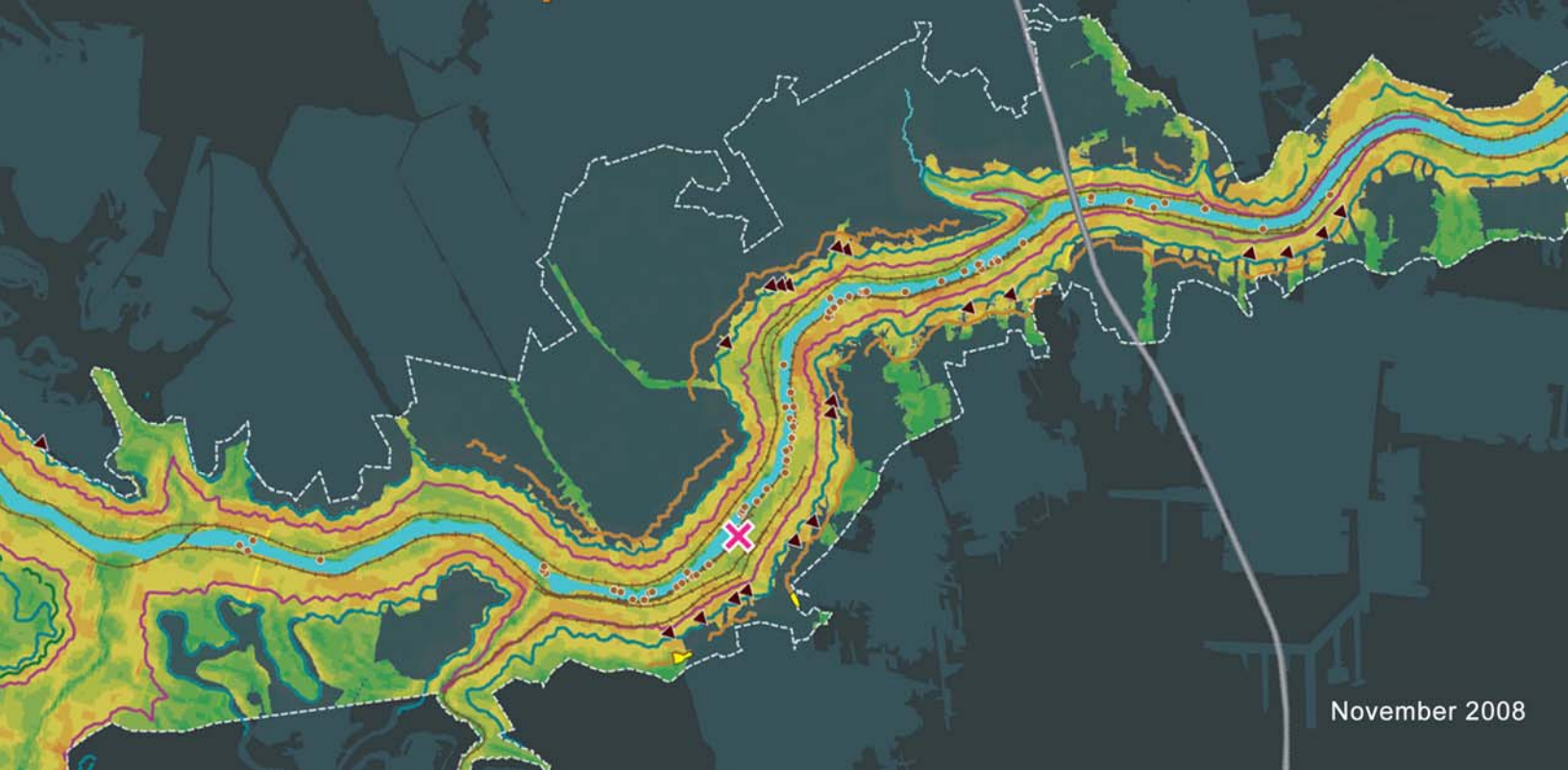
National Park Service
U.S. Department of the Interior

Nuttallburg Visitor Use Area

Implementation Plan/Environmental Assessment



November 2008

ON THE COVER (all photographs courtesy of the National Park Service)

Top: Nuttallburg coke oven bank and rail grade area (spring 2007)

Bottom Left: Nuttallburg headhouse (fall 2006)

Bottom Center: Nuttallburg power house near Nuttallburg headhouse (fall 2006)

Bottom Right: Nuttallburg conveyor (fall 2006)

NUTTALLBURG VISITOR USE AREA

Implementation Plan/Environmental Assessment

New River Gorge National River

Fayette, Summers, and Raleigh Counties, West Virginia

Summary

The National Park Service (NPS) proposes to develop a new visitor use area at New River Gorge National River. The new visitor use area will encompass land within and adjoining the Nuttallburg Mining Complex and Town Historic District. The Historic District has been listed on the *National Register of Historic Places*. The historic district is nationally significant for its association with Henry Ford's revolutionary experiment from 1920 to 1928 to vertically integrate automobile production at his Rouge River Plant in Dearborn, Michigan, by controlling the supply and flow of raw materials needed for automobile manufacturing. It is also nationally significant for Henry Ford's use of engineering innovation at the site. The purpose of the project is to provide a focal point within New River Gorge National River for the interpretation of early coal mining technology in the New River Coal Field. The project is needed to enable visitors to learn about the park's industrial heritage, to provide treatments needed to protect the site's cultural resources, and to protect visitors from unsafe conditions that exist today at the site. As a result of the proposed action visitation to the Nuttallburg area is expected to increase. Because portions of the site provide habitat for two federally-designated endangered species of bats and two state-designated rare species, actions are included in the alternatives under consideration that will protect critical habitat of these species and avoid potential adverse effects associated with development of visitor facilities and visitor use.

This Implementation Plan/Environmental Assessment (IP/EA) examines in detail four alternatives: Alternative 1 – Continuation of Current Management with Structure Stabilization (No Action); Alternative 2 – Multiple Settings on Recreational Trails (Preferred Alternative); Alternative 3 – Integrated Interpretive Destination, and; Alternative 4 – Historic and Cultural Cross Section of the Gorge. All of the alternatives include additional treatments for the site's most significant remaining historic structures – the headhouse, conveyor, and tipple – that will provide long-term stabilization and secure them from collapse. The alternatives vary in terms of the treatments for other cultural resources, the extent of tree thinning at the Mining Complex and town of Nuttallburg site, new trail access, interpretive media and the scope of the interpretive program, and connections to other visitor use areas within the park.

Environmental impacts that will result from implementation are addressed in this IP/EA. Impact topics include: soil resources; vegetation resources; rare, threatened, or endangered species, and their habitats; cultural landscapes; historic buildings and structures; archeological resources; ethnographic resources; local roads and park access; visitor use and visitor experience, and; park operations.

Notes to Reviewers and Respondents

This environmental assessment is available online at the New River Gorge National River web site at http://parkplanning.nps.gov/NERI and is being distributed for public and agency review and comment for a period of 30 days. Comments can be made on-line or in the form of email and letters and must be post marked by the due date posted on the website. Our practice is to make comments, including names and home addresses of respondents, available for public review during regular business hours. Individual respondents may request that we withhold their home address from the record, which we will honor to the extent allowable by law. *If you want us to withhold your name and address, you must state this prominently at the beginning of your comment.* We will make all submissions from organizations and businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public inspection in their entirety.

Please comment on-line at the park website or address comments to: Don Striker, Superintendent, New River Gorge National River, P.O. Box 246, Glen Jean, WV 25846-0246; E-mail: NERI_Superintendent@nps.gov

EXECUTIVE SUMMARY

▪ Project Purpose and Need

New River Gorge National River was established by Congress in 1978 in part to provide public understanding and appreciation of the park's natural, cultural, and scenic resources and values. The park's cultural resources include, among others, the sites of multiple coal mining communities that were once part of a thriving industrial corridor during the late 19th and early 20th centuries. The Nuttallburg Mining Complex and town site is the most intact example of an early 20th century coal mining complex in the New River Gorge and West Virginia, and one of the most complete coal related industrial sites in the United States (NPS 2007). The mining complex has remained essentially unaltered since the 1920s when most of the existing structures and buildings were erected. The town site has been altered by the removal of most of the structures; only foundations and road traces remain.

The National Park Service (NPS) proposes to develop a new visitor use area that will encompass land within and adjoining the Nuttallburg Mining Complex and Town Historic District. The Historic District has been listed on the *National Register of Historic Places*. The historic district is nationally significant for its association with Henry Ford's revolutionary experiment from 1920 to 1928 to vertically integrate automobile production at his Rouge River Plant in Dearborn, Michigan, by controlling the supply and flow of raw materials needed for automobile manufacturing. It is also nationally significant for Henry Ford's use of engineering innovation at the site.

The purpose of the project is to:

- to provide the focal point within New River Gorge National River for the interpretation of early coal mining technology in the New River Gorge
- to provide park visitors with a safe experience that offers opportunities for education and recreation
- to protect the park's natural and cultural resources from potential adverse effects
- to provide visitor facilities that are cost effective, that are harmonious with and integrated into the park environment, and that reflect sustainable design

The project is needed for the following reasons:

- without the project the park's significant cultural resources where visitors can learn about the park's industrial heritage will continue to remain largely inaccessible
- no visitor facilities are currently available at the Nuttallburg Mining Complex and town site
- although the site is not officially open to the public, visitors do use the site and find potentially hazardous conditions due to the unstable condition of some structures at the Nuttallburg Mining Complex and town site
- unmanaged visitor use in the vicinity of the Nuttallburg Mine poses potential adverse impacts to critical habitat of several species of bats that are designated of conservation interest

▪ Alternatives Evaluated in the IP/EA

Based upon consideration of the full range of potential alternatives, the NPS retained four alternatives for study and evaluation in this IP/EA. They include:

- Alternative 1 – Continuation of Existing Management (No Action Alternative)
- Alternative 2 – Multiple Settings on Recreational Trails (Preferred Alternative)
- Alternative 3 – Integrated Interpretive Destination
- Alternative 4 – Historic and Cultural Cross Section of the Gorge

- **NPS Preferred Alternative**

Alternative 2 – Multiple Settings on Recreational Trails is the NPS preferred alternative. Alternative 2 would meet the project purpose and fulfill the need for the project. It would provide a focal area within the park for the interpretation of early coal mining technology in the New River Coal Field. When compared to Alternatives 3 and 4, Alternative 2 would involve less trail construction and less thinning of trees on the site resulting in fewer and less intense adverse impacts on the site's soil resources, vegetation resources, and threatened and endangered species and their habitats. When compared to Alternatives 3 and 4, Alternative 2 would attract fewer visitors to the site resulting in the potential for fewer and less intense adverse impacts on the site's archeological resources and historic buildings and structures. Alternative 2 would have a less intense impact on park operations because it would include fewer miles of new trails and fewer interpretive media, and require a less intense interpretive program.

- **Impacts of the Preferred Alternative**

Soil Resources. Cultural resource management actions in Alternative 2 would have a local short-term minor adverse impact on soil resources. Natural resource management Actions in Alternative 2 would have a local short-term moderate adverse impact on soil resources. Rehabilitation of major historic traces and new trail construction would result in a local short-term minor adverse impact on soil resources. Routine maintenance of park administrative roads and trails would have periodic short-term negligible impacts on soil resources. Construction of new visitor parking facilities would result in both short-term and long-term local moderate adverse impacts on soil resources. Alternative 2 would contribute an imperceptible adverse increment to the overall cumulative long-term major adverse impact on soil resources. There would be no impairment of soil resources in the park.

Vegetation Resources. Cultural and natural resource management actions in Alternative 2 would result in a local long-term minor beneficial impact on vegetation resources. Removal of vegetation from major historic road traces and new trail construction in Alternative 2 would have a local long-term minor adverse impact on vegetation resources. Clearing for construction of new trails and parking facilities in Alternative 2 would result in a local long-term minor adverse impact on vegetation resources. Routine maintenance of park administrative roads and trails would have a local long-term negligible impact on vegetation resources. Alternative 2 would contribute an imperceptible adverse increment to the overall cumulative long-term major adverse impact on vegetation resources. There would be no impairment of vegetation resources in the park.

Rare, Threatened, or Endangered Species and Their Habitats. Cultural resource and natural resource management actions in Alternative 2 would result in local short-term and long-term negligible impacts on designated species and their habitat. Rehabilitation of major town historic road traces would result in a short-term minor adverse impact on designated species and their habitat. Routine maintenance of trails, administrative roads, and rehabilitated historic road traces would result in a local long-term negligible impact on designated species and their habitat. Clearing for parking facilities would result in a local long-term negligible impact on designated species and their habitat. Projected visitor use associated with Alternative 2 would result in a local long-term negligible impact on designated species and their habitat. The collective management actions in Alternative 2 would contribute an imperceptible adverse increment to the overall cumulative long-term major adverse

impact on designated species and their habitat. There would be no impairment of designated species and their habitat.

Cultural Landscapes. Cultural and natural resource management actions in Alternative 2 would have local long-term minor beneficial impacts on cultural landscape resources. The collective management actions in Alternative 2 would contribute an imperceptible beneficial increment to the overall cumulative long-term major adverse impact on cultural landscape resources. There would be no impairment of cultural landscape resources in the park.

Historic Buildings and Structures. Cultural and natural resource management actions in Alternative 2 would have local long-term minor beneficial impacts on historic buildings and structures. Projected visitor use associated with Alternative 2 would have a local long-term negligible impact on historic buildings and structures. Development of new visitor use facilities associated with Alternative 2 would have a long-term minor adverse impact on historic buildings and structures. The collective management actions in Alternative 2 would contribute an imperceptible beneficial increment to the overall cumulative long-term major adverse impact on historic buildings and structures. There would be no impairment of historic buildings and structures in the park.

Archeological Resources. Cultural resource management actions in Alternative 2 and development of new visitor use facilities would have local long-term negligible to moderate adverse impacts on archeological resources. Natural resource management actions in Alternative 2 would have a long-term minor beneficial impact on archeological resources. Projected visitor use associated with Alternative 2 would have a local long-term negligible impact on archeological resources. The collective management actions in Alternative 2 would contribute an imperceptible beneficial increment to the overall cumulative long-term major adverse impact on archeological resources. There would be no impairment of archeological resources in the park.

Ethnographic Resources. Cultural and natural resource management actions in Alternative 2 would have local long-term moderate beneficial impacts on ethnographic resources. The collective management actions in Alternative 2 would contribute an imperceptible beneficial increment to the overall cumulative long-term major adverse impact on ethnographic resources. There would be no impairment of ethnographic resources in the park.

Local Roads and Park Access. In Alternative 2 visitor-related traffic and parking would result in a local long-term minor beneficial impact on local roads and park access. Alternative 2 would contribute an imperceptible beneficial increment to the overall cumulative long-term moderate adverse impact on local roads and park access.

Visitor Use and Visitor Experience. Cultural resource management and natural resource management actions in Alternative 2 would result in a local long-term moderate beneficial impact on visitor use and visitor experience. Management actions taken to provide interpretive media and visitor facilities would have a local long-term major beneficial impact on visitor use and visitor experience. Alternative 2 would contribute a perceptible beneficial increment to the overall cumulative long-term major beneficial impact on visitor use and visitor experience.

Park Operations. The long-term operational needs associated with Alternative 2 for staff, maintenance, interpretation and visitor services, resource and visitor protection, and administration would result in a local long-term minor adverse impact on park operations. Alternative 2 would contribute an imperceptible adverse increment to the overall cumulative long-term major beneficial impact on park operations.

- **Alternatives Considered but Dismissed**

The NPS has evaluated numerous alternative actions that would enhance the visitor experience at the Nuttallburg Visitor Use Area. Those considered but dismissed during the planning process included a larger upper level parking facility at the Nuttallburg Mine Trail Trailhead, rebuilding some of the former town buildings or outlining lost buildings in three dimensions, restoration of the entire coke oven bank, development of a visitor contact station, and building a trail connection to Nuttallburg from the river at either Short Creek or Keeney Creek was considered but eliminated. These alternatives were dismissed primarily because of potential adverse impacts on the park's cultural and natural resources.

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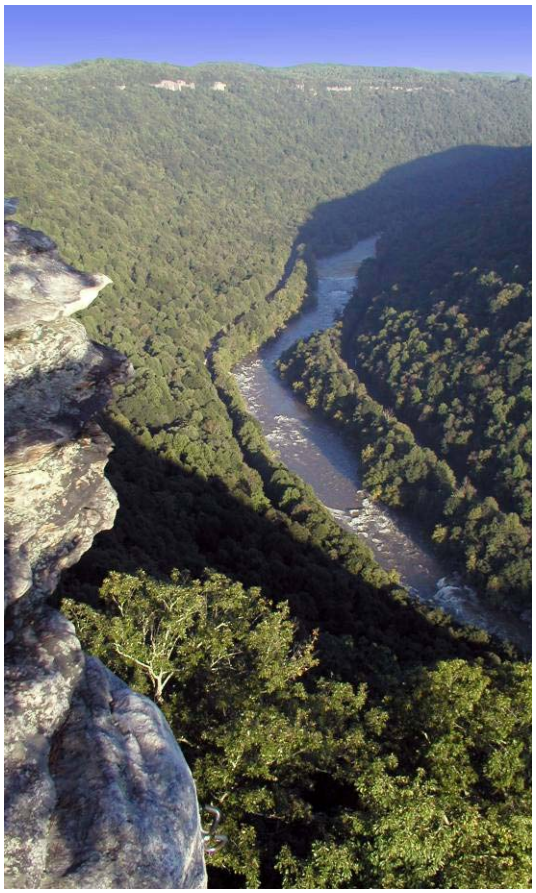
1.0 PURPOSE AND NEED FOR ACTION

1.1 New River Gorge National River Overview

New River Gorge National River encompasses approximately 72,000 acres within a 53-mile corridor along the New River, extending from Hinton to Hawks Nest State Park in West Virginia. Congress established the park in 1978 for the purpose of "conserving and interpreting outstanding natural, scenic, and historic values and objects in and around the New River Gorge and preserving as a free-flowing stream an important segment of the New River in West Virginia for the benefit and future enjoyment of present and future generations" (Public Law 95-625, 11/10/78).

The NPS mission at New River Gorge National River reflects the park's legislated mandate found in Public Law 95-625. As stated in the park's *Strategic Plan* (NPS 2006d):

> *"The park is dedicated to conserving the natural, cultural and scenic resources and values found on its lands and in its waters. The park is further dedicated to developing facilities and progress in such a manner that park resources provide for education, inspiration and enjoyment in such a manner and by such means as to leave them unimpaired for future generations."*



New River Gorge viewed from Diamond Point

The mission goals of the park are to bring about the following desired future conditions (NPS 2000):

- ecological integrity of natural resources is restored and/or maintained
- cultural resources and landscapes are preserved and protected
- the free-flowing character of the river segment is not further compromised
- visitors understand the value of resources and their responsibility to protect those resources
- scenic viewsheds and drives are maintained and enhanced through cooperative efforts with local communities
- a system of land and water based recreational opportunities is developed that allows visitors to safely experience the resources without impairing them

1.2 Purpose of the Proposed Action

This environmental assessment describes and evaluates the proposed action to develop a visitor use area at the site of the former Nuttallburg Mining Complex and adjoining town of Nuttallburg adjacent to the New River near Winona and Edmond, West Virginia, and within the New River Gorge National River (see Figures 1.1 and 1.2). The purpose of the project is:

- to provide the focal point within New River Gorge National River for the interpretation of early coal mining technology in the New River Gorge

- to provide park visitors with a safe experience that offers opportunities for education and recreation
- to protect the park's natural and cultural resources from potential adverse effects
- to provide visitor facilities that are cost effective, that are harmonious with and integrated into the park environment, and that reflect sustainable design

1.3 Need for the Proposed Action

New River Gorge National River was established by Congress in 1978 in part to provide public understanding and appreciation of the park's natural, cultural, and scenic resources and values. The park's cultural resources include, among others, the sites of multiple coal mining communities that were once part of a thriving industrial corridor during the late 19th and early 20th centuries. Today the mines and the towns that grew up around them are largely abandoned, most of the roads leading to them are no longer passable, and 50 to 100 years of forest growth obscures what remains of most of the industrial and community structures. Visitor access to these sites is largely constrained due to rugged terrain and the poor condition or absence of roads and trails. The NPS has developed trails to a few resource areas and has provided some media to interpret coal mining sites, though in general the story of coal mining technology and the life of those who worked in the mines and who lived in the gorge's mining communities is told primarily at the park's visitor centers. Only those visitors who are in good physical condition and who have good orienteering skills are able to actually visit the abandoned mine and town sites. Many of the remaining industrial structures at these sites also pose hazards to adventurous visitors who might try to enter into or climb around them.

The NPS is proposing to address its mandate for providing public understanding and appreciation of the park's cultural resources related to coal mining by developing a visitor use area at the site of the Nuttallburg Mine and adjoining town of Nuttallburg. The project is needed for the following reasons:

- without the project the park's significant cultural resources where visitors can learn about the park's industrial heritage will continue to remain largely inaccessible
- although the site is not officially open to the public, visitors do use the site and find potentially hazardous conditions due to the unstable condition of some structures at the Nuttallburg Mining Complex and town site
- no visitor facilities are currently available at the Nuttallburg Mining Complex and town site
- additional visitor use in the vicinity of the Nuttallburg Mine poses potential adverse impacts to critical habitat of several species of bats that are designated of conservation interest

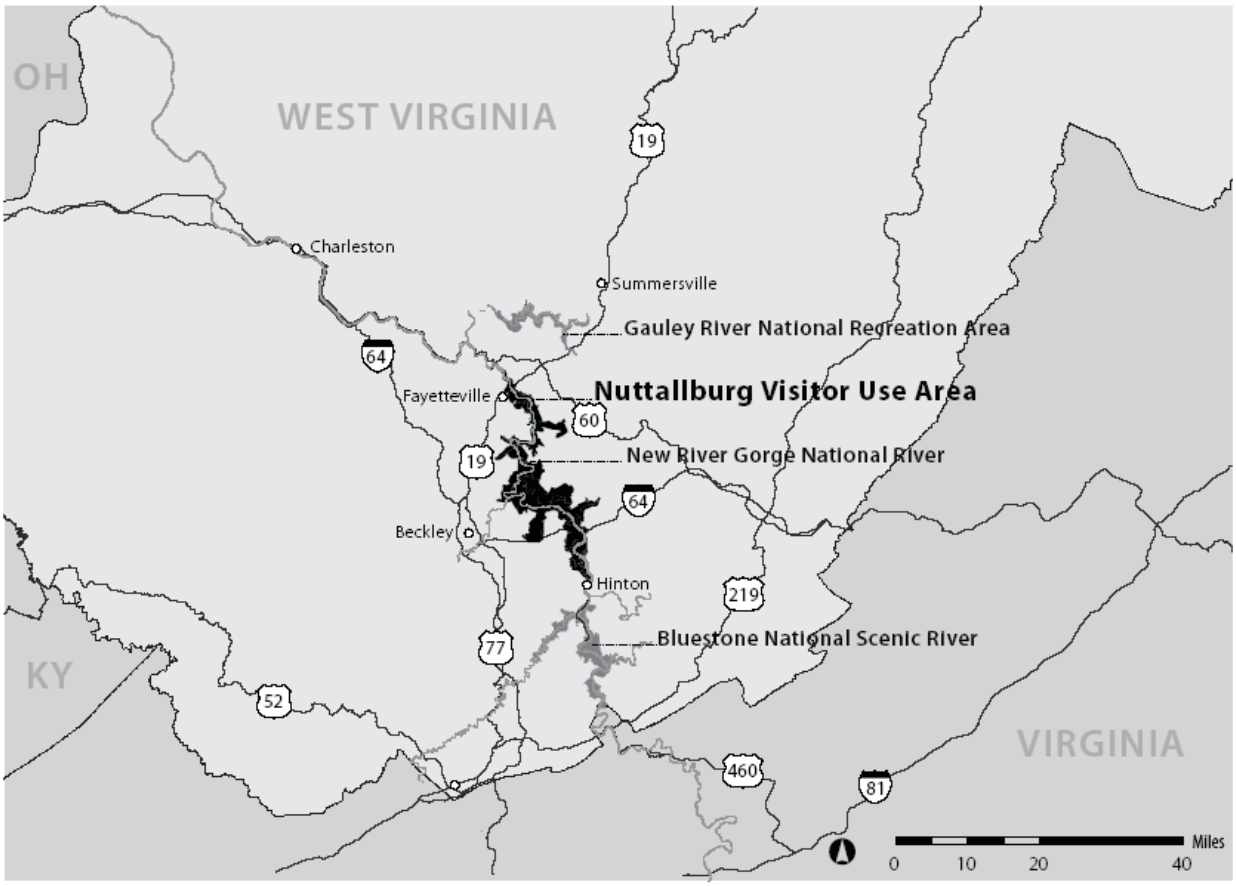
1.4 Project Background

▪ Project Setting

The Nuttallburg Visitor Use Area is located near the New River within New River Gorge National River at the end of WV Route 85/2 near Winona and Edmond, West Virginia. The site encompasses the remains of the former Nuttallburg mining complex, the abandoned Nuttallburg town site, the abandoned Seldom Seen settlement site, and adjoining lands (see Figure 1.2). The main remaining visible features of the site include the principal physical structures that were required to extract materials from the upper level coal seam and to transport them to the railroad near the river level. These include the headhouse adjoining the Nuttallburg Mine shaft opening, the tipple that sorted the coal and dropped it into rail cars, and a conveyor connecting the headhouse and tipple. The remains of these structures occur within a larger landscape that includes the ruins of many related structures that were integral to the mining operations, the remains of Nuttallburg and Seldom Seen, rail lines

Figure 1.1

Regional Location



that served the complex and connected to the main line railroad (now owned and operated by the CSX Corporation), and the ruins of facilities from different periods of the mining operation, such as a bank of coke ovens adjoining the tipple. Although surrounded by relatively dense vegetation that has grown up since the mine ceased operation in the mid-1950s, the relationships among the headhouse, conveyor, and tipple are readily discernable, allowing visitors to comprehend the function of each element and to appreciate some of the difficulties that were involved in constructing the facilities and in operating the mine.

- **Historic Significance of the Site**

The Nuttallburg mining complex and town site is the most intact example of an early 20th century coal mining complex in the New River Gorge and West Virginia, and one of the most complete coal related industrial sites in the United States (NPS 2007). The mining complex has remained essentially unaltered since the 1920s when most of the existing structures and buildings were erected. The town site has been altered by the removal of most of the structures; only foundations and road traces remain. The site is associated with the historical period when West Virginia became the leading coal producer in the country. Other early coal mining complexes have been documented in the state, but many are either in ruins or have been demolished (NPS 2007).

The Nuttallburg Coal Mining Complex and Town Historic District is listed on the *National Register of Historic Places* (see Figure 1.2 and Appendix A). The site is nationally significant for its association with Henry Ford's revolutionary experiment from 1920 to 1928 to vertically integrate automobile production at his Rouge River Plant in Dearborn, Michigan, by controlling the supply and flow of raw materials needed for automobile manufacturing (NPS 2007). The site is also nationally significant for

Ford's use of engineering innovations designed to streamline and vertically integrate all levels of industrial production (NPS 2007). The site was acquired by the Fordson Coal Company, a Ford Motor Company subsidiary, and was one of a small number of coal mine properties in West Virginia and Kentucky. The Nuttallburg Mine was the only coal mine in the productive New River Gorge Coal Field purchased by the Fordson Coal Company for this purpose.

Because of the site's association with John Nuttall the site also derives local significance. John Nuttall came to West Virginia from Pennsylvania and became a pioneering coal operator and early developer in the New River Coal Field (NPS 2007).

The site's intact archeological resources are locally significant because of their potential to yield information on the social and industrial history of the town and the coal-related industrial complex (NPS 2007).

- **Historic Overview and Context**

The Nuttallburg Coal Mining Complex and Town Historic District is located in Fayette County, West Virginia on the east side of the New River at the north end of New River Gorge National River. The district consists of 90 acres and includes, the Nutallburg mine complex colliery structures, a bank of 46 coke ovens, the town's residential and commercial areas at the bottom of the gorge including the piers of the foot bridge that linked Nuttallburg to South Nuttall on the west side of the river, and sidings of the former Chesapeake and Ohio (C&O) or "Chessie" railroad. The boundary extends to the east shore of the New River.

The primary elements of the Nuttallburg coal mine complex and town are included in the historic district. These include the 1925-26 headhouse and related elements at the top of the gorge linked to the coal seams, a 1925-1926 conveyor measuring 1,385 feet in length that brought coal from the mine to the bottom of the gorge, and a 1923-1924 tipple and related elements that sorted coal discharged from the Conveyor and directed it to rail cars below. Sections of two railroad lines closely associated with the operation of the mine and nearby mines are also included. These railroad lines are the three abandoned railroad sidings adjacent to a section of the active CSX railroad line in the bottomlands next to the New River and a section of the right-of-way of the abandoned Keeney Creek branch railroad line, including its dramatic switchback west of the conveyor and two c. 1930 trestle bridges that cross over Short Creek in two places. A circa 1892 stone retaining wall on the Keeney Creek line is included in the district, as well as a line of circa 1873 coke ovens west of the Tipple that parallel the former railroad sidings north of the active CSX railroad line. These coke ovens, of which 46 of the original 80 remain, apparently stood idle after 1919 and are the only remaining mining structures built by John Nuttall, the original mine founder.

The underground elements of the Nuttallburg Mine are not included in the historic district. Historic maps show that the Nuttallburg Mine was laid out in room and pillar configurations that reached well beyond the surface boundaries of the New River Gorge National River. The mines have been sealed off since 1958 and are presumed to be in a collapsed state following 85 years of extractive activities and abandonment.

John Nuttall began developing a coal mine at the confluence of Keeney Creek and the New River in 1870 in anticipation of the construction of the C&O Railroad through New River Gorge. Coal from this mine was the second to be shipped from the gorge on the C&O Railroad. Nuttall developed a second mine that opened in 1874 adjacent to Short Creek that he named the Nuttallburg Mine. When the C&O Railroad was completed through the area in 1873, Nuttall had already constructed 17 two-family dwellings and 80 single-family dwellings. At the Nuttallburg Mine he erected 80 coke ovens, a scale house and scales, a drumhouse or headhouse, blacksmith shop, carpentry shop, slate dump, and a tipple located on the railroad sidings that branched off the C&O mainline. These buildings were constructed in the vicinity of the Nuttallburg Mine at Short Creek in the unincorporated town of Nuttallburg. The remnants of the town are primarily located in close proximity to the Nuttallburg mining complex. The topography of the town directly affected the spatial organization of Nuttallburg. Due to the steep walls of the gorge and narrow bottomland along the New River, there was relatively

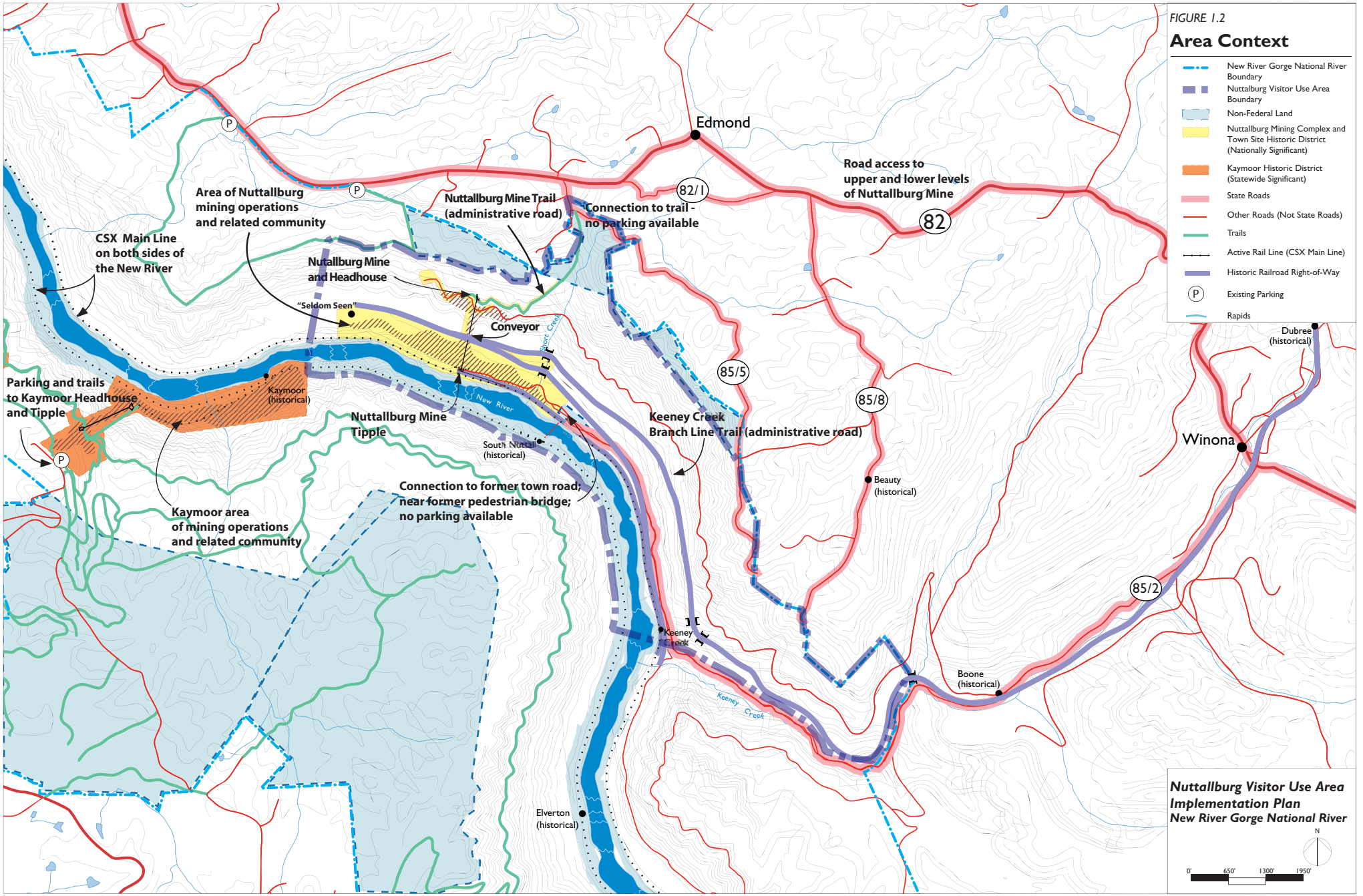


FIGURE 1.2
Area Context
New River Gorge National River Boundary
Nuttallburg Visitor Use Area Boundary
Non-Federal Land
Nuttallburg Mining Complex and Town Site Historic District (Nationally Significant)
Kaymoor Historic District (Statewide Significant)
State Roads
Other Roads (Not State Roads)
Trails
Active Rail Line (CSX Main Line)
Historic Railroad Right-of-Way
Existing Parking
Rapids
Edmond
Road access to upper and lower levels of Nuttallburg Mine
82/1
82
Area of Nuttallburg mining operations and related community
Nuttallburg Mine Trail (administrative road)
Connection to trail - no parking available
CSX Main Line on both sides of the New River
Nuttallburg Mine and Headhouse
"Seldom Seen"
Conveyor
Short Creek
Parking and trails to Kaymoor Headhouse and Tipple
Kaymoor (historical)
New River
Nuttallburg Mine Tipple
South Nuttall (historical)
Keeney Creek Branch Line Trail (administrative road)
85/5
85/8
Dubree (historical)
Winona
Beauty (historical)
Connection to former town road; near former pedestrian bridge; no parking available
Kaymoor area of mining operations and related community
Keeney Creek
Keeney Creek
85/2
Boone (historical)
Elverton (historical)
Nuttallburg Visitor Use Area Implementation Plan
New River Gorge National River
N
0'
650'
1300'
1950'

Nuttall Mine Tipple and Conveyor c. 1925

little level land on which to build. The remaining buildings that Nuttall constructed were in and around the Nuttallburg Mine. Because of the concentration of mining interests on both sides of the New River, a pedestrian suspension bridge constructed by the Roebling Bridge Company, was built across the New River in 1899, connecting Nuttallburg to South Nuttall or Browns, West Virginia.

As the town developed after 1873, the level area adjacent to the C&O tracks was dedicated to railroad and industrial activities. The buildings and structures that were built included railroad sidings, tipples, and coke ovens. Houses and other buildings were built along the inclined and switchback circulation system in the town. Many of the dwellings in town were perched on piers adjacent to narrow roads that went 100' to 200' up the east slope of the gorge.

At the turn of the century, Nuttallburg was a bustling mining town with a doctor, blacksmith, carpenter, schools, churches, and a company store. By 1895, Nuttallburg was segregated with the white workers settled on the west side of Short Creek and the black workers settled on the east side and on the river side of the C&O tracks. Each racial group had its own church, grade school, and club or boarding house. Wealthier families had more prominent homes in Nuttallburg. Historic photographs reveal that these structures were two-story wood frame buildings that included ornamented porches and clapboard fenced yards. Remarkably, the town of Nuttallburg saw few major changes during the period of its occupation from 1873 to 1958.

Although the coal processing buildings at Nuttallburg are the only above ground structures remaining, the mine and town retain the same spatial organization they had during Nuttallburg's period of significance. Primary refuse deposits and privies occur in direct association with residences, churches, and schools throughout the district. One large secondary refuse dump occurs on a slope near the Nuttallburg conveyor. In addition, the roads still pass under the conveyor, branching to connect to the locations of numerous foundations.

Deterioration from the weather or fires may account for the absence of intact wood frame residences and structures in the town, although local residents say that the lumber and other building materials were salvaged by the residents who built new houses on top of the gorge. Despite this, Nuttallburg is replete with stone building foundations, masonry stone walls, concrete pillars, roadways, railroad sidings, and other architectural features that provide a clear sense of the community's historic layout.

Mining in the New River Gorge posed an enormous challenge for the engineering design of mine structures because of the horizontal and vertical distance of the mine portals from the railroad tracks. The mine conveyance systems in the gorge generally had three principal elements: a headhouse just below the rim of the gorge at the level of the coal seam; a conveyor to carefully transport the highly friable New River coal between the headhouse and tipple; and a tipple to sort and load the coal at the bottom of the gorge adjoining the railroad. Paralleling many of the conveyors was a separate inclined rail tram or haulage to carry workers, supplies, and mine mules to and from the mines.

There is sparse evidence of the two earlier mine conveyor systems that John Nuttall built at the Nuttallburg Mine. Historical photographs, however, show that they were both constructed using cross-braced timbers. The conveyor at Nuttall's first mine at Nuttallburg was built between 1873 and 1874 and connected to a wooden tipple that stood over the side track adjacent to a long bank of coke ovens. Photographs of the first conveyor also show two shorter banks of coke ovens parallel to it on either side of the tipple. These coke ovens are absent in the photograph of Nuttall's second Nuttallburg mine conveyor. The second Nuttallburg mine conveyor differed from the first in having a rail line that curved down to the side track for the coke ovens.

Historical records indicate that the Nuttallburg mine conveyors carried their coal down to the tipple in twin "monitors". Monitors were basically cylindrical tubes with a door at one end that was fastened shut with a heavy steel bar. When the monitor reached the tipple, the bar was tripped, opening the door emptying it of its coal. After Henry Ford tore down Nuttall's second Nuttallburg mine conveyor in the early 1920s, he replaced it with a steel conveyor that employed an innovative "rope and button" technology, which increased the capacity of the conveyor while reducing the fragmentation of the coal.

The NPS acquired the mining complex and town and surrounding property from the Nuttall Estate in 1998 for inclusion in the New River Gorge National River that was originally established in 1978. The existing Ford-era structures of the Nuttallburg Coal Mining Complex are located on the northeast slope and lowland bench of the New River Gorge. The steep hill side in and around the Nuttallburg conveyor system is overgrown with invasive shrubs and volunteer trees, although the immediate area around the conveyor was cleared during the decades of its operation. Short Creek, which steeply cascades down the slope in a series of waterfalls, lies a short distance to the east of the Nuttallburg mining structures. Two of the railroad trestles of the Keeney Creek branch railroad line cross over this creek.

Passage to the Nuttallburg Mine bench is limited to two narrow roads, one to the headhouse from the Edmonds, West Virginia area and one following a northwest to southeast road along the mine bench. Within the town, the roads, including State Route 85/2, are passable only by foot, as is the route of the abandoned Keeney Creek branch railroad line.

In 2005 the NPS began implementation of a number of emergency and short-term stabilization actions to ensure the structural stability of the tipple, conveyor, headhouse, adjacent coke ovens, and foundation ruins. The actions included vegetation clearing, drainage improvements, concrete foundation repairs, structural steel repairs, and replacement of roofing and siding required to shield the steel structures from the elements. At the town site invasive plant vegetation (kudzu, multiflora rose, and Japanese knotweed) covering much of the town ruins was removed. Improvements were also made to the Nuttallburg Tipple Administrative Road, the Nuttallburg Mine Administrative Road, and the Keeney Creek Branch Line Administrative Road to enable four-wheel drive vehicle access to the Mining Complex structures for maintenance and emergencies. Improvements included clearing vegetation that had encroached within the rights-of-way, placement of crushed stone, and reseeding with native grasses. On the Keeney Creek Branch Line Administrative Road improvements also included re-decking and installation of handrails on the four trestle bridges.

Mine Conveyor and Tipple (2006)

- **Previous Studies of the Project Site**

HABS/HAER Documentation (IHTIA 1992). In 1991 the Historic American Engineering Record (HAER) in collaboration with the West Virginia University Institute for the History of Technology and Industrial Archaeology (IHTIA) recorded the coal mining resources at the Nuttallburg Mining Complex. The study focused on the structures and period of significance connected to Ford ownership of the site from 1920 to 1928. It also documented the development history of the site prior to and after the Ford era. Products included annotated measured drawings, a detailed historical narrative and physical description, and large-format archival photographs of the site and major structures.

Nuttallburg Level II Cultural Landscape Inventory **(NPS 2006c)**. The NPS completed a Level II cultural landscape inventory for the Nuttallburg area which documents the location of all known structures, landscapes, man-made features, and objects in the historic cultural landscape that compose Nuttallburg.

Nuttallburg Mine Historic Structures Report **(Heritage Partners/ICON architecture 2004)**. The *Historic Structures Report* (HSR) assessed the existing condition of structures remaining at the Nuttallburg Mining Complex and determined appropriate treatment alternatives and approaches. Historical architects, engineers, and technical personnel undertook on-site investigation of structures in collaboration with NPS staff. The HSR recommended a staged program of improvements for the headhouse, conveyor, and tipple, summarized as follows:

- emergency work to prevent collapse, including bracing, shoring, and key connections between these elements
- short-term stabilization, including repairing critical structural joints and members, as well as addressing overall integrity of elements that are compromised
- long-term stabilization, including addressing sub-elements that are important, but that are not of short-term importance
- long-term protection, including protecting each entire structure

For the short-term the HSR recommended stabilization of the tipple, headhouse, and conveyor, including short-term emergency actions to prevent collapse of structures accompanied by actions to stabilize structures and limit their further deterioration. These recommendations were considered essential to protect the resources and to enable their future use collectively as an important interpretive and visitor use site that can uniquely represent the industrial history of the park.

***New River Gorge Historic Resource Study* (Unrau 1996)**. The *Historic Resource Study* (HRS) (Unrau 1996) was the first survey and context study of resources in the New River Gorge. It was based on the NPS report, in cooperation with the West Virginia Division of History and Culture, entitled *A coal Heritage Study: A Study of Coal Mining and Related Resources in Southern West Virginia* (NPS 1992b) and a draft study entitled "Historical Context for the Coal Heritage Survey" (Workman 1996). Written before Nuttallburg was acquired by the NPS, the HRS included a discussion of John Nuttall as one of the pioneer coal operators in the New River Coal Field. It also mentioned Nuttallburg in relation to coke production and the conveyance of coal between the mine and the railroad, and in the discussion of coal towns.

***New River Gorge Historic Resource Study* (Workman et al 2005)**. The *Historic Resource Study* (HRS) was prepared to supplement and update the historic resource study for New River Gorge National River (NERI) developed in 1996 by Harlan Unrau (Unrau 1996). The goals of the HRS were to assess and update NERI's historic contexts, evaluate the significance of its historic resources, produce a small scale cultural resources base map that clearly displays locations of NERI's significant cultural resources, and provide historic preservation planning information for the park. The HRS rates the Nuttallburg site as the most significant coal related cultural resource in the park and recommends that it be nominated to the National Register of Historic Places.

***Nuttallburg Coal Mining Complex and Town National Historic District National Register Nomination* (NPS 2007)**. The NPS has submitted the *Nuttallburg Coal Mining Complex and Town National Historic District National Register Nomination* (NPS 2007) to the National Register as documentation in support of the site's nomination to the *National Register of Historic Places.* The nomination provides documentation of the historic significance of the Nuttallburg Coal Mining Complex and Town National Historic District (see Figure 1.2), encompassing 90 acres and including the following:

- Nuttallburg coal mine complex colliery structures and ancillary structures
- the bank of 46 coke ovens
- the town of Nuttallburg site and associated residential and commercial areas at the bottom of the gorge
- the Seldom Seen settlement site and associate residential area at the bottom of the gorge
- the piers of the former footbridge that linked Nuttallburg to South Nuttall on the west side of the river
- the sidings of the former Chesapeake and Ohio (C&O) Railway
- an 0.85-mile section of the former Keeney Creek Branch Railway

The Historic District does not include the underground elements of the Nuttallburg Mine or the Keeney Creek Mine. The mines have been sealed off since 1958 and are presumed to be in collapsed states following 85 years of extractive activities and subsequent abandonment (NPS 2007).

The WV State Historic Preservation Officer determined that the Nuttallburg Mining Complex and Town Historic District is eligible for the National Register (see Appendix A). It was listed on the National Register on August 22, 2007.

- **GMP Recommendations Pertaining to Abandoned Mines and Towns**

NPS completed the *"New River Gorge National River General Management Plan (GMP)"* in 1982 (NPS 1982). Since its adoption the GMP has provided park managers with the basis for managing New River Gorge National River, identifying the opportunities for visitors that will be available in the park, guiding development of park facilities, and setting the course for protecting and managing the park's natural, scenic, and cultural resources.

The 1982 GMP recommends that land needed for access, resource protection, or public use be acquired by the NPS from willing sellers. All other land not needed for these purposes or that is unlikely to be able to be acquired from willing sellers is recommended to remain in private ownership. For land remaining in private ownership the GMP states that the NPS would attempt to protect resources on those lands that are within the park boundary through a combination of active monitoring programs, cooperative agreements, and technical assistance programs with government agencies and private individuals in and near the park.

Nuttallburg is located on land identified in the GMP as remaining in private ownership. While it is recognized in the GMP – along with Kaymoor – as one of two mine sites that retain the greatest physical integrity within the gorge, at the time the GMP was completed the NPS did not have a reasonable expectation of being able to acquire the site from willing sellers. As a result the GMP does not consider visitor use of the site. Instead the GMP specifically indicates that the following actions be taken at Nuttallburg:

> *"The NPS will seek a cooperative agreement with the owners of the Nuttallburg Mine to ensure its preservation. The goals of the agreement would be to prevent vandalism; study and record the site; stabilize the conveyor system, chute, headhouse; and encourage safe public access. It is also recommended that the Nuttallburg Mine site be nominated by the landowner to the National Register of Historic Places."*

Since completion of the GMP the NPS was able to acquire Nuttallburg, including the town site and colliery buildings. Now that the site has been acquired by the NPS additional treatments beyond stabilization can be considered to enhance visitor use and understanding of Nuttallburg.

1.5 Planning Issues

Scoping with the NPS project planning team, government agencies, and the public, has revealed several issues related to planning and preliminary design of visitor use improvements at Nuttallburg.

- **Protection and Enhancement of Cultural Resources**

Future visitor use must be planned and designed so that the site's sensitive cultural resources are not adversely impacted. Recent emergency measures implemented by the NPS have stabilized the most significant colliery structures whose integrity is in most imminent danger. Further treatments are needed to protect resources over the long-term from the impacts of natural weathering processes and vegetation growth, as well as from potential impacts of visitor use at the site.

- **Interpretive Experience**

Nuttallburg is the only nationally significant historic resource currently recognized in the park and offers a unique opportunity to tell the story of industry and coal mining in New River Gorge. Visitor use facilities should provide access to the site's resources so that visitors are enabled to understand and appreciate the important elements of the Nuttallburg story, such as:

- how the geology of New River Gorge formed upper level coal seams that are accessible only with great difficulty

- the ingenuity and innovation that was required to mine the plentiful coal deposits at Nuttallburg and elsewhere in the New River Gorge Coal Field and to transport raw material to market
- how the Nuttallburg Mine played a role in the vertical integration of industry pioneered by Henry Ford in the 1920s
- the harsh conditions that prevailed for miners and the mining community of Nuttallburg and similar communities throughout New River Gorge

- **Recreation Opportunities**

Nuttallburg offers a variety of recreation opportunities, such as hiking, climbing, biking, and nature study. Visitor facilities should provide a variety of ways for visitors to experience the area safely, recognizing differing physical and athletic capacities, as well as varying attention spans and varying amounts of time spent at the site. Recreation facilities – particularly the trail network – should be designed to take full advantage of existing rights-of-way and historic traces within the site. The system of trails should also connect to and enhance the greater park trail system adjacent to and beyond Nuttallburg.

- **Visitor Safety**

Several safety concerns exist at Nuttallburg. The remaining colliery structures and coke ovens could attract some visitors who might attempt to climb onto them or otherwise enter them. Mine openings along the upper bench could also attract visitors who might try to gain entrance to mine shafts. Rail traffic on the CSX Main Line poses a safety threat to visitors who might try to illegally cross the tracks to reach the New River. Some areas of mine spoils could be unstable and would not be suitable sites for visitor use. The site is also popular among local residents for hunting during some times of the year.

- **Rare, Threatened, or Endangered Species**

The NPS has identified the potential for occurrences of rare, threatened, or endangered species in the Nuttallburg Visitor Use Area vicinity through review of existing data, coordination with the West Virginia Division of Natural Resources (WV DNR), and field surveys by NPS staff and other experts. Consultation with the WV DNR provided a list of designated species that potentially occur within the park (see Appendix A). Field study confirmed occurrences of several designated species in the area including three species of bats and the Allegheny woodrat (*Neotoma magister*).

The federally-endangered Virginia big-eared bat *(Corynorhinus townsendii virginianus)* is known to inhabit the Nuttallburg Mine portal in the vicinity of the headhouse as well as well as four other mine portals within one mile of the headhouse. Virginia big-eared bats may also use the Nuttallburg Mine portal area as foraging habitat and for a travel corridor between roosting and foraging habitat. The federally-endangered Indiana bat *(Myotis sodalis)* has not been found at the mine portal near the headhouse but is present at the other four mine portals within one mile of the headhouse. Indiana bats utilize a variety of tree species for both primary and alternate roosts in the vicinity of the Nuttallburg Mine portal; the habitat in the mine portal area is also used as foraging habitat and includes travel corridors that link roosting and foraging habitat. The federally-designated species of special concern Allegheny woodrat (*Neotoma magister)* is known to inhabit the Nuttallburg Mine portal in the headhouse area and is suspected to inhabit the four other portals as well.

- **Invasive Plant Management**

During the period of mine operations trees were removed or thinned along the length of the conveyor and in the vicinity of the tipple, headhouse, and mine portals, as well as within the town of Nuttallburg and the Seldom Seen area. Since the late 1950s when the mine ceased operation and the town was abandoned, native and non-native vegetation has revegetated the site. Non-native plants such as

kudzu *(Pueraria lobata)*, multiflora rose *(Rosa multiflora)*, and Japanese jointgrass *(Polygonum cuspidatum)* have invaded most of the open areas. Paulownia (*Paulownia tomentosa*) occurs throughout the site and adversely impacts the structures, culverts, and retaining walls. It has grown up and through the corrugated roofing and siding of the colliery structures and is a major cause of deterioration.

In the summer of 2005 much of the kudzu was removed from the Nuttallburg town site. In the summer of 2006 the invasive vegetation was removed from a portion of the coke oven area and paulownia trees removed from portions of the tipple and conveyor area. Ongoing management of invasive plants will be required to keep the site open so that remaining structures and ruins remain visible and free from impacts caused by vegetation growth.

- **Park Operations**

Improvements are needed to provide support facilities commensurate with intended and projected levels of visitor use. Keeping the site accessible to visitors will require ongoing maintenance of vegetation and roads and trails in rugged terrain subject to mass movement. Whatever desired conditions for visitor facilities and natural resources are selected for the site must be able to be feasibly maintained by the NPS.

- **Potential Impacts of Access Improvements (roads, parking, trails)**

The Nuttallburg area is characterized by very rugged terrain where construction of roads, trails, and parking facilities is difficult. Few level areas are available for parking. Roads and trails are susceptible to slides and slumping. Road and trail maintenance has the potential to adversely impact topography and soils, as well as drainage ways.

- **Access for Disabled Visitors**

Visitor use facilities should be designed to enable access for disabled visitors, including parking, restrooms, and trail access to major interpretive features on the site.

- **Potential All Terrain Vehicle (ATV) Impacts**

Enhanced trail access and parking, as well as enhanced public awareness of the site, has the potential to increase the potential for illegal use of all terrain vehicles (ATVs).

1.6 Impact Topics

- **Impact Topics Selected for Detailed Analysis**

Specific impact topics were developed for discussion focus and to allow comparison of the environmental consequences of each alternative for the Nuttallburg Visitor Use Area. These impact topics were identified based on the following: federal laws, regulations, and executive orders including NEPA guidance documents; NPS Management Policies (NPS 2006b); NPS staff knowledge of special or vulnerable natural and cultural resources in the Nuttallburg vicinity; external and internal scoping; and relevance to the project's planning issues. The following impact topics are addressed (see Chapter 4.0 below):

- soil resources
- vegetation resources
- endangered or threatened plants and animals and their habitats
- historic buildings and structures
- cultural landscapes
- archeological resources

- ethnographic resources
- local roads and park access
- visitor use and experience
- park operations and park facilities

- **Impact Topics Dismissed from Detailed Analysis**

The following impact topics were identified and dismissed from further analysis because the resources do not exist at the Nuttallburg Visitor Use Area or the resources will not be impacted adversely by the proposed action. A brief rationale for the dismissal of each impact topic is provided below.

Park Museum Collection. *NPS Management Policies* (NPS 2006b) require NPS to collect, protect, preserve, provide access to, and use objects, specimens, and archival and manuscript collections in the disciplines of archeology, ethnography, history, biology, geology, and paleontology, to aid understanding among park visitors, and to advance knowledge in the humanities and sciences. The Nuttallburg Visitor Use Area does not currently contain any facilities used to house the park's collections. Any artifacts collected from the site in the future will be added to the park's existing collections maintained elsewhere in the park. Once in the collection the artifacts will be documented and stored in accordance with the park's *Collection Management Plan* (NPS 2004). Therefore the museum collection impact topic was dismissed.

Indian Trust Resources. Secretarial Order 3175 requires that any anticipated impacts to Indian Trust Resources from a proposed project or action by agencies of the Department of the Interior be explicitly addressed in environmental documents. There are no known Indian Trust Resources at New River Gorge National River. No land within the park is held in trust by the Secretary of the Interior for the benefit of Indians due to their status as Indians. Therefore the Indian Trust resources impact topic was dismissed.

Indian Sacred Sites. Executive Order 13007, "Indian Sacred Sites", requires managers of federal lands to avoid adversely affecting the physical integrity of Indian sacred sites. There are no Indian sacred sites as defined by Executive Order 13007 within the limits of the Nuttallburg Visitor Use Area. Therefore Indian sacred sites impact topic was dismissed.

Surface Water Quality. The 1972 Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977, establishes national policy to restore and maintain the chemical, physical, and biological integrity of the nation's waters, to enhance the quality of water resources, and to prevent, control, and abate water pollution. *NPS Management Policies* (NPS 2006b) provide for the preservation, use and quality of waters in national parks.

Drainage from the Nuttallburg area flows via three permanently flowing streams and numerous swales and ditches that discharge directly into the New River. An unnamed tributary – originating midway up the gorge wall – drains the Nuttallburg town site and the mining complex at the base of the gorge. Short Creek flows through the Nuttallburg area to the east of the Nuttallburg town site. It originates on the plateau above the town site in the vicinity of US Route 60, collecting runoff from the Edmond area and other private lands within the watershed. Keeney Creek drains the area along WV Route 85/2 (Keeney Creek Road). It is a major tributary to the New River within New River Gorge National River and drains an extensive area of private land upstream of the site, including the Winona and Lookout areas. Routine water quality monitoring of Keeney Creek by the NPS indicates that water quality in the creek is poor. It is negatively impacted by bacteria (fecal coliforms) which likely originates from households within the watershed that are without septic systems or sewer service (Purvis 2002). Water quality data are not available for Short Creek or the unnamed tributary.

Management actions associated with the alternatives under consideration at the Nuttallburg Visitor Use Area would not directly impact surface water features on the site. Minor drainage diversions would be placed around historic buildings and structures, along trails, and at proposed parking sites. No new impervious surfaces would be added. The proposed suspension footbridge across the New River in Alternative 4 would not involve construction in the river. Erosion and sedimentation control

best management practices would be used at the locations where soils are disturbed as part of cultural resource management actions, reestablishment of trails, new trail construction, and unpaved parking area construction. Collectively these actions would have a local short-term negligible impact on surface water quality. Therefore the surface water quality impact topic was dismissed.

Floodplains. Executive Order 11988, "Floodplain Management," requires federal agencies to examine project impacts on floodplains and the potential risk involved in having facilities within floodplains. Floodplain mapping is not available for the New River in the Nuttallburg area. Empirical data suggest that flooding associated with the 100-year storm in the area is generally confined to land below the CSX Mail Line bed. None of alternatives for the Nuttallburg Visitor Use Area propose development of visitor use facilities within this area. There would be no impact to the floodplain and no potential risks associated with placement of facilities within the floodplain. Therefore the floodplains impact topic was dismissed.

Wetlands. Executive Order 11990, "Protection of Wetlands", requires federal agencies to avoid, where possible, impacts to wetlands. The Clean Water Act, the Rivers and Harbors Appropriation Act of 1899, and the Freshwater Wetlands Protection Act also protect wetlands (NJSA 13:9-B-1 et seq). *NPS Management Policies* (NPS 2006b) provide guidance on NPS activities regarding the management of wetlands including a "no net loss" policy. There are no jurisdictional wetlands within the areas of proposed visitor use for any of the alternatives under consideration at the Nuttallburg Visitor Use Area (US FWS 1992). No hydric soils indicative of wetlands are present on the site (USDA 1975). Therefore the wetlands impact topic was dismissed.

Prime and Unique Farmland Soils. Council on Environmental Quality (CEQ) NEPA Regulations (40 CFR 1508.27) require federal agencies to assess the impacts of their actions on soils classified by the U.S. Natural Resources Conservation Service as prime or unique farmland soils. No areas of prime farmland soils are within the area of impact associated with proposed actions at the Nuttallburg Visitor Use Area. There are no soils classified as unique within New River Gorge National River. Therefore the prime and unique farmland soils impact topic was dismissed.

Terrestrial Wildlife. The National Environmental Policy Act requires federal agencies to assess the impacts of their actions on components of affected ecosystems. *NPS Management Policies* (NPS 2006b) state that it is NPS policy to protect the abundance and diversity of natural resources.

No surveys for terrestrial wildlife have been conducted in the Nuttallburg area. However, wildlife surveys at other locations throughout the park indicate that 63 species of mammals (including 10 species of small mammals) are known to occur in the park (NPSpecies 2003). Species utilizing woodland habitat are likely to be most common, including squirrel, white-tailed deer, raccoon, and gray fox. Deer densities in the park vicinity are approximately 33 deer per square mile, considerably higher than the 3 to 8 deer per square mile characteristic of the area prior to European settlement (WV DNR 2003). Black bear may also be present. Currently 233 species of birds are also known to occur in the park (Mahan 2005). Of these approximately 93 percent were detected during breeding season and, therefore may nest in the park (Pauley et al 1997). The park is globally significant in providing critical habitat for neotropical migratory birds, especially wood warblers (Family Parulidae) (Mahan 2005). These species depend upon unfragmented mixed-deciduous forests with well-developed canopies and gap dynamics (e.g. tree falls) in place (Mahan 2005). Cerulean warblers, a species of neotropical migrant that is in decline throughout the northeast and a candidate for federal listing, appear to have a concentrated distribution in and around New River Gorge National River (Rosenberg et al 2000). Some bird species in the park are also dependent upon hemlock stands or forest gaps created by tree falls and other natural and/or human induced disturbances. Studies of reptile populations in the park have documented the occurrence of 38 species of reptiles (NPSpecies 2003). These include five species of turtles, timber rattlesnakes, and numerous species of lizards. The park is one of the few areas where turtle subspecies interbreed, making it regionally significant for painted turtles (Buhlmann et al 1987). Continuous forest, abandoned mine portals, and river/stream systems in the park provide habitat for a diverse, nationally significant assemblage of amphibian species (Mahan 2005). Studies have documented occurrences of 48 species of amphibians in the park (NPSpecies 2003).

Management actions associated with the actions under consideration at the Nuttallburg Visitor Use Area would produce short-term and long-term negligible impacts to wildlife. Short-term negligible impacts would include temporary displacement due to construction activities. Long-term negligible impacts would include loss of habitat associated with reestablishment of trails along historic traces and minor new trail construction in previously disturbed areas. Therefore the terrestrial wildlife habitat impact topic was dismissed.

Air Quality. The 1963 Clean Air Act as amended (42 USC 7401 et seq) requires that federal land managers protect air quality. The *NPS Management Policies* (NPS 2006b) address the need to analyze air quality during park planning. New River Gorge National River is designated as a Class II Clean Air Area. Fayette County is designated under the Clean Air Act as an air quality attainment area and a Class II Clean Air Area. This designation establishes a limit on the allowable increase in sulfur dioxide and particulate matter concentrations, effectively preventing additional pollutant-emitting industrial development in the vicinity of the park. Because New River Gorge National River is within a Class II Clean Air Area, NPS is not required to conduct air quality or visibility monitoring within the park.

None of the alternatives for the Nuttallburg Visitor Use Area would permanently affect air quality. However, local air quality could be temporarily affected by dust and vehicle emissions during construction of facilities. These effects would last only as long as construction occurs. The area's Class II air quality status would not be affected. Therefore the air quality impact topic was dismissed.

Wild and Scenic River. The Wild and Scenic Rivers Act establishes a system for the protection of rivers with outstanding scenic, recreational, geological, cultural, or historic values. These rivers are to be preserved in free-flowing condition for the benefit and enjoyment of present and future generations. The New River in West Virginia has been found to possess several characteristics making it eligible for inclusion in the National Wild and Scenic River System, including wildlife, cultural, recreational, and geological outstanding remarkable values. The New River, however, has neither been recommended as suitable for inclusion in the Wild and Scenic River System nor designated a wild and scenic river. No actions in this planning process are proposed that could adversely affect the values that qualify the New River for inclusion in the National Wild and Scenic River System. Therefore the wild and scenic river impact topic was dismissed.

Scenic Resources. Scenic resources at the Nuttallburg Visitor Use Site include a variety of views of natural features and cultural landscapes that can be seen from roads and trails. Views of natural features include: enclosed forest views; views of rock cliffs, rock ledges, and rock faces; and views of cascading streams. Views of cultural landscapes are of the former Nuttallburg town site and colliery structures, as well as other historic structures such as the coke ovens and wood timber railroad trestles across Short Creek on the former Keeney Creek Branch Line right-of-way.

Historically, views to the New River and canyon rim across the river were present from many of the structures within Nuttallburg. The settlement of Seldom Seen and the dwellings beyond the west edge of the town had spectacular views of the rapids and river corridor. These views still persist though they are now interrupted by uncontrolled vegetation growth. From the Keeney Creek Branch Line there were likely views of the town, valley, and surrounding gorge. Today second growth forest has grown up all along the right-of-way, generally obscuring views.

Historically, the headhouse area had spectacular views of the surrounding gorge and the town of Nuttallburg. The trail leading to the headhouse still provides a number of views of the river and canyon rim. However many of the historic views have been lost due to revegetation of the area.

Management actions included in all four alternatives for the Nuttallburg Visitor Use Area would enhance interior views of natural resources and the cultural landscape from roads and trails. Management actions would also slightly enhance views from the headhouse of the surrounding gorge. Overall there would be a local long-term moderate beneficial impact on scenic resource at the site. Therefore the scenic resource impact topic was dismissed.

Local and Regional Economy. Development of new visitor use facilities at the Nuttallburg Visitor Use Area would have a negligible one-time economic benefit to the local economy due to local spending for a portion of construction and labor and materials. New visitor use facilities would provide an additional attraction in the park with the potential to increase visitor length of stay for some visitors. This would result in a local long-term negligible beneficial impact on the local and regional economy. Therefore the local and regional economy impact topic was dismissed.

Environmental Justice. Executive Order 12891, "General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations", requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high and adverse human health or environmental impacts of their programs and policies on minorities or low-income populations or communities as defined in the Environmental Protection Agency's Draft Environmental Justice Guidance (July 1996).

Minority and low-income populations as defined in E.O. 12891 reside in Fayette County in the vicinity of New River Gorge National River. In Fayette County, 18.2 percent of families and 21.7 percent of individuals live below the poverty level and minorities constitute less than 10 percent of the population (U.S. Census 2000). None of the alternatives under consideration at the Nuttallburg Visitor Use Area would have a disproportionately high and adverse human health, economic, social, or environmental impact on minority or low-income populations residing in Fayette County. Negligible beneficial short- and long-term economic impacts on the local and regional economy would result from construction and operation of new visitor use facilities in the area. Subsistence hunting and fishing – an activity occurring in the project area by minority and low-income populations – would continue and would be enhanced through better access. Therefore the environmental justice impact topic was dismissed.

Lightscape and Night Skies. *NPS Management Policies* (NPS 2006b) require the NPS to preserve natural ambient lightscapes as natural resources and values that exist in the absence of human-caused light. None of the alternatives for the Nuttallburg Visitor Use Area would permanently affect the park's lightscape. No nighttime lighting is proposed in conjunction with development of visitor facilities at the site. Therefore the lightscape and night skies impact topic was dismissed.

Noise and Soundscape. *NPS Management Policies* (NPS 2006b) state that the NPS will strive to preserve the natural quiet and natural sounds associated with the physical and biological resources of parks. Activities causing excessive or unnecessary unnatural sounds in and adjacent to parks must be monitored, and action must be taken to prevent or minimize unnatural sounds that adversely affect park resources or values, or visitor enjoyment of them. The frequencies, magnitudes, and duration of human-caused sound considered acceptable varies among NPS units, as well as throughout each park unit, being generally greater in developed areas and less in undeveloped areas.

Construction required for the Nuttallburg Visitor Use alternatives would result in local short-term negligible impacts on daytime ambient noise levels. Equipment and vehicles would be the primary noise generators. Contractors would be required to use state-of-the-art noise reduction technology on equipment to the maximum extent practicable. Slightly increased traffic on Keeney Creek Road associated with increased visitor use would result in a local long-term negligible impact on day-time ambient noise levels. Therefore the noise and soundscape impact topic was dismissed.

Wilderness Resources. The Wilderness Act of 1964 established the National Wilderness Preservation System composed of federal lands designated as wilderness. The Act mandates a policy for the enduring protection of wilderness resources for public use and enjoyment. New River Gorge National River does not include any land within the National Wilderness Preservation System designated pursuant to the Wilderness Act of 1964.

2.0 ALTERNATIVES

2.1 Introduction

The NPS has developed and evaluated four alternatives for the Nuttallburg Visitor Use Area. As required by NEPA the alternatives include the continuation of current management (also referred to as the "no action" alternative) and several action alternatives. The action alternatives reflect a range of options for providing visitor experiences and opportunities at the site. The four alternatives include:

- **Alternative 1** – Continuation of Current Management with Structure Stabilization (No Action Alternative)
- **Alternative 2** – Multiple Settings on Recreational Trails (Preferred Alternative and Environmentally Preferred Alternative)
- **Alternative 3** – Integrated Interpretive Destination
- **Alternative 4** – Historic and Cultural Cross Section of the Gorge

2.2 Emergency Cultural Resource Management Actions Underway or Recently Completed at the Nuttallburg Visitor Use Area

The NPS is currently completing numerous emergency management actions that are providing short-term stabilization of historic buildings and structures at the Nuttallburg Mining Complex and town of Nuttallburg site. NEPA compliance required for these actions was completed prior to their implementation. Section 7 Coordination with the U.S. Fish and Wildlife Service regarding potential impacts to designated species was also completed. The short-term stabilization actions include the following:

Nuttallburg Mining Complex

Emergency and short-term stabilization activities needed to ensure the structural stability of the tipple, conveyor, headhouse, adjacent coke ovens, and foundation ruins, including:

- vegetation clearing
- drainage improvements
- concrete foundation repairs
- structural steel repairs
- replacement of roofing and siding required to shield the steel structure from the elements

Town of Nuttallburg Site

- removal of invasive plant vegetation (Kudzu and Japanese knotweed) covering much of the town ruins

Nuttallburg Tipple Trail (NPS administrative road)

- grading and gravel placement to enable four-wheel drive vehicle access for maintenance and emergencies
- reconstruction of the Short Creek Bridge

Keeney Creek Branch Line Trail (NPS administrative road)

- grading and gravel placement to enable four-wheel drive vehicle access for maintenance and emergencies
- re-decking and installation of handrails on the four trestle bridges

Nuttallburg Mine Trail (NPS Administrative Road)

- grading and gravel placement to enable four-wheel drive vehicle access for maintenance and emergencies

2.3 Alternative 1 – Continuation of Current Management with Structure Stabilization (No Action Alternative) (see Figure 2.1)

- **Concept**

Alternative 1 proposes completion of projects that are underway, including long-term stabilization of key mining complex structures and administrative road improvements to provide maintenance access to the site's historic resources. In the future additional long-term stabilization measures would be implemented, as funding becomes available, to further protect historic resources, and to enhance visitor safety. No further improvements to the Nuttallburg Visitor Use Area would occur. Maintenance would continue at current levels.

Key future actions included in Alternative 1 include the following:

- **Cultural and Natural Resource Management**

  - stabilize tipple (long-term stabilization)
    - ✓ repairs to the silo upper structure
    - ✓ repair delamination of the concrete retaining wall
    - ✓ repair damage to the stone retaining walls
    - ✓ securely attach and support the loading room conveyors
    - ✓ stabilize tipple and silo machinery
    - ✓ remove accumulated rust
    - ✓ repair/replace corrugated metal siding and roofing
    - ✓ remove temporary shoring
  - stabilize headhouse (long-term stabilization)
    - ✓ repair delamination of the concrete retaining wall
    - ✓ repair the corroded beam at the lower stair
    - ✓ stabilize the automatic crossover dump for rail cars
    - ✓ remove accumulated rust and coal dust
    - ✓ repair/replace corrugated metal siding and roofing

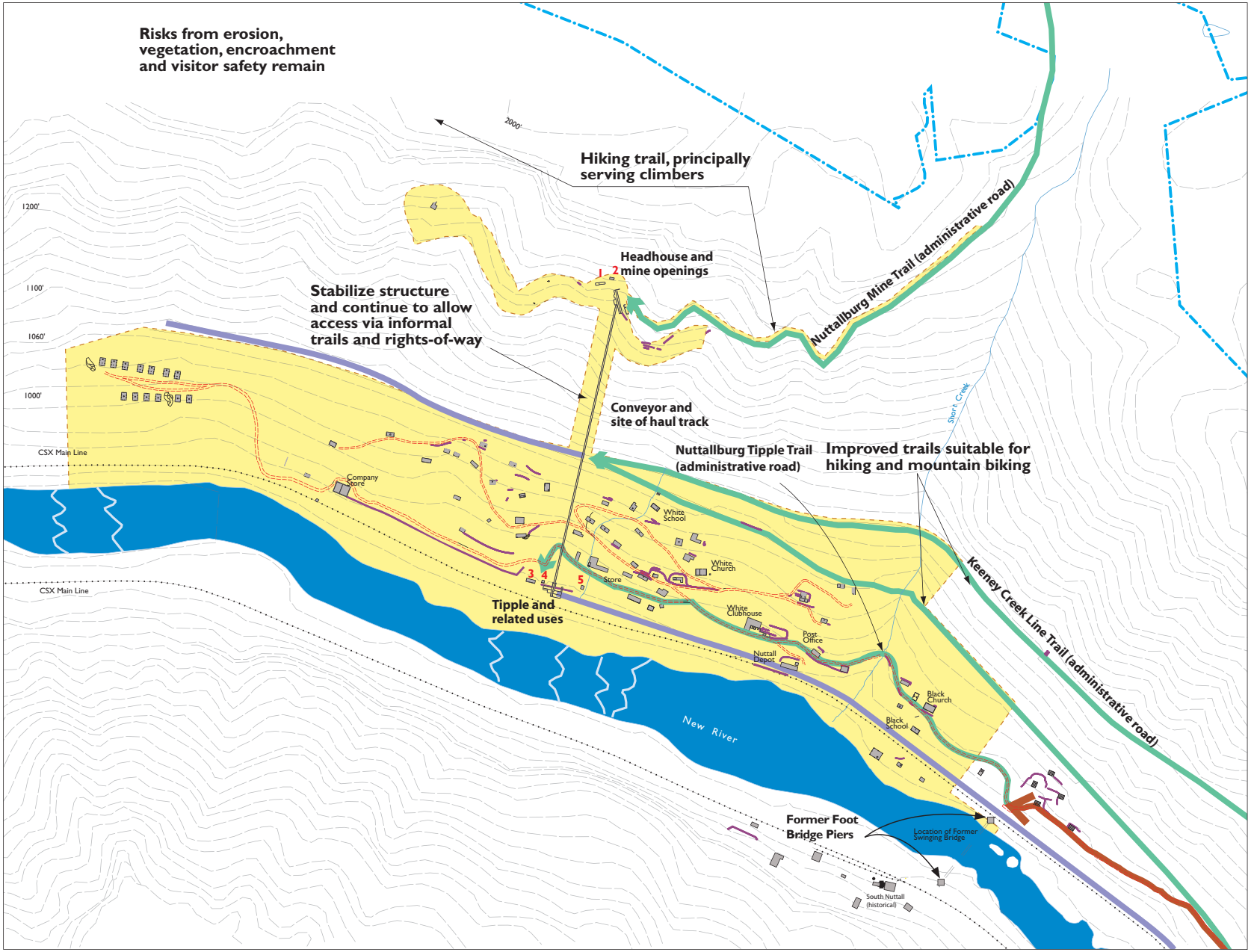


FIGURE 2.1

Alternative 1 - Continuation of Current Management

(No Action Alternative)

Stabilize conveyor structure and continue to allow access via informal trails and rights-of-way

- New River Gorge National River Boundary
- Mining Complex and Town Site Historic District (Nationally Significant)
- Roads
- Keeney Creek Road/ Route 85/2
- Existing NPS Trail/ Administrative Road
- Active Rail Line (CSX Main Line)
- Historic Railroad Right-of-Way
- Retaining Wall
- Road Traces of Nuttallburg
- Foundation Ruins / Various Buildings
  1. Substation
  2. Hoist House
  3. Sand House
  4. Refuse Bin
  5. Well House
- Rapids

Note: Some parking occurs at the Switchback and Keeney Creek Road intersection, near the former Black Church, but none of this parking is improved. This alternative introduces no improved or additional parking.

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- ✓ stabilize conveyor (long-term stabilization)
- ✓ repair corroded, bent or missing diagonal steel angle bracing at the bases of the framing bents
- ✓ repair column bases to establish proper bearing connections where columns are corroded or sheared off
- ✓ repair roofing where heavily corroded or damaged
- ✓ replace siding where needed
- ✓ remove button cable along the length of the conveyor and install button cable ends
- ✓ remove accumulated rust and coal dust
- ✓ remove temporary shoring

- monitor major structural elements to identify other potential risks of collapse that would jeopardize integrity
- implement minor management actions to protect foundations and other remains and artifacts at the town site and within the mining complex area adjacent to the tipple, conveyor, and headhouse
- monitor vegetation that risks danger to the major structural elements of the mining complex and periodically prune or remove as required to guard against further encroachment damage
- periodically remove non-native invasive vegetation that is damaging resources

- **Visitor Use and Visitor Experience Improvements**

  - provide no additional visitor facilities
  - provide no additional interpretive signage
  - limit information about Nuttallburg to that already in park overview literature
  - include safety and informational signage on the Nuttallburg Tipple Trail, Nuttallburg Mine Trail, and the Keeney Creek Branch Line Trail

- **Park Facilities and Operations Improvements**

  - maintain trails (administrative roads) as required for maintenance and emergency access
  - maintain existing on-site staff or ranger activities

2.4 Management Actions Common to the Three Action Alternatives (Alternatives 2, 3, 4)

The three action alternatives (Alternatives 2, 3, 4) reflect differing approaches to the scale and location of improvements based on the balance among historical and cultural resource preservation, natural resource conservation, site interpretation, and recreational use of the site.

- **Common Resource Protection Objectives of the Action Alternatives**

  - protect and enhance the remaining elements of the Nuttallburg Mining Complex, related significant rail rights-of-way, and remains of the town of Nuttallburg
  - design improvements to the site and structure the visitor experience to avoid adverse impacts to designated species

- periodically remove invasive vegetation from the town site and from colliery structures

- **Common Visitor Use and Visitor Experience Objectives of the Action Alternatives**

  - enable visitors to understand and appreciate how the geology of the New River Gorge formed upper level coal seams that are accessible only with great difficulty
  - enable visitors to understand and appreciate the ingenuity and innovation that was required to mine coal from the New River Coal Field and transport it to market
  - enable visitors to understand and appreciate how the Nuttallburg Mine played a role in the vertical integration of industry pioneered by Henry Ford in the 1920s
  - enable visitors to understand the harsh conditions that prevailed for miners and the mining community of Nuttallburg and to appreciate the cultural heritage of residents of similar communities throughout New River Gorge
  - expand recreation users' appreciation of the cultural heritage of the gorge and its industry
  - take advantage of the historic rail grades and historic road traces site to connect to and enhance the overall trail system at New River Gorge National River
  - provide a variety of ways for visitors to safely experience the site's resources, recognizing differing physical and athletic capacities of visitors, as well as varying attention spans and length of stay in this part of the park
  - prohibit motorized vehicles from intruding upon or damaging sensitive resources

- **Common Park Operations and Park Facilities Objectives of the Action Alternatives**

  - provide, to the degree feasible within site and resource constraints, support facilities commensurate with intended and projected levels of use – including parking, restrooms, and visitor contact facilities
  - achieve desired conditions for natural and man-made resources of the site that are feasible to be maintained by NPS

2.5 Alternative 2 – Multiple Settings on Recreational Trails (Preferred Alternative) (see Figure 2.2)

- **Concept**

Alternative 2 proposes visitor support improvements to the trail system serving Nuttallburg accompanied by interpretation of key stabilized elements of the mine, which would become a visitor destination for these trails and may be further rehabilitated in the future. Trees would be cleared along the conveyor length.

Alternative 2 treats the key elements of the mining complex as destinations along recreational trails that connect to the lower, upper, and middle levels of the site. This approach focuses rehabilitation on the dominant structures on the site - the tipple, headhouse, conveyor, and other key contributing resources, including the bank of coke ovens, selected associated mine structures at the top and bottom of the gorge, and the historic rail line corridors in the site. The overall sense of the resource would be that of an industrial complex and related settlement that has been largely taken over by nature, but whose key elements remain visible, encouraging visitors to undertake independent discovery of various ruins and remains in the area.

The three existing trails would provide access to the upper, middle, and lower levels of the Mining Complex. The trail from the upper level would terminate at the headhouse and mine bench level. At the middle level, the trail would lead to the conveyor mid-point support structure and would connect to traces of the town road system. The trail at the lowest level would lead to the tipple, coke ovens, and remains of the town. No vertical connection would be provided along the steep slope between the headhouse and the middle level. As a result the headhouse and tipple areas would include overview interpretation of the overall Nuttallburg Mining Complex to enable visitors to appreciate its significance and scale.

A trailhead would be provided for each trail, including parking, a vault toilet (except at the Switchback parking area), and directional signage (Figures 2.3, 2.4, 2.5, and 2.6). The vault toilet would be a small concrete structure with two toilet stalls built over a sealed container buried in the ground; waste collected in the underground vault would be completely contained until removed by pumping.

Although overview interpretation would be provided at the headhouse and tipple areas, the interpretive focus in this alternative would be at the lower level. Some of the former road traces in the company town of Nuttallburg would be stabilized and maintained to enable visitors to understand the scale and scope of the former mining settlement, while focusing the primary interpretive emphasis on the tipple, rail loading area, coke oven bank, mining support structures, and remains of key community buildings in this area. All foundation remains would be protected from further deterioration by removal of intrusive vegetation and diversion of drainage, while for a small number of buildings of community-wide significance (e.g. the company store, white and black churches and schools, clubhouses, and support facilities in the tipple area), masonry foundation remains would be rehabilitated and former building outlines would be delineated with landscape treatment to highlight the extent and importance of these former buildings.

In this alternative, one or two coke ovens immediately adjacent to the tipple would be rehabilitated in order to allow visitors to appreciate the operation of these early ovens and the relationship of the coking operation to coal unloading and transport. Rehabilitation of these coke ovens would help visitors understand the evolution of the site and would encourage interest in understanding the site. A trail connection would be provided below the bank of coke ovens between the tipple and the company store.

In the area of the town, as well as at the tipple, headhouse, and mid-level of the conveyor, a limited number of wayside exhibits would be installed to help visitors understand the scope of the Mining Complex, the inter-relationship of its parts, and the social implications of town on workers and their families. Appropriate informational and safety signage would be provided at the trailheads as well as within the complex.

Vegetation would be managed, as required to stop further deterioration of foundation remains, to eliminate invasive species, to keep the major road traces in the former town accessible to visitors, and to eliminate growth threatening the structure of the conveyor, tipple, and headhouse structures.

In addition to the actions included in Alternative 1, key future actions in Alternative 2 include the following:

- **Cultural and Natural Resource Management (in addition to actions included in Alternative 1)**

  - rehabilitate foundation masonry for a limited number of structures associated with community life in the former town of Nuttallburg
  - rehabilitate one or two representative coke ovens adjacent to the tipple
  - rehabilitate and maintain traces of major town roads as stabilized trails to enable self-guided visitor circulation among interpreted town remains

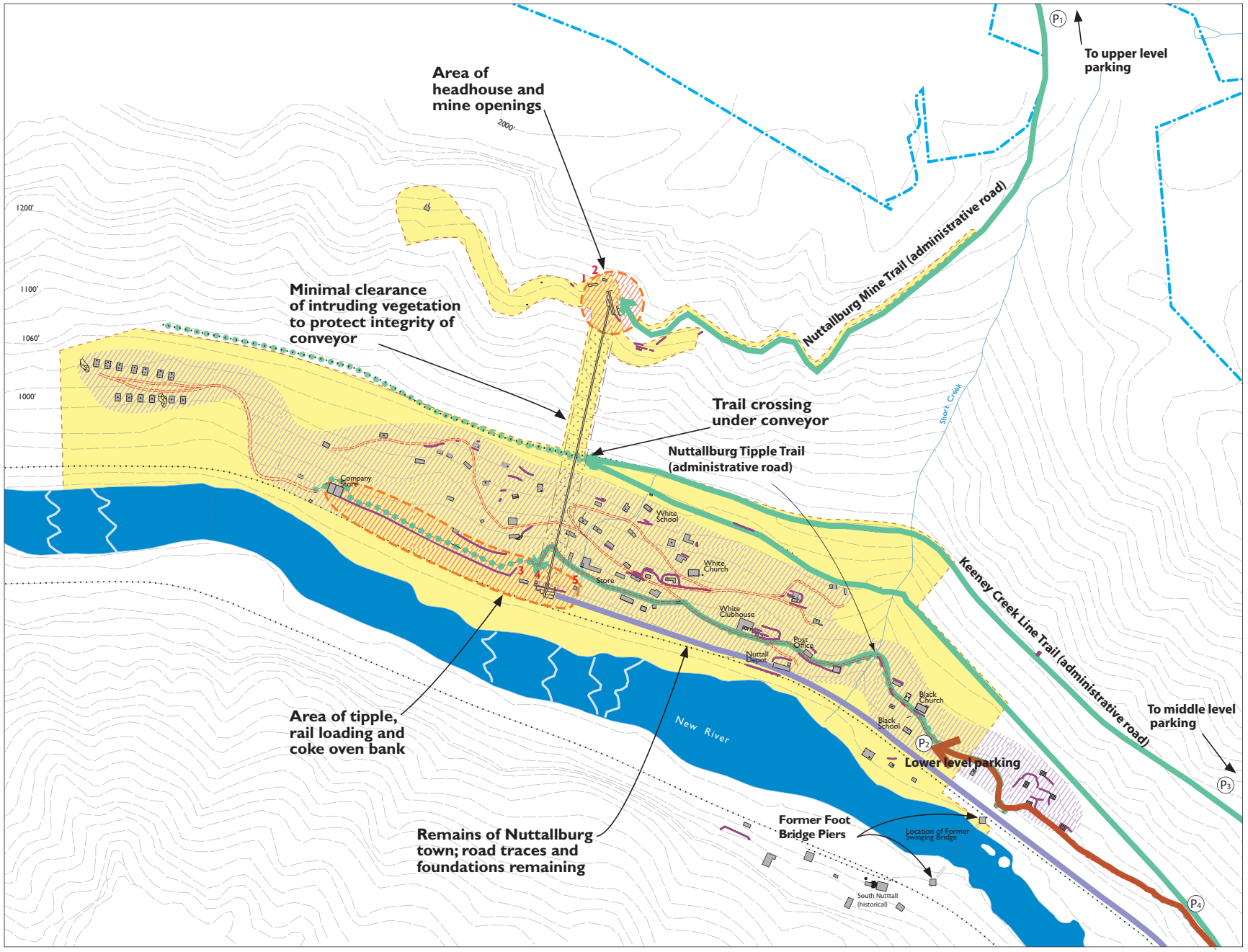

FIGURE 2.2

Alternative 2 - Multiple Settings on Recreational Trails

(Preferred Alternative)

Rehabilitate nationally significant elements of the mine as destinations for trail system

- New River Gorge National River Boundary
- Mining Complex and Town Site Hisotirc District (Nationally Significant)
- Roads
- Keeney Creek Road/ Route 85/2
- Existing NPS Trail/Administrative Road
- New Trails
- Active Rail Line (CSX Main Line)
- Historic Railroad Right-of-Way
- Retaining Wall
- Road Traces of Nuttallburg
- Area where trees will be thinned
- Primary settings for interpretation
- Secondary settings for interpretation
- Foundation Ruins / Various Buildings
  1. Substation
  2. Hoist House
  3. Sand House
  4. Refuse Bin
  5. Well House
- Rapids
- P1 Upper Level Parking
- P2 Lower Level Parking
- P3 Middle Level Parking
- P4 Switchback Level Parking

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New River Gorge National River

0' 200' 400' 600'

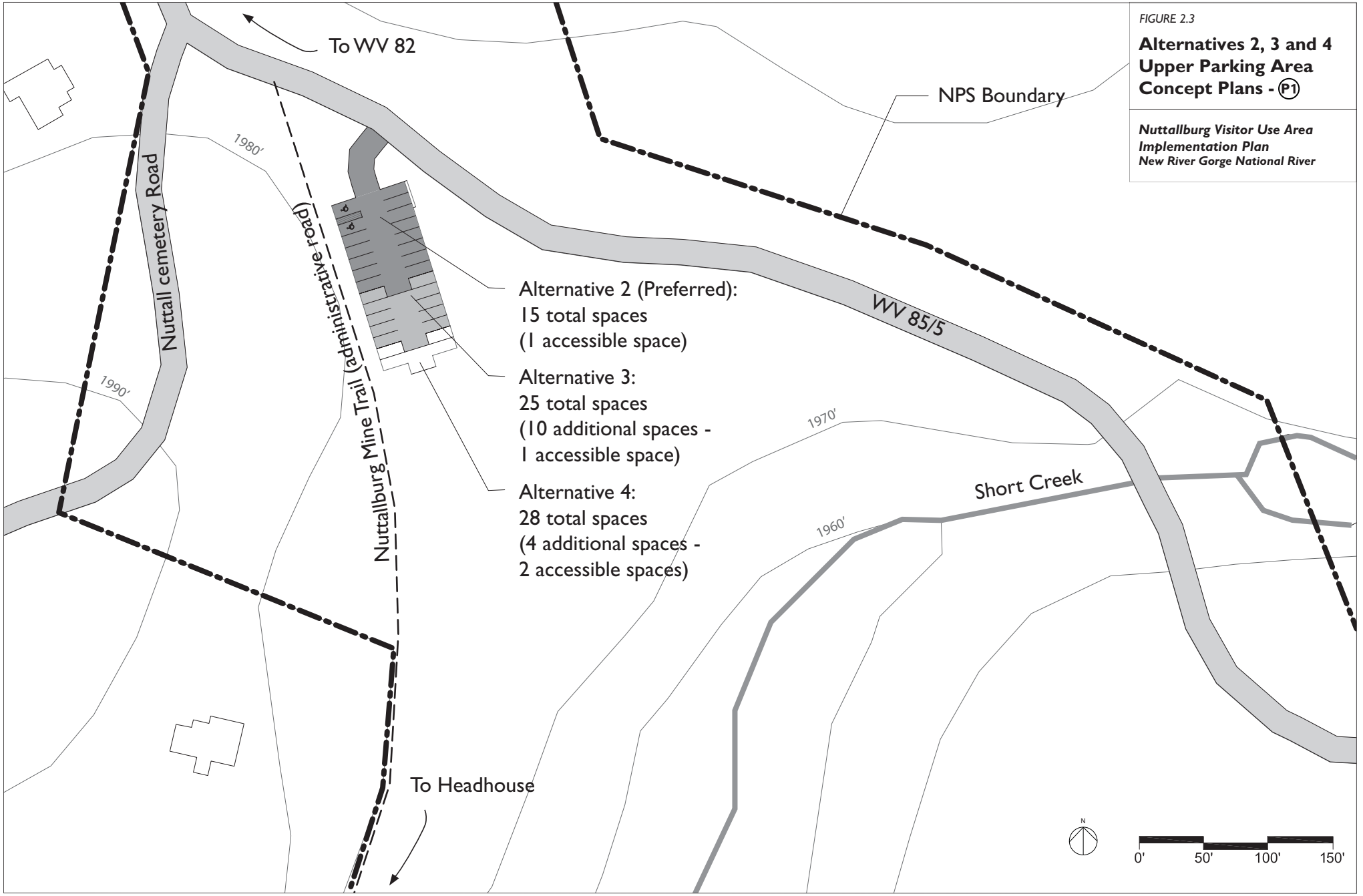

FIGURE 2.3

Alternatives 2, 3 and 4 Upper Parking Area Concept Plans - (P1)

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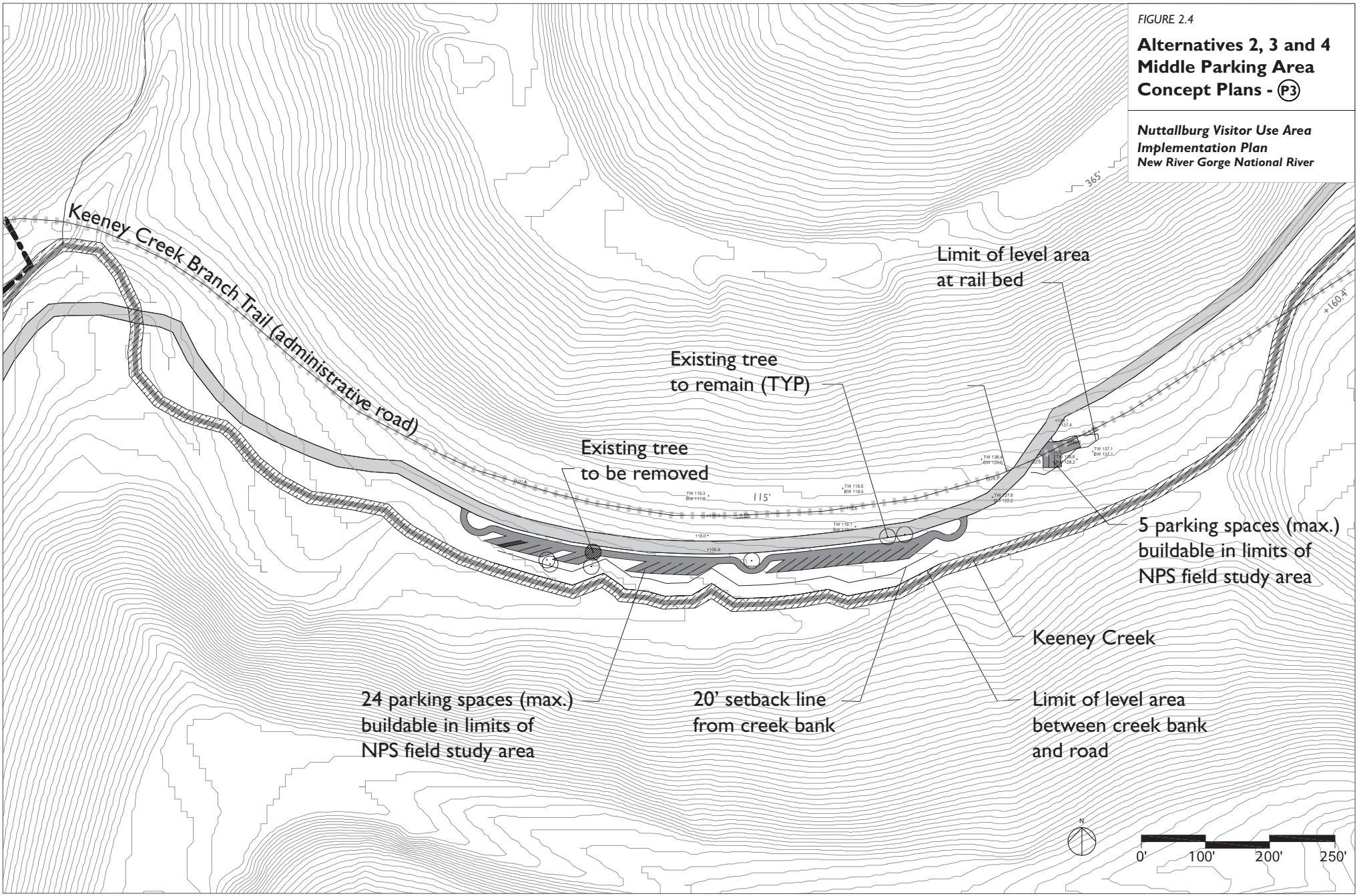

FIGURE 2.4

Alternatives 2, 3 and 4 Middle Parking Area Concept Plans - (P3)

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FIGURE 2.5

Alternatives 2, 3 and 4 Switchback Level Parking Area Concept Plans - (P4)

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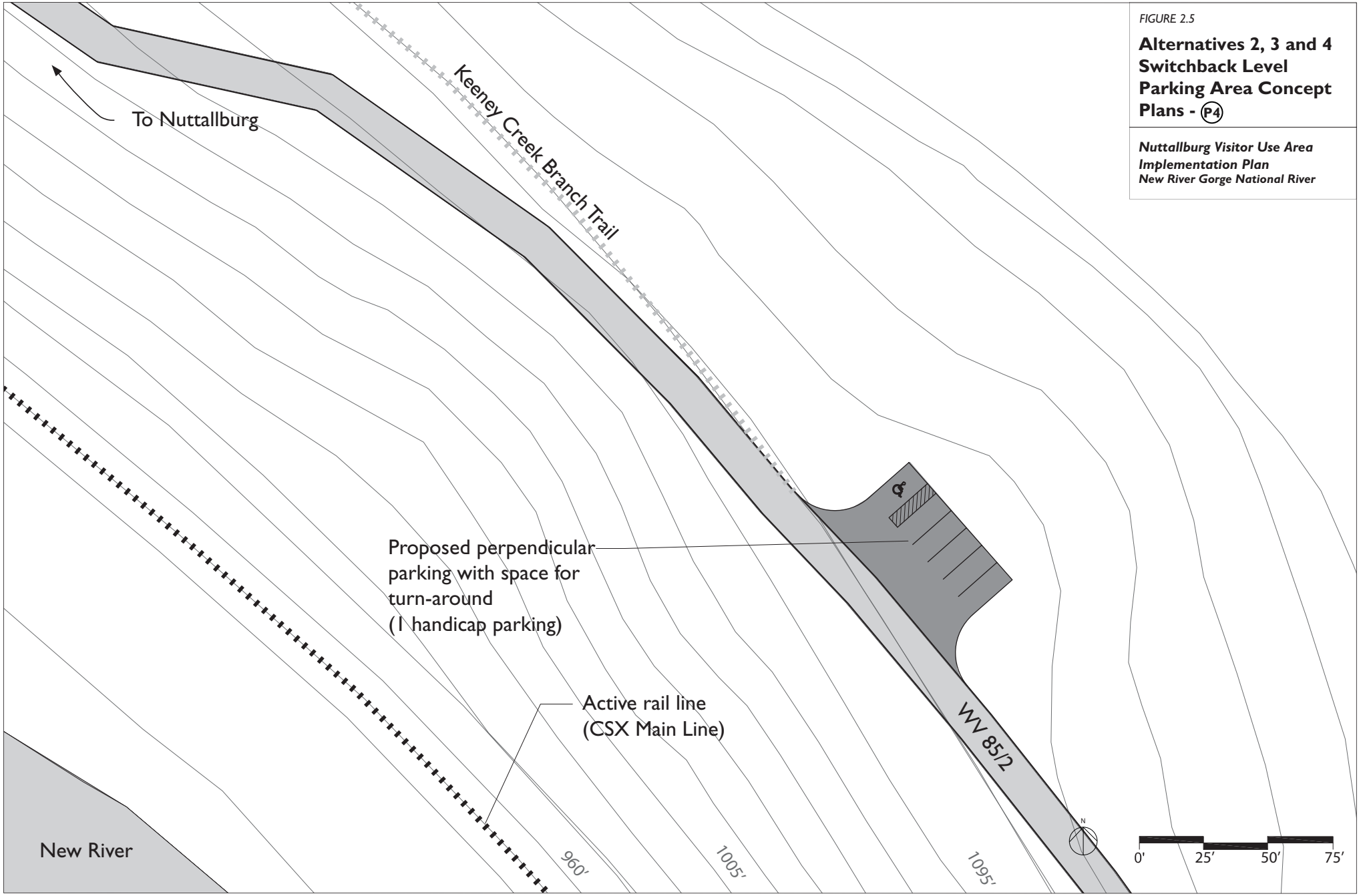

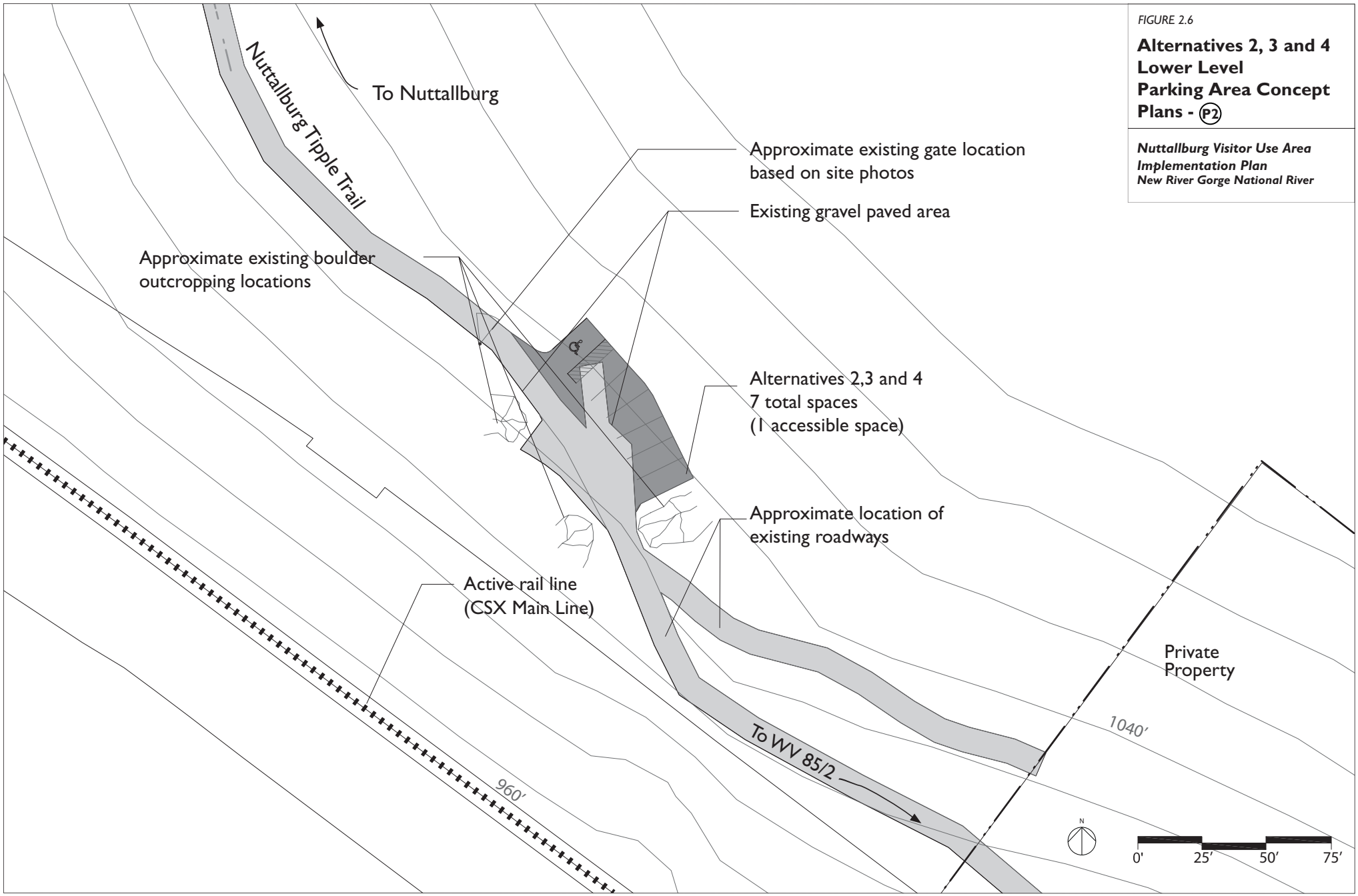

FIGURE 2.6

Alternatives 2, 3 and 4 Lower Level Parking Area Concept Plans - (P2)

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- **Visitor Use and Visitor Experience Improvements**
  - provide a trail connection below the bank of coke ovens between the tipple and the company store
  - provide information and safety signage as required along trails and within the site
  - install introductory waysides at each of four trailheads
  - include overview interpretation of the mining complex at the headhouse and tipple
  - install a limited number of wayside exhibits to help visitors understand the scope of the mining complex, focusing the interpretation effort in the town of Nuttallburg and around the tipple and surrounding elements, including the coke oven bank, the rail loading area, other associated mining structures, and representative community institutions
  - outline building footprints to delineate historical context for significant site elements, for selected buildings in focus areas

- **Park Facilities and Operations Improvements**
  - provide trailhead parking (gravel surface) to accommodate the slightly increased number of visitors who would be attracted to the site because of expanded visitor experience opportunities (see Figures 2.3, 2.4, 2.5 and 2.6):
    - ✓ at Nuttallburg Mine Trail – approximately 15 spaces serving the headhouse area (Upper Parking Area)
    - ✓ at Keeney Creek Branch Line Trail intersection with Keeney Creek Road – approximately 29 spaces serving the middle level (including a connector trail between the two areas) (Middle Parking Area)
    - ✓ at rail switchback intersection with Keeney Creek Road – approximately 6 spaces serving the middle level (Switchback Level Parking Area)
    - ✓ at lowest level of Keeney Creek Road – approximately 7 spaces serving the town site and tipple (Lower Parking Area)
  - install vault toilets at the upper, middle, and lower level parking facilities
  - maintain trails through townsite and along coke ovens to frontcountry trail standard
  - maintain Keeney Creek, Nuttallburg Mine, and Nuttallburg Tipple Trails as administrative roads for use by four-wheel drive maintenance vehicles

2.6 Alternative 3 – Integrated Interpretive Destination (see Figure 2.7)

- **Concept**

Alternative 3 proposes a new trail connection between the headhouse and the Nuttallburg town site. This would create a view and access corridor that would expand the interpretive potential of the site and enhance the visitor experience by connecting the mining structures from top to bottom. In addition, all major town roads would be cleared and maintained as trails, providing access within the former town of Nuttallburg and enabling expanded interpretation of the settlement. Tree thinning would occur in the headhouse area, along the conveyor length, and at the Nuttallburg and Seldom Seen sites.

This alternative would encompass most of the physical improvements to the site described in Alternative 2, but would expand the site treatment to provide more comprehensive interpretation and visitor access, vertically connecting the site as well as interpreting more fully the town, its key

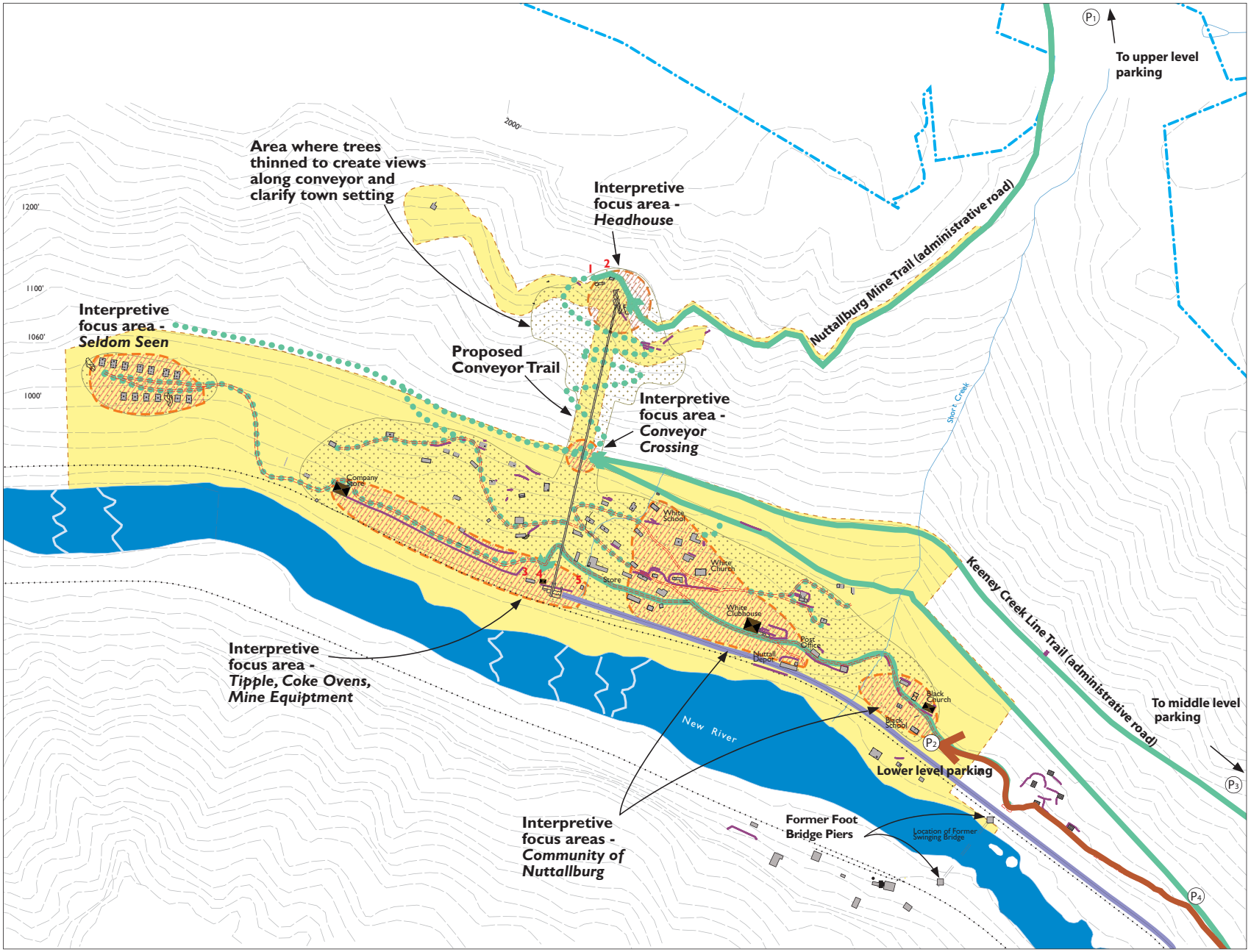

FIGURE 2.7

Alternative 3 - Integrated Interpretive Destinations

Trail connection between headhouse and Nuttallburg town site; with expanded interpretation and visitor experience

- New River Gorge National River Boundary
- Mining Complex and Town Site Historic District (Nationally Significant)
- Roads
- Keeney Creek Road/ Route 85/2
- Improved Trails
- New Trails
- Active Rail Line (CSX Main Line)
- Historic Railroad Right-of-Way
- Retaining Wall
- Road Traces of Nuttallburg
- Interpretive focus areas
- Area where trees will be thinned
- Foundation Ruins / Various Buildings
  1. Substation
  2. Hoist House
  3. Sand House
  4. Refuse Bin
  5. Well House
- Interpretive Structure
- Rapids
- P1 Upper Level Parking
- P2 Lower Level Parking
- P3 Middle Level Parking
- P4 Switchback Level Parking

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0' 200' 400' 600'

structures, and more scattered elements, such as the remains in the Seldom Seen area at the westerly edge of the former town. All former road traces within the town would be cleared, allowing visitors to understand the structure of the former settlement. A new hiking trail would be provided on the steep slope between the headhouse and conveyor midpoint, enabling visitors to go from top to bottom of the mining complex. The overall sense of the site would be that of an industrial complex and company town whose elements and their relationships are visible, accessible, and comprehensible.

Overview site interpretation would be provided at the headhouse, conveyor midpoint, and tipple, although the connection of these areas to one another would necessitate more specialized interpretation at each of these settings: visitors would be encouraged to spend more time at the site than for Alternative 2 and would have the opportunity to follow the length of the mine structure.

A trailhead would be provided for each trail, including parking, a vault toilet, and directional signage (Figures 2.3, 2.4, 2.5, and 2.6).

The primary interpretive experience would combine visual appreciation of the scale of the vertical conveyor system and the horizontal breadth of the town remains along the river. The headhouse, conveyor, tipple, rail loading area, coke oven bank, mining support structures, and remains of key community buildings in this area would be interpreted by waysides at trailheads and throughout the town. All foundation remains would be protected from further deterioration by removal of intrusive vegetation and diversion of drainage, while for all buildings of community-wide significance (e.g. – company store, white and black churches and schools, clubhouses, support facilities in the tipple area and the selected housing structures within the town and at Seldom Seen), masonry foundations would be rehabilitated and former building outlines would be delineated with landscape treatment to highlight the extent of these buildings.

In this alternative, a bank of ten coke ovens in the tipple area would be rehabilitated in order to allow visitors to appreciate the scale and repetitive character of these early ovens and the relationship of the coking operation to the unloading of coal and its transport. A trail connection would be provided below the bank of coke ovens between the tipple and the company store.

In addition to site wayside exhibits, several interpretive focus areas would be developed, located in sites where foundations and artifacts can convey key elements of the Nuttallburg story. These would include the tipple and coke ovens, the headhouse, the company store, and community building complexes.

Vegetation would be managed, as required to stop further deterioration of foundation remains, to eliminate invasive species, to keep the major road traces in the former town accessible to visitors, and to eliminate growth threatening the structure of the conveyor, tipple, and headhouse structures. Trees along the conveyor and within the headhouse area would be thinned, enabling visitors to see from top to bottom of the mining complex as well as across the gorge. Trees within the Nuttallburg town site and the Seldom Seen site would also be thinned, enabling visitors to better understand the historic development pattern.

In addition to the actions included in Alternative 1, key future actions in Alternative 3 include the following:

- **Cultural and Natural Resource Management (in addition to actions included in Alternative 1)**
  - rehabilitate foundation masonry for a limited number of structures associated with community life in the former town of Nuttallburg (as in Alternative 2)
  - rehabilitate and maintain all town road traces as stabilized trails to enable guided visitor circulation among thoroughly interpreted town remains

- rehabilitate a bank of up to ten coke ovens in order to allow visitors to appreciate the scale and evolution of the mining process

- **Visitor Use and Visitor Experience Improvements**

  - provide a trail connection below the bank of coke ovens between the tipple and the company store (as in Alternative 2)
  - develop a new trail connection between the headhouse and the Nuttallburg town site (the Conveyor Trail)
  - thin trees along the conveyor length (to provide top to bottom views) (as in Alternative 2)
  - thin trees in the headhouse area (to provide views across the gorge)
  - thin trees throughout the Nuttallburg town site and the Seldom Seen site (to enable visitors to better understand the historic development patterns)
  - provide information and safety signage as required along trails and within the site (as in Alternative 2)
  - install introductory waysides at each of four trailheads (as in Alternative 2)
  - include overview interpretation at the headhouse and tipple (as in Alternative 2), at the midpoint of the conveyor, at the coke oven bank, at the rail loading area, and at other associated mining structures and town remains
  - install wayside exhibits as defined in Alternative 2, plus additional exhibits focused on the mine and community social institutions to help visitors understand the scope of the mining complex and to guide them in grasping its social organization and Nuttallburg's relationship to the culture of New River communities
  - outline building footprints to delineate historical context for selected buildings in focus areas (as in Alternative 2)

- **Park Facilities and Operational Improvements**

  - provide trailhead parking (gravel surface) to accommodate the moderately increased number of visitors who would be attracted to the site because of expanded visitor experience opportunities (see Figures 2.3, 2.4, 2.5 and 2.6):
    - ✓ at Nuttallburg Mine Trail – approximately 25 spaces serving the headhouse area (Upper Parking Area)
    - ✓ at Keeney Creek Branch Line Trail intersection with Keeney Creek Road – approximately 29 spaces serving the middle level (including a connector trail between the two areas) (Middle Parking Area)
    - ✓ at rail switchback intersection with Keeney Creek Road – approximately 6 spaces serving the middle level (Switchback Level Parking Area)
    - ✓ at lowest level of Keeney Creek Road – approximately 7 spaces serving the town site and tipple (Lower Level Parking Area)
  - install vault toilets at the upper, middle, and lower level parking facilities (as in Alternative 2)
  - maintain trails as administrative roads for use by four-wheel drive maintenance vehicles (as in Alternative 2)

2.7 Alternative 4 – Historic and Cultural Cross Section of the Gorge (see Figure 2.8)

- **Concept**

This approach incorporates the improvements defined in Alternative 3, but expands upon this interpretive concept to create a connection between Nuttallburg and Kaymoor by providing a footbridge across the river and the CSX Main Line. The connection would not only link two important and nearby cultural resources, but would also provide a way for visitors to experience a setting that includes both sides of the gorge and their shared industrial heritage – from top to bottom – encompassing a full range of recreational, natural, historic, and cultural resources. Tree thinning would occur in the headhouse area, along the conveyor length, and at the Nuttallburg and Seldom Seen sites.

The core feature of this concept would be the visitor experience of connecting trail through the Nuttallburg site, crossing the gorge, and continuing along the south side of the river to the Miners Trail. The new footbridge over the river and CSX Main Line could be a suspension structure that would reintroduce a connection originally provided by the "swinging bridge" that was part of the Nuttallburg. The link would provide a rim to rim experience that is lacking in the remainder of the park and would also offer opportunities to observe and take part in other major recreational activities characteristic of the gorge such as climbing, hiking, paddling, and fishing. In order to connect the bridge to Kaymoor, a trail between the bridge landing and the Kaymoor tipple area would be required.

Alternative 4 would also emphasize bench level trails on either side of the river, due to their strong association with mining operations and their potential for upper level access along the gorge.

A trailhead would be provided for each trail, including parking, a vault toilet, and directional signage (Figures 2.3, 2.4, 2.5, and 2.6).

The interpretation in this alternative would include all elements defined in Alternative 3, but would be expanded to relate the two mining complexes to one another, as well as to explain in more depth the relationship of industry to the natural phenomena of the gorge.

In addition to wayside exhibits, several interpretive focus areas would be developed, located in sites where foundations and artifacts can convey key elements of the Nuttallburg story. These would include the tipple and coke ovens, the headhouse, the company store, and community building complexes.

As in Alternative 3, vegetation would be managed, as required to stop further deterioration of foundation remains, to eliminate invasive species, to keep the major road traces in the former town accessible to visitors, and to eliminate growth threatening the structure of the conveyor, tipple, and headhouse structures. Trees along the conveyor and within the headhouse area would be thinned, enabling visitors to see from top to bottom of the mining complex as well as across the gorge. Trees within the Nuttallburg town site and the Seldom Seen site would also be thinned, enabling visitors to better understand the historic development pattern.

In addition to the actions included in Alternative 1, key future actions in Alternative 4 include the following:

- **Cultural and Natural Resource Management (in addition to actions included in Alternative 1)**
  - rehabilitate foundation masonry for key remains associated with community life in the former town of Nuttallburg (as in Alternatives 2 and 3)
  - rehabilitate and maintain all town road traces as stabilized trails to enable guided visitor circulation among thoroughly interpreted town remains (as in Alternative 3)

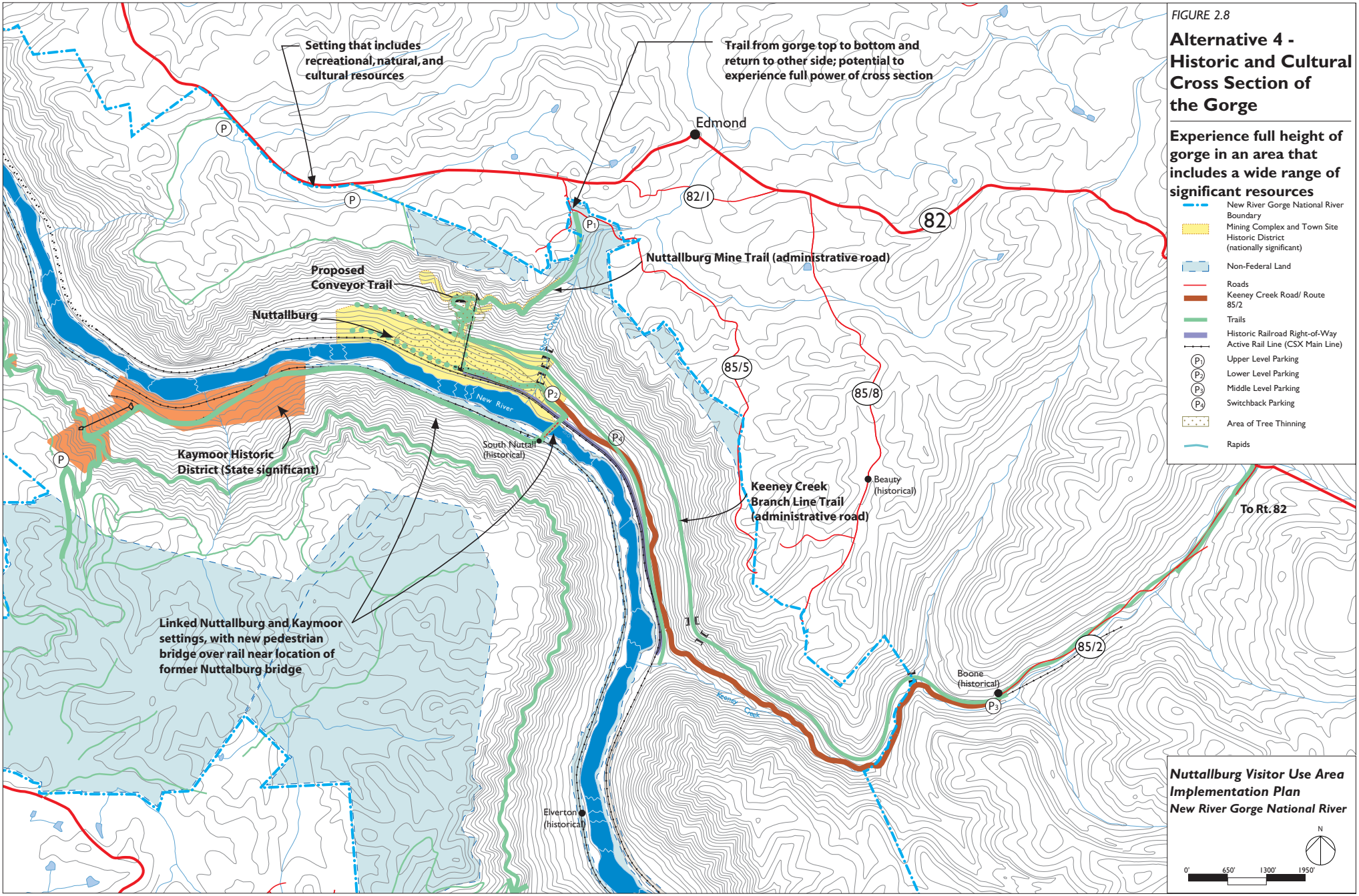

FIGURE 2.8

Alternative 4 - Historic and Cultural Cross Section of the Gorge

Experience full height of gorge in an area that includes a wide range of significant resources

- New River Gorge National River Boundary
- Mining Complex and Town Site Historic District (nationally significant)
- Non-Federal Land
- Roads
- Keeney Creek Road/ Route 85/2
- Trails
- Historic Railroad Right-of-Way
- Active Rail Line (CSX Main Line)
- P1 Upper Level Parking
- P2 Lower Level Parking
- P3 Middle Level Parking
- P4 Switchback Parking
- Area of Tree Thinning
- Rapids

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0' 650' 1300' 1950'

- rehabilitate a bank of up to ten coke ovens in order to allow visitors to appreciate the scale and evolution of the mining process (as in Alternative 3)

- **Visitor Use and Visitor Experience Improvements**

  - provide a trail connection below the bank of coke ovens between the tipple and the company store (as in Alternatives 2 and 3)
  - develop a new trail connection between the headhouse and the Nuttallburg town site (the Conveyor Trail) (as in Alternative 3)
  - develop a new trail connection for the lower parking facility to Kaymoor (connecting to the existing Miners Trail on river left), including construction of a footbridge near the site of the historic "swinging bridge"
  - thin trees along the conveyor length (to provide top to bottom views) (as in Alternatives 2 and 3)
  - thin trees in the headhouse area (to provide views across the gorge) (as in Alternative 3)
  - thin trees throughout the Nuttallburg town site and the Seldom Seen site (to enable visitors to better understand the historic development patterns) (as in Alternative 3)
  - provide information and safety signage as required along trails and within the site (as in Alternatives 2 and 3)
  - install introductory waysides at each of four trailheads (as in Alternatives 2 and 3)
  - include overview interpretation at the headhouse and tipple (as in Alternative 2), at the midpoint of the conveyor, at the coke oven bank, at the rail loading area, and at other associated mining structures and town remains (as in Alternative 3)
  - provide wayside exhibits as defined in Alternative 2, plus additional exhibits focused on the mine and community social institutions to help visitors understand the scope of the mining complex and to guide them in grasping its social organization and their relationship to the culture of the New River communities (as in Alternative 3)
  - outline building footprints to delineate historical context for selected buildings in focus areas (as in Alternatives 2 and 3)
  - install wayside with context map on both sides of the bridge linking Nuttallburg and Kaymoor

- **Park Facilities and Operational Improvements**

  - provide trailhead parking (gravel surface) to accommodate the significantly increased number of visitors who would be attracted to the site because of expanded visitor experience opportunities (see Figures 2.3, 2.4, 2.5 and 2.6):
    - ✓ at Nuttallburg Mine Trail – approximately 28 spaces serving the headhouse area (Upper Parking Area)
    - ✓ at Keeney Creek Branch Line Trail intersection with Keeney Creek Road – approximately 29 spaces serving the middle level (including a connector trail between the two areas) (Middle Parking Area)
    - ✓ at rail switchback intersection with Keeney Creek Road – approximately 6 spaces serving the middle level (Switchback Level Parking Area)
    - ✓ at lowest level of Keeney Creek Road – approximately 7 spaces serving the town site and tipple (Lower Level Parking Area)

- install bat-friendly gates to prevent visitor access to mine portals
- other parking facilities would serve the Nuttallburg area, including two parking facilities along the Endless Wall Trail with immediate access to Route 82, and one parking facility at the western edge of Kaymoor at the upper level of the gorge
- install vault toilets at the upper, middle, and lower level parking facilities (as in Alternatives 2 and 3)
- maintain three trails as administrative roads for use by four-wheel drive maintenance vehicles (as in Alternatives 2 and 3)
- maintain Conveyor Trail and trails through the townsite as single-track trails

2.8 Alternatives Considered but Dismissed from Detailed Analysis

During the planning process a number of alternatives were considered but dismissed, including:

- Alternatives that included a larger upper level parking facility at the Nuttallburg Mine Trail Trailhead were considered but eliminated. During the planning process a determination was made to limit the amount of parking at the trailhead in order to control the number of visitors to the headhouse area. This was done to decrease the potential for adverse impacts on federally-designated endangered species.
- The alternatives of rebuilding some former town buildings or outlining buildings in three dimensions were considered as part of an interpretive strategy for the site. However, this approach was determined to be out of character with the former town site.
- Restoration of the entire coke oven bank was considered but eliminated because the interpretive benefit added would not warrant the additional restoration cost. This level of restoration was also considered out of scale in relation to the level of restoration being implemented in the remainder of the site.
- A visitor contact station was considered but rejected because it implied much larger visitation than is likely or desirable at the site given natural resource constraints and the limited opportunities for visitor parking.
- Creating a trail connection to Nuttallburg from the river at Short Creek was considered but eliminated. The crossing was judged to be too hazardous. It was also considered unlikely that the CSX Corporation would grant legal access across the Main Line right-of-way.

2.9 Mitigation Measures of the Preferred Alternative

Mitigation measures were analyzed as part of Alternative B (Preferred Alternative) in order to lessen or eliminate potential adverse impacts of the proposed action. There are five categories of mitigation as defined in the regulations of the Council on Environmental Quality, as follows:

- avoiding the impact by not taking certain action or parts of an action
- minimizing impacts by limiting the degree or magnitude of the action and its implementation
- rectifying the impact by repairing, rehabilitating, or restoring the affected environment
- reducing or eliminating the impact over time by preservation and maintenance during the life of the action

- compensating for the impact by replacing or providing substitute resources or environments

Table 2.1 presents a summary of the mitigation measures that have been incorporated into the design of the Nuttall Mine and Nuttallburg Visitor Use Area.

2.10 Comparative Summaries of the No Action and Action Alternatives

- **Degree to which the Alternatives Meet the Project Purpose and Fulfill the Need for the Project**

Alternative 1. Alternative 1 (No Action) would not meet the project purpose and would not fulfill the need for the project. It would not provide a focal point within the park for the interpretation of early coal mining technology in New River Gorge. While visitors would be able to hike to the site on recently improved trails, once they reach Nuttallburg there would be no signage or media available to interpret its significant cultural resources. Long-term treatment of the headhouse, conveyor, and tipple would stabilize the structures, preventing them from collapse and thereby protect visitors from the most imminent hazards currently present on the site. Designated species would be protected from visitor impacts.

Alternative 2. Alternative 2 (Preferred Alternative) would meet the project purpose and fulfill the need for the project. Alternative 2 would provide a focal point within the park for the interpretation of early coal mining technology in New River Gorge, although interpretive media and programs would be limited to wayside exhibits at the headhouse, the tipple, and the town site, with a focus at the lower level. Visitors would be encouraged to visit the site. A new trail would be added providing access at the lower level to the Nuttallburg town site, the tipple area, and Seldom Seen. Parking and vault toilets would be provided. Long-term treatment of the headhouse, conveyor, and tipple would stabilize the structures, preventing them from collapse and thereby protect visitors from hazards currently present on the site. Stabilization measures and other cultural resource management actions would protect the site's most significant cultural resources over the long-term as well as resources at the Nuttallburg town site and most of the coke ovens. Designated species would be protected from visitor impacts.

Alternative 3. Alternative 3 would meet the project purpose and fulfill the need for the project. It would provide a strong focal point within the park for the interpretation of early coal mining technology in New River Gorge, with interpretive media and programs composed of wayside exhibits and interpretive focal areas at the headhouse, at the tipple, and at the town site. Visitors would be encouraged to visit the site. A new trail connecting the headhouse with the tipple would enable visitors to more easily experience the entire site. Parking and vault toilets would be provided. Long-term treatment of the headhouse, conveyor, and tipple would stabilize the structures, preventing them from collapse and thereby protect visitors from hazards currently present on the site. Stabilization measures and other cultural resource management actions would protect the site's most significant cultural resources over the long-term as well as resources at the Nuttallburg town site and most of the coke ovens. Designated species would be protected from visitor impacts.

Alternative 4. Alternative 4 would meet the project purpose and fulfill the need for the project. It would provide a very strong focal point within the park for the interpretation of early coal mining technology in New River Gorge, with interpretive media and programs composed of wayside exhibits and interpretive focal areas at the headhouse, at the tipple, and at the town site. By connecting Nuttallburg and Kaymoor via a new trail and footbridge over the New River the interpretive experience would be expanded to include and be integrated with the interpretive experience at Kaymoor. Visitors would be encouraged to visit both Nuttallburg and Kaymoor. The existing historic trail providing

access at the lower level to the Nuttallburg town site, the tipple area, and Seldom Seen would be rehabilitated. A second new trail connecting the headhouse with the tipple would enable visitors to more easily experience the entire site. Parking and vault toilets would be provided. Long-term treatment of the headhouse, conveyor, and tipple would stabilize the structures, preventing them from collapse and thereby protect visitors from hazards currently present on the site. Stabilization measures and other cultural resource management actions would protect the site's most significant cultural resources over the long-term as well as resources at the Nuttallburg town site and most of the coke ovens. Designated species would be protected from visitor impacts.

TABLE 2.1. Summary of Mitigation Measures Included in Alternative 2 (Preferred Alternative)

Impact Topic	Mitigation Measure
Soil Resources	▪ fence all construction areas to confine potentially adverse activities to the minimum area required for construction all protection measures would be clearly stated in the construction specifications and works would be instructed to avoid conducting activities beyond the fenced construction zone ▪ use soil and erosion control measures during construction ▪ reseed all new trails with native grasses
Vegetation Resources	▪ remove invasive plants from trail corridors, historic road traces, and the vicinity of the site's cultural resources using methods prescribed in the park's *Integrated Pest Management Plan* (NPS 2003) ▪ implement measures to prevent invasive plants from returning to sites where they have been removed ▪ restore disturbed areas that are temporarily disturbed during construction with native grasses and other native species
Rare, Threatened and Endangered Species and Their Habitat	▪ restrict visitation to the Nuttallburg Visitor Use Area to day-use only ▪ gate and fence all mine portals within one mile of the Nuttallburg headhouse ▪ inspect for evidence of bat roosting all trees that are to be removed from the vicinity of the headhouse, conveyor and tipple, as well as from the rights-of-way of major historic road traces; avoid removing to the extent practicable trees that show evidence of bat roosting ▪ where mature trees that provide potential habitat must be removed, remove them during the hibernation period from November 15th through March 31st ▪ install bat condos within the conveyor and the headhouse structures ▪ reseed all new gravel trails with native grasses
Historic Buildings and Structures	▪ provide signage warning visitors about the dangers inherent in climbing on the site's historic structures and buildings ▪ implement measures as needed to prevent visitors from climbing on historic structures, buildings, foundations, and ruins ▪ design and install bat condos to avoid adverse effects to historic buildings and structures
Archeological Resources	▪ conduct an archeological survey to identify and avoid archeological resources prior to implementing management actions to protect foundations and other remains and artifacts at the site conduct ▪ immediately implement NHPA Section 106 procedures if and when any unknown significant archeological resources are uncovered during ground-disturbing activities ▪ implement measures to confine visitors to designated trails within the site ▪ protect foundations and ruins from trampling by visitors

TABLE 2.2. Comparative Summary of Alternatives

	Alternative 1 (No Action)	Alternative 2 (Preferred)	Alternative 3	Alternative 4
Headhouse	▪ complete long-term stabilization	▪ complete long-term stabilization ▪ include overview interpretation	▪ complete long-term stabilization ▪ include overview interpretation	▪ complete long-term stabilization ▪ include overview interpretation
Conveyor	▪ complete long-term stabilization	▪ complete long-term stabilization	▪ complete long-term stabilization ▪ include overview interpretation	▪ complete long-term stabilization ▪ include overview interpretation
Coal Tipple	▪ complete long-term stabilization	▪ complete long-term stabilization ▪ include overview interpretation	▪ complete long-term stabilization ▪ include overview interpretation	▪ complete long-term stabilization ▪ include overview interpretation
Coke Ovens	▪ monitor for potential collapse	▪ include overview interpretation ▪ rehabilitate two coke ovens adjacent to tipple	▪ include overview interpretation ▪ rehabilitate ten coke ovens adjacent to tipple	▪ include overview interpretation ▪ rehabilitate ten coke ovens adjacent to tipple
Town Remains	▪ implement minor management actions to protect foundations and other remains	▪ rehabilitate limited foundation masonry associated with community life ▪ outline building footprints for select buildings ▪ protect foundation remains	▪ rehabilitate limited foundation masonry associated with community life ▪ outline building footprints for select buildings ▪ protect foundation remains ▪ install wayside exhibits	▪ rehabilitate limited foundation masonry associated with community life ▪ outline building footprints for select buildings ▪ protect foundation remains ▪ install wayside exhibits
Supporting Structures	▪ none	▪ complete stabilization and preservation	▪ complete stabilization and preservation ▪ include overview interpretation	▪ complete stabilization and preservation ▪ include overview interpretation
Trails and Trailheads	▪ maintain trails to headhouse, and middle bench	▪ install introductory waysides at trailheads ▪ rehabilitate and maintain major historic town road traces ▪ provide information and safety signage ▪ maintain three trails for four-wheel drive maintenance vehicles ▪ maintain other trails as single-track hiking/biking trails ▪ install vault toilets at trailheads	▪ build new trail from headhouse to tipple ▪ install introductory waysides at trailheads ▪ rehabilitate and maintain most historic town road traces as stabilized roads, including trail to Seldom Seen ▪ provide information and safety signage ▪ maintain three trails for four-wheel drive maintenance vehicles ▪ maintain other trails as single-track hiking/biking trails ▪ install vault toilets at trailheads	▪ build new trail from headhouse to tipple ▪ install introductory waysides at trailheads ▪ rehabilitate and maintain most town historic road traces as stabilized roads, including trail to Seldom Seen ▪ provide information and safety signage ▪ maintain three trails for four-wheel drive maintenance vehicles ▪ maintain other trails as single-track hiking/biking trails ▪ install vault toilets at trailheads ▪ build bridge connection to Kaymoor and install wayside interpretation
Roads and Parking	▪ provide no trailhead parking	▪ provide trailhead parking to meet visitor demand	▪ provide trailhead parking to partially meet visitor demand	▪ provide trailhead parking to partially meet visitor demand
Vegetation Management	▪ periodically remove invasive vegetation from supporting structures and the town site	▪ periodically remove invasive vegetation from supporting structures and the town site	▪ periodically remove invasive vegetation from supporting structures and the town site ▪ thin trees along conveyor ▪ thin trees in headhouse area ▪ thin trees throughout the Nuttallburg town site and at Seldom Seen	▪ periodically remove invasive vegetation from supporting structures and the town site ▪ thin trees along conveyor ▪ thin trees in headhouse area ▪ thin trees throughout the Nuttallburg town site and at Seldom Seen
Habitat Protection	▪ none	▪ limit visitation to day use only ▪ install bat gates and fences at all mine portals within one mile of the headhouse ▪ install bat roosting structures in the vicinity of the conveyor and headhouse ▪ install bat condos within conveyor and headhouse	▪ limit visitation to day use only ▪ install bat gates and fences at all mine portals within one mile of the headhouse ▪ install bat roosting structures in the vicinity of the conveyor and headhouse ▪ install bat condos within the conveyor headhouse	▪ limit visitation to day use only ▪ install bat gates and fences at all mine portals within one mile of the headhouse ▪ install bat roosting structures in the vicinity of the conveyor and headhouse ▪ install bat condos within the conveyor headhouse

TABLE 2.3. Comparative Summary of Environmental Consequences

Impact Topic	Alternative 1 (No Action)	Alternative 2 (Preferred)	Alternative 3	Alternative 4
Soil Resources	Cultural resource management actions would have a local short-term minor adverse impact on soil resources. Natural resource management actions would have a local short-term moderate adverse impact on soil resources. Routine maintenance of park administrative roads and trails would have periodic short-term negligible impacts on soil resources.	Cultural resource management actions would have a local short-term minor adverse impact on soil resources. Natural resource management actions would have a local short-term moderate adverse impact on soil resources. Rehabilitation of major historic road traces and new trail construction would result in a local short-term moderate adverse impact on soil resources. Construction of new visitor parking facilities would result in both short-term and long-term local moderate adverse impacts on soil resources. Routine maintenance of park administrative roads and trails would have periodic short-term negligible impacts on soil resources.	Cultural resource management actions would have a local short-term minor adverse impact on soil resources. Natural resource management actions would have a local short-term moderate adverse impact on soil resources. Rehabilitation of most historic road traces and new trail construction would result in a local short-term minor adverse impact on soil resources. Construction of new visitor parking facilities would result in both short-term and long-term local moderate adverse impacts on soil resources. Routine maintenance of park administrative roads and trails would have periodic short-term negligible impacts on soil resources.	Cultural resource management actions would have a local short-term minor adverse impact on soil resources. Natural resource management actions would have a local short-term moderate adverse impact on soil resources. Rehabilitation of most historic road traces and new trail construction would result in a local short-term moderate adverse impact on soil resources. Construction of new visitor parking facilities would result in both short-term and long-term local moderate adverse impacts on soil resources. Routine maintenance of park administrative roads and trails would have periodic short-term negligible impacts on soil resources.
Vegetation Resources	Cultural and natural resource management actions would result in a local long-term minor beneficial impact on vegetation resources. Routine maintenance of park administrative roads and trails would have a local long-term negligible impact on vegetation resources.	Cultural and natural resource management actions would result in a local long-term minor beneficial impact on vegetation resources. Rehabilitation of major historic road traces would have a local long-term minor adverse impact on vegetation resources. Clearing for construction of new trails and parking facilities would result in a local long-term minor adverse impact on vegetation resources. Routine maintenance of park administrative roads and trails would have a local long-term negligible impact on vegetation resources.	Cultural and natural resource management actions would result in a local long-term minor beneficial impact on vegetation resources. Rehabilitation of most historic road traces would have a local long-term minor adverse impact on vegetation resources. Tree thinning in the Nuttallburg town site, the Seldom Seen site, the headhouse area, and along the conveyor length to enhance interior views and top to bottom views would have a local long-term minor adverse impact on vegetation resources Clearing for construction of new trails and parking facilities would result in a local long-term minor adverse impact on vegetation resources. Routine maintenance of park administrative roads and trails would have a local long-term negligible impact on vegetation resources.	Cultural and natural resource management actions would result in a local long-term minor beneficial impact on vegetation resources. Rehabilitation of most historic road traces would have a local long-term minor adverse impact on vegetation resources. Tree thinning in the Nuttallburg town site, the Seldom Seen site, the headhouse area, and along the conveyor length to enhance interior views and top to bottom views would have a local long-term minor adverse impact on vegetation resources Clearing for construction of new trails and parking facilities would result in a local long-term minor adverse impact on vegetation resources. Routine maintenance of park administrative roads and trails would have a local long-term negligible impact on vegetation resources.

TABLE 2.3. Comparative Summary of Environmental Consequences

Impact Topic	Alternative 1 (No Action)	Alternative 2 (Preferred)	Alternative 3	Alternative 4
Rare, Threatened, Endangered Species	Cultural resource and natural resource management actions would result in local short-term and long-term negligible impacts on designated species and their habitat. Routine maintenance of park administrative roads and trails would result in a local long-term negligible impact on designated species and their habitat. Projected visitor use would result in a local long-term negligible impact on designated species and their habitat.	Cultural resource and natural resource management actions would result in local short-term and long-term negligible impacts on designated species and their habitat. Rehabilitation of major town historic road traces would result in a short-term minor adverse impact on designated species and their habitat. Routine maintenance of trails, administrative roads, and rehabilitated historic road traces would result in a local long-term negligible impact on designated species and their habitat. Clearing for parking facilities would result in a local long-term negligible impact on designated species and their habitat. Projected visitor use would result in a local long-term negligible impact on designated species and their habitat.	Cultural resource and natural resource management actions would result in local short-term and long-term negligible impacts on designated species and their habitat. Rehabilitation of major town historic road traces would result in a short-term minor adverse impact on designated species and their habitat. Tree thinning in the Nuttallburg town site, the Seldom Seen site, the headhouse area, and along the conveyor length to enhance interior views and top to bottom views would result in a local long-term minor adverse impact on designated species and their habitat. Construction of a new trail connection from the headhouse to the tipple would result in a local short-term minor adverse impact to designated species. Routine maintenance of trails, administrative roads, and rehabilitated historic road traces would result in a local long-term negligible impact on designated species and their habitat. Clearing for parking facilities would result in a local long-term negligible impact on designated species and their habitat. Projected visitor use would result in a local long-term negligible impact on designated species and their habitat.	Cultural resource and natural resource management actions would result in local short-term and long-term negligible impacts on designated species and their habitat. Rehabilitation of major town historic road traces would result in a short-term minor adverse impact on designated species and their habitat. Tree thinning in the Nuttallburg town site, the Seldom Seen site, the headhouse area, and along the conveyor length to enhance interior views and top to bottom views would result in a local long-term minor adverse impact on designated species and their habitat. Construction of a new trail connection from the headhouse to the tipple would result in a local short-term minor adverse impact to designated species. Routine maintenance of trails, administrative roads, and rehabilitated historic road traces would result in a local long-term negligible impact on designated species and their habitat. Clearing for parking facilities would result in a local long-term negligible impact on designated species and their habitat. Projected visitor use would result in a local long-term negligible impact on designated species and their habitat.
Cultural Landscapes	Cultural and natural resource management actions would have local long-term minor beneficial impacts on cultural landscape resources. The Section 106 determination of effect would be no adverse effect to cultural landscapes.	Cultural and natural resource management actions would have local long-term minor beneficial impacts on cultural landscape resources. The Section 106 determination of effect would be no adverse effect to cultural landscapes.	Cultural and natural resource management actions would have local long-term minor beneficial impacts on cultural landscape resources. The Section 106 determination of effect would be no adverse effect to cultural landscapes.	Cultural and natural resource management actions would have local long-term minor beneficial impacts on cultural landscape resources. The Section 106 determination of effect would be no adverse effect to cultural landscapes.
Historic Buildings and Structures	Cultural and natural resource management actions would have local long-term minor beneficial impacts on historic buildings and structures. Projected visitor use would have a local long-term negligible impact on historic buildings and structures. The Section 106 determination of effect would be no adverse effect to historic buildings and structures.	Cultural and natural resource management actions would have local long-term minor beneficial impacts on historic buildings and structures. Projected visitor use would have a local long-term negligible impact on historic buildings and structures. Development of new visitor use facilities would have a long-term minor adverse impact on historic buildings and structures.	Cultural and natural resource management actions would have local long-term minor beneficial impacts on historic buildings and structures. Projected visitor use would have a local long-term minor adverse impact on historic buildings and structures. Development of new visitor use facilities would have a long-term minor adverse impact on historic buildings and structures.	Cultural and natural resource management actions would have local long-term minor beneficial impacts on historic buildings and structures. Projected visitor use would have a local long-term minor adverse impact on historic buildings and structures. Development of new visitor use facilities would have a long-term minor adverse impact on historic buildings and structures.

TABLE 2.3. Comparative Summary of Environmental Consequences

Impact Topic	Alternative 1 (No Action)	Alternative 2 (Preferred)	Alternative 3	Alternative 4
Historic Buildings and Structures (continued)		The Section 106 determination of effect would be no adverse effect to historic buildings and structures.	The Section 106 determination of effect would be no adverse effect to historic buildings and structures.	The Section 106 determination of effect would be no adverse effect to historic buildings and structures.
Archeological Resources	Cultural resource management actions would have local long-term negligible to moderate adverse impacts on archeological resources. Natural resource management actions would have a long-term minor beneficial impact on archeological resources. Projected visitor use would have a local long-term negligible impact on archeological resources. The Section 106 determination of effect would be no adverse effect to archeological resources.	Cultural resource management actions and development of new visitor use facilities would have local long-term negligible to moderate adverse impacts on archeological resources. Natural resource management actions would have a long-term minor beneficial impact on archeological resources. Projected visitor use would have a local long-term minor adverse impact on archeological resources. The Section 106 determination of effect would be no adverse effect to archeological resources.	Cultural resource management actions and development of new visitor use facilities would have local long-term negligible to moderate adverse impacts on archeological resources. Natural resource management actions in Alternative 3 would have a long-term minor beneficial impact on archeological resources. Projected visitor use would have a local long-term minor adverse impact on archeological resources. The Section 106 determination of effect would be no adverse effect to archeological resources.	Cultural resource management actions and development of new visitor use facilities would have local long-term negligible to moderate adverse impacts on archeological resources. Natural resource management actions would have a long-term minor beneficial impact on archeological resources. Projected visitor use would have a local long-term minor adverse impact on archeological resources. The Section 106 determination of effect would be no adverse effect to archeological resources.
Ethnographic Resources	Cultural and natural resource management actions would have local long-term moderate beneficial impacts on ethnographic resources. The Section 106 determination of effect would be no adverse effect to ethnographic resources.	Cultural and natural resource management actions would have local long-term moderate beneficial impacts on ethnographic resources. The Section 106 determination of effect would be no adverse effect to ethnographic resources.	Cultural and natural resource management actions would have local long-term moderate beneficial impacts on ethnographic resources. The Section 106 determination of effect would be no adverse effect to ethnographic resources.	Cultural and natural resource management actions would have local long-term moderate beneficial impacts on ethnographic resources. The Section 106 determination of effect would be no adverse effect to ethnographic resources.
Local Roads and Park Access	Visitor-related traffic and parking would result in a local long-term minor adverse impact on local roads and park access.	Visitor-related traffic and parking would result in a local long-term minor beneficial impact on local roads and park access.	Visitor-related traffic and parking would result in a local long-term moderate adverse impact on local roads and park access.	Visitor-related traffic and parking would result in a local long-term moderate adverse impact on local roads and park access.
Visitor Use and Visitor Experience	Cultural resource management and natural resource management actions would result in a local long-term negligible impact on visitor use and visitor experience. Management actions taken to provide interpretive media and visitor facilities would have a local long-term negligible impact on visitor use and visitor experience.	Cultural resource management and natural resource management actions would result in a local long-term moderate beneficial impact on visitor use and visitor experience. Management actions taken to provide interpretive media and visitor facilities would have a local long-term major beneficial impact on visitor use and visitor experience.	Cultural resource management and natural resource management actions would result in a local long-term moderate beneficial impact on visitor use and visitor experience. Management actions taken to provide interpretive media and visitor facilities would have a local long-term major beneficial impact on visitor use and visitor experience.	Cultural resource management and natural resource management actions would result in a local long-term moderate beneficial impact on visitor use and visitor experience. Management actions taken to provide interpretive media and visitor facilities would have a local long-term major beneficial impact on visitor use and visitor experience.
Park Operations	Long-term operational needs for staff, maintenance, interpretation and visitor services, resource and visitor protection, and administration would result in a local long-term minor adverse impact on park operations.	Long-term operational needs for staff, maintenance, interpretation and visitor services, resource and visitor protection, and administration would result in a local long-term minor adverse impact on park operations.	Long-term operational needs for staff, maintenance, interpretation and visitor services, resource and visitor protection, and administration would result in a local long-term moderate adverse impact on park operations.	Long-term operational needs for staff, maintenance, interpretation and visitor services, resource and visitor protection, and administration would result in a local long-term moderate adverse impact on park operations.

3.0 AFFECTED ENVIRONMENT

The proposed Nuttallburg Visitor Use Area will make available opportunities for park visitors to explore the former sites of the Nuttallburg Mining Complex and the town of Nuttallburg. The mine and town were once part of an industrial corridor with multiple coal mining and lumbering communities in the vicinity of the New River within New River Gorge. Today Nuttallburg and the other communities within the gorge are largely abandoned and their sites included within New River Gorge National River, a unit of the National Park System established by Congress in 1978. New River Gorge National River encompasses approximately 73,000 acres within a 53-mile corridor that stretches from Hinton to Hawks Nest, West Virginia. The sites of the former Nuttallburg Mining Complex and town of Nuttallburg are located in Fayette County in the northern end of the park at the end of West Virginia Route 85/2, near the settlements of Edmond and Winona.

3.1 Natural Resources

- **Soil Resources**

The Nuttallburg Visitor Use Area encompasses the rugged steeply sloping terrain extending from the CSX Main Line adjacent to the New River to the rim of New River Gorge near West Virginia Route 82. The lower level mining complex and the former communities of Nuttallburg and Seldom Seen historically occupied the narrow strip of relatively flat land that parallels the railroad at the base of the gorge. Steep slopes on the gorge walls ranging from 20 to 40 percent limited the settlement areas to the lower portion of the gorge. The headhouse and mine openings were located at the base of the Nuttall Sandstone rock wall at the top of the gorge. Elevations on the site range from approximately 920’ at the railroad to approximately 2,100’ at base of the gorge wall.

Sandstones, siltstones, and shales of the New River Formation underlay the site. Mining operations in the area extracted coal from the Fire Creek, Beckley, and Sewell coal seams contained in the New River Formation. Soils on the site are primarily derived from the underlying sandstones, siltstones, and shales (see Table 3.1). They are relatively shallow, and well drained, with moderately high runoff potential. Soil erodibility is generally low. In depressions and along streams the soils are derived from colluvium and are shallow and well drained. They have moderately low to moderately high runoff potential and moderate to high erodibility. Soils are generally severely constrained for developed uses due to steep slopes and shallow depth to bedrock. None of the soils are prime farmland soils, although the Dekalb fine sandy loam – which underlies the town of Nuttallburg site – is designated a statewide important farmland soil by the Natural Resources Conservation Service (NRCS).

- **Vegetation**

Native and non-native species have revegetated much of the Nuttallburg Visitor Use Area site. Forest communities of the site today include the three major terrestrial plant communities typical at New River Gorge National River:

- riparian plant communities maintained by flooding and the moist microclimate found along waterways
- plant communities of the steep gorge slopes
- cliff faces, and plant communities of the plateaus, rims, and shoulders (Vanderhoorst 2001)

Floodplain forest dominated by plane tree, ash, ironwood, musclewood, and American hornbeam characterizes the riparian community between the New River and the CSX railroad. Two forest types occur on the gorge slopes. Red maple, tulip poplar, sweet gum, paulonia, red buckeye, scarlet buckeye, and wood nettle are typical of the moderately sloping lower gorge slopes. The upper more steeply sloping gorge slopes are generally characterized by ash, tulip poplar, black gum, black tupelo,

TABLE 3.1. Soil Characteristics Summary – Nuttallburg Visitor Use Area

Soil Type	Depth to Bedrock	Depth to Seasonal High Water	NRCS Farmland Class[1]	Erodibility (1st horizon K Factor)	Runoff Potential (hydrologic soil group)	Parent Material
Dekalb fine sandy loam (DbC)	shallow (1½ to 3½')	>4'	statewide important farmland	low (0.24)	C	sandstone
Dekalb channery loam (DcE)	shallow (1½ to 3½')	>4'	--	low (0.24)	C	sandstone
Dekalb and Gilpin very stony soils (DsF)	shallow (1½ to 3½')	>4'	--	low to moderate (0.24 to 0.32)	C	sandstone and shale
Ernest and Shelocta very stony silt loam, 5 to 20% (EsC)	shallow (1½ to 2')	>4'	--	moderate to high (0.28 to 0.43)	B/C	colluvium
Ernest and Shelocta very stony silt loam, 20 to 40% (EsE)	shallow (1½ to 2')	>4'	--	moderate to high (0.28 to 0.43)	B/C	colluvium
Steep Rock Land (Sr)	variable	variable	--	low	--	sandstone
Mine Dump (Me)	variable	variable	--	--	--	coal, sandstone

1. Soils designated by NRCS as "farmland of statewide importance"

Source: USDA 1975

sourwood, lily of the valley tree, and sorrel tree. At the top of the gorge, above the headhouse and mine openings, rare cliff and Virginia pine communities occur on and above the headwall. White oak, tulip poplar, and greenbrier dominate the plateau behind the headwall. Along Short Creek the cool moist microclimate supports hemlock, birch, and rhododendron. No other rare or significant vegetation communities have been found on the site.

Areas of the site once developed for mining structures and town buildings have been invaded by non-native plants. Vines, particularly kudzu, cover many open landscape areas. Kudzu was removed from the former Nuttallburg town site during the summer of 2006. Reforestation occurring around the tipple and in the conveyor area has been acting as a barrier to kudzu invasion up the gorge slope. However, within the reforested areas invasive multiflora rose and Japanese jointgrass are prevalent.

Some indications of designed plantings remain at the site. Patches of daffodils and yucca occur near some foundations. A few apple trees and quince trees are also present in the town site.

- **Rare, Threatened, or Endangered Species and Their Habitats**

The NPS has identified the potential for occurrences of rare, threatened, or endangered species in the Nuttallburg Visitor Use Area vicinity through review of existing data, coordination with the West Virginia Division of Natural Resources (WV DNR), and field surveys by NPS staff and other experts. Consultation with the WV DNR provided a list of designated species that potentially occur within the park (see Appendix A). Field study confirmed occurrences of several designated species in the area including three species of bats and the Allegheny woodrat (*Neotoma magister*).

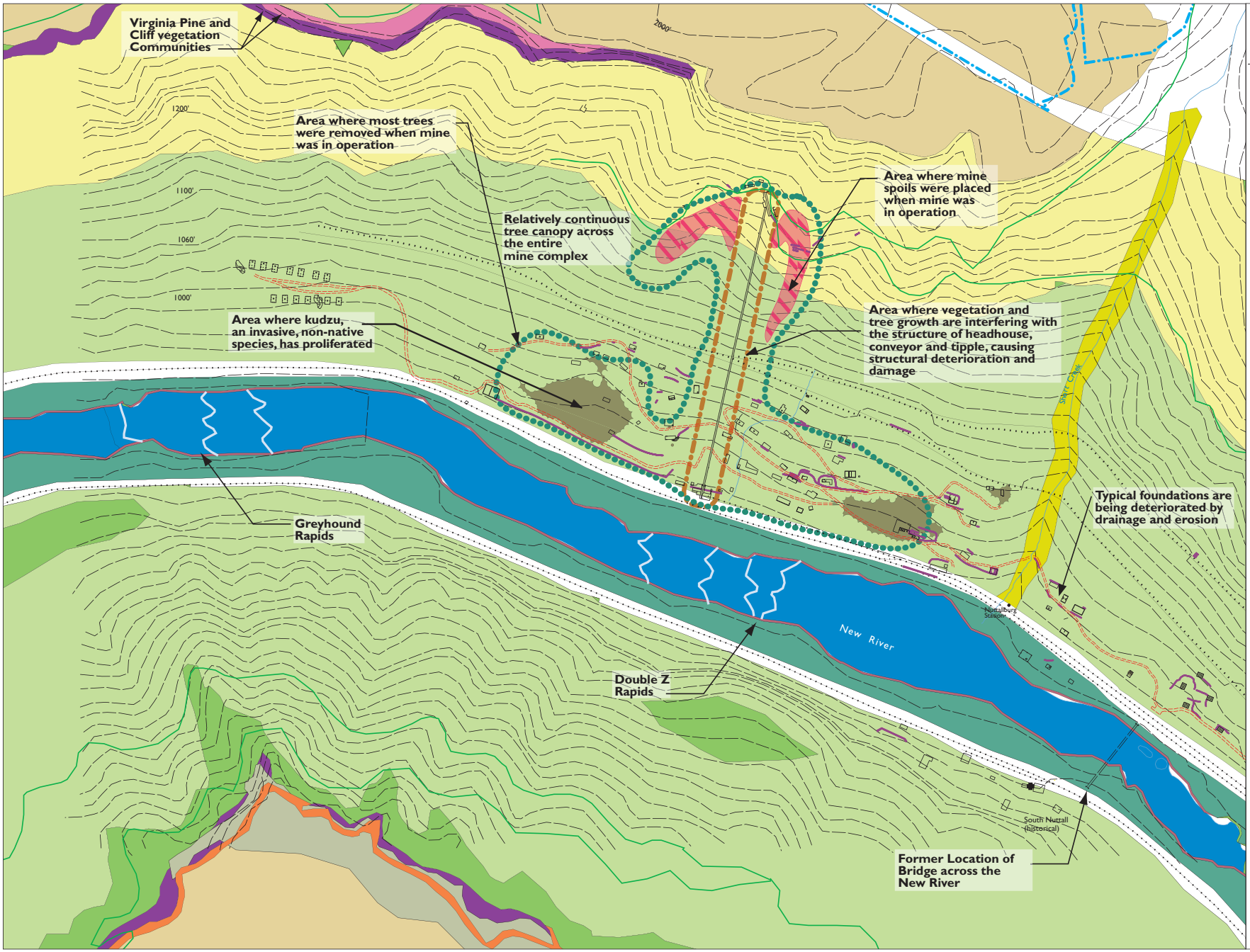

FIGURE 3.1

Natural Resources

- New River Gorge National River Boundary
- Trails
- Railroads
- Rapids
- Retaining Wall
- Nuttallburg Road Traces

- Quercus alba-Liriodendron/Smilax, (White Oak -Tulip Tree/Greenbriar, Catbriar, or Briar)
- Pinus virginiana, (Virginia pine)
- Quercus-Nyssa-Oxydendrum, (Oak - Black gum; Black tupelo - Sourwood; Lily of the Valley Tree; Sorrel Tree)
- Acer- Aesculus/Laportea, (Maple - Red buckeye; Scarlet buckeye - Wood nettle)
- Tsuga-Betula/Rhododenron, (Hemlock - Birch - Rhodododendron)
- Quercus-Prunus-Magnolia, (Oak - Cherry - Magnolia)
- Platanus-Betula/Apocynum-Polygonum, (Planetree - Birch -Indian Hemp-cannabinum) - (Japanese Knotweed))
- Platanus-Fraxinus-Carpinus, (Planetree - Ash - Ironwood; Musclewood; American Hornbeam)
- Cliff
- Sandstone Cliff
- Tsuga -Quercus prinus / Rhododendron catawbiense, (Hemlock - Chestnut Oak / Catawba Rhododendron Forest)
- Kudzu
- Tsuga canadensis-Betula lenta/Rhododendron maximum forest, (Canadian Hemlock - Cherry Birch, Sweet Birch, or Black Birch - Rosebay Rhododendron)

Nuttallburg Visitor Use Area Implementation Plan
New River Gorge National River

0' 200' 400' 600'

Bats. Capture data based upon fall swarm mist net surveys (2002 and 2005) indicate that the Nuttallburg B abandoned mine portal (in the cliff wall adjacent to the Headhouse) provides habitat for the federally-designated endangered Virginia big-eared bat (*Corynorhinus townsendii virginianus*) and for the state-designated rare Small-footed myotis (*Myotis leibii*). Four other abandoned mine portals within one mile of the Headhouse are inhabited by the Virginia big-eared bat (*Corynorhinus townsendii virginianus*) and the Small-footed myotis (*Myotis leibii)*. Two of these portals also provide habitat for the federally-designated endangered Indiana bat (*Myotis soladis*). A fifth abandoned mine portal within one mile has not been surveyed but is suspected to provide habitat for all three designated species of bats.

Limited data have been collected on bat foraging behavior and habitat use in the vicinity of the mine portals. The Virginia big-eared bat is an obligate cave/cliff/mine portal species. The Indiana bats likely use the mine portals within the gorge and surrounding areas as hibernacula and maternity roosts (Johnson et al 2005). In general their habitat can be divided into four categories:

- roosting habitat – live, dead, or dying trees with exfoliating bark, split tree trunks, split branches, holes, cracks, crevices, or hollow trunks or branches

- foraging habitat – within and on the edges of wooded areas (frequently associated with streams, floodplain forests, forested wetlands, and impounded water bodies)

- travel corridors – areas that link roosting and foraging habitat, including open understory forest, wooded fence-rows, and open paths through wooded areas, including streams, trails, and small roads with canopy cover

- hibernacula – caves or underground mines

Numerous characteristics of the Nuttallburg site and the surrounding area suggest that it would be favorable habitat for both Indiana bats and Virginia big-eared bats. Indiana bats exhibit a preference for primary and alternate roosts in trees with increased sun exposure typical of south to southwest facing slopes, such as those on the north and east side of New River Gorge in the Nuttallburg area. Within two miles of the Nuttallburg site approximately 66 percent of the land is within the park and is being managed by the NPS. The area is generally dominated by intact forest communities interspersed with open areas and corridors that include former town sites, active rail lines, and active utility corridors. Travel corridors in the form of historic mine and logging roads are common throughout the gorge and the Nuttallburg area. Riparian areas that provide foraging habitat are associated with steep perennial drainages, ephemeral pools located on historic bench roads, mine portal effluent, and the New River. These conditions provide a matrix of foraging habitat and travel ways that is likely used by both the Indiana bat and the Virginia big-eared bat.

Allegheny Woodrats. Trapping data indicate that the Nuttallburg B mine portal and one other mine portal within one mile of the headhouse provide habitat for the Allegheny woodrat (*Neotoma magister*), a federally-designated species of special concern. Trapping data have not confirmed the presence of woodrats in the other four mine portals within one mile of the headhouse, although the habitat conditions in the portals suggest that they are likely to be present.

TABLE 3.2. Abandoned Mine Portal Evaluation Scale for Portals within 1 mile of the Nuttallburg Headhouse

Priority	Mine Portal	Entrance Stability	Entrance Dimensions (ft)	Access Limitation	Rare Species Present	Bat Species Present	Endangered Bats Present	Rare Species
2	Nuttallburg B	good	10 x 25	gated	6	6	1	Virginia big-eared bat Small-footed bat Allegheny woodrat
1	West Nuttall 3	good	~2 x 3	gated	3	7	2	Virginia big-eared bat Indiana bat Small-footed bat
1	Nuttallburg South D	fair	1 x 2	ungated	2	5	2	Virginia big-eared bat Small-footed bat
2	Nuttallburg South B	poor	1 x 4	heavy sloughing	4	6	1	Virginia big-eared bat Indiana bat Allegheny woodrat, Eastern red bat
X	Nuttallburg South C	poor	1 x 4	heavy sloughing	?	?	?	not surveyed
2	West Nuttall 2	good	~6 X 12	gated	6	6	1	Virginia big-eared bat Small-footed bat

Federally-designated endangered – Virginia big-eared bat, Indiana bat
State-designated rare species – Allegheny woodrat, Small-footed bat

3.2 Cultural Resources

- **Nuttallburg Mining Complex and Town Historic District**

The Nuttallburg Visitor Use Area encompasses the 90-acre Nuttallburg Mining Complex and Town Historic District. The Historic District encompasses approximately 90 acres and includes the following major elements:

- Nuttallburg coal mine complex colliery structures and ancillary structures
- the bank of 46 coke ovens
- the former town of Nuttallburg site and associated residential and commercial areas at the bottom of the gorge
- the former Seldom Seen settlement area site and associated residential area at the bottom of the gorge
- the piers of the former footbridge that linked Nuttallburg to South Nuttall on the west side of the river
- the sidings of the former Chesapeake and Ohio (C&O) Railroad
- an 0.85-mile section of the former Keeney Creek Branch Railroad

TABLE 3.3. Nuttallburg Coal Mining Complex and Town – Summary of Historic Significance

National Register Criterion	Area of Significance	Level of Significance
Criterion A – associated with events that have made a significant contribution to the broad patterns of our history	Business (Fordson Coal Company, vertical integration)	National
Criterion B – associated with the lives of person significant in our past	Industry (John Nuttall)	Local
Criterion C – embody distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction	Engineering (coal mining complex)	National
Criterion D – that have yielded, or may be likely to yield, information in prehistory or history	Archeology (town site)	Local

Source: West Virginia Division of Culture and History (see Appendix A)

The Historic District does not include the underground elements of the Nuttallburg Mine. The mines have been sealed off since 1958 and are presumed to be in a collapsed state following 85 years of extractive activities and abandonment (NPS 2007).

The Nuttallburg Mining Complex and Town Historic District represents the highest level of integrity as it retains all of the major elements associated with the historic activities conducted at the site (NPS 2007). Because all of the major components of the coal mining process remain, the site also possesses integrity as an intact mining system (NPS 2007). An overview of the site and its historical context is presented above in Section 1.4.

The entire 90-acre site and the major elements contained within it compose the Nuttallburg Coal Mining Complex and Town Historic District. The West Virginia State Historic Preservation Officer (SHPO) has determined that the historic district contains important business and engineering elements. Because the site is significant in several areas, the SHPO has further clarified the relative levels of significance for each area of significance reflected in the four National Register criteria (see Table 3.3) (see Appendix A). Based on these findings the historic district has been listed in the *National Register of Historic Places*.

- **Cultural Landscape**

The Nuttallburg site retains the aspects and qualities necessary to convey its significance as a 20th century mining complex and town, despite the fact that many of the structures have deteriorated since being abandoned in the late 1950s (NPS 2006c). The town retains its integrity of location and setting. It remains in an isolated area of the New River Gorge. The site retains the same spatial organization represented during its period of significance. It is replete with stone building foundations, stone walls, concrete pillars, roadways, railroad sidings, and other architectural features that provide a clear sense of the community's historic layout (NPS 2007). The extent of the town is still evident and elements are still in place to exhibit the site's unique building style, materials, and workmanship. The CSX Main Line is located in the relatively level floodplain adjacent to the river. Former roads pass through the tipple level, branching to connect the numerous foundation ruins. The foundations of houses are located up the slope of the gorge above the floodplain.

Nuttallburg's site integrity suffers due to a lack of many of the historic structures. A few features from the period of significance remain, such as the tipple, conveyor, headhouse, and small railroad features.

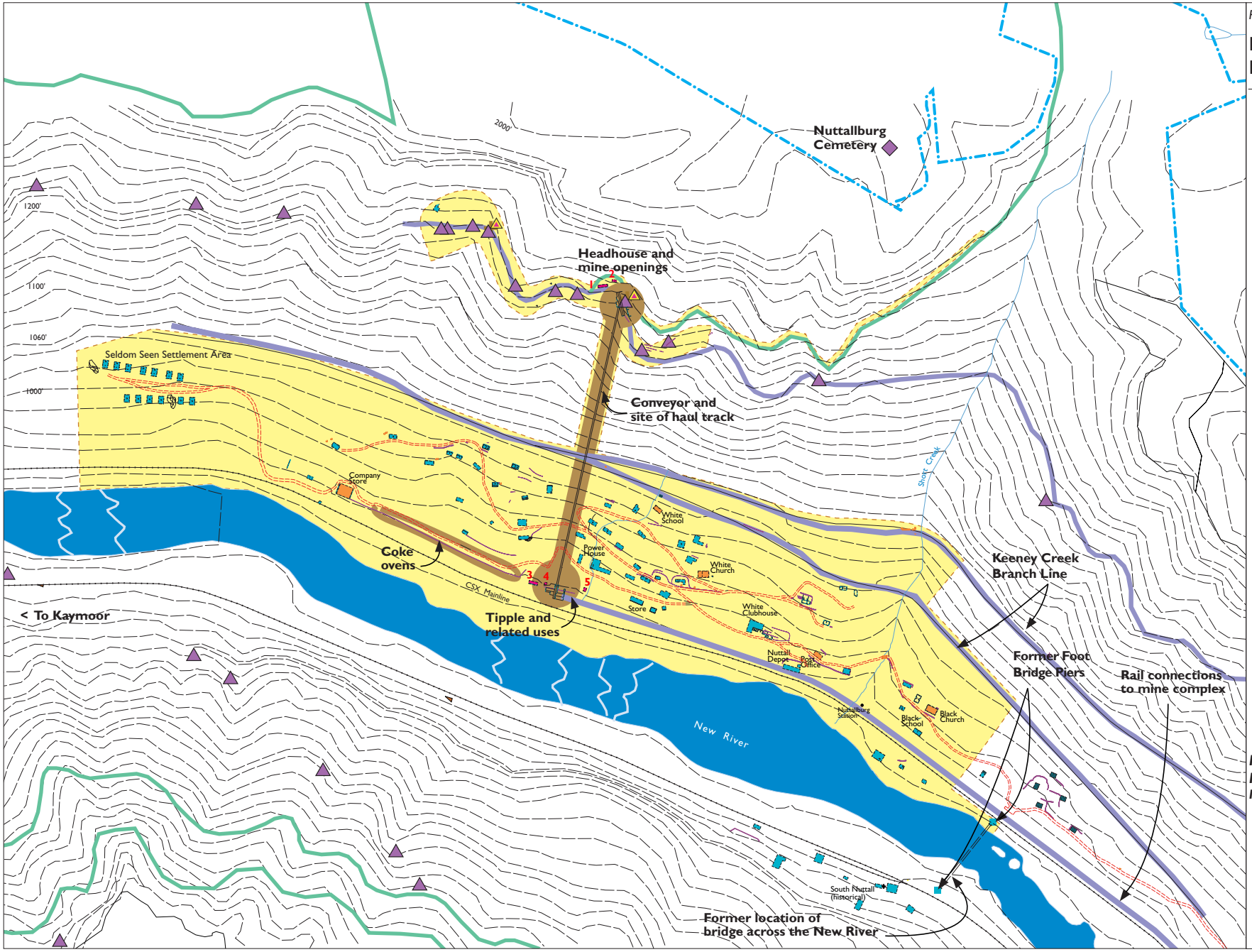

FIGURE 3.2

Historic Resources

- New River Gorge National River Boundary
- Nuttallburg Mining Complex and Town Site Historic District (Nationally Significant)
- Roads
- Trails
- Active Rail Line (CSX Main Line)
- Historic Railroad Right-of-Way
- Retaining Wall
- Nuttallburg Road Traces
- Foundation Ruins / Key Mining Structures
  1. Substation
  2. Hoist House
  3. Sand House
  4. Refuse Bin
  5. Well House
- Community Service and Facilities
- Other Structures
- Mine Sites / Open Mines / Types
- Nuttallburg Abondoned Mine
- Cemetery
- Rapids

Note: Keeney Creek Branch Line now serves as an official trail to Nuttallburg.

Nuttallburg Visitor Use Area Implementation Plan
New River Gorge National River

N

0' 200' 400' 600'

However, the residential dwellings indicative of the larger mining community are now represented only by cut stone foundations and retaining walls. The major mine buildings built of steel and concrete remain extant despite severe rust. A number of small landscape scale features persist including stone railroad markers, abandoned mining cars, fire hydrants, and well covers. The landscape has also been altered dramatically since the period of significance by the invasive growth of plants such as kudzu and Japanese jointgrass, although much of this was removed from the town site in the summers of 2005 and 2006.

Retaining walls are the landscape structural features most pervasive in Nuttallburg. The necessity to stabilize the steep topography of the gorge walls to support houses and roadways, while also providing level areas for gardens and yards, made the design and implementation of retaining walls critical for the success of the town design. As a result almost every building site has some type of retaining wall system. Many walls on the site remain in remarkable condition (NPS 2006c).

- **Historic Buildings and Structures**

Nuttallburg Coal Mining Complex and Ancillary Structures. The most significant and intact remnants of Nuttallburg's mine operation are the steel and concrete colliery structures at the Nuttallburg Mine built by Henry Ford during the early 1920s. Buildings, structures, sites, and features associated with the Nuttallburg Mine Complex include the following (also see Figure 3.2):

- Mine Headhouse (building) – 1925-1926 (contributing)
- Nuttallburg Mine Tipple (building) 1923-1924 (contributing)
- Fan House (building) – ca 1945-1955
- Conveyor (structure) – 1925–1926
- mine opening (structure) – 1873
- Cap House (structure) – 1925-1926
- Powder House (structure) – 1925-1926
- railroad sidings (structure) – 1873
- mine and motor cars (approximately 14 structures) – circa 1925-1955
- Hoist House (site) – 1925-1926
- Substation (structure) – 1925-1926
- coke oven bank (structure) – 1873
- Mine Superintendent's Office (site) – 1920s
- Sand House (site) – 1920s
- Lower Sand House (site) – 1920s

Town of Nuttallburg (Site) – circa 1873-1958. The town of Nuttallburg was founded by John Nuttall in 1873 and was occupied until 1958. The physical evidence of the town consists of over 100 building foundations, retaining walls, property fence lines, roads, privies, primary and secondary refuse deposits, C&O property marker monuments, and the piers of the former pedestrian footbridge that crossed the New River to South Nuttall. Most of the features are located on a lowland bench and terraced hillside between the 1,000' and 1,200' elevation. State Route 85/2 was built through the town on this bench in 1892 and included a small bridge across Short Creek.

The town's building foundations are mainly located along this road and a network of inclined and switchback cinder-surfaced roads. The U.S. Geological Survey's (USGS) 1928 15-minute Fayetteville map also shows a few houses across from the Nuttallburg Tipple on the river side of the C&O tracks at the 940' elevation. The train depot for the town of Nuttallburg – Nuttall Station – was located along the east side of the C&O Railroad and just north of Short Creek. Behind the depot were the Nuttallburg Post Office and a C&O Railroad monument next to State Route 85/2.

Contributing **building and structure retaining walls and foundations** associated with the Town of Nuttallburg include the following (see Figure 3.2):

- foundations for Buildings 1 through 13 – circa 1920 – 1930
- foundations and associated retaining walls for Buildings 14 through 48, and 50 through 59 – circa 1897-1900
- Company Store – circa 1897-1900
- Building 49 – circa 1873-1900
- White Clubhouse– circa 1873-1900
- Black Church – circa 1873-1900
- White Church– circa 1873-1900
- Black School – circa 1873-1900
- White School – circa 1873-1900
- Nuttall Station – circa 1900

Contributing **objects** associated with the Town of Nuttallburg include the following (see Figure 3.2):

- cast iron water hydrants – circa 1897-1900

Contributing **circulation-related structures** associated with the Town of Nuttallburg include the following (see Figure 3.2):

- State Route 85/2 (Structure) – 1892
- Short Creek Bridge (State Route 85/2) (Structure) – 1892
- pedestrian suspension bridge towers (Site) – 1899
- Keeney Creek Branch Railroad Line (Structure) – 1892
- Trestle 1 (Short Creek – Keeney Creek Branch Railroad) (Structure) – 1892
- Trestle 2 (Short Creek – Keeney Creek Branch Railroad) (Structure) – 1892
- masonry stone retaining wall, Keeney's Creek Branch Railroad (Associated Feature) – 1892

There are three additional (2 NPS-owned and 1 privately-owned) trestle bridges along the Keeney Creek Branch Line that have been determined eligible for the National Register but are not officially listed on it (see Figure 3.3).

- **Archeological Resources**

The Nuttallburg Coal Mining Complex and Town Historic District is locally significant for the potential of its archeological resources to yield information on 1) the social and industrial history of a late 19th and 20th century coal mining complex in New River Gorge and in West Virginia, and 2) one of the most complete coal-related industrial sites in the United States (NPS 2007).

Shovel testing in the town of Nuttallburg at the Black Church and at a residence in Seldom Seen indicated that primary refuse deposits contain deep intact artifact-bearing soils (Fuerst 2005). Although archeological reconnaissance and testing did not analyze or curate any of the historic artifacts that were observed, their material types reflected a variety of domestic activities. The archeological reconnaissance also discovered privies in specific association with the foundations of residential housing, churches, and schools throughout the town of Nuttallburg. In addition a large secondary refuse deposit was found near the conveyor. The greatest amount of land disturbance or "made land" was found in the vicinity of the Nuttallburg tipple associated with business-related transformations of the site's industrial landscape.

The intact primary refuse deposits provide an opportunity to examine a number of theoretical perspectives (NPS 2007), such as:

- the nature of the Nuttallburg community and its social and political landscape during the period from 1873 to 1958 when it contributed to the country's industrial development and national defense (this potential is accentuated by the provenance of the refuse deposits within deeded and functionally discrete properties and the association of properties with specific individuals and households)

- the comparative individual social histories of contemporaneous coal mining towns in the gorge, including a number of themes within Nuttallburg's community and between its community and other communities in the gorge

- community-level involvement in decisions affecting education, sanitation, water, fire fighting, and electrification

- material differences with respect to domestic household activities

- similarities and differences in economic classes in Nuttallburg and in communities within and beyond the gorge

- **Ethnographic Resources**

Former residents and descendents of former residents of the town of Nuttallburg and Seldom Seen settlement have long-standing ties and strong persistent cultural associations with the Nuttallburg site. Some members of local families have substantial knowledge about the site and its resources because of their long associations with the land and have specialized knowledge about the land and the town's social and cultural history.

The landscape adjoining the Nuttallburg site – composed of the mixed mesophytic forest and associated watershed – supports the collective memory on which some local community members rely for cultural and economic survival (Hufford et al 2006). The knowledge of how to participate in this landscape is expressed through a host of practices that appear to have antecedents in distinct waves of settlement and land use including: Native American practices dating from 16th and 17th century contact between European and Native American peoples, and; Scotch-Irish, German, and African American patterns of settlement and agriculture dating from the period of frontier settlement (1700-1880), the industrial period (1880-1968), the post-industrial pre-park period (1950-1980), and the present era of NPS ownership and management (Hufford et al 2006).

3.3 Local Roads and Park Access

Vehicular access to the Nuttallburg area is via Keeney Creek Road (WV Route 85/2) from the town of Winona. Keeney Creek Road is a narrow winding road that has been recently upgraded by the W.V. Division of Highways with asphalt paving of the steep sections, drainage improvements, and new guard rails. Slides are a recurring problem on the road requiring frequent maintenance by the state. Keeney Creek Road ends near the former town of Nuttallburg site and has been abandoned by the West Virginia Division of Highways beyond the parking area. The NPS has closed the road to public vehicular access shortly after it enters NPS property, approximately 600 feet east of Short Creek. Visitors park within the public right-of-way and continue on foot to reach the town site and the tipple area. The NPS maintains the road on its property as a graded gravel administrative road (Nuttallburg Tipple Trail/Administrative Road). The NPS recently reconstructed the bridge over Short Creek. The road provides maintenance and emergency access to the town and tipple sites and is also an official park trail.

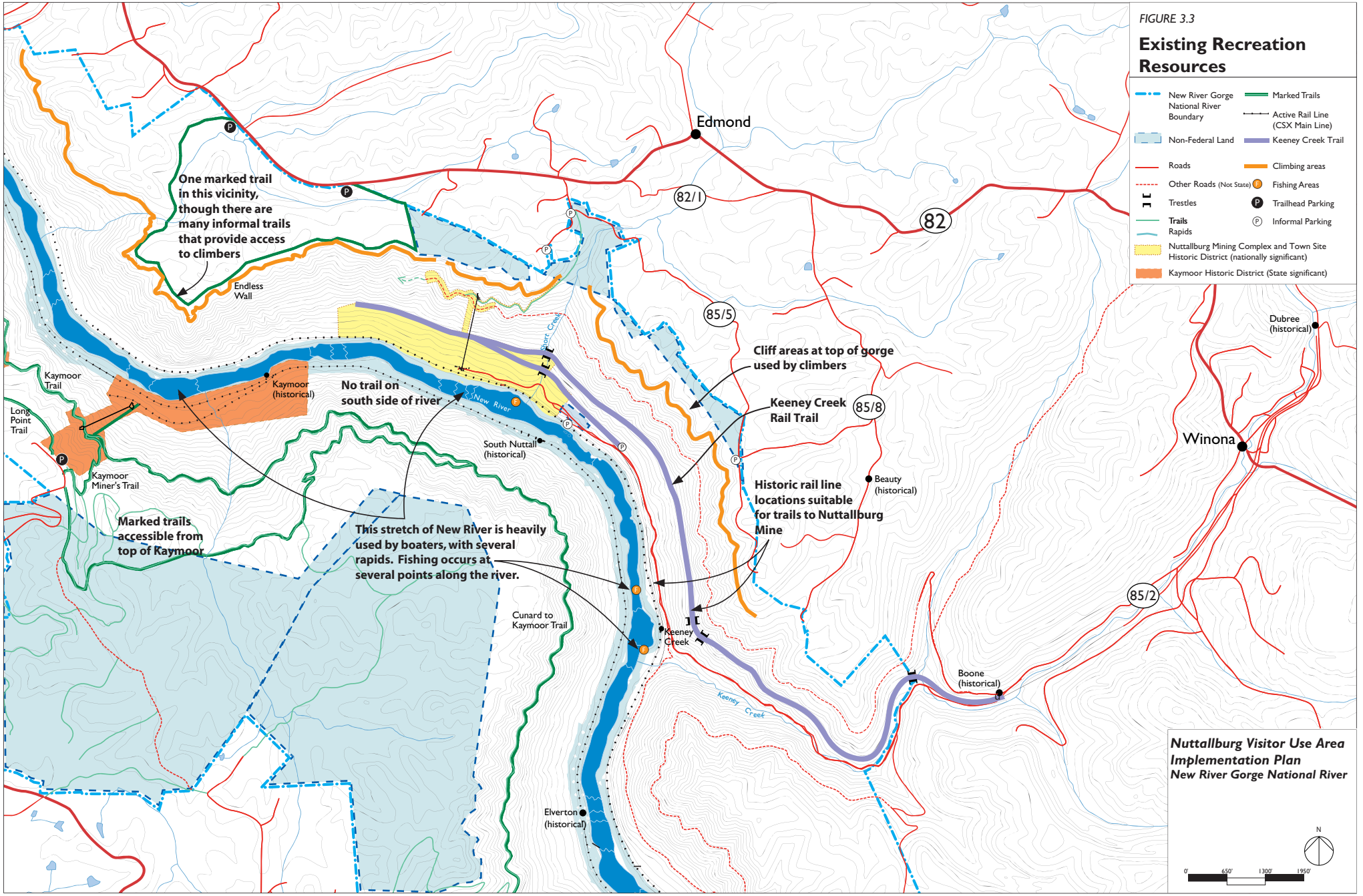
FIGURE 3.3
Existing Recreation Resources
New River Gorge National River Boundary
Non-Federal Land
Roads
Other Roads (Not State)
Trestles
Trails
Rapids
Marked Trails
Active Rail Line (CSX Main Line)
Keeney Creek Trail
Climbing areas
Fishing Areas
Trailhead Parking
Informal Parking
Nuttallburg Mining Complex and Town Site Historic District (nationally significant)
Kaymoor Historic District (State significant)
Edmond
82/1
82
85/5
85/8
85/2
One marked trail in this vicinity, though there are many informal trails that provide access to climbers
Endless Wall
Kaymoor Trail
Kaymoor (historical)
Long Point Trail
Kaymoor Miner's Trail
No trail on south side of river
New River
Short Creek
South Nuttall (historical)
Marked trails accessible from top of Kaymoor
This stretch of New River is heavily used by boaters, with several rapids. Fishing occurs at several points along the river.
Cunard to Kaymoor Trail
Cliff areas at top of gorge used by climbers
Keeney Creek Rail Trail
Historic rail line locations suitable for trails to Nuttallburg Mine
Keeney Creek
Keeney Creek
Beauty (historical)
Boone (historical)
Dubree (historical)
Winona
Elverton (historical)
Nuttallburg Visitor Use Area Implementation Plan
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N
0'
650'
1300'
1950'

A few visitors reach the town and mining complex site from the river. They leave their boats at the Keeney Creek Beach and hike up from the river, cross the CSX Main Line, and then follow the Keeney Creek Road.

Access to the Nuttallburg Mine and headhouse area is from the Nuttallburg Mine Trail/Administrative Road. The road begins on WV Route 85/5 and follows the old mine access road down to the headhouse area. Today the road is maintained as a graded gravel park administrative road suitable for four-wheel drive park vehicles. Public access is informally permitted by the private property owners. The development of a parking area and trailhead for public use would require acquisition of this private property.

Visitors can access the middle bench area of the Nuttallburg Visitor Use Area site – including the area beneath the conveyor – via the Keeney Creek Branch Trail/Administrative Road. The trail follows the abandoned Keeney Creek Branch Line railroad right-of-way. It is an official park trail. The NPS recently improved the four trestle bridges, including redecking and installation of handrails for visitor safety. The trail is accessed from Keeney Creek Road. Visitors using the trail park informally along the edge of the Keeney Creek Road right-of-way.

Climbers using the Nuttall Sandstone outcrop above the Headhouse park at the Nuttall Parking Facility or at an informal parking area that is privately owned located on WV 85/5. They reach the climbing area by following the Nuttallburg Mine Trail/Administrative Road which provides access to the base of the outcrop or by following the Endless Wall Trail which provides access to a network of informal trails that lead to the top of the Nuttall Sandstone outcrop.

3.4 Visitor Use and Visitor Experience

The Nuttallburg Visitor Use Area currently has no developed visitor use facilities. Visitors to the site include climbers, hikers, bikers, boaters, and those who go to the site explicitly to view its cultural resources. No interpretive media are currently available to present stories associated with the site and the NPS does not run any special interpretive programs at the site. Some directional signage is provided at trailheads for the Keeneys Branch Line Trail, the Nuttallburg Mine Trail, and the Nuttallburg Tipple Trail.

Visitation to the town site and colliery structures is very low, primarily because the NPS has not encouraged visitation due to the hazards posed by the colliery structures which until recently have been in very poor condition. Visitation to the climbing area at the Nuttall Sandstone outcrop above the Headhouse is moderately high. The Nuttallburg area is also a popular hunting area for residents of nearby communities.

3.5 Park Operations and Park Facilities

In 2005 the NPS began implementing numerous emergency management actions that are providing short-term stabilization of historic buildings and structures at the Nuttallburg Mining Complex and town of Nuttallburg site (see Section 2.2 above). Several interrelated actions were completed as part of emergency stabilization to provide access to the site for equipment (see Section 3.3 above). Routine maintenance is now required at the site to maintain trails and administrative roads, as well as to maintain vegetation at the town site, along the coke oven bank, and along the conveyor length where invasive plants have been recently removed.

Other park operations in the Nuttallburg area include infrequent ranger patrols.

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 Assessing Environmental Consequences

Council on Environmental Quality (CEQ) regulations implementing the National Environmental Policy Act (NEPA) require the NPS to describe the probable impacts of each proposed alternative for the Nuttallburg Visitor Area on the park's cultural, natural, and physical resources; visitor use and experience; access; and park operations. The specific impact topics addressed are those retained for detailed analysis as summarized above in Section 1.6. Impact analyses and conclusions are based on the review of existing literature and park studies, information provided by park staff, professional judgments and insights of other agencies and officials, and input from interested members of the public. When assessing environmental consequences, the NPS is required to consider context, duration, and intensity of direct impacts, as well as indirect impacts, cumulative impacts, and measures to mitigate impacts. NPS policy also requires that potential "impairment" of resources be evaluated. Conclusions presented assume adoption of the mitigation measures outlined above in Section 2.5 Mitigation Measures of the Preferred Alternative.

- **Nature of Impacts**

Definitions used to evaluate the nature of impacts are as follows:

- **Type**. Impact types include beneficial or adverse.
- **Beneficial**. A beneficial impact would be a positive change in the condition or appearance of the resource or a change that moves the resource toward a desired condition.
- **Adverse**. An adverse impact would be a change that declines, degrades, and/or moves the resource away from a desired condition or detracts from its appearance or condition.
- **Context**. Context is the affected environment within which an impact would occur, such as local, park-wide, regional, global, affected interests, society as a whole, or any combination of these. Context is variable and depends on the circumstances involved with each impact topic. In this EA all impacts are local to the Nuttallburg Visitor Use Area and the WV Route 82/2 (Keeney Creek Road corridor) from the settlement of Winona to the park.
- **Duration**. Duration is the time period for which the impacts are evident. Short-term impacts are those that would be temporary, lasting a year or less, such as effects associated with construction. Long-term impacts are those that would last more than one year and could be permanent in nature.
- **Intensity**. Intensity is a measure of the severity of an impact. The intensity of an impact may be negligible, minor, moderate, or major. Impact intensity definitions are defined for each impact topic in Section 4.2 through 4.14 below.
- **Direct Impacts**. Direct impacts include impacts on the resource actually caused by the proposed action, generally at the immediate site of the action and at the time of the action. Direct impacts can extend into the future and are often permanent, but can be temporary. An example of a direct impact would be clearing second growth forest, which would immediately cause habitat loss at that location.
- **Indirect Impacts**. Indirect impacts generally occur as a result of a "side-effect" of a direct impact, but occur removed in time or space from the proposed action. An indirect impact could result from silt flowing downstream, creating turbid conditions, and adversely affecting water quality.

- **Cumulative Impacts**

Assessment of cumulative impacts is required in the decision-making process for all federal projects. Cumulative impacts are defined as follows (40 CFR 1508.7):

> *Cumulative impacts are incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative impacts can result from individually minor, but collectively moderate or major actions that take place over a period of time.*

Cumulative impacts were considered for each alternative for all impact topics. These impacts were determined by combining the impacts of the alternatives with the impacts of other past, present, and reasonably foreseeable future actions. To do this, the NPS GMP Planning Team identified other such projects or actions at New River Gorge National River and in the surrounding Fayette, Raleigh, and Summers Counties (see Table 4.1). The geographic area of interest for the cumulative impact analysis varied, depending on the impact topic (see Table 4.2). The timeframe of the analysis was within approximately 5 to 7 years of 2008.

In defining the contribution of each alternative to cumulative impacts, the following terminology is used:

- **Imperceptible**. The incremental effect contributed by the alternative to overall cumulative impacts is such a small increment that it is impossible or extremely difficult to discern.
- **Noticeable**. The incremental effect contributed by the alternative, while evident and observable, is still relatively small in proportion to the overall cumulative impacts.
- **Appreciable**. The incremental effect contributed by the alternative constitutes a large portion of the overall cumulative impact. Because some of these actions are in the early planning stages, the evaluation of the cumulative impact is based on a general description of the project. The cumulative impact is considered for all alternatives and is presented at the end of each impact topic discussion.

TABLE 4.1 Actions Included in the Cumulative Impact Scenario

Actions	Summary Description
NPS Projects	■ Sandstone Visitor Center (2003) - Visitor Center for New River Gorge National River, located near the I-64/ WV 20 interchange (Summers County) ■ Burnwood Center (future) – Multi-use facility composed of an environmental education center and a maintenance and operations facility, located on US 19 just north of the New River Bridge (Fayette County)
Development	■ Hinton Technology Center (2006) – two-story 38,000 square feet technology center in downtown Hinton (Summers County) ■ Beckley Higher Education Center (2007) – 67,000 square feet of building on 33-acre campus (Fayette County) ■ Harper Road/I-77 Interchange Area (ongoing) – Lodging, restaurant, and other commercial services development in the vicinity (Raleigh County) ■ US 19 Commercial Corridor (ongoing) – various commercial developments in the US 19 between Oak Hill and Fayetteville, recently including Walmart Supercenter, Lowes, and other retailers (Fayette County) ■ Woodlands Business Park (ongoing) – 1,000-acre industrial park (Raleigh County) ■ Raleigh County Airport Industrial Park (Phase II ongoing since 2005) – two phase

TABLE 4.1 Actions Included in the Cumulative Impact Scenario

Actions	Summary Description
	industrial park (Phase 1 – 214 acres; Phase II – 300 acres) (Raleigh County) ■ Pinecrest Business and Technology Park (ongoing since 2004) – 1000-acre industrial park (Raleigh County) ■ Wolf Creek Park (ongoing since 2005) – mixed use development on 300 acres, including 21 manufacturing sites, 5 acres of commercial development and 100 residences, located on US 19 near Appalachian Drive (Fayette County) ■ Fayetteville Area Residential Development (ongoing) – anticipated development of recently approved residential developments, including approximately 2.830 single-family residential units at River Edge Estates, Roaring River, and Bridgeview Estates (Fayette County)
Transportation System Improvements	■ US 19 Loghelly Interchange (2007) – grade-separated interchange near Appalachian Drive (Fayette County) ■ Beckley Inter-Modal Project (future) – joint transportation and economic development improvement project in downtown Beckley, including a new city hall, cultural center, and inter-modal facilities (with a 3-level underground parking) ■ East Beckley Bypass (future) – partially controlled access five-lane facility from Eisenhower Drive in Beckley to US 19 in Bradley (Raleigh County) ■ WV Turnpike (I-77) Widening (future) – addition of one lane in each direction between I-64 and US 19 (Raleigh County) ■ Shady Springs Interchange and Connector (future) – new 3-mile roadway connection from I-77 to US 19 at WV 3 (Raleigh County) ■ Bridge Replacements (future) – Lilly Bridge (WV 20) (Summers County), Big Bridge (WV 121 (Raleigh County), Mill Creek Bridge (Fayette County), Kanawha Falls Bridge (Fayette County); Thomas Burford Pugh Memorial Bridge (WV 41) (Raleigh and Fayette Counties); Thurmond Bridge (WV 25/2) (Fayette County) ■ Shawnee Parkway (future) – 18-mile reconstruction of WV 48 (Raleigh County) ■ Beckley Z-Way (future) – 10.3 mile new roadway connection from Shade Springs to Van Kirk Drive (Raleigh County) ■ New River Parkway (future) – reconstruction of River Road near Hinton as a 10-mile parkway through New River Gorge National River in the vicinity of Hinton to WV 20, including a new bridge crossing of the New River (Raleigh and Summers Counties)
Municipal Utilities and Infrastructure	■ Fayette County Regional Water and Distribution System (ongoing since 1995) – regional water plant and distribution system (Fayette County)
Mined Land Reclamation	■ Claremont Reclamation Project – 80-acre reclamation project within the park including destruction and burial of concrete structures, recontouring of existing gradient, reestablishing and stabilizing drainageways, revegetation, and treatment of acid mine drainage ■ Other Reclamation Projects – numerous mined land reclamation projects in Raleigh and Fayette County including a variety of activities similar to those for the Claremont Reclamation Project (see above)

- **Impairment**

The *2006 NPS Management Policies* (NPS 2006) and *Director's Order 12: Conservation Planning, Environmental Impacts Analysis, and Decision-Making* (NPS 2001), require analysis of potential impacts to determine if actions would impair resources at New River Gorge National River. The fundamental purpose of the National Park System, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. NPS managers must always seek ways to avoid or minimize to the greatest degree practicable adverse impacts on park resources and values. However, these laws give NPS management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given NPS management discretion to allow certain impacts within parks, that discretion is limited by statutory requirement that the NPS must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise.

The prohibited impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including opportunities that otherwise would be present for the enjoyment of those resources or values. Impairment may result from NPS park management activities, as well as from visitor activities or activities undertaken by concessionaires, contractors, and others operating in the park. Whether an impact meets the definition of an impairment depends on the particular resources and values that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts. An impact to any park resource or value may constitute impairment. However, an impact would more likely constitute impairment to the extent it affects a resource or value whose conservation is:

Table 4.2

Cumulative Impact Analysis – Area of Impact

Topic	Impact Area
■ physiography, geology and soils ■ floodplains ■ vegetation ■ water quality ■ aquatic wildlife ■ terrestrial wildlife ■ rare, threatened and endangered species	watershed of the New River in Fayette, Raleigh and Summers Counties
■ scenic resources	the park viewshed in Fayette, Raleigh, and Summers Counties
■ archeological resources ■ cultural landscapes ■ historic structures ■ ethnographic resources	New River Gorge National River
■ economy ■ communities	Fayette, Raleigh, and Summers Counties
■ park access	area within three miles of the park boundary
■ visitor use and visitor experience	New River Gorge National River
■ park operations	New River Gorge National River

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the New River Gorge National River, or

- key to the natural or cultural integrity of the park or to opportunities for enjoyment of New River Gorge National River, or

- identified as a goal in the *General Management Plan for New River Gorge National River* (NPS 1982) and other applicable NPS planning documents

An impairment determination is provided in the conclusion section under most impact topics selected for detailed analysis in this environmental assessment. An impairment determination is not made for the local road network/park access, park operations, and park facilities topics because impairment findings relate back to park resources and values and these impact topics are not generally considered to be a park resource or value. An impairment determination is not made for the visitor use and experience topic because, according to the Organic Act, enjoyment cannot be impaired in the same way that an action can impair park resources and values.

4.2 Soil Resources

▪ Applicable Regulations and Guidelines

Regulations and guidelines related to geologic and soils include the following:

- Clean Water Act of 1977, as amended
- Farmland Protection Policy Act of 1980 and 1995
- Analysis of Impacts on Prime and Unique Agricultural Lands in Implementing NEPA
- NPS 2006 Management Policies

▪ Methodology and Assumptions

Impacts to soil resources are qualitatively evaluated in terms of the nature and extent of soil disturbing activities, potential for erosion and sedimentation, restoration of areas disturbed during construction, and permanent soil development.

Definitions of Impact Intensity Levels

Negligible: The impact on soils would be so small that it would not be of any measurable or perceptible consequence.

Minor: The impact on soils would be slight and localized with few measurable consequences. There could be changes in a soil's profile in a relatively small area, but the change would not increase the potential for erosion.

Moderate: The impact on soils would be readily apparent and localized with measurable consequences. There could be a loss or alteration of the topsoil in a small area, or the potential for erosion to remove small quantities of additional soil could increase.

Major: The impact on soil resources would be readily apparent with severely adverse measurable consequences. There would be permanent loss or alteration of soils in a relatively large area, or there would be a strong likelihood for erosion to remove large quantities of additional soil.

▪ Alternative 1 (Continuation of Existing Management) – Soil Resources

Analysis. In Alternative 1, cultural resource management actions would include long-term stabilization of the tipple, conveyor, and headhouse. As needed, minor actions would be taken to protect foundations and other remains and artifacts at the town site. These actions would temporarily expose small areas of surface soils in the immediate vicinity of historic buildings and structures. Areas exposed would generally be previously disturbed soils. Upon completion of stabilization actions disturbed areas would be reseeded with native grasses. Collectively these cultural resource management actions would result in a local short-term minor adverse impact on soil resources.

Natural resource management actions would include removal of invasive plants that are changing the cultural landscape – particularly kudzu, Japanese knotweed, and multiflora rose – by cutting, mowing, and selective application of Herbicides (as recommended in the park's *Integrated Pest Management* (NPS 2003)). Where Herbicides is used, areas of exposed surface soil would be immediately reseeded with native grasses. These natural resource management actions would have a local short-term moderate adverse impact on soil resources.

Existing trails and administrative roads would remain with no improvements other than routine maintenance needed to keep them open for hiking and administrative use, as appropriate. Routine

maintenance of park administrative roads and trails would have a local short-term negligible impact on soil resources.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on soil resources are identified in Section 4.1 above. Throughout the watershed, land development and road building in mountainous terrain generally involves clearing forest followed by cutting, filling, and site grading. Large areas of exposed soils characterize many development sites. Rock excavation and blasting is commonly used to remove road at or near the surface that interferes with site leveling. In the past, few controls over these construction activities have existed, resulting in high historic rates of erosion and sedimentation. Recently, through the National Pollutant Discharge Elimination System (NPDES) program the state of West Virginia has begun regulating stormwater containing sediment flowing from construction sites into the state's waters. This has and will continue to reduce erosion and sedimentation losses from construction sites throughout the watershed. Collectively these other actions have contributed or will contribute long-term moderate adverse impacts on soil resources. The impact of Alternative 1 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on soil resources. Alternative 1 would contribute an imperceptible adverse increment to the total cumulative impact.

Conclusion. Cultural resource management actions in Alternative 1 would have a local short-term minor adverse impact on soil resources. Natural resource management Actions in Alternative 1 would have a local short-term moderate adverse impact on soil resources. Routine maintenance of park administrative roads and trails would have periodic short-term negligible impacts on soil resources. Alternative 1 would contribute an imperceptible adverse increment to the overall cumulative long-term moderate adverse impact on soil resources. There would be no impairment of soil resources in the park.

- **Alternative 2 (Preferred Alternative) – Impacts on Soil Resources**

Analysis. As in Alternative 1, cultural resource management actions would include long-term stabilization of the tipple, conveyor, and headhouse, as well as minor actions to protect foundations at the town site. In addition actions would be taken to rehabilitate one or two coke ovens and to rehabilitate foundation masonry for a limited number of structures associated with community life at the town of Nuttallburg. These actions would temporarily expose small areas of surface soils in the immediate vicinity of historic buildings and structures. Areas exposed would generally be previously disturbed soils. Upon completion of stabilization actions disturbed areas would be reseeded with native grasses. Collectively these cultural resource management actions would result in a local short-term minor adverse impact on soil resources.

As in Alternative 1, natural resource management actions would include removal of invasive plants that are changing the cultural landscape resulting in a local short-term moderate adverse impact on soil resources.

As in Alternative 1, existing trails and administrative roads would remain with no improvements other than routine maintenance. In addition 1) a trail would be added in the vicinity of the coke ovens, 2) a new trail would be added from the headhouse to the tipple (largely following existing trails but requiring limited grading to ensure slope stability), 3) the rights-of-way of historic traces of major town roads would be cleared of invasive plants, and 4) other vegetation and maintained as stabilized trails. Trails would likely have a gravel surface seeded with native grasses that would be mowed periodically. Rehabilitation of major road traces and construction of new trails could temporarily expose up to 0.48 acres of previously disturbed surface soils in the immediate vicinity of historic buildings and structures. Best management practices would be used during construction to mitigate erosion and sedimentation. Rehabilitation of major historic traces and new trail construction would result in a local short-term moderate adverse impact on soil resources. Trail maintenance actions would result in a local short-term negligible impact on soil resources.

Construction of new visitor parking facilities would involve minor grading of approximately 1.72 acres exposing surface soils to erosion until stabilized through placement of crushed stone or by revegetation with native grasses resulting in a local short-term moderate adverse impact on soil resources. Crushed stone would be placed over 1.53 acres resulting in a local long-term moderate adverse impact on soil resources.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on soil resources are identified in Section 4.1 above. The cumulative impacts of these actions on soil resources are described above for Alternative 1. Collectively these other actions have contributed or will contribute long-term moderate adverse impacts on soil resources. The impact of Alternative 2 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on soil resources. Alternative 2 would contribute an imperceptible adverse increment to the total cumulative impact.

Conclusion. Cultural resource management actions in Alternative 2 would have a local short-term minor adverse impact on soil resources. Natural resource management Actions in Alternative 2 would have a local short-term moderate adverse impact on soil resources. Rehabilitation of major historic traces and new trail construction would result in a local short-term moderate adverse impact on soil resources. Routine maintenance of park administrative roads and trails would have periodic short-term negligible impacts on soil resources. Construction of new visitor parking facilities would result in both short-term and long-term local moderate adverse impacts on soil resources. Alternative 2 would contribute an imperceptible adverse increment to the overall cumulative long-term moderate adverse impact on soil resources. There would be no impairment of soil resources in the park.

- **Alternative 3 – Impacts on Soil Resources**

Analysis. As in Alternatives 1 and 2, cultural resource management actions would include long-term stabilization of the tipple, conveyor, and headhouse, as well as minor actions to protect foundations at the town site. In addition actions would be taken as in Alternative 2 to rehabilitate foundation masonry for a limited number of structures associated with the community life at the town of Nuttallburg and to protect foundations and other remains and artifacts at the town site. In Alternative 3 rehabilitation of the coke ovens would be expanded to include a bank of 10 coke ovens. These actions would temporarily expose small areas of surface soils in the immediate vicinity of historic buildings and structures. Areas exposed would generally be previously disturbed soils. Upon completion of stabilization actions disturbed areas would be reseeded with native grasses. Collectively these cultural resource management actions would result in a local short-term minor adverse impact on soil resources.

As in Alternatives 1 and 2, natural resource management actions would include removal of invasive plants that are changing the cultural landscape resulting in a local short-term moderate adverse impact on soil resources.

As in Alternatives 1 and 2, existing trails and administrative roads would remain with no improvements other than routine maintenance. As in Alternative 2 a trail would be added in the vicinity of the coke ovens. In Alternative 3 rehabilitation of historic traces would be expanded to include most town roads. These would be cleared, stabilized, and maintained as trails, affecting approximately 1.65 acres of previously disturbed soils within these rights-of-way. In addition a new trail connection would be established from the headhouse to the tipple requiring clearing, stabilization, and long-term maintenance. Trail construction could temporarily expose up to 0.76 acre of previously disturbed soils. Best management practices would be used during construction to mitigate erosion and sedimentation. Upon completion of stabilization actions disturbed areas would be reseeded with native grasses. Rehabilitation of most historic road traces and construction of new trails would result in a local short-term minor adverse impact on soil resources. Trail maintenance actions would result in a local short-term negligible impact on soil resources.

Construction of new visitor parking facilities would involve minor grading of approximately 1.82 acres exposing surface soils to erosion until stabilized through placement of crushed stone or by revegetation with native grasses resulting in a local short-term moderate adverse impact on soil resources. Crushed stone would be placed over 1.62 acres resulting in a local long-term moderate adverse impact on soil resources.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on soil resources are identified in Section 4.1 above. The cumulative impacts of these actions on soil resources are described above for Alternative 1. Collectively these other actions have contributed or will contribute long-term moderate adverse impacts on soil resources. The impact of Alternative 3 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on soil resources. Alternative 3 would contribute an imperceptible adverse increment to the total cumulative impact.

Conclusion. Cultural resource management actions in Alternative 3 would have a local short-term minor adverse impact on soil resources. Natural resource management Actions in Alternative 3 would have a local short-term moderate adverse impact on soil resources. Rehabilitation of most historic road traces and construction of new trails would result in a local short-term moderate adverse impact on soil resources. Construction of new visitor parking facilities would result in both short-term and long-term local moderate adverse impacts on soil resources. Routine maintenance of park administrative roads and trails would have periodic short-term negligible impacts on soil resources. Alternative 3 would contribute an imperceptible adverse increment to the overall cumulative long-term moderate adverse impact on soil resources. There would be no impairment of soil resources in the park.

- **Alternative 4 – Impacts on Soil Resources**

Analysis. As in Alternatives 1, 2, and 3, cultural resource management actions would include long-term stabilization of the tipple, conveyor, and headhouse, as well as minor actions to protect foundations at the town site. In addition actions would be taken as in Alternative 2 to rehabilitate foundation masonry for a limited number of structures associated with the community life at the town of Nuttallburg and to protect foundations and other remains and artifacts at the town site. As in Alternative 3 rehabilitation of the coke ovens would be expanded to include a bank of 10 coke ovens. These actions would temporarily expose small areas of surface soils in the immediate vicinity of historic buildings and structures. Areas exposed would generally be previously disturbed soils. Upon completion of stabilization actions disturbed areas would be reseeded with native grasses. Collectively these cultural resource management actions would result in a local short-term minor adverse impact on soil resources.

As in Alternatives 1, 2, and 3 natural resource management actions would include removal of invasive plants that are changing the cultural landscape resulting in a local short-term moderate adverse impact on soil resources.

As in Alternatives 1, 2, and 3, existing trails and administrative roads would remain with no improvements other than routine maintenance. As in Alternative 2 a trail would be added in the vicinity of the coke ovens. As in Alternative 3 Rehabilitation of historic traces would be expanded to include most town roads. These would be cleared, stabilized, and maintained as trails, affecting approximately 1.65 acres of previously disturbed soils within these rights-of-way. As in Alternative 3, a new trail connection would be established from the headhouse to the tipple affecting up to 0.76 acre of previously disturbed soils. In addition the trail connection between the Nuttallburg town site and the Kaymoor town site would be reestablished along its historic trace (including a footbridge across the New River) affecting approximately 2.22 acres. These actions would temporarily expose surface soils most of which have been previously disturbed soils. Best management practices would be used during construction to mitigate erosion and sedimentation. Upon completion of stabilization actions

disturbed areas would be reseeded with native grasses. Rehabilitation of most historic road traces and construction of new trails would result in a local short-term moderate adverse impact on soil resources. Trail maintenance actions would result in a local short-term negligible impact on soil resources.

Construction of new visitor parking facilities would involve minor grading of approximately 1.86 acres exposing surface soils to erosion until stabilized through placement of crushed stone or by revegetation with native grasses resulting in a local short-term moderate adverse impact on soil resources. Crushed stone would be placed over 1.65 acres resulting in a local long-term moderate adverse impact on soil resources.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on soil resources are identified in Section 4.1 above. The cumulative impacts of these actions on soil resources are described above for Alternative 1. Collectively these other actions have contributed or will contribute long-term moderate adverse impacts on soil resources. The impact of Alternative 4 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on soil resources. Alternative 4 would contribute an imperceptible adverse increment to the total cumulative impact.

Conclusion. Cultural resource management actions in Alternative 4 would have a local short-term minor adverse impact on soil resources. Natural resource management actions in Alternative 4 would have a local short-term moderate adverse impact on soil resources. Rehabilitation of most historic road traces and construction of new trails would result in a local short-term moderate adverse impact on soil resources. Construction of new visitor parking facilities would result in both short-term and long-term local moderate adverse impacts on soil resources. Routine maintenance of park administrative roads and trails would have periodic short-term negligible impacts on soil resources. Alternative 4 would contribute an imperceptible adverse increment to the overall cumulative long-term moderate adverse impact on soil resources. There would be no impairment of soil resources in the park.

- **Comparison of Impacts of the Alternatives – Soil Resources**

Cultural resource management actions in all four alternatives would have a local short-term minor adverse impact on soil resources. Natural resource management in all four alternatives would have a local short-term moderate adverse impact on soil resources. In Alternative 2 rehabilitation of major historic road traces and construction of new trails would result in a local short-term moderate adverse impact on soil resources. In Alternatives 3 and 4 rehabilitation of most historic road traces and construction of new trails would result in a local short-term moderate adverse impact on soil resources. In Alternative 2 no new trails would be constructed resulting in no impacts to soil resources. In Alternative 3 new trail construction would result in a local short-term minor adverse impact on soil resources, while new trail construction in Alternative 4 would result in a local short-term moderate adverse impact on soil resources. In Alternatives 2, 3, and 4 construction of new visitor parking facilities would result in both short-term and long-term local moderate adverse impacts on soil resources. Routine maintenance of park administrative roads and trails in all four alternatives would have periodic short-term negligible impacts on soil resources.

Each alternative would contribute an imperceptible adverse increment to the total cumulative moderate adverse impact on soil resources. None of the alternatives would result in an impairment of park resources or values related to soil resources.

4.3 Vegetation

▪ Applicable Regulations and Guidelines

Regulations and guidelines related to vegetation include the following:

- Executive Order 13112 – Invasive Plants
- Endangered Species Act of 1973, as amended
- NPS 2006 Management Policies

▪ Methodology and Assumptions

Impacts to vegetation are evaluated in terms of the vegetation to be disturbed during construction and long-term site maintenance and the extent and likely success of measures to mitigate adverse impacts.

Definitions of Impact Intensity Levels

Negligible: The impact on vegetation would not be of any measurable or perceptible consequence; impacts would be small scale and little (if any) mitigation would be needed.

Minor: The impact on vegetation would be slight and localized with few measurable consequences. This could include changes in the abundance, distribution, or composition of individual species in a local area, but not changes that would affect the viability of vegetation communities. Changes to local ecological processes would be minimal. If mitigation is needed to offset adverse impacts it would be relatively simple to implement and would likely be successful.

Moderate: The impact on vegetation would be readily apparent with measurable consequences. This could include changes in the abundance, distribution, or composition of local vegetation communities, but not changes that would affect the viability of regional plant populations. Changes to local ecological processes would be of limited extent. Mitigation would be needed to offset adverse impacts, could be extensive, and would likely be successful.

Major: The impact on vegetation would be readily apparent with severely adverse consequence. This could include changes in the abundance, distribution, or composition of a local vegetation community or regional plant population to the extent that the population would not be likely to recover. Significant ecological processes would be altered, and landscape level (regional) changes could be expected. Extensive mitigation would be needed to offset adverse impacts and success of the mitigation measures would not be guaranteed.

▪ Alternative 1 (Continuation of Existing Management) – Impacts on Vegetation

Analysis. In Alternative 1, cultural and natural resource management actions would include ongoing maintenance to control invasive plants and growth of new trees and understory plants in the recently rehabilitated coke oven area and in the rail bed parallel to the coke oven bank on its downhill side. Similar management actions would be taken to control invasive vegetation at the town site where it has recently been removed. Maintenance would include periodic mowing, removal of invasive species (by cutting and some use of herbicide), and removal of young native trees and shrubs where their continued growth would pose threats to cultural resources. These actions would generally help to control the spread of invasive plants in the area. Collectively these cultural and natural resource management actions would result in a local long-term minor beneficial impact on vegetation resources.

Existing trails and administrative roads would remain with no improvements other than routine maintenance needed to keep them open for hiking and administrative use, as appropriate. Maintenance would include periodic mowing, tree trimming, and removal of understory growth and invasive plants that encroach into trail and road rights-of-way. Routine maintenance of park administrative roads and trails would have a local long-term negligible impact on vegetation resources.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on vegetation resources are identified in Section 4.1 above. These generally include development on private property, public development projects, and transportation system improvements that have resulted in or could result in loss of vegetation or general degradation of vegetation communities. Loss of vegetation has occurred through clearing and grading and subsequent conversion of natural lands to developed uses. Fragmentation, non-native species introduction, drainage alterations, erosion and sedimentation, introduction of contaminants from urban runoff, and loss due to herbicide drift, have adversely impacted remaining areas of natural vegetation adjoining developed lands. Historically high impacts on vegetation have occurred because in the past there were few controls over land development intended to protect vegetation. Reasonably foreseeable actions that would have impacts on vegetation would be subject to recently adopted local community and state regulations requiring stormwater management, erosion and sedimentation control, and replanting with native species. Compliance with these regulations would reduce the extent of impacts of foreseeable actions on vegetation, although impacts would continue to occur at a reduced level. Collectively these other actions have contributed or will contribute a long-term moderate adverse impact on vegetation resources. The impacts of Alternative 1 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on vegetation resources. Alternative 1 would contribute an imperceptible beneficial increment to the total cumulative impact.

Conclusion. Cultural and natural resource management actions in Alternative 1 would result in a local long-term minor beneficial impact on vegetation resources. Routine maintenance of park administrative roads and trails would have a local long-term negligible impact on vegetation resources. Alternative 1 would contribute an imperceptible beneficial increment to the overall cumulative long-term moderate adverse impact on vegetation resources. There would be no impairment of vegetation resources in the park.

- **Alternative 2 (Preferred Alternative) – Impacts on Vegetation**

Analysis. As in Alternative 1, cultural and natural resource management actions would include ongoing maintenance to control invasive plants and growth of new trees and understory plants in the recently rehabilitated coke oven area and in the rail bed parallel to the coke oven bank on its downhill side. Similar management actions would be taken to control invasive vegetation at the town site where it has recently been removed. Maintenance would include periodic mowing, removal of invasive species (by cutting and some use of herbicide), and removal of young native trees and shrubs where their continued growth would pose threats to cultural resources. These actions would generally help to control the spread of invasive plants in the area. Collectively these cultural and natural resource management actions would result in a local long-term minor beneficial impact on vegetation resources.

As in Alternative 1, existing trails and administrative roads would remain with no improvements other than routine maintenance needed to keep them open for hiking and administrative use, as appropriate. In addition a trail would be added in the vicinity of the coke ovens and the rights-of-way historic traces of major town roads would be cleared of invasive plants and other vegetation and maintained as stabilized trails with a gravel surface reseeded with native grasses. These actions would affect approximately 0.48 acres within these rights-of-way resulting in a local long-term minor adverse impact on vegetation. Maintenance of trails and road traces would include periodic mowing, tree trimming, and removal of understory growth and invasive plants that encroach into trail and road rights-of-way. Removal of vegetation from major historic road traces would have a local long-term

minor adverse impact on vegetation resources. Routine maintenance of park administrative roads and trails would have a local long-term negligible impact on vegetation resources.

Construction of four new visitor parking facilities would involve clearing and grading of approximately 1.72 acres. Young secondary forest that characterizes the sites would be removed. Following construction approximately 1.53 acres would be committed to gravel-surface parking and approximately 0.19 acre in perimeter areas would be seeded with native grasses. Clearing for parking facilities would result in a local long-term minor adverse impact on vegetation resources.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on vegetation resources are identified in Section 4.1 above. The cumulative impacts of these actions on vegetation resources are described above for Alternative 1. Collectively these other actions have contributed or will contribute a long-term moderate adverse impact on vegetation resources. The impacts of Alternative 2 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on vegetation resources. Alternative 2 would contribute an imperceptible adverse increment to the total cumulative impact.

Conclusion. Cultural and natural resource management actions in Alternative 2 would result in a local long-term minor beneficial impact on vegetation resources. Removal of vegetation from major historic road traces and new trail construction in Alternative 2 would have a local long-term minor adverse impact on vegetation resources. Clearing for construction of new trails and parking facilities in Alternative 2 would result in a local long-term minor adverse impact on vegetation resources. Routine maintenance of park administrative roads and trails would have a local long-term negligible impact on vegetation resources. Alternative 2 would contribute an imperceptible adverse increment to the overall cumulative long-term moderate adverse impact on vegetation resources. There would be no impairment of vegetation resources in the park.

- **Alternative 3 – Impacts on Vegetation**

Analysis. As in Alternatives 1 and 2, cultural and natural resource management actions would include ongoing maintenance to control invasive plants and growth of new trees and understory plants in the recently rehabilitated coke oven area and in the rail bed parallel to the coke oven bank on its downhill side. Similar management actions would be taken to control invasive vegetation at the town site where it has recently been removed. Maintenance would include periodic mowing, removal of invasive species (by cutting and some use of herbicide), and removal of young native trees and shrubs where their continued growth would pose threats to cultural resources. Collectively these cultural and natural resource management actions would result in a local long-term minor beneficial impact on vegetation resources.

As in Alternatives 1 and 2, existing trails and administrative roads would remain with no improvements other than routine maintenance needed to keep them open for hiking and administrative use, as appropriate. As in Alternative 2, a trail would be added in the vicinity of the coke ovens. In Alternative 3 rehabilitation of historic traces would be expanded to include most town roads. These would be cleared of invasive plants and maintained as stabilized trails with a gravel surface reseeded with native grasses. These actions would affect approximately 1.72 acres within these rights-of-way. In Alternative 3 trees would also be thinned in the Nuttallburg town site, the Seldom Seen site, the headhouse area, and along the conveyor length to enhance interior views and top to bottom views. In addition in Alternative 3 new trail connection would be established from the headhouse to the tipple requiring clearing 0.69 acre of young trees, understory plants, and invasive plants within the trail right-of-way. Maintenance of trails and road traces would include periodic mowing, tree trimming, and removal of understory growth and invasive plants that encroach into trail and road rights-of-way. Removal of vegetation from historic traces would have a local long-term minor adverse impact on vegetation resources. Clearing for new trail construction would result in a

local long-term minor adverse impact on vegetation resources. Routine maintenance of park administrative roads and trails would have a local long-term negligible impact on vegetation resources.

In Alternative 3 construction of four new visitor parking facilities would involve clearing and grading of approximately 1.82 acres. Young secondary forest that characterizes the sites would be removed. Following construction approximately 1.62 acres would be committed to gravel-surface parking and approximately 0.20 acre in perimeter areas would be seeded with native grasses. Clearing for parking facilities would result in a local long-term minor adverse impact on vegetation resources.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on vegetation resources are identified in Section 4.1 above. The cumulative impacts of these actions on vegetation resources are described above for Alternative 1. Collectively these other actions have contributed or will contribute a long-term moderate adverse impact on vegetation resources. The impacts of Alternative 3 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on vegetation resources. Alternative 3 would contribute an imperceptible adverse increment to the total cumulative impact.

Conclusion. Cultural and natural resource management actions in Alternative 3 would result in a local long-term minor beneficial impact on vegetation resources. Removal of vegetation from most historic road traces in Alternative 3 would result in a local long-term minor adverse impact on vegetation resources. Tree thinning would have a local long-term minor adverse impact on vegetation resources. Clearing for construction of new trails and parking facilities in Alternative 3 would result in a local long-term minor adverse impact on vegetation resources. Routine maintenance of park administrative roads and trails would have a local long-term negligible impact on vegetation resources. Alternative 3 would contribute an imperceptible adverse increment to the overall cumulative long-term moderate adverse impact on vegetation resources. There would be no impairment of vegetation resources in the park.

- **Alternative 4 – Impacts on Vegetation**

Analysis. As in Alternatives 1, 2, and 3, cultural and natural resource management actions would include ongoing maintenance to control invasive plants and growth of new trees and understory plants in the recently rehabilitated coke oven area and in the rail bed parallel to the coke oven bank on its downhill side. Similar management actions would be taken to control invasive vegetation at the town site where it has recently been removed. Maintenance would include periodic mowing, removal of invasive species (by cutting and some use of herbicide), and removal of young native trees and shrubs where their continued growth would pose threats to cultural resources. Collectively these cultural and natural resource management actions would result in a local long-term minor beneficial impact on vegetation resources.

As in Alternatives 1, 2, and 3, existing trails and administrative roads would remain with no improvements other than routine maintenance needed to keep them open for hiking and administrative use, as appropriate. As in Alternative 2, a trail would be added in the vicinity of the coke ovens. As in Alternative 3 rehabilitation of historic traces would be expanded to include most town roads. These would be cleared of invasive plants and maintained as stabilized trails with a gravel surface reseeded with native grasses. These actions would affect approximately 1.72 acres within these rights-of-way. As in Alternative 3, trees would also be thinned in the Nuttallburg town site, the Seldom Seen site, the headhouse area, and along the conveyor length to enhance interior views and top to bottom views. As in Alternative 3, a new trail connection would be established from the headhouse to the tipple requiring clearing 0.69 acre of young trees, understory plants, and invasive plants within the trail right-of-way. In addition, in Alternative 4 the trail connection between the Nuttallburg town site and the Kaymoor town site would be reestablished along its historic trace with new trail right-of-way connecting to a new footbridge across the New River. This would require clearing an additional 2.22 acres of invasive plants and other vegetation within the trail right-of-way.

Maintenance of road traces and trails would include periodic mowing, tree trimming, and removal of understory growth and invasive plants that encroach into trail and road rights-of-way. Removal of vegetation from historic traces would have a local long-term minor adverse impact on vegetation resources. Clearing for new trail construction would result in a local long-term minor adverse impact on vegetation resources. Routine maintenance of park administrative roads and trails would have a local long-term negligible impact on vegetation resources.

In Alternative 4 construction of four new visitor parking facilities would involve clearing and grading of approximately 1.86 acres. Young secondary forest that characterizes the sites would be removed. Following construction approximately 1.65 acres would be committed to gravel-surface parking and approximately 0.21 acre in perimeter areas would be seeded with native grasses. Clearing for parking facilities would result in a local long-term minor adverse impact on vegetation resources.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on vegetation resources are identified in Section 4.1 above. The cumulative impacts of these actions on vegetation resources are described above for Alternative 1. Collectively these other actions have contributed or will contribute a long-term moderate adverse impact on vegetation resources. The impacts of Alternative 4 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on vegetation resources. Alternative 4 would contribute an imperceptible adverse increment to the total cumulative impact.

Conclusion. Cultural and natural resource management actions in Alternative 4 would result in a local long-term minor beneficial impact on vegetation resources. Removal of vegetation from historic road traces in Alternative 4 would have a local long-term minor adverse impact on vegetation resources. Tree thinning along historic road traces and the conveyor would have a local long-term minor adverse impact on vegetation resources. Clearing for construction of new trails and parking facilities in Alternative 4 would result in a local long-term minor adverse impact on vegetation resources. Routine maintenance of park administrative roads and trails would have a local long-term negligible impact on vegetation resources. Alternative 4 would contribute an imperceptible adverse increment to the overall cumulative long-term moderate adverse impact on vegetation resources. There would be no impairment of vegetation resources in the park.

- **Comparison of Impacts of the Alternatives – Vegetation**

Cultural and natural resource management actions in all four alternatives would have a local short-term minor adverse impact on vegetation resources. Removal of vegetation from historic road traces in Alternatives 2, 3 and 4 would have a local long-term minor adverse impact on vegetation resources. Tree thinning in Alternatives 3 and 4 would have a local long-term minor adverse impact on vegetation resources. Clearing for construction of new trails and parking facilities in Alternatives 2, 3, and 4 would result in local long-term minor adverse impacts on vegetation resources. Routine maintenance of park administrative roads and trails in all four alternatives would have periodic long-term negligible impacts on soil resources.

Alternative 1 would contribute an imperceptible beneficial increment to the total cumulative moderate adverse impact on vegetation resources. Alternatives 2, 3, and 4 would contribute an imperceptible adverse increment to the total cumulative moderate adverse impact on vegetation resources. None of the alternatives would result in an impairment of park resources or values related to vegetation resources.

4.4 Rare, Threatened, or Endangered Species and Their Habitats

▪ Applicable Regulations and Guidelines

Regulations and guidelines related to rare, threatened, or endangered species and their habitats include the following:

- Endangered Species Act of 1973, as amended
- Bald and Golden Eagle Protection Act
- NPS 2006 Management Policies

▪ Methodology and Assumptions

Potential impacts to designated species are identified in terms of proposed visitor activity areas and site management actions that would affect critical habitat of designated species known to occur at or near the site of the proposed action. Findings are based on best available data regarding the occurrence and location of rare, threatened, or endangered species assembled from NPS staff field observations and studies. Mitigation measures to be taken to protect federally designated species are identified.

Definitions of Impact Intensity Levels

Negligible: There would be no effects on a listed or protected species or designated critical habitat.

Minor: The effects on special status species are expected to be discountable and insignificant.

Moderate: The effects on special status species may pose an impact on listed species or designated critical habitat that could be meaningfully measured, detected, or evaluated.

Major: The effects would include any adverse effect to the species that may occur as a direct or indirect result of the alternative and the effect is not discountable or insignificant.

▪ Alternative 1 (Continuation of Existing Management) – Impacts on Rare, Threatened, or Endangered Species and Their Habitats

Analysis. In Alternative 1, cultural resource management actions in the vicinity of the habitat of designated species would include long-term stabilization of the tipple, headhouse, and conveyor. These actions would generally include structural repairs, rust removal, and painting. Construction would occur during daytime hours. Staging areas and road access would be limited to areas previously cleared for short-term emergency stabilization actions that are already underway or completed. There would be no removal or trimming of large trees that may be used as roosts by rare bats known to inhabit the area. Collectively the cultural resource management actions would result in local short-term and local long-term negligible impacts on designated species and their habitat.

Natural resources would continue to be minimally managed except where vegetation growth has the potential to damage historic buildings and structures. New tree growth would be cleared or pruned along the conveyor and around the headhouse, tipple, coke ovens, other mining complex buildings, and the Nuttall Mine portal near the headhouse. These actions would affect young trees that have grown up subsequent to clearing that has recently occurred as part of the short-term emergency stabilization of these structures. It would not involve additional removal or trimming of large trees that may be used as roosts by rare bats known to inhabit the area. Collectively natural resource management actions would result in local short-term and long-term negligible impacts on designated species and their habitat.

Existing trails/administrative roads would remain with no improvements other than routine maintenance needed to keep them open for hiking and administrative use, as appropriate. Maintenance would include periodic mowing, tree trimming, and removal of understory growth and invasive plants that encroach into trail and road rights-of-way. These actions would affect young trees that have grown up subsequent to clearing that has recently occurred as part of the emergency stabilization project. It would not involve additional removal or trimming of large trees that may be used as roosts by rare bats known to inhabit the area. Routine maintenance of park administrative roads and trails would have a local long-term negligible impact on designated species and their habitat.

Visitation is projected to be approximately 150 visitors on an average summer day. Most visitors would visit the lower portion of the site during daytime hours. Visitation to the area in the vicinity of the headhouse and abandoned mine openings would be limited to day use only. All abandoned mine portals within one mile of the headhouse would be gated and fenced to prevent visitor access and disturbance. Overall, visitor use would have a local long-term negligible impact on designated species and their habitat.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on designated species and their habitat are identified in Section 4.1 above. These other actions have contributed or will contribute long-term moderate adverse impacts on designated species and their habitat. The impact of Alternative 1 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on designated species and their habitat. Alternative 1 would contribute an imperceptible increment to the total cumulative impact.

Conclusion. Cultural resource and natural resource management actions in Alternative 1 would result in local short-term and long-term negligible impacts on designated species and their habitat. Routine maintenance of park administrative roads and trails would result in a local long-term negligible impact on designated species and their habitat. Projected visitor use associated with Alternative 1 would result in a local long-term negligible impact on designated species and their habitat. The collective management actions in Alternative 1 would contribute an imperceptible increment to the overall cumulative long-term moderate adverse impact on designated species and their habitat. There would be no impairment of designated species and their habitat.

- **Alternative 2 (Preferred Alternative) – Impacts on Rare, Threatened, or Endangered Species and Their Habitats**

Analysis. As in Alternative 1, cultural resource management actions in the vicinity of the habitat of designated species would include long-term stabilization of the tipple, headhouse, and conveyor. These actions would generally include structural repairs, rust removal, and painting. Construction would occur during daytime hours. Staging areas and road access would be limited to areas previously cleared for short-term emergency stabilization actions that are already underway or completed. There would be no removal or trimming of large trees that may be used as roosts by rare bats known to inhabit the area. Collectively the cultural resource management actions would result in local short-term and local long-term negligible impacts on designated species and their habitat.

As in Alternative 1, natural resources would continue to be minimally managed except where vegetation growth has the potential to damage historic buildings and structures. New tree growth would be cleared or pruned along the conveyor and around the headhouse, tipple, coke ovens, other mining complex buildings, and the Nuttall Mine portal near the headhouse. These actions would affect young trees that have grown up subsequent to the clearing and pruning that has already been completed as part of the short-term emergency stabilization of these structures. It would not involve additional removal or trimming of large trees that may be used as roosts by rare bats known to inhabit the area. Collectively natural resource management actions would result in local short-term and long-term negligible impacts on designated species and their habitat.

In Alternative 2, development and maintenance of visitor use facilities that could potentially affect designated species and their habitat include the following:

- As in Alternative 1, existing trails/administrative roads would remain with no improvements other than routine maintenance needed to keep them open for hiking and administrative use, as appropriate. Maintenance would include periodic mowing, tree trimming, and removal of understory growth and invasive plants that encroach into trail and road rights-of-way. These actions would affect young trees that have grown up subsequent to the clearing that has already been completed as part of the emergency stabilization project. It would not involve additional removal or trimming of large trees that may be used as roosts by rare bats known to inhabit the area.

  Routine maintenance of trails and administrative roads would result in a local long-term negligible impact on designated species and their habitat.

- Historic traces of major town roads would be cleared of invasive plants and maintained as stabilized trails with a gravel surface reseeded with native grasses. These actions would affect approximately 0.41 acres within these rights-of-way. Maintenance of the road traces would include periodic mowing, tree trimming, and removal of understory growth and invasive plants that encroach into the rights-of-way. Tree removal would have the potential to displace Indiana bats during tree felling operations, but this potential would be low based on the low number of trees likely to exhibit roosting characteristics. To reduce the potential impact all trees within the rights-of-way would be inspected and those found to have cavities with evidence of bat roosting (e.g. guano deposits, etc.) would not be removed or they would be removed during the hibernation period from November 15th through March 31st. Mitigation for tree removal would include installation of bat condos in the vicinity of the conveyor that would provide additional summer roosting habitat. Road trace rehabilitation could also affect bat travel corridors by removing some overstory vegetation and completely removing understory vegetation on the trail bed. To reduce the potential for this to impact bat travel corridors trail beds would be reseeded with native grasses.

  Rehabilitation of major town historic road traces would have a short-term minor adverse impact on designated species and their habitat. Routine maintenance of rehabilitated road traces would have a local long-term negligible impact on designated species and their habitat.

- In Alternative 2, construction of four new visitor parking facilities would involve clearing and grading of approximately 1.72 acres. Young secondary forest that characterizes the sites would be removed. Following construction approximately 1.53 acres would be committed to gravel-surface parking and approximately 0.19 acre in perimeter areas would be seeded with native grasses. None of the parking facilities would be located within 2000 feet of the six abandoned mine portals in the site vicinity.

  Clearing for parking facilities would result in a local long-term negligible impact on designated species and their habitat.

Visitation is projected to be approximately 460 visitors on an average summer day. Most visitors would visit the lower portion of the site during daytime hours. Visitation to the area in the vicinity of the headhouse and abandoned mine openings would be limited to day use only. All abandoned mine portals within one mile of the headhouse would be gated and fenced to prevent visitor access and disturbance. Overall, visitor use would have a local long-term negligible impact on designated species and their habitat.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on designated species and their habitat are identified in Section 4.1 above. The cumulative impacts of these actions on designated species and their habitat are described above for

Alternative 1. Collectively these other actions have contributed or will contribute long-term moderate adverse impacts on designated species and their habitat. The impact of Alternative 2 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on designated species and their habitat. Alternative 2 would contribute an imperceptible adverse increment to the total cumulative impact.

Conclusion. Cultural resource and natural resource management actions in Alternative 2 would result in local short-term and long-term negligible impacts on designated species and their habitat. Rehabilitation of major town historic road traces would result in a short-term minor adverse impact on designated species and their habitat. Routine maintenance of trails, administrative roads, and rehabilitated historic road traces would result in a local long-term negligible impact on designated species and their habitat. Clearing for parking facilities would result in a local long-term negligible impact on designated species and their habitat. Projected visitor use associated with Alternative 2 would result in a local long-term negligible impact on designated species and their habitat. The collective management actions in Alternative 2 would contribute an imperceptible adverse increment to the overall cumulative long-term moderate adverse impact on designated species and their habitat. There would be no impairment of designated species and their habitat.

- **Alternative 3 – Impacts on Rare, Threatened, or Endangered Species and Their Habitats**

Analysis. As in Alternatives 1 and 2, cultural resource management actions in the vicinity of the habitat of designated species would include long-term stabilization of the tipple, headhouse, and conveyor. These actions would generally include structural repairs, rust removal, and painting. Construction would occur during daytime hours. Staging areas and road access would be limited to areas previously cleared for short-term emergency stabilization actions that are already underway or completed. There would be no removal or trimming of large trees that may be used as roosts by rare bats known to inhabit the area. Collectively the cultural resource management actions would result in local short-term and local long-term negligible impacts on designated species and their habitat.

As in Alternatives 1 and 2, natural resources would continue to be minimally managed except where vegetation growth has the potential to damage historic buildings and structures. New tree growth would be cleared or pruned along the conveyor and around the headhouse, tipple, coke ovens, other mining complex buildings, and the Nuttall Mine portal near the headhouse. These actions would affect young trees that have grown up subsequent to clearing and pruning that has recently occurred as part of the short-term emergency stabilization of these structures. It would not involve additional removal or trimming of large trees that may be used as roosts by rare bats known to inhabit the area. Collectively natural resource management actions would result in local short-term and long-term negligible impacts on designated species and their habitat.

Development and maintenance of visitor use facilities that could potentially affect designated species and their habitat include the following:

- As in Alternatives 1 and 2, existing trails and administrative roads would remain with no improvements other than routine maintenance needed to keep them open for hiking and administrative use, as appropriate. Maintenance would include periodic mowing, tree trimming, and removal of understory growth and invasive plants that encroach into trail and road rights-of-way. These actions would affect young trees that have grown up subsequent to clearing that has recently occurred as part of the emergency stabilization project. It would not involve additional removal or trimming of large trees that may be used as roosts by rare bats known to inhabit the area.

  Routine maintenance of trails and administrative roads would result in a local long-term negligible impact on designated species and their habitat.

- Historic traces of most town roads would be cleared of invasive plants and maintained as stabilized trails with a gravel surface reseeded with native grasses. These actions would affect approximately 1.65 acres within these rights-of-way. Maintenance of the road traces would include periodic mowing, tree trimming, and removal of understory growth and invasive plants that encroach into the rights-of-way. Tree removal would have the potential to displace Indiana bats during tree felling operations, but this potential would be low based on the low number of trees likely to exhibit roosting characteristics. To reduce the potential impact all trees within the rights-of-way would be inspected and those found to have cavities with evidence of bat roosting (e.g. guano deposits, etc.) would not be removed or they would be removed during the hibernation period from November 15th through March 31st. Mitigation for tree removal would include installation of bat condos in the vicinity of the conveyor that would provide additional summer roosting habitat. Road trace rehabilitation could also affect bat travel corridors by removing some overstory vegetation and completely removing understory vegetation on the trail bed. To reduce the potential for this to impact bat travel corridors trail beds would be reseeded with native grasses.

  Rehabilitation of major town historic road traces would have a short-term minor adverse impact on designated species and their habitat. Routine maintenance of rehabilitated road traces would have a local long-term negligible impact on designated species and their habitat.

- In Alternative 3, trees would be thinned along the conveyor length to provide views from top to bottom, in the headhouse area to enhance rim to rim views, and in the Nuttallburg town site and the Seldom Seen site to enhance interior views. Tree thinning would have the potential to displace Indiana bats. To reduce the potential impact all trees within the area to be thinned would be inspected and those found to have cavities with evidence of bat roosting (e.g. guano deposits, etc.) would not be removed or they would be removed during the hibernation period from November 15th through March 31st. Mitigation for tree removal would include installation of bat condos in the vicinity of the conveyor that would provide additional summer roosting habitat.

  Tree thinning along the conveyor length, in the headhouse area, in the Nuttallburg town site and the Seldom Seen site would have a local long-term minor adverse impact on designated species and their habitat.

- In Alternative 3, a new trail connection would be established from the headhouse to the tipple requiring clearing 0.69 acre of young trees, understory plants, and invasive plants within the trail right-of-way. Tree removal would have the potential to displace Indiana bats during tree felling operations, but this potential would be low based on the low number of trees likely to exhibit roosting characteristics. To reduce the potential impact all trees within the new trail right-of-way would be inspected and those found to have cavities with evidence of bat roosting (e.g. guano deposits, etc.) would not be removed or they would be removed during the hibernation period from November 15th through March 31st. Mitigation for tree removal would include installation of bat condos in the vicinity of the conveyor that would provide additional summer roosting habitat.

  Construction of a new trail from the headhouse to the tipple would have a short-term minor adverse impact on designated species and their habitat. Routine maintenance of rehabilitated road traces would have a local long-term negligible impact on designated species and their habitat.

- In Alternative 3, construction of four new visitor parking facilities would involve clearing and grading of approximately 1.82 acres. Young secondary forest that characterizes the sites would be removed. Following construction approximately 1.62 acres would be committed to gravel-surface parking and approximately 0.20 acre in perimeter areas would be seeded with

native grasses. None of the parking facilities would be located within 2000 feet of the six abandoned mine portals in the site vicinity.

Clearing for parking facilities would result in a local long-term negligible impact on designated species and their habitat.

In Alternative 3, visitation is projected to be approximately 760 visitors on an average summer day. Most visitors would visit the lower portion of the site during daytime hours. Visitation to the area in the vicinity of the headhouse and abandoned mine openings would be limited to day use only. All abandoned mine portals within one mile of the headhouse would be gated and fenced to prevent visitor access and disturbance. Overall, visitor use would have a local long-term negligible impact on designated species and their habitat.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on designated species and their habitat are identified in Section 4.1 above. The cumulative impacts of these actions on designated species and their habitat are described above for Alternative 1. Collectively these other actions have contributed or will contribute long-term moderate adverse impacts on designated species and their habitat. The impact of Alternative 3 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on designated species and their habitat. Alternative 3 would contribute an imperceptible adverse increment to the total cumulative impact.

Conclusion. Cultural resource and natural resource management actions in Alternative 3 would result in local short-term and long-term negligible impacts on designated species and their habitat. Rehabilitation of major town historic road traces would result in a short-term minor adverse impact on designated species and their habitat. Tree thinning along the conveyor length, in the headhouse area, in the Nuttallburg town site and the Seldom Seen site would have a local long-term minor adverse impact on designated species and their habitat. Construction of a new trail connection from the headhouse to the tipple would result in a local short-term minor adverse impact to designated species. Routine maintenance of trails, administrative roads, and rehabilitated historic road traces would result in a local long-term negligible impact on designated species and their habitat. Clearing for parking facilities would result in a local long-term negligible impact on designated species and their habitat. Projected visitor use associated with Alternative 3 would result in a local long-term negligible impact on designated species and their habitat. The collective management actions in Alternative 3 would contribute an imperceptible adverse increment to the overall cumulative long-term moderate adverse impact on designated species and their habitat. There would be no impairment of designated species and their habitat.

- **Alternative 4 – Impacts on Rare, Threatened, or Endangered Species and Their Habitats**

Analysis. As in Alternatives 1, 2, and 3, cultural resource management actions in the vicinity of the habitat of designated species would include long-term stabilization of the tipple, headhouse, and conveyor. These actions would generally include structural repairs, rust removal, and painting. Construction would occur during daytime hours. Staging areas and road access would be limited to areas previously cleared for short-term emergency stabilization actions that are already underway or completed. There would be no removal or trimming of large trees that may be used as roosts by rare bats known to inhabit the area. Collectively the cultural resource management actions would result in local short-term and local long-term negligible impacts on designated species and their habitat.

As in Alternatives 1, 2, and 3, natural resources would continue to be minimally managed except where vegetation growth has the potential to damage historic buildings and structures. New tree growth would be cleared or pruned along the conveyor and around the headhouse, tipple, coke ovens, other mining complex buildings, and the Nuttall Mine portal near the headhouse. These actions would affect young trees that have grown up subsequent to the clearing and pruning that has recently

occurred as part of the short-term emergency stabilization of these structures. It would not involve additional removal or trimming of large trees that may be used as roosts by rare bats known to inhabit the area. Collectively natural resource management actions would result in local short-term and long-term negligible impacts on designated species and their habitat.

Development and maintenance of visitor use facilities that could potentially affect designated species and their habitat include the following:

- As in Alternative 1, existing trails and administrative roads would remain with no improvements other than routine maintenance needed to keep them open for hiking and administrative use, as appropriate. Maintenance would include periodic mowing, tree trimming, and removal of understory growth and invasive plants that encroach into trail and road rights-of-way. These actions would affect young trees that have grown up subsequent to the clearing that has recently occurred as part of the emergency stabilization project. It would not involve additional removal or trimming of large trees that may be used as roosts by rare bats known to inhabit the area.

  Routine maintenance of trails and administrative roads would result in a local long-term negligible impact on designated species and their habitat.

- As in Alternatives 2 and 3, historic traces of major town roads would be cleared of invasive plants and maintained as stabilized trails with a gravel surface reseeded with native grasses. These actions would affect approximately 1.66 acres within these rights-of-way. Maintenance of the road traces would include periodic mowing, tree trimming, and removal of understory growth and invasive plants that encroach into the rights-of-way. Tree removal would have the potential to displace Indiana bats during tree felling operations, but this potential would be low based on the low number of trees likely to exhibit roosting characteristics. To reduce the potential impact all trees within the rights-of-way would be inspected and those found to have cavities with evidence of bat roosting (e.g. guano deposits, etc.) would not be removed or they would be removed during the hibernation period from November 15th through March 31st. Mitigation for tree removal would include installation of bat condos in the vicinity of the conveyor that would provide additional summer roosting habitat. Road trace rehabilitation could also affect bat travel corridors by removing some overstory vegetation and completely removing understory vegetation on the trail bed. To reduce the potential for this to impact bat travel corridors trail beds would be reseeded with native grasses.

  Rehabilitation of major town historic road traces would have a short-term minor adverse impact on designated species and their habitat. Routine maintenance of rehabilitated road traces would have a local long-term negligible impact on designated species and their habitat.

- In Alternative 3, trees would be thinned along the conveyor length to provide views from top to bottom, in the headhouse area to enhance rim to rim views, and in the Nuttallburg town site and the Seldom Seen site to enhance interior views. Tree removal would have the potential to displace Indiana bats To reduce the potential impact all trees within the area to be thinned would be inspected and those found to have cavities with evidence of bat roosting (e.g. guano deposits, etc.) would not be removed or they would be removed during the hibernation period from November 15th through March 31st. Mitigation for tree removal would include installation of bat condos in the vicinity of the conveyor that would provide additional summer roosting habitat.

  Tree thinning along the conveyor length, in the headhouse area, in the Nuttallburg town site and the Seldom Seen site would have a local long-term minor adverse impact on designated species and their habitat.

- As in Alternative 3 a new trail connection would be established from the headhouse to the tipple requiring clearing 0.69 acre of young trees, understory plants, and invasive plants within the trail right-of-way. Tree removal would have the potential to displace Indiana bats during tree felling operations, but this potential would be low based on the low number of trees likely to exhibit roosting characteristics. To reduce the potential impact all trees within the new trail right-of-way would be inspected and those found to have cavities with evidence of bat roosting (e.g. guano deposits, etc.) would not be removed or they would be removed during the hibernation period from November 15th through March 31st. Mitigation for tree removal would include installation of bat condos in the vicinity of the conveyor that would provide additional summer roosting habitat.

  Construction of a new trail from the headhouse to the tipple would have a short-term minor adverse impact on designated species and their habitat. Routine maintenance of rehabilitated road traces would have a local long-term negligible impact on designated species and their habitat.

- In Alternative 4, construction of four new visitor parking facilities would involve clearing and grading of approximately 1.86 acres. Young secondary forest that characterizes the sites would be removed. Following construction approximately 1.65 acres would be committed to gravel-surface parking and approximately 0.19 acre in perimeter areas would be seeded with native grasses. None of the parking facilities would be located within 2000 feet of the six abandoned mine portals in the site vicinity.

  Clearing for parking facilities would result in a local long-term negligible impact on designated species and their habitat.

In Alternative 4, visitation is projected to be approximately 915 visitors on an average summer day. Most visitors would visit the lower portion of the site during daytime hours. Visitation to the area in the vicinity of the headhouse and abandoned mine openings would be limited to day use only. All abandoned mine portals within one mile of the headhouse would be gated and fenced to prevent visitor access and disturbance. Overall, visitor use would have a local long-term negligible impact on designated species and their habitat.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on designated species and their habitat are identified in Section 4.1 above. The cumulative impacts of these actions on designated species and their habitat are described above for Alternative 1. Collectively these other actions have contributed or will contribute long-term moderate adverse impacts on designated species and their habitat. The impact of Alternative 4 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on designated species and their habitat. Alternative 4 would contribute an imperceptible adverse increment to the total cumulative impact.

Conclusion. Cultural resource and natural resource management actions in Alternative 4 would result in local short-term and long-term negligible impacts on designated species and their habitat. Rehabilitation of major town historic road traces would result in a short-term minor adverse impact on designated species and their habitat. Tree thinning along the conveyor length, in the headhouse area, in the Nuttallburg town site and the Seldom Seen site would have a local long-term minor adverse impact on designated species and their habitat. Construction of a new trail connection from the headhouse to the tipple would result in a local short-term minor adverse impact to designated species. Routine maintenance of trails, administrative roads, and rehabilitated historic road traces would result in a local long-term negligible impact on designated species and their habitat. Clearing for parking facilities would result in a local long-term negligible impact on designated species and their habitat. Projected visitor use associated with Alternative 4 would result in a local long-term negligible impact on designated species and their habitat. The collective management actions in Alternative 4 would contribute an imperceptible adverse increment to the overall cumulative long-term moderate adverse

impact on designated species and their habitat. There would be no impairment of designated species and their habitat.

- **Comparison of Impacts of the Alternatives – Rare, Threatened, or Endangered Species and Their Habitats**

Cultural resource and natural resource management actions in Alternatives 1, 2, 3, and 4 would result in local short-term and long-term negligible impacts on designated species and their habitat. Routine maintenance of trails and administrative roads in Alternative 1, 2, 3, and 4 would result in a local long-term negligible impact on designated species and their habitat. Rehabilitation and subsequent routine maintenance of major town historic road traces in Alternatives 2, 3, and 4, would result in a local short-term minor adverse impact and a local long-term negligible impact, respectively, on designated species and their habitat. Tree thinning along rehabilitated road traces and the conveyor in Alternatives 3 and 4 would result in a local long-term minor adverse impact on designated species and their habitat. Construction of a new trail connection from the headhouse to the tipple in Alternatives 3 and 4 would result in a local short-term minor adverse impact to designated species. Clearing for parking facilities in Alternatives 2, 3, and 4 would result in a local long-term negligible impact on designated species and their habitat. Projected visitor use associated with Alternatives 1, 2, 3, and 4 would result in a local long-term negligible impact on designated species and their habitat.

Alternative 1 would contribute an imperceptible increment to the total cumulative moderate adverse impact on designated species and their habitat. Alternatives 1, 2, 3, and 4 would contribute an imperceptible adverse increment to the total cumulative moderate adverse impact on designated species and their habitat. None of the alternatives would result in an impairment of park resources or values related to designated species and their habitat.

4.5 Cultural Landscapes

- **Applicable Regulations and Guidelines**

Regulations and guidelines related to cultural landscapes include the following:

- Advisory Council on Historic Preservation implementing regulations regarding the "Protection of Historic Properties" (36 CFR 800)
- Antiquities Act of 1906
- National Historic Preservation Act of 1966, as amended
- Executive Order 11593 – Protection and Enhancement of Cultural Environment
- Director's Order #28 – Cultural Resources Management Guidelines
- NPS 2006 Management Policies

- **Methodology and Assumptions**

In accordance with the Advisory Council on Historic Preservation's regulations implementing Section 106 of the National Historic Preservation Act (36 CFR Part 800, *Protection of Historic Properties*), effects to cultural resources are identified and evaluated by (1) determining the area of potential effects; (2) identifying cultural resources present in the area of potential effects that are either listed in or eligible to be listed in the National Register of Historic Places; (3) applying the criteria of adverse effect to affected National Register-eligible or listed cultural resources; and (4) considering ways to avoid, minimize, or mitigate adverse effects.

Under the Advisory Council's regulations a determination of either *adverse effect* or *no adverse effect* must also be made for affected National Register-eligible or listed cultural resources. An *adverse effect* occurs whenever an impact alters, directly or indirectly, any characteristic of a cultural resource

that qualifies it for inclusion in the National Register, e.g. diminishing the integrity (or the extent which a resource retains its historic appearance) of its location, design, setting, materials, workmanship, feeling, or association. Adverse effects also include reasonably foreseeable effects caused by the alternatives that would occur later in time, be farther removed in distance, or be cumulative (36 CFR 800.5, *Assessment of Adverse Effects*). A determination of *no adverse effect* means there is an effect, but the effect would not diminish the characteristics of the cultural resource that qualify it for inclusion in the National Register.

Definitions of Impact Intensity Levels

Negligible: Impact(s) is at the lowest levels of detection with neither adverse nor beneficial consequences. The determination of effect for Section 106 would be *no adverse effect.*

Minor: **Adverse Impact** – Alteration of a pattern(s) or feature(s) of the landscape would not diminish the overall integrity of the landscape. The determination of effect for Section 106 would be *no adverse effect*.

Beneficial Impact – Preservation of a landscape pattern(s) and feature(s) in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes.* The determination of effect for Section 106 would be *no adverse effect.*

Moderate: **Adverse Impact** – Alteration of a pattern(s) of feature(s) of the landscape would diminish the overall integrity of the character-defining pattern(s) or feature(s) of the cultural landscape but would not diminish the integrity of the landscape to the extent that its National Register eligibility is jeopardized. The determination of effect for Section 106 would be *adverse effect*. A memorandum of agreement is executed among the NPS and applicable state or tribal historic preserver officer and, if necessary, the Advisory Council on Historic Preservation in accordance with 36 CFR 800.6(b). Measures identified in the MOA to minimize or mitigate adverse impacts reduce the intensity of impact under NEPA from major to moderate.

Beneficial Impact – Rehabilitation of a landscape or its pattern(s) and feature(s) in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*. The determination of effect under Section 106 would be *no adverse effect*.

Major: **Adverse Impact** – Alteration of a pattern(s) or feature(s) of the landscape would diminish the overall integrity of the landscape to the extent that it is no longer eligible to be listed on the National Register. The determination of effect for Section 106 would be *adverse effect*. Measures to minimize or mitigate adverse impacts cannot be agreed upon and the NPS and applicable state or tribal historic preservation officer and/or Advisory Council are unable to negotiate and execute a memorandum of agreement in accordance with 36 CFR 800.6(b).

Beneficial Impact - Restoration of a landscape or its pattern(s) or feature(s) in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes.* The determination of effect for Section 106 would be *no adverse effect.*

- **Alternative 1 (Continuation of Existing Management) – Impacts on Cultural Landscapes**

Analysis. In Alternative 1, cultural resource management actions would be implemented to preserve some aspects of the landscape pattern and features of the site that convey its significance as a 20th century mining complex and town. This would include long-term stabilization of the tipple, conveyor, and headhouse. Following stabilization structures would be monitored to identify other potential risks of collapse that could jeopardize their integrity. As needed, other minor actions would be taken to protect foundations and other remains and artifacts at the town site. Collectively these cultural resource management actions would result in a local long-term minor beneficial impact on cultural landscape resources.

Natural resources would continue to be minimally managed except where vegetation growth has the potential to damage cultural landscape features. The town site would generally be kept open as would areas around mining complex buildings and along the conveyor. Invasive plants – particularly kudzu, Japanese knotweed, and multiflora rose – would be controlled through cutting, mowing, and selective application of Herbicides. This would reveal the community's historic layout and help to maintain the integrity of the remaining landscape structural features, including cut stone building foundations, stone retaining walls, fire hydrants, well covers, railroad markers, rail lines, and abandoned mining cars. Collectively these natural resource management actions would have a local long-term minor beneficial impact on cultural landscape resources.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on cultural landscape resources are identified in Section 4.1 above. These generally include growth and development on private property and public development and transportation system improvements. No local public policies or regulations are in place to protect cultural landscapes on private land during the land development process. As a result past development on private land within the park boundary has occurred without consideration of cultural landscapes, resulting in adverse impacts. This could change on a site-specific basis in the future where the NPS is able to successfully cooperate with owners of remaining private land within the park boundary whose properties include significant cultural landscapes. Public development and transportation system projects with federal funding are required to mitigate potential adverse effects to cultural landscapes in accordance with Section 106 of the NHPA. These other actions have contributed or will contribute long-term moderate adverse impacts on cultural landscape resources. The impact of Alternative 1 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on cultural landscape resources. Alternative 1 would contribute an imperceptible beneficial increment to the total cumulative impact.

Section 106 Summary. The Section 106 determination of effect would be no adverse effect to cultural landscapes.

Conclusion. Cultural and natural resource management actions in Alternative 1 would have local long-term minor beneficial impacts on cultural landscape resources. The collective management actions in Alternative 1 would contribute an imperceptible beneficial increment to the overall cumulative long-term moderate adverse impact on cultural landscape resources. There would be no impairment of cultural landscape resources in the park.

- **Alternative 2 (Preferred Alternative) – Impacts on Cultural Landscapes**

Analysis. As in Alternative 1, cultural resource management actions would be implemented to preserve some aspects of the remaining landscape pattern and features of the site necessary to convey its significance as a 20th century mining complex and town. In addition actions would be taken to rehabilitate one or two coke ovens, to rehabilitate and maintain traces of major town roads as trails and to rehabilitate foundation masonry for a limited number of structures associated with community

life at the town of Nuttallburg. Collectively these cultural resource management actions would result in a local long-term minor beneficial impact on cultural landscape resources.

As in Alternative 1, natural resources would continue to be minimally managed except where vegetation growth has the potential to damage cultural landscape features. Collectively natural resource management actions would have a local long-term minor beneficial impact on cultural landscape resources.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on cultural landscape resources are identified in Section 4.1 above. The cumulative impacts of these actions on cultural landscapes are described above for Alternative 1. Collectively these other actions have contributed or will contribute long-term moderate adverse impacts on cultural landscape resources. The impact of Alternative 2 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on cultural landscape resources. Alternative 2 would contribute an imperceptible beneficial increment to the total cumulative impact.

Section 106 Summary. The Section 106 determination of effect would be no adverse effect to cultural landscapes.

Conclusion. Cultural and natural resource management actions in Alternative 2 would have local long-term minor beneficial impacts on cultural landscape resources. The collective management actions in Alternative 2 would contribute an imperceptible beneficial increment to the overall cumulative long-term moderate adverse impact on cultural landscape resources. There would be no impairment of cultural landscape resources in the park.

- **Alternative 3 – Impacts on Cultural Landscapes**

Analysis. As in Alternatives 1 and 2, cultural resource management actions would be implemented to preserve many aspects of the remaining landscape pattern and features of the site necessary to convey its significance as a 20th century mining complex and town. In addition actions would be taken as in Alternative 2 to rehabilitate and maintain traces of major town roads as trails, to rehabilitate foundation masonry for a limited number of structures associated with the community life at the town of Nuttallburg, and to protect foundations and other remains and artifacts at the town site. In Alternative 3 rehabilitation of the coke ovens would be expanded to include a bank of 10 coke ovens. Collectively these cultural resource management actions would result in a local long-term minor beneficial impact on cultural landscapes.

As in Alternatives 1 and 2 natural resources would continue to be minimally managed except where vegetation growth has the potential to damage cultural landscape resources. In addition trees along road traces in the town and along the conveyor length would be thinned. Collectively these natural resource management actions would have a local long-term minor beneficial impact on cultural landscape resources.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on cultural landscape resources are identified in Section 4.1 above. The cumulative impacts of these actions on cultural landscapes are described above for Alternative 1. Collectively these other actions have contributed or will contribute long-term moderate adverse impacts on cultural landscape resources. The impact of Alternative 3 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on cultural landscape resources. Alternative 3 would contribute an imperceptible beneficial increment to the total cumulative impact.

Section 106 Summary. The Section 106 determination of effect would be no adverse effect to cultural landscapes.

Conclusion. Cultural and natural resource management actions in Alternative 3 would have local long-term minor beneficial impacts on cultural landscape resources. The collective management actions in Alternative 3 would contribute an imperceptible beneficial increment to the overall cumulative long-term moderate adverse impact on cultural landscape resources. There would be no impairment of cultural landscape resources in the park.

- **Alternative 4 – Impacts on Cultural Landscapes**

Analysis. As in Alternatives 1, 2, and 3, cultural resource management actions would be implemented to preserve many aspects of the remaining landscape pattern and features of the site necessary to convey its significance as a 20th century mining complex and town. In addition actions would be taken as in Alternative 2 to rehabilitate and maintain traces of major town roads as trails, to rehabilitate foundation masonry for a limited number of structures associated with the community life at the town of Nuttallburg, and to protect foundations and other remains and artifacts at the town site. As in Alternative 3 rehabilitation of the coke ovens would be expanded to include a bank of 10 coke ovens. Collectively these cultural resource management actions would result in a local long-term minor beneficial impact on cultural landscapes.

As in Alternative 1, 2, and 3 natural resources would continue to be minimally managed except where vegetation growth has the potential to damage cultural landscape resources. As in Alternative 3, in addition trees along road traces in the town and along the conveyor length would be thinned. Collectively these natural resource management actions would have a local long-term minor beneficial impact on cultural landscape resources.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on cultural landscape resources are identified in Section 4.1 above. The cumulative impacts of these actions on cultural landscapes are described above for Alternative 1. Collectively these other actions have contributed or will contribute long-term moderate adverse impacts on cultural landscape resources. The impact of Alternative 4 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on cultural landscape resources. Alternative 4 would contribute an imperceptible beneficial increment to the total cumulative impact.

Section 106 Summary. The Section 106 determination of effect would be no adverse effect to cultural landscapes.

Conclusion. Cultural and natural resource management actions in Alternative 4 would have local long-term minor beneficial impacts on cultural landscape resources. The collective management actions in Alternative 4 would contribute an imperceptible beneficial increment to the overall cumulative long-term moderate adverse impact on cultural landscape resources. There would be no impairment of cultural landscape resources in the park.

- **Comparison of Impacts of the Alternatives – Cultural Landscapes**

Cultural and natural resource management actions in Alternatives 1, 2, 3, and 4 would each result in a local long-term minor beneficial impact on cultural landscape resources. Each alternative would contribute an imperceptible beneficial increment to the total cumulative moderate adverse impact on cultural landscape resources. None of the alternatives would result in an impairment of park resources or values related to cultural landscape resources.

4.6 Historic Buildings and Structures

▪ Applicable Regulations and Guidelines

Regulations and guidelines related to historic buildings and structures include the following:

- Advisory Council on Historic Preservation implementing regulations regarding the "Protection of Historic Properties" (36 CFR 800)
- Antiquities Act of 1906
- Historic Sites, Buildings, and Antiquities Act of 1935, as amended
- National Historic Preservation Act of 1966, as amended
- Secretary of the Interior's Standards for Treatment of Historic Properties (1966)
- Executive Order 11593 – Protection and Enhancement of Cultural Environment
- Director's Order #28 – Cultural Resources Management Guidelines
- NPS 2006 Management Policies

▪ Methodology and Assumptions

In accordance with the Advisory Council on Historic Preservation's regulations implementing Section 106 of the National Historic Preservation Act (36 CFR Part 800, *Protection of Historic Properties*), effects to cultural resources are identified and evaluated by (1) determining the area of potential effects; (2) identifying cultural resources present in the area of potential effects that are either listed in or eligible to be listed in the National Register of Historic Places; (3) applying the criteria of adverse effect to affected National Register-eligible or listed cultural resources; and (4) considering ways to avoid, minimize, or mitigate adverse effects.

Under the Advisory Council's regulations a determination of either *adverse effect* or *no adverse effect* must also be made for affected National Register-eligible or listed cultural resources. An *adverse effect* occurs whenever an impact alters, directly or indirectly, any characteristic of a cultural resource that qualifies it for inclusion in the National Register, e.g. diminishing the integrity (or the extent which a resource retains its historic appearance) of its location, design, setting, materials, workmanship, feeling, or association. Adverse effects also include reasonably foreseeable effects caused by the alternatives that would occur later in time, be farther removed in distance, or be cumulative (36 CFR 800.5, *Assessment of Adverse Effects*). A determination of *no adverse effect* means there is an effect, but the effect would not diminish the characteristics of the cultural resource that qualify it for inclusion in the National Register.

Definitions of Impact Intensity Levels

Negligible: Impact is at the lowest levels of detection with neither adverse nor beneficial consequences. The determination of effect for Section 106 would be *no adverse effect.*

Minor: **Adverse Impact** – Alteration of a feature(s) would not diminish the overall integrity of the structure or building. The determination of effect for Section 106 would be *no adverse effect*.

Beneficial Impact – Stabilization/preservation of character-defining feature(s) in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Historic Properties.* The determination of effect for Section 106 would be *no adverse effect.*

Moderate: **Adverse Impact** – Alteration of a character defining feature(s) of the structure or building would not diminish the integrity of the resource to the extent that its National Register eligibility is jeopardized. The determination of effect for Section 106 would be *adverse effect*. A memorandum of agreement is executed among the National Park Service and applicable state or tribal historic preserver officer and, if necessary, the Advisory Council on Historic Preservation in accordance with 36 CFR 800.6(b). Measures identified in the MOA to minimize or mitigate adverse impacts reduce the intensity of impact under NEPA from major to moderate.

Beneficial Impact – Rehabilitation of a structure or building in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. The determination of effect under Section 106 would be *no adverse effect*.

Major: **Adverse Impact** – Alteration of a character-defining feature(s) of the structure or building that diminishes the integrity of the resource to the extent that it is no longer eligible to be listed on the National Register. The determination of effect for Section 106 would be *adverse effect*. Measures to minimize or mitigate adverse impacts cannot be agreed upon and the NPS and applicable state or tribal historic preservation officer and/or Advisory Council are unable to negotiate and execute a memorandum of agreement in accordance with 36 CFR 800.6(b).

Beneficial Impact – Restoration of a structure or building in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties.*

- **Alternative 1 Continuation of Existing Management) – Impacts on Historic Buildings and Structures**

Analysis. In Alternative 1, cultural resource management actions would be implemented for long-term stabilization of the tipple, headhouse, and conveyor. Following stabilization structures would be monitored to identify other potential risks of collapse that could jeopardize their integrity. As needed, other minor actions would be taken to protect foundations and other remains and artifacts at the town site. Collectively these cultural resource management actions would result in a local long-term minor beneficial impact on historic buildings and structures.

Natural resources would continue to be minimally managed except where vegetation growth has the potential to damage historic buildings and structures. The town site would generally be kept open as would areas around mining complex buildings and along the conveyor. Invasive plants – particularly kudzu, Japanese knotweed, and multiflora rose – would be controlled through cutting, mowing, and selective application of herbicides. New tree growth would be cleared or pruned along the conveyor and around the headhouse, tipple, coke ovens, other mining complex buildings, and the Nuttall Mine portal near the headhouse. Collectively these natural resource management actions would have a local long-term minor beneficial impact on historic buildings and structures.

While visitors would not be encouraged to visit the site, there could be some increase in visitation when compared to recent years due to recently completed trail improvements in the Nuttallburg area. Because NPS would continue to remove invasive plants from historic areas, the few visitors who discover the site would have a greater opportunity to climb into or on historic buildings and structures thereby exposing historic resources to potential visitor impacts. Overall, visitor use would have a local long-term negligible impact on historic buildings and structures.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on historic buildings and structures are identified in Section 4.1 above. These generally include growth and development on private property and public development and transportation system improvements. No local public policies or regulations are in place to protect historic structures on private land during the land development process. Public development and

transportation system projects with federal funding are required to mitigate potential adverse effects to historic structures in accordance with Section 106 of the NHPA. These other actions have contributed or will contribute long-term moderate adverse impacts on historic buildings and structures. The impact of Alternative 1 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on historic buildings and structures. Alternative 1 would contribute an imperceptible beneficial increment to the total cumulative impact.

Section 106 Summary. The Section 106 determination of effect would be no adverse effect to historic buildings and structures.

Conclusion. Cultural and natural resource management actions in Alternative 1 would have local long-term minor beneficial impacts on historic buildings and structures. Projected visitor use associated with Alternative 1 would have a local long-term negligible impact on historic buildings and structures. The collective management actions in Alternative 1 would contribute an imperceptible beneficial increment to the overall cumulative long-term moderate adverse impact on historic buildings and structures. There would be no impairment of historic buildings and structures in the park.

- **Alternative 2 (Preferred Alternative) – Impacts on Historic Buildings and Structures**

Analysis. As in Alternative 1, cultural resource management actions would include long-term stabilization of the tipple, conveyor, and headhouse, as well as minor actions to protect foundations at the town site. In addition actions would be taken to rehabilitate one or two coke ovens and to rehabilitate foundation masonry for a limited number of structures associated with community life at the town of Nuttallburg. Collectively these cultural resource management actions would result in a local long-term minor beneficial impact on historic buildings and structures.

As in Alternative 1, natural resources would continue to be minimally managed except where vegetation growth has the potential to damage historic buildings and structures. In addition, in Alternative 2 a few small bat condos would be installed in the conveyor and headhouse structures; these would be designed and installed to avoid adverse impacts to historic buildings and structures. Collectively natural resource management actions would have a local long-term minor beneficial impact on historic buildings and structures.

Visitation is projected to increase to approximately 460 visitors on an average summer day as a result of the addition of visitor use facilities and interpretive media at the site. People would be encouraged to visit the site. Because NPS would continue to remove invasive plants from historic areas, visitors would have a greater opportunity to climb into or on historic buildings and structures thereby exposing historic resources to potential visitor impacts. Overall, visitor use would have a local long-term minor adverse impact on historic buildings and structures.

Four new parking areas would provide parking for visitors, one of which would include 5 spaces located within and adjacent to the right-of-way of the historic Keeney Creek Branch Line. Construction would require minimal surface grading and placement of crushed stone. This would have a local, long-term minor adverse impact on the historic structure.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on historic buildings and structures are identified in Section 4.1 above. The cumulative impacts of these actions on historic buildings and structures are described above for Alternative 1. Collectively these other actions have contributed or will contribute long-term moderate adverse impacts on historic buildings and structures. The impact of Alternative 2 in conjunction with the impacts of these actions would result in a cumulative long-term minor adverse impact on historic buildings and structures. Alternative 2 would contribute an imperceptible beneficial increment to the total cumulative impact.

Section 106 Summary. The Section 106 determination of effect would be no adverse effect to historic buildings and structures.

Conclusion. Cultural and natural resource management actions in Alternative 2 would have local long-term minor beneficial impacts on historic buildings and structures. Projected visitor use associated with Alternative 2 would have a local long-term negligible impact on historic buildings and structures. Development of new visitor use facilities associated with Alternative 2 would have a long-term minor adverse impact on historic buildings and structures. The collective management actions in Alternative 2 would contribute an imperceptible beneficial increment to the overall cumulative long-term moderate adverse impact on historic buildings and structures. There would be no impairment of historic buildings and structures in the park.

- **Alternative 3 – Impacts on Historic Buildings and Structures**

Analysis. As in Alternatives 1 and 2, cultural resource management actions would include long-term stabilization of the tipple, conveyor, and headhouse, as well as minor actions to protect foundations at the town site. In addition actions would be taken as in Alternative 2 to rehabilitate foundation masonry for a limited number of structures associated with the community life at the town of Nuttallburg and to protect foundations and other remains and artifacts at the town site. In Alternative 3 rehabilitation of the coke ovens would be expanded to include a bank of 10 coke ovens. Collectively these cultural resource management actions would result in a local long-term minor beneficial impact on historic buildings and structures.

As in Alternatives 1 and 2 natural resources would continue to be minimally managed except where vegetation growth has the potential to damage historic buildings and structures. As in Alternative 2, a few small bat condos would be installed in the conveyor and headhouse structures; these would be designed and installed to avoid adverse impacts to historic buildings and structures. In addition trees along road traces in the town and along the conveyor length would be thinned. Collectively these natural resource management actions would have a local long-term minor beneficial impact on historic buildings and structures.

Visitation is projected to increase to approximately 760 visitors on an average summer day as a result of the addition of visitor use facilities and interpretive media at the site. People would be encouraged to visit the site. Because NPS would continue to remove invasive plants from historic areas, visitors would have a greater opportunity to climb into or on historic buildings and structures thereby exposing historic resources to potential visitor impacts. Overall, visitor use would have a local long-term minor adverse impact on historic buildings and structures.

Four new parking areas would provide parking for visitors, one of which would include 5 spaces located within and adjacent to the right-of-way of the historic Keeney Creek Branch Line (as in Alternative 2). Construction would require minimal surface grading and placement of crushed stone. This would result in a local, long-term minor adverse impact on the historic structure.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on historic buildings and structures are identified in Section 4.1 above. The cumulative impacts of these actions on historic buildings and structures are described above for Alternative 1. Collectively these other actions have contributed or will contribute long-term moderate adverse impacts on historic buildings and structures. The impact of Alternative 3 in conjunction with the impacts of these actions would result in a cumulative long-term minor adverse impact on historic buildings and structures. Alternative 3 would contribute an imperceptible beneficial increment to the total cumulative impact.

Section 106 Summary. The Section 106 determination of effect would be no adverse effect to historic buildings and structures.

Conclusion. Cultural and natural resource management actions in Alternative 3 would have local long-term minor beneficial impacts on historic buildings and structures. Projected visitor use associated with Alternative 3 would have a local long-term minor adverse impact on historic buildings and structures. Development of new visitor use facilities associated with Alternative 3 would have a long-term minor adverse impact on historic buildings and structures. The collective management actions in Alternative 3 would contribute an imperceptible beneficial increment to the overall cumulative long-term moderate adverse impact on historic buildings and structures. There would be no impairment of historic buildings and structures in the park.

- **Alternative 4 – Impacts on Historic Buildings and Structures**

Analysis. As in Alternatives 1, 2, and 3, cultural resource management actions would include long-term stabilization of the tipple, conveyor, and headhouse, as well as minor actions to protect foundations at the town site. In addition actions would be taken as in Alternative 2 to rehabilitate foundation masonry for a limited number of structures associated with the community life at the town of Nuttallburg and to protect foundations and other remains and artifacts at the town site. As in Alternative 3 rehabilitation of the coke ovens would be expanded to include a bank of 10 coke ovens. Collectively these cultural resource management actions would result in a local long-term minor beneficial impact on historic buildings and structures.

As in Alternatives 1, 2, and 3 natural resources would continue to be minimally managed except where vegetation growth has the potential to damage historic buildings and structures. As in Alternatives 2 and 3, a few small bat condos would be installed in the conveyor and headhouse structures; these would be designed and installed to avoid adverse impacts to historic buildings and structures. As in Alternative 3, trees along road traces in the town and along the conveyor length would be thinned. Collectively these natural resource management actions would have a local long-term minor beneficial impact on historic buildings and structures.

Visitation is projected to increase to approximately 920 visitors on an average summer day as a result of the addition of visitor use facilities and interpretive media at the site. People would be encouraged to visit the site. Because NPS would continue to remove invasive plants from historic areas, visitors would have a greater opportunity to climb into or on historic buildings and structures thereby exposing historic resources to potential visitor impacts. Overall, visitor use would have a local long-term minor adverse impact on historic buildings and structures.

Four new parking areas would provide parking for visitors (as in Alternative 2), one of which would include 5 spaces located within and adjacent to the right-of-way of the historic Keeney Creek Branch Line (as in Alternatives 2 and 3). Construction would require minimal surface grading and placement of crushed stone. This would result in a local, long-term minor adverse impact on the historic structure.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on historic buildings and structures are identified in Section 4.1 above. The cumulative impacts of these actions on historic buildings and structures are described above for Alternative 1. Collectively these other actions have contributed or will contribute long-term moderate adverse impacts on historic buildings and structures. The impact of Alternative 4 in conjunction with the impacts of these actions would result in a cumulative long-term minor adverse impact on historic buildings and structures. Alternative 4 would contribute an imperceptible beneficial increment to the total cumulative impact.

Section 106 Summary. The Section 106 determination of effect would be no adverse effect to historic buildings and structures.

Conclusion. Cultural and natural resource management actions in Alternative 4 would have local long-term minor beneficial impacts on historic buildings and structures. Projected visitor use

associated with Alternative 4 would have a local long-term minor adverse impact on historic buildings and structures. Development of new visitor use facilities associated with Alternative 4 would have a long-term minor adverse impact on historic buildings and structures. The collective management actions in Alternative 4 would contribute an imperceptible beneficial increment to the overall cumulative long-term moderate adverse impact on historic buildings and structures. There would be no impairment of historic buildings and structures in the park.

- **Comparison of Impacts of the Alternatives – Historic Buildings and Structures**

Cultural and natural resource management actions in Alternatives 1, 2, 3, and 4 would each result in a local long-term minor beneficial impact on historic buildings and structures. Visitor use in Alternatives 1 and 2 would have a negligible impact on historic buildings and structures, while increased visitor use in Alternatives 3 and 4 would have a local long-term minor adverse impact on historic buildings and structures. Development of new visitor use facilities associated with Alternatives 2, 3, and 4 would have a long-term minor adverse impact on historic buildings and structures.

Each alternative would contribute an imperceptible beneficial increment to the total cumulative moderate adverse impact on historic buildings and structures. None of the alternatives would result in an impairment of park resources or values related to historic buildings and structures.

4.7 Archeological Resources

- **Applicable Regulations and Guidelines**

Regulations and guidelines related to archeological resources include the following:

- 36 CFR 79 – Curation of Federally-Owned and Administered Archaeological Collections
- Advisory Council on Historic Preservation implementing regulations regarding the "Protection of Historic Properties" (36 CFR Part 800)
- Archaeological Resources Protection Act of 1979, as amended
- National Historic Preservation Act of 1966, as amended
- Native American Graves Protection and Repatriation Act of 1990
- Secretary of the Interior's Standards for Treatment of Historic Properties (1966)
- Executive Order 11593 – Protection and Enhancement of Cultural Environment
- Executive Order 13007 – American Indian Sacred Sites
- Director's Order #28 – Cultural Resources Management Guidelines
- NPS 2006 Management Policies

- **Methodology and Assumptions**

In accordance with the Advisory Council on Historic Preservation's regulations implementing Section 106 of the National Historic Preservation Act (36 CFR Part 800, *Protection of Historic Properties*), effects to cultural resources are identified and evaluated by (1) determining the area of potential effects; (2) identifying cultural resources present in the area of potential effects that are either listed in or eligible to be listed in the National Register of Historic Places; (3) applying the criteria of adverse effect to affected National Register-eligible or listed cultural resources; and (4) considering ways to avoid, minimize, or mitigate adverse effects.

Under the Advisory Council's regulations a determination of either *adverse effect* or *no adverse effect* must also be made for affected National Register-eligible or listed cultural resources. An *adverse effect* occurs whenever an impact alters, directly or indirectly, any characteristic of a cultural resource

that qualifies it for inclusion in the National Register, e.g. diminishing the integrity (or the extent which a resource retains its historic appearance) of its location, design, setting, materials, workmanship, feeling, or association. Adverse effects also include reasonably foreseeable effects caused by the alternatives that would occur later in time, be farther removed in distance, or be cumulative (36 CFR 800.5, *Assessment of Adverse Effects*). A determination of *no adverse effect* means there is an effect, but the effect would not diminish the characteristics of the cultural resource that qualify it for inclusion in the National Register.

Definitions of Impact Intensity Levels

Negligible: Impact is at the lowest levels of detection with neither adverse nor beneficial consequences. The determination of effect for Section 106 would be *no adverse effect.*

Minor: **Adverse Impact** – Disturbance of a site(s) results in little, if any, loss of integrity. The determination of effect for Section 106 would be *no adverse effect*.

Beneficial Impact – Maintenance and preservation of a site(s). The determination of effect for Section 106 would be *no adverse effect.*

Moderate: **Adverse Impact** – Disturbance of a site(s) does not diminish the integrity of the site(s) to the extent that its National Register eligibility is jeopardized. The determination of effect for Section 106 would be *adverse effect*. A memorandum of agreement is executed among the NPS and applicable state or tribal historic preserver officer and, if necessary, the Advisory Council on Historic Preservation in accordance with 36 CFR 800.6(b). Measures identified in the MOA to minimize or mitigate adverse impacts reduce the intensity of impact under NEPA from major to moderate.

Beneficial Impact – Stabilization of a site(s). The determination of effect for Section 106 would be no adverse effect.

Major: **Adverse Impact** – Disturbance of a site(s) diminishes the integrity of the site(s) to the extent that it is no longer eligible for listing on the National Register. The determination of effect for Section 106 would be *adverse effect*. Measures to minimize or mitigate adverse impacts cannot be agreed upon and the NPS and applicable state or tribal historic preservation officer and/or Advisory Council are unable to negotiate and execute a memorandum of agreement in accordance with 36 CFR 800.6(b).

Beneficial Impact - Active intervention to preserve a site(s). The determination of effect would be *no adverse effect.*

- **Alternative 1 (Continuation of Existing Management) – Impacts on Archeological Resources**

Analysis. In Alternative 1, cultural resource management actions to protect foundations and other remains and artifacts at the mining complex and town site would have the potential to impact archeological resources. These actions would be preceded by an archeological survey to identify and avoid any archeological resources. Where resources could not be avoided, there could be negligible to moderate adverse impacts. If any unknown significant resources are uncovered during ground-disturbing activities, procedures to implement Section 106 of the National Historic Preservation Act (NHPA) would be instituted.

Natural resource management actions would include removal of invasive plants and new tree growth along the conveyor and around the headhouse, tipple, coke ovens, other mining complex buildings, and the Nuttall Mine portal near the headhouse. These actions would control the growth of large trees that could otherwise damage intact archeological resources likely to be present in these areas. They

would be implemented to avoid ground surface disturbance. Other management actions at the site would include revegetation of the ground surface with native plant species, protecting surface soils from erosion and underlying potential archeological resources from exposure. Collectively these natural resource management actions would result in a local long-term minor beneficial impact on archeological resources.

While visitors would not be encouraged to visit the site, there could be some increase in visitation when compared to recent years due to recently completed trail improvements in the Nuttallburg area. Because NPS would continue to remove invasive plants from historic areas, the few visitors who discover the site would have a greater opportunity to explore the site exposing the ground surface to compaction and trampling through off-trail visitor use. The lack of interpretation of archeological resources at the site would also contribute to the public's lack of awareness, appreciation, and spirit of stewardship of archeological resources. Overall, visitor use would have a local long-term negligible impact on archeological resources.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on archeological resources are identified in Section 4.1 above. These generally include development on private property, public development projects, and transportation system improvements. No local public policies or regulations are in place to protect archeological resources on private land during the land development process. Public development and transportation system projects with federal funding are required to mitigate potential adverse effects to archeological resources in accordance with Section 106 of the NHPA. These other actions have contributed or will contribute long-term moderate adverse impacts on archeological resources. The impact of Alternative 1 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on archeological resources. Alternative 1 would contribute an imperceptible beneficial increment to the total cumulative impact.

Section 106 Summary. The Section 106 determination of effect would be no adverse effect to archeological resources.

Conclusion. Cultural resource management actions in Alternative 1 would have local long-term negligible to moderate adverse impacts on archeological resources. Natural resource management actions in Alternative 1 would have a long-term minor beneficial impact on archeological resources. Projected visitor use associated with Alternative 1 would have a local long-term negligible impact on archeological resources. The collective management actions in Alternative 1 would contribute an imperceptible beneficial increment to the overall cumulative long-term moderate adverse impact on archeological resources. There would be no impairment of archeological resources in the park.

- **Alternative 2 (Preferred Alternative) – Impacts on Archeological Resources**

Analysis. As in Alternative 1, cultural resource management actions to protect foundations and other remains and artifacts at the mining complex and town site would have the potential to impact archeological resources. In addition actions would be taken to rehabilitate one or two coke ovens, to rehabilitate and maintain traces of major town roads as trails, and to rehabilitate foundation masonry for a limited number of structures associated with community life at the town of Nuttallburg. These actions would be preceded by an archeological survey to identify and avoid any archeological resources. Where resources could not be avoided, there could be negligible to moderate adverse impacts. If any unknown significant resources are uncovered during ground-disturbing activities, procedures to implement Section 106 of the National Historic Preservation Act (NHPA) would be instituted.

As in Alternative 1, natural resource management actions would include removal of invasive plants and new tree growth along the conveyor and around the headhouse, tipple, coke ovens, other mining complex buildings, and the Nuttall Mine portal near the headhouse. Collectively these natural

resource management actions would result in a local long-term minor beneficial impact on archeological resources.

Visitation is projected to increase to approximately 460 visitors on an average summer day as a result of the addition of visitor use facilities and interpretive media at the site. Because NPS would continue to remove invasive plants from historic areas, the few visitors who discover the site would have a greater opportunity to explore the site exposing the ground surface to compaction and trampling through off-trail visitor use. The lack of interpretation of archeological resources at the site would also contribute to the public's lack of awareness, appreciation, and spirit of stewardship of archeological resources. Overall, visitor use would have a local long-term minor adverse impact on archeological resources.

Construction of new visitor use facilities (town trails and 4 parking areas with 45 total spaces) would be preceded by an archeological survey to identify and avoid any archeological resources. Where resources could not be avoided, there could be negligible to moderate adverse impacts. If any unknown significant resources are uncovered during ground-disturbing activities, procedures to implement Section 106 of the National Historic Preservation Act (NHPA) would be instituted.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on archeological resources are identified in Section 4.1 above. The cumulative impacts of these actions on archeological resources are described above for Alternative 1. Collectively these other actions have contributed or will contribute long-term moderate adverse impacts on archeological resources. The impact of Alternative 2 in conjunction with the impacts of these actions would result in a cumulative long-term minor adverse impact on archeological resources. Alternative 2 would contribute an imperceptible beneficial increment to the total cumulative impact.

Section 106 Summary. The Section 106 determination of effect would be no adverse effect to archeological resources.

Conclusion. Cultural resource management actions in Alternative 2 and development of new visitor use facilities would have local long-term negligible to moderate adverse impacts on archeological resources. Natural resource management actions in Alternative 2 would have a long-term minor beneficial impact on archeological resources. Projected visitor use associated with Alternative 2 would have a local long-term negligible impact on archeological resources. The collective management actions in Alternative 2 would contribute an imperceptible beneficial increment to the overall cumulative long-term moderate adverse impact on archeological resources. There would be no impairment of archeological resources in the park.

- **Alternative 3 – Impacts on Archeological Resources**

Analysis. As in Alternatives 1 and 2, cultural resource management actions to protect foundations and other remains and artifacts at the mining complex and town site would have the potential to impact archeological resources. In addition actions would be taken as in Alternative 2 to rehabilitate and maintain traces of major town roads as trails, to rehabilitate foundation masonry for a limited number of structures associated with the community life at the town of Nuttallburg, and to protect foundations and other remains and artifacts at the town site. In Alternative 3 rehabilitation of the coke ovens would be expanded to include a bank of 10 coke ovens. These actions would be preceded by an archeological survey to identify and avoid any archeological resources. Where resources could not be avoided, there could be negligible to moderate adverse impacts. If any unknown significant resources are uncovered during ground-disturbing activities, procedures to implement Section 106 of the National Historic Preservation Act (NHPA) would be instituted.

As in Alternatives 1 and 2, natural resource management actions would include removal of invasive plants and new tree growth along the conveyor and around the headhouse, tipple, coke ovens, other mining complex buildings, and the Nuttall Mine portal near the headhouse. Tree thinning included in

Alternative 3 would not involve ground surface disturbance. Collectively these natural resource management actions would result in a local long-term minor beneficial impact on archeological resources.

Visitation is projected to increase to approximately 760 visitors on an average summer day as a result of the addition of visitor use facilities and interpretive media at the site. Because NPS would continue to remove invasive plants from historic areas, the few visitors who discover the site would have a greater opportunity to explore the site exposing the ground surface to compaction and trampling through off-trail visitor use. The lack of interpretation of archeological resources at the site would also contribute to the public's lack of awareness, appreciation, and spirit of stewardship of archeological resources. Overall, visitor use would have a local long-term minor adverse impact on archeological resources.

Construction of new visitor use facilities (town trails, headhouse to town trail connection, and 4 parking areas with 64 total spaces) would be preceded by an archeological survey to identify and avoid any archeological resources. Where resources could not be avoided, there could be negligible to moderate adverse impacts. If any unknown significant resources are uncovered during ground-disturbing activities, procedures to implement Section 106 of the National Historic Preservation Act (NHPA) would be instituted.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on archeological resources are identified in Section 4.1 above. The cumulative impacts of these actions on archeological resources are described above for Alternative 1. Collectively these other actions have contributed or will contribute long-term moderate adverse impacts on archeological resources. The impact of Alternative 3 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on archeological resources. Alternative 3 would contribute an imperceptible beneficial increment to the total cumulative impact.

Section 106 Summary. The Section 106 determination of effect would be no adverse effect to archeological resources.

Conclusion. Cultural resource management actions in Alternative 3 and development of new visitor use facilities would have local long-term negligible to moderate adverse impacts on archeological resources. Natural resource management actions in Alternative 3 would have a long-term minor beneficial impact on archeological resources. Projected visitor use associated with Alternative 3 would have a local long-term minor adverse impact on archeological resources. The collective management actions in Alternative 3 would contribute an imperceptible beneficial increment to the overall cumulative long-term moderate adverse impact on archeological resources. There would be no impairment of archeological resources in the park.

- **Alternative 4 – Impacts on Archeological Resources**

Analysis. As in Alternatives 1, 2, and 3, cultural resource management actions to protect foundations and other remains and artifacts at the mining complex and town site would have the potential to impact archeological resources. In addition actions would be taken as in Alternative 2 to rehabilitate and maintain traces of major town roads as trails, to rehabilitate foundation masonry for a limited number of structures associated with the community life at the town of Nuttallburg, and to protect foundations and other remains and artifacts at the town site. As in Alternative 3 rehabilitation of the coke ovens would be expanded to include a bank of 10 coke ovens. These actions would be preceded by an archeological survey to identify and avoid any archeological resources. Where resources could not be avoided, there could be negligible to moderate adverse impacts. If any unknown significant resources are uncovered during ground-disturbing activities, procedures to implement Section 106 of the National Historic Preservation Act (NHPA) would be instituted.

As in Alternative 1, 2, and 3, natural resource management actions would include removal of invasive plants and new tree growth along the conveyor and around the headhouse, tipple, coke ovens, other mining complex buildings, and the Nuttall Mine portal near the headhouse. As in Alternative 3 tree thinning included in Alternative 4 would not involve ground surface disturbance. Collectively these natural resource management actions would result in a local long-term minor beneficial impact on archeological resources.

Visitation is projected to increase to approximately 920 visitors on an average summer day as a result of the addition of visitor use facilities and interpretive media at the site. Because NPS would continue to remove invasive plants from historic areas, the few visitors who discover the site would have a greater opportunity to explore the site exposing the ground surface to compaction and trampling through off-trail visitor use. The lack of interpretation of archeological resources at the site would also contribute to the public's lack of awareness, appreciation, and spirit of stewardship of archeological resources. Overall, visitor use would have a local long-term minor adverse impact on archeological resources.

Construction of new visitor use facilities (town trails, headhouse to town trail connection, trail to Kaymoor, New River footbridge, and 4 parking areas with 68 total spaces) (parking areas, town trails, headhouse to town trail connection,) would be preceded by an archeological survey to identify and avoid any archeological resources. Where resources could not be avoided, there could be negligible to moderate adverse impacts. If any unknown significant resources are uncovered during ground-disturbing activities, procedures to implement Section 106 of the National Historic Preservation Act (NHPA) would be instituted.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on archeological resources are identified in Section 4.1 above. The cumulative impacts of these actions on archeological resources are described above for Alternative 1. Collectively these other actions have contributed or will contribute long-term moderate adverse impacts on archeological resources. The impact of Alternative 4 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on archeological resources. Alternative 4 would contribute an imperceptible beneficial increment to the total cumulative impact.

Section 106 Summary. The Section 106 determination of effect would be no adverse effect to archeological resources.

Conclusion. Cultural resource management actions in Alternative 4 and development of new visitor use facilities would have local long-term negligible to moderate adverse impacts on archeological resources. Natural resource management actions in Alternative 4 would have a long-term minor beneficial impact on archeological resources. Projected visitor use associated with Alternative 4 would have a local long-term minor adverse impact on archeological resources. The collective management actions in Alternative 4 would contribute an imperceptible beneficial increment to the overall cumulative long-term moderate adverse impact on archeological resources. There would be no impairment of archeological resources in the park.

- **Comparison of Impacts of the Alternatives – Archeological Resources**

Cultural resource management actions in Alternative 1, 2, 3, and 4 would have local long-term negligible to moderate adverse impacts on archeological resources. Natural resource management actions in Alternatives 1, 2, 3, and 4 would have local long-term minor beneficial impacts on archeological resources. Projected visitor use associated with Alternative 1 would have a local long-term negligible impact on archeological resources, while projected visitor use associated with Alternatives 2, 3 and 4 would have a local long-term minor adverse impact on archeological resources.

Each alternative would contribute an imperceptible beneficial increment to the total cumulative moderate adverse impact on archeological resources. None of the alternatives would result in an impairment of park resources or values related to archeological resources.

4.8 Ethnographic Resources

▪ Applicable Regulations and Guidelines

Regulations and guidelines related to ethnographic resources include the following:

- Advisory Council on Historic Preservation implementing regulations regarding the "Protection of Historic Properties" (36 CFR Part 800)
- National Historic Preservation Act of 1966, as amended
- Native American Graves Protection and Repatriation Act of 1990
- Secretary of the Interior's Standards for Treatment of Historic Properties (1966)
- Executive Order 11593 – Protection and Enhancement of Cultural Environment
- Executive Order 13007 – American Indian Sacred Sites
- Director's Order #28 – Cultural Resources Management Guidelines
- NPS 2006 Management Policies

▪ Methodology and Assumptions

In accordance with the Advisory Council on Historic Preservation's regulations implementing Section 106 of the National Historic Preservation Act (36 CFR Part 800, *Protection of Historic Properties*), effects to cultural resources are identified and evaluated by (1) determining the area of potential effects; (2) identifying cultural resources present in the area of potential effects that are either listed in or eligible to be listed in the National Register of Historic Places; (3) applying the criteria of adverse effect to affected National Register-eligible or listed cultural resources; and (4) considering ways to avoid, minimize, or mitigate adverse effects.

Under the Advisory Council's regulations a determination of either *adverse effect* or *no adverse effect* must also be made for affected National Register-eligible or listed cultural resources. An *adverse effect* occurs whenever an impact alters, directly or indirectly, any characteristic of a cultural resource that qualifies it for inclusion in the National Register, e.g. diminishing the integrity (or the extent to which a resource retains its historic appearance) of its location, design, setting, materials, workmanship, feeling, or association. Adverse effects also include reasonably foreseeable effects caused by the alternatives that would occur later in time, be farther removed in distance, or be cumulative (36 CFR 800.5, *Assessment of Adverse Effects*). A determination of *no adverse effect* means there is an effect, but the effect would not diminish the characteristics of the cultural resource that qualify it for inclusion in the National Register.

Definitions of Impact Intensity Levels

Negligible: Impact(s) would be barely perceptible and would neither alter resource conditions, such as traditional access or site preservation, nor the relationship between the resources and the affiliated group's body of practices and beliefs. The determination of effect on traditional cultural properties (ethnographic resources eligible to be listed in the National Register) for Section 106 would be *no adverse effect.*

Minor: **Adverse Impact** – Impact(s) would be slight but noticeable but would neither appreciably alter resource conditions, such as traditional access or site preservation, and beliefs. The determination of effect on traditional cultural properties

(ethnographic resources eligible to be listed in the National Register) for Section 106 would be *no adverse effect.*

Beneficial Impact – Action(s) would allow access to and/or accommodate a group's traditional practices or beliefs. The determination of effect on traditional cultural properties for Section 106 would be no adverse effect.

Moderate: **Adverse Impact** – Impact(s) would be apparent and would alter resource conditions. Something would interfere with traditional access, site preservation, or the relationship between the resource and the affiliated group's practices and beliefs, even though the group's practices and beliefs would survive. The determination of effect on traditional cultural properties (ethnographic resources eligible to be listed in the National Register) for Section 106 would be *adverse effect.*

Beneficial Impact – Action(s) would facilitate traditional access and/or accommodate a group's practices or beliefs. The determination of effect on traditional cultural properties for Section 106 would be no adverse effect.

Major: **Adverse Impact** – Impact(s) would alter resource conditions. Something would block or greatly affect traditional access, site preservation or the relationship between the resource and the affiliated group's body of practices and beliefs, to the extent that the survival of a group's practices and/or beliefs would be jeopardized. The determination of effect on traditional cultural properties (ethnographic resources eligible to be listed in the National Register) for Section 106 would be *adverse effect.*

Beneficial Impact – Action(s) would encourage traditional access and/or accommodate a group's practices or beliefs. The determination of effect on traditional cultural properties for Section 106 would be no adverse effect.

- **Alternative 1 (Continuation of Existing Management) – Impacts on Ethnographic Resources**

Analysis. In Alternative 1, cultural resource management actions would include long-term stabilization of the tipple, conveyor, and headhouse. These actions would protect buildings and a structure that are ethnographic resources important to former residents and descendents of former residents who have long-standing ties and strong persistent associations with the town of Nuttallburg. Collectively the cultural resource management actions would result in a local long-term moderate beneficial impact on ethnographic resources.

Natural resource management actions would include removal of invasive plants and new tree growth along the conveyor and around the headhouse, tipple, coke ovens, other mining complex buildings, and the Nuttall Mine portal near the headhouse. These actions also protect and make accessible structures and buildings that are ethnographic resources important to former residents and descendents of former residents who have long-standing ties and strong persistent associations with the town. Collectively the natural resource management actions would result in a local long-term moderate beneficial impact on ethnographic resources.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on ethnographic resources are identified in Section 4.1 above. These generally include growth and development on private property and public development and transportation system improvements. No local public policies or regulations are in place to protect ethnographic resources on private land during the land development process. Public development and transportation system projects with federal funding are required to mitigate potential adverse effects to ethnographic resources in accordance with Section 106 of the NHPA. These other actions have contributed or will contribute long-term moderate adverse impacts on ethnographic resources. The

impact of Alternative 1 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on ethnographic resources. Alternative 1 would contribute an imperceptible beneficial increment to the total cumulative impact.

Section 106 Summary. The Section 106 determination of effect would be no adverse effect to ethnographic resources.

Conclusion. Cultural and natural resource management actions in Alternative 1 would have local long-term moderate beneficial impacts on ethnographic resources. The collective management actions in Alternative 1 would contribute an imperceptible beneficial increment to the overall cumulative long-term moderate adverse impact on ethnographic resources. There would be no impairment of ethnographic resources in the park.

- **Alternative 2 (Preferred Alternative) – Impacts on Ethnographic Resources**

Analysis. As in Alternative 1, cultural resource management actions would include long-term stabilization of the tipple, conveyor, and headhouse. In addition actions would be taken to rehabilitate one or two coke ovens, to rehabilitate and maintain traces of major town roads as trails, and to rehabilitate foundation masonry for a limited number of structures associated with community life at the town of Nuttallburg. These actions would protect structures and buildings that are ethnographic resources important to former residents and descendents of former residents who have long-standing ties and strong persistent associations with the town. They would also facilitate traditional access. Collectively the cultural resource management actions would result in a local long-term moderate beneficial impact on ethnographic resources.

As in Alternative 1, natural resource management actions would include removal of invasive plants and new tree growth along the conveyor and around the headhouse, tipple, coke ovens, other mining complex buildings, and the Nuttall Mine portal near the headhouse. Collectively the natural resource management actions would result in a local long-term moderate beneficial impact on ethnographic resources.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on ethnographic resources are identified in Section 4.1 above. The cumulative impacts of these actions on ethnographic resources are described above for Alternative 1. Collectively these other actions have contributed or will contribute long-term moderate adverse impacts on ethnographic resources. The impact of Alternative 2 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on ethnographic resources. Alternative 2 would contribute an imperceptible beneficial increment to the total cumulative impact.

Section 106 Summary. The Section 106 determination of effect would be no adverse effect to ethnographic resources.

Conclusion. Cultural and natural resource management actions in Alternative 2 would have local long-term moderate beneficial impacts on ethnographic resources. The collective management actions in Alternative 2 would contribute an imperceptible beneficial increment to the overall cumulative long-term moderate adverse impact on ethnographic resources. There would be no impairment of ethnographic resources in the park.

- **Alternative 3 – Impacts on Ethnographic Resources**

Analysis. As in Alternatives 1 and 2, cultural resource management actions would include long-term stabilization of the tipple, conveyor, and headhouse. As in Alternative 2, additional actions would be taken to rehabilitate foundation masonry for a limited number of structures associated with community life at the town of Nuttallburg and to protect foundations and other remains and artifacts at the town site. In Alternative 3 rehabilitation of the coke ovens would be expanded to include a

bank of 10 coke ovens. Rehabilitation of historic traces would be expanded to include most town roads. Trees would also be thinned in the Nuttallburg town site, the Seldom Seen site, the headhouse area, and along the conveyor length. These actions would protect structures and buildings that are ethnographic resources important to former residents and descendents of former residents who have long-standing ties and strong persistent associations with the town. They would also facilitate traditional access. Collectively the cultural resource management actions would result in a local long-term moderate beneficial impact on ethnographic resources.

As in Alternatives 1 and 2, natural resource management actions would include removal of invasive plants and new tree growth along the conveyor and around the headhouse, tipple, coke ovens, other mining complex buildings, and the Nuttall Mine portal near the headhouse. In Alternative 3, trees would also be thinned in the Nuttallburg town site, the Seldom Seen site, the headhouse area, and along the conveyor length. Collectively the natural resource management actions would result in a local long-term moderate beneficial impact on ethnographic resources.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on ethnographic resources are identified in Section 4.1 above. The cumulative impacts of these actions on ethnographic resources are described above for Alternative 1. Collectively these other actions have contributed or will contribute long-term moderate adverse impacts on ethnographic resources. The impact of Alternative 3 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on ethnographic resources. Alternative 3 would contribute an imperceptible beneficial increment to the total cumulative impact.

Section 106 Summary. The Section 106 determination of effect would be no adverse effect to ethnographic resources.

Conclusion. Cultural and natural resource management actions in Alternative 3 would have local long-term moderate beneficial impacts on ethnographic resources. The collective management actions in Alternative 3 would contribute an imperceptible beneficial increment to the overall cumulative long-term moderate adverse impact on ethnographic resources. There would be no impairment of ethnographic resources in the park.

- **Alternative 4 – Impacts on Ethnographic Resources**

Analysis. As in Alternatives 1, 2, and 3, cultural resource management actions would include long-term stabilization of the tipple, conveyor, and headhouse. As in Alternative 2, additional actions would be taken to rehabilitate foundation masonry for a limited number of structures associated with community life at the town of Nuttallburg and to protect foundations and other remains and artifacts at the town site. As in Alternative 3 rehabilitation of the coke ovens would be expanded to include a bank of 10 coke ovens. Rehabilitation of historic traces would be expanded to include most town roads. These actions would protect structures and buildings that are ethnographic resources important to former residents and descendents of former residents who have long-standing ties and strong persistent associations with the town. They would also facilitate traditional access. Collectively the cultural resource management actions would result in a local long-term moderate beneficial impact on ethnographic resources.

As in Alternatives 1 and 2, natural resource management actions would include removal of invasive plants and new tree growth along the conveyor and around the headhouse, tipple, coke ovens, other mining complex buildings, and the Nuttall Mine portal near the headhouse. As in Alternative 3, trees would also be thinned in the Nuttallburg town site, the Seldom Seen site, the headhouse area, and along the conveyor length. Collectively these natural resource management actions would have a local long-term moderate beneficial impact on ethnographic resources.

The new footbridge across the New River would restore the traditional connection between the town of Nuttallburg and the town of Kaymoor. This would facilitate traditional access between the two communities resulting in a local long-term beneficial impact on ethnographic resources.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on ethnographic resources are identified in Section 4.1 above. The cumulative impacts of these actions on ethnographic resources are described above for Alternative 1. Collectively these other actions have contributed or will contribute long-term moderate adverse impacts on ethnographic resources. The impact of Alternative 4 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on ethnographic resources. Alternative 4 would contribute an imperceptible beneficial increment to the total cumulative impact.

Section 106 Summary. The Section 106 determination of effect would be no adverse effect to ethnographic resources.

Conclusion. Cultural and natural resource management actions in Alternative 4 would have local long-term moderate beneficial impacts on ethnographic resources. The collective management actions in Alternative 4 would contribute an imperceptible beneficial increment to the overall cumulative long-term moderate adverse impact on ethnographic resources. There would be no impairment of ethnographic resources in the park.

- **Comparison of Impacts of the Alternatives – Ethnographic Resources**

Cultural and natural resource management actions in Alternatives 1, 2, 3, and 4 would each result in a local long-term moderate beneficial impact on ethnographic resources. Each alternative would contribute an imperceptible beneficial increment to the total cumulative moderate adverse impact on ethnographic resources. None of the alternatives would result in an impairment of park resources or values related to ethnographic resources.

4.9 Local Roads and Park Access

- **Applicable Regulations and Guidelines**

Regulations and guidelines related to local roads and park access include the following:

- Architectural Barriers Act of 1968
- Americans with Disabilities Act of 1990
- Secretary of the Interior's Regulation 43 CFR 17 – Enforcement on the Basis of Disability in the Interior Programs
- U.S. Access Board Draft Accessibility Guidelines for Outdoor Developed Areas of 1999
- NPS 2006 Management Policies

- **Methodology and Assumptions**

Impacts to local roads and park access are evaluated in terms of anticipated changes to existing vehicle trips and parking patterns on local roads in the vicinity of the Nuttallburg Visitor Use Area. The analysis includes a qualitative assessment of the capacity of existing state roads in the project area to accommodate additional vehicle trips. The capacity of existing and proposed NPS parking facilities in the site vicinity is also qualitatively assessed.

Definitions of Impact Intensity Levels

Negligible: The impact of changes to visitor-generated traffic on public roads would not be readily apparent; roads would have adequate capacity to safely accommodate visitor traffic during all times of the year; adequate parking would be available to meet demand at all visitor facilities.

Minor: The impact of changes to visitor-generated traffic on public roads would be readily apparent; roads would have capacity to safely accommodate visitor traffic but congestion would slow travel somewhat and slightly detract from the visitor experience; adequate parking would not be available at to meet average daily demand sometimes causing visitors to park on local roads, potentially blocking through traffic.

Moderate: The impact of changes to visitor-generated traffic on public roads would be readily apparent; roads would have capacity to safely accommodate visitor traffic but congestion would slow travel and detract from the visitor experience during peak visitation periods; adequate parking would not be available to meet average daily demand sometimes causing visitors to park on local roads, potentially blocking through traffic.

Major: The impact of changes to visitor-generated traffic on public roads would be readily apparent; roads would not have adequate capacity to safely accommodate visitor traffic on an average day; adequate parking would not be available to meet average daily demand sometimes causing visitors to park on local roads, potentially blocking through traffic.

- **Alternative 1 (Continuation of Existing Management) – Impacts on Local Roads and Park Access**

Analysis. In Alternative 1 existing traffic volumes and parking conditions would generally remain, although there could be some increase in visitation when compared to recent years due to recently completed trail improvements in the Nuttallburg area. Visitors would generally arrive by car. Visitor projections suggest that at a given time during an average summer day about six cars would park at the informal parking area on WV 85/5 approximately ¼ mile from the Nuttallburg headhouse trailhead and approximately ten cars would park informally along Keeney Creek Road. These cars would potentially block access for other vehicles and emergency vehicles. Visitor-related traffic and parking would result in a local long-term minor adverse impact on local roads and park access.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on local roads and park access are identified in Section 4.1 above. Growth and development in the three counties would generate additional traffic on roads providing access to the park, resulting in long-term minor to moderate adverse impacts on local roads and park access. Planned transportation system improvements would provide additional capacity to efficiently and safely accommodate much of the traffic generated by new development, resulting in long-term minor to moderate beneficial impacts on local roads and park access. These other actions have contributed or will contribute moderate adverse impacts on local roads and park access. The impacts of Alternative 1 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on local roads and park access. Alternative 1 would contribute an imperceptible adverse increment to the total cumulative impact.

Conclusion. In Alternative 1 visitor-related traffic and parking would result in a local long-term minor adverse impact on local roads and park access. Alternative 1 would contribute an imperceptible adverse increment to the overall cumulative long-term moderate adverse impact on local roads and park access.

- **Alternative 2 (Preferred Alternative) – Impacts on Local Roads and Park Access**

Analysis. In Alternative 2 approximately 460 people are expected to visit the Nuttallburg Visitor Use Area per day on an average summer day. Visitors would generally arrive by car. Adequate parking capacity would be available at proposed parking facilities to meet demand. Cars would not be parked within the Keeney Creek Road right-of-way. Existing problems caused by visitors parking in the Keeney Creek Road right-of-way would be mitigated. Visitor-related traffic and parking would result in a local long-term minor beneficial impact on local roads and park access.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on local roads and park access are identified in Section 4.1 above. The cumulative impacts of these actions on local roads and park access are described above for Alternative 1. Collectively these other actions have contributed or will contribute moderate adverse impacts on local roads and park access. The impacts of Alternative 2 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on local roads and park access. Alternative 2 would contribute an imperceptible beneficial increment to the total cumulative impact.

Conclusion. In Alternative 2 visitor-related traffic and parking would result in a local long-term minor beneficial impact on local roads and park access. Alternative 2 would contribute an imperceptible beneficial increment to the overall cumulative long-term moderate adverse impact on local roads and park access.

- **Alternative 3 – Impacts on Local Roads and Park Access**

In Alternative 3 approximately 760 people are expected to visit the Nuttallburg Visitor Use Area per day on an average summer day. Visitors would generally arrive by car. Adequate parking capacity would not be available at proposed parking facilities to meet demand. Cars would be parked within the Keeney Creek Road right-of-way. Existing problems caused by visitors parking in the Keeney Creek Road right-of-way would not be mitigated. Visitor-related traffic and parking would result in a local long-term moderate adverse impact on local roads and park access.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on local roads and park access are identified in Section 4.1 above. The cumulative impacts of these actions on local roads and park access are described above for Alternative 1. Collectively these other actions have contributed or will contribute moderate adverse impacts on local roads and park access. The impacts of Alternative 3 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on local roads and park access. Alternative 3 would contribute an imperceptible adverse increment to the total cumulative impact.

Conclusion. In Alternative 3 visitor-related traffic and parking would result in a local long-term moderate adverse impact on local roads and park access. Alternative 3 would contribute an imperceptible adverse increment to the overall cumulative long-term moderate adverse impact on local roads and park access.

- **Alternative 4 – Impacts on Local Roads and Park Access**

In Alternative 4 approximately 920 people are expected to visit the Nuttallburg Visitor Use Area per day on an average summer day. Visitors would generally arrive by car. Adequate parking capacity would not be available at proposed parking facilities to meet demand. Cars would be parked within the Keeney Creek Road right-of-way. Existing problems caused by visitors parking in the Keeney Creek Road right-of-way would not be mitigated. Visitor-related traffic and parking would result in a local long-term moderate adverse impact on local roads and park access.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on local roads and park access are identified in Section 4.1 above. The cumulative impacts of these actions on local roads and park access are described above for Alternative 1. Collectively these other actions have contributed or will contribute moderate adverse impacts on local roads and park access. The impacts of Alternative 4 in conjunction with the impacts of these actions would result in a cumulative long-term moderate adverse impact on local roads and park access. Alternative 4 would contribute an imperceptible adverse increment to the total cumulative impact.

Conclusion. In Alternative 4 visitor-related traffic and parking would result in a local long-term moderate adverse impact on local roads and park access. Alternative 4 would contribute an imperceptible adverse increment to the overall cumulative long-term moderate adverse impact on local roads and park access.

- **Comparison of Impacts of the Alternatives – Local Roads and Park Access**

Visitor-related traffic and parking in Alternative 1 would result in a local long-term minor adverse impact on local roads and park access. In Alternatives 3 and 4 visitor-related traffic and parking would result in a local long-term moderate adverse impact on local roads and park access. In Alternative 2 visitor-related traffic and parking would result in a local long-term minor beneficial impact on local roads and park access.

Alternatives 1, 3, and 4 would each contribute an imperceptible adverse increment to the overall cumulative long-term moderate adverse impact on local roads and park access. Alternative 2 would contribute an imperceptible beneficial increment to the overall cumulative long-term moderate adverse impact on local roads and park access.

4.10 Visitor Use and Visitor Experience

- **Applicable Regulations and Guidelines**

Regulations and guidelines related to visitor use and visitor experience include the following:

- NPS Organic Act
- Architectural Barriers Act of 1968
- Americans with Disabilities Act of 1990
- NPS 2006 Management Policies

- **Methodology and Assumptions**

The potential for change in visitor use and experience proposed by the alternatives was evaluated by identifying projected increases or decreases in visitor uses, and determining to what degree and for how long projected changes would affect the desired visitor experience.

Definitions of Impact Intensity Levels

Negligible: Visitors would not be affected or changes in visitor use and/or experience would be below or at the level of detection. The visitor would not likely be aware of the impacts associated with the alternative.

Minor: Changes in visitor use and/or experience would be detectable and long-term, although the changes would be slight. The visitor would be aware of the impacts associated with the alternative, but the impacts would be slight.

Moderate: Changes in visitor use and/or experience would be readily apparent and long-term. The visitor would be aware of the impacts associated with the alternative and would likely be able to express an opinion about the changes.

Major: Changes in visitor use and/or experience would be readily apparent and long-term, severely adverse, or exceptionally beneficial, and have important long-term consequences. The visitor would be aware of the impacts associated with the alternative and would likely express a strong opinion about the changes.

- **Alternative 1 (Continuation of Existing Management) – Impacts on Visitor Use and Visitor Experience**

Analysis. In Alternative 1, cultural resource management actions would include long-term stabilization of the tipple, conveyor, and headhouse, as well as minor actions to protect foundations and other remains and artifacts at the town site. Natural resources would continue to be minimally managed except where vegetation growth has the potential to damage historic buildings and structures. The town site would generally be kept open as would areas around mining complex buildings and along the conveyor. Collectively these cultural resource management actions and natural resource management actions would slightly enhance accessibility to historic areas of the site and make cultural resources slightly more visible to visitors. This would result in a local long-term negligible impact on visitor use and visitor experience.

While visitors would not be encouraged to visit the site, there could be some increase in visitation when compared to recent years due to recently completed trail improvements in the Nuttallburg area. Information about Nuttallburg would be limited to what is available in general park literature. No interpretive information would be provided. Signage would be limited to safety and informational signage along the four trails that provide visitor access to the site. Collectively these actions would result in a local long-term negligible impact on visitor use and visitor experience.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on visitor use and visitor experience are identified in Section 4.1 above. These generally include growth and development on private property and transportation system improvements. New development and new roads in the park vicinity would detract from the visitor experience and visitor enjoyment of the park by altering the natural setting, increasing the number of people in the area, increasing traffic, increasing ambient noise, and generally reducing the wildness of the area. Collectively these other actions have contributed or will contribute long-term major beneficial impacts on visitor use and visitor experience. The impact of Alternative 1 in conjunction with the impacts of these actions would result in a cumulative long-term major beneficial impact on visitor use and visitor experience. Alternative 1 would contribute an imperceptible increment to the total cumulative impact.

Conclusion. Cultural resource management and natural resource management actions in Alternative 1 would result in a local long-term negligible impact on visitor use and visitor experience. Management actions taken to provide interpretive media and visitor facilities would have a local long-term negligible impact on visitor use and visitor experience. Alternative 1 would contribute an imperceptible beneficial increment to the overall cumulative long-term major beneficial impact on visitor use and visitor experience.

- **Alternative 2 (Preferred Alternative) – Impacts on Visitor Use and Visitor Experience**

Analysis. As in Alternative 1, cultural resource management actions would include long-term stabilization of the tipple, conveyor, and headhouse. In addition actions would be taken to rehabilitate one or two coke ovens, to rehabilitate and maintain traces of major town roads as trails, and to rehabilitate foundation masonry for a limited number of structures associated with community life at

the town of Nuttallburg. As in Alternative 1, natural resources would continue to be minimally managed except where vegetation growth has the potential to damage historic buildings and structures. Collectively these cultural resource management actions and natural resource management actions would significantly enhance accessibility to historic areas of the site and make cultural resources much more visible to visitors. This would result in a local long-term moderate beneficial impact on visitor use and visitor experience.

Visitors would be encouraged to visit the site and interpretive media would be provided. On an average summer day approximately 460 people are expected to visit the site. Four recreational trails would provide access to the mining complex and town site. Introductory waysides would be installed at trailheads. Overview interpretation of the mining complex would be provided at the headhouse and tipple. Wayside exhibits would be installed to help visitors understand the scope of the mining complex, with interpretive focal areas in the town of Nuttallburg and around the tipple and surrounding mining complex. Collectively these interpretive media and visitor facilities would have a local long-term major beneficial impact on visitor use and visitor experience.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on visitor use and visitor experience are identified in Section 4.1 above. The cumulative impacts of these actions on visitor use and visitor experience are described above for Alternative 1. Collectively these other actions have contributed or will contribute long-term major beneficial impacts on visitor use and visitor experience. The impact of Alternative 2 in conjunction with the impacts of these actions would result in a cumulative long-term major beneficial impact on visitor use and visitor experience. Alternative 2 would contribute a perceptible beneficial increment to the total cumulative impact.

Conclusion. Cultural resource management and natural resource management actions in Alternative 2 would result in a local long-term moderate beneficial impact on visitor use and visitor experience. Management actions taken to provide interpretive media and visitor facilities would have a local long-term major beneficial impact on visitor use and visitor experience. Alternative 2 would contribute a perceptible beneficial increment to the overall cumulative long-term major beneficial impact on visitor use and visitor experience.

- **Alternative 3 – Impacts on Visitor Use and Visitor Experience**

Analysis. As in Alternatives 1 and 2, cultural resource management actions would include long-term stabilization of the tipple, conveyor, and headhouse. As in Alternative 2, additional actions would be taken to rehabilitate foundation masonry for a limited number of structures associated with community life at the town of Nuttallburg and to protect foundations and other remains and artifacts at the town site. In Alternative 3 rehabilitation of the coke ovens would be expanded to include a bank of 10 coke ovens. Rehabilitation of historic traces would be expanded to include most town roads. As in Alternatives 1 and 2 natural resources would continue to be minimally managed except where vegetation growth has the potential to damage historic buildings and structures. In Alternative 3, trees would also be thinned in the Nuttallburg town site, the Seldom Seen site, the headhouse area, and along the conveyor length to enhance interior views, top to bottom views, and rim to rim views. Collectively these cultural resource management actions and natural resource management actions would significantly enhance accessibility to historic areas of the site and make cultural resources much more visible to visitors. This would result in a local long-term moderate beneficial impact on visitor use and visitor experience.

Visitors would be encouraged to visit the site and interpretive media would be provided. On an average summer day approximately 760 people are expected to visit the site. As in Alternative 2, four recreational trails would provide access to the mining complex and town site. In addition a vertical connecting trail would be added from the headhouse to the tipple. As in Alternative 2 signage and interpretive media would be installed. In addition overview interpretation of the mining complex

would be added at the headhouse and tipple. Collectively these interpretive media and visitor facilities would have a local long-term major beneficial impact on visitor use and visitor experience.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on visitor use and visitor experience are identified in Section 4.1 above. These other actions have contributed or will contribute long-term major beneficial impacts on visitor use and visitor experience. The impact of Alternative 3 in conjunction with the impacts of these actions would result in a cumulative long-term major beneficial impact on visitor use and visitor experience. Alternative 3 would contribute a perceptible beneficial increment to the total cumulative impact.

Conclusion. Cultural resource management and natural resource management actions in Alternative 3 would result in a local long-term moderate beneficial impact on visitor use and visitor experience. Management actions taken to provide interpretive media and visitor facilities would have a local long-term major beneficial impact on visitor use and visitor experience. Alternative 3 would contribute a perceptible beneficial increment to the overall cumulative long-term major beneficial impact on visitor use and visitor experience.

- **Alternative 4 – Impacts on Visitor Use and Visitor Experience**

Analysis. As in Alternatives 1, 2, and 3, cultural resource management actions would include long-term stabilization of the tipple, conveyor, and headhouse. As in Alternative 2, additional actions would be taken to rehabilitate foundation masonry for a limited number of structures associated with community life at the town of Nuttallburg and to protect foundations and other remains and artifacts at the town site. As in Alternative 3 rehabilitation of the coke ovens would be expanded to include a bank of 10 coke ovens. Rehabilitation of historic traces would be expanded to include most town roads. As in Alternatives 1 and 2 natural resources would continue to be minimally managed except where vegetation growth has the potential to damage historic buildings and structures. As in Alternative 3, trees would also be thinned in the Nuttallburg town site, the Seldom Seen site, the headhouse area, and along the conveyor length to enhance interior views, top to bottom views, and rim to rim views. As in Alternative 3, the town site would generally be kept open as would areas around mining complex buildings and along the conveyor. Collectively these cultural resource management actions and natural resource management actions would significantly enhance accessibility to historic areas of the site and make cultural resources much more visible to visitors. This would result in a local long-term moderate beneficial impact on visitor use and visitor experience.

Visitors would be encouraged to visit the site and interpretive media would be provided. On an average summer day approximately 920 people are expected to visit the site. As in Alternative 2, four recreational trails would provide access to the mining complex and town site. As in Alternative 3 a vertical connecting trail would be added from the headhouse to the tipple. In addition a trail connection to the town of Kaymoor, including a footbridge across the New River, would be added. As in Alternative 2 signage and interpretive media would be installed. As in Alternative 3 an overview interpretation of the mining complex would be added at the headhouse and tipple. In addition interpretive media would be expanded to relate Nuttallburg and Kaymoor to one another, as well as to explain in more depth the relationship of industry to the natural phenomena of the gorge. Collectively these interpretive media and visitor facilities would have a local long-term major beneficial impact on visitor use and visitor experience.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on visitor use and visitor experience are identified in Section 4.1 above. The cumulative impacts of these actions on visitor use and visitor experience are described above for Alternative 1. Collectively these other actions have contributed or will contribute long-term major beneficial impacts on visitor use and visitor experience. The impact of Alternative 4 in conjunction with the impacts of these actions would result in a cumulative long-term major beneficial impact on

visitor use and visitor experience. Alternative 4 would contribute a perceptible beneficial increment to the total cumulative impact.

Conclusion. Cultural resource management and natural resource management actions in Alternative 4 would result in a local long-term moderate beneficial impact on visitor use and visitor experience. Management actions taken to provide interpretive media and visitor facilities would have a local long-term major beneficial impact on visitor use and visitor experience. Alternative 4 would contribute a perceptible beneficial increment to the overall cumulative long-term major beneficial impact on visitor use and visitor experience.

- **Comparison of Impacts of the Alternatives – Visitor Use and Visitor Experience**

Cultural resource management and natural resource management actions in Alternative 1 would result in a local long-term negligible impact on visitor use and visitor experience, while similar actions in Alternatives 2, 3, and 4 would result in a local long-term moderate beneficial impact on visitor use and visitor experience. Management actions taken in Alternative 1 to provide interpretive media and visitor facilities would have a local long-term negligible impact on visitor use and visitor experience, while similar actions taken in Alternatives 2, 3 and 4 would have a local long-term major beneficial impact on visitor use and visitor experience.

Alternative 1 would contribute an imperceptible increment to the overall cumulative long-term major beneficial impact on visitor use and visitor experience. Alternatives 2, 3, and 4 would contribute a perceptible beneficial increment to the overall cumulative long-term major beneficial impact on visitor use and visitor experience.

4.11 Park Operations

- **Applicable Regulations and Guidelines**

Regulations and guidelines related to park operations and park facilities include the following:

- NPS 2006 Management Policies

- **Methodology and Assumptions**

Impacts of the alternatives on park operations relate to the actions required to manage the Nuttallburg Visitor Use Area facilities and resources in accordance with NPS mandates related to park staffing, maintenance, interpretation and visitor services, resource and visitor protection, and administration.

Definitions of Impact Intensity Levels

Negligible: Park operations and facilities would generally not be affected. The changes that occur would be so small that they would generally not be perceptible to most park staff and visitors.

Minor: A slight change in park operations and facilities would occur. The change would be slight and localized and would be perceptible to few staff and visitors.

Moderate: A substantial change in park operations and facilities would occur. The change would be noticeable to most staff and visitors.

Major: Numerous substantial changes in park operations and facilities would occur. The changes would be clearly noticeable to most staff and visitors as markedly different from existing operations.

- **Alternative 1 (Continuation of Existing Management) – Impacts on Park Operations**

Analysis. In Alternative 1, following stabilization of the tipple, conveyor, and headhouse the park staff would monitor the structures to identify other potential risks of collapse that could jeopardize their integrity. As needed, park staff would take other minor actions to protect foundations and other remains and artifacts at the town site. Park staff would continue to minimally manage natural resources in the Nuttallburg area except where vegetation growth has the potential to damage historic buildings and structures. The town site would generally be kept open as would areas around mining complex buildings and along the conveyor. Invasive plants would be controlled through cutting, mowing, and selective application of Herbicides. New tree growth would be cleared or pruned along the conveyor and around the headhouse, tipple, coke ovens, other mining complex buildings, and the Nuttallburg Mine portal near the headhouse.

Park staff would continue to maintain existing trails/administrative roads to keep them open for hiking and administrative use, as appropriate. Maintenance would include periodic mowing, tree trimming, and removal of understory growth and invasive plants that encroach into trail and road rights-of-way.

Overall in Alternative 1 the long-term operational needs for staff, maintenance, interpretation and visitor services, resource and visitor protection, and administration would result in a local long-term minor adverse impact on park operations.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on park operations are identified in Section 4.1 above. These other actions have contributed or will contribute major beneficial impacts on park operations. The impact of Alternative 1 in conjunction with the impacts of these actions would result in a cumulative long-term major beneficial impact on visitor use and visitor experience. Alternative 1 would contribute an imperceptible adverse increment to the total cumulative impact.

Conclusion. The long-term operational needs associated with Alternative 1 for staff, maintenance, interpretation and visitor services, resource and visitor protection, and administration would result in a local long-term minor adverse impact on park operations. Alternative 1 would contribute an imperceptible adverse increment to the overall cumulative long-term major beneficial impact on park operations.

- **Alternative 2 (Preferred Alternative) – Impacts on Park Operations**

Analysis. As in Alternative 1, following stabilization of the tipple, conveyor, and headhouse the park staff would monitor the structures to identify other potential risks of collapse that could jeopardize their integrity. As needed, park staff would take other minor actions to protect foundations and other remains and artifacts at the town site. In addition park operations would be expanded to include maintenance of one or two rehabilitated coke ovens and rehabilitated foundation masonry at structures associated with community life at the town of Nuttallburg.

As in Alternative 1, park staff would continue to minimally manage natural resources in the Nuttallburg area except where vegetation growth has the potential to damage historic buildings and structures.

As in Alternative 1, park staff would continue to maintain existing trails/administrative roads to keep them open for hiking and administrative use, as appropriate. In Alternative 2, the park staff would also maintain approximately 3,600 linear feet of new trails. Maintenance of trails and road traces would include periodic mowing, tree trimming, and removal of understory growth and invasive plants that encroach into trail and road rights-of-way. Interpretive media to be maintained would include approximately 16 waysides.

Park staff would also maintain four visitor parking facilities, including periodic grading, mowing of perimeter grass, and maintenance of three vault toilets.

Overall in Alternative 2 the long-term operational needs for staff, maintenance, interpretation and visitor services, resource and visitor protection, and administration would result in a local long-term minor adverse impact on park operations.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on park operations are identified in Section 4.1 above. These other actions have contributed or will contribute major beneficial impacts on park operations. The impact of Alternative 2 in conjunction with the impacts of these actions would result in a cumulative long-term major beneficial impact on visitor use and visitor experience. Alternative 2 would contribute an imperceptible adverse increment to the total cumulative impact.

Conclusion. The long-term operational needs associated with Alternative 2 for staff, maintenance, interpretation and visitor services, resource and visitor protection, and administration would result in a local long-term minor adverse impact on park operations. Alternative 2 would contribute an imperceptible adverse increment to the overall cumulative long-term major beneficial impact on park operations.

- **Alternative 3 – Impacts on Park Operations**

Analysis. As in Alternatives 1 and 2, following stabilization of the tipple, conveyor, and headhouse the park staff would monitor the structures to identify other potential risks of collapse that could jeopardize their integrity. As needed, park staff would take other minor actions to protect foundations and other remains and artifacts at the town site. As in Alternative 2, park operations would be expanded to include maintenance of rehabilitated masonry at structures associated with community life at the town of Nuttallburg. In Alternative 3 park operations would be further expanded to include maintenance of a bank of ten rehabilitated coke ovens.

As in Alternatives 1 and 2 park staff would continue to minimally manage natural resources in the Nuttallburg area except where vegetation growth has the potential to damage historic buildings and structures.

As in Alternatives 1 and 2 park staff would continue to maintain existing trails/administrative roads to keep them open for hiking and administrative use, as appropriate. In Alternative 3, the park staff would also maintain approximately 15,600 linear feet of new trails. Maintenance of trails and road traces would include periodic mowing, tree trimming, and removal of understory growth and invasive plants that encroach into trail and road rights-of-way. In addition, maintenance would be required to periodically thin vegetation along the conveyor length to provide views from top to bottom, in the headhouse area to enhance rim to rim views, and in the Nuttallburg town site and the Seldom Seen site to enhance interior views. Interpretive media to be maintained would include approximately 23 waysides and four interpretive venues.

Park staff would also maintain four visitor parking facilities, including periodic grading, mowing of perimeter grass, and maintenance of three vault toilets.

Overall in Alternative 3 the long-term operational needs for staff, maintenance, interpretation and visitor services, resource and visitor protection, and administration would result in a local long-term moderate adverse impact on park operations.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on park operations are identified in Section 4.1 above. These other actions have contributed or will contribute major beneficial impacts on park operations. The impact of Alternative 3 in conjunction with the impacts of these actions would result in a cumulative long-term major

beneficial impact on visitor use and visitor experience. Alternative 3 would contribute an imperceptible adverse increment to the total cumulative impact.

Conclusion. The long-term operational needs associated with Alternative 3 for staff, maintenance, interpretation and visitor services, resource and visitor protection, and administration would result in a local long-term moderate adverse impact on park operations. Alternative 3 would contribute an imperceptible adverse increment to the overall cumulative long-term major beneficial impact on park operations.

- **Alternative 4 – Impacts on Park Operations**

Analysis. As in Alternatives 1, 2, and 3, following stabilization of the tipple, conveyor, and headhouse the park staff would monitor the structures to identify other potential risks of collapse that could jeopardize their integrity. As needed, park staff would take other minor actions to protect foundations and other remains and artifacts at the town site. As in Alternative 2, park operations would be expanded to include maintenance of rehabilitated foundation masonry at structures associated with community life at the town of Nuttallburg. As in Alternative 3 park operations would be further expanded to include maintenance of a bank of ten rehabilitated coke ovens.

As in Alternatives 2 and 3 park staff would continue to minimally manage natural resources in the Nuttallburg area except where vegetation growth has the potential to damage historic buildings and structures.

As in Alternatives 1, 2, and 3, park staff would continue to maintain existing trails/administrative roads with no improvements to keep them open for hiking and administrative use, as appropriate. In Alternative 4, the park staff would also maintain approximately 23,100 linear feet of new trails. Maintenance of road traces and trails would include periodic mowing, tree trimming, and removal of understory growth and invasive plants that encroach into trail and road rights-of-way. As in Alternative 3, maintenance would also be required to periodically thin vegetation along the conveyor length to provide views from top to bottom, in the headhouse area to enhance rim to rim views, and in the Nuttallburg town site and the Seldom Seen site to enhance interior views. As in Alternative 3, interpretive media to be maintained would include approximately 23 waysides and four interpretive venues.

Park staff would also maintain four visitor parking facilities, including periodic grading, mowing of perimeter grass, and maintenance of three vault toilets.

Overall in Alternative 4 the long-term operational needs for staff, maintenance, interpretation and visitor services, resource and visitor protection, and administration would result in a local long-term moderate adverse impact on park operations.

Cumulative Impacts. Other past, present, and reasonably foreseeable actions that have had or would have impacts on park operations are identified in Section 4.1 above. These other actions have contributed or will contribute major beneficial impacts on park operations. The impact of Alternative 4 in conjunction with the impacts of these actions would result in a cumulative long-term major beneficial impact on visitor use and visitor experience. Alternative 4 would contribute an imperceptible adverse increment to the total cumulative impact.

Conclusion. The long-term operational needs associated with Alternative 4 for staff, maintenance, interpretation and visitor services, resource and visitor protection, and administration would result in a local long-term moderate adverse impact on park operations. Alternative 4 would contribute an imperceptible adverse increment to the overall cumulative long-term major beneficial impact on park operations.

- **Comparison of Impacts of the Alternatives – Park Operations**

The long-term operational needs associated with Alternatives 1 and 2 for staff, maintenance, interpretation and visitor services, resource and visitor protection, and administration would result in a local long-term minor adverse impact on park operations. In Alternatives 3 and 4 the long-term operational needs associated with Alternatives 3 and 4 for staff, maintenance, interpretation and visitor services, resource and visitor protection, and administration would result in a local long-term moderate adverse impact on park operations.

Alternatives 1, 2, 3, and 4 would contribute an imperceptible adverse increment to the overall cumulative long-term major beneficial impact on park operations.

5.0 CONSULTATION AND COORDINATION

5.1 Public Involvement

- **Stakeholder Meetings**

Early in the planning process, the Planning Team identified numerous individuals and groups with specific interests in the future management of visitor use at the former sites of the Nuttall Mine and the Town of Nuttallburg. In the summer of 2006, these individuals were invited to participate in small group stakeholder meetings held at the New River Gorge National River Headquarters in Glen Jean, WV. Approximately 36 people attended the meetings, representing the following groups and interests:

- Plateau Action Network
- West Virginia Rivers Coalition
- Dunloup Creek Watershed Association
- West Virginia Trails Coalition
- New River Birding
- West Virginia Biking Association
- Blue Ridge Mountain Boy Scouts
- Various Commercial Climbing Interests
- American Whitewater
- West Virginia Wildwater Association
- Coastal Canoeists
- Various Private Paddler Interests
- Friends of the Rivers of West Virginia
- West Virginia Whitewater Commission
- Various Commercial Whitewater Interests

Subsequent to the stakeholder meetings in the summer of 2006, participants received routine announcements regarding continuing opportunities to provide input and comments.

- **Public Meetings**

NPS hosted four public meetings for purposes of obtaining public input during the initial phase of the planning process. Each public meeting was held at the southern end of the park, in the middle of the park, and at the northern end of the park. Each set of public meetings was structured to accomplish the following:

- to provide the public with information regarding development of the plan
- to obtain the public's comments on findings of the planning process as they developed
- to obtain public input into subsequent steps of the planning process

Public Meeting 1 – January 24, 25, and 26, 2006. The first series of public meetings focused on providing the public with an overview of the planning process and obtaining input regarding the public's perception of the significance of the resources at the Nuttallburg site and what they valued most about the site. Small group discussions concentrated on gathering public comment. Approximately 185 people attended the meetings.

Public Meeting 2 – March 14, 15, and 16, 2006. The focus of the second series of public meetings was to identify the public's interests and concerns regarding management of the Nuttallburg Visitor Use Area and to obtain input regarding the public's vision for the future of the site. Small group discussions concentrated on gathering public comment. Approximately 75 people attended the meetings.

Public Meeting 3 – May 9, 10, and 11, 2006. The third set of public meetings shared with the public the findings of the planning team's analysis of the resources at the Nuttallburg Visitor Use Area. The public was invited to review analysis maps of the site and to talk further with the park's resource

specialists. The public was asked to provide comments on the resource analysis in writing using post-it notes. Approximately 41 people attended the meetings.

Public Meeting 4 – July 25, 26, and 27, 2006. At the fourth set of public meetings NPS presented four alternatives for the future management of the Nuttallburg Visitor Use Area to the public for their consideration and comment. The public was invited to review maps of the alternatives and to talk with the park's resource specialists. The public was asked to provide comments on the alternatives in writing using post-it notes. Approximately 78 people attended the meetings.

- **Press Releases and Public Meeting Announcements**

Press releases announcing the planning project and describing the project's progress were issued prior to the four series of public meetings on January 11, 2006, March 3, 2006, May 3, 2006, and July 20, 2006. Each press release was faxed and emailed to eight television/radio stations and to local newspapers in Beckley, Fayetteville, Charleston, Summersville, Hinton, and Bluefield. Public meeting announcements were placed in the *Fayette Tribune*, the *Register-Herald* (Beckley), and the *Hinton News*. Public meeting invitations were sent to all parties on the park's mailing list. The invitations identified the time and place for each meeting and provided general information on the meeting content, meeting format, and the type of input desired from the public.

- **Newsletters**

Two weeks in advance of the first series of public meetings (January 2006) and the third series of public meetings (May 2006) the NPS distributed a newsletter to all parties on the park's mailing list. Newsletter 1 invited the public to attend the upcoming public meetings and provided a brief introduction to the Nuttallburg Visitor Use Area Implementation Plan project. Newsletter 2 invited the public to attend the upcoming public meetings and provided a summary of the issues and concerns identified by the public at the second series of public meetings.

- **NPS Planning, Environment and Public Comment Website**

The NPS Planning, Environment and Public Comment (PEPC) web site has provided the public with an electronic link for obtaining information about or commenting upon the planning process. Meeting invitations, newsletters, comment forms, and public meeting slide slows were posted for the public to view and/or download. One person provided comments through the web site.

5.2 Public Agencies Consulted during the Planning Process

- **Agencies in Attendance at Public Meetings**

The NPS invited several federal and state agency representatives to attend each of the four series public meetings. Following is a list of those to whom invitations were sent, with an indication of which meetings were attended:

- **Federal Agencies**

  U.S. Geological Survey (attended Public Meetings 1 and 2)

  U.S. Department of Agriculture, Natural Resources Conservation Service

  U.S. Environmental Protection Agency, Region 3

  U.S. Army Corps of Engineers

  U.S. Fish and Wildlife Service, Office of Surface Mining

  U.S. Department of the Interior, Office of Planning and Review

  Virginia Division of Natural Resources

Advisory Council on Historic Preservation

- **State Agencies**

  West Virginia Division of Natural Resources
  W.V. DOT, Division of Highways
  W.V. DOT, Coal Heritage Highway Authority (attended Public Meetings 1 and 4)
  W.V. Division of Culture and History
  W.V. DNR (attended Public Meetings 1 and 2)
  W.V. DNR, Non-Game and Natural Heritage Programs
  W.V. DNR, Fisheries Resources Section (attended Public Meeting 1)
  W.V. DNR, Wildlife Resources Section (attended Public Meetings 1 and 2)
  W.V. DNR, Law Enforcement Section
  W.V. Division of Tourism
  W.V. Department of Commerce
  W.V. Governor's Office
  W.V. Development Office
  W.V. DEP, Division of Air Quality
  W.V. DEP, Division of Water and Waste Management
  W.V. DEP, Division of Land Restoration
  W.V. DEP, Office of Innovation
  W.V. DEP, Division of Mining and Reclamation
  W.V. Citizens Conservation Corps
  W.V. Division of Forestry
  Babcock State Park
  Hawks Nest State Park
  Pipestem Resort State Park
  Bluestone State Park
  New River Parkway Authority (attended Public Meetings 1, 2 and 4)

- **Section 106 Consultation**

Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, requires that federal agencies consider the effect of undertakings on properties listed on the National Register of Historic Places and allow the State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP) the opportunity to comment.

On April 5, 2007, New River Gorge National River sent a letter to the West Virginia Department of Culture and History to initiate consultation for the Nuttallburg Visitor Use Area. On April 11, 2007 the Deputy State Historic Preservation Officer sent a response to the NPS indicating that the department would provide further review of the project when the draft environmental assessment is complete.

- **Section 7 Consultation**

Section 7 of the Endangered Species Act of 1973, as amended (16 USC 1531 et seq) requires all federal agencies to consult with the U.S. Fish and Wildlife Service to ensure that any action authorized, funded, or carried out by the agency does not jeopardize the continued existence of listed species or critical habitat. NPS management policies also require cooperation with appropriate state

conservation agencies to protect state-listed and candidate species of special concern within park boundaries.

The NPS has identified the potential for occurrences of rare, threatened, or endangered species in the Nuttallburg Visitor Use Area vicinity through review of existing data, coordination with the West Virginia Division of Natural Resources (WV DNR), and field surveys by NPS staff and other experts. Consultation with the WV DNR provided a list of designated species that potentially occur within the park (see Appendix A). Field study confirmed occurrences of several designated species in the area including three species of bats and the Allegheny woodrat (*Neotoma magister*).

On November 6, 2006, the NPS notified the West Virginia Field Office of the U.S. Fish and Wildlife Service (U.S. FWS) that it is proposing to implement cultural and natural resource management actions at the Nuttallburg Mining Complex and town of Nuttallburg site and to develop visitor use facilities that would make the site more accessible to park visitors.

Section 7 Consultation will proceed once a copy of the implementation plan/environmental assessment has been reviewed by the U.S. FWS West Virginia Field Office. Based upon the analysis performed for this EA the effect of Alternative 2 (Preferred Alternative) on special status species are expected to be discountable and insignificant.

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LEGAL CITATIONS

Laws and executive orders that apply to the management of New River Gorge National River are listed below.

New River Gorge National River Establishing Legislation

- Water Resources Development Act of 1986, P.L. 99-662 (H.R. 6); November 17, 1986
- West Virginia National Interest River Conservation Act, P.L. 100-534 (H.R. 900); October 26, 1988
- West Virginia National River Amendments of 1996

National Park Service Enabling Legislation

- Act of August 25, 1916 (National Park Service Organic Act), Public Law (P.L.) 64-235, 16 United States Code (U.S.C) Section (§) *(et seq* (and the following ones)) as amended
- Reorganization Act of March 3, 1933, 47 Statute (Stat.) 1517
- General Authorities Act, October 7, 1976, P.L. 94-458, 90 Stat. 1939, 16 U.S.C. §1a-1 *et seq.*
- Act amending the Act of October 2, 1968 (commonly called Redwoods Act), March 27, 1978, P.L. 95-250, 92 Stat. 163, 16 U.S.C. Subsection(s) (§§) 1a-1, 79a-q
- National Parks and Recreation Act, November 10, 1978, P.L. 95-265, 92 Stat. 3467; 16 U.S.C. §1 *et seq.*

Accessibility Citations

- Americans with Disabilities Act, P.L. 101-336, 104 Stat. 327, 42 U.S.C. §12101

- Architectural Barriers Act of 1968, P.L. 90-480, 82 Stat. 718, 42 U.S.C. §4151 *et seq.*
- Rehabilitation Act of 1973, P.L. 93-112, 87 Stat. 357, 29 U.S.C. §701 *et seq.* as amended by the Rehabilitation Act Amendments of 1974, 88 Stat. 1617

Cultural Resources Citations

- American Indian Religious Freedom Act, P.L. 95-341, 92 Stat. 469, 42 U.S.C. §1996
- Antiquities Act of 1906, P.L. 59-209, 34 Stat. 225, 16 U.S.C. §432 and 43 Code of Federal Regulations (CFR) 3
- Archeological and Historic Preservation Act of 1974, P.L. 93-291, 88 Stat. 174, 16 U.S.C. §469
- Archeological Resources Protection Act of 1979, P.L. 96-95, 93 Stat. 712, 16 U.S.C. §470aa *et seq.* and 43 CFR 7, subparts A and B, 36 CFR 79
- National Historic Preservation Act as amended, P.L. 89-665, 80 Stat. 915, 16 U.S.C. §470 *et seq.* and 36 CFR 18, 60, 61, 63, 68, 79, 800
- Native American Graves Protection and Repatriation Act of 1990, 25 U.S.C. 3001 *et seq.* and 43 CFR 10
- Protection of Historic and Cultural Properties, Executive Order (E.O.) 11593; 36 CFR 60, 61, 63, 800; 44 Federal Register (FR) 6068
- Public Buildings Cooperative Use Act of 1976, P.L. 94-541, 90 Stat. 2505, 42 U.S.C. §4151-4156

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- Analysis of Impacts on Prime or Unique Agricultural Lands in Implementing the National Environmental Policy Act, Environmental Statement Memorandum (E.S.) 80-3, 08/11/80, 45 FR 59109
- Clean Air Act as amended, P.L. Chapter 360, 69 Stat. 322, 42 U.S.C. §7401 *et seq.*
- Endangered Species Act of 1973, as amended, P.L 93-205, 87 Stat. 884, 16 U.S.C. §1531 *et seq.*
- Executive Order 11514 – Protection and Enhancement of Environmental Quality
- Executive Order 11988 – Floodplain Management, 42 FR 26951, 3 CFR 121 (Supplement (Supp) 177)
- Executive Order 11990 – Protection of Wetlands, 42 FR 26961, 3 CFR 121 (Supp 177)
- Executive Order 12088 – Federal Compliance with Pollution Control Standards
- Executive Order 13112 – Invasive Species, 64 FR 6183
- Federal Insecticide, Fungicide and Rodenticide Act, P.L. 92-516, 86 Stat. 973, 7 U.S.C. §136 *et seq.*
- Federal Water Pollution Control Act (commonly referred to as Clean Water Act), P.L. 92-500, 33 U.S.C. §1251 *et seq.* as amended by the Clean Water Act, P.L. 95-217
- Fish and Wildlife Coordination Act of 1958 as amended, P.L. 85-624, 72 Stat. 563, 16 U.S.C. §661, *et seq.*

- Mangnuson Fishery Conservation and Management Act of 1976, P.L. 94-625, 90 Stat. 331m 16 U.S.C. §1801 *et seq.*
- Migratory Bird Conservation Act, P.L. Chapter 257, 45 Stat. 1222, 16 U.S.C. §715 *et seq.*
- Migratory Bird Treaty Act of 1918, P.L. 186, 40 Stat 755
- National Environmental Policy Act of 1969, P.L. 91-190, 83 Stat. 852, 42 U.S.C. §4321 *et seq.*
- National Historic Preservation Act, as amended, P.L 89-665, 80 Stat. 915, 16 U.S.C. §470 et seq. and 36 CFR 18, 60, 61, 61, 68, 79, 800
- National Park System Final Procedures for Implementing E.O. 11988 and 11990 (45 FR 35916 as revised by 47 FR 36718)
- Protection and Enhancement of Environmental Quality, E.O. 11514 as amended, 1970, E.O. 11991, 35 FR 4247; 1977, 42 FR 26967)
- Resource Conservation and Recovery Act, P.L. 94-580, 30 Stat. 1148, 42 U.S.C. §6901 *et seq.*
- Rivers and Harbors Act of 1899, 33 U.S.C. Chapter 425, as amended by P.L. 97-332, October 15, 1982 and P.L. 97-449, 33, U.S.C. §§401-403
- Water Resources Planning Act of 1965 (P.L. 89-90, 42 U.S.C. §1962 *et seq.)* and Water Resource Council's Principles and Standards, 44 FR 723977
- Watershed Protection and Flood Prevention Act, P.L. 92-419, 68 Stat. 666, 16 U.S.C. §100186
- Wild and Scenic Rivers Act, P.L. 90-542, as amended, 16 U.S.C. 1271-1287
- Wilderness Act of 1964, 16 U.S.C. 1131-1136, 78 Stat. 890

Other Citations

- Administrative Procedures Act, 5 U.S.C. §551-559, §§701-706
- Comprehensive Environmental Response, Compensation and Liability Act of 1980, P.L. 96-51042 U.S.C. 9601 – 9675
- Concessions Policy Act of 1965, P.L. 89-249, 79 Stat. 969, 16 U.S.C. §20 *et seq.*
- Department of Transportation Act of 1966, P.L. 89-670, 80 Stat. 931, 49 U.S.C. §303
- Executive Order 12003: Energy Policy and Conservation, 3 CFR 134 (Supp. 1977), 42 U.S.C. §2601
- Executive Order 12008: Federal Compliance with Pollution Control Standards
- Executive Order 12372: Intergovernmental Review of Federal Programs, 47 FR 30959
- Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
- Executive Order 13007: Indian Sacred Sites (61 FR 26771-26772 (1996))
- Executive Order 6166: Organization of Executive Agencies (Amended by E.O. 6226, 6586, 6623, 6639, 6728, 12608)
- Forest and Rangeland Renewable Resources Planning Act, P.L. 95-307, 92 Stat. 353, 16 U.S.C. §1600 *et seq.*

APPENDIX A

Compliance Coordination

DIVISION OF NATURAL RESOURCES
Wildlife Resources Section
Operations Center
P.O. Box 67
Elkins, West Virginia 26241-3235
Telephone (304) 637-0245
Fax (304) 637-0250

Joe Manchin III
Governor

Frank Jezioro
Director

February 28, 2006

Mr. Calvin F. Hite
National Park Service
New River Gorge National River
P.O. Box 246
Glen Jean, WV 25846

Dear Mr. Hite:

Thank you for contacting us regarding rare, threatened and endangered (RTE) species and critical habitats within the New River Gorge National River. Enclosed is disk containing a spreadsheet listing the RTE species and communities currently known from within the National River. The list includes the species or community names, rarity ranks, federal status, date of last observation, survey site and coordinates in NAD 83/Zone 17.

We hope that these species are taken into consideration when planning future projects for the National River. Please let us know if you require any additional information as work on the Management Plan progresses.

Sincerely,

Barbara Sargent
Environmental Resources Specialist
Natural Heritage Program

enclosure

WEST VIRGINIA
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CULTURE & HISTORY

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Mr. Calvin Hite, Superintendent
New River Gorge National River
104 Main Street
PO Box 246
Glen Jean, WV 25846

Re: Nuttallburg Mining Complex and Town, Fayette County
National Register of Historic Places

Dear Mr. Hite:

We have reviewed the National Register of Historic Places nomination for the Nuttallburg Coal Mining Complex and Town. In our opinion, the complex is eligible for listing in the National Register under the following criteria, areas of significance, and levels of significance:

NR Criteria	Area of Significance	Level of Significance
Criterion A	Business (Fordson Coal Co. vertical integration)	National
Criterion B	Industry (John Nuttall)	Local
Criterion C	Engineering (coal mining complex)	National
Criterion D	Archaeology (town site)	Local

Due to the identification of several areas of significance, we have clarified the relative levels of significance for each area of significance. We agree that the important business and engineering elements of the property's history were important to the nation as a whole, thus meriting recognition at the national level of significance. Our determination is rendered for the purposes of processing the nomination at the state level. It does not carry the weight of an official determination of eligibility by the Keeper of the National Register.

Sincerely,

Alan R. Rowe

Alan Rowe
National Register Coordinator

cc: Ms. Betsy Iglehear
Mr. Richard Segars

PREPARERS

- **NPS Planning Team**

  New River Gorge National River

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  Deborah Darden, Deputy Superintendent
  Mike Hunter, Deputy Superintendent for Operations (former)

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  Gene Clare, Geologist
  Paul Fox, Automotive Worker
  Gary Hartley, Chief Ranger
  Duncan Hollar, Assistant Chief Ranger (former)
  Dave Fuerst, Cultural Resource Specialist
  Michael Hartzog, South District Maintenance Foreman
  Adrienne Jenkins, Park Ranger, Interpretation
  Sheryle Lindley, Facility Manager
  Lynn Loetterle, Sandstone District Interpreter (former)
  Peggy Maddy, Contract Specialist (former)
  Greg Malcolm, Canyon District Law Enforcement Ranger
  James Minor, Assistant Facility Manager
  Jennifer Noll, South District Law Enforcement Ranger
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  Greg Phillips, IT Specialist
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ICON architecture, inc.

Jonathan S. Lane, AIA, AICP, Principal
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Kevin Losso, GIS Specialist
Bora Mici, Planner
Richard Perkins, Graphic Designer
Kevin Tofias, Researcher

ACRONYMS

AML – abandoned mine lands
BMPs – best management practices
CEQ – Council on Environmental Quality
CFR – Code of Federal Regulations
CLI – Cultural Landscape Inventory
CLR – Cultural Landscape Report
DO – Director's Order
EA – Environmental Assessment
EO – Executive Order
EPA – Environmental Protection Agency
FEMA – Federal Emergency Management Agency
FICR – Federal Impact Conversion Rating (pursuant to the Farmland Protection Policy Act)
GMP – General Management Plan
IHTIA – West Virginia University, Institute for the History of Technology and Industrial Archaeology
IP – Implementation Plan
NEPA – National Environmental Policy Act
NHPA – National Historic Preservation Act
NPDES – National Pollutant Discharge Elimination System
NPS – National Park Service
NR – National River
NRCS – U.S Department of Agriculture Natural Resources and Conservation Service
NWI – U.S. Fish and Wildlife Service National Wetland Inventory
PL – Public Law
ppm – parts per million
ROW – right-of-way
RL – river left (looking downstream)
RR – river right (looking downstream)
SHPO – State Historic Preservation Officer
SR – West Virginia state road
SWPPP – Stormwater Pollution Prevention Plan
USC – U.S. Code
WV DEP – West Virginia Division of Environmental Protection
WV DNR – West Virginia Division of Natural Resources
WV DT – West Virginia Division of Tourism
WV GES – West Virginia Geologic and Economic Survey
WV SHPO – West Virginia State Historic Preservation Officer
WVU – West Virginia University
US ACOE – U.S. Army Corps of Engineers

US 19 – U.S. Route 19
US DC – U.S. Department of Commerce, Bureau of the Census
US FWS – U.S. Fish and Wildlife Service
USGS – U.S. Geological Survey

As the nation's primary conservation agency, the Department of the Interior has responsibility for most of our nationally owned public land and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration

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