

## Cultural Landscape Report Part - I

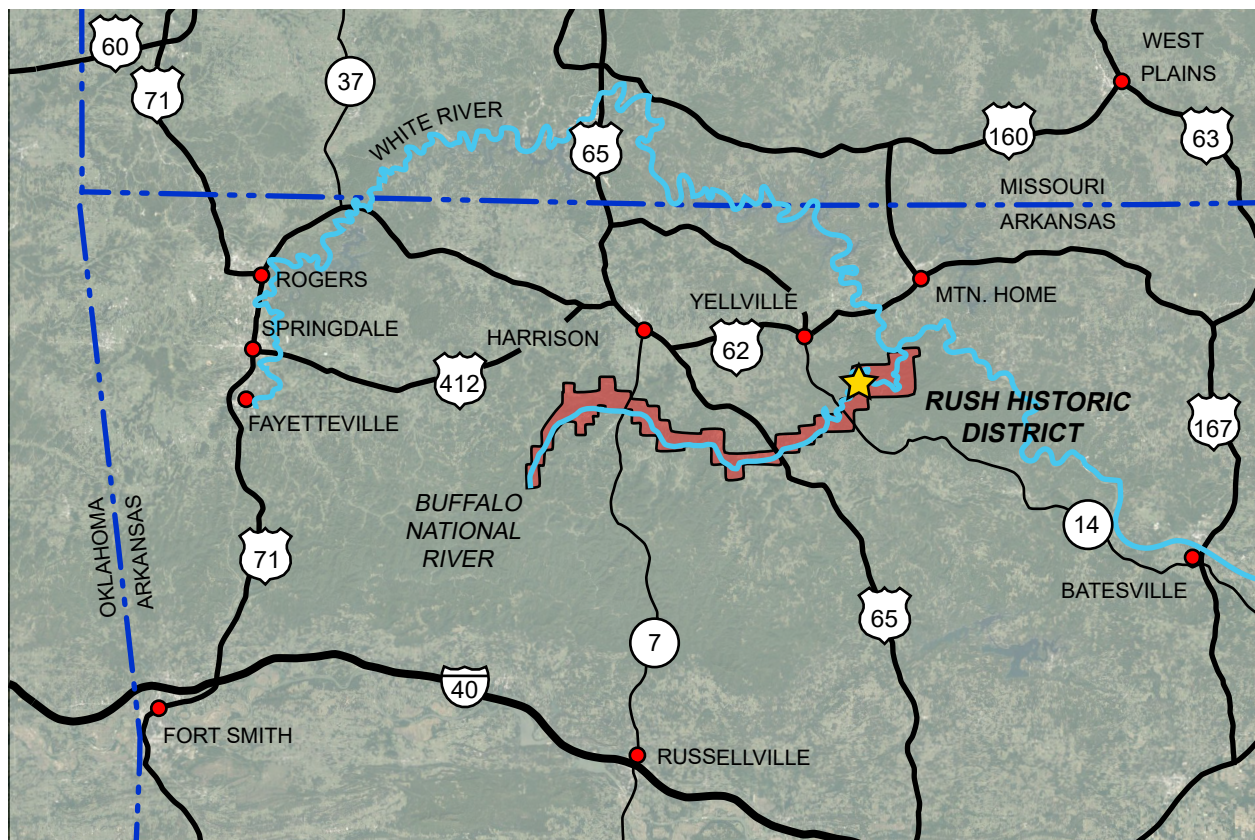
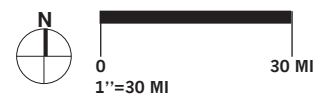


Figure 1-1. Rush Historic District is in the Buffalo National River in the Ozark Highlands. It is accessed by Arkansas Highway 14 and County Road 635. A boat landing on the river provides water access. (Mundus Bishop 2017, adapted from [nps.gov/dscw/cad-sheets.htm](https://nps.gov/dscw/cad-sheets.htm), Google Maps 2017)



# Chapter 1. Introduction

## Introduction

1 This document presents the Cultural	45 National Park Service's "Planning Portfolio"
2 Landscape Report and Environmental	46 construct, consisting of a compilation of
3 Assessment (CLR/EA) for Rush Historic	47 individual plans, studies, and inventories,
4 District (study area), a component of Buffalo	48 which together guide park decision making.
5 National River (the park).	49 The planning portfolio enables the use of
6	50 targeted planning products to meet a broad
7 This CLR/EA provides detailed	51 range of park planning needs, a change from
8 documentation of Rush Historic District's	52 the previous National Park Service (NPS)
9 historical development, evaluates its existing	53 focus on standalone general management
10 condition, analyzes landscape characteristics,	54 plans. The general management plan remains
11 assesses integrity, and defines contributing	55 a critical piece of the planning framework and
12 features.	56 will be revised in a timely manner as part of
13	57 the park's planning portfolio.
14 The CLR/EA is the primary treatment	58
15 document for Rush Historic District, used to	59
16 guide management and stewardship. This	60
17 document defines an appropriate treatment	61
18 strategy for managing Rush Historic District	62
19 and accommodating visitor use and access.	63
20 The treatment guidelines provide interim and	64
21 long-term resource management, sustainable	65
22 cyclic maintenance, and support educational	66
23 programs and recreation.	67
24	68
25 This work builds upon studies, investigations	69
26 and documents that already exist for	70
27 Rush Historic District. These include the	71
28 2008 Buffalo National River "Foundation	72
29 for Planning and Management (FPM),"	73
30 2015 Buffalo National River Long Range	74
31 Interpretive Plan (LRIP), 2012 Rush Historic	75
32 District Cultural Landscape Inventory	76
33 (CLI), 1987 Rush Historic District National	77
34 Register of Historic Places nomination	78
35 (NRHP), 2006 NPS Rogers et al. "Historic	79
36 Resource Documentation, Morning Star Mines	80
37 Interpretive Area," and numerous other plans	81
38 and resource reports.	82
39	83
40 This plan fulfills a park priority for facility	84
41 asset management and resource management	85
42 at Rush Historic District of Buffalo National	86
43 River and serves as a component of the	87
44 park's planning portfolio. This follows the	88



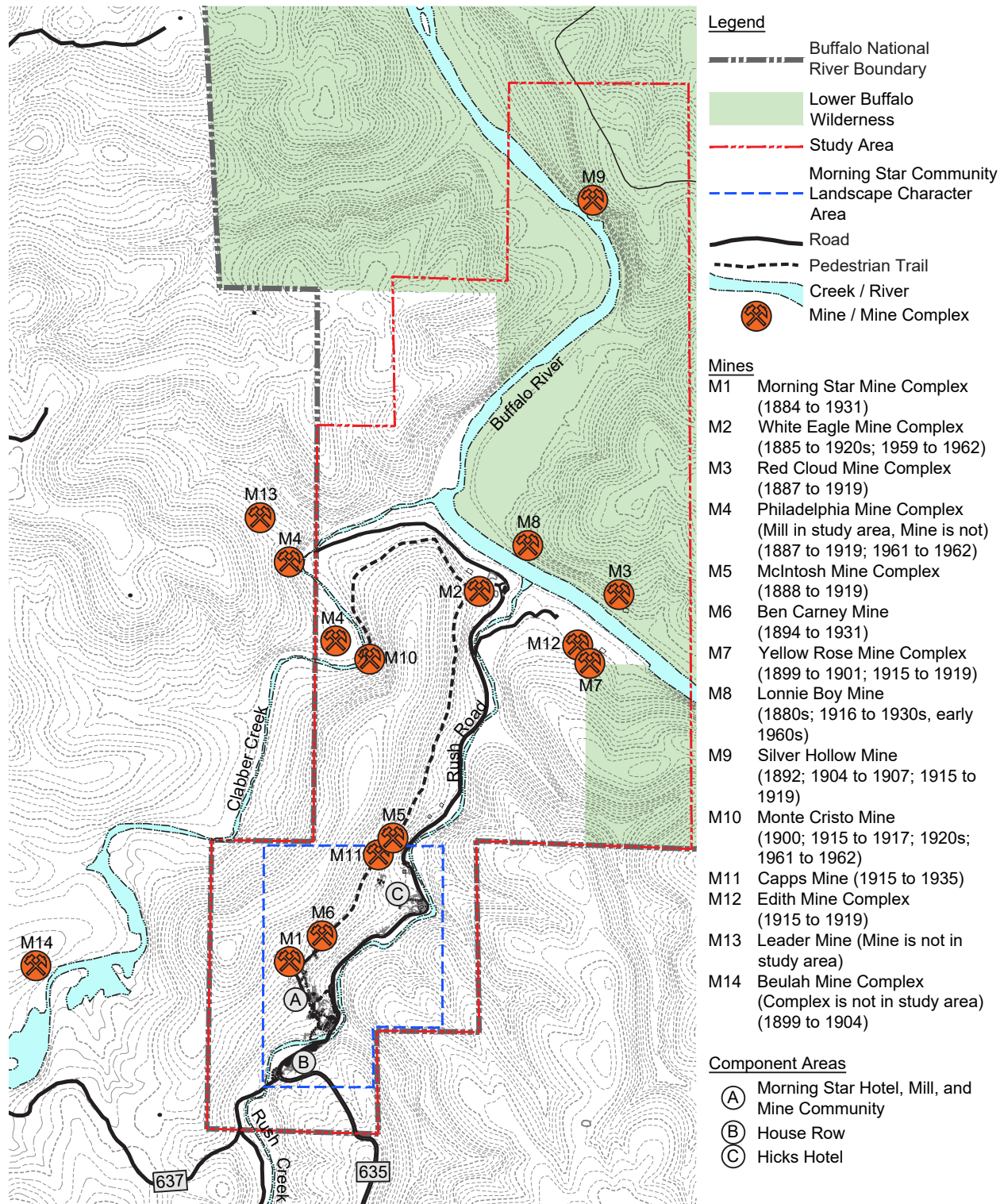
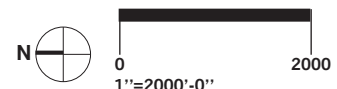


Figure 1-2. Rush Historic District (study area) is defined by steep forested hillsides and narrow river valleys. The former zinc mining district is evidenced by the remains of fourteen mines, eleven of which are in the study area, and seven zinc concentrating mills. Of what was once a larger town, today the Morning Star Community landscape character area is marked by seven standing buildings, ruins of buildings and structures, stone retaining walls, ornamental vegetation, and circulation routes that date from the period of significance.





## Study Area

Rush Historic District is in the eastern half of the Buffalo National River in Marion County, Arkansas. Buffalo National River, in northern Arkansas in the Ozark Highlands, provides recreation and access to 135 miles of free-flowing river with boat landings, campgrounds, and visitor facilities. The study area encompasses a 1,316 acre former zinc mining district that flourished in the late 19th and early 20th centuries. The study area is defined by rugged terrain of steep hillsides, exposed rock outcroppings, and the narrow valleys of Buffalo River and two tributaries, Rush and Clabber creeks. Oak/hickory forest is the prominent vegetation type. A portion of the study area is within the Lower Buffalo Wilderness.

This CLR/EA describes the cultural landscape in two sections: the study area and Morning Star Community landscape character area. An overall description and treatment approach for the study area is presented first, including ten of the eleven mines and mine complexes (Morning Star Mine Complex is included in the Morning Star Community landscape character area). Detailed treatment guidance for the Morning Star Community landscape character area, historically the most intensely developed portion of the landscape, is presented separately.<sup>1.1</sup>

Mining activity began when zinc deposits were discovered in the exposed rock outcroppings of Rush Mountain in the 1880s. A mining community quickly grew from individual prospectors' digs to full-scale industrial zinc mining of vast room-and-pillar mines, zinc concentrating mills, and support structures. Mines built on the side of Rush Mountain accessed zinc deposits. Mills and

communities developed downhill and on valley floors. Trees were cleared to provide fuel and building materials, and to make room for mining activities.

The First World War's increased demand for zinc, used in munitions, greatly expanded the industry. At its height, the mining district included ten mining companies, fourteen mines (eleven of which are in the study area), seven zinc concentrating mills, and over 2,000 residents.<sup>1.2</sup> Prior to the war's end the national surplus of zinc led to deflation in prices and the mines quickly closed. The most prominent mine, Morning Star Mine (M1), closed in 1931 signaling the end of the mining boom, although informal mining continued into the 1960s.

Rush Historic District was listed in the NRHP in 1987. It is significant for its role in the development of Arkansas mineral resources; for the cohesive unity of the mining community; and for the information that its buildings, structures, mines, and archeological sites offer for an understanding of historical mining techniques and associated community life. The period of significance is 1885 to 1931.<sup>1.3</sup>

Contributing features include mines, mining complexes, and features associated with the mining community. This encompass buildings and building ruins, structures, vegetation, and archeological resources. Mine complexes consist of a mine with an associated mill, mines are those not associated with a mill. The ruins of eleven mines and mining complexes include ruins of seven zinc concentrating mills, and eleven former zinc

<sup>1.1</sup> A "landscape character area" is an area defined by the physical qualities of a cultural landscape and the type and concentration of cultural resources.

<sup>1.2</sup> *Cultural Landscapes Inventory*. (U.S. Department of the Interior, National Park Service, 2012), 29.

<sup>1.3</sup> *Rush Historic District, National Register of Historic Places Inventory - Nomination Form*. (1987), 36.

<b>Matrix 1-1. Study Area - Features</b>		
<b>Feature</b>	<b>Date</b>	<b>Contributing/ Non-Contributing</b>
<b><i>Ruins</i></b>		
New Town Site	1915 to 1920	Contributing
New Town Building Ruin	c 1915	Contributing
Keystone Town Site	1904 to 1919	Contributing
McIntosh Hotel Ruins	1900	Contributing
McIntosh Livery Ruins	1900	Contributing
Pop Campbell House Site Ruins	1900	Contributing
George Jones Site	c 1929 to 1939	Contributing
Boiling Spring Site	c 1915	Contributing
Gotley House Site	c 1899	Contributing
Cold Springs Hollow Structures	c 1910 to 1920	Contributing
Mine Manager's House Site	c 1925	Contributing
Pat McCormick House Site	Date unknown	Contributing
Hicks Rental Houses Sites	1915	Contributing
Con Medley House Site	c WWI	Contributing
William Fernimen Store Site	1906 to 1918	Contributing
Vicker Springs Houses Sites	c 1900	Contributing
Messer General Store Site	1910 to 1917	Contributing
Exeter Town Site	1887-1890s	Contributing
<b><i>Circulation</i></b>		
Rush Road	c 1880	Contributing
Morning Star Trail Parking	1988	Non-Contributing
Clabber Creek Road		Contributing
Morning Star Trail	1988	Non-Contributing
Mine Level Trail	c 1885	Historic portions that follow Tramway = Contributing
Mine Level Trail at Ore Cart		Contributing
Clabber Creek Trail		Non-Contributing
McIntosh Roadbed and Spurs	c 1900-1930s	Contributing
Driveway	c 1950	Non-Contributing
Old Road to White Eagle Mine	c 1958	Non-Contributing
Rush Landing	c 1980	Non-Contributing

1 mines (see Matrix 1-2). Circulation routes  
2 include Rush Road, the major vehicular  
3 route that terminates at a boat launch (Rush  
4 Landing) at Buffalo River, and hiking trails  
5 that follow historic routes. Visitor facilities  
6 include a campground and picnic area.  
7  
8 Since the period of significance, the cultural  
9 landscape was reforested naturally, buildings  
10 have been removed or have been subject to  
11 deterioration and arson. Historic circulation  
12 networks, spatial relationships, and mining  
13 remnants remain but are obscured by  
14 overgrown vegetation. In several locations,  
15 contemporary features encroach on the  
16 historic setting.

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<b>Matrix 1-1. Study Area - Features</b>		
<b>Feature</b>	<b>Date</b>	<b>Contributing/ Non-Contributing</b>
<b>Capps Mine Roadbed</b>		Contributing
<b>Rush Landing Parking</b>		Non-Contributing
<b>New White Eagle Mill Parking</b>		Non-Contributing
<b>Campground Road</b>	1915 and earlier	Contributing
<b>Rush Campground Parking</b>		Non-Contributing
<b><i>Buildings</i></b>		
<b>Rush Landing Comfort Station</b>		Non-Contributing
<b>Rush Landing Shelter</b>		Non-Contributing
<b>Rush Campground Comfort Station</b>		Non-Contributing
<b><i>Small Scale Features</i></b>		
<b>Pole and Cables</b>	1950s	Non-Contributing
<b>Ore Cart</b>		Contributing
<b>Remnant Fencing</b>		Contributing
<b>Stone Retaining Wall</b>		Contributing
<b>Rush Landing Shelter Interpretive Panels</b>		Non-Contributing
<b>Rush Landing Shelter Information Panel</b>		Non-Contributing
<b>Rush Landing Picnic Table (4)</b>		Non-Contributing
<b>Rush Campground Pay Station</b>		Non-Contributing
<b>Rush Campground Information Panel</b>		Non-Contributing
<b>Rush Campground Picnic Table (12)</b>		Non-Contributing
<b>Rush Campground Fire Ring (12)</b>		Non-Contributing
<b>Rush Campground Lantern Hook (12)</b>		Non-Contributing

<b>Matrix 1-2. Study Area - Mines and Mine Complexes</b>		
<b>Mine or Mine Complex</b>	<b>Associated Mine</b>	<b>Associated Mill</b>
<b>Morning Star Mine Complex (M1)</b> <b>RE: Morning Star Community</b> <b>Landscape Character Area</b>	Morning Star Mine Morning Star Drift Mine A Morning Star Drift Mine B Morning Star Drift Mine C Morning Star Loading Platform Morning Star Mine Opening 1 Morning Star Shaft Morning Star Mine Open Cut Morning Star Mine Spoils Pile	Morning Star Mill
<b>White Eagle Mine Complex (M2)</b>	White Eagle Mine	White Eagle Mill Ruins New White Eagle Mill Ruins
<b>Red Cloud Mine Complex (M3)</b>	Red Cloud Mine	Red Cloud Mill Ruins
<b>McIntosh Mine Complex (M5)</b>	McIntosh Mine	McIntosh Mill Ruins
<b>Ben Carney Mine (M6)</b>		Morning Star Mill
<b>Yellow Rose Mine Complex (M7)</b>	Yellow Rose Mine	Yellow Rose Mill Ruins
<b>Lonnie Boy Mine (M8)</b>		<i>Unknown</i>
<b>Silver Hollow Mine Complex (M9)</b>	Silver Hollow Mine	Silver Hollow Mill Site
<b>Monte Cristo Mine (M10)</b>		Philadelphia Mill (Outside of study area)
<b>Capps Mine (M11)</b>		<i>Unknown</i>
<b>Edith Mine Complex (M12)</b>	Edith Mine	Edith Mill Ruins

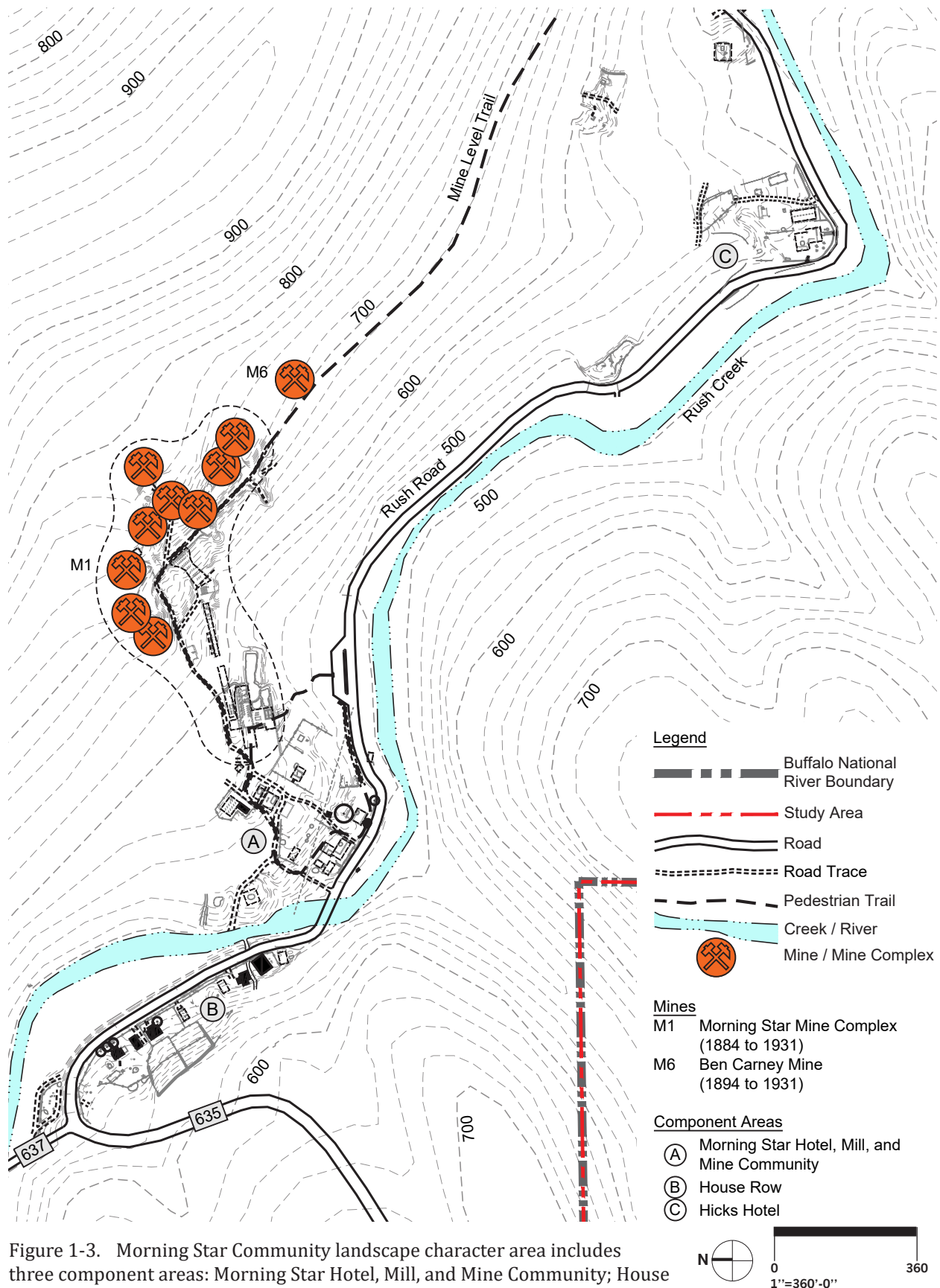


Figure 1-3. Morning Star Community landscape character area includes three component areas: Morning Star Hotel, Mill, and Mine Community; House Row; and Hicks Hotel.



## Morning Star Community Landscape Character Area

Morning Star Community landscape character area represents the most intensely developed portion of Rush Historic District. This landscape character area generally extends from the park boundary on the west, north to Morning Star Mill, east to Hicks Hotel, and to Rush Creek on the south. Mining related activities are represented by residences and businesses. Key landscape characteristics include spatial organization, circulation, buildings, and vegetation.

Three component areas are distinguished within this landscape character area (Figure 1-3).

- Morning Star Hotel, Mill, and Mine Community;
- House Row;
- Hicks Hotel

Detailed analysis of landscape characteristics and detailed treatment recommendations are provided for each of the three component areas.

Prominent features of the Morning Star Hotel, Mill, and Mine Community include the ruins of the Morning Star Mill, Morning Star Mine Office, and Morning Star Hotel. Rush Blacksmith Shop and Rush Smelter are the only extant buildings. All other buildings and structures are only evident as ruins, foundations or lesser traces on the landscape.

House Row consists of five extant buildings, several building ruins and evidence of former residential activities.

The site of Hicks Hotel and Hicks General Store includes building ruins, extant small scale features, and ornamental vegetation.

Matrix 1-3. Morning Star Community Landscape Character Area - Features		
Feature	Date	Contributing/ Non-Contributing
<i>Buildings and Structures</i>		
Rush Smelter	1886	Contributing
Rush Blacksmith Shop	1935	Contributing
Morning Star Hotel Ruins	c 1900	Contributing
Lyons House Ruins	c 1925	Contributing
Post Office Ruins	c 1890	Contributing
Morning Star Livery Barn Ruins	c 1899	Contributing
Smith House Ruins	c 1899	Contributing
Chase and Mulholland Store Ruins	c 1899	Contributing
Morning Star Mine Office Ruins	c 1911	Contributing
Warehouse Ruins	1927	Contributing

<b>Matrix 1-3. Morning Star Community Landscape Character Area - Features</b>		
<b>Feature</b>	<b>Date</b>	<b>Contributing/ Non-Contributing</b>
Oil Storage House Ruins	c 1911	Contributing
Morning Star Mill Ruins	1898	Contributing
Morning Star Mill Stone Retaining Wall		Contributing
Morning Star Mill Stone Tower Ruins		Contributing
Tramway Ruins		Contributing
Barn Ruins	c 1902	Contributing
Courthouse Site	c 1916	Contributing
Hopper House Ruins		Contributing
Morning Star Shelter		Non-Contributing
<i>Morning Star Mine (M1)</i>		
Building Site		Contributing
Morning Star Drift Mine A		Contributing
Morning Star Drift Mine B		Contributing
Morning Star Drift Mine C		Contributing
Morning Star Loading Platform		Contributing
Morning Star Mine Opening 1		Contributing
Morning Star Shaft		Contributing
Morning Star Mine Open Cut		Contributing
Morning Star Mine Spoils Pile		Contributing
<i>Small Scale Features</i>		
Stone Retaining Wall at Chase Mulholland Store		Contributing
Scale Pit		Contributing
Stone Retaining Wall - at Tramway		Contributing
Footbridge Pillar	c 1915	Contributing
Rush Blacksmith Shop Fence		Non-Contributing
Wood Fence		Non-Contributing
Interpretive Panels		Non-Contributing
Benches		Non-Contributing

Matrix 1-4. House Row - Features		
Feature	Date	Contributing/ Non-Contributing
<i>Buildings and Structures/Ruins</i>		
Bundy House	c 1899	Contributing
Wash House	c 1899	Contributing
Kastning House	c 1899	Contributing
Brantley House Ruins	c 1899	Contributing
Gotley House Site	c 1899	Contributing
Raby House Ruins	c 1899	Contributing
Storekeeper's House	c 1899	Contributing
Taylor-Medley General Store	c 1899	Contributing
Store Site		Contributing
<i>Small Scale Features</i>		
Shed		Contributing
Root Cellar		Contributing
Chicken House		Contributing
Goose House		Contributing
Privy		Contributing
Trash Piles		Contributing
Privy		Contributing
Mailbox Shelter		Contributing
NPS Fencing		Non-Contributing
NPS Signage		Non-Contributing

Matrix 1-5. Hicks Hotel - Features		
Feature	Date	Contributing/ Non-Contributing
<i>Buildings and Structures/Ruins</i>		
Hicks General Store Ruins	1916	Contributing
Hicks Hotel Site	1903	Contributing
<i>Small Scale Features</i>		
Hicks Wall		Contributing
Stone Flower Beds		Contributing



## Project Purpose and Need

1 The proposed project addresses the  
2 need to preserve Rush Historic District's  
3 historically significant landscape, structures,  
4 and features, and to supplement current  
5 baseline information. This CLR/EA will  
6 generate needed baseline documentation,  
7 supplement existing historical data, provide  
8 recommendations for future study, and  
9 provide guidance for treatment and resource  
10 protection.

11  
12 This CLR/EA is needed to document the  
13 changes to the cultural landscape over  
14 time, to transfer knowledge, and to provide  
15 holistic and integrated guidance for the  
16 long-term preservation and stewardship of  
17 Rush Historic District. The project is needed  
18 to connect cultural landscape maintenance  
19 to other resource management plans and  
20 projects.

21  
22 This CLR/EA addresses the following.

- 23
- 24 • Explore concepts for visitor amenities,  
25 including accommodations for universal  
26 access, and augmenting sustainable  
27 operations.
  - 28
  - 29 • Provide recommendations and guidance  
30 on future protection of the mines,  
31 buildings, and related historic features.
  - 32
  - 33 • Provide guidance on preservation,  
34 maintenance, and treatment of the  
35 cultural landscape.
  - 36
  - 37 • Provide stabilization strategies for the  
38 extant buildings.
  - 39
  - 40 • Reconsider how exterior spaces are  
41 programmed and determine whether  
42 more or different spaces are needed.
  - 43
  - 44

## Project Goals

45 This CLR/EA addresses the following goals.

- 46
- 47 • Summarize the prehistoric/historic  
48 activity in the region/study area to  
49 convey how it influenced today's physical  
50 landscape.
  - 51
  - 52 • Document the current physical conditions  
53 at Rush Historic District to identify  
54 ongoing resource threats and resulting  
55 impacts, such as invasive native and exotic  
56 plants, drainage and/or erosion, and  
57 deferred maintenance.
  - 58
  - 59 • Recommend methods for vegetation  
60 management to control or reestablish  
61 significant views.
  - 62
  - 63 • Identify opportunities for accommodating  
64 universally accessible visitor amenities  
65 such as parking, trails and walkways,  
66 comfort stations/shelters, and  
67 outdoor gathering spaces. Provide  
68 recommendations regarding human  
69 access to restricted resources. Identify  
70 future research potential with regards to  
71 history, mineralogy, archeology, etc.
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## Methodology

1 The CLR/EA was conducted at a thorough  
 2 level of investigation and documentation  
 3 for historical research, existing condition  
 4 assessment, and landscape analysis. This  
 5 research methodology, as defined by the NPS,  
 6 focuses on the use of select documentation  
 7 of known and presumed relevance, including  
 8 primary and secondary sources that are  
 9 readily available.<sup>1.4</sup>  
 10  
 11 The existing condition investigation was  
 12 conducted according to best practices. A  
 13 review of existing documentation included  
 14 information from the park, the Denver Service  
 15 Center eTIC data and information, and the  
 16 National Park Service's Midwest Regional  
 17 Office (NPS-MWRO).<sup>1.5</sup> This review included  
 18 planning documents, administrative reports,  
 19 technical reports, natural resource studies,  
 20 and correspondence.  
 21  
 22 Review of historical documentation included  
 23 the NRHP nomination for Rush Historic  
 24 District, historic drawings and photographs,  
 25 and correspondence available from primary  
 26 and secondary sources. Background data  
 27 provided by the NPS was used to prepare  
 28 CLR/EA base mapping, drawings and  
 29 illustrations. This included historic drawings,  
 30 supplemented with field observations and  
 31 measurements. Contour data is adapted from  
 32 the 2006 Rogers et al. Historic Resource  
 33 Documentation of Morning Star Mine  
 34 Area, and USGS data, and is approximate.  
 35 Site investigations in April and September  
 36 2017 documented the study area's existing  
 37 condition. Archeological research focused  
 38 on review of previous archeological  
 39 investigations. The CLR/EA did not include  
 40 any additional archeological investigations.

42 1.4 Robert R. Page, Cathy A. Gilbert and Susan A. Dolan. *A*  
 43 *Guide to Cultural Landscape Reports: Contents, Processes*  
 44 *and Techniques*. (Washington D.C.: National Park Service,  
 1998).

1.5 (<http://etic.nps.gov/>).

## Park Purpose and Significance

45 Buffalo National River was established in  
 46 1972 as the country's first national river. The  
 47 park's purpose is to preserve, conserve, and  
 48 interpret a clear, clean, free-flowing river and  
 49 its Ozark mountain setting of deep valleys,  
 50 towering bluffs, wilderness, and pastoral  
 51 landscapes.<sup>1.6</sup>  
 52  
 53 The park is significant for its free-flowing  
 54 river, karst geology, Ozark culture, complex  
 55 ecosystem, recreational setting, and the  
 56 22,500 acre Lower Buffalo Wilderness.<sup>1.7</sup>  
 57  
 58 Buffalo River is undammed and is the only  
 59 river protected for its entire length within  
 60 the Ozark Highlands. As a dynamic river  
 61 ecosystem, Buffalo River is important  
 62 for scientific discoveries and advances in  
 63 ecosystem management and restoration.  
 64 Approximately 135 miles of the river are  
 65 included in the boundaries of the park, with  
 66 1.94 miles flowing through Rush Historic  
 67 District. The river originates in the Boston  
 68 Mountains and generally flows in an easterly  
 69 direction to its confluence with White River.  
 70  
 71 The karst geology of the region is a prominent  
 72 landscape feature. Flanking the river are  
 73 bluffs of eroded sandstone, limestone, and  
 74 dolomite that tower in some places 400-feet  
 75 above the river. The park includes a wide  
 76 variety of plant and animal species and a  
 77 diversity of habitats. Visitor amenities include  
 78 more than 100 miles of designated trails and  
 79 21 access points to the river, as well as access  
 80 to three wilderness areas.

84 1.6 P.L. 92-237.

85 1.7 *Buffalo National River, Arkansas, Foundation for Planning*  
 86 *and Management, Foundation Workshop Results, December*  
 87 *2-5, 2008*. (U.S. Department of the Interior, National Park  
 88 Service, 2008). The full statement of significance can be  
 found in the FPM.

## Management

1 Cultural resources include Rush Historic  
2 District, and other sites that reflect the  
3 prehistoric/historic settlement and  
4 development of the park and region.  
5  
6 More than 700 archeological sites have been  
7 recorded. Two bluff shelters, Cob Cave and  
8 Indian Rockhouse, have provided pivotal  
9 information about prehistoric life.  
10  
11 The Boxley Valley is a living rural community  
12 that carries on traditional farming  
13 practices. Other cultural sites include  
14 pioneer homesteads, Civil War sites, and  
15 industrial sites. Historic resources, including  
16 Rush Historic District, are identified as  
17 fundamental resources to Buffalo National  
18 River.<sup>1.8</sup>

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44 1.8 FPM, 11.

45 Rush Historic District is managed by the NPS  
46 as part of Buffalo National River. Maintenance  
47 crews and law enforcement travel from the  
48 visitor contact station at Buffalo Point to  
49 Rush Historic District. The 22,500 acre Lower  
50 Buffalo Wilderness borders Rush Historic  
51 District.

52  
53 The management of Buffalo National River  
54 is primarily guided by the FPM, LRIP, fire  
55 management plan, and 2012 Rush Historic  
56 District Cultural Landscape Inventory (CLI).

57  
58 The FPM establishes the fundamental  
59 resources and values of Buffalo National  
60 River. These include the Ozark cultural  
61 landscape and historic resources including  
62 Rush Historic District.<sup>1.9</sup>

63  
64 LRIP recommendations for Rush Historic  
65 District seek to increase understanding of the  
66 significance of the cultural landscape through  
67 publications and non-personal services.  
68 Recommendations include developing “digital  
69 media to provide virtual access to the historic  
70 Rush Mining district and the prehistoric Rush  
71 campsite. Digital, cross-platform 3-D media  
72 will allow audiences to ‘see what can’t be  
73 seen.’ ” The plan recommends researching  
74 possibilities for providing interpretation via  
75 mobile platforms, as coverage is available.<sup>1.10</sup>

76  
77 The following management issues were  
78 identified in consultation with park staff,  
79 and through research and evaluation of the  
80 cultural landscape. In general, management  
81 issues associated with Rush Historic  
82 District, and existing features, structures,  
83 or associated operations or maintenance

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85 1.9 FPM, 11.

86 1.10 *Buffalo National River, Long Range Interpretive Plan.*  
87 (Harpers Ferry Center, U.S. Department of the Interior,  
88 National Park Service, 2015), 2015, 41-45. and *LRIP*, 41-  
45.

are those that make it difficult to realize the vision and goals of this CLR. These issues assist in defining treatment recommendations to address concerns.

#### **Building and Ruin Stabilization**

The study area's historic buildings are in need of stabilization and repair. Emergency stabilization of Taylor-Medley General Store was undertaken recently, as an interior structure. Identification of the critical assets to prioritize repair work is needed.

Vandalism, including arson, has occurred. Three structures have been destroyed by arson since Rush Historic District was designated. The most recent was in 2004.

#### **Mine Stabilization and Security**

Stabilization of the mine exteriors and potential access is needed. Existing chainlink fencing surrounds the entrances and metal grates are at mine portals. This chainlink fencing is not compatible or historically appropriate, and does little to ensure visitor safety. A need exists to identify how to best secure the mines. Threatened and endangered bats have been recorded living in the mines.

#### **Lack of Interpretation**

Rush Historic District lacks appropriate levels of interpretation that would make it easy for visitors to visualize the extent of mining and development that occurred historically.

The study area is a popular canoe take-out location along Buffalo River. It is the last takeout before the majority of the Lower Buffalo Wilderness; the next takeout is 26 miles downstream at Buffalo City.

Limited interpretation is provided for visitors to or through the study area. To the uninitiated, the landscape does not appear to be a mining district, due to vegetation that obscures the ruins, and loss of buildings. Minimal visitor engagement or interpretation of the historic resources is provided. Most visitors are visiting the area for recreation, not historic interest. Additional, focused interpretation and trails could invite additional visitors. Existing trails are self-guided, and the community desires to expand the trail system.

#### **Vegetation Overgrowth and Management**

Overgrown vegetation obscures cultural resources making it difficult to visualize spaces and understand the development of the mines and community. Some invasive plant species impact the study area.<sup>1.11</sup> The park follows the Terrestrial Habitat Management Plan for vegetation management.

#### **Architectural Barriers Act (ABA) Accessibility**

The study area has steep gradients making universal accessibility difficult. A location for a universal accessible experience is desired along Rush Road.

#### **Archeological Resources**

The study area includes significant prehistoric and historic archeological resources. Prehistoric sites include a site at the mouth of Rush Creek, a site at Clabber Creek and additional unrecorded sites. Rush Historic District contains the numerous

<sup>1.11</sup> Consultation with BUFF staff, CLR/EA Work Session April 2017.

## Environmental Assessment

1 historic sites of former buildings, structures,  
2 smaller features below-grade, and the mines.  
3 No recent archeological work or surveys  
4 have been completed, and opportunities  
5 exist for future archeological work. Sites  
6 are threatened by erosion and looting.  
7 Recommendations are needed to protect the  
8 prehistoric and historic resources.  
9

### 10 **Flooding/Stormwater Run-off**

11  
12 Buffalo River and Rush Creek frequently flood,  
13 impacting buildings and ruins. Stormwater  
14 runoff is an issue around some buildings  
15 and structures. A small intermittent creek  
16 drainage at House Row has potential to  
17 damage the Taylor-Medley General Store.  
18 At Rush Road, drainage is an issue where  
19 the paved road meets the gravel pavement.  
20 Low-water creek crossings are subject to  
21 flash-flooding. Recommendations are needed  
22 to address stormwater runoff and flooding  
23 issues.  
24

### 25 **Biological Resources**

26  
27 Rush Historic District includes important  
28 biological resources such as Buffalo River,  
29 Rush and Clabber creeks, uncommon  
30 vegetation associations, and a number  
31 of bat species, some of which are listed  
32 as threatened or endangered under the  
33 Endangered Species Act. Bats are known to  
34 use the area and have hibernacula in some  
35 mines. Restricting human access to mines  
36 with bat-permeable grates is an important  
37 management measure to reduce impacts to  
38 hibernating bats.  
39  
40  
41  
42  
43  
44

45 The Environmental Assessment (EA) for this  
46 CLR evaluates potential effects on resources  
47 from the proposed treatment alternatives  
48 and a no action alternative. This CLR/EA  
49 provides the decision-making framework to:  
50 1) analyze a reasonable range of alternatives  
51 to meet objectives of the proposal; 2) evaluate  
52 potential issues and impacts to Rush Historic  
53 District's resources and values; and 3)  
54 identify mitigation measures to lessen the  
55 degree or extent of these impacts.  
56

57 This EA evaluates impacts to historic  
58 structures and cultural landscapes,  
59 archaeological resources, special status  
60 species, water resources, and vegetation.  
61 Other impact topics were dismissed because  
62 the project would result in no more than  
63 minor effects. No major effects were identified  
64 that would result from implementing the  
65 proposed alternatives in an initial analysis of  
66 effects.  
67

68 The public, regulatory agencies, tribal  
69 partners, and other stakeholders have had  
70 opportunities to comment on this CLR/EA.  
71 Comments received during scoping and the  
72 public comment period will be considered in  
73 the final evaluation of effects.  
74

### 75 **Scoping**

76  
77 Scoping is an early and open process  
78 to determine the breadth of issues and  
79 alternatives to be addressed in an EA. Park  
80 staff and resource professionals of the NPS  
81 Midwest Regional Office conducted internal  
82 scoping. This interdisciplinary process  
83 defined the purpose and need, identified  
84 potential actions to address the need,  
85 determined the likely issues and impact  
86 topics, and identified the relationship of the  
87 proposed action to other planning efforts at  
88 BUFF and Rush Historic District.



1 As part of tribal consultation, scoping letters  
 2 were sent to federally recognized tribes for  
 3 consultation with Buffalo National River  
 4 on November 7, 2017, to determine if any  
 5 ethnographic or other resources are in the  
 6 project area and to inquire whether tribes  
 7 wanted to be involved in the environmental  
 8 compliance process. The tribes and  
 9 governments that received letters were:

- 10
- 11 • Absentee Shawnee Tribe;
- 12 • Caddo Tribe of Oklahoma;
- 13 • Cherokee Nation of Oklahoma;
- 14 • Eastern Shawnee Tribe of Oklahoma;
- 15 • Osage Tribe of Oklahoma;
- 16 • Quapaw Tribe of Oklahoma,
- 17 • Shawnee Tribe;
- 18 • Tunica-Biloxi Tribe of Louisiana;
- 19 • United Keetoowah Band of the Cherokee
- 20 Nation, and;
- 21 • Wichita and Affiliated Tribes.

22  
 23  
 24 Consultations with Native American tribes  
 25 will continue throughout the planning  
 26 process to ensure that tribal concerns are  
 27 considered and identified resources are  
 28 protected.

29  
 30 Section 106 of the National Historic  
 31 Preservation Act (NHPA) (16 USC 470 et  
 32 seq.) requires the consideration of impacts  
 33 on cultural resources, either listed in or  
 34 eligible to be listed in, the National Register of  
 35 Historic Places. Park staff sent a scoping letter  
 36 to the Arkansas State Historic Preservation  
 37 Office (SHPO) on November 7, 2017 to solicit  
 38 input on issues of concern. BUFF will continue  
 39 to consult with the SHPO to determine the  
 40 effects of the action alternatives on eligible  
 41 historic resources and to develop mitigation  
 42 for impacts on historic features, if any, from  
 43 the preferred alternative.

44

45 In compliance with Section 7 of the  
 46 Endangered Species Act, BUFF also sent a  
 47 scoping letter on November 7, 2017 to the  
 48 U.S. Fish and Wildlife Service (USFWS) to  
 49 solicit input on issues of concern. As part of  
 50 formal Section 7 consultation, the NPS will  
 51 also forward this CLR/EA and NPS' effects  
 52 determination to the USFWS to determine  
 53 if they concur with the NPS' findings of  
 54 effect, and whether additional conservation  
 55 measures are needed to protect listed species.

56  
 57 A public open house was held on October  
 58 23, 2018 at Harrison, Arkansas to allow the  
 59 public an opportunity to learn about the CLR/  
 60 EA process and to provide comments on  
 61 the proposed treatment alternatives and on  
 62 issues they believe are important to address  
 63 in the CLR/EA.

64  
 65 Finally, the public, regulatory agencies, tribal  
 66 partners, and others have an opportunity to  
 67 comment on the final CLR/EA during a public  
 68 comment period. Comments will be compiled  
 69 and taken into consideration by NPS when  
 70 deciding which of the alternatives to select for  
 71 implementation.

72

### 73 **Issues and Impact Topics**

74

75 An important part of the decision-making  
 76 process is seeking to understand the  
 77 consequences of making one decision  
 78 over another. This CLR/EA identifies the  
 79 anticipated impacts of possible actions on  
 80 certain resources and values. The impacts are  
 81 organized by topic, such as "vegetation" or  
 82 "historic structures." Impact topics serve to  
 83 focus the environmental analysis and ensure  
 84 the relevance of impact evaluation.

85

86 Impact topics were developed from the  
 87 questions and comments brought forth  
 88 during scoping; site conditions; staff



1 knowledge of resources; and any laws,  
2 regulations, policies, or orders applicable  
3 to the project. Some topics were dismissed  
4 from detailed analysis because the resource is  
5 not present in the study area or because the  
6 treatment alternatives would either have no  
7 effect on the impact topic, or the effects would  
8 be unnoticeable or barely noticeable. Some  
9 impact topics were retained even though  
10 the effects of the alternatives would be small  
11 because the impact topic is a particularly  
12 sensitive resource, or was identified as an  
13 important topic in scoping.

14

15 As a rule, an issue or impact topic is carried  
16 forward for detailed analysis if:

17

- 18 • the environmental impacts associated  
19 with the issue are central to the proposal  
20 or of critical importance;
- 21 • a detailed analysis of environmental  
22 impacts related to the issue is necessary  
23 to make a reasoned choice between  
24 alternatives;
- 25 • the environmental impacts associated  
26 with the issue are a big point of  
27 contention among the public or other  
28 agencies;
- 29 • or there are potentially significant  
30 impacts to resources associated with the  
31 issue.

32

### 33 **Impact Topics Selected for Analysis**

34

35 The topics evaluated in detail in this CLR/EA  
36 are:

37

- 38 • Cultural landscapes and historic  
39 structures;
- 40 • Archaeological resources;
- 41 • Special status species;
- 42 • Water resources;
- 43 • Vegetation

44

45

46

### 47 **Impact Topics Dismissed from Further**

#### 48 **Consideration**

49

50 According to NPS guidance on preparing EAs,  
51 it is not necessary to carry an issue or impact  
52 topic forward for detailed analysis simply  
53 because a resource is present or is affected.  
54 Detailed analysis under each alternative is  
55 reserved for significant issues (i.e., pivotal  
56 issues or issues of critical importance) that  
57 will play a key role in selecting a preferred  
58 alternative. Other than the retained impact  
59 topics previously listed, remaining impact  
60 topics were eliminated from consideration  
61 because either the resources are not present  
62 in the areas proposed for management  
63 implementation or because the effects, if any,  
64 would be negligible to minor, either with  
65 impacts alone or with mitigation measures.  
66 Because they are often considered in EAs or  
67 were preliminarily identified during scoping  
68 and are dismissed in this CLR/EA, reasons for  
69 dismissing certain impact topics or issues are  
70 summarized below.

71

#### 72 Geology and Soils

73

74 While geologic resources contribute to  
75 the significance of the park, the treatment  
76 alternatives would have little to no impact  
77 on site geology because no subsurface  
78 excavation is anticipated to be deep enough  
79 to affect important or unusual geologic  
80 formations. Any activities proposed in the  
81 study area would have indiscernible effects  
82 on soils because activities would occur  
83 within previously disturbed areas, would  
84 not substantially affect the soil profile, and/  
85 or would include measures to minimize  
86 or avoid changes in soil erosion. Because  
87 the alternatives would not result in any  
88 unacceptable effects, this topic was dismissed  
89 from further analysis.

90

91

92

## 1 Wetlands

2  
3 The term “wetlands” means those areas  
4 that are inundated by surface water or  
5 saturated by ground water frequently enough  
6 to support a prevalence of vegetation that  
7 requires saturated or seasonally saturated  
8 soil conditions for growth and reproduction.  
9 Wetlands generally include swamps, marshes,  
10 bogs, and similar areas such as sloughs,  
11 potholes, wet meadows, river overflows, mud  
12 flats, and natural ponds.

13  
14 A survey for wetlands at Rush Historic  
15 District has not been completed, so the  
16 location and extent of wetlands that may be  
17 affected by the treatment alternatives is not  
18 known; although, it is certain that wetlands  
19 of some type and size are adjacent to Buffalo  
20 river and Rush and Clabber creeks. Other  
21 wetlands may be associated with smaller  
22 streams and hillside seeps. An estimate of  
23 the order of magnitude of wetlands in Rush  
24 Historic District can be made based on  
25 vegetation community mapping completed by  
26 the NPS Vegetation Inventory Program.<sup>1.12</sup> The  
27 Bottomland Hardwood Forest, Bottomland  
28 Shrubland, and Gravel Bar Sparse Vegetation  
29 categories are present in 75 acres of the  
30 floodplains of Buffalo River and Rush and  
31 Clabber creeks at Rush. Floodplains are  
32 where wetlands are most likely to be present.  
33 The three categories include vegetation  
34 associations dominated by species often  
35 found in wetlands, including box-elder (*Acer*  
36 *negundo*), silver maple (*Acer saccharinum*),  
37 green ash (*Fraxinus pennsylvanica*), sweetgum  
38 (*Liquidambar styraciflua*), hazel alder (*Alnus*  
39 *serrulata*), and rough-leaved dogwood  
40 (*Cornus obliqua*). If 10% of the 75 acres

41  
42  
43 1.12 Kevin Hop, et al. *National Park Service vegetation*  
44 *inventory program: Buffalo National River, Arkansas.*  
45 *Natural Resource Report NPS/HTLN/NRR—2012/526.*  
46 (Fort Collins: U.S. Department of the Interior, National  
Park Service, 2012). <https://www1.usgs.gov/vip/buff/buffrpt.pdf> (accessed October 3, 2017).

47 covered by the three categories are assumed  
48 to be wetlands (a conservative estimate),  
49 7.5 acres of wetlands would be present at  
50 Rush. The actual number of acres of wetlands  
51 is likely higher, but well within an order of  
52 magnitude of the estimate.

53  
54 Proposed treatment alternatives would  
55 primarily be in upland areas on hillsides and  
56 well-drained areas, so impacts to wetlands  
57 are not anticipated for any treatment  
58 alternatives. Prior to implementing vegetation  
59 or ground-disturbing activities, areas would  
60 be evaluated for the presence of wetlands.  
61 If any wetlands were identified within the  
62 project footprint, impacts would be avoided  
63 by revising the activity, if possible.

64  
65 If unavoidable impacts would occur because  
66 of constructing visitor trails, for example,  
67 NPS would comply with the provisions  
68 of Executive Order 11990 (Protection of  
69 Wetlands) and NPS Director’s Order #77-1  
70 (Wetland Protection), minimizing impacts  
71 as much as practicable. In addition to the  
72 requirements of the Director’s Order, NPS  
73 activities that involve the discharge of  
74 dredged or fill material into wetlands or  
75 other “waters of the United States” must also  
76 comply with Section 404 of the Clean Water  
77 Act and Section 10 of the Rivers and Harbors  
78 Act. Under Section 404, authorized activities  
79 with wetland impacts over 0.10 acre must  
80 include a compensatory wetland mitigation  
81 plan, which typically results in no net loss of  
82 wetland functions and values.

83  
84 In the improbable event that unanticipated,  
85 unavoidable wetland impacts would be as  
86 high as 0.5 acre in extent, the impacts would  
87 be six percent of the estimated 7.5 acres  
88 of wetlands in Rush Historic District and  
89 an even smaller percentage of wetlands in  
90 Buffalo National River. Impacts would likely  
91 be authorized under one or more Clean  
92 Water Act Section 404 nationwide permits.

1 The nationwide permits are issued following  
2 the determination by U.S. Army Corps of  
3 Engineers and Environmental Protection  
4 Agency through their NEPA process that  
5 impacts of 0.5 acre or less do not have  
6 a significant adverse effect on wetland  
7 resources. Therefore, because the worst case  
8 of 0.5 acre of impacts would impact just 6%  
9 of estimated Rush Historic District wetlands  
10 and the impacts would be authorized under  
11 a permit that considers 0.5 acres of impact  
12 to not be significant under NEPA, , wetlands  
13 were dismissed as an impact topic.

14

#### 15 Wildlife

16

17 A variety of wildlife species are found in  
18 the park, including various birds, reptiles,  
19 amphibians, and mammals. The study area  
20 provides somewhat limited wildlife habitat  
21 because parts of the area consist of disturbed  
22 areas associated with structures, trails, and  
23 roads. Human activity in the area further  
24 limits wildlife use compared to more intact  
25 habitats elsewhere in the park. The trees  
26 and shrubs surrounding the structures and  
27 landscaping provide some habitat for birds,  
28 insects, and small mammals (including bats).

29

30 Proposed treatment alternatives include  
31 vegetation management activities such as  
32 thinning trees and shrubs and reestablishing  
33 landscape features associated with Rush  
34 Historic District's period of significance.  
35 At most, 10.84 acres within the study  
36 area boundary may receive at least some  
37 vegetation management treatment, with most  
38 tree and shrub thinning focused around the  
39 structures and ruins. Proposed treatment  
40 alternatives would result in the loss or  
41 disturbance of select trees and shrubs, which  
42 would have a long-term, minor adverse effect  
43 on wildlife displaced by the habitat change.  
44 Because similar habitats are readily available  
45 in areas surrounding the study area and in the  
46 park, on local and regional levels, the change

47 of wildlife habitat associated with vegetation  
48 management would be small. Measures such  
49 as performing vegetation removal outside  
50 of bird and bat reproductive season would  
51 be undertaken to avoid disturbing active  
52 bird nests or bat maternity roosts. The small  
53 scale of vegetation affected and mitigation  
54 measures to minimize impacts would result  
55 in negligible to minor impacts on wildlife, so  
56 wildlife was dismissed as an impact topic.

57

#### 58 Floodplains

59

60 The proposed alternatives would not modify  
61 structures or topography in the floodplains  
62 along Buffalo River, Rush or Clabber creeks, or  
63 any other streams in the study area. Because  
64 there would be no effect on floodplains,  
65 this topic was dismissed from further  
66 consideration.

67

#### 68 Indian Trust Resources

69

70 The federal Indian trust responsibility is  
71 a legally enforceable fiduciary obligation  
72 on the part of the United States to protect  
73 tribal lands, assets, resources, and treaty  
74 rights. Secretarial Order 3175 requires that  
75 any anticipated impacts to Indian trust  
76 resources from a proposed project or action  
77 by Department of the Interior agencies  
78 be explicitly addressed in environmental  
79 documents. The order represents a duty to  
80 carry out the mandates of federal law with  
81 respect to American Indian and Alaska Native  
82 tribes. No Indian trust resources are present  
83 at Buffalo National River, so this topic was  
84 dismissed from detailed analysis.

85

#### 86 Ethnographic Resources

87

88 Ethnographic resources are defined by  
89 the NPS as any "site, subsistence, or other  
90 significance in the cultural system of a group  
91 traditionally associated with it." Certain  
92 contemporary Native American and other  
93 communities are permitted by law, regulation,

1 or policy to pursue customary religious,  
 2 subsistence, and other cultural uses of park  
 3 resources with which they are traditionally  
 4 associated. Such continuing use is often  
 5 essential to the survival of family, community,  
 6 or regional cultural systems, including  
 7 patterns of belief and economic and religious  
 8 life.

9  
 10 As part of scoping, November 7, 2017 NPS  
 11 sent letters to the affiliated Tribes to solicit  
 12 their involvement and identify ethnographic  
 13 resources of concern. As of the date of this  
 14 draft CLR/EA, the Tribes have not responded  
 15 or expressed concern with the proposed  
 16 alternatives. The Tribes will be notified when  
 17 the draft CLR/EA is made available for public  
 18 comment. If no responses are received during  
 19 the remainder of the CLR/EA process or  
 20 during the public comment, NPS will assume  
 21 the proposed alternatives would have no  
 22 discernible effect on ethnographic resources.  
 23 Although it is possible that plant species  
 24 used by Tribes may be in areas that would  
 25 be impacted by the treatment alternatives,  
 26 because appropriate steps would be taken to  
 27 protect any ethnographic resources that are  
 28 inadvertently discovered or disclosed during  
 29 on-going tribal consultation, ethnographic  
 30 resources were dismissed as an impact topic.

### 32 Environmental Justice

33  
 34 Executive Order 12898, "General Actions  
 35 to Address Environmental Justice in  
 36 Minority Populations and Low-Income  
 37 Populations" requires all federal agencies  
 38 to incorporate environmental justice into  
 39 their missions by identifying and addressing  
 40 the disproportionately high and/or adverse  
 41 human health or environmental effects of  
 42 their programs and policies on minorities and  
 43 low-income populations and communities.  
 44 The proposed treatment alternatives would  
 45 have no direct effect on minority or low-  
 46 income populations because none are present

47 at Rush Historic District and there would be  
 48 no indirect effects that would affect minority  
 49 or low-income populations outside of the  
 50 park, if any are present. Additionally, the  
 51 facilities improvements would be available  
 52 for use by all visitors regardless of race or  
 53 income, and the construction workforces  
 54 would not be hired based on their race  
 55 or income. Because there would be no  
 56 disproportionate effects, this topic was  
 57 dismissed as an impact topic.

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