimentation in Bluestone Lake resulting from upstream sediment loading is currently an issue. Sedimentation lowers the holding capacity of the lake, thereby reducing its flood control capacity. In extreme cases it can also cause powerboat propellers to come into contact with the lake bottom. This is especially a concern immediately downstream of where the river and lake meet, as the lake is naturally shallower in this location and this is where flow decreases and suspended solids start to fall to the bottom. Lake sedimentation is beginning to become a problem in some areas already and the problem will almost certainly intensify in the future. Management of upstream sediment loading could help to forestall this problem, but is unlikely to completely eliminate it. If the problem increases, dredging of portions of the lake bottom will likely be considered.

Floodplains and Bottomlands

Bottomlands are found along the New River throughout the study area, with Crump's Bottom being the largest. Typically formed over long periods of time by the slowing of water and the deposition of sediment on the inside of large river bends, and sustained by flooding during spring run-off and significant weather events, these bottomlands are some of the most dominant and ecologically significant features of the New River. The periodic flooding caused by floodwater retention at Bluestone Dam does not appear to have changed the essential character of these naturally occurring bottomlands. The study area also contains numerous islands, many of which likely were adjacent bottomlands that were cut off from the shorelands during high flow events. Much of the area of the bottomlands and islands are within what would be considered the river's floodplain.

Wetlands

Wetlands are areas where soils are saturated with water or covered by water for all or a significant part of the year and where vegetation is habituated to a wet environment. While river and stream courses fit a broader definition of wetlands, here the focus is on wetlands where the water is not flowing. According to the U.S. Fish and Wildlife Service's wetlands classification system, these non-tidal, non-flowing wetlands are called "palustrine." There are three types: (1) emergent vegetation wetlands, (2) scrub or shrub wetlands, and (3) forested wetlands. Emergent vegetation wetlands are commonly called marshes. In marshes, the vegetation consists of reeds, sedges, grasses, and cattails. Shrub and forested wetlands are commonly called swamps. Wetlands are important to a variety of wildlife species from butterflies to large game species such as black bear. They are especially important as habitat for furbearers and birds. Birds that make use of wetlands include waterfowl, waders, and a wide range of smaller perching birds.

All three types of palustrine wetlands occur in the study area, primarily on bottomland floodplains and islands. These bottomland wetlands are subject to both natural flooding and flooding associated with operation of the Bluestone Dam. Crump's Bottom contains the largest area of wetland in the study area, with 138 acres of naturally occurring wetland. The West

Virginia DNR created an additional fifteen-acre seasonally flooded wetland at Crump's Bottom to support waterfowl. A two-acre impoundment and several potholes also have been established in the floodplain upstream of the Bulls Falls camping area.

Vegetation

Plant Communities

In ecological terms, the area where the New River cuts through the Appalachian Mountains is an ecotone. An ecotone is the transitional area between different plant communities, habitat types, or ecosystems. The New River area is the northern limit for southern plant communities and the southern boundary for northern plant communities. It is also where the higher elevation Appalachian Mountain plant species transition into species of the lowlands. The flora of the study area is a combination of coastal plain and prairie species, and high and low altitude species. Not necessarily coincidentally, the area is also a north-south and east-west migration corridor for animals, birds, and humans, each carrying plant species with them both wittingly and unwittingly. This has contributed to the area's diversity of vegetation.

Roughly eighty percent of the study area is forested. The study area's uplands contain vegetation associated with the Appalachian Plateau's Mixed Mesophytic Forest Type. Lowlands to mid-elevation areas contain vegetation from the Oak-Hickory Forest Type of the Ridge and Valley Province. Primarily an oak-hickory forest, the study area associations also include oak-pine-hickory, white pine, hard pine, hemlock hardwoods, and bottomland hardwoods. As described in the previous section, marsh, scrub, and forested wetland associations are found in riparian and bottomland locations.

Common trees include species of the red, white, black, scarlet, and chestnut oaks; black locust; basswood; tulip poplar; American beech; hickory; eastern hemlock; white, pitch, Virginia, and short-leaf pines; black walnut; sycamore; and sugar and black maples. Flowering dogwood, sassafras, sourwood, striped maple, American holly, witch hazel, and magnolia are common understory trees in the study area. Mountain laurel, pawpaw, viburnums, gooseberry, elderberry, poison ivy, and nettles dot the forest floor. Bottomland wetland vegetation includes box elder, silver maple, slippery elm, ash, river birch, and black gum. Shrub species include black alder, buttonbush, black willow, spicebush, swamp privet, and ninebark.

The forest that covers the study area is not virgin forest. Much of the area was cutover and converted to cropland and other uses in the 19th century. With the purchase of these lands by the federal government in the 1930s and 1940s, the area began to revert to forest. After some sixty years the forest is now reaching maturity.

While most of the land in the study area is forested, some twenty percent is unforested – including agricultural lands and other clearings, camping areas, and open ridge tops. Camping areas are primarily grass with a semi-open tree canopy and vegetation buffers in some locations where campsites meet the river. Clearings provide an opportunity for native plants to get established that require a more open canopy. Ridge tops provide locations for additional non-forest plant communities that add to the vegetative diversity of the area.

Plant Species of Special Concern

Virginia spirea (*spiraea virginiana*) is the only federally-listed endangered or threatened species suspected to inhabit the study area. It is classified as threatened. Three plant species contained on the West Virginia Natural Heritage Program’s list of species of concern are known to occur in the study area: the nodding onion (*allium oxphilum*), Steele’s aster (*aster steeleorum*), and a sedge (*carex molesta*). An additional twenty-nine plant species recognized as rare by the Natural Heritage Program are thought to be likely to occur in the area.

Fish and Other Aquatic Species

Fish Species

The geomorphology of the New River and its tributaries creates high quality habitat for a wide range of fish species. A 1980 biological study identified fifty-eight fish species in the upper portions of the New River in West Virginia. Game species present at that time included largemouth, smallmouth, spotted, striped, hybrid striped, white, and rock bass; muskellunge; walleye; sunfish; yellow perch; and brook trout. The river also contains stable populations of black crappie, white crappie, channel catfish, flathead catfish, golden shiner, bluntnose minnow, white sucker, and alewife. Rainbow, golden rainbow,¹⁰ and sometimes brown and brook trout are stocked seasonally in Indian Creek by the West Virginia DNR, and may be present in the New River near the mouth of Indian Creek during spring months.

More recently, boat electro-fishing by the Virginia DGIF in the Giles County portion of the New River (which includes the Virginia portion of the study area) identified the 33 species listed in Table 2.11.

Table 2.11. Fish species recorded in the New River main stem in Giles County, Virginia.

Bass, largemouth	Darter, Roanoke	Shiner, swallowtail
Bass, rock	Darter, snubnose	Shiner, telescope
Bass, smallmouth	Logperch	Shiner, white
Bass, spotted	Madtom, margined	Shiner, whitetail
Bluegill	Minnow, bluntnose	Stoneroller, central
Carp, common	Muskellunge	Sucker, northern hog
Catfish, channel	Sculpin, mottled	Sucker, white
Catfish, flathead	Shad, gizzard	Sunfish, green
Chub, bigmouth	Shiner, rosyface	Sunfish, redbreast
Chub, creek	Shiner, silver	Sunfish, redeer
Darter, greenside	Shiner, spottail	Trout, rainbow

¹⁰ A golden rainbow is a rainbow trout variation. The only difference is coloration.

The Virginia DGIF and the West Virginia DNR-Wildlife Resources Section are collaborating in an assessment of walleye populations in the New River. Researchers at Virginia Polytechnic Institute and State University have identified a genetically unique stock of walleye in the New River.

Fish native to the New River included brook trout, channel catfish, flathead catfish, and green sunfish. Many of the river’s native species are believed to have originated in the Mississippi River basin, which is thought to be the center for North American fish evolution and distribution. The Teays River, the prehistoric predecessor to the New River, was thought to have been a principal corridor for the movement of fish from the Mississippi to the Atlantic side of the Appalachian Mountains. The Mississippi theory is supported by the fact that there are 90 native fish species in the lower Kanawha/New River basin and only fifty species in the upper reaches of the New River. This is likely due to the presence of Kanawha Falls, near the confluence of the New and Gauley Rivers, which is likely to have blocked the upstream movement of many species. Over time, humans introduced most of the lower river fish upriver, and today the numbers of species below and above Kanawha Falls are about the same. Exotic fish species also have been introduced and some have become naturalized, that is, they maintain self-supporting populations without additional stocking.

Other Aquatic Species

The New River also provides habitat for a variety of other aquatic species, including several crayfish species and the six species of mussel listed in Table 2.12. All of these are native species except the Asiatic clam. The Asiatic clam is an invasive species that is transported by boats and other means. Biologists are concerned that this species could out-compete native species.

Table 2.12. Mussels occurring in the New River study area.

Scientific name	Common name
<i>Corbicula manilensis</i>	Asiatic clam
<i>Cyclonaias tuberculata</i>	Purple wartyback
<i>Elliptio dilatata</i>	Northern lance
<i>Lampsilis cardium</i>	Plain pocketbook
<i>Lampsilis fasciola</i>	Wavy-rayed lampmussel
<i>Tritogonia verrucosa</i>	Pistolgrip

Aquatic Species of Special Concern

There are no federally endangered or threatened fish, mussel, or other aquatic species known to inhabit the New River study area.

In addition to the federal endangered species program, the states of Virginia and West Virginia each have natural heritage programs that track other species of special concern. In accordance

with natural heritage program protocol, the states rank species of concern using the following ranking system:

- S-1 = 5 or fewer known occurrences in the state
- S-2 = 6 to 20 known occurrences in the state
- S-3 = 21 to 100 known occurrences in the state
- S-4 and S-5 indicate more common species

Each state ranks species within its borders and the “S” rankings may differ between states.

Table 2.13. West Virginia S-1 through S-3 aquatic species known to occur in the New River study area.

Scientific name	Common name	Natural Heritage Program ranking
Fish:		
<i>Etheostoma osburni</i>	Finescale saddled darter	S-3
<i>Nocomis platyrhynchus</i>	Bigmouth chub	S-3Q (question)
<i>Percina roanoka</i>	Roanoke darter	S-1
Scientific name	Common name	Natural Heritage Program ranking
Mussels:		
<i>Cyclonaias tuberculata</i>	Purple wartyback	S-1
<i>Elliptio dilatata</i>	Northern lance	S-2/3
<i>Lampsilis cardium</i>	Plain pocketbook	S-2
<i>Lampsilis fasciola</i>	Wavy-rayed lampmussel	S-2
<i>Tritogonia verrucosa</i>	Pistolgrip	S-2

Aquatic species recognized as being of concern by the West Virginia Natural Heritage Program that are known to inhabit the study area are listed in Table 2.13. Species suspected to occur are listed in Table 2.14.

Table 2.14. West Virginia S-1 through S-3 aquatic species suspected to occur in the New River study area.

Scientific name	Common name	Natural Heritage Program ranking
Fish:		
<i>Exoglossum laurae</i>	Tongue-tied minnow	S-3
<i>Exoglossum maxillingua</i>	Cutlips minnow	S-2
<i>Notropis scabriceps</i>	New River shiner	S-3
<i>Phoxinus oreas</i>	Mountain redbelly dace	S-2

Aquatic Habitat

Each aquatic species has its own life history and habitat needs. The entire New River upstream of Bluestone Lake is considered to be important spawning, rearing, adult, and migration habitat for multiple game species of fish. This is principally due to its size and geomorphologic variety, including ledge drops, pools, runs, side eddies, islands, backwaters, large woody debris, bank overhangs, forested bank cover, and substrates suitable for spawning.

Perhaps the most limiting of the aquatic habitat factors is the water itself, both in terms of water quality and flow. From the perspective of an aquatic organism, water quality must be subdivided into at least three factors – chemistry, temperature, and sediment. All three may be affected by upstream land use and commercial activities. Currently the river appears to be within acceptable bounds for all three, with the exception of the PCB problem noted in the “Water Quality” section, above. With the strong federal and state laws that govern point source discharges, both chemical and thermal pollution are generally well managed. Aside from the challenges of addressing the PCB contamination in Virginia, the most significant threat to water quality is likely to be from so-called “nonpoint source” discharges, such as runoff from roads, parking lots, and disturbed land. These sources can adversely affect water chemistry, temperature, and especially sedimentation. Effective management of nonpoint source pollution will be an ongoing challenge in maintaining the New River’s high quality aquatic habitat.

From a habitat perspective there are two aspects of flow that are of concern – maintaining minimum flows, especially during late summer, and ensuring that daily flow fluctuations do not disrupt key ecological functions. Concerns with minimum flows relate mostly to water withdrawals that are not returned to the river. Beyond natural flow variations from rainfall, flow fluctuations are primarily a function of upstream dam releases. Fortunately, the size of the New River and its distance from the closest upstream impoundment help to attenuate issues related to flow. As described earlier in the “Streamflow” section, Claytor Dam, the nearest dam upstream of the study area, operates as a run-of-river facility from mid-April through mid-October. This operating regime essentially eliminates human-induced daily fluctuations for half of the year.

Wildlife

Wildlife Species

The Bluestone WMA, including the portion within the study area, is recognized for both its production and its diversity of wildlife.

Examples of mammals that inhabit the Bluestone WMA include white-tailed deer, black bear, squirrel, cottontail rabbit, woodchuck, raccoon, gray and red fox, beaver, opossum, muskrat, weasel, striped skunk, bobcat, otter and mink.

With respect to birds that use the area, migratory waterfowl include Canada geese, snow geese, gadwall, pintail, scaup, goldeneye, bufflehead, ruddy duck, ring-necked duck, redhead, common

and hooded merganser, mallard, wood duck, and black duck. Upland game birds include eastern wild turkey, mourning dove, woodcock, ruffed grouse, and bobwhite quail. The area has one of the highest concentrations of wild turkeys per square mile in the eastern United States, a result of a successful reintroduction and management effort by the WVDNR. Bald eagles can often be seen soaring above the river. Other raptors include red-tailed, broad-winged, and red-shouldered hawks. The study area is a migration corridor for songbirds, many of which also use the area's riparian corridor, fields, and forests for nesting. All told, some 218 species of birds can be expected to use the study area at some time during the year.

Common amphibian and reptile species in the study area include the green frog; spring peeper; American toad; box and stinkpot turtle; a variety of salamanders; and copperhead, timber rattlesnake, and other, nonpoisonous snakes. At certain seasons river bottomlands are also a magnet for butterflies. The area is noteworthy both for its species variety and the concentration of individuals from single species. The number of swallowtail butterflies in certain areas along the river is particularly striking.

Hunting is allowed for raccoon, coyote, gray and red fox, white-tailed deer, black bear, squirrel, cottontail rabbit, woodchuck, wild turkey, waterfowl, mourning dove, woodcock, ruffed grouse, and bobwhite quail. Trapping is permitted for beaver, fisher, muskrat, mink, opossum, weasel, raccoon, and striped skunk, but requires a special permit.

Wildlife Species of Special Concern

There are no federally listed endangered or threatened animal species known to frequent the study area. While a frequent seasonal visitor, the bald eagle is not known to breed in or near the area. The Northern red-bellied cooter is also technically a component of the federal endangered species program due to similarities with a population in Massachusetts that is listed as endangered. Terrestrial species listed as S-1 through S-3 through the West Virginia Natural Heritage Program that are known to occur in the study area are listed in Table 2.15. Suspected occurrences are listed in Table 2.16.

Table 2.15. West Virginia S-1 through S-3 terrestrial species known to occur in the New River study area.

Scientific name	Common name	Natural Heritage Program ranking
<i>Desmognathus quadramaculatus</i>	Black-bellied salamander	S-3
<i>Hendersonia occulta</i>	Cherrystone drop snail	S-U (unknown)
<i>Pseudemys concinna</i>	Eastern river cooter	S-2
<i>Pseudemys rubriventris</i>	Northern red-bellied cooter	S-2
<i>Zapus hudsonius</i>	Meadow jumping mouse	S-3

Table 2.16. West Virginia S-1 through S-3 terrestrial species suspected to occur in the New River study area.

Scientific name	Common name	Natural Heritage Program ranking
<i>Calephelis borealis</i>	Northern Metalmark	S-3
<i>Cyllopsisgemma</i>	Gemmed satyr	S-U (unknown)
<i>Erora laeta</i>	Early hairstreak	S-3
<i>Eurycea lucifuga</i>	Cave salamander	S-3
<i>Myotis septentrionalis</i>	Northern long-eared bat	S-2
<i>Paravitrea reesei</i>	Round supercoil snail	S-U (unknown)
<i>Reithrodontomys humulis</i>	Eastern harvest mouse	S-U (unknown)
<i>Satyrium caryaevorum</i>	Hickory hairstreak	S-U (unknown)
<i>Satyrium edwardsii</i>	Edwards' hairstreak	S-3
<i>Satyrodes appalachia</i>	Appalachian brown	S-U (unknown)
<i>Sorex disper</i>	Long-tailed shrew	S-2/3
<i>Speyeria dian</i>	Diana	S-3
<i>Sylvilagus transitionalis</i>	New England cottontail	S-3
<i>Triodopsis juxtidentis</i>	Atlantic three-tooth snail	S-U (unknown)

Wildlife Habitat

The study area provides high quality habitat for a wide range of wildlife species. This is a result of several factors including location, size, physiographic diversity, vegetation, land use, and management. Each is summarized below.

Location. The study area is strategically located along both a major neo-tropical migrant north-south flyway and a cross-Appalachian travel corridor. In addition, significant areas of public conservation land are found throughout the New River watershed, both upstream and downstream. These lands are beneficial for a variety of species, including those that require larger areas of open space. Among other benefits, the attributes of the study area's location combine to provide opportunities for interchange between different populations of the same species.

Size. The Bluestone WMA covers nearly 18,000 acres and is the second largest public facility of its kind in West Virginia. The size of the WMA and adjacent public conservation lands collectively encompass more than 25,000 acres, a substantial amount of undeveloped land that makes this study area ideal for large game and raptors, both of which require large areas to fulfill life cycle needs, as well as for a wide range of other species that benefit from large swaths of undeveloped habitat.

Physiographic Diversity. Habitat quality is often associated with variety and interfaces. The study area contains a wide range of landforms including mountains, hillsides, benches, valleys,

cliffs, bottomlands, and islands. The interface between these landforms is especially important for wildlife. The habitat quality of these landforms is significantly enhanced by the presence of a large and hydrologically diverse river. In combination, the river and adjacent landforms provide a variety of habitat types that is conducive to use by a wide range of species.

Vegetation. The predominantly oak-hickory forest is attractive to a wide range of wildlife species, notably bear. This forest, which for the most part is now nearly sixty years old, is approaching maturity, a stage when the production of mast (nuts, seeds, etc.) upon which many wildlife species depend is high. While oak-hickory predominates, the diversity of landforms supports numerous pockets of other plant associations that provide cover and food for diverse species.

Land Use. Outside of the national forests that follow the Appalachian Mountains, the study area and the remainder of the Bluestone Lake Project Area is one of the region's least developed areas.

Management. The portion of the study area in West Virginia has been actively managed by the WVDNR as part of the Bluestone WMA for over 50 years. Management objectives and activities emphasize enhancing wildlife habitat primarily by providing food, cover, and habitat diversity, and protecting wildlife from disturbance (e.g., protecting brood rearing areas). While many habitat management actions aim primarily at a single species to provide greater hunting opportunities for this species, actions typically benefit larger associations of species with similar habitat requirements. For example, WVDNR has determined that habitat actions undertaken to support turkey also benefit smoky shrews, hermit thrushes, towhees, woodpeckers, great crested flycatchers, dusky salamanders, Fowlers toads, and black snakes, among other species.

Cultural Resources

Prehistoric Resources

The term “prehistoric resources” refers to evidence of the existence of cultures that lived in, or traveled through, an area prior to the arrival of European explorers and settlers. In almost all cases along the New River in and near the study area, readily apparent physical evidence of such activity is lacking without further archeological investigation. Some evidence of Native American trails may be found, though these were almost always transformed to roads by later cultures. Typically, evidence of prehistoric cultures is in the form of artifacts located in settlement or burial areas. In some cases these artifacts indicate the presence of villages that housed many people, often for many generations.

There are several distinct prehistoric periods characterized by the cultures associated with those periods. Table 2.17 presents a very abbreviated summary of periods relevant to the New River.

Table 2.17. Prehistoric culture periods relevant to the New River.

Time	Period	Characteristics
10,500 – 8,000 B.C.	Paleo-Indian	Big game hunting culture
9,000 – 7,500 B.C.	Terminal Paleo-Indian	Corner and side-notched projectile points.
8,000 – 6,000 B.C.	Early Archaic	Broad-spectrum hunting and gathering.
6,000 – 3,000 B.C.	Middle Archaic	Continuation of broad-spectrum hunting and gathering.
3,000 – 1,000 B.C.	Late Archaic	Shift toward agriculture.
1,000 – 200 B.C.	Early Woodland	Increasing use of agriculture.
200 B.C. – A.D. 400	Middle Woodland	Refinement in tools.
A.D. 400 –1200	Late Woodland	More refinement in tools.
A.D. 1200 – 1550	Late Prehistoric	Intensive corn agriculture and more sedentary village life.
A.D. 1550 – 1753	Proto-Historic	No direct contact with Europeans but received European goods in trade.
1753	European contact	Start of hostilities and displacement.

For each of the periods identified in Table 2.17, one or more cultures evolved and became established within the New River area. Within the Bluestone Lake Project Area (not including the Bluestone National Scenic River area), the ACE’s archeology records document fifty-six open habitation sites, five prehistoric rock shelters (one with a pictograph), ten prehistoric village sites, four prehistoric hamlets, and one rock pile/cairn. It is significant that these sites include multiple associations with each of the periods listed in Table 2.17.

Of the sites identified, three are especially significant and may be eligible for registration on the National Register of Historic Places. All three of these are located within the wild and scenic river study area portion of the Bluestone Lake Project Area. The first site has Late Prehistoric, Late Archaic, Early Archaic, and Middle Woodland components. This site has 145 documented burials, one-third of which contained shell necklaces, wrist, and ankle bracelets. The second site has Late Prehistoric, Middle Woodland, and Late Archaic components. The third site has Late Prehistoric components. It is likely that additional sites exist that would be eligible for the National Register of Historic Places, but more investigation would be needed to confirm this.

All told, the archeological evidence demonstrates that the New River corridor, including the study area and immediate environs, is a particularly significant prehistoric resource and is perhaps the most significant in the southeast Virginia/southwest Virginia region. This significance is the result of (1) continuous use over such a long time frame, (2) the high

concentration of use during a given period, and (3) the presence of particularly important sites and a diversity of site types.

Historic Resources

The term “historic resources” refers to sites and events associated with the time period since the arrival of the first European explorers and settlers. Historic sites can include both extant sites, that is, structures, roadways, or landscapes where physical evidence remains readily apparent, and archeological sites, that is, sites where physical evidence is not as readily apparent but where the remains of structures and/or artifacts may be located through site investigation, often including excavation. Historic events include historically significant events, regardless of whether physical evidence is available.

Within the Bluestone Project Area along the New River and Bluestone Lake (but not including the Bluestone River), the ACE’s archeology records document the presence of four historic forts, eight historic residential sites, ten historic industrial sites, and two sites of reported historical use. The forts were actually small stockade buildings built as protection for inhabitants. They did not play a significant role in either the French and Indian (Seven Years) or Revolutionary Wars. Their real significance is as the earliest buildings in the area. Early written records confirm that these forts were constructed along the river within the Bluestone Lake Project Area. However, archeological investigations have failed to uncover physical evidence of their precise locations.

During the 19th century, sluices or “chutes” were opened through several of the rapids in the study area to provide passage for batteau, large canoe-like boats used to transport cargo. These passageways, which were often up to thirty feet long and typically two feet in depth, were opened by blasting. Also constructed to aid in batteau passage were wing dams and hauling walls. Remnants of these chutes may be found even today. They continue to serve their intended purpose by allowing canoe passage through otherwise difficult rapids. Batteau chutes are rare, both nationally and regionally. While a comparative study has not been completed, it is reputed that this part of the river possesses one of the best collections of batteau navigation structures in the United States.

From 1855 to 1939, the Crump estate at Crump’s Bottom consisted of a stately home and several outbuildings. The main house was the most substantial building ever constructed in the study area and at the time of its construction was recognized as among the finest residences in southeast West Virginia. While the buildings have been removed, the site is well documented, including period photographs, a site plan, written history, and ample physical evidence. The Mercer Salt Works, the Lick Creek Trail and Road, and Shanklin's Ferry Crossing are significant due to their role in late 19th century commercial and industrial development in the Lick Creek area.

While there are several interesting stories concerning human use of the study area that are locally significant, there were few events that occurred in post-colonial period that are noteworthy from a regional or national perspective. An event that holds high local significance was the escape of Mary Draper Ingles from her Native American captures and her long walk back home, a walk that took her through the length of the study area. Perhaps the most noteworthy events were,

first, the establishment of early forts, and second, the decision to remove residents to make way for the Bluestone Dam. The story of attempts to improve the navigation of the New River by blasting batteau chutes holds interest, due in part to the heroics involved in running these chutes and the fact that these are still very much in evidence.

Management of Prehistoric and Historic Resources

Although many of the prehistoric and historic sites have been mapped, documented, and identified on the state registry, additional archival and field research will be required to fully understand the role this area played in prehistoric and historic cultures. According to the ACE's draft *Bluestone Lake Historic Properties Management Plan*, "Major priorities include conducting a systematic historic and prehistoric archeological survey to record previously unknown sites, conducting deep testing at Crump's Bottom to record deeply buried sites, and conducting historic research and nominating Crump's Bottom as a National Register of Historic Places District." To date, historic research has focused on the prehistoric and early historic periods. Interpretation of the culture and industry that existed in the study area in decades immediately pre-dating the construction of Bluestone Dam may prove to be both interesting and informative.

Illegal artifact collecting is a problem in the study area. In West Virginia, the regular presence of staff from DNR-Parks and DNR-Wildlife Resources Section helps prevent major digging operations, though artifact hunters are known to scavenge in plowed fields for archeological remnants. While the ACE monitors public use in the Virginia portion of the study area, the more limited management presence there means that archeological resources are particularly vulnerable.

Recreation and Public Use

Traditional Public Uses

Recreational uses within the study area that are considered to be "traditional" include fishing, hunting, trapping, camping, boating, and wildlife observation. These are considered traditional uses particularly because they are the uses most closely associated with the primary purpose of the Bluestone WMA, that is, fish and wildlife management. (The same activities also have occurred over time in the Virginia portion of the study area, although in a less managed setting.) A tradition has built up over the years of local and regional residents using this area as a favored location for these activities; in many cases, multiple generations of the same family have visited the area regularly, and annual or more frequent visits are considered a ritual.

According to West Virginia DNR data, the Bluestone WMA major roads and camping areas received 111,000 visitor days of use in 2004, including 58,000 overnight stays. This includes the three camping areas in the study area and Bertha and Bull Falls camping areas, which are located just downstream of the study area. It does not include Barton Ridge, a popular hunting area accessed by a secondary road. It is estimated that 25,000 hunters and anglers use the WMA annually. Reliable statistics on the use of undeveloped camping sites along the Virginia portion

of the river are not available, but it is reported that the area receives frequent to near continuous use during the spring, summer, and fall seasons. Visitation both in Virginia and West Virginia is particularly high during holidays, summer weekends, and the spring and fall hunting seasons.

Historically, most boating use has been associated with fishing. Small motorboats are often launched from boat ramps at the Glen Lyn town park and the West Virginia camping areas. The boats are then used for fishing between the nearest upstream and downstream rapids. Fishing from canoes as part of a one-way trip that includes boating through one or more rapids also appears to be fairly common. Recently, longer boat trips appear to have become more popular, either in combination with fishing or as a stand-alone activity.

One-way canoe trips in the study area are popular with organized youth groups. Canoe liveries use the study area only infrequently, but have expressed interest in adding trips through the area to their list of offerings. In West Virginia, overnight camping is allowed only at established camping areas, although interest has been expressed in establishing boat-only campsites. Table 2.18 identifies the various opportunities for one-way canoe trips that are entirely or primarily within the study area, the longest of which is 21.5 miles in length. It would also be possible to make this part of a much longer trip by starting further upstream or extending the trip downstream. This is part of the vision for the New River Blueway, described above in the “Regional Initiatives” section. Trips continuing downstream of Bluestone Lake would require portaging around Bluestone Dam and large rapids in some locations.

Table 2.18. Canoe trip opportunities in the New River study area.

Boat launch site	River Mile	Miles to next take-out	Distance from Glen Lyn put-in
Glen Lyn Town Park	30.5	8.8	--
Upper Shanklin’s Ferry	21.7	2.1	8.8
Middle Shanklin’s Ferry	19.6	1.1	10.9
Lower Shanklin’s Ferry	18.5	3.3	12.0
Cedar Branch	15.2	1.6	15.3
Indian Creek	13.6	4.6	16.9
Bull Falls	9.0	2.0	21.5
Bertha	7.0	--	23.5

Other Public Uses

Recreational activities that have not been pursued extensively in the past in the study area but that are becoming increasingly popular elsewhere include hiking, mountain biking, and horseback riding. In the West Virginia portion, hiking is permitted throughout the Bluestone WMA but may be limited by the closure of gates during certain seasons for the protection of

wildlife. Horses must stay on trails designated for their use. Mountain bikes are restricted to the same roadways that are used for automobile traffic. All-terrain vehicle use is not permitted in the WMA due to the likelihood of adverse impacts on the area's wildlife.

An evaluation of recreation opportunities provided within the study area should not be conducted in a narrow context, but rather should consider the opportunities afforded by other nearby lands available to the same group of users (in this case residents of and visitors to the four-county region and, more broadly, the greater southwest Virginia/southeast West Virginia region). Such a regional recreation opportunity analysis would consider both supply and demand, and would look to provide a range of opportunities, rather than duplicate the same opportunities at all sites. Such an analysis also would seek to avoid or resolve conflicts, both between uses and between public use and resource conservation. While a formal recreation opportunity analysis of this type is beyond the scope of this study, it is useful to recognize the broader spectrum of recreational opportunities in the region. To this end, Table 2.19 offers a simplified view of the recreational opportunities afforded by the various public lands in the southwest Virginia/southeast West Virginia region.

Access and Facilities

Access. The eastern portion of the Bluestone WMA is accessed from West Virginia State Highway 12. Spur roads including County Roads 23 and 24 lead to three camping areas in the wild and scenic river study area – Indian Creek, Cedar Branch and Shanklin's Ferry. A fourth, the Bull Falls Camping Area, is located on the left-hand shoreline less than a mile downstream of the northern terminus of the study area; and a fifth, the Bertha Camping Area, is located along the right-hand shoreline of Bluestone Lake approximately three miles further downstream from Bull Falls. The western portion of the WMA is accessed from West Virginia State Highway 20 and County Road 44. Spur roads are unpaved but typically open year-round. They are impassible during heavy storm events. Where these roads come near the river, typically in camping areas, they are subject to flooding during times when Bluestone Dam is impounding floodwaters.

In Virginia, Route 460 and Glen Lyn town roads provide the primary access to the study area. On river left a road primarily used to access the Appalachian Power Company's fly ash facility continues past the fly ash facility and parallels the river to the state line. Beyond Appalachian Power's facility, the road is rough and in some places steep. During wet periods it is impassible. On river right, agricultural lease areas along the river are accessed from a primitive county road that crosses private land. This road does not currently provide public access to the study area.

Facilities. Developed river-related recreation areas in or near the study area are summarized in Table 2.20. The five camping areas and boat launches in West Virginia are managed by DNR-Parks. DNR-Parks also manages two camping areas in the study area that are not located on the New River – Keatley and Indian Mills camping areas, both of which are located along Indian Creek near the Bluestone WMA Office just off of Route 12. Each has fifteen campsites. All campsites in the study area are classified as "primitive," and typically include a picnic table, a fire ring, and, in some cases, a vehicle pad. Each camping area has one or more sanitation

facilities and trash receptacles. In addition to camping areas, DNR-Parks maintains the Sherman Ballard pavilion and a horse stable, both located near the entrance to the Shanklin’s Ferry camping area. The pavilion is billed as “rustic.” It is equipped with a stove, refrigerator, bathrooms, and a fireplace. It is available for rent and is popular for group activities.

The Glen Lyn town park is the only developed recreational facility in the Virginia portion of the Bluestone Lake Project Area. While the park is technically upstream of the study area, it provides a key access point for use of the study area.

Table 2.20. Developed river-related recreation sites in and near the New River study area.

Site name	River Mile	Size	Facilities	Notes
Bertha Camping Area (WV)	6.1	23 acres	55 campsites, pit toilets, 1 boat launch	Important to consider from a management efficiency perspective. Located on the right-hand shoreline of Bluestone Lake downstream of the study area.
Bull Falls Camping Area (WV)	9.2	30 acres	79 campsites, pit toilets, 1 boat launch	Road to camping area also is important for access to Crump’s Bottom. Located on river left less than a mile downstream of the northern endpoint of the study area.
Indian Creek Camping Area (WV)	13.5	50 acres	145 campsites, pit toilets, 3 boat launches, picnic areas, archery range	The second largest camping area in the study area. Located on river right.
Cedar Branch Camping Area (WV)	15.5	10 acres	17 campsites, pit toilets, 2 boat launches	A smaller camping area located on river right midway between Indian Creek and Shanklin’s.
Shanklin’s Ferry Camping Area (WV)	18.5	35 acres	177 campsites, playground and beach area, pit toilets, 3 boat launches, picnic areas, Sherman Ballard Rec. Area with pavilion and barn	Located on river right. The largest of the camping areas in the study area.
Glen Lyn Town Park (VA)	30.5	18.44 acres	Picnic areas, paved boat ramp, camping, ball field, restrooms	Located on river right just upstream of the Rt. 460 Bridge.

Table 2.19. Public lands recreation opportunities in the region.

Site	Biking	Camping	Canoeing	Fishing	Hiking	Horses	Hunting	Lake Boating	Family resort	Rafting Kayaking	Trapping
Appalachian Trail (VA)		X (remote)			XX						
Bluestone Lake (Bluestone WMA)		XX (primitive)		XX		X	XX	XX			XX
Bluestone NSR (Bluestone WMA)		XX	X	XX	X	X	XX			X	XX
Bluestone State Park (WV)	X	XX	X	XX	X			XX			
Camp Creek State Park (WV)	X	XX			X						
Claytor Lake State Park (VA)		XX		XX				XX			
Gauley River NRA (WV)	X	XX		XX	X		X			XX	
Jefferson National Forest (VA)	X	XX		XX	XX	X	XX				X
Mt. Rogers NRA (VA)	XX	XX	X	X	XX	XX					
New River Gorge Nat. River (WV)	XX	XX	X	XX	XX		XX			XX	
New River Trail State Park (VA)		XX	XX	XX							
Pinnacle Rock State Park (WV)					X						
Pipestem Resort State Park (WV)	X	XX			XX	XX			XX		
Study Area (Bluestone WMA)		XX (primitive)	XX	XX	X	X	XX				XX

XX = Primary activity, X = Secondary activity

Note. This table identifies only the most noteworthy uses. Individual sites may offer other uses not highlighted in this table.

CHAPTER 3. ELIGIBILITY AND CLASSIFICATION

This chapter presents findings regarding the New River study area’s “eligibility” for designation as a national wild and scenic river. The chapter also presents findings about whether the river would be most appropriately classified as a “wild,” “scenic,” or “recreational” river under the criteria of the Wild and Scenic Rivers Act.

Background

One of the first steps in the wild and scenic river study process is to determine if the river in question is “eligible” for inclusion in the National Wild and Scenic Rivers System. For a river to be found eligible, it must meet two criteria. First, it must be “free-flowing.” That is, it must be free of impoundments, diversions, or other significant modifications to the waterway. Second, the river or river corridor must possess one or more “outstandingly remarkable values.”

If eligible, the river is then given a proposed classification as either a “wild,” “scenic,” or “recreational” river, depending on the relative degree of access, shoreline and instream modification, and water quality. A “wild” river is in natural or near-natural condition. A “scenic” river may have some access or modification but, on whole, retains its natural character. A “recreation” river can exhibit a range of in-river and shoreland development.

Table 3.1. Management implications of eligibility and classification.

Eligibility/Classification Factor:	Management Implication:
Free-flowing condition	<p>Flows must remain sufficient to sustain or complement identified outstandingly remarkable values.</p> <p>Flow patterns, including high and low flows and flow variability, must retain at least the same degree of naturalness as existed at the time of designation.</p> <p>Proposed FERC-licensed projects and other federally assisted water resources projects that would adversely affect the free-flowing condition are prohibited (see Chapter 1, “Implications,” page 6).</p>
Outstandingly remarkable values	<p>The specific natural, cultural, and/or recreational values identified as outstandingly remarkable values must be protected over the long-term and enhanced wherever possible.</p> <p>Proposed FERC-licensed projects and other federally assisted water resources projects that would adversely affect the identified outstandingly remarkable values are prohibited (see Chapter 1, “Implications, page 6).</p>
Classification	<p>The overall water and land use characteristics that made the river appropriate for a given classification (wild, scenic, or recreational) must be retained.</p>

While eligibility and classification are critical factors in determining whether wild and scenic river designation is in fact warranted, they also have important implications concerning management if a river is designated. Drawing from the requirements of the Wild and Scenic Rivers Act, Table 3.1 summarizes the implications of a river's eligibility and classification for future management if the river is designated.

Eligibility

Criteria

The Wild and Scenic Rivers Act and associated federal guidelines define the criteria to be used in determining whether a river is eligible for inclusion in the National Wild and Scenic Rivers System. These include free-flowing condition and outstandingly remarkable resource values, as discussed below.

Free-flowing condition. The river segment must be free-flowing. Free-flowing is defined in federal guidelines as "flowing in a natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway. The existence of low dams, diversion works, and other minor structures at the time any river is proposed for inclusion in the national wild and scenic rivers system shall not automatically bar its consideration for such inclusion...."

"Modification of the waterway" is interpreted to include significant alterations to the river's channel or flow. Examples of channel modifications include damming, diking, re-routing, and stabilization of banks. Examples of flow modifications include significant decreases in natural flow due to water withdrawals or diversions, and significant variations in flow patterns due to the operation of upstream dams. In accordance with federal guidelines, the fact that a river segment flows between impoundments does not necessarily preclude its designation.

The determination of whether a river is free-flowing is a professional judgment on the part of the study team, based on a review of the best available flow and corridor condition data and interpretation of the Wild and Scenic Rivers Act criteria.

Outstandingly Remarkable Values. The river segment must possess one or more outstandingly remarkable values, often referred to as "ORVs." An ORV is defined as a natural, cultural, or recreation resource feature that is unique or especially significant when considered in a regional or national context. The determination of whether a river area possesses an ORV is a professional judgment on the part of the study team. To be credible, the basis for the judgment must be documented. The evaluation of ORVs for the New River study area in this chapter builds on the information presented in Chapter 2, where the river area's natural, cultural, and recreational resources are described in greater detail.

Evaluation of Free-flowing Condition

The New River study segment is free-flowing and riverine in appearance under most conditions. No dams, diversions, or other significant modifications of the waterway exist within the segment. While the New River is impounded both downstream and upstream of the study area, the effects of these impoundments on flows within the study segment are not significant enough on a continual basis to render the river ineligible for designation.

As described in Chapter 2, “Streamflow,” Claytor Dam, which creates the upstream impoundment, stores and releases water to generate electricity. The federal license that governs the operation of Claytor Dam sets limits on how much water may be withheld and how much downstream releases can fluctuate. During the six-month recreation season, the dam is operated as a run-of-river project and therefore has essentially no effect on the free-flowing character of the river in the study area. If anything, it may augment flows during very low flow periods. For the other six months, releases from the dam do fluctuate frequently, resulting in fluctuations in river flows downstream. However, the dam is far enough upstream that by the time these fluctuations reach the study area, they generally have moderated to the point where they are not overly disruptive to river resources and uses. Also, low flow releases from Claytor Dam generally mirror natural low flow conditions, and therefore do not significantly detract from flow-dependent resources in the study area such as fish and recreation.

Under normal conditions the Bluestone Dam downstream does not cause water to back-up into the study area. As described in Chapter 2, “Streamflow,” on page 36, parts of the study segment are subject to occasional inundation for short durations due to operation of the Bluestone Dam for downstream flood control. However, these occasional inundations do not normally persist beyond a few days or under rare conditions a few weeks. Furthermore, these inundations typically back into only the lower portions of the study segment, although flooding of parts of the upper portions of the study segment does occur during significant storm events and inundation of the entire segment is possible in an extreme event. Regardless, the river quickly returns to its normal, fully free-flowing condition after these flood events. Also, inflow into the study area historically has varied significantly – month-to-month, season-to-season, and year-to-year. As a result, the river shorelands are resilient, and the inundations caused by operation of the Bluestone Dam do not cause lasting effects. In light of these considerations, the occasional brief inundation of parts of the river within the study area is not sufficient to disqualify the river from wild and scenic river eligibility.

In summary, the river within the study area has been found to meet the Wild and Scenic River Act’s requirements for free-flowing condition. This finding is based on current conditions in the study segment. These conditions would set the baseline for future management if the river were designated into the National Wild and Scenic Rivers System. In other words, modifications in upstream flow management or downstream flood control management to enhance the current free-flowing condition within the study segment would not be required as a result of designation, but modifications that required federal assistance and would degrade the current condition would be prohibited.

Evaluation of Outstandingly Remarkable Values

Each of the New River study area's natural, cultural, and recreational resources was evaluated to determine if any were unique or especially significant when considered in a regional or national context. The following resource characteristics of the study area have been found to meet the significance thresholds for outstandingly remarkable values.

Geology/Hydrology. The New River derives its geological and hydrological significance from the fact that it is the oldest river in the western hemisphere and, due to its age, is the only river that crosses the Appalachian Range from east to west.¹ These geological and hydrological characteristics have had a significant influence on the river's natural, recreational, and cultural values, but the geologic and hydrologic history itself also constitutes an ORV.

Scenery. With the limited exception of the Route 460 Bridge and its immediate surroundings, the entire study area is in a largely natural condition, and scenic quality is high. There are a variety of near, mid, and long-range views and significant visual complexity due to vegetative cover and diverse landforms. Floodways, islands, meanders, and tributary streams all add significantly to the visual appeal. The only noteworthy visual intrusions below the Route 460 Bridge are two electric transmission lines (one that crosses high above the river at River Mile 27, and another that parallels the river on the ridgeline to the right for a short stretch between River Miles 26 and 27). While several rivers and streams in this region have notable scenery, this segment is distinguished from the others by the combination of its large size (both volume of water and corridor width) and the degree of its natural condition. This natural condition is especially important in the context of other New River segments in Virginia and West Virginia. While many of these are very scenic, none is as undeveloped.

Fish and Other Aquatic Species. This segment is considered to be one of the largest and highest quality warmwater stream fisheries in the State of West Virginia. Aquatic biodiversity is also significant as the river provides high-quality habitat for a wide range of fish and mussel species. Three species of fish and five species of mussels that are listed as S-1, S-2, or S-3 species by the West Virginia Natural Heritage Program are known to exist in the study segment, and an additional four species of fish in these categories are suspected inhabitants.

Wildlife. The New River corridor provides a unique "natural highway" between the lowlands of the eastern coastal plains and the interior of the continental United States. As such, it is one of the most significant corridors for species flow (both plant and animal) between major ecological provinces. The area provides habitat for a wide variety of both game and non-game species and contains an especially high concentration of neo-tropical migratory birds. Also, four terrestrial species listed as S-2 or S-3 species by the West Virginia Natural Heritage Program are known to exist in the study area, and at least eight additional species in these categories are suspected inhabitants. And perhaps most noteworthy is the fact that the area supports one of the highest concentrations of eastern wild turkey in the eastern United States.

Cultural Resources. As was also true historically for plants and animals, the Upper New River provided a relatively easy route for pre-historic and historic peoples to penetrate the Appalachian

¹ The Potomac River also crosses the Appalachian Mountains, but it flows west to east toward the Atlantic Ocean.

Mountains. The river also bisects one of the region's most significant north-south Native American trails. These transportation advantages, along with large floodplains suitable for agriculture and habitation, combined to make the study area the site of a significant concentration of use areas and village sites that persisted throughout human prehistory in the region. Fifty-eight prehistoric sites have been recorded within the Bluestone Lake Project Area, most but not all in the study area. These fifty-eight sites include five rock shelters, seven Late Prehistoric Village sites, four Woodland hamlets, and forty-two camp sites. This is a particularly high number and variety of sites for an area of this size in this region of the country. The fact that this area contains evidence of use from the full range of prehistoric periods from 10,500 B.C. to 1750 A.D. makes the area especially significant. While these sites have not been subjected to a formal evaluation of eligibility for listing on the National Register of Historic Places, the prevailing opinion of professional archeologists familiar with the area is that at least three village sites in the study area likely would qualify for listing on the National Register. If any one of these sites had been found to be eligible for the National Register of Historic Places, this would be sufficient justification in and of itself for an outstandingly remarkable value finding. While that automatic qualification is not available because National Register listing has not yet been pursued, the number of prehistoric sites in the study area, their variety, and the time period they span warrant an ORV finding nonetheless.

The area also is significant for historic sites dating from the mid 18th century to the late 19th century. There is documented evidence of the presence of four colonial and Revolutionary War period forts (stockade buildings) that, if definitively located, likely would qualify for National Historic Register listing. The batteau chutes through the study area's rapids are important local historic features and may, in fact, be nationally significant. At least they warrant investigation to determine National Historic Register status. The archeological remains of an architecturally and culturally significant mansion on Crump's Bottom and several other human habitation sites were removed before the Bluestone Dam went into operation. It is unknown whether any of these sites would meet the criteria for the National Historic Register. If the forts, batteau chutes, Crump's Mansion site, or other historic remnants were found to meet the criteria for National Register of Historic Places status, this would further reinforce the significance of the study area's cultural resources.

While the archeological evidence of both prehistoric and historic times is significant, based on the information that is currently available it is the high concentration of prehistoric sites dating over the entire time of North American human habitation that constitutes an outstandingly remarkable cultural value.

Recreation. The Bluestone WMA receives the highest hunting use of any WMA in southeastern West Virginia and is among the most heavily used in the state. Hunting is primarily for eastern wild turkey and white-tailed deer; though a wide range of game species are hunted, including bear, waterfowl, and upland game birds. Hunter success for wild turkey is unrivaled. The area also receives high fishing use. The area is particularly noteworthy for the opportunity to fish from a boat on a large river in an undeveloped setting. Fishing is primarily for smallmouth bass and catfish. The significance of these hunting and fishing opportunities provides the basis for an outstandingly remarkable rating. In addition, other recreation opportunities in the study area are also significant, including camping, boating, and other outdoor experiences that benefit from a

largely remote and undeveloped setting. Most boating is currently associated with fishing. This stretch of the New River also has high potential for large river canoeing and canoe camping. The study area is one of only a few areas in the southwest Virginia/southeast West Virginia region where it is possible to take a long canoe trip on a large river in a natural setting. This portion of the New River also could play a key role in the New River Blueway (see Chapter 2, “Regional Initiatives” section on page 30), which would provide opportunities for multi-day canoe trips.

Eligibility Findings

The New River study segment meets specified criteria for the Wild and Scenic Rivers Act requirement of free-flowing condition. In addition, the study area exceeds WSRA requirements for outstandingly remarkable values by possessing six categories of resources that meet the ORV threshold. In light of its free-flowing condition and array of outstanding resource values, the study area is eligible for inclusion in the National Wild and Scenic Rivers System.

Classification

Criteria

Section 2(b) of the Wild and Scenic Rivers Act and associated federal guidelines identify the criteria to be used to classify eligible river segments as wild, scenic, or recreational. The classification is important as it provides a basis for future management. Essentially, each river designated into the National Wild and Scenic Rivers System must be managed in a manner that ensures that the classification will be maintained over time.

Classification is based on the degree to which a river segment meets the following criteria:

Wild Rivers. The criteria for wild river areas include:

1. The river segment must be free of impoundments.
2. It must be generally inaccessible, except by trail.
3. The watersheds or shorelines should be essentially primitive.
4. Waters must be free of pollution.

Scenic Rivers. The criteria for scenic river areas include:

1. The river segment must be free of impoundments.
2. The shorelines should be largely undeveloped.
3. The river may be accessible in places by road.

Recreational Rivers. The criteria for recreational river areas include:

1. The river segment may be readily accessible by road or railroad.
2. The river may have considerable development along the shoreline.
3. Some impoundment or diversion may have occurred in the past.

Appendix 3.A provides additional details on each of the above criteria.

Classification Findings

The New River study area is most appropriately classified as a “scenic” river. The river is free-flowing throughout the segment with no significant alterations to the river channel that change the pattern of flow. Water quality meets acceptable standards, but is not pristine (as described in Chapter 2, “Water Quality” section on page 45). The shore lands are largely in a natural condition. Below the area immediately adjacent to the Route 460 Bridge, the only permanent developments that are visible from the river are two power lines – one that crosses high over the river, and another parallels the river on a ridgeline for a short distance. There are no buildings visible from the river. Some lands along the bottomlands are used for agriculture, but these are not intrusive. There are several unmanaged informal use sites in Virginia that are visible from the river, but none that are beyond restoration. There are three primitive campgrounds along the river in West Virginia, which are largely buffered by vegetation. Unpaved roads parallel the river in some places, and there are established vehicular access points to the river at the camping areas in West Virginia. These characteristics, along with the segment’s acceptable but not pristine water quality, are the key factors indicating that the segment should be classified as “scenic” rather than “wild.” The river segment significantly exceeds criteria for classification as a “recreational” river.

Summary and Conclusions

The essential finding of this chapter is that the New River study area is eligible for designation into the National Wild and Scenic Rivers System. The proposed classification is “scenic.”

For ease of reference the above findings are summarized below in a series of boxes. Key considerations related to the study area’s free-flowing condition are summarized in Box 3.1. Box 3.2 presents a synopsis of the study area’s outstandingly remarkable values. Box 3.3 provides a summary of the reasons the river is most appropriate for classification as a “scenic” river.

Box 3.1. Findings regarding the New River study segment’s free-flowing condition.

- The study segment is free-flowing and riverine in appearance under most conditions; no dams, diversions, or other significant modifications of the waterway exist within the segment.
- Flows in the segment are essentially unaffected by the operation of the Claytor Dam upstream from mid-April through mid-October, when the dam is operated on a run-of-river regime. During the rest of the year, flows in the segment are influenced by releases from Claytor Dam, but release fluctuations moderate by the time water reaches the study area and flows are sufficient to sustain important flow-dependent resources such as fish and recreation.
- Occasional inundations of parts of the study segment due to operation of Bluestone Dam for downstream flood control do not persist beyond a few days to a few weeks per year, and therefore do not preclude a free-flowing determination.

Box 3.2. Summary of outstandingly remarkable values in the New River study area.

Geology/Hydrology

- The oldest river in the western hemisphere and the only river that crosses the Appalachian Range from east to west.

Scenery

- Diverse landforms and vegetation combine with the area’s predominantly natural condition to produce high scenic quality. Floodways, islands, meanders, and tributary streams add to the visual appeal.

Fish and Other Aquatic Species

- One of the largest and highest quality warmwater stream fisheries in the two-state region; provides high-quality habitat for diverse fish species, as well as several rare mussels.
- Provides habitat for a diversity of wildlife including game and non-game species, species that are rare in the two-state region, and the federally threatened bald eagle; contains an especially high concentration of neo-tropical migratory birds; supports one of the highest concentrations of wild turkey in the eastern U.S.

Cultural Resources

- Significant concentration of pre-historic use sites extending over all periods of human pre-history; high likelihood that at least three river bottomland village sites are eligible for the National Register of Historic Places.

Recreation

- Regionally significant hunting and fishing; opportunities for camping and other outdoor experiences in a highly scenic and largely undisturbed natural environment; high potential for large-river canoeing and canoe camping, a recreational activity that is limited in the southwest Virginia/southeast West Virginia region.

Box 3.3. Rationale for classification as a “scenic” river.

- The river is free-flowing throughout the segment with no significant alterations to the river channel
- Shorelands are predominantly in a natural condition. The only permanent developments visible from the river below the Route 460 Bridge are two transmission lines (one that crosses high over the river and another that parallels the river on an adjacent ridgeline for short distance). No buildings are visible from the river. Three primitive camping areas in West Virginia and lands used for agriculture are not visually intrusive.
- Access is limited to established vehicular access points at the three camping areas and unpaved roads that parallel the river in some areas.

CHAPTER 4. ISSUES

This chapter identifies issues identified during the study process related to management of the New River study area and its possible designation as a National Wild and Scenic River. Included are (1) background information, (2) a description of the process used to identify issues, (3) a summary of the range of issues, and (4) a description of the key study issues. A complete list of issues is included in Appendix 4.1.

Background

The identification of issues is a fundamental part of all wild and scenic river studies. In the context of this project, it is a critical component of the effort to develop potential long-term management strategies for the New River study area, because issues provide a frame of reference for developing management options and, later, evaluating their effectiveness.

The term "issues" refers to problems, concerns, questions, and, in some cases, unrealized opportunities regarding current and potential future management of the study area. Issues may be very specific and focus on a specific location or a specific natural, cultural, or recreational feature. They also may be broad - for example, considering how management of this area fits within the larger context of the two states or the region. Issues may concern existing problems or speculation about problems that might arise in the future.

This study included a "scoping process" to identify important issues. Issues are identified by soliciting information and opinions from members of the public who have a stake or interest in the outcome, and through the study team's own review of resource and management information. Initially, both substantial and non-substantial issues are identified. This larger list can then be analyzed to determine which issues should be considered the "key study issues." These key issues then are considered in the development and comparison of management alternatives (Chapter 5). In this report, the key study issues also play a significant role in determining the "suitability" of the New River study area for designation into the National Wild and Scenic River System (Chapter 6).

Scoping

Two sets of public meetings were held in December, 2003, and July, 2004, where concerned individuals could express their opinions about issues. Residents, organizations and government agencies were notified about the meetings and the scoping process through the mail and by notices in local newspapers. These meetings were held in Glen Lyn and Rich Creek, Virginia, and in Hinton, West Virginia, communities located immediately upstream and downstream of the study area. Meetings were also held with town and county officials and stakeholder groups. Town and county officials included mayors, county commissioners, town and county administrators and planners, and tourism/economic development committees. Stakeholder groups included sportsmen, conservation organizations, and managers of Appalachian Power Company's Glen Lyn Plant. The study team also met with individuals who

expressed interest in commenting about the New River study area. The agencies involved in the interagency work group also identified issues, both through meetings of the work group and through individual meetings with the participating agencies. While most of the issues identified in this chapter were identified at these various meetings, some issues were provided by individuals who submitted written comments and others were identified by the study team through its own research and analysis.

The team used the following process to compile issues:

- (1) Individual comments were captured, typically on flip charts at public meetings and note-taking at smaller, less formal meetings. All comments were included, regardless of duplication or contradiction.
- (2) Issues were compiled into one list.
- (3) The study team added additional issues to the list that had been identified through its review of the literature and other research.
- (4) Issues were sorted into logical groupings, similar issues were combined, and contradictory positions on issues identified.
- (5) A revised list was created.

This list then was analyzed to determine dominant themes - that is, issues identified by many individuals and issues for which a particularly strong sentiment was expressed, regardless of whether these issues were widely expressed. Based on this, key study issues were identified.

Range of Issues

While there was a wide range of issues identified, in general all issues fall into one of two general categories: those relating to current conditions and current management, and those relating to potential future management of the study area, including but not limited to possible wild and scenic river designation. The first category includes concerns related to specific natural and cultural resources and to public use of the study area. The second category includes speculation concerning what may take place in the future if management changes. Many of those expressing concerns about future management options are current users of the area who are concerned that their use might be affected or curtailed. Others are concerned about the protection of the area's special values over the long-term under any future management arrangement. A comprehensive list of issues identified during the study is presented in Appendix 4.1.

Key Study Issues

This section of the report identifies and describes key study issues. These issues appear to be those of greatest concern to resource managers residents of the four county area and others who use or rely upon the study area for recreational, economic, or environmental quality purposes. Included are issues that are of concern to a great many people and issues that, while less widely expressed, are of high concern to one or more stakeholder groups. Issues are organized around six general themes, with each theme encompassing a range of specific but related issues.

Management in West Virginia

Key Study Issue #1: Management of the West Virginia portion of the study area if the NPS is assigned administrative responsibility for the federal lands.

The predominant issue raised by the West Virginia DNR and certain other stakeholders (including some users of the area, local officials, and local economic interests) during the study process relates to the possibility of the New River study area being designated as a national wild and scenic river and administrative responsibility for the federal lands being transferred from the ACE to the NPS. The DNR and the other stakeholders (including some users of the area, local officials, and local economic interests) are concerned that NPS habitat management standards differ from those of the DNR. (Reference *NPS Management Policies, Chapter 4 Natural Resource Management; 4.1 General Management Concepts*)...It is widely believed that these policies might require DNR to change its long standing approach to management of fish and wildlife, habitat and traditional public uses in the West Virginia portion of the study area and that this would result in a difficult relationship between NPS and DNR. These stakeholders want assurances that the same opportunities for traditional uses such as hunting and fishing would continue to be available, as under current DNR wildlife management.

Other stakeholders, including local environmental organizations, residents and local officials do not share these concerns. They feel that NPS involvement could result in enhancements to the management, use and visibility of the area, and believe that NPS and DNR could work effectively as co-managers of the West Virginia portion. They emphasize that NPS has extensive experience managing a wide range of natural and cultural resources, including some that are significant in the study area such as historical and archeological resources. They also note NPS experience in managing a variety of public uses and recreational activities, including hunting and fishing in the New River Gorge National River. In addition, they point to NPS experience in administering and managing many national wild and scenic rivers around the country, as a further rationale for NPS involvement in the New River study area.

Issues related to NPS administration of national wild and scenic rivers within the Bluestone WMA date to the early 1990s, when differences of opinion surfaced over what management activities would and would not be allowed on the Bluestone NSR following its designation by Congress and the assignment of NPS as administrator. Progress has been made in recent years in the relationship between the two agencies, as evidenced significantly by their signing of a new license for management of the area in 2002. Nonetheless, significant differences remain between

the two agencies due to disparities in their underlying management policies and approaches, as well as differing views on the extent to which DNR should be required to seek NPS approval before conducting management and maintenance activities.

A number of specific questions were raised during the study process related to a potential NPS/DNR partnership in managing the West Virginia portion of the study area. These questions fall into three primary categories: (1) overall responsibilities, authorities, and relationships; (2) fish and wildlife management; and (3) public use management.

1. Overall Responsibilities, Authorities, and Relationships:

- *NPS laws, regulations and policies:* Would the general laws, regulations and policies that govern the National Park System apply? Are they appropriate and/or necessary for this location and situation?
- *Management plans:* What planning documents would be necessary or required to provide guidance for management decisions? Which agency would have primary responsibility for preparing them?
- *Review, approval, and compliance:* What review, approval and statutory compliance procedures would be necessary or required for management activities and maintenance?
- *Working relationship:* Could the NPS and DNR achieve and sustain a productive, harmonious, mutually beneficial working relationship?
- *Overlapping designations:* Would the area designated as a wild and scenic river also continue to be part of the Bluestone WMA and the Bluestone Lake Project Area, both in name and in function?

2. Fish and Wildlife Management:

- *Authority for fish and wildlife management:* Which agency would have authority for regulating and managing fish and wildlife?
- *Habitat management:* How would wildlife habitat in the designated area be managed? (Examples of potential differences between NPS and DNR approaches to habitat management include: (1) management of ecological processes, (2) management of non-native plants, (3) forest stand management, (4) fire management, (5) creation of new clearings, and (6) wetlands construction/restoration and management of water control structures.)
- *Fish stocking:* Would stocking, introduction, and/or re-introduction of native or non-native fish species be allowed?
- *Wildlife stocking:* Would stocking, introduction, and/or re-introduction of native or non-native wildlife species be allowed?
- *Funding for habitat management:* Would DNR be able to obtain funding for active management of wildlife habitat from existing federal sources? Would there be any liability for projects that were funded in the past that might be managed differently under NPS administration?

3. Public Use Management:

- *Traditional public uses and other recreational activities:* Would priority be given to traditional public uses of the area relative to other activities?
- *Public access:* Would there be changes to existing management policies and practices regarding public access to the area?

Management in Virginia

Key Study Issue #2: Long-term management and enhancement of the Virginia portion of the study area.

The portion of the Bluestone Lake Project Area within the Commonwealth of Virginia is approximately 1,645 acres in size, an area far smaller than the West Virginia portion. This area is managed by the ACE in cooperation with the Giles County Sheriff's Office and game wardens from the Virginia DGIF. Due to limited resources, ACE rangers patrol the area only infrequently. Similarly, patrols by county sheriffs and Virginia DGIF game wardens also are infrequent. There is a lack of developed facilities, and the unpaved road that parallels the western side of the river in Virginia is steep in places and often impassible. The Glen Lyn Town Park provides the only established public river access.

As a consequence of the limited management presence, there are resource protection and public safety concerns. Unmanaged recreational use of riparian lands, including numerous informal campsites and trails, is causing extensive loss of vegetation, streambank erosion and littering. These campsites lack any sanitary facilities. In addition, resource degradation has resulted from unregulated use of motor vehicles in some areas. There is a general sense that the area attracts unlawful activity and that, as a result, public safety is a significant issue. One local resident expressed the common sentiment at a public meeting when he stated "anything would be better than what currently exists in Virginia; just do something to improve the situation."

With the anticipated closing in the near future of Appalachian Power Company's existing fly ash landfill adjacent to the river in Glen Lyn, there may be an opportunity for restoration and re-use of the landfill site for recreation and/or other public purposes that could complement the conservation and recreational use of the river corridor.

While the poor condition of the west-side road is viewed by many to be a significant concern, others are concerned that road improvements could significantly increase use and lead to conflicts between different user groups. There is interest in continuing shoreline camping in Virginia, but there is general recognition that significant site improvements and increased management are needed. There is concern that the Glen Lyn campground is at capacity during most of the use season and that there is need for additional developed sites of this type. Members of the public also have expressed interest in site improvements to the Glen Lyn campground, and see the need to significantly enhance boating and fishing opportunities.

The basic conclusions shared by many are, first, that the Virginia portion of the study area is a significant natural area with high, though as yet unrealized, recreational potential; and second, that there is a clear need for increased management and law enforcement in the area.

River Protection

Key Study Issue #3: Public interest in long-term protection of river resources.

The wild and scenic river study was authorized by Congress in response to public concern surrounding a proposal by Appalachian Power Company to construct a 765kv transmission line that would have crossed the center of the study area. While another route was ultimately chosen for the transmission line that avoided the study area, significant public concern remains about potential future threats to the river.

Many in the public perceive that the river is vulnerable to a variety of regional-scale energy, communications, or development projects. Potential energy projects include electric transmission lines or gas pipelines that might bisect the study area and cross the river. Some individuals remain concerned about a pump storage energy facility that was proposed in the past within the study area, and others are concerned that a new dam might be built in the study area. There is concern that these types of development would detract significantly from the natural character of the area and harm wildlife and recreation values.

The WSRA temporarily prohibits federally-assisted water resource projects that would have an adverse effect on river values during the time that a river is being studied and for an additional three years once the study report is submitted to Congress. If Congress does not permanently designate the river, those protections expire. As a result, stakeholders concerned with the long-term conservation of the New River study area fear that it will once again become vulnerable to federally-assisted projects after the study period if the river is not designated as a national wild and scenic river.

Contribution to the Region

Key Study Issue #4: Unrealized potential for the New River to contribute to the region's economy and quality of life.

The New River study area is part of a larger geographic, economic, and social region. Due to both its strategic location and its significance as a natural and recreational resource, many who commented believe this section of the New River can play a pivotal role in shaping the future of the broader region.

These commenters suggest there are numerous unrealized opportunities for increased coordination between the study area and nearby public lands, including the Bluestone State Park, the Pipestem Resort State Park, the Bluestone NSR, the Bluestone WMA, and the New River Gorge National River. In addition, the study area is not currently included in efforts

within the broader region to "brand" its high quality recreational resources in order to give the area higher visibility and attract visitors who would use existing and evolving regional tourist attractions (including the public lands mentioned above and the Jefferson National Forest, the New River Parkway, and the New River Blueway). There is, however, concern that increased visitors will undoubtedly have conflicts (typically perceived or imagined) that may result in the reduction of hunting opportunity while demanding additional recreational development, which may impact existing resource values.

Virginia DCR and the NPS (through the New River Gorge National River unit and the Northeast Regional Office) are working with local and state agencies to develop the New River Blueway, an effort to establish a canoe trail beginning in North Carolina and running through Virginia and West Virginia (including the study area) downstream to Thurmond, West Virginia. Local outfitters are becoming aware of unrealized recreational boating opportunities in the study area for single and multi-day family and youth group boating trips.

Glen Lyn Town Park, located on land leased from the ACE, offers the upstream-most public river access to the study area, along with a campground, restrooms, and picnic pavilion. Discussions are under way with DCR about assisting with possible upgrades to facilities at the park, including new restrooms and showers. Within the study area, the lack of boat access-only primitive campsites limits the opportunities for overnight paddle trips.

Thus, the overall question for this key issue category is whether designation of the New River as a wild and scenic river, in combination with management improvements, could make a meaningful contribution to economic development and quality of life efforts at the local and/or regional levels or will it significantly impact the very resources that it is trying to protect?

Other Concerns about Wild and Scenic River Designation

Key Study Issue #5: Concerns about the effects of wild and scenic river designation on other existing uses and about how designation would be implemented.

Residents and users value the primitive character and high quality hunting and fishing experiences now found in the study area. Some question what would be gained by wild and scenic river designation given the existing high level of protection provided through the combination of federal ownership of the study area and management of the West Virginia portion by the state's DNR. These stakeholders are concerned that designation could result in no improvements in the West Virginia portion and could be accompanied by new limits on existing public uses.

Managers of existing facilities, both upstream and downstream, want assurances that their operations would continue into the future unimpeded by wild and scenic river status. The ACE wants assurance that its operation of the Bluestone Dam for the authorized purposes of flood control, hydropower, fish and wildlife, and recreation would not be affected if the river is designated, and that current plans by the Tri-City Power Authority to retrofit the dam for hydropower production may proceed as planned. Similarly, the Appalachian Power Company,

operator of electrical generating facilities at Claytor Dam and Glen Lyn, Virginia (upstream of the study area), wants assurances that its operations would not be affected by designation.

Many questions were raised in public discussions about the mission and capacity of the various agencies that could be involved in administering and managing the area under wild and scenic river designation. Some questioned whether administration of a wild and scenic river fits within the mission of the ACE. Others questioned the appropriateness of NPS involvement in an area that is primarily focused on fish and wildlife management and related traditional public uses. Many wondered whether adequate funding would be obtainable to implement meaningful management under different options for future management, especially if the states were designated as the primary managers.

CHAPTER 5. ALTERNATIVES FOR FUTURE MANAGEMENT

This chapter considers how the New River study area could be managed in the future, with a focus on four alternative strategies that were identified for detailed consideration during the study process. Alternative 1 represents a continuation of the current situation; this is the “no-action” or no designation alternative required by the Wild and Scenic Rivers Act. Alternatives 2, 3, and 4 are “action” alternatives; that is, each includes changes from the current framework for managing the area.

The chapter includes (1) a brief background on how the alternatives were developed, (2) an articulation of goals and other critical management concepts that would apply if the river were designated as a national wild and scenic river, (3) a description of several other features that are shared by the three action alternatives, (4) a summary description of the four alternatives, and (5) a comparison of similarities and differences among the four alternatives. More detailed information on important aspects of the four alternatives is provided in Appendix 5.A.

The discussion of future management presented in this chapter and related appendices may be more detailed and complicated than is typical for wild and scenic river study reports focused on rivers flowing through federal lands. The study team concluded that this depth was necessary in order to provide both the public and the affected agencies with sufficient information for making informed decisions about the alternatives and how the river corridor could be managed in the future.

Background

Process for Identifying Alternatives

As described in Chapter 1, “Public Involvement and Study Scoping,” (see page 2) and documented in Chapter 8, from the fall of 2003 through the fall of 2004, the study team worked with the Interagency Work Group and the public to define a reasonable range of alternatives for the future management of the New River study area. Initially, the team and Work Group thought as broadly as possible and identified nineteen possible alternatives involving different lead agencies and different designations that could enhance the current conservation and management of the area. This list was narrowed down to six alternatives that were presented at the public meetings held in July, 2004, in Hinton, West Virginia, and Rich Creek, Virginia. Based on public input at those meetings and further discussions with the Interagency Work Group, the range was further narrowed to the final set of four alternatives that are described in detail in the “Summary of Alternatives” section of this chapter (see page 92) and in Appendix 5.A. The four final alternatives are:

- Alternative 1: Continuation of current management (No Action)
- Alternative 2: National Wild and Scenic River administered by the ACE
- Alternative 3: National Wild and Scenic River administered by the NPS

- Alternative 4: National Wild and Scenic River administered by the states of Virginia and West Virginia

Alternatives Not Considered in Detail

Table 5.1 identifies (15) alternatives that were included in the original list of preliminary alternatives but that the study team and Interagency Work Group later rejected from detailed consideration and analysis. The rejected alternatives are arrayed in five categories according to the agency or agencies that would have overall lead responsibility for implementation, as follows: (1) Army Corps of Engineers (ACE), (2) National Park Service (NPS), (3) U.S. Forest Service (USFS), (4) U.S. Fish and Wildlife Service (USFWS), and (5) the states of Virginia (VA) and West Virginia (WV).

Table 5.1. Alternatives rejected and the rationale for these decisions.

Rejected Alternative	Decision Sequence	Rationale for Decision
1. Alternatives w/ ACE Lead:		
1.1. Enhanced management with no national designation	Rejected during preliminary examination of alternatives.	Viewed as not being distinct from the continuation of current management (Alternative 1).
1.2. National W&S River administered by ACE and managed by Giles County in VA & by DNR in WV	Rejected during preliminary examination of alternatives.	County not experienced in managing an area of this size and type and does not see a need to be an active manager when other options are available.
1.3. National Recreation Area (NRA) & National W&S River administered by ACE	Retained as one of six initial alternatives presented to the public in July 2004. Rejected during the development of final alternatives.	Establishing NRA would potentially support regional tourism efforts. Advantages may not outweigh the added administrative cost. Little public support for this alternative.
2. Alternatives w/ NPS Lead:		
2.1. National W&S River administered by NPS & managed by Giles County in VA & by DNR in WV.	Rejected during preliminary examination of alternatives.	See rationale for 1.2.

2.2. National WS River administered and managed by NPS with no state or county involvement.	Rejected during preliminary examination of alternatives.	History of Bluestone NSR as joint federal/state venture suggests that continued state involvement was preferable to federal-only management.
2.3. NRA & National W&S River administered by NPS.	Retained as one of six initial alternatives presented to the public in July 2004. Rejected during the development of final alternatives.	See rationale for 1.3.
2.4. National Park administered and managed by NPS with no state or county involvement.	Rejected during preliminary examination of alternatives.	Local residents want to retain the WV portion of this area as a wildlife management area. New River Gorge National River is already established nearby and there does not appear to be a need to duplicate the opportunities provided there.
3. Alternatives with USFS Lead:		
3.1. National W&S River administered and managed by USFS with no state or county involvement	Rejected during preliminary examination of alternatives.	USFS declined to become involved due to other commitments. Many stakeholders feel there is no advantage in adding a new agency to those already in managing the study area.
3.2. National W&S River administered by USFS and managed by Giles County in VA & DNR in WV.	Rejected during preliminary examination of alternatives.	See rationale for 1.2.
3.3. National W&S River administered by USFS w/ state wildlife management	Rejected during preliminary examination of alternatives.	See rationale for 3.1.
3.4. NRA & National W&S River administered by USFS	Rejected during preliminary examination of alternatives.	See rationale for 3.1 and 1.3.

4. Alternatives w/ USFWS Lead:		
4.1. National Wildlife Refuge and National W&S River administered and managed by USFWS with no state or county involvement	Rejected during preliminary examination of alternatives.	USFWS mission & skills are similar to the state fish & wildlife agencies. Given the similarity, many stakeholders feel there is no advantage to adding USFWS. (USFWS was not contacted to solicit interest.)
5. Alternatives w/ State Lead:		
5.1. State-owned and managed Wildlife Management Area and state-administered National W&S River in WV only	Rejected during preliminary examination of alternatives.	This alternative does not address management issues in VA.
5.2. Interstate Park and state-administered National W&S River	Rejected during preliminary examination of alternatives.	Strong desire among local residents to retain the WV portion of this area as a wildlife management area. No advantage detected for this interstate scenario over separate but coordinated efforts in the two states.
5.3. State-owned and managed Wildlife Management Area (or State Park in VA) and state-administered National Wild and Scenic River designated under Section 2(a)(ii) of the WSR ¹	Rejected during preliminary examination of alternatives.	This alternative holds no advantages over Alternative 4 in the set of final alternatives. Also, the Section 2(a)(ii) designation would introduce unnecessary complexity.

Two of the rejected alternatives: National Recreation Area and National Wild and Scenic River administered by ACE (1.3 in Table 5.1), and National Recreation Area and National Wild and Scenic River administered by NPS (2.3), were presented to the public in July, 2004, along with the four alternatives that ultimately made the final list of alternatives. These two alternatives

¹ Section 2(a)(ii) of the WSR provides for designation by administrative action of the Secretary of the Interior upon request from the governor(s) of the state(s) involved and subsequent to the river's inclusion in the state(s)'s river protection program(s). This is different from the more common procedure of designating rivers through Congressional action.

envisioned a National Recreation Area that would encompass the study area and other adjacent public lands (including the portion of the Bluestone WMA surrounding Bluestone Lake, the Bluestone NSR (and potentially Bluestone and Pipestem State Parks) in a multi-agency collaborative conservation and recreation area. While there was some support for both of these alternatives, the level of support was not as high as for the four other alternatives that ultimately were selected for detailed analysis. The public viewed the National Recreation Area alternatives as too complex to be feasible. As a result of the rejection of the two National Recreation Area alternatives, all four of the final alternatives focus exclusively on the study area. However, the idea of greater inter-jurisdictional collaboration among the different management areas within the Bluestone Lake Project Area and other nearby public lands has not been totally discarded. Opportunities for collaboration with adjacent and other public conservation lands are explored in the next section of this chapter.

Treatment of Opportunities Involving the Larger Region

In the development of management alternatives for the study area, the project team and other participants were mindful of the fact that this section of the New River is part of a larger geographic, ecological, economic, and social region. Due to both its strategic location and the significance of its resources, the study area could play an important role in contributing to the future of the broader region. There was agreement, therefore, that some consideration should be given to possible approaches for integrating management of the river with the larger region.

A number of strategies were identified that could be used to more fully connect this section of the New River to the larger region. These strategies are described in Appendix 5.B. While these strategies could complement and enhance future management of the study area, readers should note that each of the four management alternatives presented in this chapter stands on its own and could be implemented independent of broader regional action.

Foundations for Future Management

An important part of the study process involved identifying key concepts to guide future management of this segment of the New River and the adjacent federal lands, particularly if the area is designated as a national wild and scenic river as called for in Alternatives 2, 3 and 4. The goals, management principles, and assurances articulated below are the outcome of that effort. They were identified through extensive consultation with the Interagency Work Group and dialogue with other key stakeholders, including local and county officials, sporting groups and other recreationists, businesses, conservation interests, residents, and other interested individuals.

These goals, management principles, and assurances are consistent with, and would supplement, the WSRA's general management policy of protecting and enhancing the free-flowing condition and outstanding resource values of all designated rivers (as described in Chapter 1, "Implications of Wild and Scenic River Designation," page 6). The goals, management principles, and assurances would apply under each of the action alternatives (Alternatives 2, 3, and 4) and are sufficiently important for future management that they should be included or at least referenced

in any federal legislation that would designate this segment of the New River as a national wild and scenic river, which would give them the weight of federal law. These provisions would not apply if the river area is not designated as a WSR (i.e., if Alternative 1 is ultimately selected).

Goals

The following goals will serve as the foundation for all decisions regarding management and use of the area. Consistency with these goals will be the primary measure for determining the range of management directions and actions that might be considered.

1. Recognizing existing upstream water management and the variability of natural conditions, maintain sufficient stream flow, water quality, and riparian corridor conditions to sustain the outstanding resource values that make the river eligible for inclusion in the National Wild and Scenic Rivers System. Enhance these values wherever possible.
2. Maintain the existing conditions and functions of the river and adjacent lands.
3. Provide a range of habitats and conditions to support the existing diversity of species and healthy populations of fish and wildlife and ensure that these species and populations will persist into the future.
4. Protect special natural features, scenic landscapes, sensitive plant and wildlife species, and historic sites that are important to the area's natural and cultural heritage.
5. Retain the study area's predominantly undeveloped, rugged, and relatively remote character.
6. Provide opportunities for the public to participate in outdoor recreational activities that make use of, and are consistent with, long-term conservation of the natural environment, with an emphasis on traditional uses including hunting, fishing, trapping, wildlife observation, camping, boating, and, in general, experiencing a remote outdoor setting. Provide an environment that allows people participating in these activities to have a high-quality experience.
7. Contribute to the region's livability and economy by providing appropriate outdoor recreational opportunities to both residents and visitors that complement other local and regional recreational opportunities.
8. Continue to provide flood control for communities downstream of the Bluestone Dam, and balance other demands for water use outside the study area (including for energy production, waste assimilation, water supply, commercial and industrial uses, and recreation) with maintenance of the river's environmental quality.

Management Principles

While goals define *what* should occur, management principles describe *how* those involved in management of the area will conduct their business.

1. Management will respect traditional patterns of use and adjacent ownership.
2. Management decisions will be made mindful of the broader regional context in order to contribute to regional objectives and complement regional activities.
3. Collaborative working relationships will be established and maintained with gateway communities, both up and downstream, with counties, and with other federal, state, regional, and local authorities with a stake in the management of the river and river corridor.
4. Meaningful public involvement opportunities will be provided, in order that the counties, municipalities, public and private organizations, and interested citizens can learn about – and become engaged in – the planning and management of the area.
5. An emphasis will be placed on consistency and continuity of management with adjacent public lands, including lands currently administered by the ACE upstream and downstream of the study area, and with other significant public lands in the region, including the New River Gorge National River, the Bluestone NSR, Bluestone and Pipestem State Parks, and the Jefferson National Forest.

Assurances

If any of the alternatives involving wild and scenic river designation ultimately is implemented, there are certain fundamental provisions that will apply. These assurances generally relate to the continuation of specific aspects of the current situation in the area, and are consistent with the goals and management principles identified in the previous sections.

1. The operation of Bluestone Dam for the authorized purposes of flood control, hydropower, fish and wildlife, and recreation will not be affected, nor will upstream flowage rights related to the Bluestone Lake Project that are held by the ACE. The dam may be retrofitted for energy production, subject to existing laws and regulations and consistent with the long-term conservation of the river's outstanding resource values.
2. Wildlife species and their habitats will be managed in a manner that provides healthy populations into the future.
3. High-quality hunting, fishing, and trapping opportunities will be provided for current and future generations.

4. State and federal agencies will retain their existing authorities, as defined by federal and state law, over the management of fish and wildlife species and the regulation of hunting, fishing and trapping.
5. The operations of Appalachian Power’s Glen Lyn Plant and Claytor Dam will not be affected, unless changes to these facilities are proposed that could significantly affect water quality or the free-flowing condition of the river. State and federal water resource and/or environmental protection agencies will continue to make decisions regarding water quality and flow using applicable state and federal law. The substantive provisions of the existing lease of federal lands downstream of the Route 460 Bridge in Glen Lyn, Virginia, to Appalachian Power for fly ash disposal will not be affected, even if the lands are transferred from the ACE to another agency.
6. Other existing leases of federal lands in the area (i.e., for agriculture and the town park in Glen Lyn, Virginia) will continue for the life of those leases even if the lands are transferred from the ACE to another agency, provided the uses involved remain consistent with the overall direction and specific standards for management of the river corridor.
7. Lands in the West Virginia portion of the designated area will continue to be part of the Bluestone WMA, unless the West Virginia DNR chooses to remove them from the WMA.
8. The West Virginia DNR will continue to own and maintain the buildings at its administrative complex at Indian Mills unless it desires to transfer them to another willing party.
9. Applicable federal and state laws and regulations will continue to apply, including the Clean Water Act, the Endangered Species Act, the National Historic Preservation Act, and state equivalents.
10. Condemnation (or “eminent domain”) will not be used as a means to acquire lands or easements for purposes of managing the project area. Any land acquisition will be through purchase from willing sellers or donation and will be used only when necessary to achieve critical management objectives (e.g., to secure important public access).

Elements Common to All Action Alternatives

In addition to the goals, management principles, and assurances described in the previous section, there are several other features that are common to all three action alternatives (i.e., Alternatives 2, 3 and 4). These are described below.

Purpose

The fundamental purpose of the action alternatives is to provide added protection for the free-flowing condition and outstanding resource values of this stretch of the New River (as described in Chapter 3), while maintaining the current emphasis on fish and wildlife management and the established fish- and wildlife-dependent traditional public uses of the study area.

Wild and Scenic River Designation

Under all action alternatives, most of the New River and adjacent federal lands in the study area would be designated as a national wild and scenic river. The designated segment would be classified as a “scenic” river under the WSRA. The suggested boundaries of the area that would be designated as a WSR under each of the action alternatives are discussed in “Wild and Scenic River Implementation” below.

Management Guidance

For all action alternatives, management of the designated WSR segment of the New River would be consistent with the following: (1) the WSRA’s general policy of protecting and enhancing the area’s free-flowing condition and outstanding resources (see Chapter 1, “Implications of Wild and Scenic River Designation,” page 6); (2) the goals, management principles, and assurances presented above in “Foundations for Future Management,” page 83; and (3) the maintenance of conditions sufficient for meeting the WSRA “scenic” classification. In addition, detailed resource management standards for each action alternative were prepared during the study process. These standards, which are specific to each alternative, provide further guidance for future management. (See Appendix 5.C.) If one of the action alternatives is ultimately selected for implementation, the applicable standards and other management provisions considered to be central to that alternative should be referenced in the authorizing legislation in order to provide guarantees that these standards and management provisions would be implemented.

Also, as described in Chapter 1, “Implications of Wild and Scenic River Designation,” a comprehensive river management plan would be prepared by the lead agency (or agencies) after designation. This plan would incorporate the goals, management principles, and assurances, and the management standards specific to the alternative selected. For the portion of the designated area in West Virginia, the comprehensive river management plan would incorporate provisions of WVDNR’s current five-year wildlife management plan for the broader Bluestone WMA to the greatest extent possible within the overall framework of the selected alternative. The comprehensive river management plan would replace the ACE’s Bluestone Lake Project Area master plan as the guiding document for the Virginia portion of the designated area. Potential components of the comprehensive river management plan are described in Appendix 5.D.

Wild and Scenic River Implementation

The NPS Northeast Regional Office in Philadelphia, Pennsylvania, would be responsible for reviewing any proposed projects that would fall under the provisions of Section 7 of the WSRA. (See description in Chapter 1, “Implications of Wild and Scenic River Designation.”) This is because (1) in accordance with the WSRA, a federal agency must assume this responsibility, and (2) the NPS Regional Office has considerable experience implementing Section 7 on other rivers throughout the northeast.² Responsibility for implementing other aspects of wild and scenic river designation (such as developing a comprehensive management plan and managing the river and adjacent public lands) would vary under the different action alternatives, as described in “Summary of Alternatives,” page 92 below and Appendix 5.A.

Suggested Wild and Scenic River Boundaries

Under all of the action alternatives, the area that would be designated as a WSR is proposed to include the following:

River Area: The New River, from a line approximately 1-¼ miles below the Route 460 Bridge at the upstream end of the large bend in Giles County, Virginia (the southern boundary, as shown in Figure 5.1), downstream to the confluence with Buffalo Creek near Steer Island in Summers County, West Virginia (the northern boundary, as shown in Figure 5.2); and

Land Area: Federal (ACE) lands adjacent to the river segment described above and bounded on the northern and southern ends by the lines shown in Figures 5.1 and 5.2, respectively.³

The Study Team and Interagency Work Group developed this boundary proposal after careful consideration of several options. The rationale for the proposed boundaries is as follows:

Southern Boundary: While the entire study segment has been found eligible for wild and scenic river designation (i.e., beginning at the Route 460 Bridge), the study team and agency participants concluded that it would be more appropriate to begin the designation at the river bend roughly 1-¼ mile downstream of the Route 460 Bridge. This boundary would be downstream of the concentrated development around the bridge, including components of Appalachian Power’s Glen Lyn generating facility (such as the fly ash disposal site and several permitted wastewater discharges). To establish the proposed land boundary at this location, the river boundary was extended in a straight line on river right and river left because this was most straightforward approach and there were no compelling resource or management reasons for doing otherwise.

² For Alternatives 2 and 4, specific language would need to be included in the designation legislation authorizing the NPS to assume this role.

³ As discussed in “Treatment of Opportunities Involving the Larger Region,” page 83, other public lands close to the study area (including the federal/ACE lands around Bluestone Lake, Bluestone State Park, Bluestone NSR, and Pipestem Resort State Park) were considered in the development of alternatives, but ultimately were not included in any of the alternatives presented in this chapter. (See Appendix 5.B for further discussion.) The only exception is that under Alternative 3 there is potential that administrative and management responsibility for the Bertha Camping Area downstream of the potential WSR area could be transferred to the NPS. This issue is discussed further in the detailed description of Alternative 3 in “National Wild and Scenic River administered by the NPS,” on page 95.

Northern Boundary: With respect to the location of the suggested northern boundary, the confluence with Buffalo Creek was chosen because it is an easily identifiable feature at or very close to the 1,410-foot elevation above mean sea level. This is the maximum summer pool elevation of Bluestone Lake as identified in study authorizing legislation, and the point at which the New River is no longer free-flowing during summer pool conditions.

The land-based boundary on river left shown in Figure 5.2 was selected because it is easy to understand and would incorporate the Bull Falls Camping Area within the designated WSR area. This would keep the Bull Falls campground under the same managing agency as other upstream camping areas, thereby simplifying recreation management. The land-based boundary on river right was chosen primarily because it would not divide important ecological features – namely, Barton Ridge, the Buffalo Creek watershed, and the Dickinson Hollow watershed. While the net result is a suggested northern boundary that appears somewhat unusual on a map, it nonetheless appears to be preferable relative to other options because of these important management considerations.

Figure 5.1. Suggested southern boundary for wild and scenic river designation.

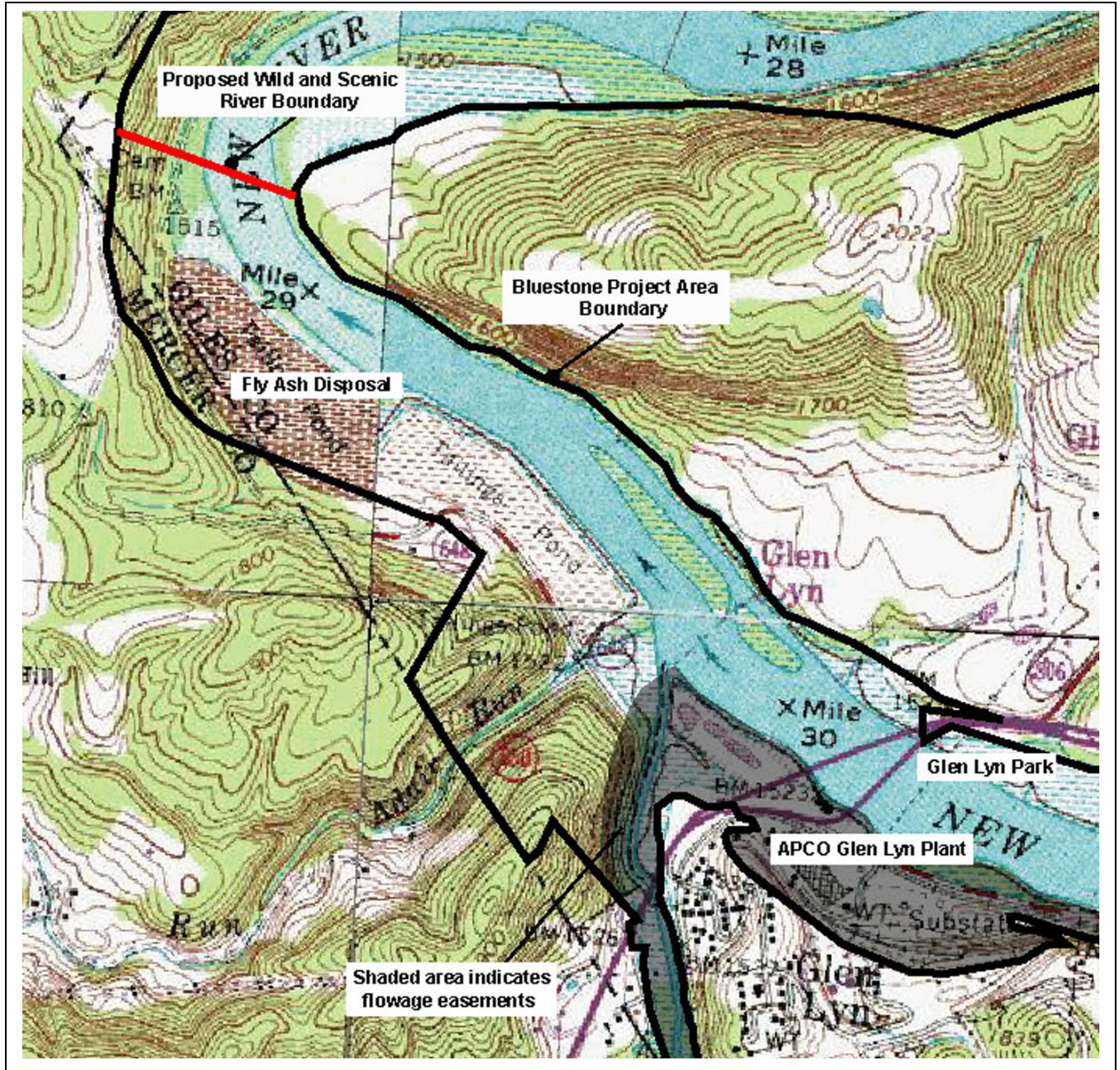
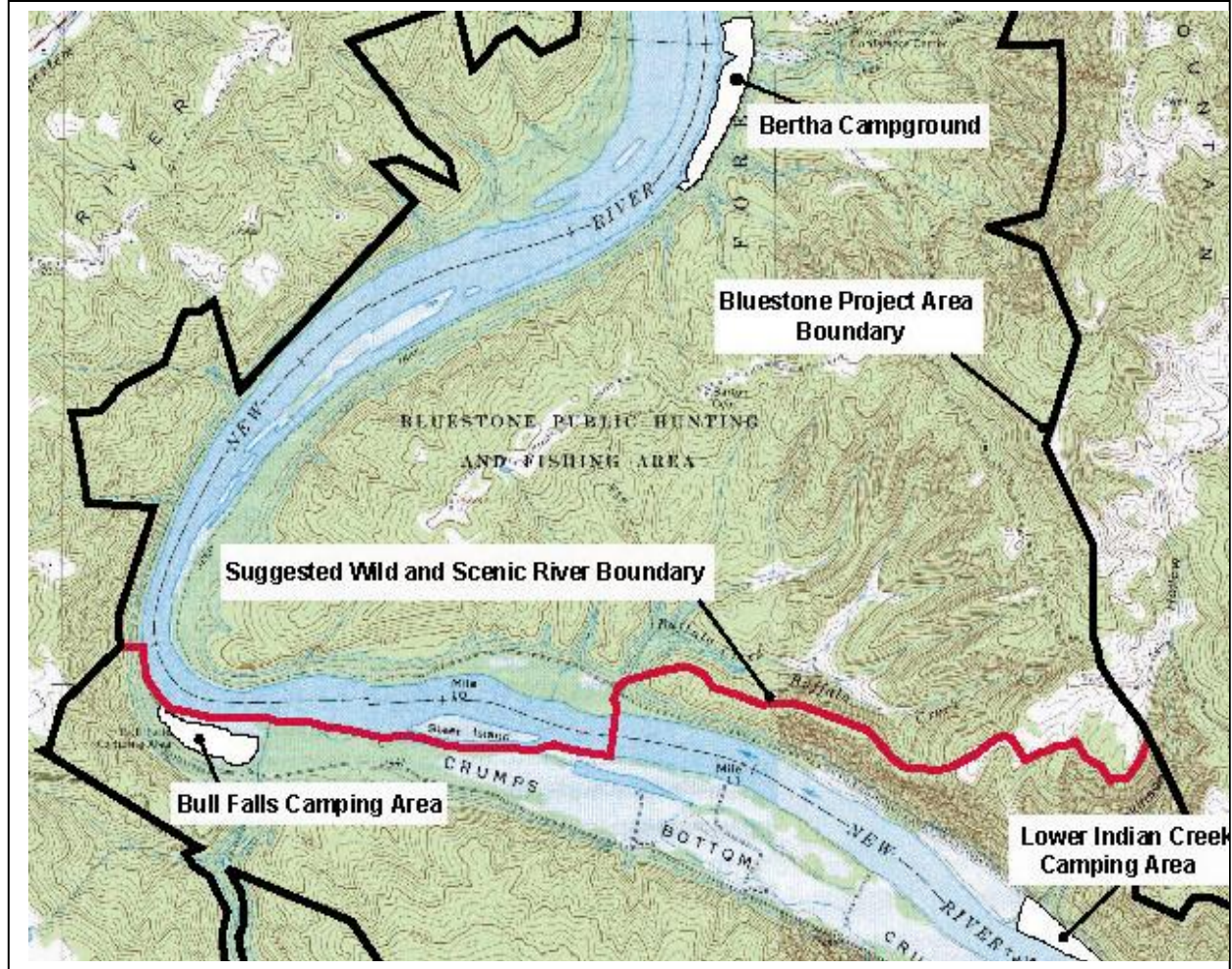


Figure 5.2. Suggested northern boundary for wild and scenic river designation.



Management of the River and Adjacent Federal Lands Upstream

Under all action alternatives, additional portions of the river and adjacent federal lands within the Bluestone Lake Project Area upstream of the suggested southern boundary would not be included as part of the designated WSR segment. However, those upstream areas have important ecological, public use, and management connections to the area downstream that would be designated. It is recommended that the upstream area be managed in the same way as the designated area – that is, according to the provisions described above under “Management Guidance.”

Summary of Alternatives

This section provides an overview of the four alternatives for future management selected for detailed consideration. The description focuses on the management structure and general direction for resource management that would be used for each alternative. Further information on these and other important features of the alternatives is presented in Appendix 5.A.

The Wild and Scenic Rivers Act requires that a reasonable range of alternatives be considered in addition to the no-action alternative. As discussed in “Alternatives Not Considered in Detail,” page 80, a wide range of preliminary alternatives was initially considered. Some had similar attributes. When this was the case, one alternative was selected that appeared to have the most merit, both in terms of its potential environmental effects and its management feasibility. The study team and Interagency Work Group determined that the four alternatives presented below represent a reasonable range for the following reasons:

- All four alternatives are technically and economically feasible.
- Each of the alternatives represents an approach to management for which there is a reasonable expectation that the agencies involved could and would successfully implement the alternative if it were selected.
- The action alternatives (Alternatives 2, 3 and 4) are consistent with the Wild and Scenic Rivers Act and the goals, management principles, and assurances for future management presented in “Foundations for Future Management,” page 83.
- The alternatives address only the immediate study area of the New River and do not incorporate larger regional possibilities (which were seen by some participants as beyond the purview of the study and too complicated).
- The agencies identified as potential administrators or on-the-ground managers for the four alternatives include only federal and state agencies that have existing management responsibilities in the study area or other nearby parts of the New River upstream or downstream. These agencies are knowledgeable about the area and, assuming that federal funding is available, are in a position to integrate these new responsibilities with other ongoing activities.

Alternative 1: Continuation of Current Management (No-Action Alternative)

Under this alternative, the current situation would continue with no significant changes in administration, ownership, or management. The river area would not be designated as a national wild and scenic river. No other new mechanisms, programs, or funding would be established as a result of this study to modify or enhance resource management in the study area. The Army Corps of Engineers would continue to administer all federal lands in the study area. Resource management in both states would continue to emphasize fish and wildlife (including priority game species) and identified traditional public uses (i.e., hunting, fishing, trapping, camping, boating, wildlife observation, and experiencing a remote outdoor setting). More specifically, resource management would continue to be conducted in accordance with the current practices and guidelines described in Chapter 2, “Management,” and Appendix 2.A.

In Virginia, ACE would continue to have primary responsibility for on-the-ground management. However, this management would continue to be limited due to funding and staff constraints and the lack of a management agreement with Virginia resource management agencies. The Virginia DGIF would continue its current role in fish and wildlife management (i.e., enforcing state fish and game regulations, and managing species and populations). The county sheriff would continue to assist ACE and DGIF with law enforcement and public safety.

In West Virginia, ACE would continue to delegate primary responsibility for most aspects of on-the-ground management on lands in the study area to the West Virginia DNR through the existing license. DNR would continue to manage the area as part of the Bluestone WMA. DNR–Wildlife Resources Section would continue to have lead responsibility for managing fish, wildlife, habitat, and related public uses (i.e., hunting, fishing and trapping) within the WMA. DNR–Parks would continue to have lead responsibility for managing other public uses, including campgrounds and related recreation facilities.

Alternative 2: National Wild and Scenic River administered by the Army Corps of Engineers

Under this alternative, most of the river and adjacent federal lands in the study area would be designated as a national wild and scenic river, with a “scenic” classification under the WSRA.⁴ This designation would provide added federal protection for the free-flowing condition and outstanding resource values of this stretch of the New River. Lands within the designated WSR area and other Bluestone Lake Project Area lands upstream in Virginia would continue to be owned by the federal government and administered by the ACE.

As in Alternative 1, management in both states would continue to emphasize fish and wildlife (including priority game species) and identified traditional public uses. ACE would have lead responsibility for preparing a comprehensive management plan for the designated WSR area in both states, in accordance with the WSRA. This plan would be consistent with (1) the authorizing legislation for the area; (2) the goals, management principles, and assurances presented in “Foundations for Future Management,” page 83, and (3) WSRA policies requiring protection of the area’s attributes that make it eligible for designation and “scenic” classification. (See Chapter 1, “Implications of Wild and Scenic River Designation,” page 6, for further discussion.)

In addition, resource management in both states would be guided by management standards presented in Appendix 5.C.1. These standards were developed during the study process by representatives from Virginia’s DGIF and Department of Conservation and Recreation, West Virginia’s DNR, and the ACE, with assistance from the study team. The standards would involve a significant enhancement of management in Virginia, while continuing many current practices in West Virginia (See Appendix 5 C.1 for details). If this alternative were chosen for implementation, the standards (along with the goals, management principles, and assurances

⁴ See “Suggested Wild and Scenic River Boundaries,” page 88, for a detailed description of the area that is suggested to be included in the designation.

presented in “Foundations for Future Management,” page 83) should be referenced in federal legislation designating the river as wild and scenic.

Under Alternative 2, there are two options for on-the-ground resource management in Virginia: either ACE would continue to have primary responsibility, or ACE could delegate this responsibility to the Virginia Secretary of Natural Resources (SONR) if the state agreed. If SONR assumed lead management responsibility, the area would be managed either as a state park (by the Department of Conservation and Recreation) or as a wildlife management area (by the DGIF). In either case, ACE and SONR would establish a formal management agreement spelling out respective roles and responsibilities. This agreement would be consistent with the goals, management principles, and assurances described in “Foundations for Future Management,” page 83, and with the management standards described in Appendix 5.C.1.

Decisions by SONR about whether to take on a lead role in managing the Virginia portion and, if so, whether to manage the area as a state park or a wildlife management area could be made after the area was designated as a WSR. However, it would be preferable if these decisions were made before designation because they would provide the agencies involved, the public, and the U.S. Congress with a clear understanding of lead management responsibilities and the overall focus of management in Virginia (i.e., whether it would be oriented toward a state park or a wildlife management area).

Regardless of which agency had lead responsibility, significantly greater management attention would be given to the Virginia portion of the designated area under Alternative 2 than is currently the case (assuming allocation of sufficient resources). Greater emphasis would be placed on clean up and restoration of degraded sites, increasing law enforcement and public safety, enhancing river-related recreational opportunities, increasing management of river recreation, and capital improvements.

In West Virginia, the management structure and direction would essentially be the same as in Alternative 1. WVDNR would continue to have lead responsibility for on-the-ground management through its existing license with ACE, and the area would continue to be part of Bluestone WMA. DNR–Wildlife Resources Section and DNR–Parks would continue their existing responsibilities and approach for managing fish, wildlife, and public use and recreation. DNR–Parks would increase efforts to enhance existing campgrounds and manage river recreation if sufficient funding were available.

Under Alternative 2, the NPS Northeast Regional Office would have responsibility in both states for conducting the review of proposed projects in accordance with Section 7 of the Wild and Scenic Rivers Act.⁵ (See Chapter 1, “Implications of Wild and Scenic Designation,” page 6, for further discussion.) NPS review would be conducted in close consultation with other federal and state agencies involved in managing the New River corridor. Federal funding would be appropriated to enable ACE to conduct activities implementing the WSR designation. If SONR chose to assume lead on-the-ground management responsibility in Virginia, it would be recommended that federal funding be made available through the ACE to assist with start-up

⁵ Specific language would need to be included in the designation legislation authorizing the NPS to assume this role under Alternative 2.

costs, possibly through a federal/state cost-sharing arrangement.⁶ In Virginia and/or West Virginia, long-term state involvement in management would be supported by state funding and supplemented by other federal sources (such as the “Pittman-Robertson,” “Wallop-Breaux” and “Dingell-Johnson” programs, which are currently helping to fund WVDNR activities in the Bluestone WMA).

Alternative 3: National Wild and Scenic River administered by the National Park Service

As in Alternative 2, most of the river and adjacent federal lands in the study area would be designated as a national wild and scenic river with a “scenic” classification.⁷ However, Alternative 3 differs from Alternative 2 in that the NPS would be assigned lead federal responsibility for administering the designated WSR area. Responsibility for administering the federal/Bluestone Lake Project Area lands within the designated area and upstream would be transferred from ACE to NPS. NPS would administer the area through the New River Gorge National River office in Glen Jean, WV, as is currently the case with the Bluestone NSR and the Gauley River NRA. However, it is important to note that distinct management provisions would apply to the area under consideration in this alternative that may differ from the management regimes used in the New River Gorge National River, the Bluestone NSR, or the Gauley River NRA. Those provisions are discussed further below.

As in Alternatives 1 and 2, management in both states would continue to emphasize fish and wildlife (including priority game species) and identified traditional public uses. Under Alternative 3, NPS would have lead responsibility for preparing a comprehensive river management plan for the designated WSR area in both states, in accordance with the Wild and Scenic Rivers Act. This plan would be consistent with (1) the authorizing legislation for the area; (2) the goals, management principles, and assurances presented in “Foundations for Future Management,” page 83, and (3) WSRA policies requiring protection of the area’s attributes that make it eligible for designation and “scenic” classification. (See Chapter 1, Implications of Wild and Scenic River Designation,” for further discussion.)

In addition, resource management in both states would be consistent with the management standards presented in Appendix 5.C.2. These standards were developed during the study process by NPS staff from the New River Gorge National River office, with assistance from the study team and in consultation with representatives from Virginia’s DGIF and Department of Conservation and Recreation and West Virginia’s DNR. In many respects these standards are the same or similar to those that would apply under Alternative 2, although there are differences for certain aspects of management as indicated in the comparative table presented in Appendix 5.C.3. The principal difference is that natural resource and forest/habitat management under NPS administration in Alternative 3 would tend to rely on passive natural selection processes rather than on the active management practices (e.g., timber harvesting, creating new clearings, stocking) that would be used more widely in Alternative 2. This reliance on natural processes in Alternative 3 derives from NPS’s generic management policies for units of the National Park

⁶ The ACE does not have funding in its budget at present that would allow for this. A new appropriation would be needed.

⁷ See “Suggested Wild and Scenic River Boundaries,” page 88, for a detailed description of the area that is suggested to be included in the designation.

System, updated most recently in 2006. If Alternative 3 is chosen for implementation, the management standards contained in Appendix 5.C.2 along with the goals, management principles, and assurances should be referenced in the designating legislation to indicate that the area will be managed according to these management standards. In Virginia, NPS would be the primary manager. NPS and Virginia DGIF would cooperate on management of fish and wildlife and the enforcement of related laws and regulations. (DGIF would have “concurrent jurisdiction” for law enforcement, as it does currently with ACE in the study area and with the U.S. Forest Service on nearby national forest lands.) As would be the case under ACE or Virginia SONR management in Alternative 2, NPS management of the Virginia portion of the designated area would entail a significant increase in management attention relative to that which currently exists. Aspects of management that would receive increased attention by NPS would be the same as described above for Alternative 2 (cleaning up and restoring degraded sites, increasing law enforcement and public safety, etc.).

In West Virginia, NPS would be the primary manager. NPS and DNR–Wildlife Resources Section would establish a cooperative partnership for the management of fish, wildlife, habitat, and related public uses (i.e., fishing, hunting, and trapping). NPS and DNR would formalize the relationship through a license agreement that would spell out respective authorities, roles, and responsibilities. This agreement would be modeled on the existing license between NPS and DNR for the Bluestone NSR and will reference the management standards in Appendix 5.C.2.

NPS would be the primary manager of camping, river recreation, and other public uses not related to fish and wildlife (e.g., hiking, horseback riding, mountain biking) in the West Virginia portion of the designated WSR area. NPS would assume administrative and management responsibility for the existing campgrounds in the designated area (Shanklin’s Ferry, Cedar Branch, Indian Creek, and Bull Falls).

Given the proximity, parallel designations, and similar resources and management of the designated WSR portion of the New River and the Bluestone NSR, under this alternative NPS would administer the two areas out of the same office as the New River National River and the Gauley NRA. The management agreement (or license) between NPS and DNR mentioned above would cover both the Bluestone NSR and the designated WSR area of the New River, a single management plan would be prepared, and the standards for resource management contained in Appendix 5.C.2 would apply to both areas. In addition, both areas would continue to be part of the larger Bluestone WMA (unless DNR chose to remove them from the WMA). As in Alternative 2, the NPS Northeast Regional Office would have responsibility in both states for conducting the review of proposed projects in accordance with Section 7 of the Wild and Scenic Rivers Act. (See Chapter 1, “Implications of Wild and Scenic River Designation,” for further discussion.) NPS review would be conducted in close consultation with other federal and state agencies involved in managing the New River corridor.

Federal funding would be appropriated to enable NPS to implement the WSR designation. West Virginia DNR’s long-term involvement in management would be supported by state funding and supplemented by other federal sources (such as the “Pittman-Robertson,” “Wallop-Breaux” and “Dingell-Johnson” programs).

Alternative 4: National Wild and Scenic River Administered by the States of Virginia and West Virginia

As in Alternatives 2 and 3, most of the river and adjacent federal lands in the study area would be designated as a national wild and scenic river with a “scenic” classification under this alternative.⁸ However, Alternative 4 differs significantly from Alternatives 2 and 3 in that ownership and management responsibility for all federal/Bluestone Lake Project Area lands within the designated area and upstream would be transferred from the ACE to the states of Virginia and West Virginia under this alternative. Lands in Virginia would be administered and managed by the Commonwealth’s Secretary of Natural Resources, while those in West Virginia would be administered and managed by the state’s DNR.⁹

As in the three other alternatives, management in both states would continue to emphasize fish and wildlife (including priority game species) and identified traditional public uses in this alternative. Virginia SONR and West Virginia DNR would share responsibility for preparing a comprehensive management plan for the designated WSR area in both states, in accordance with the WSRA. This plan would be consistent with (1) the authorizing legislation; (2) the goals, management principles, and assurances presented in “Foundations for Future Management,” page 83, and (3) WSRA policies requiring protection of the area’s attributes that make it eligible for designation and “scenic” classification. (See Chapter 1, “Implications of Wild and Scenic River Designation,” page 6, for further discussion.) The plan would require approval by the Secretary of the Interior to ensure consistency with WSRA requirements. Upon request and with available funding, the NPS could provide technical assistance to the states in developing the plan.

In addition, resource management in both states would be in accordance with the same management standards that would apply under Alternative 2, as presented in Appendix 5.C.1. Representatives from Virginia’s DGIF and Department of Conservation and Recreation and West Virginia’s DNR developed these standards with assistance from the study team during the study process. The standards would involve a significant enhancement of management in Virginia, while generally representing a continuation of current practices in West Virginia. The standards are sufficiently important that they (along with the goals, management principles, and assurances presented in “Foundations for Future Management,” page 83) should be referenced in the designating legislation if this alternative is implemented.

Each state would manage its lands independently, although there would be collaboration as appropriate. Examples could include coordinated management of river recreation and compatible management of fish, wildlife, and habitat.

⁸ See “Suggested Wild and Scenic River Boundaries,” page 88, for a detailed description of the proposed area that would be included in the designation.

⁹ A variation on this would be for the federal government to authorize a long-term lease (e.g., 99 years) to the states. This would relieve the ACE of much of its administrative burden while reducing potential criticism of the federal government for divesting its lands. At the same time, it would give the states long-term assurance that they would be justified in making significant investments in the area. Whether the lands were transferred in fee or through a long-term lease, the effect would be the same.

In Virginia, the Secretary of Natural Resources would determine whether the area would be managed as a state park by DCR or as a wildlife management area by DGIF.¹⁰ In either case, there would be a significant increase in management attention relative to that which currently exists. Aspects of management that would receive increased attention would be the same as described above for Alternative 2 (cleaning up and restoring degraded sites, increasing law enforcement and public safety, etc.).

In West Virginia, the area would continue to be part of the Bluestone WMA. DNR–Wildlife Resources Section and DNR–Parks would continue with their existing responsibilities and approach in managing fish, wildlife, and various types of public use and recreation. DNR–Parks would increase its efforts to enhance existing campgrounds if sufficient funding were available.

As in the other action alternatives, the NPS Northeast Regional Office would have responsibility in both states for conducting the review of proposed projects in accordance with Section 7 of the WSRRA.¹¹ (See Chapter 1, “Implications of Wild and Scenic River Designation,” for further discussion.) NPS review would be conducted in close consultation with other federal and state agencies involved in managing the New River corridor.

Federal funding could be provided to assist the states with the initial costs of implementing the designation (such as preparation of a comprehensive river management plan for the area, enhancing management in Virginia, and addressing essential infrastructure and other capital needs identified in a management plan). This could take the form of a federal/state cost-sharing arrangement. Long-term state management would be supported by state funding and supplemented by other federal sources (such as the “Pittman-Robertson,” “Wallop-Breaux” and “Dingell-Johnson” programs).

Comparison of Alternatives

Introduction

This section of the report summarizes similarities and differences among the four management alternatives presented in “Summary of Alternatives,” page 92, and in Appendices 5.A and 5.C. This summary is intended to provide a “snapshot” to give readers a relatively brief, general understanding of how the substantive provisions of the alternatives compare to one another. Readers who desire a more thorough understanding of the similarities and differences among the alternatives are advised to consult Appendix 5.A in particular. That appendix provides the most complete description of the alternatives, including specific provisions that would apply under each alternative for twenty-six separate management factors. By selecting any one of the

¹⁰ As with Alternative 2, a decision by Virginia SONR about whether to manage the area as a state park or a wildlife management area could be made after the area was designated as a Wild and Scenic River. However, it would be preferable if this decision were made beforehand because it would provide both the agencies involved and the public with a clear understanding of what the overall focus of management in Virginia would be (i.e., a state park or a wildlife management area).

¹¹ Specific language would need to be included in the designation legislation authorizing the NPS to assume this role under Alternative 4.

twenty-six factors in Appendix 5.A, the reader can scan across all four alternatives and get a detailed picture of key similarities and differences.

The following comparison focuses only on the substance of key provisions of the alternatives. It does not compare the environmental effects of implementation of the alternatives. That subject is addressed in Chapter 6.

Major Similarities and Differences Among the Alternatives

Major similarities and differences among the alternatives include the following:

- All of the action alternatives (Alternatives 2, 3, and 4) would designate most of the study area as a national wild and scenic river, while Alternative 1 would not. The NPS Northeast Regional Office would be responsible for reviewing proposed projects under Section 7 of the Wild and Scenic Rivers Act.
- All of the action alternatives share the same purpose, foundations for future management (i.e., the goals, management principles, and assurances articulated in “Foundations for Future Management,” page 83), and general direction for management in both states. Under Alternative 1, existing agreements and coordination among the different managing agencies would continue.
- All of the action alternatives would entail a significant change in management of the river corridor in Virginia relative to Alternative 1. (See further discussion in “Comparison of Agency Responsibilities, Missions, and Management Experience,” next page.) There are significant similarities among all four alternatives in West Virginia. All seek to accomplish similar objectives and all would retain many important elements of the current management approach. Of the three action alternatives, Alternative 2 is most similar to Alternative 1 because in West Virginia it would essentially continue the current situation while adding an overlay of wild and scenic river designation.
- Alternative 3 is distinct because it is the only one in which the NPS would be involved in managing the river corridor. This would entail certain differences in the standards for resource management relative to the other alternatives, as discussed further in “Comparison of Resource Management Standards for the Four Alternatives,” next page, and Appendix 5.C.3.
- Alternative 4 is distinct because it would involve transferring the federal lands in the affected area to the two states. As a result, no federal agency would be involved in on-the-ground management operations or administering the river corridor – except for NPS review of proposed water resource development projects under WSRA Section 7 and review of the comprehensive river management plan.
- The alternatives include a variety of strategies for administering and managing the river corridor. Assuming adequate funding, all of the agencies that would be involved under the various alternatives have the capability to implement a high quality management program. However, each agency must follow its own applicable laws, mandates, policies and guidelines for carrying out management of natural, cultural, and recreational resources, which may result in different approaches to management of these resources.

Comparison of Resource Management Standards for the Four Alternatives

As discussed in “Management Guidance,” page 87, and “Summary of Alternatives,” page 92, and in Appendix 5.C, management standards that would apply in both states were prepared during this study for each of the three action alternatives. Comparable management standards do not exist for current management or for Alternative 1. However, as discussed in Chapter 2 and Appendix 2.A, guidelines were compiled during the study process that describe how resource management currently is conducted in the two states. For comparative purposes, these guidelines can be considered equivalent to management standards for Alternative 1.

In Virginia, the resource management standards for Alternatives 2, 3, and 4 would entail a significant change from the continuation of current management envisioned under Alternative 1. For many aspects of management there would be no structured program or approach under Alternative 1, whereas under any of the action alternatives management in Virginia would be elevated to a standard consistent with that in West Virginia.

In West Virginia on the other hand, the resource management standards for Alternatives 2 and 4, are similar to the guidelines for continued current management under Alternative 1. This is because the management standards for the action alternatives were largely derived from West Virginia DNR’s current practices in recognition of the quality and stakeholder acceptance of that existing management. However, the standards for all of the action alternatives are somewhat more comprehensive than the guidelines for Alternative 1, and would require certain enhancements beyond current management in West Virginia (e.g., improvements to the existing campgrounds).

With respect to a comparison of resource management standards for the three action alternatives, Alternatives 2 and 4 share the same standards. The standards for Alternative 3 are the same as those for Alternatives 2 and 4 in many respects, but there are some important differences. In summary form, the differences include the following:

- Alternatives 2 and 4 would allow for creating new clearings for wildlife habitat purposes and planting of trees and shrubs that provide wildlife habitat. Alternative 3 would maintain existing clearings but otherwise would use natural processes to provide wildlife habitat and create new clearings.
- While giving preference to native species, Alternatives 2 and 4 would allow for the intentional introduction of certain non-native plants in clearings and along roads for wildlife purposes. Alternative 3 would not allow introduction of non-native plants, except on a case by case basis.
- Alternatives 2 and 4 would allow the use of a wide range of forest management techniques to achieve wildlife habitat objectives. Commercial contractors would be utilized for forest management when this was economically prudent. Alternative 3 would utilize natural processes such as blow downs from wind and death of trees from natural causes to open up clearings in the forest canopy rather than active forest management, and commercial timber harvesting would be prohibited.

- Alternatives 2 and 4 would maintain existing artificial wetlands and allow for new wetland projects, while Alternative 3 would continue existing wetlands projects but not develop new ones.
- Alternatives 2 and 4 would allow stocking of non-native species (mainly fish) for both ecological and public use reasons. Alternative 3 would allow stocking for ecological reasons but not to enhance hunting, trapping, or fishing. (The exception would be that the existing stocking of trout species in Indian Creek would be allowed to continue.)
- Alternative 3 would consider expanding the range of recreational uses if these were found to be appropriate through development of the area’s management plan. Alternatives 2 and 4 would be less likely to allow new uses and would use compatibility with wildlife management as a major criterion in making any such decisions.

For more details on management standards for the action alternatives, readers should refer to Appendix 5.C and especially 5.C.3, which compares management standards for Alternatives 2 and 4 with those for Alternative 3.

Comparison of Agency Responsibilities, Missions, and Management Experience

As mentioned above, one area in which clear distinctions can be drawn between the alternatives is management and administrative responsibility. Table 5.2 presents a summary of these responsibilities under each alternative.

While implementation of Section 7 of the WSRA is not an on-the-ground management responsibility, it is included in Table 5.2 to provide a complete picture of administrative and management responsibilities. As with other aspects of the comparison of the alternatives, readers are encouraged to consult “Summary of Alternatives,” page 92, and Appendix 5.A for more detailed descriptions of agency roles and responsibilities.

As shown in Table 5.2, West Virginia DNR would continue to be involved in management regardless of the alternative ultimately selected. DNR’s role and approach in managing fish and wildlife, habitat, and recreation would be essentially the same under Alternatives 1, 2, and 4 (although DNR would no longer need a license from ACE to manage the river corridor under Alternative 4).

Under Alternative 3, DNR–Wildlife Resources Section would be involved in managing fish, wildlife, and habitat in West Virginia in cooperation with the NPS, and there would be a greater emphasis on natural selection processes and limitations on active habitat management relative to the other alternatives. Also, the NPS would assume responsibility for recreation management in the West Virginia portion of the study area from DNR–Parks.

Table 5.2. Comparison of administrative and management responsibilities.

Agency	No Action	Action Alternatives		
	Alternative 1	Alternative 2	Alternative 3	Alternative 4
ACE	X	X ¹²		
NPS (management)			X	
NPS (WSRA Sec. 7)		X	X	X
Virginia SONR		X ¹³		X
West Virginia DNR	X	X	X	X

Because much of the difference among the three action alternatives relates to which agencies would be involved, it is useful to consider each agency’s mission and experience with management of public lands and national wild and scenic rivers. This information is summarized in Table 5.3.

¹² Under Alternative 2, ACE would be the administering agency for the federal lands and the WSR designation (except for implementing Section 7 of the WSRA, which would be the responsibility of NPS). If Virginia SONR elected not to participate, ACE also would continue to have responsibility for resource management in Virginia.

¹³ Whether Virginia SONR would be involved in management under Alternative 2 has yet to be determined.

Table 5.3. Comparison of agency missions and relevant management experience.

Agency	Mission	Experience with public lands management	Experience with National Wild and Scenic Rivers
ACE	<p>“To provide quality, responsive engineering services to the nation including planning, designing, building and operating water resources and other civil works projects (Navigation, Flood Control, Environmental Protection, Disaster Response, etc.)... Environmental stewardship includes compliance measures to ensure that [ACE] projects must meet federal, state, and local environmental requirements... Conservation includes two different types of resource management at project sites: conservation and preservation. Conservation focuses on responsibly managing Army lands to ensure long-term natural resource productivity. Preservation focuses on resource protection in stewardship of natural and cultural resources.”</p>	<p>ACE administers and manages approximately 2,600 areas nationwide for public use and/or conservation purposes. Of these, roughly 85 are located within ACE’s Huntington (WV) District, which has responsibility for a 45,000 square mile area that includes parts of Virginia, West Virginia, North Carolina, Kentucky, and Ohio.</p>	<p>ACE currently administers part of one WSR (a 4.6-mile segment of the Cossatot River in Arkansas).</p>
NPS	<p>“The National Park Service preserves unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations. The Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.”</p>	<p>NPS administers and manages 388 areas nationwide, ranging from national parks and preserves to historic sites and battlefields. Approximately 75 of these areas are located within the 13 state NPS Northeast Region.</p>	<p>NPS currently administers and manages part or all of 35 WSRs throughout the country, totaling 2,826 river miles. NPS has acted as federal administrator and co-managed the Bluestone NSR with WVDNR since its designation in 1988.</p>
VA SONR	<p>DGIF: “To manage Virginia's wildlife and inland fish to maintain optimum populations of all species to serve the needs of the Commonwealth; to provide opportunity for all to enjoy wildlife, inland fish, boating and related outdoor recreation; to promote safety for persons and property in connection with boating, hunting and fishing.”</p> <p>DCR: “To conserve, protect, enhance, and advocate the wise use of the Commonwealth's unique natural, historic, recreational, scenic and cultural resources.”</p>	<p>DGIF owns and manages 30 wildlife management areas and 32 lakes for fishing. DCR manages 34 state parks, including the 57-mile New River Trail State Park in Grayson, Carroll, Wythe and Pulaski counties.</p>	<p>There are currently no designated WSRs in Virginia. DCR is involved in a wide range of state-level river management activities.</p>
WVDNR	<p>DNR (overall): “To provide and administer a long-range comprehensive program for the exploration, conservation, development, protection, enjoyment and use of the natural resources of the State of West Virginia.”</p> <p>Wildlife Resources Section: “The basic mission of our agency is to manage the state's wildlife resources for the benefit and enjoyment of the public.”</p> <p>Parks and Recreation Section: “Promote conservation and public recreation by preserving and protecting natural areas of unique or exceptional scenic, scientific, cultural, archaeological or historic significance, and provide outdoor recreational opportunities while maintaining state parks in a natural condition.”</p>	<p>DNR-WRS manages nearly 100 wildlife management areas, including some on state and national forest lands. DNR– Parks manages a total of 49 units, including 34 state parks.</p>	<p>DNR has co-managed the Bluestone NSR corridor in conjunction with the NPS since its designation in 1988.</p>

CHAPTER 6. SUITABILITY

This chapter provides a basis for determining whether designation of the study segment of the New River as a national wild and scenic river is appropriate from a public policy perspective. Specifically, the chapter analyzes and draws conclusions concerning the “suitability” of the New River study area for designation. Suitability is determined by analyzing whether designation under each of the action alternatives meets four major criteria. A conclusion is then drawn regarding overall suitability.

Background

Section 4 (a) of the WSRA requires that federal agencies conducting wild and scenic river studies “study and submit to the President reports on the suitability or non-suitability for addition to the national wild and scenic rivers system of rivers which are designated ... by the Congress as potential additions to such system.”

In Chapter 3, the New River’s “eligibility” for designation was evaluated. Eligibility is determined through an analysis of the river’s condition and the significance of its natural, cultural, and recreational values. This resource-based determination is made independent of social, political, or other considerations. Suitability, on the other hand, seeks to determine if designation is appropriate from a socio-political perspective. In effect, eligibility considers whether a river area is worthy of designation, while suitability considers whether designation would constitute sound public policy.

Methods

Neither the WSRA nor the published federal guidelines for implementing the WSRA specify the factors that should be used to evaluate suitability. The Interagency Wild and Scenic Rivers Coordinating Council’s *Wild and Scenic Rivers Reference Guide* provides perhaps the most thorough discussion of this subject. The criteria used in this report to assess the New River study area’s suitability for designation were developed using the Coordinating Council’s guidance, along with the study team’s knowledge of the WSRA. Four broad criteria were identified, as follows:

Criterion #1, Justification for Protection: *Should the river’s free-flowing character, water quality, and outstandingly remarkable values be protected, or are one or more other uses important enough to warrant doing otherwise?*

Criterion #2, Conservation of River Values: *Will the river’s free-flowing character, water quality, and outstandingly remarkable values be protected through designation?*

Criterion #3, Commitment and Capability: *Is there a demonstrated commitment and capability by any non-federal entities that may be partially responsible to protect the river and its associated values following designation?*

Criterion #4, Support for Designation. *Is there demonstrated support for designation of the river by federal, state, local or tribal governments; national, state, or local non-profit organizations; or local residents?*

The suitability analysis that follows considers each of the above criteria independently and provides a finding for each. An overall conclusion on suitability is then drawn. Determining suitability is value laden and in most cases quantification is difficult if not impossible. It is therefore incumbent on the study team to use its best professional judgment and the best available information in evaluating suitability, and to adequately document findings in order that decision-makers and the public can follow the logic used to make a determination.

Analysis

Criterion #1: Justification for Protection:

Should the river's free-flowing character, water quality, and outstandingly remarkable values be protected, or are one or more other uses important enough to warrant doing otherwise?

To answer this question, the following factors were considered:

- (1) resource significance;
- (2) contribution to the National Wild and Scenic Rivers System;
- (3) threats;
- (4) effect on future uses; and
- (5) consistency with regional initiatives.

Resource Significance

This factor involved consideration of whether the New River study area possesses natural, cultural, and/or recreational resources that are worthy of long-term protection.

Relative to other areas along the New River main stem, and in an era of increasing land development, the study area's size and undeveloped nature is significant in and of itself. In addition, the study area possesses a variety of other special features that distinguish it from other parts of the region.

In Chapter 3, the river was found eligible for wild and scenic river designation in part because of its "outstandingly remarkable" fish and other aquatic species, wildlife, recreation, geology/hydrology, scenery, and cultural resources. This determination of eligibility confirms the national and regional significance of the area. Only one resource factor must meet the outstandingly remarkable standard for a river to be eligible. In this case, there were several. This concentration of important resources distinguishes the New River study area and makes it especially significant.

The significance of the study area in West Virginia is closely linked to the fact that it has been carefully managed for over fifty years as a federally-owned and state-managed wildlife

management area. In fact, the Bluestone WMA is recognized by both West Virginia sportsmen groups and the West Virginia DNR as among the premier wildlife areas in West Virginia. In Virginia, the study area also has special significance as the downstream extent of southwestern Virginia's dominant river. Having a large parcel of high quality, undeveloped public land as the downstream anchor for the river in Virginia affords significant opportunities for regional recreational development. The interstate nature of the study area only adds to its significance.

Contribution to the National Wild and Scenic Rivers System

This factor involves consideration of whether the study area would make a meaningful contribution to the National Wild and Scenic Rivers System and the public interest it reflects. Three primary factors suggest that designation of this portion of the New River would indeed represent a significant contribution to the system.

First, of the one hundred sixty-three rivers in the system, about two-thirds are in the western United States and Alaska. In all of the greater mid-Atlantic area of Pennsylvania, Delaware, New Jersey, Maryland, Virginia, and West Virginia, there are only seven designated rivers, with only one in West Virginia (the Bluestone) and none in Virginia. In the broader context of the southeastern United States east of the Mississippi River, there are currently only twelve wild and scenic rivers in this ten-state area, including the Bluestone.

Second, this portion of the New River is a large-order river, and rivers of this size are rare in the National Wild and Scenic Rivers System. (Examples of large-order rivers in the system in the lower forty-eight states include the Salmon River in Idaho, the Klamath River in Oregon and California, the Missouri River in Montana, Nebraska and South Dakota, the St. Croix in Minnesota and Wisconsin, the Rio Grande in Texas, and the Delaware in New York, New Jersey and Pennsylvania.)

Third, only eight wild and scenic rivers are located on national wildlife refuges (seven in Alaska and a small segment of the Niobrara in Nebraska), and there appears to be only one wild and scenic river flowing through a state wildlife management area (the Obed River, which flows through the Catoosa WMA, which is owned and managed by the State of Tennessee). In sum, the section of the New River in the study area would be one of only a few designated national wild and scenic rivers in the mid-Atlantic and southeastern region; it would be among relatively few high order wild and scenic rivers nationwide; and it would be nearly unique as a combined wild and scenic river/wildlife management area.

Threats

This factor considers whether there are threats to the New River that could harm river-related natural, cultural, or recreational values or make the river ineligible for designation. While it would be inappropriate for an active threat to be a requirement for suitability, this is often an impetus for designation. It is, therefore, standard practice to include consideration of threats as a component of the suitability analysis.

This section of the New River was originally proposed for designation in response to a proposed high voltage transmission line that would have crossed the middle of the study area, affecting the corridor's scenic and undeveloped qualities and upland habitat on both sides of the river. This transmission line ultimately was located on a different route that avoided the study area.

Several other possible threats were raised by the public or identified through other sources during the study. In the past, there was a proposal for a pump storage energy facility that would have been located in the study area. However, this project does not appear to be under active consideration at this time. There has been some discussion about relocation or expansion of the Route 460 Bridge in Glen Lyn, Virginia, to accommodate additional traffic. This is not currently under active consideration, but it could be a remote possibility in the future. It is unlikely that a relocated bridge would be within the boundaries of the designation. Environmental impacts associated with relocation would be a concern regardless of whether the downstream area were designated and state and federal water quality and it would be anticipated that development would be consistent with these and other applicable environmental laws. There is an active proposal to retrofit the Bluestone Dam for hydropower. As long as this is a "run-of-the-river" project (i.e., requiring no further impoundment), it would have no effect on the study area.

Downstream of the study area, the principal threats are changes in dam operations and the potential for siltation where suspended solids in the flowing river enter the placid lake. The issue of dam operations has been discussed at length elsewhere. Flooding of the area for flood control purposes is recognized as a given with this project. The issue of siltation is a significant issue, but more so for the lake than the river.

In sum, while there is the possibility that energy, transportation, communication, or other development projects could be proposed within the study area in the future, there are no known proposals at this time. Perhaps the most likely threat to the river is from development pressures in the watershed upstream of the study area or on tributaries to it that could result in increased water withdrawals, further fluctuations in flow levels, or additional sedimentation or other degradation of water quality. It is difficult to pinpoint or quantify these abstract and dispersed threats. Upstream of the study area, the Commonwealth of Virginia's implementation of water quality statutes and standards will moderate these effects regardless of designation. This also will be the case with immediate tributaries to the study area both in Virginia and West Virginia.

Effect on Future Uses

This factor considers whether uses of the river and adjacent lands within the study area would be enhanced, foreclosed, or curtailed if the river were to be designated. Some current recreational or wildlife management activities and uses may be curtailed by designation depending on the federal agency in charge of federal administration.

As described immediately above in the threats discussion, there is potential for a range of energy, transportation, communication, or other development projects to occur within the study area. Wild and scenic river designation would preclude any projects licensed by the FERC and other federally-assisted water resources projects that would have a direct and adverse effect on the

river's flow or special values, but not other projects. However, this does not mean that non-water resource projects necessarily would be allowed. The fact that the study area is publicly owned and managed for conservation purposes already limits the amount and type of development activity that could occur on these lands regardless whether the river is ultimately designated as a wild and scenic river. Currently there are no proposals for development within the study area that would be foreclosed or curtailed if any of the action alternatives were selected and implemented.

As suggested above in the discussion of potential threats, the most likely threats are from upstream development. Designation may play a part in the way that these threats are dealt with, but it is highly unlikely that designation would foreclose or greatly curtail these developments directly or indirectly.

Consistency with Regional Initiatives

This factor views designation from a regional context and considers whether designation would be compatible with other ongoing or planned regional initiatives.

Each of the four counties that abut the study area emphasizes quality of life as a reason to live in the area and each actively promotes environment-related tourism. In addition, Hinton, West Virginia, is actively using its proximity to the New River and river-related amenities as a means to draw both new businesses and visitors.

As described in Chapter 2, there are several ongoing initiatives in the broader region that seek to draw connections between the environment and tourism, including the New River Blueway, the New River Parkway, and the Virginia Birding and Wildlife Trail. Designation of the New River study area as a wild and scenic river would complement all of these efforts. There are no known local or regional initiatives with which designation might conflict.

Finding for Criterion #1, Consistency with Regional Initiatives: In sum, there appears to be a public interest in designating the study area of the New River as a wild and scenic river under any of the action alternatives for the following reasons:

- (1) the river and surrounding public lands possess resources of national and regional significance, and these resources would be further protected and potentially enhanced through designation;
- (2) the New River would make a distinctive contribution to the National Wild and Scenic Rivers System;
- (3) there do not appear to be any competing public interest uses that would be foreclosed; some uses may be curtailed; and
- (4) designation would be consistent with ongoing and planned regional initiatives.

Criterion #2: Conservation of River Values

Will the river's free-flowing character, water quality, and outstandingly remarkable values be protected through designation?

This criterion considers whether the free-flowing character, water quality, and identified outstanding resource values of the New River study segment would be adequately protected if the study area were to be designated as a wild and scenic river.

Under all action alternatives, the river's free-flowing condition would be protected by the combination of state regulation of water withdrawals and the WSRA's prohibition of FERC-licensed projects and other water resources development projects within or directly affecting the designated area that would have an adverse effect. Water quality would be protected through the implementation of federal and state water quality statutes and standards by the states of Virginia and West Virginia. (This would be true regardless of whether the river is designated.) The study area's outstanding resource values (fish and other aquatic species, wildlife, recreation, geology/hydrology, scenery, and cultural resources) would be protected by the combination of:

- (1) the instream protections of the WSRA;
- (2) existing state and federal laws;
- (3) public ownership of the lands in the area for conservation purposes; and
- (4) management that would be in accordance with the goals and management standards developed during the study with the specific intent of protecting these outstanding values.

Finding for Criterion #2, Conservation of River Values: Together, the factors described above indicate that the study area would be well protected under any of the action alternatives.

Criterion #3: Commitment and Capability

Is there a demonstrated commitment and capability to protect the river following designation under the scenarios envisioned in the action alternatives?

Factors considered in answering this question include the following:

- (1) management agency commitment and capability;
- (2) cost.

Management Agency Commitment and Capability

This factor considers the likelihood that the agencies involved in implementing each of the action alternatives would be committed to implementation and would have the capability to follow through with the commitment.

There are two aspects of commitment that warrant attention. First, for each alternative, would the applicable agencies be willing to assume management responsibility? Second, assuming that

they would be willing to participate, would they commit to management according to the standards defined in this report?

Regarding the first question, at this time none of the prospective management agencies (i.e., ACE, NPS, Virginia SONR, and West Virginia DNR) committed to participate in implementing a wild and scenic river designation. Rather, all agreed to participate in the development of management alternatives during the study process, and to defer decisions on their potential involvement in designation until they had the opportunity to review this complete Study Report. Based on comments received during the development of draft versions of this Study Report, it was apparent that not all of the prospective management agencies would support federal wild and scenic designation. Further, it has been assumed that none of the potential managing agencies would be in a position to commit to long-term involvement without assurances of adequate funding.

Regarding agency commitment to manage according to the standards specified in this report, the standards for each alternative were developed with the active participation of the agency or agencies that would have lead management responsibility. At this time it can not be assumed that all of the implementing agencies would commit to conducting its management activities in accordance with the management standards that were developed as part of this study.

Regarding capability, each of the four agencies has extensive experience in the management of public conservation lands and outdoor recreation. (See Table 5-3.) Both SONR and DNR have park and wildlife management agencies that manage recreation and wildlife areas in each state. The NPS manages park areas nationwide, many of which have significant wildlife components. The ACE also manages numerous conservation and recreation areas and is committed to partnerships with states to manage lands and public uses when appropriate. Thus, it is reasonable to conclude that all four of these agencies would have the capability to fulfill their responsibilities under the different action alternatives.

It is important to note that, as with any public land management situation, the capability to follow through with management commitments is highly dependent on funding.

Cost

This factor considers whether the cost of management would be reasonable. The analysis of costs assumes that the cost of implementing any of the three action alternatives would be similar, the difference being the entity or entities that would assume responsibility for providing the funding necessary for management.

In West Virginia there would not be a significant change in cost over the no-action alternative. This reflects the fact that considerable funds are already being expended to manage the Bluestone WMA, primarily by WVDNR. There could be additional expenditures to improve public use facilities, but this is likely to occur with or without designation. In Virginia there would be a major increase in cost. It is important to remember that this finding is relative to the current situation, in which only limited funds are expended on management in the Virginia portion of the study area. Comparing long-term costs under any action alternative for

management of the West Virginia portion relative to the costs for management of the Virginia portion, the West Virginia portion is likely to cost more due to the fact that the area is far larger. There would, however, be significant start-up costs in Virginia, primarily to provide needed infrastructure related to access and camping.

In general, it is reasonable to conclude that the cost of managing this area would not differ substantially from the cost of managing any public lands project of this magnitude. Compared to an entirely new area, the cost would be lower as the lands are already in public ownership, making purchase of lands unnecessary.

Finding for Criterion #3, Commitment and Capability: The agencies that would be involved in administration and management under each alternative have the skills and experience to effectively implement the designation and manage the area for specified conservation purposes. However, there is not a demonstrated commitment by all of the agencies to manage the area as provided for in this study report. The cost of implementation of any of the action alternatives would be similar to other areas of this size and resource character.

Criterion #4: Support for Designation

This factor considers whether the interested public – including local residents, users of the area, public interest groups, those affected by future management, public agencies, and public officials – support designation and the management regimes that would be implemented under the three action alternatives.

Finding for Criterion #4, Support for Designation: The extensive public involvement during the course of the study and the work of the Interagency Work Group revealed a serious lack of support by state and local interests for any of the action alternatives prepared as part of this study. In addition, many stakeholders stated that federal wild and scenic river designation would not bring any additional benefits to this section of river. Many state and local interests also expressed the view that this section of river was already adequately protected and that no further government intervention was necessary. It was therefore determined that there was insufficient support at the state and local level for federal wild and scenic designation at this time.

Conclusions

This chapter considered whether the New River within the study area is suitable for designation based on four public policy considerations:

- (1) the justification for protection;
- (2) the extent to which wild and scenic values would be assured of protection;
- (3) the commitment and capability of those who would be involved in implementation; and
- (4) support for wild and scenic river designation.

All action alternatives were considered in this evaluation.

Although this section of the New River is eligible for inclusion in the National Wild and Scenic Rivers System, it has been found not suitable. This conclusion was reached given the lack of state and public interest and support for federal wild and scenic river designation at this time. Support for designation often weighs heavily in suitability determinations and it did in this case. Other suitability factors which heavily influenced a non-suitable determination in this case were the lack of immediate threats to the river and its resources and a lack of commitment by all of the management agencies to implement all of the resource management proposals as envisioned by this study report.

Table 6.1 summarizes the suitability findings. It lists the four public policy questions considered in the evaluation and breaks each down into the relevant specific factors. Suitability findings are included for all of the specific factors.

Table 6.1. Summary of suitability findings.

	Specific Factors	Suitability Finding
Criterion #1: Justification for Protection	Resource significance	Yes
	Contribution to the National Wild and Scenic Rivers System	Yes
	Threats	No
	Effect on future uses	Yes
	Consistency with regional initiatives	Yes
Criterion #2: Conservation of River Values	Laws, regulations, management standards	Yes
Criterion #3: Commitment and Capability	Management agency commitment and capability	No
	Cost	Yes
Criterion # 4: Support for Wild and Scenic River Designation		
	State and local governments	Yes/No
	Organizations	Yes
	Residents	Yes/No
	User groups	No

CHAPTER 7. CONCLUSIONS

This chapter summarizes the essential findings of the study, summarizes the four alternatives that were considered for future management of the New River study area, and indicates a finding of the alternative appropriate at this time.

Summary of Findings

The purpose of this study has been to provide essential information that will allow federal and state decision-makers, and the interested public, to draw informed conclusions regarding whether the New River from the Route 460 Bridge in Glen Lyn, Virginia, to the point where the river enters Bluestone Lake near Hinton, West Virginia, should be designated as a national wild and scenic river; and, if so, how the river and surrounding public lands should be managed. Following is a summary of the study's major findings.

Eligibility and Classification (Chapter 3)

The study area is eligible for designation. It meets WSRA requirements for free-flowing condition and it possesses multiple outstandingly remarkable values including geology/hydrology, scenery, fish and other aquatic species, wildlife, recreation, and cultural resources. The presence of any one of these outstanding values would make the river eligible. In combination, they suggest that this is a very important resource, both to the region and the nation.

Of the three possible classifications under the WSRA ("wild," "scenic," and "recreational"), scenic classification is most appropriate for the study area. This is due to the area's relatively undeveloped character, moderate degree of accessibility, and acceptable but not pristine water quality.

In addition to being a required part of the study process, the evaluation of a river's free-flowing condition, outstandingly remarkable resource values, and potential classification has important implications for management if the river is designated. The WSRA requires that the free-flowing condition and identified outstandingly remarkable values of each designated river be protected and, wherever possible, enhanced. The Act also requires that the river corridor be managed in a way that will sustain the river's classification over time. This does not mean that nothing in the river corridor can change, but rather that the general character and level of development of the corridor at the time of designation should be sustained. In the case of the New River study area, this would mean maintaining the area's current relatively undeveloped character.

Simply because a river is found eligible does not necessarily mean it should or will be designated. Rather, it establishes that the river in question meets basic resource requirements and is worthy of further study.

Issues (Chapter 4)

Interested agencies and the public identified a wide range of issues related to current and potential future use and management of the New River study area. These fall into six primary categories.

(1) *Wildlife Management:* The predominant issue raised by the West Virginia DNR and certain other stakeholders (including some users of the area, local officials, and local economic interests) during the study process relates to the possibility of the New River study area being designated as a national wild and scenic river and administrative responsibility for the federal lands being transferred from the ACE to the NPS. The DNR and the other stakeholders are concerned that NPS wildlife management standards differ from those of WVDNR. The DNR and these stakeholders want assurances that the same opportunities for traditional uses such as hunting, fishing and trapping will continue to be available as under the current DNR wildlife management.

(2) *Traditional Uses:* Many are concerned that long-standing traditional uses of the study area such as hunting, fishing, trapping, camping, and boating need to be recognized as priorities for future management.

(3) *Management in Virginia:* Virginia residents and state and local government representatives view the Virginia portion of the study area as a highly valuable resource, and are concerned that it is being degraded and is not being managed to its full potential.

(4) *River Protection:* Many are concerned that future proposals for major energy, transportation, communications, and water resources projects could jeopardize the river and its special values. They see wild and scenic river designation as a unique opportunity to protect the river for the long-term.

(5) *Contribution to the Region:* The four-county region is seeking to establish itself as a high-quality environment in which to live, work, and recreate. County, city, and town officials and local residents see opportunities to capitalize on the study area's significant values and strategic location to enhance the livability and economy of the region.

(6) *Other Concerns about Wild and Scenic River Designation:* While expressing support for conservation of the study area's significant values, many are concerned that the river corridor might be managed differently and the values they hold dear might be altered if the river receives federal designation.

These issues served as underpinning for the development of management alternatives in Chapter 5.

Alternatives for Future Management (Chapter 5)

In many respects, the identification of alternatives for future management of the New River study area was the central component of this study. In the initial consideration of potential alternatives for the study area, it was recognized that future management could be approached in a variety of ways and that all of these deserved consideration. As a result, potential management alternatives were explored with the specific intent of identifying a range of reasonable alternatives, all of which could be capable of garnering support from many, if perhaps not all, of the affected agencies, interested citizens, and other stakeholders.

Ultimately, four alternatives were considered in detail:

- *Alternative 1:* Continuation of current management
- *Alternative 2:* National Wild and Scenic River administered by the Army Corps of Engineers
- *Alternative 3:* National Wild and Scenic River administered by the NPS
- *Alternative 4:* National Wild and Scenic River administered by the States of Virginia and West Virginia

Alternative 1 is the so-called “no-action” alternative, while the other three are all considered “action” alternatives.

To ensure that each action alternative would achieve essential objectives, a series of goals, principles, and assurances were developed that would apply equally to these three alternatives. These goals, principles, and assurances provide important direction for future conservation and management of the study area. (Many of these provisions, but not all, would apply under the no-action alternative as well.)

Each of the alternatives has been described in detailed narrative form (see Chapter 5), and key provisions have been summarized in a table to facilitate comparison of similarities and differences (see Appendix 5.A). In addition, specific resource management standards were developed for each action alternative (see Appendix 5.C). The applicable standards would guide future management activities in the area if one of the action alternatives were implemented.

All three action alternatives share the same suggested wild and scenic river boundaries, that is, the New River from a line approximately 1-¼ miles below the Route 460 Bridge (at the upstream end of the large bend) in Giles County, Virginia, downstream to the confluence with Buffalo Creek near Steer Island in Summers County, West Virginia. Federal lands within the Bluestone Lake Project Area adjacent to this river segment also would be included in the designated area. A more detailed description and maps are provided in Chapter 5.

Suitability (Chapter 6)

The New River study area was found to be “not suitable” for designation under each of the action alternatives because it did not meet two of the important public policy criteria:

- (1) The river corridor possesses natural, recreational, and cultural values that are worthy of long-term conservation.
- (2) The provisions of each action alternative, including wild and scenic river designation, would provide additional protection for the river and important natural, recreational, and cultural values. However, there does not appear to be any threats to these resources at this time.
- (3) There does not appear to be a commitment to manage the area as envisioned by this study report among those agencies that would potentially manage the area if the area were designated a national wild and scenic river,
- (4) There appears to be little support or interest by state or local agencies, user groups or some local residents to seek designation of the river.

The fact that the river has been found not suitable for wild and scenic river designation does not necessarily mean that it will not be designated. It simply means that the river and the management regimes envisioned under the three action alternatives did not meet essential public policy tests. The President and Congress will make the final decision as to whether or not to designate the river.

Appropriate Alternative

Given that the NPS found the river eligible but not suitable for wild and scenic river designation, NPS finds that Alternative Number One, the No-Action Alternative, is the only appropriate alternative at this time. This finding is based on the determination that the river and its resources are being adequately protected under the current management arrangements and that there are no current threats to those resources.

This finding is also based to a large degree on the fact that little support was demonstrated during the study process by state or local officials, agencies, residents or user groups for wild and scenic designation.

CHAPTER 8. CONSULTATION AND COORDINATION

This chapter identifies significant consultations with federal, state and local government representatives during the study process; public meetings held to provide information and solicit input; and other meetings held with non-governmental stakeholders including interest groups and industry. In addition to these more formal consultations, the study team also had frequent informal communication with various governmental and non-governmental stakeholders by telephone and email.

The chapter also identifies members of the study team and Interagency Work Group, as well as recipients of this report.

Agency Consultation

This section documents consultation with federal and state agencies. Also documented are consultations with the Interagency Work Group.

Federal Agency Consultation

Organization: NPS – New River Gorge National River

Date: June 16, 2003

Type: Conference call

Purpose: Discuss Wild and Scenic River Study background and river issues

Organization: U.S. Army Corps of Engineers

Date: June 17, 2003

Type: Meeting

Location: Huntington, WV

Purpose: Discuss Wild and Scenic River Study background and river issues

Organization: U.S. Army Corps of Engineers – Bluestone Dam

Date: June 18, 2003

Type: Meeting

Location: Hinton, WV

Purpose: Discuss Wild and Scenic River Study background, river issues, and Bluestone Dam operations

Organization: NPS – New River Gorge National River

Date: June 19, 2003

Type: Meeting

Location: Glen Jean, WV

Purpose: Discuss river issues

Organization: U.S. Army Corps of Engineers – Project Coordination Team (PCT)
Date: July 31, 2003
Type: Meeting
Location: Hinton, WV
Purpose: Discuss Bluestone Dam projects and Wild and Scenic River Study background

Organization: U.S. Forest Service – Jefferson National Forest
Date: March 5, 2004
Type: Conference Call
Purpose: Discuss Wild and Scenic River Study background, management alternatives, and potential USFS role

State Agency Consultation

Organization: WV Division of Natural Resources
Date: June 17, 2003
Type: Meeting
Location: Charleston, WV
Purpose: Discuss Wild and Scenic River Study background and river issues

Organization: WV Division of Natural Resources – Wildlife Resources and State Parks
Date: June 18, 2003
Type: Meeting
Location: Indian Mills, WV
Purpose: Discuss Wild and Scenic River Study background, river issues, and Bluestone Wildlife Management Area operations

Organization: WV Division of Natural Resources
Date: July 31, 2003
Type: Meeting
Location: Hinton, WV
Purpose: Discuss Wild and Scenic River Study background and river issues

Organization: Virginia Department of Game and Inland Fisheries
Date: August 1, 2003
Type: Meeting
Location: Blacksburg, VA
Purpose: Discuss Wild and Scenic River Study background and river issues

Organization: WV Division of Natural Resources State Parks – Bluestone and Pipestem Resort State Parks
Date: July 13, 2004
Type: Meeting
Location: Pipestem, WV
Purpose: Discuss Wild and Scenic River Study background, river issues, and State Park operations

Interagency Work Group Consultation

Type: Meeting

Date: December 2, 2003

Location: Pipestem State Park, Pipestem, WV

Purpose: Discuss issues and management alternatives

Type: Conference Call

Date: February 26, 2004

Purpose: Discuss management alternatives and goals, principles and management assurances

Type: Conference Call

Date: April 7, 2004

Purpose: Discuss revised management alternatives and goals, principles and management assurances

Type: Meeting

Date: May 13, 2004

Location: Pipestem State Park, Pipestem, WV

Purpose: Discuss management alternatives

Type: Conference Call

Date: June 17, 2004

Purpose: Update on management alternatives and goals, principles and management assurances

Type: Float Trip

Date: July 14, 2004

Purpose: Field reconnaissance of study area

Type: Meeting

Date: July 15, 2004

Location: Pipestem State Park, Pipestem, WV

Purpose: Discuss management alternatives and issues needing further discussion, clarification, or research

Type: Conference Call

Date: August 2, 2004

Purpose: Discuss draft resource management standards and update on agency discussions regarding alternatives

Type: Conference Call

Date: September 22, 2004

Purpose: Agreement on final management alternatives to be analyzed; discussion on resource management standards; update on agency discussions regarding alternatives

Type: Conference Call

Date: November 10, 2004

Purpose: Discuss possible boundaries for wild and scenic river designation, resource management standards, and draft report

Type: Conference Call

Date: March 10, 2005

Purpose: Review of proposed changes to the Foundations for Future Management document, status of preparation of the study report, and discussion about review process for draft report

Local Government Consultation

This section documents consultation with local government, including counties, cities, and towns.

Consultation with Counties

Organization: Region One Planning and Development Council

Date: July 30, 2003

Type: Meeting

Location: Hinton, WV

Purpose: Discuss Wild and Scenic River Study background and river issues

Organization: Giles County, VA

Date: August 1, 2003

Type: Meeting

Location: Pearisburg, VA

Purpose: Discuss Wild and Scenic River Study background and river issues

Organization: Giles County, VA – Tourism Taskforce and Board of Supervisors

Date: December 3, 2003

Type: Meeting

Location: Pearisburg, VA

Purpose: Discuss Wild and Scenic River Study background, river issues, and management alternatives

Organization: Summers County, WV Commissioners

Date: May 10, 2004

Type: Meeting

Location: Hinton, WV

Purpose: Discuss Wild and Scenic River Study background, river issues, and management alternatives

Organization: Giles County, VA – Tourism Taskforce

Date: May 12, 2004

Type: Meeting

Location: Pearisburg, VA

Purpose: Discuss Wild and Scenic River Study background, river issues, and management alternatives

Organization: Monroe County, WV Commissioners

Date: May 12, 2004

Type: Meeting

Location: Union, WV

Purpose: Discuss Wild and Scenic River Study background, river issues, and management alternatives

Organization: Mercer County Commissioners

Date: July 13, 2004

Type: Meeting

Location: Princeton, WV

Purpose: Discuss Wild and Scenic River Study background, river issues, and management alternatives

Consultation with Cities and Towns

Organization: City of Hinton, WV

Date: July 30, 2003

Type: Meeting

Location: Hinton, WV

Purpose: Discuss Wild and Scenic River Study background and river issues

Organization: Town of Glen Lyn, VA

Date: December 4, 2003

Type: Meeting

Location: Glen Lyn, VA

Purpose: Discuss Wild and Scenic River Study background and river issues

Organization: City of Hinton, WV

Date: May 10, 2004

Type: Meeting

Location: Hinton, WV

Purpose: Discuss river issues and management alternatives

Public Participation

This section documents consultation with non-governmental stakeholders, including interest groups, industry, and individuals.

Public Meetings

Type: Open House

Date: December 3, 2003

Location: Hinton, WV

Purpose: Discuss Wild and Scenic River Study background and river issues

Type: Open House

Date: December 4, 2003

Location: Glen Lyn, VA

Purpose: Discuss Wild and Scenic River Study background and river issues

Type: Meeting

Date: July 12, 2004

Location: Hinton, WV

Purpose: Discuss Wild and Scenic River Study background, river issues, and management alternatives

Type: Meeting

Date: July 13, 2004

Location: Rich Creek, VA

Purpose: Discuss Wild and Scenic River Study background, river issues, and management alternatives discussion of

Other Consultations

Organization: National Committee for New River

Date: July 31, 2003

Type: Meeting

Location: Hinton, WV

Purpose: Discuss Wild and Scenic River Study background and river issues

Organization: Appalachian Power Company – Glen Lyn Generating Plant

Date: December 4, 2003

Type: Meeting

Location: Glen Lyn, VA

Purpose: Discuss Wild and Scenic River Study background and river issues

Organization: Mountain State Sportsmen's Alliance, Ducks Unlimited, Southern WV Rocky Mountain Elk Association

Date: May 10, 2004

Type: Meeting

Location: Lewisburg, WV

Purpose: Discuss Wild and Scenic River Study background, river issues, and management alternatives

Organization: Appalachian Power Company – Glen Lyn Generating Plant

Date: May 12, 2004

Type: Meeting

Location: Glen Lyn, VA

Purpose: Discuss Wild and Scenic River Study background, river issues, and management alternatives

Study Participants

Study Team

David Lange (through October 2005)	NPS project manager	Master of Regional Planning; 20+ years experience in natural resource policy and planning; detailed experience with river planning projects.
Philip Huffman (through October 2005)	Project consultant, co-author of preliminary draft of the study report and environmental assessment (not involved in developing the final suitability determination or identification of appropriate alternative)	Master of Environmental Studies; Master of Public and Private Management; 20 years experience in natural resource policy and planning; experience with numerous wild and scenic river studies.
Drew Parkin (through October 2005)	Project consultant, co-author of preliminary draft of the study report and environmental assessment (not involved in developing the final suitability determination or identification of appropriate alternative)	Master of Community and Regional Planning; 20+ years experience in natural resource policy and planning; experience with numerous wild and scenic river studies.
Chuck Barscz (2005 thru 2008)	NPS, Wild and Scenic Rivers Program Manager, Northeast Region	Master of Landscape Architecture; 18 years experience with wild and scenic rivers and studies.

Interagency Working Group

<i>Name</i>	<i>Agency</i>	<i>Position</i>
James Allman	U.S. Army Corps of Engineers	General Engineer
Roger Anderson	West Virginia Division of Natural Resources, Wildlife Resources Section	Supervisor, Environmental Coordination
John Baker	Virginia Department of Game and Inland Fisheries	Wildlife Lands Manager
Robert Beanblossom	West Virginia Division of Natural Resources, Parks and Recreation Section	District Administrator
Ben Borda	U.S. Army Corps of Engineers	Assistant Chief, Planning Division
Allen Boynton	Virginia Department of Game and Inland Fisheries	Regional Wildlife Biologist Manager
David Eskridge	U.S. Army Corps of Engineers	Past Manager, Bluestone Lake Project
Calvin Hite	NPS	Superintendent, New River Gorge National River
William B. Kittrell, Jr.	Virginia Department of Game and Inland Fisheries	Regional Fisheries Manager
Joseph Kolodziej	U.S. Army Corps of Engineers	Past Acting Manager, Bluestone Lake Project
Robert Munson	Virginia Department of Conservation and Recreation	Environmental Programs Manager
Lorrie Sprague	NPS	Management Assistant, New River Gorge National River
Kenneth Stephens	NPS	Resource Management Specialist, New River Gorge National River
Toby Wood	U.S. Army Corps of Engineers	Acting Manager, Bluestone Lake Project

APPENDICES

APPENDIX 1:

Questions and Answers about the New River Wild and Scenic River Study (Revised: Summer 2004)

What is the Upper New River Wild and Scenic River Study?

The United States Congress created the National Wild and Scenic Rivers System in 1968 to protect some of the nation's most outstanding free-flowing rivers and river segments for the benefit of future generations. The Upper New River Wild and Scenic River Study was authorized by the Congress and the President to determine whether an approximately 20-mile section of the New River straddling the Virginia/West Virginia border should be added to the National Wild and Scenic Rivers System. The study is being conducted by the National Park Service.

When was the study authorized?

The study was authorized on October 26, 1992, with the enactment of Public Law 102-525, which amended Section 5(a) of the Wild and Scenic Rivers Act (16 U.S.C. 1276(a)).

What is the study area?

The study area is defined by Public Law 102-525 as follows:

"The segment defined by public lands commencing at the U.S. Route 460 Bridge over the New River in [Glen Lyn] Virginia to the maximum summer pool elevation (1410 feet above mean sea level) of Bluestone Lake in [Hinton] West Virginia."

The authorizing legislation limits the Wild and Scenic River study area to the river segment and the adjacent corridor defined by public lands owned by the U.S. Army Corps of Engineers within the Bluestone Project Area.

Wasn't this study completed during the 1990s?

No. The National Park Service (NPS) started the study soon after its authorization by Congress and completed several initial steps, but the study was put on hold in 1997 before it could be completed.

Why was the study put on hold?

To allow staff from the New River Gorge National River and the West Virginia Division of Natural Resources (DNR) to focus on developing a new license agreement for the Bluestone National Scenic River (NSR), which is adjacent to the study area. The park and the West Virginia DNR came to an agreement on the new license for the Bluestone NSR in the fall of 2002, and the study was reactivated in 2003.

Who is conducting the study?

The Northeast Region / Philadelphia Office of the National Park Service has lead responsibility for the study on behalf of the Secretary of the Interior (who was assigned responsibility in the authorizing legislation). The National Park Service has engaged Phil Huffman and Drew Parkin, consultants with substantial experience on Wild and Scenic River studies, to assist with the project.

What is the study process?

The Wild and Scenic Rivers Act provides a process for determining whether rivers are *eligible* and *suitable* for inclusion into the National Wild and Scenic River System.

To be *eligible*, a river or river segment must be free-flowing and possess at least one outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historical, cultural, or other similar value. Eligible segments are classified as “wild”, “scenic”, or “recreational” based on established criteria, including existing water quality, the amount of development along the river corridor, and accessibility.

The *suitability* determination involves an evaluation of whether Wild and Scenic River designation would be an appropriate element of long-term management of the river or, in other words, whether designation makes sense for the river in question. This evaluation includes:

- considerations of existing land ownership and management,
- alternatives for how the river might be administered and managed if designated,
- what the effects of designation might be (including whether designation would provide additional protection to important river-related resources), and
- whether there is support for designation among key stakeholders (*e.g.*, local communities, state and federal agencies, and nongovernmental organizations).

Has the river been found eligible for designation into the National Wild and Scenic River System?

The National Park Service released a draft eligibility report in July 1994. The Study Team has recently verified and updated the findings from the draft report. The study segment is eligible for inclusion into the National Wild and Scenic Rivers System, and meets the criteria for “scenic” river classification.

Six outstandingly remarkable resource values have been documented in the study area: scenery, fish, wildlife, recreation, geology/hydrology, and archeological/historic resources.

Does management of river flows at the Claytor Dam upstream or the Bluestone Dam downstream affect the study segment’s “free-flowing” condition and eligibility for Wild and Scenic River designation?

No. The Wild and Scenic Rivers Act defines free-flowing as “existing or flowing in a natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway.” This definition applies to modifications of the waterway *within* the established boundaries of the study area, and therefore does not preclude eligibility in cases with impoundments upstream or downstream and managed flows.

Indeed, there are many examples of designated Wild and Scenic Rivers above and below existing dams and impoundments, such as the Bluestone National Scenic River. And while the segment of the Upper New River currently under study is subject to occasional inundation for downstream flood control at times of high flows, the segment is flowing and riverine in appearance most of the time and meets the “free-flowing” criterion.

What are the next steps in the study process?

(1) Evaluate the pros and cons of potential management alternatives for the study area (including some with Wild and Scenic River designation and some without), (2) Prepare a draft study report for public review and comment, and (3) Identify an appropriate alternative for future management (if possible). These steps will be completed before the National Park Service presents the study findings to the Secretary of Interior. Following departmental review, the final report will be forwarded to the President, who transmits it with a recommendation to the Congress. It is then up to the Congress to decide whether to designate the study area into the National Wild and Scenic Rivers System through federal legislation.

Will there be opportunities for the public to participate in the study process?

Yes. The National Park Service will hold open public gatherings at key junctures in the process to provide information and seek public input. The NPS will publicize these events through the local media and other mechanisms. The first round of public open houses was held in December 2003. Additional public gatherings will be held in July and fall, 2004. These events will be publicized through press releases to the regional media and announcements to individuals on the NPS mailing list for the project.

Have any decisions been made as a result of this study about future management or designation of the river?

No. The National Park Service does not have any preconceived ideas regarding future management or designation, other than that the river and its adjacent corridor should be managed to conserve the important resource values identified in the eligibility analysis.

Will there be a land transfer if the river is designated?

The National Park Service has no preconception regarding whether this would be desirable or warranted, nor is there any requirement that this be a component of management. The issue will be one of many to be considered in the exploration of possible management alternatives.

Who will make the final decision about whether or not to designate the river?

The National Park Service will prepare a study report that contains findings and several alternatives for future management. The report will be forwarded to the Secretary of the Interior, who will, in turn, forward it to the President. The report will be submitted to Congress by the President. A final decision to designate the study segment into the National Wild and Scenic Rivers System would be in the form of federal legislation passed by Congress and signed by the President.

What are the implications of the study and potential wild and scenic designation on the Drift and Debris Study and the Dam Safety Assurance Project at Bluestone Dam?

The Wild and Scenic River study area stops at the maximum summer pool elevation of Bluestone Lake (1410 feet above sea level). The study and potential designation will have no effect on project operations that do not affect the river upstream of the current maximum summer pool elevation.

Would the Tri-Cities Hydropower Project be affected in any way if the river were to be added to the Wild and Scenic River system?

The National Park Service's understanding is that the hydropower project is proposed to be operated as a "run-of-river" project utilizing the existing maximum summer pool elevation. As such, the hydropower project would not be affected by Wild and Scenic River designation.

What effects would wild and scenic river designation have for the New River?

The fundamental result of designation would be a permanent prohibition on new dams and other water development projects that would have a negative effect on the river and related natural, cultural, and recreational resources. (In fact, one of the original reasons river advocates were interested in pursuing potential designation of the New River was to prevent a proposed electric transmission line from crossing the river in the heart of the study area.)

Designation also would increase the likelihood that federal actions of all kinds would be consistent with river management objectives. In addition, designation could serve as leverage to secure funding, technical assistance, volunteer involvement, and other commitments to improve river management and protection. Also, depending on how (or if) local interests wish to market the designation, it could be used to help bolster local economies through increased recreation and tourism. Less tangible benefits often accompany designation as well, including increased public awareness of the value of the river area and increased civic pride.

If the river were designated into the National Wild and Scenic River System, who would have management responsibility for the river and lands adjacent to the river within the study area?

No decisions have been made about future management of the river were it to be designated. This issue will be considered with the public during the evaluation of management alternatives, and the National Park Service will provide findings and alternatives on which agency or agencies might be assigned responsibility for managing and administering the river if it is designated.

The Wild and Scenic Rivers Act provides flexibility in assigning management responsibility, as long as the river is managed to specified standards. Current Wild and Scenic Rivers include examples of federal management, state management, local management, and combinations.

Could the Army Corps of Engineers be the administering agency if the river were designated?

Yes. There is nothing in the Wild and Scenic Rivers Act that would preclude the Army Corps of Engineers from being the administering agency. The Army Corps currently has administrative responsibility for a section of the Cossatot Wild and Scenic River in Arkansas.

Could the states of West Virginia and Virginia be the administering agencies?

Yes. There are a number of examples of state-administered National Wild and Scenic Rivers.

The most long-established example is the Allagash Wilderness Waterway, which has been administered by the state of Maine since its designation into the national system in 1970.

Would current hunting and fishing activities within the Bluestone Wildlife Management Area be allowed to continue if the river is designated?

Yes. Fishing and hunting are regulated under state laws. Hunting and fishing are allowed in Wild and Scenic River areas, except if additional regulations are necessary to ensure public safety (e.g., establishing no hunting zones near campgrounds) or to achieve other critical management objectives (e.g., protecting the habitat of an endangered species).

Who would manage wildlife and the existing campgrounds within the Bluestone Wildlife Management Area if the river were designated?

These issues will be considered during the evaluation of management alternatives, and the existing managers will be actively consulted and involved in the decision process. There is no Wild and Scenic Rivers Act requirement that would preclude the state(s) from continuing to manage campgrounds or wildlife management areas within a designated Wild and Scenic River. (For example, the West Virginia DNR currently manages the Bluestone River Unit of the Bluestone Wildlife Management Area, which surrounds the Bluestone National Scenic River.)

APPENDIX 2: Summary of Current Resource Management

The following table presents a summary description of current management in the study area. Separate descriptions are provided for West Virginia and Virginia. The descriptions of management practices in West Virginia are derived from (1) the West Virginia Division of Natural Resource’s license with the Army Corps of Engineers, (2) DNR’s Wildlife Management Plan (2001-2006) for the Bluestone Wildlife Management Area, (3) generic DNR wildlife and recreation management policies, and (4) DNR wildlife and recreation management practices within the Bluestone WMA not covered in 1, 2, or 3. There is no comparable state management program in the Virginia portion of the study area. The Army Corps of Engineers maintains some management presence in Virginia, but not on a day-to-day basis. The Virginia Department of Game and Inland Fisheries has authority over fish and wildlife management, including hunting, fishing, and trapping. There is, however, no active fish and wildlife management beyond biological surveys and normal enforcement of state laws and regulations.

Management Factor	West Virginia portion of the study area	Virginia portion of the study area
MANAGEMENT OF FISH AND OTHER AQUATIC SPECIES		
Single species management	<ul style="list-style-type: none"> • Management of focal species is conducted in the broader context of other species and the overall ecosystem. 	<ul style="list-style-type: none"> • No specific management program for the area.
Reintroduction and stocking of native species	<ul style="list-style-type: none"> • Brook trout are stocked in Indian Creek. • Reintroduction of extirpated species or stocking of depleted native species is allowed in order to reestablish species or strengthen ecosystem processes. 	<ul style="list-style-type: none"> • None presently, but possible subject to same basic policy as WV.
Stocking naturalized species	<ul style="list-style-type: none"> • Stocking of naturalized species such as smallmouth bass is allowed following applicable environmental review, including evaluation of (1) potential effects on native species and the aquatic environment, and (2) potential biological and social benefits. 	<ul style="list-style-type: none"> • Same as WV.
Stocking non-native species	<ul style="list-style-type: none"> • Stocking of brown, rainbow, and golden rainbow trout in Indian Creek is conducted because it continues to serve a recreational fishing purpose and is not believed to adversely affect native species. • Other stocking of non-native species does not occur unless it can be demonstrated that this would serve an important biological or social purpose and would not adversely affect native species. 	<ul style="list-style-type: none"> • None presently, but possible subject to same basic policy as WV.
Management of federal and state sensitive species	<ul style="list-style-type: none"> • No species in the study area is currently listed under the federal Endangered Species Act. West Virginia does not have a formal state equivalent but does 	<ul style="list-style-type: none"> • Same as WV.

Management Factor	West Virginia portion of the study area	Virginia portion of the study area
	maintain a list of sensitive species through the Natural Heritage Program. Any species that may be federally listed in the future would be managed in accordance with applicable federal and state laws and recovery plans.	
MANAGEMENT OF TERRESTRIAL WILDLIFE		
Single species management	<ul style="list-style-type: none"> Management emphasizes “featured species associations,” in which management actions for featured species also benefit a variety of other species. (For example, managing for turkey habitat benefits smoky shrews, hermit thrushes, towhees, woodpeckers, great crested flycatchers, dusky salamanders, Fowlers toads, and black snakes, among other species.) 	<ul style="list-style-type: none"> No specific management program for the area.
Re-introduction and stocking of native species	<ul style="list-style-type: none"> Re-introduction of extirpated species or stocking of depleted native species is allowed in order to reestablish species or strengthen ecosystem processes. 	<ul style="list-style-type: none"> No specific management program for the area, but basic policy is the same as WV.
Introduction of non-native species	<ul style="list-style-type: none"> There is a general policy of no introductions of non-native wildlife species. Exceptions are made only following applicable environmental review, including evaluations of the potential effects on native species and the environment, and the potential biological and social benefits. 	<ul style="list-style-type: none"> No specific management program for the area, but basic policy is the same as WV.
Management of federal and state sensitive species	<ul style="list-style-type: none"> No species in the study area is currently listed under the federal Endangered Species Act. West Virginia does not have a formal state equivalent but does maintain a list of sensitive species through the Natural Heritage Program. Any species that may be federally listed in the future would be managed in accordance with applicable federal and state laws and recovery plans. 	<ul style="list-style-type: none"> Same as WV.
HABITAT MANAGEMENT		
Management of ecological processes	<ul style="list-style-type: none"> Management relies on natural processes where practical. Judicious use of active habitat management is allowed in order to meet specific wildlife management objectives. Active management includes 	<ul style="list-style-type: none"> No specific management program for the area.

Management Factor	West Virginia portion of the study area	Virginia portion of the study area
	<p>(1) creating, reestablishing, and maintaining clearings to enhance wildlife habitat, (2) forest management for vegetative species diversity and mast production, (3) planting trees, shrubs, and/or herbaceous species for wildlife food, cover and critical habitat, and (4) controlling water levels in selected wetlands for migratory bird and aquatic furbearer sustenance.</p>	
<p>Management of non-native plants</p>	<ul style="list-style-type: none"> • While preference is given to native species, non-native plants can be introduced in clearings and along roads and trails if these are the only feasible choice for the anticipated use and if managers have confidence that these plants will not spread to other areas. • Invasive exotic plants are controlled to the extent practical. 	<ul style="list-style-type: none"> • No specific management program for the area.
<p>Agriculture</p>	<ul style="list-style-type: none"> • DNR grants special use permits allowing cultivation of hay and row crops (e.g., corn) on approximately 390 acres throughout the Bluestone WMA in WV as a means to achieve wildlife management objectives. • All agricultural activities are conducted in accordance with recognized best management practices. 	<ul style="list-style-type: none"> • ACE leases approximately 190 acres in VA for cultivation of hay and row crops (e.g., corn). While these leases provide habitat benefits for wildlife, they are not part of an overall wildlife management program for the area (as is the case in WV). • All agricultural activities are conducted in accordance with recognized best management practices.
<p>Forest stand management</p>	<ul style="list-style-type: none"> • Forest management using both even-aged and uneven-aged silvicultural systems is utilized to enhance wildlife habitat. Forest stands are managed using various techniques, including clearcuts, shelterwood cuts, single-tree selection, group selection, and deferment cuts. Harvests are limited to that needed to achieve a specific wildlife objective, and are conducted in accordance with recognized BMPs. • Timber damaged or destroyed by natural hazard or insect infestations may be removed through salvage operations if this is compatible with wildlife management objectives. • Managers have the option to conduct forest management operations using private contractors if this is the most efficient and economical way to achieve objectives. 	<ul style="list-style-type: none"> • No specific management program for the area.

Management Factor	West Virginia portion of the study area	Virginia portion of the study area
Fire management	<ul style="list-style-type: none"> • Prescribed burning is recognized as an ecologically sound way to maintain or create wildlife habitat and may be used as appropriate. • Wildfire is managed under the guidance of the state forestry department and according to applicable state or federal regulations and BMPs. 	<ul style="list-style-type: none"> • No specific management program for the area.
Maintaining existing clearings	<ul style="list-style-type: none"> • Existing clearings are maintained if they continue to serve a management purpose. • Existing clearings are maintained using a range of techniques (e.g., mowing, burning, brushhogging). Heavy equipment (e.g., bulldozers, road graders) can be used but must follow BMPs. 	<ul style="list-style-type: none"> • No specific management program for the area.
Reclaiming overgrown clearings	<ul style="list-style-type: none"> • Reclaiming of clearings is allowed. Heavy equipment can be used when required but must follow BMPs. 	<ul style="list-style-type: none"> • No specific management program for the area.
New clearings	<ul style="list-style-type: none"> • New clearings may be created as necessary to meet wildlife objectives. • Use of timber harvesting techniques to make clearings is subject to provisions described above under “forest stand management”. 	<ul style="list-style-type: none"> • No specific management program for the area.
Shoreline modifications	<ul style="list-style-type: none"> • Shoreline modifications are subject to reviews under Section 404 of the Clean Water Act and applicable state laws. 	<ul style="list-style-type: none"> • Same as in WV.
Wetlands construction/restoration and management of water control structures	<ul style="list-style-type: none"> • Existing artificial wetlands and water manipulation projects are maintained to the extent they continue to support wildlife objectives. New projects may be constructed only if they serve a demonstrated site management need and can be implemented with low impact to the environment. • New projects within the bed and banks of the New River are subject to reviews under Section 404 of the Clean Water Act and applicable state laws. 	<ul style="list-style-type: none"> • New projects within the bed and banks of the New River are subject to reviews under Section 404 of the Clean Water Act and applicable state laws.
Use of pesticides, herbicides, insecticides, fish toxicants	<ul style="list-style-type: none"> • Non-restrictive use pesticides, herbicides, insecticides, and fish toxicants may be used judiciously to meet management objectives. Use of other pesticides and herbicides occur only when no other alternative is available. • All use of these chemicals is subject to applicable state 	<ul style="list-style-type: none"> • All use of these chemicals is subject to applicable state and federal laws and policies.

Management Factor	West Virginia portion of the study area	Virginia portion of the study area
	and federal laws and policies.	
Management of federal and state sensitive plant species	<ul style="list-style-type: none"> No species known to exist in the study area is currently listed under the federal Endangered Species Act. (Virginia spirea is suspected to exist in the study area.) West Virginia does not have a formal state equivalent but does maintain a list of sensitive species through the Natural Heritage Program. Any species that may be federally listed in the future would be managed in accordance with applicable federal and state laws and recovery plans. 	<ul style="list-style-type: none"> Same as in WV.
MANAGEMENT OF TRADITIONAL PUBLIC USES		
Dispersed pedestrian access	<ul style="list-style-type: none"> The entire area is open to foot traffic, except when and where restrictions are necessary for public safety, resource management (e.g., protection of wildlife nesting areas), or protection of agricultural or other leaseholdings. 	<ul style="list-style-type: none"> The entire area is open to foot traffic, except when and where restrictions are necessary for public safety or protection of agricultural or other leaseholdings.
Hunting	<ul style="list-style-type: none"> Hunting is allowed subject to applicable state regulations. 	<ul style="list-style-type: none"> Same as in WV.
Fishing	<ul style="list-style-type: none"> Fishing is allowed subject to applicable state regulations. 	<ul style="list-style-type: none"> Same as WV.
Trapping	<ul style="list-style-type: none"> Trapping is allowed subject to applicable state regulations. 	<ul style="list-style-type: none"> Same as WV.
Wildlife/nature observation	<ul style="list-style-type: none"> Wildlife/nature observation is allowed, subject to other access policies (e.g., restrictions for public safety or resource management). 	<ul style="list-style-type: none"> Same as WV.
Camping	<ul style="list-style-type: none"> Camping is allowed at designated sites, subject to state regulations, policies, and fees. Dispersed “backcountry” camping is prohibited. Camping on islands or other boat access only locations is not regulated. 	<ul style="list-style-type: none"> Camping in tents and recreational vehicles is allowed at designated sites in the Glen Lyn town park just upstream of the Route 460 Bridge. Camping downstream of the bridge occurs at numerous informal sites along the river, but is not managed.
Boating	<ul style="list-style-type: none"> No restrictions are placed on use of non-motorized or motorized watercraft, including personal watercraft (PWCs). 	<ul style="list-style-type: none"> Same as WV.
Gathering of abundant and renewable natural products	<ul style="list-style-type: none"> Gathering of abundant and renewable natural products including fishing bait (e.g., worms, insects, minnows) 	<ul style="list-style-type: none"> Same as WV.

Management Factor	West Virginia portion of the study area	Virginia portion of the study area
	and wild edibles (e.g., berries, mushrooms) for personal, non-commercial use is allowed. <ul style="list-style-type: none"> Gathering for other purposes (e.g., commercial sale) is prohibited. 	
Safety	<ul style="list-style-type: none"> Limited and reasonable restrictions may be placed on public access to certain areas and/or for certain uses during hunting seasons, flood hazards, or other times when public safety is a concern. Safety zones are enforced around campgrounds and other high use areas. Hunting and shooting is not allowed in these areas. 	<ul style="list-style-type: none"> Public safety is largely unregulated except for occasional patrols and enforcement of state hunting and fishing regulations (by county sheriff, VA DGIF conservation officers, and ACE staff).
MANAGEMENT OF OTHER PUBLIC USES		
Non-motorized recreational travel	<ul style="list-style-type: none"> Hiking and horseback riding are allowed on a limited number of designated routes, subject to appropriate access restrictions related to public safety, wildlife management, or resource protection. Bicycling is limited to roadways designated for motor vehicle use. Because of their importance as the primary emphases of the area, fish and wildlife management and traditional public uses are given priority over non-motorized recreational travel (e.g., the location and timing of non-motorized recreation is managed to avoid conflicts with fish and wildlife management or traditional public uses). Organized horseback riding and bicycling events are not permitted. 	<ul style="list-style-type: none"> There are no designated non-motorized travel routes and no formal management of this use.
Motor vehicles	<ul style="list-style-type: none"> Automobiles, light trucks, motorcycles and recreational vehicles are allowed on designated roadways. Motorized all-terrain vehicles (ATVs) are not allowed (except on designated state motor vehicle roadways if authorized for such use under state law). 	<ul style="list-style-type: none"> Motor vehicle use is largely unregulated and some resource damage has occurred.
Commercial recreation	<ul style="list-style-type: none"> Commercial outfitters and guides (boat livery operators, fishing guides, etc.) are allowed to operate in the area. Commercial use is limited at present, and commercial permits are not required. 	<ul style="list-style-type: none"> Same as WV.

MANAGEMENT OF PUBLIC ACCESS AND RECREATION FACILITIES		
Public access facilities	<ul style="list-style-type: none"> • Existing roads and related facilities (e.g., gates) are managed for consistency with the area’s management objectives. Some areas are gated and closed to limit public access in order to achieve resource management goals. • Road and trail construction and maintenance are consistent with erosion and sedimentation control BMP standards. 	<ul style="list-style-type: none"> • Access along roadways is not restricted. • The road beyond the Appalachian Power Company’s flyash facility on river left is maintained infrequently by ACE.
Camping and day use areas	<ul style="list-style-type: none"> • More than 300 designated campsites exist at three state-managed camping areas in the study area (Indian Creek, Cedar Branch, Shanklin’s Ferry). Nearly 80 additional sites are located at the Bull Falls camping area just downstream of the study area. Bertha camping area, another 2 miles downstream has 55 campsites. All of these camping areas are primitive in nature, with basic facilities (e.g., picnic tables, trash cans, pit toilets) but no electrical, water, or sewage hook-ups. 	<ul style="list-style-type: none"> • The Glen Lyn town park provides sites for tent and RV camping. The park has picnic tables and toilet facilities. Downstream of the Route 460 Bridge there are no designated campsites.
Boat landings	<ul style="list-style-type: none"> • All camping areas have boat launches that are maintained by the state. Some are carry-in and some are accessible by vehicle. 	<ul style="list-style-type: none"> • There is a boat ramp at the Glen Lyn town park that is maintained by the town. • Informal, unimproved launch sites exist downstream of the Route 460 Bridge on river left.
Trails for hiking, mountain biking, and horseback riding	<ul style="list-style-type: none"> • Foot trails and bridal paths exist but are few in number and maintained infrequently. • No trails for mountain biking have been established. 	<ul style="list-style-type: none"> • There are no formal trails.
Other areas and facilities	<ul style="list-style-type: none"> • DNR-Parks maintains a rustic lodge and a horse barn. DNR also has a visitor contact station at the park headquarters. 	<ul style="list-style-type: none"> • None.

MANAGEMENT OF HISTORIC AND ARCHEOLOGIC RESOURCES		
General standards	<ul style="list-style-type: none"> • Known historic/archeological sites are protected. • A preliminary inventory of historic/archeological sites has been completed by ACE. • Management activities that might disturb historic or archeological sites (e.g., agricultural practices such as plowing; creating/maintaining/reclaiming clearings; establishing new facilities such as campsites) must comply with applicable state and federal historic protection laws and regulations. Site reviews occur frequently. 	<ul style="list-style-type: none"> • Same as WV, although the lack of management activity (other than limited road maintenance and use of agriculture areas) results in few historic/archeological reviews.
MANAGEMENT OF LANDSCAPE CHARACTER / VISUAL RESOURCES		
General standards	<ul style="list-style-type: none"> • There is no formal visual resource management program. 	<ul style="list-style-type: none"> • Same as WV.

APPENDIX 3: Detailed Criteria for Determining Wild and Scenic River Classification

Following are the criteria used to determine whether a river that has been found eligible for wild and scenic river designation should be classified as “wild,” “scenic,” or “recreational.” These criteria are excerpted from the federal guidelines for eligibility, classification, and management of wild and scenic river areas.

“Wild” Rivers

The criteria for wild river areas include:

1. Free of impoundments
2. Generally inaccessible except by trail
 - No roads, railroads, or other provisions for vehicular travel.
 - A few inconspicuous roads leading to the boundary of the river area are acceptable.
3. Watersheds or shorelines essentially primitive
 - Little or no evidence of human activity.
 - Shoreline and immediate watershed essentially free of structures such as buildings, pipelines, power lines, dams, pumps, generators, diversion works, rip-rap and other modifications.
 - A few inconspicuous structures, particularly those of historic or cultural value at the time of the study, are acceptable.
 - A limited amount of domestic livestock grazing or hay production is acceptable.
 - No row crops or ongoing timber harvest is acceptable.
 - The river area should show little or no evidence of past logging activities.
4. Waters unpolluted
 - The water quality of a wild river will meet or exceed federal criteria or federally approved state standards for aesthetics, for propagation of fish and wildlife normally adapted to the habitat of the stream, and for primary contact recreation except where exceeded by natural conditions.

“Scenic” Rivers

The criteria for scenic river areas include:

1. Free of impoundments
2. Watersheds still largely primitive and shorelines largely undeveloped
 - Should not show substantial evidence of human activity.
 - May have some existing development.
 - Shorelines and the immediate river environment present an overall natural character.
 - In places, land may be developed for agricultural purposes.
 - Row crops, timber harvest, and other resource uses are acceptable providing such activity is accomplished without a substantial adverse effect on the natural appearance of the river or its immediate environment.

- Any structure or concentration of structures must be limited to relatively short reaches of the segment under consideration for designation.

3. Accessible in places by road

- Roads may reach the river area and occasionally bridge the river.
- Presence of short stretches of conspicuous roads or railroads are acceptable.
- Presence of longer stretches of inconspicuous and well-screened roads or railroads are acceptable.
- Consideration should be given to the type of use for which such roads or railroads were constructed and the type of use which would occur within the area. Lower intensity uses are more compatible with a scenic classification than high intensity uses.

“Recreational” Rivers

The criteria for recreational river areas include:

1. Readily accessible by road or railroad

- May contain existing parallel roads or railroads in close proximity to one or both banks of the river as well as bridge crossings and roads fording or ending at the river.

2. Some development along the shoreline

- Area may have been developed for the full range of agricultural and forestry uses.
- May show evidence of past and ongoing timber harvest.
- May include some residential, commercial, or similar development.

3. Some impoundment or diversion in the past

- May be some existing impoundments, diversions, and other modifications of the waterway.
- Existing low dams, diversion works, rip-rap, and other minor structures are acceptable.
- The river should generally be natural and riverine in appearance.

APPENDIX 4: List of Issues

This appendix provides a list of issues and concerns related to the segment of the New River and adjacent federal lands currently being that are under study for potential inclusion in the National Wild and Scenic Rivers System. The key study issues described in Chapter 4 were drawn from this list. Issues were identified by the study team through discussions with the Interagency Work Group, conversations with other interested parties, review of relevant documents, and the two rounds of public meetings that were held in the study area in December 2003 and July 2004.

This list is not a verbatim transcription of issues as articulated by interested parties. Rather, issues have been restated for clarity and consistency. However, care has taken to ensure that the intent and content of the issues listed accurately reflect the sentiment of those who expressed them. Issues identified by more than one person have been consolidated to avoid redundancy. In some instances the study team has included parenthetical statements following issue statements in order to clarify or explain the issue.

This is a comprehensive list; no issue expressed by the public has been omitted. In some cases issues may appear to conflict. That is normal as issues were identified by a number of individuals, some of whom may have differing perspectives. Inclusion of an issue in this list does not necessarily mean that the issue is valid or that it is supported by any given agency, stakeholder group, or individual.

The list of issues is divided into two general groups:

1. Current Issues: Issues relating to the study area under current management.
2. Future Issues: Issues relating to potential future management options, including wild and scenic river designation.

Within each of these two groupings, issues are organized into four categories: (1) natural and cultural resources, (2) recreation and public use, (3) landscape character, and (4) socio-economics. Within these general categories are several specific sub-headings. To facilitate reference, individual issues are numbered. Numbers are sequential and do not imply significance or priority.

Readers are encouraged to review this list with an eye toward determining if their issues have been included and are accurately and fairly stated.

Current Issues

1. Natural and Cultural Resources

Flow

No issues related to current flow patterns or management of flows in the study area were identified.

Water quality

Current Issue 1.1: River only partially meets the Clean Water Act “fishable” goal (due to elevated zinc and PCB 1254 levels in carp tissue).

Current Issue 1.2: Water quality degradation from upstream point and/or non-point sources, e.g., trash in river coming from upstream sources, sediment discharges from tributaries in Virginia.

Current Issue 1.3: Potential for sediment discharges from Appalachian Power Company’s settling ponds and flyash treatment facilities in Glen Lyn, e.g., runoff from landfill during heavy rains, potential inundation of settling ponds at extreme high water.

River Shorelands

Current Issue 1.4: Effect of campgrounds located next to the river on river ecology and river recreation.

Fish and aquatic biota

No current issues related to fish and aquatic biota in the study area were identified.

Wildlife and wildlife habitats

Current Issue 1.5: Lack of information on the potential presence of rare plants or plant communities makes protection difficult.

Archeological and historic resources

Current Issue 1.6: Need for improved protection of known sensitive historic and archeological sites to prevent pillaging.

Current Issue 1.7: Need for information on the location of suspected historic and archeological sites in order that these might be better protected.

Current Issue 1.8: Lack of a comprehensive framework for managing historic and archeological resources. (While there is an excellent inventory in place, there is need for a comprehensive management plan and a systematic evaluation of National Historic Register eligibility.)

Current Issue 1.9: Unrealized potential for interpretation of cultural resources (e.g., historic settlements, archeological sites, Mary Ingles Trail, old warrior trail at Indian Creek, bateau route).

Current Issue 1.10: Potential impacts on archeological and historic resources from agricultural practices, especially tilling, in leased areas.

2. Recreation and Public Use

Traditional public uses: hunting, fishing, and trapping

Current Issue 2.1: Unrealized potential for fishing, hunting and other recreational activities in the upper portion of study area, i.e., Glen Lyn to Shanklin's Ferry.

Current Issue 2.2: Confusion and inconvenience concerning state fishing license requirements near the Virginia/West Virginia border. (Near the border it is difficult to determine which state a boat may be in. Also, many boaters float from Virginia to West Virginia and would desire to fish throughout the trip but cannot unless they possess licenses for both states.)

Traditional public uses: boating

Current Issue 2.3: Unrealized potential for multi-day family and youth group boating trips.

Current Issue 2.4: Lack of boat access-only primitive campsites.

Traditional public uses: camping

Current Issue 2.5: Impacts of flooding on recreational facilities; desire that recreational facilities be flood-proofed to prevent economic loss and environmental damage.

Current Issue 2.6: Unrealized potential at Glen Lyn town park. Facilities could be improved or upgraded.

Current Issue 2.7: Unsanitary conditions during flooding events at some WV camping areas due to primitive toilet facilities.

Current Issue 2.8: Unmanaged recreational use on riparian lands in Virginia has damaged shorelands and is causing a sanitation problem. (Resource damage includes loss of vegetation and erosion.)

Current Issue 2.9: Some campsites in West Virginia camping areas that are very near the water and sometimes in the floodway may detract from the natural character of the area and/or adversely effect sensitive riparian resources.

Other public uses (hiking, horseback riding, etc.)

Current Issue 2.10: In general, there is increasing demand for access for hiking, mountain biking, and horseback riding; and this area appears well-suited for these uses.

Current Issue 2.11: Potential conflicts between non-wildlife-dependent recreational use (e.g., hiking, mountain biking, horseback riding) and wildlife management; desire among managers and some users to restrict recreational access from key habitat areas during nesting and brood seasons; potential safety concerns during hunting season.

Public access and recreational facilities

Current Issue 2.12: Limited resources for managing recreational facilities and uses, especially in Virginia.

Current Issue 2.13: Potential opportunity to use federally owned islands upstream of Route 460 Bridge for conservation and recreation purposes, especially in conjunction with the New River Blueway water trail project.

Current Issue 2.14: Unrealized potential to develop a partnership with Appalachian Power regarding use of company owned or licensed islands and shorelands.

Current Issue 2.15: Unrealized potential for interpretation and public education regarding the New River and river-related resources.

Current Issue 2.16: Need for maintenance of paved and unpaved access roads. Cost of maintenance is also an issue.

Current Issue 2.17: Resource damage related to unpaved campground roads that are in or near the floodway and are subject to flooding after periods of heavy rain and/or inundation from operation of Bluestone Dam.

Current Issue 2.18: Frequent inaccessibility of the Crump's Bottom/Bull Falls area due to weather and road conditions.

Current Issue 2.19: Difficulty of access to the river along the west side of the river in Virginia due to the unimproved nature of the road and one particularly steep section; concern that the road is often rendered impassible by inclement weather; feeling among some members of the public that the road should be improved or closed.

Current Issue 2.20: Potential for conflicts between different types of users if the west side road in Virginia is improved and recreational use increases as a result.

Current Issue 2.21: Limited river access in the Virginia portion.

Current Issue 2.22: Primitive boat landings at existing campgrounds in West Virginia that need improvement.

3. Landscape Character

Remote and undeveloped character

Current Issue 3.1: Vulnerability of wildlife and other resource values within study area to the effects of potential development of adjacent private lands, particularly where the study area is narrow.

Current Issue 3.2: Vulnerability of the study area's natural character to degradation from potential power line or other large energy, communications, or transportation projects.

Scenic Resources

Current Issue 3.3: Potential for power line or other large energy, communications, or transportation projects to detract from scenic vistas.

4. Socio-economics

Operation of Bluestone Dam

No issues identified.

Operation of other existing water resource projects

No issues identified.

New or modified water resource projects

No issues identified.

Private Property

No issues identified.

Land use leases (agriculture, fly ash, town park)

Current Issue 4.1: Potential for re-use of Appalachian Power's existing fly ash landfill in Glen Lyn, Virginia, for recreation and/or other public purposes that complement the conservation and recreational use of the river corridor.

Public safety

Current Issue 4.2: Effect of limited law enforcement and management presence in the Virginia portion of study area on public safety.

Nearby public lands

Current Issue 4.3: Unrealized potential for increased cohesion and coordination between the study area and adjacent management units, including Bluestone and Pipestem Resort State Parks, Bluestone National Scenic River, Bluestone Lake, and New River Gorge National River.

Tax revenue

No issues identified.

Local and regional economy

Current Issue 4.4: Unrealized potential to use the amenities of the study area, possibly in combined with other nearby public lands (including Bluestone and Pipestem Resort State Parks, New River Gorge National River, and Jefferson National Forest), and other regional initiatives (including the New River Parkway, the New River Blueway, the Mary Ingles Trail, and local/county heritage initiatives) as a means to increase the tourism economy in Hinton, Glen Lyn, and the greater four-county area.

Quality of life

Current Issue 4.5: Unrealized potential for increased coordination with other New River watershed initiatives (e.g., American Heritage River Initiative) that may have a positive effect on the quality of life of local residents

Future Issues (Related to Potential Wild and Scenic River Designation and/or Future Management)

The following issues reflect the concerns of various stakeholder groups and individuals regarding possible effects of changing current management. There is some overlap with the current management issues identified above. However, there is a difference in how the issues are approached and it is therefore important to list them here as well.

These issues were identified prior to the development of the management alternatives described in Chapter 5. In fact, these issues had a significant influence in the development of project goals, management principles, and assurances, and in the crafting of alternatives. As a result, some of these issues may have been resolved. It will be left to readers to make their own decisions regarding the continued applicability of these issues.

Future management issues are organized using the same headings as the current management issues.

1. Natural and Cultural Resources

Flow

Future Issue 1.1: Effect of wild and scenic designation on future upstream projects and activities that may affect flow.

Future Issue 1.2: Effects on river-related natural and/or cultural resource values if the pool elevation in Bluestone Lake is permanently raised, either for hydropower generation or to provide greater depth in shallow areas for boats.

Future Issue 1.3: Effects on river-related natural values from new upstream water projects, especially potential water withdrawals in Wythe and Grayson counties in Virginia.

Future Issue 1.4: Effects on river-related natural and/or cultural resource values from potential development of a pump storage energy generation project within Bluestone Project Area.

Water quality

Future Issue 1.5: Effect of wild and scenic designation on future upstream projects and activities that may affect water quality.

Fish and aquatic biota

Future Issue 1.6: Concern that designation might restrict the states in making decisions regarding stocking of native or non-native fish species.

Wildlife and wildlife habitat

General concerns:

Future Issue 1.7: Concern that NPS policies on habitat management differ from those of WV DNR and that NPS administration could limit DNR's ability to manage fish and wildlife resources to the standards set by that agency. Some stakeholders desire assurances that DNR will be allowed to continue its current wildlife management activities if the river is designated as a wild and scenic river.

Future Issue 1.8: Desire that DNR continue to manage wildlife habitat regardless of the alternative selected.

Future issue 1.9: Concern that NPS policies would require increased environmental review for normal maintenance activities and that this would both increase costs and delay action.

Subject matter concerns:

Future Issue 1.10: Concern that planting of non-native plant species in disturbed areas (e.g., clearings, roads, trails) for wildlife purposes would be limited under wild and scenic designation with NPS administration. (State wildlife managers suggest that certain non-native plants are desirable as forage for wildlife. Also, many agricultural crops are not native but provide forage for wildlife, and having farmers plant these crops under lease is viewed as a most economically efficient way to maintain some clearings.)

Future Issue 1.11: Concern that NPS policies would limit use of agriculture (e.g., haying, cultivating row crops) as a means to maintain clearings and that this would lead to a decrease in wildlife habitat diversity.

Future Issue 1.12: Concern that NPS policies would limit the use of timber management practices that are currently used to establish or restore clearings, making it difficult to maintain wildlife habitat diversity; allied concern that NPS policies against the use of commercial forestry would make habitat management more expensive and/or difficult to implement.

Future Issue 1.13: Concern that use of heavy equipment to conduct land management activities to maintain or restore clearings would be limited under wild and scenic designation with NPS administration and that this would make it difficult to maintain habitat diversity.

Future Issue 1.14: Concern that creation of new wildlife clearings would be limited under wild and scenic designation with NPS administration.

Future Issue 1.15: Concern that wetland construction and maintenance would be limited under wild and scenic designation with NPS administration.

Future Issue 1.16: Concern that use of pesticides, herbicides, insecticides, and fish toxicants for wildlife management purposes would be restricted under NPS administration; allied concern that local and regional efforts to control black flies would also be restricted.

Archeological and historic resources

Future Issue 1.17: Concern that protection and interpretation of archeological and historic sites may not be a priority unless NPS is involved in administration and management.

Future Issue 1.18: Concern that the increased attention to archeological and historic sites likely to occur with NPS management not be allowed to detract from wildlife habitat management and traditional public uses.

2. Recreation and Public Use

Traditional public uses: hunting, fishing, and trapping

Future Issue 2.1: Concern that changes in management may restrict opportunities for hunting and fishing.

Future Issue 2.2: Concern that changes in management may diminish existing state authorities to regulate hunting, fishing and trapping.

Future Issue 2.3: Concern that changing in management may result in declines in game populations, thereby decreasing the quality of the hunting experience.

Future Issue 2.4: Concern that high-quality fishing could decline if too many new users come to the area in the future.

Future Issue 2.5: Opportunity to use this process to establish reciprocal fishing licenses for WV and VA in the wild and scenic river area.

Traditional public uses: boating

Future Issue 2.6: Concern that changes in management could result in burdensome requirements for outfitter licensing.

Future Issue 2.7: Concern about how river recreation in general would be managed if the river is designated as a wild and scenic river.

Traditional public uses: camping

Future Issue 2.8: Concern that any new recreational facilities developed in the future be flood-proofed.

Future Issue 2.9: Desire that shoreline camping in Virginia be allowed to continue if the river is designated; desire for improved camping ground downstream of Rt. 460 Bridge in VA because the Glen Lyn campground is often full now.

Future Issue 2.10: Concern that changes in management could lead to development of new facilities even if existing areas have unused capacity.

Future Issue 2.11: Concern that wild and scenic river designation might limit improvements to existing camping sites and development of new campsites, and possibly restrict public use within existing sites.

Future Issue 2.12: Concern over prohibitions on “backcountry” camping, including camping on islands or other boat access only locations. (Backcountry and island camping are currently prohibited.)

Other public uses, including general recreation issues

Future Issue 2.13: Concern that NPS would encourage new recreational uses that might conflict with traditional wildlife-oriented public uses.

Future Issue 2.14: Question regarding whether facilities could be improved or whether new developments would be allowed if the river were designated as a wild and scenic river.

Future Issue 2.15: Concern that improving the west side road in Virginia could significantly increase use and could lead to conflicts between different types of users.

3. Landscape Character

Remote and undeveloped character

Future Issue 3.1: Concern that the temporary protection for the study segment from water resource development projects during the study period will end three years after the report is submitted to Congress if the river is not designated wild and scenic, making the river vulnerable again to new crossings from electric transmission lines, gas pipelines, and similar regional-scale development projects.

Scenic Resources

No issues identified.

4. Socioeconomics

Operation of Bluestone Dam (flood retention, hydro, dam safety assurance, drift and debris project)

Future Issue 4.1: Concern about whether wild and scenic river designation would restrict ACE's ability to operate the Bluestone Project for its authorized purposes of flood control, hydropower, fish and wildlife, and recreation.

Future Issue 4.2: Concern about whether designation would affect ACE's upstream flowage rights and thereby restrict ACE's ability to hold back water during flood events.

Future Issue 4.3: Concern about whether designation would restrict proposals to retrofit Bluestone Dam for energy production.

Future Issue 4.4: Concern about whether designation would require ACE to relinquish ownership of lands that are necessary for Bluestone Dam operations.

Operation of other existing water resource projects

Future Issue 4.5: Concern that river-related resource values, particularly fish and river recreation, could be adversely impacted if variability of releases from Claytor Dam are allowed to increase as a result of re-licensing. (Note: Claytor Dam operates according to a license with the Federal Energy Regulatory Commission that establishes minimum flows and flow ramping requirements. This project will be re-licensed in the near future.)

Future Issue 4.6: Concern about whether designation would require Appalachian Power Company to change its operation of the Glen Lyn Plant or Claytor Dam.

Private property

Future Issue 4.7: Concern about whether new water quality regulations would be required on tributaries if the river is designated as a wild and scenic river and that this could adversely affect landowners.

Future Issue 4.8: Concern about whether private property would be subject to purchase through condemnation. (Stakeholders expressed a desire that any future land acquisition involve willing sellers only.)

Land use leases

Future Issue 4.9: Concern about whether agricultural leases would be terminated under various management alternatives, which could be economically detrimental to those holding these leases.

Future Issue 4.10: Concern that designation of the New River as a wild and scenic river might restrict Appalachian Power Company's ability to continue to operate the existing fly ash facility.

Public safety

Future Issue 4.11: Concern regarding who would have responsibility for law enforcement if NPS and the states were both involved in management. (Would there be concurrent jurisdiction?)

Nearby public lands

Future Issue 4.12: Concern that transfer of management might leave ACE with outlier land parcels that would be difficult to manage. (Areas of concern include islands and shorelands upstream of the designation boundary in Virginia, and Bull Falls and Bertha camping areas in West Virginia.)

Tax revenue

Future Issue 4.13: Concern that changes in management may result in diminished property tax payments to the counties. (This issue was not raised in scoping meetings. It was identified as an issue by the study team.)

Local and regional economy

Future Issue 4.14: Potential for designation as a wild and scenic river to enhance the area's position as a tourism destination and thereby support the local and regional economy.

Quality of life

Future Issue 4.15: Concern that traditional uses of the study area will be curtailed if designation as a wild and scenic river results in a drastically different land management strategy.

APPENDIX 5.A: Detailed Description of Management Alternatives

The following table provides additional information on a variety of important aspects of the four management alternatives. This additional information is intended to supplement the summary descriptions of the alternatives presented in Chapter 5.4. Readers are also encouraged to refer to Appendices 2.A and 5.C, which contain specific guidelines and standards for resource management that would apply under the different alternatives.

MANAGEMENT FACTOR	ALTERNATIVE #1	ALTERNATIVE #2	ALTERNATIVE #3	ALTERNATIVE #4
PURPOSE	Maintain the existing level of resource protection, and continue current uses and management practices.	Provide added protection for the free-flowing condition and outstanding resource values of this stretch of the New River (as described in Chapter 3), while maintaining the current emphasis on fish and wildlife management and traditional public uses.	Same as Alternative 2.	Same as Alternative 2.
GOALS, MANAGEMENT PRINCIPLES, AND ASSURANCES	N/A	The goals, management principles, and assurances articulated in Chapter 5.2 would serve as a foundation for future management, and should be directly referenced in the authorizing legislation (see next row below).	Same as Alternative 2.	Same as Alternative 2.
LEGAL AUTHORIZATION	Management would continue to be based on existing authorities, including the original authorization of the Bluestone Project and the current license between ACE and WVDNR.	A federal law would be enacted designating this part of the New River as a WSR. The law would specify important management provisions and authorize federal funding to implement the designation.	Same as Alternative 2, plus the authorizing law would transfer administration of the federal/ACE lands in the designated area and upstream to NPS.	Same as Alternative 2, plus the authorizing law would transfer ownership and management responsibility of federal/ACE lands in the designated area and upstream to the states of VA and WV. The law also would specify any conditions associated with the transfer of ownership (e.g., reversion to federal ownership if the state(s) no longer wanted to manage the lands for conservation purposes).
GEOGRAPHIC AREA	The study area, which includes the New River from the Rt. 460 bridge in Glen Lyn, VA to 1,410-foot elevation above Steer Island in WV and adjacent federal lands. ACE also administers lands adjacent to Bluestone Lake and a	WSR: The New River from approximately 1-¼ mile downstream of the Route 460 Bridge in Giles County, VA downstream to the confluence with Buffalo Creek near Steer Island in Summers County, WV, and	Same as Alternative 2, plus the Bertha Camping Area could be included in the area under NPS administration and management (although it would not be within the designated WSR segment).	Same as Alternative 2.

MANAGEMENT FACTOR	ALTERNATIVE #1	ALTERNATIVE #2	ALTERNATIVE #3	ALTERNATIVE #4
	narrow corridor of land upstream of the Rt. 460 bridge as part of the Bluestone Project Area.	adjacent federal/ACE lands. (See detailed description of suggested boundaries in Chapter 5.3.5 and Figures 5.1 and 5.2.) Upstream Areas: Additional portions of the river and adjacent federal lands within the Bluestone Project Area upstream would not be included in WSR designation, but would be managed by the same agency in same way as designated segment.		
LAND OWNERSHIP AND ADMINISTERING AGENCY	Federal/ACE	Federal/ACE	Federal/NPS	State/VA SONR and WVDNR
AGENCIES INVOLVED IN MANAGEMENT	VA: ACE, DGIF WV: ACE, DNR-WRS & DNR-Parks	VA: ACE, DGIF & possibly DCR WV: ACE, DNR-WRS & DNR-Parks	VA: NPS, DGIF WV: NPS, DNR-WRS	VA: DCR &/or DGIF WV: DNR-WRS & DNR-Parks
FEDERAL/STATE RELATIONSHIP FOR LAND AND RESOURCE MANAGEMENT	VA: ACE would continue to be the primary manager. DGIF would continue its current role in fish and wildlife management (e.g., enforcing state fish and game regulations, managing species and populations). WV: ACE would continue to delegate primary on-the-ground management responsibility for fish and wildlife, habitat, recreation, and campgrounds to DNR through the existing license.	VA: Same as Alternative 1, or ACE could delegate primary on-the-ground management responsibility to DCR or DGIF if they agreed. If DCR assumed this responsibility the area would be managed as a state park; if DGIF did so it would be managed as a wildlife management area. WV: Same as Alternative 1.	VA: NPS would be the primary manager. DGIF would continue its current role in fish and wildlife management (e.g., enforcing state regulations, managing species and populations), and NPS and DGIF could cooperate on additional initiatives. WV: As the administering federal agency, NPS would have primary management responsibility but DNR-WRS would also be involved in managing fish, wildlife, habitat, and related public uses. NPS would be the primary manager of campgrounds, river recreation, and non-traditional	VA: N/A (due to state land ownership) WV: N/A (due to state land ownership)

MANAGEMENT FACTOR	ALTERNATIVE #1	ALTERNATIVE #2	ALTERNATIVE #3	ALTERNATIVE #4
			public uses.	
RESPONSIBILITY FOR MANAGEMENT OF FISH AND WILDLIFE	<p>Fish & Aquatic Biota: DGIF in VA; DNR-WRS in WV.</p> <p>Terrestrial Wildlife: DGIF in VA; DNR-WRS in WV.</p> <p>Habitat: ACE in VA; DNR-WRS in WV</p>	<p>Fish & Aquatic Biota: Same as Alternative 1.</p> <p>Terrestrial Wildlife: Same as Alternative 1.</p> <p>Habitat: ACE or DCR or DGIF in VA; DNR-WRS in WV</p>	<p>Fish & Aquatic Biota: NPS & DGIF in VA; NPS & DNR-WRS in WV</p> <p>Terrestrial Wildlife: NPS & DGIF in VA; NPS & DNR-WRS in WV</p> <p>Habitat: NPS in VA; NPS & DNR-WRS in WV</p>	<p>Fish & Aquatic Biota: Same as Alternative 1.</p> <p>Terrestrial Wildlife: Same as Alternative 1.</p> <p>Habitat: DCR &/or DGIF in VA; DNR-WRS in WV</p>
RESPONSIBILITY FOR MANAGEMENT OF PUBLIC USE	<p>Hunting, Fishing, & Trapping: DGIF & ACE in VA; DNR-WRS & DNR-Parks in WV</p> <p>Boating & Camping: ACE in VA; DNR-Parks in WV</p> <p>Other Public Uses: ACE in VA; DNR-Parks in WV</p>	<p>Hunting, Fishing, & Trapping: Same as Alternative 1.</p> <p>Boating & Camping: ACE or DCR or DGIF in VA; DNR-Parks in WV</p> <p>Other Public Uses: ACE or DCR or DGIF in VA; DNR-Parks in WV</p>	<p>Hunting, Fishing, & Trapping: NPS & DGIF in VA; NPS & DNR-WRS in WV</p> <p>Boating & Camping: NPS in VA & WV</p> <p>Other Public Uses: NPS in VA & WV</p>	<p>Hunting, Fishing, & Trapping: DGIF & possibly DCR in VA; DNR-WRS & DNR-Parks in WV</p> <p>Boating & Camping: DCR or DGIF in VA; DNR-Parks in WV</p> <p>Other Public Uses: DCR or DGIF in VA; DNR-Parks in WV</p>
RESPONSIBILITY FOR MANAGEMENT OF OTHER RESOURCES	<p>Cultural Resources: ACE in VA; ACE & DNR-WRS & DNR-Parks in WV</p> <p>Landscape Character: ACE in VA; DNR-WRS & DNR-Parks in WV</p>	<p>Cultural Resources: ACE & possibly DCR or DGIF in VA; ACE & DNR-WRS & DNR-Parks in WV</p> <p>Landscape Character: ACE or DCR or DGIF in VA; DNR-WRS & DNR-Parks in WV</p>	<p>Cultural Resources: NPS in VA & WV</p> <p>Landscape Character: NPS in VA & WV</p>	<p>Cultural Resources: DCR or DGIF in VA; DNR-WRS & DNR-Parks in WV</p> <p>Landscape Character: DCR or DGIF in VA; DNR-WRS & DNR-Parks in WV</p>
RESPONSIBILITY FOR LAW ENFORCEMENT AND PUBLIC SAFETY	<p>VA: ACE, DGIF & county sheriff</p> <p>WV: ACE, DNR-Parks, DNR-WRS & county sheriff</p>	<p>VA: Same as Alternative 1, and possibly DCR.</p> <p>WV: Same as Alternative 1.</p>	<p>VA: NPS, DGIF & county sheriff</p> <p>WV: NPS, DNR-Parks, DNR-WRS & county sheriff</p>	<p>VA: DCR &/or DGIF, & county sheriff</p> <p>WV: DNR-Parks, DNR-WRS & county sheriff</p>

MANAGEMENT FACTOR	ALTERNATIVE #1	ALTERNATIVE #2	ALTERNATIVE #3	ALTERNATIVE #4
MANAGEMENT AGREEMENT	<p>VA: N/A</p> <p>WV: License between ACE and DNR (current license expires June, 2025).</p>	<p>VA: N/A, or management agreement/license between ACE and DCR or DGIF. This agreement would be consistent with goals, management principles, and assurances presented in Chapter 5.2 and resource management standards in Appendix 5.C.1.</p> <p>WV: Same as Alternative 1, except license would be modified as needed to ensure consistency with goals, management principles, and assurances presented in Chapter 5.2 and resource management standards in Appendix 5.C.1.</p>	<p>VA: N/A</p> <p>WV: License between NPS and DNR. License would be modeled on the existing NPS/DNR license for Bluestone NSR. License would be consistent with goals, management principles, and assurances presented in Chapter 5.2 and resource management standards in Appendix 5.C.2.</p>	<p>VA: N/A (due to no federal role in land ownership/management)</p> <p>WV: N/A (due to no federal role in land ownership/management)</p>
MANAGEMENT PLAN	<p>ACE has a master plan for the overall Bluestone Project Area. WVDNR prepares 5-year wildlife management plans for Bluestone WMA (current plan covers 2001-2006).</p>	<p>ACE would have lead responsibility for preparing a comprehensive management plan for the designated area in close consultation with the states within 3 years of designation. The plan would be consistent with the WSRA; the authorizing legislation; the goals, management principles, and assurances presented in Chapter 5.2; and the management agreement(s) described above. ACE would consult with NPS/Northeast Regional Office in developing the plan in light of NPS's responsibility for implementing WSRA Section 7 (as discussed under "Implementation of WSRA Section 7" below). Potential components of the management</p>	<p>Same as Alternative 2, except:</p> <ol style="list-style-type: none"> (1) NPS would have lead responsibility; (2) The plan would also cover the Bluestone NSR; (3) VA SONR and WVDNR would be invited to participate as official cooperating agencies; and (4) DNR's 5-year management plans would be coordinated with NPS's five-year strategic plans for the area. 	<p>Same as Alternative 2, except:</p> <ol style="list-style-type: none"> (1) VA SONR and WVDNR would have lead responsibility; (2) The Secretary of the Interior would approve the plan to ensure consistency with WSRA requirements; (3) Other planning requirements would depend on state policy; and (4) The NPS could provide technical assistance in developing the plan if the states requested and if funding were available.

MANAGEMENT FACTOR	ALTERNATIVE #1	ALTERNATIVE #2	ALTERNATIVE #3	ALTERNATIVE #4
		<p>plan identified during the study period are described in Appendix 5.D.</p> <p>WVDNR (and DGIF or DCR, if one or the other chose to accept primary on-the-ground management responsibility in VA) would prepare 5-year management plans for its activities. These plans would be consistent with the comprehensive management plan.</p>		
ANNUAL WORK PLAN	<p>VA: N/A</p> <p>WV: DNR would continue to prepare annual work plans for ACE review and approval.</p>	<p>VA: N/A or, if DGIF or DCR accepted primary on-the-ground management responsibility, they would prepare annual work plans for ACE review and approval.</p> <p>WV: Same as Alternative 1.</p>	<p>VA: N/A</p> <p>WV: DNR would prepare annual work plans in consultation with NPS. Plans would also cover Bluestone NSR. NPS would review and approve prior to implementation.</p>	<p>VA: N/A</p> <p>WV: N/A</p>
COMMUNICATION AND COLLABORATION AMONG MANAGEMENT AGENCIES	<p>VA: Occasional informal communication between ACE and DGIF field staff.</p> <p>WV: Annual meeting between ACE and DNR to review draft annual work plan. Frequent informal communication and collaboration between field staff.</p>	<p>Same as Alternative 1. If DCR or DGIF assumed primary on-the-ground management responsibility in VA and established a formal management agreement with ACE, the agencies would meet annually to review draft work plan and would have frequent informal communication between field staff. Also, there would be increased collaboration between DCR/DGIF and DNR on cross-boundary planning and management for relevant issues (e.g., river recreation, wildlife habitat).</p>	<p>VA: NPS would collaborate with DGIF as needed/appropriate on fish, wildlife, and habitat issues.</p> <p>WV: NPS and DNR supervisors and field managers would meet annually to review draft annual work plan. Field staff would have frequent informal communication, and would seek opportunities for collaboration in implementing management activities and projects (e.g., conducting prescribed burns).</p>	<p>DCR &/or DGIF would meet annually with DNR to discuss their respective management and collaboration on cross-boundary planning and management for relevant issues (e.g., river recreation, wildlife habitat). Field staff would communicate informally as needed/appropriate.</p>

MANAGEMENT FACTOR	ALTERNATIVE #1	ALTERNATIVE #2	ALTERNATIVE #3	ALTERNATIVE #4
GENERAL DIRECTION FOR RESOURCE MANAGEMENT IN BOTH STATES	Management would continue to emphasize fish, wildlife, and related traditional public uses.	Same as Alternative 1, plus management would be consistent with the following: (1) the general WSRA policy of protecting and enhancing the area’s free-flowing condition and outstanding resources; (2) the goals, management principles, and assurances presented in Chapter 5.2; and (3) the maintenance of conditions sufficient for WSRA “scenic” classification.	Same as Alternative 2.	Same as Alternative 2.
MANAGEMENT DIRECTION COMMON TO BOTH STATES FOR SPECIFIC RESOURCES	<p>The New River would continue to be managed as a warmwater fishery emphasizing smallmouth bass, flathead and channel catfish, and hybrid striped bass. No stocking would be envisioned in the New River in VA or WV. (DNR-WRS would continue to stock sterile hybrid striped bass in Bluestone Lake and brown and rainbow trout in Indian Creek.) DGIF and DNR-WRS would continue their ongoing assessment of New River walleye populations.</p> <p>In conducting land management activities, ACE (in VA) and DNR (in WV) would continue to be mindful of identified historic and archeological resources. Significant new efforts to identify, protect and/or interpret these resources would be unlikely.</p>	Same as Alternative 1.	<p>Fisheries management in both states would be the same as for Alternative 1. Under NPS lead, there would be somewhat greater emphasis relative to the other alternatives on the following:</p> <p>(1) enhancing river-related recreational opportunities (e.g., establishing new primitive boat-only campsites, developing a limited number of new access points) and increasing management of river recreation;</p> <p>(2) expanding visitor services (e.g., limited interpretive programs);</p> <p>(3) seeking new opportunities for public uses such as trails for hiking, biking, and horseback riding that would not degrade resources or conflict with traditional uses or wildlife management; and</p> <p>(4) identifying, protecting and interpreting historic and archeologic resources.</p>	Same as Alternative 1.

MANAGEMENT FACTOR	ALTERNATIVE #1	ALTERNATIVE #2	ALTERNATIVE #3	ALTERNATIVE #4
MANAGEMENT EMPHASIS SPECIFIC TO VIRGINIA	Management would continue to be limited due to ACE’s funding and staff constraints and the lack of a management agreement with VA agencies. ACE would continue to lease some land for agricultural activities that have wildlife benefits. Management of recreation and public use would continue to consist of limited law enforcement, maintenance of the unimproved road paralleling the west shore of the river, and maintenance by the Town of Glen Lyn of the park immediately upstream of the Route 460 bridge that provides a river access point, campground, and day use area.	Additional management attention would be given to the VA portion. Emphasis would be placed on the following: (1) enhancing river-related recreational opportunities (e.g., improving existing access points) and increasing management of river recreation; (2) increasing law enforcement and public safety; (3) cleaning up and restoring degraded sites; and (4) pursuing potential capital improvements (e.g., upgrading the existing access road, possible limited development of new day and/or overnight use areas).	Same as Alternative 2.	Same as Alternative 2. VA portion would be managed either by DCR as a state park or by DGIF as a wildlife management area.
MANAGEMENT EMPHASIS SPECIFIC TO WEST VIRGINIA	DNR-WRS would continue to manage the area as part of Bluestone WMA, using an integrated system of wildlife, agricultural, and forest management practices to enhance wildlife habitat primarily for game species. Management of recreation and public use would continue to emphasize fish and wildlife-related activities (hunting, fishing, trapping, & wildlife observation) and other traditional activities (boating and camping). Opportunities for other types of recreation (e.g., hiking, horseback riding) would continue to be limited, and permitted only to the extent they are compatible with wildlife objectives. DNR-Parks	Same as Alternative 1, and DNR-Parks would increase efforts to enhance existing campgrounds where needed and if funding permits (e.g., improving sanitary facilities, establishing distinct parking areas, relocating campsites away from the floodway).	Management by NPS and DNR-WRS would continue the current emphasis on fish and wildlife and related traditional public uses, but would include greater reliance on natural processes and some limitations on active habitat management. NPS would enhance existing campgrounds (as DNR-Parks would do in Alternative 2). The area would continue to be part of the Bluestone WMA (unless DNR chose to remove it from the WMA).	Same as Alternative 2.

MANAGEMENT FACTOR	ALTERNATIVE #1	ALTERNATIVE #2	ALTERNATIVE #3	ALTERNATIVE #4
	<p>would continue its current approach to managing campgrounds and boating access, and its increasing involvement in managing river recreation. (See Chapter 2 for further description.)</p>			
<p>DETAILED STANDARDS FOR RESOURCE MANAGEMENT</p>	<p>Current guidelines would continue to apply. (See description in Appendix 2.A.)</p>	<p>Management of natural, cultural and recreational resources would be in accordance with standards presented in Appendix 5.C.1.</p>	<p>Management of natural, cultural and recreational resources would be in accordance with standards presented in Appendix 5.C.2. These standards are similar but not identical to those for Alternative 2. Differences between the two sets of standards are indicated in Appendix 5.C.3.</p> <p>(Note: Any desired exceptions to generic NPS management policies would need to be specified in the authorizing legislation – for instance, to authorize continued hunting and trapping.)</p>	<p>Same as Alternative 2.</p>
<p>IMPLEMENTATION OF WSRA SECTION 7</p>	<p>N/A</p>	<p>Responsibility: DOI/NPS (Northeast Regional Office), in consultation with other federal and state agencies involved in managing the New River corridor.</p> <p>Approach: NPS review of proposed FERC-licensed projects and other federally assisted water resources projects would emphasize protection of the designated segment’s free-flowing condition and outstanding resource values (fish, wildlife, recreation, scenery, geology/hydrology, and historic/archeologic resources). (See Chapter 1.2.3 for further discussion.)</p>	<p>Same as Alternative 2.</p>	<p>Same as Alternative 2.</p>

MANAGEMENT FACTOR	ALTERNATIVE #1	ALTERNATIVE #2	ALTERNATIVE #3	ALTERNATIVE #4
COMPLIANCE WITH APPLICABLE FEDERAL AND STATE LAWS	ACE and WVDNR would continue to be responsible for complying with applicable federal and state laws (e.g., Endangered Species Act, National Historic Preservation Act, Archeological Resources Protection Act, Clean Water Act).	All planning and management activities would comply with applicable federal and state laws. Primary responsibility for compliance would fall to the agency whose regulations require the action (ACE for federal, WVDNR and possibly VA SONR for state), except ACE would be responsible for compliance with State Historic Preservation Office under NHPA Section 106. Whichever agency is not in lead for a given project would provide support as needed.	Same as Alternative 2, except NPS would have lead responsibility for federal and NHPA Section 106 compliance rather than ACE.	Same as Alternative 2, except VA SONR and WVDNR would have full responsibility for required compliance.
COMPLIANCE WITH NATIONAL ENVIRONMENTAL POLICY ACT	ACE would continue to be responsible for complying with NEPA.	ACE would have lead responsibility for NEPA compliance. The comprehensive management plan would require an environmental assessment (EA) or environmental impact statement (EIS), which could serve as complete NEPA compliance for select actions ACE and states would identify “categorical exclusions” under NEPA for routine recurring activities (e.g., maintaining existing wildlife habitat clearings, routine maintenance on existing facilities such as campgrounds, river access, trails). Potential construction projects would require separate NEPA compliance.	Same as Alternative 2, except: (1) NPS would have lead responsibility for NEPA compliance rather than ACE; and (2) compliance needed for potential construction projects would be covered under NPS-prepared EA/EIS done in conjunction with development concept plan (DCP) that would be prepared subsequent to management plan/EIS.	N/A (except any federal permits or assistance would require NEPA compliance, which would be the responsibility of the applicable federal agency).
FUNDING	ACE would continue to receive federal funding to support its limited current management in the study area. The State of West Virginia would continue to provide funding for DNR	ACE would be authorized to receive new federal funding to implement the WSR designation (including administering the area,	NPS would be authorized to receive new federal funding to implement the WSR designation. WVDNR’s long-term involvement in management would be supported by state funding and	New federal funding could be made available to VA SONR and WVDNR, possibly through a federal/state cost-share to assist with initial costs of implementing WSR designation (including developing a

MANAGEMENT FACTOR	ALTERNATIVE #1	ALTERNATIVE #2	ALTERNATIVE #3	ALTERNATIVE #4
	management, including DNR-WRS management of habitat and wildlife-related public uses and DNR-Parks management of camping facilities and other public uses. DNR and DGIF would continue to be eligible to apply for federal funding from relevant sources (e.g., Wallop-Breaux, Dingell-Johnson programs).	developing a comprehensive management plan, enhancing management in VA, addressing essential infrastructure and other capital needs identified in management plan, etc.). If SONR chooses to assume lead on-the-ground management responsibility in VA, federal funding could be made available through ACE to assist with start-up costs (possibly through a federal/state cost-share). In VA and/or WV, long-term state involvement in management would be supported by state funding, which could be supplemented by other federal sources (e.g., Wallop-Breaux, Dingell-Johnson programs).	potentially supplemented by other federal sources (e.g., Pittman-Robertson, Wallop-Breaux, and Dingell-Johnson programs).	comprehensive management plan, enhancing management in VA, and addressing essential infrastructure and other capital needs identified in management plan). Long-term state management would be supported by state funding and potentially supplemented by other federal sources (e.g., Pittman-Robertson, Wallop-Breaux, and Dingell-Johnson programs).
RELATIONSHIP WITH ADJACENT COMMUNITIES AND COUNTIES	There would continue to be no formal, ongoing community involvement program, and no concerted effort to incorporate this area into a regional tourism strategy or as a contributing factor to the region’s quality of life. ACE and WVDNR would continue to consult with neighboring communities and counties on relevant issues/projects.	Neighboring communities and counties would be consulted during the development and implementation of the management plan. Opportunities for partnerships with local entities would be sought for specific projects. Local interests could use the area’s national designation as a tool in their tourism strategies if they wanted, and ACE and state managers would make increased efforts to coordinate with these efforts.	Same as Alternative 2, except NPS efforts to coordinate with regional tourism strategies likely would be more extensive.	Same as Alternative 2, except state efforts to coordinate with regional interests on tourism issues likely would not be as extensive as Alternatives 2 or 3.
RELATIONSHIP WITH BLUESTONE NATIONAL SCENIC RIVER	WVDNR would continue to be involved in managing fish, wildlife, habitat, and related public uses throughout the Bluestone WMA, including both the study area and Bluestone NSR portions. Habitat management along the	Same as Alternative 1, except there could be increased collaboration in the management of the two areas (e.g., in the development of management plans for each and in communicating similarities and differences	While technically the New River WSR and the Bluestone NSR would be separate management units, the NPS would administer and manage the two areas together. NPS would prepare a single general management plan	Same as Alternative 2.

MANAGEMENT FACTOR	ALTERNATIVE #1	ALTERNATIVE #2	ALTERNATIVE #3	ALTERNATIVE #4
	<p>Bluestone NSR likely would continue to be somewhat more limited than in the study area.</p>	<p>between the areas to the public) since both would be designated as WSRs.</p>	<p>for both areas, and resource management would be in accordance with the same standards (i.e., those presented in Appendix 5.C.2). NPS and WVDNR would manage fish, wildlife, habitat, and related public uses in the same way in both areas. The two agencies would establish a single license covering their relationship for both areas, and DNR’s annual work plans would address their efforts in both areas.</p>	

APPENDIX 5.B. Summary of Possible Regional Connection Strategies

Introduction

As discussed in Chapter 5.1.3, the study team and other participants were mindful in developing management alternatives that the New River study area is part of a larger geographic, ecological, economic, and social region, and that it could play a pivotal role in shaping the future of the broader region. With this in mind, a number of strategies were identified that could be used to more fully connect this section of the New River to the larger region. These strategies are described below. Some may work better with one or another of the action alternatives for the study area that are described in Chapter 5 (i.e., Alternatives 2, 3, and 4), while others would work with any action alternative. It is important to note, though, that each of the management alternatives described in this report stands on its own. Decisions regarding the selection of a preferred alternative for the study area of the New River can (and should) be made independent of decisions regarding the broader regional connection strategies identified below.

Regional Strategy 1: No Explicit Regional Connections

Under this option the New River study area would be managed with no explicit connection to the larger region beyond what is normally expected of any federally or state owned public use area. Outreach to adjacent communities and interest groups would occur, and managers would cooperate with other efforts as appropriate, but there would be no explicit effort to make larger regional connections. This option is essentially a status quo strategy against which all others might be judged.

Regional Strategy 2: Enhanced Connections to Adjacent Lands

Under this option additional attention would be given to devising cooperative management strategies with adjacent public lands. This would apply in particular to three blocks of land: Bluestone State Park, Bluestone National Scenic River, and lands administered by the Army Corps of Engineers adjacent to Bluestone Lake.

Bluestone State Park. Part of Bluestone State Park is on state land and part is leased from the ACE. This study offers an excellent opportunity to make a decision regarding whether or not ACE lands in Bluestone State Park should be transferred to the State of West Virginia, both because all of the relevant players are collaborating on this study and because any federal legislation that might result would provide a convenient mechanism for transferring ownership of the federal lands. This is not an issue having significant policy implications. The issue mainly revolves around whether this action would provide for more efficient management in the future. The decision on whether this transfer should occur should be made in close consultation with ACE and West Virginia DNR.

Bluestone NSR. Should Alternative 3 be adopted for the study area, the designated WSR portions of both the New River and the Bluestone River would be administered by the National Park Service with DNR-Wildlife Resources Section involved in management of fish and wildlife

and related public uses. In this case, it would seem reasonable that effort be made to provide for consistency in the management of the two areas, both to encourage management efficiency and simplify public understanding. With this in mind, Alternative 3 calls for the two areas to be managed together, to be covered by a single comprehensive management plan, and to be subject to the same standards for resource management.

Should either Alternative 2 or 4 be selected, there is likely to be some difference in the management approach and standards for the two river areas. Given their geographic proximity and the fact that both would be designated as National Wild and Scenic Rivers, this could be confusing to users of these areas. Under Alternative 2, it would also add to the complexity of management for DNR, which would be involved in certain aspects of management for both areas but under different federal administering agencies (i.e., ACE on the New River and NPS on the Bluestone River). To mitigate for this, managers of the two areas could develop consistent management regimes for both or, while retaining different approaches, take special care to communicate the differences and similarities to the public.

Bluestone Lake Shorelands. If Alternative 2 or 4 were selected, DNR would be the primary manager of habitat and recreation for both the New River WSR and the lake shorelands. Given that the lands are adjacent and the same agency would be the manager of both areas, it would seem logical to have both properties managed according to the same resource management standards – that is, the standards developed for these alternatives (as shown in Appendix 5.C.1) would apply to the lake shorelands as well. However, such consistency would not be a requirement, and any decision on this would be left to ACE and DNR.

If Alternative 3 were selected, DNR would be involved in management of the designated WSR portions of both the New River and the Bluestone River through licenses with NPS, and also would continue to have primary responsibility for resource management of ACE-administered lands around Bluestone Lake. However, resource management of these areas would follow two sets of standards, one set by NPS for the New and Bluestone WSRs and the other set by ACE for the lake shorelands. While it is likely that these standards would differ somewhat, for the benefit of both managers and the user public it would be desirable to make them consistent wherever possible and to clearly describe any differences.

Regional Strategy 3: Informal Regional Connections

New River WSR managers could informally, yet proactively, engage in appropriate regional initiatives. These might include participating in future planning and implementation activities for the New River Parkway, the New River American Heritage River, New River Blueway, Virginia Birding and Wildlife Trail, and other efforts focused on conservation, recreation, quality of life, and economic development activities in adjacent communities and surrounding counties. Under this scenario, managers of the New River WSR would be participants in these regional activities, but not necessarily coordinators or facilitators.

This strategy could be implemented regardless of the action alternative selected.

Regional Strategy 4: A National Recreation Area

In this strategy, Congress would establish a national recreation area (NRA) that would encompass the New River WSR, the Bluestone NSR, Pipestem State Park, Bluestone State Park, and possibly the Bluestone Lake shorelands. The NRA would be coordinated by the National Park Service. Management authority would not change hands for any of the areas involved, with the possible exception of the New River WSR depending on which management alternative had been selected separately for it. Each unit of this NRA would continue to be managed independently, but special effort would be made to coordinate activities and market the area as one unified yet multi-dimensional recreation resource. As coordinator of the NRA, the National Park Service's responsibility would be limited to facilitating interagency action, possibly with the assistance of an interagency coordinating committee. Neither the National Park Service nor an interagency coordinating committee would have authority to direct management activities on properties managed by any member agency.

This strategy would likely work best with action Alternative 3, though it might also be possible in conjunction with Alternative 2. The NRA strategy would not be appropriate for Alternative 4 because of the absence of federal involvement in land ownership and management along the New River WSR under that alternative.

Regional Strategy 5: Strong Connections with the New River American Heritage River and Blueway.

Under this strategy, special effort would be made to connect the New River WSR with two ongoing, tri-state initiatives involving most or all of the New River mainstem: the New River American Heritage River, and the New River Blueway. The study area could serve as an important link in this system, along with the previously designated New River WSR in North Carolina, the New River Trail State Park in Virginia, and the New River Gorge National River immediately downstream of the study area. Managers of the New River study area would be active in long-range planning for the heritage river/blueway, and would take actions within the study area that supported the larger objective. An example would be to coordinate development of boating access points and boat access campsites with similar actions in other areas along the river.

This strategy would work equally well with any action alternative.

Regional Strategy 6: A National or State Heritage Area

Under this strategy, the New River would serve as the fulcrum or anchor for a more expansive regional recreation, resource conservation, and economic development initiative that encompassed other significant natural, cultural, and recreational resources in any one of the surrounding counties or, possibly, the entire four county region. The intent would be to enhance the awareness and protection of important resources, improve the quality of life for residents, and attract visitors by identifying, interpreting, and promoting key natural, cultural, and/or recreational themes. This could involve a "heritage area study" conducted by the federal

government, state government(s), or a combination. If the federal government were involved, the National Park Service would likely coordinate the project as a “special resource study.”

This strategy would work equally well with any action alternative. The lead agency for the New River WSR, be it ACE, NPS, or the states, would not necessarily be charged with implementing the heritage area program, but would be expected to be a participant (much as would be the case with strategy 3 above).

Regional Strategy 7: A Broad-scale National Conservation Area

There are ongoing efforts within the greater Virginia and West Virginia area to “brand” certain high quality recreational resources on and around the New River in order to give higher visibility to the area and attract more visitors who would use the various resources and contribute to the local economy. This branding initiative could be bolstered through designation of a “National Conservation Area” that could include the study area, adjacent public lands (the same areas in the NRA in strategy #4 above), the New River Gorge National River, the Gauley River NRA, and, depending on the scope and content, nearby portions of the Jefferson National Forest. This strategy would focus on marketing the region, and could help to highlight on the natural amenities and recreational opportunities of the river and surrounding mountain areas. It would involve a certain amount of inter-area coordination, but each public area would continue to be managed independently.

This strategy would work equally well with any action alternative.

Regional Strategy 8: An Interstate Recreation or Conservation Area

The states of Virginia and West Virginia could initiate an interstate recreation area or conservation area that would cover the same territory as the NRA in strategy 4 but would be designated and coordinated by the states.

This strategy would only apply to Alternative 4.

Making Decisions on a Regional Context Strategy

It is recommended that the four alternatives for management of the New River study area be considered separately from the broader regional strategies described immediately above. It is possible that management decisions for the study area will be made prior to making a final decision on any additional regional strategy or strategies. In this case, it might suffice to simply have an idea of which regional strategies might seem reasonable for the future, and then let experience with implementing the selected action alternative for the study area suggest a direction for regional connections.

On the other hand, at least some of the regional connection strategies could be efficiently implemented in tandem with a given action alternative. For example, should it be decided to pursue a national recreation area (strategy 4) with either Alternative 2 or 3, both the selected

alternative for the study area and the broader NRA designation could be achieved through the same legislation. Similarly, legislation developed to achieve a preferred action alternative for the study area could also be used as a means to authorize a special resource study (a precursor to strategy 6), or the transfer of title to ACE-administered lands within Bluestone State Park to the state of West Virginia (should it be determined that such a transfer is warranted as part of strategy 2).

It is worth noting that the various regional context strategies are not necessarily mutually exclusive. For example, it would be possible to implement strategy 5 (strong connections to the American Heritage River and Blueway) with strategy 6 (federal or state heritage area) concurrently. Strategy 2 (enhanced connections to adjacent lands) would also work with many of the other strategies.

APPENDIX 5.C. Resource Management Standards for the Action Alternatives

This appendix consists of three components:

- Appendix 5.C.1 contains standards for the management of natural, cultural, and recreational resources and related facilities that would apply under both Alternative 2 and Alternative 4;
- Appendix 5.C.2 contains comparable standards for resource management that would apply under Alternative 3; and
- Appendix 5.C.3 contains a table comparing the two sets of management standards.

The resource management standards contained in Appendices 5.C.1 and 5.C.2 were developed by members of the interagency working group from the agencies that would be involved in the various alternatives, with assistance from the study team. The standards are intended to supplement the descriptions of the alternatives provided in Chapter 5 and Appendix 5.A. They represent a greater level of detail and specificity than is typically included in wild and scenic river study reports for federal land situations, but the interagency working group and the study team agreed that this additional information was necessary in this situation in order to provide the affected agencies and other interested parties with the clearest picture possible of how resource management would be conducted under each of the alternatives.

Management standards are of sufficient importance that the specific standards that apply to the alternative ultimately selected for implementation should be referenced directly in the federal legislation that would designate the river as a national wild and scenic river. This would provide assurances to managers and the public that the area would be managed in a manner consistent with the description of the selected alternative and its associated resource management standards, rather than in strict accordance with the general management policies of the agencies that would be involved in administering and managing the area.

APPENDIX 5.C.1. Resource Management Standards for Alternatives 2 and 4

Following are standards for the management of natural, cultural, and recreational resources and related facilities that would apply under Alternatives 2 and 4. While the standards presented below provide the general outline for management under those alternatives, more detailed prescriptions would be developed in a comprehensive management plan that would be prepared if either alternative is ultimately selected for implementation. Those more detailed prescriptions would be consistent with the general standards presented below.

Note that the standards below would apply only to the area affected by Alternatives 2 and 4 – that is, the New River from the confluence with Buffalo Creek above Steer Island in West Virginia upstream to the upper extent of the Bluestone Project Area above Glen Lyn, Virginia, and adjacent federal lands. (See Chapter 5.3.5 for a more detailed description.) Resource management activities and public use on other nearby public lands and waters would not be affected (for example, the stocking of muskellunge fingerlings in the Bluestone River and sterile hybrid striped bass in Bluestone Lake, or the speed of motorboats and use of personal watercraft on Bluestone Lake).

In Virginia, Alternatives 2 and 4 allow for either a state park or a state-administered wildlife management area if the Commonwealth of Virginia chooses to take on management responsibility. While the management standards that follow would apply to either a state park or a wildlife management area, it is important to remember that Virginia state parks and state wildlife management areas are managed by different agencies with different missions and management policies. Therefore, how the management standards below would be applied could differ depending on whether the Commonwealth chose to establish a state park or wildlife management area. Also, if Alternative 2 is ultimately selected and the Commonwealth chooses *not* to take on management responsibility for the affected area in Virginia, the U.S. Army Corps of Engineers would retain management responsibility for the area and the standards below would apply to their management.

MANAGEMENT FACTOR	STANDARDS FOR RESOURCE MANAGEMENT UNDER ALTERNATIVES 2 AND 4
MANAGEMENT OF FISH AND OTHER AQUATIC SPECIES	
Single species management	<ul style="list-style-type: none"> • Management of focal species would continue to be conducted in the broader context of other species and the overall ecosystem
Reintroduction and stocking of native species	<ul style="list-style-type: none"> • Reintroduction of extirpated species or stocking of depleted native species would be allowed in order to reestablish species or strengthen ecosystem processes.
Stocking naturalized species	<ul style="list-style-type: none"> • Stocking of naturalized species such as smallmouth bass would be allowed following applicable environmental review, including evaluation of (1) potential effects on native species and the aquatic environment, and (2) potential biological and social benefits.
Stocking non-native species	<ul style="list-style-type: none"> • Stocking of brown and rainbow trout in Indian Creek would continue to the extent that this continues to serve a recreational fishing purpose and does not adversely affect native species. • Other stocking of non-native species would not occur unless it could be demonstrated that this would serve an important biological or social purpose and would not adversely affect native species.
Management of federal and state sensitive species	<ul style="list-style-type: none"> • All species listed under the federal Endangered Species Act and state equivalents would be managed in accordance with applicable federal and state laws and recovery plans.
MANAGEMENT OF TERRESTRIAL WILDLIFE	
Single species management	<ul style="list-style-type: none"> • Management would continue to emphasize “featured species associations”, in which management actions for featured species also benefit a variety of other species. (For example, managing for turkey habitat benefits smoky shrews, hermit thrushes, towhees, woodpeckers, great crested flycatchers, dusky salamanders, Fowlers toads, and black snakes, among other species.)
Re-introduction and stocking of native species	<ul style="list-style-type: none"> • Re-introduction of extirpated species or stocking of depleted native species would be allowed in order to reestablish species or strengthen ecosystem processes.
Introduction of non-native species	<ul style="list-style-type: none"> • There would be a general policy of no introductions of non-native wildlife species. Exceptions would be made only following applicable environmental review, including evaluations of the potential effects on native species and the environment, and the potential biological and social benefits.
Management of federal and state sensitive species	<ul style="list-style-type: none"> • All species listed under the federal Endangered Species Act and state equivalents would be managed in accordance with applicable federal and state laws and recovery plans.
HABITAT MANAGEMENT	
Management of ecological processes	<ul style="list-style-type: none"> • Management would rely on natural processes where practical. Judicious use of active habitat management would be allowed in order to meet specific wildlife management objectives. Active management could include (1) creating, reestablishing, and maintaining clearings to enhance wildlife habitat, (2) forest management for vegetative species diversity and mast production, (3) planting trees, shrubs, and/or herbaceous species for wildlife food, cover and critical

MANAGEMENT FACTOR	STANDARDS FOR RESOURCE MANAGEMENT UNDER ALTERNATIVES 2 AND 4
	habitat, and (4) controlling water levels in selected wetlands for migratory bird and aquatic furbearer sustenance.
Management of non-native plants	<ul style="list-style-type: none"> • While preference would be given to native species, non-native plants could be introduced in clearings and along roads and trails if these were the only realistic choice for the anticipated use and if managers have confidence that these plants would not spread to other areas. • Invasive exotic plants would be controlled to the extent practical.
Agriculture	<ul style="list-style-type: none"> • Agriculture (e.g., haying and cultivating row crops such as corn) would be used where appropriate as a means to achieve wildlife objectives. • Commercial leases could be used to accomplish habitat management objectives. • All agricultural activities would be conducted in accordance with recognized best management practices (BMPs).
Forest stand management	<ul style="list-style-type: none"> • Forest management using both even-aged and uneven-aged silvicultural systems would be utilized to enhance wildlife habitat. Forest stands would be managed using various techniques, including clearcuts, shelterwood cuts, single tree selection, group selection, and deferment cuts. Harvests would be limited to that needed to achieve a specific wildlife objective, and would be conducted in accordance with recognized BMPs. Clearcuts and shelterwood cuts would be limited to a maximum size of 25 acres. Managers would be encouraged to experiment with different cut patterns and techniques (e.g., timber stand improvement) to determine those that produce the desired outcome with low environmental impact. • Timber damaged or destroyed by natural hazard or insect infestations could be removed through salvage operations if this is compatible with natural resource management objectives. • Managers would have the option to conduct forest management operations using private contractors if this is the most efficient and economical way to achieve objectives.
Fire management	<ul style="list-style-type: none"> • Prescribed burning would be recognized as an ecologically sound way to maintain or create wildlife habitat and would be used as appropriate. • Wildfire would be managed under the guidance of state forestry departments and according to applicable state or federal regulations and BMPs.
Maintaining existing clearings	<ul style="list-style-type: none"> • Existing clearings would be maintained if they continue to serve a management purpose. • Existing clearings would be maintained using a range of techniques (e.g., mowing, burning, brush-hogging). Heavy equipment (e.g., bulldozers, road graders) could be used when required but must follow BMPs to minimize erosion and sedimentation into streams, while protecting archeological resources.
Reclaiming overgrown clearings	<ul style="list-style-type: none"> • Reclaiming of clearings would be allowed. Heavy equipment could be used when required but must follow BMPs.
New clearings	<ul style="list-style-type: none"> • New clearings would be created as necessary to meet wildlife objectives. • Use of timber harvesting techniques to make clearings would be subject to provisions described above under “forest stand management”.
Shoreline modifications	<ul style="list-style-type: none"> • New projects would not be allowed unless they would address a demonstrated public need and could be accomplished with low environmental impact and no adverse effect on identified outstanding resource values. • Shoreline modification projects would likely require W&SRA Section 7 review.

MANAGEMENT FACTOR	STANDARDS FOR RESOURCE MANAGEMENT UNDER ALTERNATIVES 2 AND 4
Wetlands construction/restoration and management of water control structures	<ul style="list-style-type: none"> Existing artificial wetlands and water manipulation projects would continue to be maintained as long as they support wildlife objectives. New projects would be constructed only if they would serve a demonstrated site management need and could be implemented with low impact to the environment. New projects within the bed and banks of the New River would require W&SRA Section 7 review.
Use of pesticides, herbicides, insecticides, fish toxicants	<ul style="list-style-type: none"> Non-restrictive use pesticides, herbicides, insecticides, and fish toxicants would be used judiciously to meet management objectives. Use of other pesticides and herbicides would occur only when no other alternative is available. All use of these chemicals would be subject to applicable state and federal laws and policies.
Management of federal and state sensitive plant species	<ul style="list-style-type: none"> All species listed under the federal Endangered Species Act and state equivalents would be managed in accordance with applicable federal and state laws and recovery plans.
MANAGEMENT OF TRADITIONAL PUBLIC USES	
Dispersed pedestrian access	<ul style="list-style-type: none"> The entire area would continue to be open to foot traffic, except when and where restrictions are necessary for public safety, resource management (e.g., protection of wildlife nesting areas), or protection of agricultural or other lease holdings.
Hunting	<ul style="list-style-type: none"> Hunting would be allowed and guaranteed in legislation. Hunting would be subject to applicable state regulations.
Fishing	<ul style="list-style-type: none"> Fishing would be allowed and guaranteed in legislation. Fishing would be subject to applicable state regulations.
Trapping	<ul style="list-style-type: none"> Trapping would be allowed and guaranteed in legislation. Trapping would be subject to applicable state regulations.
Wildlife/nature observation	<ul style="list-style-type: none"> Wildlife/nature observation would be allowed, subject to other access policies (e.g., restrictions for public safety or resource management).
Camping	<ul style="list-style-type: none"> Camping would be allowed at designated sites, subject to federal and/or state regulations, policies, and fees. Dispersed “backcountry” camping would be prohibited. Camping on islands or other boat access only locations would be prohibited unless sites were designated for this purpose.
Boating	<ul style="list-style-type: none"> Traditional use of motorized and non-motorized boats for low-impact recreational purposes would be allowed, subject to applicable state regulations. Personal watercraft (PWCs) would not be allowed. Launching of boats from trailers would be restricted to designated ramps. Steps would be taken to discourage introduction of exotic species via boats and trailers.
Gathering of abundant and renewable natural products	<ul style="list-style-type: none"> Gathering of abundant and renewable natural products including fishing bait (e.g., worms, insects, minnows) and wild edibles (e.g., berries, mushrooms) for personal, non-commercial use would be allowed. Gathering for other purposes (e.g., commercial sale) would be prohibited.

MANAGEMENT FACTOR	STANDARDS FOR RESOURCE MANAGEMENT UNDER ALTERNATIVES 2 AND 4
Safety	<ul style="list-style-type: none"> • Limited and reasonable restrictions may be placed on public access to certain areas and/or for certain uses during hunting seasons, flood hazards, or other times when public safety is a concern. • Safety zones would be enforced around campgrounds and other high use areas. Hunting and shooting would not be allowed in these areas.
MANAGEMENT OF OTHER PUBLIC USES	
Non-motorized recreational travel	<ul style="list-style-type: none"> • Hiking, mountain biking, and horseback riding on designated routes would be allowed, subject to appropriate access restrictions related to public safety, wildlife management, or resource protection. • Because of their importance as the primary emphases of the area, fish and wildlife management and traditional public uses would be given priority over non-motorized recreational travel (e.g., the location and timing of non-motorized recreation would be managed to minimize conflicts with fish and wildlife management or traditional public uses). • Organized horseback riding and bicycling events are not permitted in WV.
Motor vehicles	<ul style="list-style-type: none"> • Automobiles, light trucks, motorcycles and recreational vehicles would be allowed on designated roadways. • Motorized all-terrain vehicles (ATVs) would not be allowed (except on designated state motor vehicle roadways if authorized for such use under state law).
Commercial recreation	<ul style="list-style-type: none"> • Commercial outfitters and guides (boat livery operators, fishing guides, etc.) would be allowed to operate in the area. Any commercial permits that might be required in the future would be established and administered in accordance with applicable federal and state laws and policies. • No single commercial entity would be given an exclusive license to provide livery or guiding services throughout the designated national wild and scenic river area.
MANAGEMENT OF PUBLIC ACCESS AND RECREATION FACILITIES	
Public access facilities	<ul style="list-style-type: none"> • Existing roads and related facilities (e.g., gates) would be managed for consistency with the area’s management objectives. Some areas may be gated and closed to limit public access in order to achieve resource management goals. • Priority would be given to enhancing existing roads, parking lots, and other access facilities over developing new facilities. • New access roads or parking areas would be developed only if they would meet a demonstrated need and not adversely impact riparian zones, fish and wildlife, traditional public uses, and/or the relatively undeveloped, remote character of the area. • Road and trail construction and maintenance would be consistent with erosion and sedimentation control BMP standards.

MANAGEMENT FACTOR	STANDARDS FOR RESOURCE MANAGEMENT UNDER ALTERNATIVES 2 AND 4
Camping and day use areas	<ul style="list-style-type: none"> • In general, camping areas would be primitive in nature, with no electrical, water, or sewage hook-ups. Due to its accessibility and relatively developed surroundings, camping facilities at the existing town park in Glen Lyn, VA, (upstream of the Route 460 Bridge) could be less primitive than at other, more remote areas. • Existing designated camping and day use sites in WV would continue to operate. Campsites where use is causing significant erosion or degradation of the riparian corridor would be stabilized, phased out or relocated over time. Other campground improvements would be made over time, with priority given to upgrading sanitary facilities and stabilizing/hardening sites within 100 feet of the high water mark. • Managers would work with the Town of Glen Lyn to enhance the existing town park. • In VA, existing informal camping and day use areas would be evaluated to determine how best to provide appropriate public use and protect the environment. Some existing sites would be closed in order to stop resource degradation, and would be actively restored or allowed to naturally revegetate. Others would be improved through site stabilization/hardening, providing sanitary facilities, etc. • Priority would be given to enhancing existing campgrounds and day use areas over developing new facilities. • New camping and day use areas would be developed only if there is a demonstrated need and would largely be limited to replacement of other sites that are being closed. In general, new campsites would be located at least one hundred feet from the river. New camping and day use areas within 100 feet of the river would be limited to sites that are outside of the normal floodplain, that are not subject to excessive erosion, and that do not excessively intrude on the natural setting as viewed from the river. Any new sites within 100 feet of the river would be stabilized to minimize erosion. • Camping and day use areas, both existing and potential, would be managed such that health and safety requirements are met, vehicles are restricted to designated roadways and parking areas, and the relatively undeveloped, remote character of the area is maintained.
Boat landings	<ul style="list-style-type: none"> • Existing boat ramps would be maintained and improved as needed over time. • A limited number of new boat ramps may be developed in the future, although priority would be given to meeting demand through improvements to existing ramps. • The boat launch at the park in Glen Lyn would serve as a primary location in VA for boat access to the river downstream.
Trails for hiking, mountain biking, and horseback riding	<ul style="list-style-type: none"> • Existing trails would remain open and be maintained unless environmental damage or conflicts with resource management objectives or traditional public uses occur. • New trails or facilities would be developed only if they meet a demonstrated need. Conflicts with fish and wildlife and other public uses would be avoided by judicious siting of facilities and/or closure during certain times of the year, for example, during critical wildlife rearing seasons or hunting seasons.
Other areas and facilities	<ul style="list-style-type: none"> • Managers would work with the American Electric Power Company to determine a suitable public use for the existing flyash landfill in Glen Lyn once it has reached its disposal capacity.

MANAGEMENT FACTOR	STANDARDS FOR RESOURCE MANAGEMENT UNDER ALTERNATIVES 2 AND 4
MANAGEMENT OF HISTORIC AND ARCHEOLOGIC RESOURCES	
General standards	<ul style="list-style-type: none"> • Known historic/archeological sites would be protected. • An inventory of historic/archeological sites would be completed. • Management activities that might disturb historic or archeological sites (e.g., agricultural practices such as plowing; creating/maintaining/reclaiming clearings; establishing new facilities such as campgrounds) would comply with applicable state and federal historic protection laws and regulations. • Managers would seek to ensure that public use of the area does not adversely affect historic and archeological resources. • Interpretation of historic sites would not be a management priority, but could be provided if and when sufficient capacity exists (i.e., funding, staff, and/or an appropriate partnership opportunity) and it is determined that interpretive activities and associated public use would not result in degradation of sensitive resources or interfere with wildlife management and traditional public uses.
MANAGEMENT OF LANDSCAPE CHARACTER	
General standards	<ul style="list-style-type: none"> • In designing, constructing, and/or maintaining facilities for public access/recreation and management purposes, managers would seek to minimize impacts on the relatively undeveloped and remote character of the area. • No land manipulation or placement of structures or facilities would be undertaken that resulted in permanent intrusions to mid or long-range views of the river corridor. • Signage and other visitor information and education facilities would be designed so as to not detract from the area's relatively undeveloped and remote character.

APPENDIX 5.C.2. Resource Management Standards for Alternative 3

Following are standards for the management of natural, cultural, and recreational resources and related facilities that would apply under Alternative 3. While the standards presented below provide the general outline for management under that alternative, more detailed prescriptions would be developed in the general management plan and subsequent planning documents that would be prepared if Alternative 3 is ultimately selected for implementation. Those more detailed prescriptions would be consistent with the general standards presented below.

Note that the standards below would apply to the area affected by Alternative 3, that is, the New River from the confluence with Buffalo Creek above Steer Island in West Virginia upstream to the upper extent of the Bluestone Project Area above Glen Lyn, Virginia, and adjacent federal lands. (See Chapter 5.3.5 for a more detailed description.) Resource management activities and public use on other nearby public lands and waters would not be affected (for example, the stocking of muskellunge fingerlings in the Bluestone River and sterile hybrid striped bass in Bluestone Lake, or the speed of motorboats and use of personal watercraft on Bluestone Lake).

It is also important to note that some of the standards described below (for instance, allowing trapping and maintaining existing agricultural clearings) may entail a departure from the National Park Service's generic management policies for lands under its administration. These exceptions to NPS policy would need to be specifically authorized in the legislation designating the area as a National Wild and Scenic River and assigning administrative responsibility to the NPS. Note that while hunting is often prohibited in national parks and national monuments, this is not the case with National Park Service-administered wild and scenic rivers that are not in national parks or monuments. In fact, Section 13(a) of the WSRA specifies that hunting and fishing will be allowed to continue.

MANAGEMENT FACTOR	STANDARDS FOR RESOURCE MANAGEMENT UNDER ALTERNATIVE 3
MANAGEMENT OF FISH AND OTHER AQUATIC SPECIES	
Single species management	<ul style="list-style-type: none"> • Management of focal species would continue to be conducted in the broader context of other species and the overall ecosystem
Reintroduction and stocking of native species	<ul style="list-style-type: none"> • Reintroduction of extirpated species or stocking of depleted native species would be allowed in order to reestablish species or strengthen ecosystem processes.
Stocking naturalized species	<ul style="list-style-type: none"> • Stocking of naturalized species such as smallmouth bass would be allowed following applicable environmental review, including evaluation of (1) potential effects on native species and the aquatic environment, and (2) potential biological and social benefits.
Stocking non-native species	<ul style="list-style-type: none"> • Stocking of brown and rainbow trout in Indian Creek would continue to the extent that this continues to serve a recreational fishing purpose and does not adversely affect native species. • Other stocking of non-native species would not occur unless it could be demonstrated that this would serve an important biological purpose and would not adversely affect native species.
Management of federal and state sensitive species	<ul style="list-style-type: none"> • All species listed under the federal Endangered Species Act and state equivalents would be managed in accordance with applicable federal and state laws and recovery plans.
MANAGEMENT OF TERRESTRIAL WILDLIFE	
Single species management	<ul style="list-style-type: none"> • Management would continue to emphasize “featured species associations”, in which management actions for featured species also benefit a variety of other species. (For example, managing for turkey habitat benefits smoky shrews, hermit thrushes, towhees, woodpeckers, great crested flycatchers, dusky salamanders, Fowlers toads, and black snakes, among other species.)
Re-introduction and stocking of native species	<ul style="list-style-type: none"> • Re-introduction of extirpated species or stocking of depleted native species would be allowed in order to reestablish species or strengthen ecosystem processes.
Introduction of non-native species	<ul style="list-style-type: none"> • There would be a general policy of no introductions of non-native wildlife species.
Management of federal and state sensitive species	<ul style="list-style-type: none"> • All species listed under the federal Endangered Species Act and state equivalents would be managed in accordance with applicable federal and state laws and recovery plans.
HABITAT MANAGEMENT	
Management of ecological processes	<ul style="list-style-type: none"> • Management would rely on natural processes where practical. Judicious use of active habitat management would be allowed in order to meet specific wildlife management objectives. Active management could include (1) maintaining existing clearings to enhance wildlife habitat, and (2) maintaining water levels in the existing wetlands site at Crump’s Bottom for migratory bird and aquatic furbearer sustenance.
Management of non-native plants	<ul style="list-style-type: none"> • Invasive exotic plants would be controlled to the extent practical.
Agriculture	<ul style="list-style-type: none"> • Agriculture (e.g., haying and cultivating row crops such as corn) would be used where appropriate in existing areas, as a means to achieve wildlife habitat management objectives.

MANAGEMENT FACTOR	STANDARDS FOR RESOURCE MANAGEMENT UNDER ALTERNATIVE 3
	<ul style="list-style-type: none"> • Commercial leases could be used as warranted to accomplish habitat management objectives. • All agricultural activities would be conducted in accordance with recognized best management practices (BMPs).
Forest stand management	<ul style="list-style-type: none"> • Forest stands would be managed for natural succession. • Timber damaged or destroyed by natural hazard or insect infestations could be removed through salvage operations if this is compatible with natural resource management objectives.
Fire management	<ul style="list-style-type: none"> • Prescribed burning would be recognized as an ecologically sound way to maintain wildlife habitat and/or to accelerate natural succession as appropriate. • Wildfire would be managed under the guidance of state forestry departments, and the National Park Service, according to applicable state and federal regulations and BMPs.
Maintaining existing clearings	<ul style="list-style-type: none"> • Existing clearings would be maintained if they continue to serve a management purpose. • Existing clearings would be maintained using a range of techniques (e.g., mowing, burning, brush-hogging). Heavy equipment (e.g., bulldozers, road graders) could be used when required but must follow BMPs to minimize erosion and sedimentation into streams, while protecting archeological resources.
Reclaiming overgrown clearings	<ul style="list-style-type: none"> • Reclaiming of clearings associated with road traces would be allowed, based on the general management plan. Heavy equipment could be used when required but must follow BMPs.
New clearings	<ul style="list-style-type: none"> • No new clearings would be created for habitat purposes.
Shoreline modifications	<ul style="list-style-type: none"> • New projects would not be allowed unless they would address a demonstrated public need and could be accomplished with low environmental impact and no adverse effect on identified outstanding resource values. • Shoreline modification projects would likely require W&SRA Section 7 review.
Wetlands construction/restoration and management of water control structures	<ul style="list-style-type: none"> • Existing artificial wetlands and water manipulation projects would continue to be maintained as long as they support wildlife objectives. • New projects within the bed and banks of the New River would require W&SRA Section 7 review.
Use of pesticides, herbicides, insecticides, fish toxicants	<ul style="list-style-type: none"> • Non-restrictive use pesticides-and fish toxicants would be used judiciously to meet management objectives. All use of these chemicals would be subject to applicable state and federal laws and National Park Service policies.
Management of federal and state sensitive plant species	<ul style="list-style-type: none"> • All species listed under the federal Endangered Species Act and state equivalents would be managed in accordance with applicable federal and state laws and recovery plans.
MANAGEMENT OF TRADITIONAL PUBLIC USES	
Dispersed pedestrian access	<ul style="list-style-type: none"> • The entire area would continue to be open to foot traffic, except when and where restrictions are necessary for public safety, resource management (e.g., protection of wildlife nesting areas), or protection of agricultural or other lease holdings.
Hunting	<ul style="list-style-type: none"> • Hunting would be allowed and guaranteed in legislation. • Hunting would be subject to applicable state regulations.
Fishing	<ul style="list-style-type: none"> • Fishing would be allowed and guaranteed in legislation. • Fishing would be subject to applicable state regulations.

MANAGEMENT FACTOR	STANDARDS FOR RESOURCE MANAGEMENT UNDER ALTERNATIVE 3
Trapping	<ul style="list-style-type: none"> • Trapping would be allowed and guaranteed in legislation. • Trapping would be subject to applicable state regulations.
Wildlife/nature observation	<ul style="list-style-type: none"> • Wildlife/nature observation would be allowed, subject to other access policies (e.g., restrictions for public safety or resource management).
Camping	<ul style="list-style-type: none"> • Camping would be allowed at designated sites, subject to federal regulations, policies, and fees. • Dispersed “backcountry” camping would be considered based on the general management plan. • Camping on islands or other boat access only locations would be considered based on the general management plan.
Boating	<ul style="list-style-type: none"> • Traditional use of motorized and non-motorized boats for low-impact recreational purposes would be allowed, subject to applicable state regulations. • Personal watercraft (PWCs) would not be allowed. • Launching of boats from trailers would be restricted to designated ramps. • Steps would be taken to discourage introduction of exotic species via boats and trailers.
Gathering of abundant and renewable natural products	<ul style="list-style-type: none"> • Gathering of abundant and renewable natural products including fishing bait (e.g., worms, insects, minnows) and wild edibles (e.g., berries, mushrooms) for personal, non-commercial use would be allowed. • Gathering for other purposes (e.g., commercial sale) would be prohibited.
Safety	<ul style="list-style-type: none"> • Limited and reasonable restrictions may be placed on public access to certain areas and/or for certain uses during hunting seasons, flood hazards, or other times when public safety is a concern. • Safety zones would be enforced around campgrounds and other high use areas. Hunting and shooting would not be allowed in these areas.
MANAGEMENT OF OTHER PUBLIC USES	
Non-motorized recreational travel	<ul style="list-style-type: none"> • Hiking, mountain biking, and horseback riding on designated routes would be allowed, subject to appropriate access restrictions related to public safety, wildlife management, or resource protection. • Because of their importance, fish and wildlife management and traditional public uses would be given priority over non-motorized recreational travel (e.g., the location and timing of non-motorized recreation would be managed to minimize conflicts with fish and wildlife management or traditional public uses).
Motor vehicles	<ul style="list-style-type: none"> • Automobiles, light trucks, motorcycles and recreational vehicles would be allowed on designated roadways. • Motorized all-terrain vehicles (ATVs) would not be allowed (except on designated state motor vehicle roadways if authorized for such use under state law).
Commercial recreation	<ul style="list-style-type: none"> • Commercial outfitters and guides (boat livery operators, fishing guides, etc.) would be allowed to operate in the area. Any commercial permits that might be required in the future would be established and administered in accordance with applicable federal and state laws and policies. • (Commercial fishing and boating guides would be licensed by the state(s), as is the case in the New River Gorge National River and the Gauley River National Recreation Area, or by the NPS through issuance of incidental business permits.) • No single commercial entity would be given an exclusive license to provide livery or guiding services throughout the designated national wild and scenic river area.

MANAGEMENT FACTOR	STANDARDS FOR RESOURCE MANAGEMENT UNDER ALTERNATIVE 3
MANAGEMENT OF PUBLIC ACCESS AND RECREATION FACILITIES	
Public access facilities	<ul style="list-style-type: none"> • Existing roads and related facilities (e.g., gates) would be managed for consistency with the area’s management objectives. Some areas may be gated and closed to limit public access in order to achieve resource management goals. • Priority would be given to enhancing existing roads, parking lots, and other access facilities over developing new facilities. • New access roads or parking areas would be developed only if they would meet a demonstrated need and would not adversely impact riparian zones, fish and wildlife, traditional public uses, and/or the relatively undeveloped, remote character of the area. • Road and trail construction and maintenance would be consistent with erosion and sedimentation control BMP standards.
Camping and day use areas	<ul style="list-style-type: none"> • In general, camping areas would be relatively primitive in nature, with basic sanitary facilities, picnic tables, and well water provided but no electrical, water, or sewage hook-ups. Due to its accessibility and relatively developed surroundings, the existing town park in Glen Lyn, VA, (upstream of the Route 460 Bridge) could offer additional amenities beyond those available at other, more remote camping areas. • Existing designated camping and day use sites in WV would continue to operate. Campsites where use is causing significant erosion or degradation of the riparian corridor would be stabilized, phased out or relocated over time. Other campground improvements would be made over time, with priority given to upgrading sanitary facilities and stabilizing/hardening sites within 100 feet of the high water mark. • Managers would work with the Town of Glen Lyn to enhance the existing town park (e.g., upgrade sanitary facilities). • In VA, existing informal camping and day use areas would be evaluated to determine how best to provide appropriate public use and protect the environment. Some existing sites would be closed in order to stop resource degradation, and would be actively restored or allowed to naturally re-vegetate. Others would be improved through site stabilization/hardening, providing sanitary facilities, etc. • Priority would be given to enhancing existing campgrounds and day use areas over developing new facilities. • New camping and day use areas would be developed only if there is a demonstrated need and would largely be limited to replacement of other sites that are being closed. In general, new campsites would be located at least one hundred feet from the river. New camping and day use areas within 100 feet of the river would be limited to sites that are outside of the normal floodplain, that are not subject to excessive erosion, and that do not excessively intrude on the natural setting as viewed from the river. Any new sites within 100 feet of the river would be stabilized/hardened to minimize erosion. • Camping and day use areas, both existing and potential, would be managed such that health and safety requirements are met, vehicles are restricted to designated roadways and parking areas, and the relatively undeveloped, remote character of the area is maintained.
Boat landings	<ul style="list-style-type: none"> • Existing boat ramps would be maintained and improved as needed over time, with an emphasis placed on using the most environmentally sensitive techniques that are feasible for the particular situation. • A limited number of new boat ramps may be developed in the future, although priority would be given to meeting demand through improvements to existing ramps. • The boat launch at the park in Glen Lyn would serve as a primary location in VA for boat access to the river downstream.
Trails for hiking, mountain biking, and horseback riding	<ul style="list-style-type: none"> • Existing trails would remain open and be maintained unless environmental damage or conflicts with resource management objectives or traditional public uses occur.

MANAGEMENT FACTOR	STANDARDS FOR RESOURCE MANAGEMENT UNDER ALTERNATIVE 3
	<ul style="list-style-type: none"> • New trails or facilities would be developed only if they meet a demonstrated need. Conflicts with fish and wildlife and other public uses would be avoided by judicious siting of facilities and/or closure during certain times of the year, for example, during critical wildlife rearing seasons or hunting seasons.
Other areas and facilities	<ul style="list-style-type: none"> • Managers would work with the American Electric Power Company to determine a suitable public use for the existing flyash landfill in Glen Lyn once it has reached its disposal capacity.
MANAGEMENT OF HISTORIC AND ARCHEOLOGIC RESOURCES	
General standards	<ul style="list-style-type: none"> • Known historic/archeological sites would be protected. • An inventory of historic/archeological sites would be completed. • Management activities that might disturb historic or archeological sites (e.g., agricultural practices such as plowing; creating/maintaining/reclaiming clearings; establishing new facilities such as campgrounds) would comply with applicable state and federal historic protection laws and regulations. • Managers would seek to ensure that public use of the area does not adversely affect historic and archeological resources. • Interpretation of historic sites would be provided as determined by the general management plan and subsequent planning documents.
MANAGEMENT OF LANDSCAPE CHARACTER	
General standards	<ul style="list-style-type: none"> • In designing, constructing, and/or maintaining facilities for public access/recreation and management purposes, managers would seek to minimize impacts on the relatively undeveloped and remote character of the area. • No land manipulation or placement of structures or facilities would be undertaken that resulted in permanent intrusions to mid or long-range views of the river corridor. • Signage and other visitor information and education facilities would be designed so as to not detract from the area's relatively undeveloped and remote character.

APPENDIX 5.C.3. Comparison of Resource Management Standards for Alternatives 2, 3 and 4

The following table provides a side-by-side comparison of the resource management standards for Alternatives 2 and 4 (which adhere to the same set of standards) with those for Alternative 3. For those management factors for which the standards for all 3 alternatives are the same, this is indicated with the notation “Same”. For those management factors for which the standards for Alternatives 2 and 4 differ from those for Alternative 3, the standards for all three alternatives are presented in their entirety even if some or most of the language is the same. Underlining is provided to assist the reader in identifying differences. Please refer back to the preceding parts of this appendix for complete descriptions of resource management standards for Alternatives 2, 3 and 4.

MANAGEMENT FACTOR	RESOURCE MANAGEMENT STANDARDS FOR ALTERNATIVES 2 AND 4	RESOURCE MANAGEMENT STANDARDS FOR ALTERNATIVE 3
MANAGEMENT OF FISH AND OTHER AQUATIC SPECIES		
Single species management	<ul style="list-style-type: none"> • Same 	<ul style="list-style-type: none"> • Same
Reintroduction and stocking of native species	<ul style="list-style-type: none"> • Same 	<ul style="list-style-type: none"> • Same
Stocking naturalized species	<ul style="list-style-type: none"> • Same 	<ul style="list-style-type: none"> • Same
Stocking non-native species	<ul style="list-style-type: none"> • Stocking of brown and rainbow trout in Indian Creek would continue to the extent that this continues to serve a recreational fishing purpose and does not adversely affect native species. • Other stocking of non-native species would not occur unless it could be demonstrated that this would serve an important biological <u>or social</u> purpose and would not adversely affect native species. 	<ul style="list-style-type: none"> • Stocking of brown and rainbow trout in Indian Creek would continue to the extent that this continues to serve a recreational fishing purpose and does not adversely affect native species. • Other stocking of non-native species would not occur unless it could be demonstrated that this would serve an important biological purpose and would not adversely affect native species.
Management of federal and state sensitive species	<ul style="list-style-type: none"> • Same 	<ul style="list-style-type: none"> • Same
MANAGEMENT OF TERRESTRIAL WILDLIFE		
Single species management	<ul style="list-style-type: none"> • Same 	<ul style="list-style-type: none"> • Same
Re-introduction and stocking of native species	<ul style="list-style-type: none"> • Same 	<ul style="list-style-type: none"> • Same

MANAGEMENT FACTOR	RESOURCE MANAGEMENT STANDARDS FOR ALTERNATIVES 2 AND 4	RESOURCE MANAGEMENT STANDARDS FOR ALTERNATIVE 3
Introduction of non-native species	<ul style="list-style-type: none"> • There would be a general policy of no introductions of non-native wildlife species. <u>Exceptions would be made only following applicable environmental review, including evaluations of the potential effects on native species and the environment, and the potential biological and social benefits.</u> 	<ul style="list-style-type: none"> • There would be a general policy of no introductions of non-native wildlife species.
Management of federal and state sensitive species	<ul style="list-style-type: none"> • Same 	<ul style="list-style-type: none"> • Same
HABITAT MANAGEMENT		
Management of ecological processes	<ul style="list-style-type: none"> • Management would rely on natural processes where practical. Judicious use of active habitat management would be allowed in order to meet specific wildlife management objectives. Active management could include <u>(1) creating, reestablishing, and maintaining clearings to enhance wildlife habitat, (2) forest management for vegetative species diversity and mast production, (3) planting trees, shrubs, and/or herbaceous species for wildlife food, cover and critical habitat, and (4) controlling water levels in selected wetlands for migratory bird and aquatic furbearer sustenance.</u> 	<ul style="list-style-type: none"> • Management would rely on natural processes where practical. Judicious use of active habitat management would be allowed in order to meet specific wildlife management objectives. Active management could include <u>(1) maintaining existing clearings to enhance wildlife habitat, and (2) maintaining water levels in the existing wetlands site at Crump’s Bottom for migratory bird and aquatic furbearer sustenance.</u>
Management of non-native plants	<ul style="list-style-type: none"> • <u>While preference would be given to native species, non-native plants could be introduced in clearings and along roads and trails if these were the only realistic choice for the anticipated use and if managers have confidence that these plants would not spread to other areas.</u> • Invasive exotic plants would be controlled to the extent practical. 	<ul style="list-style-type: none"> • Invasive exotic plants would be controlled to the extent practical.
Agriculture	<ul style="list-style-type: none"> • Agriculture (e.g. haying and cultivating row crops such as corn) would be used where appropriate as a means to achieve wildlife objectives. • Commercial leases would be used as warranted to accomplish habitat management objectives. • All agricultural activities would be conducted in accordance with recognized best management practices (BMPs). 	<ul style="list-style-type: none"> • Agriculture (e.g. haying and cultivating row crops such as corn) would be used where appropriate <u>in existing areas</u> as a means to achieve wildlife habitat management objectives. • Commercial leases could be used as warranted to accomplish habitat management objectives. • All agricultural activities would be conducted in accordance with recognized best management practices (BMPs).

MANAGEMENT FACTOR	RESOURCE MANAGEMENT STANDARDS FOR ALTERNATIVES 2 AND 4	RESOURCE MANAGEMENT STANDARDS FOR ALTERNATIVE 3
Forest stand management	<ul style="list-style-type: none"> • <u>Forest management using both even-aged and uneven-aged silvicultural systems would be utilized to enhance wildlife habitat. Forest stands would be managed using various techniques, including clearcuts, shelterwood cuts, single tree selection, group selection, and deferment cuts. Harvests would be limited to that needed to achieve a specific wildlife objective, and would be conducted in accordance with recognized BMPs. Clearcuts and shelterwood cuts would be limited to a maximum size of 25 acres. Managers would be encouraged to experiment with different cut patterns and techniques (e.g., timber stand improvement) to determine those that produce the desired outcome with low environmental impact.</u> • Timber damaged or destroyed by natural hazard or insect infestations could be removed through salvage operations if this is compatible with natural resource management objectives. • <u>Managers would have the option to conduct forest management operations using private contractors if this is the most efficient and economical way to achieve objectives.</u> 	<ul style="list-style-type: none"> • <u>Forest stands would be managed for natural succession.</u> • Timber damaged or destroyed by natural hazard or insect infestations could be removed through salvage operations if this is compatible with natural resource management objectives.
Fire management	<ul style="list-style-type: none"> • Prescribed burning would be recognized as an ecologically sound way to maintain <u>or create</u> wildlife habitat and would be used as appropriate. • Wildfire would be managed under the guidance of state forestry departments and according to applicable state or federal regulations and BMPs. 	<ul style="list-style-type: none"> • Prescribed burning would be recognized as an ecologically sound way to maintain wildlife habitat <u>and/or to accelerate natural succession as appropriate.</u> • Wildfire would be managed under the guidance of state forestry departments, and the National Park Service, according to applicable state and federal regulations and BMPs.
Maintaining existing clearings	<ul style="list-style-type: none"> • Same 	<ul style="list-style-type: none"> • Same
Reclaiming overgrown clearings	<ul style="list-style-type: none"> • Reclaiming of clearings would be allowed. Heavy equipment could be used when required but must follow BMPs. 	<ul style="list-style-type: none"> • Reclaiming of clearings <u>associated with road traces</u> would be allowed, <u>based on the general management plan.</u> Heavy equipment could be used when required but must follow BMPs.

MANAGEMENT FACTOR	RESOURCE MANAGEMENT STANDARDS FOR ALTERNATIVES 2 AND 4	RESOURCE MANAGEMENT STANDARDS FOR ALTERNATIVE 3
New clearings	<ul style="list-style-type: none"> • <u>New clearings would be created as necessary to meet wildlife objectives.</u> • <u>Use of timber harvesting techniques to make clearings would be subject to provisions described above under “forest stand management”.</u> 	<ul style="list-style-type: none"> • <u>No new clearings would be created for habitat purposes.</u>
Shoreline modifications	<ul style="list-style-type: none"> • Same 	<ul style="list-style-type: none"> • Same
Wetlands construction/restoration and management of water control structures	<ul style="list-style-type: none"> • Existing artificial wetlands and water manipulation projects would continue to be maintained as long as they support wildlife objectives. <u>New projects would be constructed only if they would serve a demonstrated site management need and could be implemented with low impact to the environment.</u> • New projects within the bed and banks of the New River would require W&SRA Section 7 review. 	<ul style="list-style-type: none"> • Existing artificial wetlands and water manipulation projects would continue to be maintained as long as they support wildlife objectives. • New projects within the bed and banks of the New River would require W&SRA Section 7 review.
Use of pesticides, herbicides, insecticides, fish toxicants	<ul style="list-style-type: none"> • Non-restrictive use pesticides, herbicides, insecticides, and fish toxicants would be used judiciously to meet management objectives. <u>Use of other pesticides and herbicides would occur only when no other alternative is available.</u> All use of these chemicals would be subject to applicable state and federal laws and policies. 	<ul style="list-style-type: none"> • Non-restrictive use pesticides-and fish toxicants would be used judiciously to meet management objectives. All use of these chemicals would be subject to applicable state and federal laws <u>and National Park Service policies.</u>
Management of federal and state sensitive plant species	<ul style="list-style-type: none"> • Same 	<ul style="list-style-type: none"> • Same
MANAGEMENT OF TRADITIONAL PUBLIC USES		
Dispersed pedestrian access	<ul style="list-style-type: none"> • Same 	<ul style="list-style-type: none"> • Same
Hunting	<ul style="list-style-type: none"> • Same 	<ul style="list-style-type: none"> • Same
Fishing	<ul style="list-style-type: none"> • Same 	<ul style="list-style-type: none"> • Same
Trapping	<ul style="list-style-type: none"> • Same 	<ul style="list-style-type: none"> • Same
Wildlife/nature observation	<ul style="list-style-type: none"> • Same 	<ul style="list-style-type: none"> • Same

MANAGEMENT FACTOR	RESOURCE MANAGEMENT STANDARDS FOR ALTERNATIVES 2 AND 4	RESOURCE MANAGEMENT STANDARDS FOR ALTERNATIVE 3
Camping	<ul style="list-style-type: none"> • Camping would be allowed at designated sites, subject to federal <u>and/or state</u> regulations, policies, and fees. • Dispersed “backcountry” camping would be <u>prohibited</u>. • Camping on islands or other boat access only locations would be <u>prohibited unless sites were designated for this purpose</u>. 	<ul style="list-style-type: none"> • Camping would be allowed at designated sites, subject to federal regulations, policies, and fees. • Dispersed “backcountry” camping would be <u>considered based on the final general management plan</u>. • Camping on islands or other boat access only locations would be <u>considered based on a final general management plan</u>.
Boating	<ul style="list-style-type: none"> • Same 	<ul style="list-style-type: none"> • Same
Gathering of abundant and renewable natural products	<ul style="list-style-type: none"> • Same 	<ul style="list-style-type: none"> • Same
Safety	<ul style="list-style-type: none"> • Same 	<ul style="list-style-type: none"> • Same
MANAGEMENT OF OTHER PUBLIC USES		
Non-motorized recreational travel	<ul style="list-style-type: none"> • Same 	<ul style="list-style-type: none"> • Same
Motor vehicles	<ul style="list-style-type: none"> • Same 	<ul style="list-style-type: none"> • Same
Commercial recreation	<ul style="list-style-type: none"> • Same 	<ul style="list-style-type: none"> • Same
MANAGEMENT OF PUBLIC ACCESS AND RECREATION FACILITIES		
Public access facilities	<ul style="list-style-type: none"> • Same 	<ul style="list-style-type: none"> • Same
Camping and day use areas	<ul style="list-style-type: none"> • Same 	<ul style="list-style-type: none"> • Same
Boat landings	<ul style="list-style-type: none"> • Same 	<ul style="list-style-type: none"> • Same
Trails for hiking, mountain biking, and horseback riding	<ul style="list-style-type: none"> • Same 	<ul style="list-style-type: none"> • Same
Other areas and facilities	<ul style="list-style-type: none"> • Same 	<ul style="list-style-type: none"> • Same

MANAGEMENT FACTOR	RESOURCE MANAGEMENT STANDARDS FOR ALTERNATIVES 2 AND 4	RESOURCE MANAGEMENT STANDARDS FOR ALTERNATIVE 3
MANAGEMENT OF HISTORIC AND ARCHEOLOGIC RESOURCES		
General standards	<ul style="list-style-type: none"> • Known historic/archeological sites would be protected. • An inventory of historic/archeological sites would be completed. • Management activities that might disturb historic or archeological sites (e.g., agricultural practices such as plowing; creating/maintaining/reclaiming clearings; establishing new facilities such as campgrounds) would comply with applicable state and federal historic protection laws and regulations. • Managers would seek to ensure that public use of the area does not adversely affect historic and archeological resources. • <u>Interpretation of historic sites would not be a management priority, but could be provided if and when sufficient capacity exists (i.e., funding, staff, and/or an appropriate partnership opportunity) and it is determined that interpretive activities and associated public use would not result in degradation of sensitive resources or interfere with wildlife management and traditional public uses.</u> 	<ul style="list-style-type: none"> • Known historic/archeological sites would be protected. • An inventory of historic/archeological sites would be completed. • Management activities that might disturb historic or archeological sites (e.g., agricultural practices such as plowing; creating/maintaining/reclaiming clearings; establishing new facilities such as campgrounds) would comply with applicable state and federal historic protection laws and regulations. • Managers would seek to ensure that public use of the area does not adversely affect historic and archeological resources. • <u>Interpretation of historic sites would be provided as determined by the general management plan and subsequent planning documents.</u>
MANAGEMENT OF LANDSCAPE CHARACTER		
General standards	<ul style="list-style-type: none"> • Same 	<ul style="list-style-type: none"> • Same

APPENDIX 5.D. Potential Management Plan Components

Introduction

If one of the action alternatives (i.e., Alternative 2, 3, or 4) is ultimately selected and implemented, a management plan will be prepared to guide future management activities and to implement the National Wild and Scenic River designation. The goals, management principles, and assurances defined in Chapter 5.2 will be incorporated into any such plan, along with the relevant resource management standards from Appendix 5.C.

During the study process, a number of additional actions were suggested for inclusion in the management plan. These proposed actions are listed below. Some aim to resolve existing issues, others to fill unmet needs. Some of the actions are so central to one or more of the action alternatives that they have been incorporated directly into the description of the alternatives in Chapter 5 and Appendix 5.A, and into the corresponding standards for resource management in Appendix 5.C. Others are ideas that, while not mandatory, are worthy of consideration when a management plan is developed because they appear to enjoy broad-based support and would be consistent with any future management approach.

Site Improvements:

- Assist the Town of Glen Lyn, Virginia, to make improvements to the town-managed riverfront park (e.g. upgrade restroom facilities). These improvements would be aimed at establishing this location as a principal point for river access and providing information to the public.
- Enhance existing campgrounds in the West Virginia portion of the study area. Depending on location, these improvements may include updating sanitary facilities, moving campsites in eroded/sensitive riparian areas away from the immediate shoreline and revegetating eroded sites, defining parking areas, etc.
- Evaluate the need, cost, and desirability of establishing a developed campground with basic facilities (including sanitary facilities and potable water) along the river in Virginia.
- In collaboration with Appalachian Power (AP), evaluate the potential for re-use of AP's existing fly ash landfill in Glen Lyn, Virginia for recreation and/or other purposes that complement the conservation and recreational use of the river corridor. Any proposal for re-use of the site must recognize and respect AP's need to continue to dispose of fly ash, which will occur on another site outside of, but near, the study boundary. Particular attention should be given to potential safety issues that could arise from increased public use of the existing narrow road that AP's trucks will need to use to haul fly ash to the new landfill.
- Restore, protect and monitor degraded sites in Virginia, including informal river access points, primitive campsites, and areas heavily impacted by 4-wheel drive vehicles.

Management:

- Increase management presence and law enforcement in the Virginia portion of the study area.
- Organize an annual river cleanup, perhaps as a collaborative, public participation project.
- Establish a policy to confine the use of motorized vehicles to designated roadways in order to protect wildlife, habitat, and other sensitive resources, and to avoid disrupting traditional recreational activities.
- Explore the feasibility of allowing holders of valid Virginia or West Virginia fishing licenses to fish the New River in both states.

Planning:

- Develop a recreation/public access plan that emphasizes traditional uses and explores opportunities for other uses, provided that those opportunities would not conflict with traditional uses or degrade resources. This plan also should address the issue of public use carrying capacity.
- Develop a strategy for enhancing river-related recreational opportunities by, for example, improving access; establishing boat access only campsites; providing information on access, safety, and potential trips; developing a system for notifying recreationists about any closure of road access gates, campgrounds, boat ramps and other facilities (including signage at the boat put-in at the town park in Glen Lyn, Virginia, to notify boaters who are planning to take out at the campgrounds in West Virginia); etc.
- Develop plans for the management of natural, cultural and visual resources. These plans (which could be separate documents or components of a comprehensive management plan) could include identification of important resources, analysis of threats and opportunities, consideration of additional measures to protect and (where feasible) enhance important resources, and identification of appropriate mechanisms for increasing public understanding of these resources. The cultural resource component could include evaluating the potential eligibility of historic/archeologic sites (e.g., prehistoric village sites and batteau chutes) for listing on the National Register of Historic Places and preparing the necessary nomination forms.
- Evaluate the need for land acquisition and, if acquisition is needed, develop a judicious (limited) land acquisition plan with public input. (As described in the assurances presented in Chapter 5.2, any land acquisition would be from willing sellers or through donation.)
- Develop a plan for public information, education and interpretation that complements the conservation and recreational use of the area, and emphasizes facilities and techniques that are consistent with the area's relatively remote, undeveloped character.
- Develop a road management plan that would identify potential road improvements, access limitations/closures, maintenance responsibilities, and funding requirements.
- Evaluate opportunities for enhanced conservation and recreation on federally owned lands (including islands) within the Bluestone Project Area upstream of the designated wild and scenic river area.

Research:

- Conduct a study of the rate and extent of siltation in Bluestone Lake to determine the potential impacts of sedimentation on lake levels, lake recreation, and the free flowing character of the New River immediately upstream of Bluestone Lake (i.e., in the lowermost portion of the designated NWSR segment).
- Complete the inventory of historic and archeological sites initiated by the Army Corps of Engineers.
- Complete baseline inventories for biological and physical resources.
- Conduct a public use carrying capacity study and establish a long-term program to monitor public use of the area.

Linkages:

- Develop a strategy for interaction with the towns/cities of Glen Lyn, Virginia, and Hinton, West Virginia, that would emphasize their status as gateway communities. Develop similar connections to the three abutting West Virginia counties and Giles County, Virginia.
- Develop meaningful and mutually beneficial partnerships with appropriate private sector entities, including Appalachian Power, outfitters/guides, local and regional sporting groups, conservation organizations, etc.
- Explore and develop connections with other river conservation and outdoor recreation initiatives in the region, such as the Bluestone National Scenic River, the New River Blueway, the New River American Heritage River Initiative, the New River Gorge National River and Gauley River National Recreation Area, the Jefferson National Forest, and watershed efforts on Indian Creek and the upper Bluestone River. (See Appendix 5.B for further discussion of potential strategies for connecting the designated NWSR area with these and other regional initiatives.)

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