

National Park Service
U.S. Department of the Interior

Buffalo National River
Arkansas



Erbie Road Improvements Environmental Assessment



ENVIRONMENTAL ASSESSMENT for the REHABILITATION OF COMPTON ERBIE ROAD, and the COVE CREEK CROSSINGS on COUNTY ROAD 57 and COUNTY ROAD 79 at BUFFALO NATIONAL RIVER

EXECUTIVE SUMMARY

The National Park Service (NPS), in cooperation with the Federal Highway Administration (FHWA), proposes to rehabilitate a 2.58-mile damaged section of Compton-Erbie Road (County Road 19) and to replace two low-water crossings in the Erbie area. All of the proposed work lies within the Buffalo National River (park), in Newton County, Arkansas. In May of 2015, a major storm event caused widespread damage in the park. Along with repair of the storm damage, improvements are necessary to reduce the likelihood of damage from future storm events. This Environmental Assessment (EA) examines two alternatives; the No Action Alternative and the Action Alternative.

The Action Alternative would rehabilitate approximately 2.58 miles of Compton-Erbie Road to repair storm damage and minimize the potential for damage from future storm events. The existing road surface would be reconditioned and then resurfaced with six inches of aggregate. The rehabilitation would also include the replacement of the road base material in a 1200-foot section of the road that has particularly poor clay soils. The County Road 79 low-water crossing would be replaced with a new concrete slab and articulated concrete block roadway approaches. County Road 79 from the Buffalo River north to the intersection with County Road 57 would be reconstructed. The County Road 57 low-water crossing would be replaced with a vented ford (eight 8-foot span by 4-foot rise box culverts) with articulated concrete block mat roadway approaches.

The Action Alternative would have adverse impacts to floodplains, species of special concern, water quality, and wetlands. The impacts to these resources are primarily due to the in-water construction activities and would subside after construction is complete. During construction, increased water turbidity and noise would impact water quality and species of special concern. These impacts would be minimized by the implementation of best management practices. After project completion, water quality would improve through reduced erosion and sedimentation which would also benefit species of special concern. Aquatic species would also benefit from the box culverts installed for the vented ford on County Road 57 because the culverts would be embedded and backfilled with natural native material. During construction, visitor use would be impacted by increased construction traffic and road closures; however, after construction is completed, having a more sustainable section of Compton-Erbie Road and new low-water crossings would improve the ability of visitors to access the area and the many recreational opportunities present.

This plan fulfills a park priority for facility asset management, resource management, and visitor experience at Buffalo National River and serves as a component of the park's planning portfolio. This follows the NPS's "Planning Portfolio" construct, consisting of a compilation of individual plans, studies, and inventories, which together guide park decision making. The planning portfolio enables the use of targeted planning products (such as this one) to meet a broad range

of park planning needs, a change from the previous NPS focus on standalone general management plans. The general management plan remains a critical piece of the planning framework and will be revised in a timely manner through the park's planning portfolio.

PUBLIC COMMENT

This EA will be on public review from April 16, 2018 through May 15, 2018. During this 30-day period, a limited number of hardcopies of the EA will be available for review at 402 North Walnut, Suite 136, Harrison, AR 72601. An electronic version of this document can be found on the NPS's Planning Environment and Public Comment (PEPC) website at <http://parkplanning.nps.gov/buff>. This site provides access to current plans, environmental impact analyses, and related documents on public review. An electronic version may also be found at the FHWA, Eastern Federal Lands Highway Division's website at <https://flh.fhwa.dot.gov/projects/ar/>.

If you wish to comment on the EA, you may submit comments through the PEPC website or mail comments to the name and address below. Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so. We will make all submissions from organizations, businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public inspection in their entirety.

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CHAPTER 1: PURPOSE AND NEED

INTRODUCTION

The Erbie area of the Buffalo National River was damaged by rain and subsequent flooding in 2015. The potential for future flooding presents a serious challenge to the maintenance of the roads in this area, specifically the low-water crossings, and to the safety of visitors. This EA presents alternatives for the repair of damage to Compton-Erbie Road (also referred to as County Road 19), the County Road 57 low-water crossing, and the County Road 79 low-water crossing that were damaged by heavy rains in May of 2015 in Newton County, Arkansas. In addition to presenting the alternatives, this EA also discloses the potential impacts of the implementation of those alternatives.

Chapter 1 presents the purpose and need for the action, discusses the location and background of the project, and provides information regarding the scoping completed as a part of the project development process. Chapter 2 presents the alternatives proposed to meet the purpose and need of the action, and discusses alternatives that were dismissed from further consideration. Chapter 3 provides information regarding the resources present in the study area that would be impacted by the proposed action, and also discloses the impacts of each alternative to the resources. Chapter 4 documents the public involvement process and interagency coordination throughout this project. Chapter 5 presents the list of references.

The preparation of an EA by a Federal agency taking an action, and the contents of an EA are the result of legislation and implementing regulations issued to date. In 1969, the United States Congress passed the National Environmental Policy Act (NEPA) (42 U.S.C. 4321 et seq.) to establish a national policy,

“...which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; ...”

NEPA also established the Council on Environmental Quality (CEQ) as an agency of the Executive Office of the President. In enacting NEPA, Congress recognized that nearly all Federal activities affect the environment in some way. Section 102 of NEPA mandates that before Federal agencies make decisions they must consider the effects of their actions on the quality of the human and natural environment. NEPA assigns CEQ the task of ensuring that Federal agencies meet their obligations under the Act.

The CEQ regulations (40 CFR 1500-1508) describe the means for Federal agencies to develop the Environmental Impact Statements (EIS's) mandated by NEPA in Section 102. The CEQ regulations developed the EA to be used when there is not enough information to decide whether a proposed action may have significant impacts. If an EA concludes that a Federal action will result in significant impacts, the Agency is required to prepare an EIS or alter the action proposed. Otherwise, the Agency is directed to issue a Finding of No Significant Impact (FONSI).

Section 1508.09 of the CEQ regulations states that the purposes of an EA are to:

- Briefly provide sufficient evidence and analysis for determining whether to prepare an EIS or a FONSI.
- Aid an Agency's compliance with NEPA when no environmental impact statement is necessary.
- Facilitate preparation of a statement when one is necessary.

Preparation of an EA is also used to aid in an Agency's compliance with Section 102(2)E of NEPA, which requires an Agency to "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources."

This EA was prepared to meet the NEPA requirements of both the National Park Service (NPS) and Federal Highway Administration (FHWA). The Department of the Interior (which the NPS is part of) issued its NEPA regulations as Part 516 of its Departmental Manual (516 DM), last revised in March 2004. In January 2011, the NPS updated the 2001 edition of Director's Order #12: Conservation Planning, Environmental Impact Analysis, and Decision-Making and the accompanying Handbook 12. The NPS NEPA handbook was released in 2015. The FHWA's NEPA regulations are codified at 23 CFR Part 771.

Applicable Laws and Regulations

Coordination or consultation, as appropriate, in accordance with other laws and regulations has been completed during the development of the EA to help guide the development of the proposed action, determine impacts of the proposed action, and identify mitigation measures. Applicable laws include the Clean Water Act of 1972 (33 USC 1251), Endangered Species Act of 1973 (16 USC 35), and National Historic Preservation Act of 1966 (16 USC 470), National Park Service Organic Act (54 USC 1), and Buffalo National River Establishing Act (P.L. 92-237), as codified in the Code of Federal Regulations. A detailed list of applicable Executive Orders, Regulations and policies are provided in Appendix A.

NPS Management Policies 2006, Section 1.4: The Prohibition on Impairment of Park Resources and Values

By enacting the NPS Organic Act of 1916 (Organic Act), Congress directed the U.S. Department of Interior and the NPS to manage units "to conserve the scenery and the natural and historic objects and wild life therein and to provide for the enjoyment of the same in such a manner and by such a means as will leave them unimpaired for the enjoyment of future generations" (16 USC § 1). Congress reiterated this mandate in the Redwood National Park Expansion Act of 1978 by stating that NPS must conduct its actions in a manner that will ensure no "derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by Congress" (16 USC 1a-1).

NPS Management Policies 2006, Section 1.4.4, explains the prohibition on impairment of park resources and values:

While Congress has given the Service the management discretion to allow impacts within parks, that discretion is limited by the statutory requirements (generally enforceable by the federal courts) that the Park Service must leave park resources and values unimpaired unless a particular law directly and specifically provides otherwise. This, the cornerstone of the Organic Act, establishes the primary responsibility of the NPS. It ensures that park resources and values will continue to exist in a condition that will allow the American people to have present and future opportunities for enjoyment of them.

The NPS has discretion to allow impacts on park resources and values when necessary and appropriate to fulfill the purposes of a park (NPS 2006 sec. 1.4.3). However, the NPS cannot allow an adverse impact that would constitute impairment of the affected resources and values (NPS 2006 sec.1.4.3). An action constitutes an impairment when its impacts “harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values” (NPS 2006 sec.1.4.5). To determine impairment, the NPS must evaluate “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” (NPS 2006 sec 1.4.5). A determination of impairment will be made only for the selected alternative, and will be appended.

Project Site Description

Buffalo National River contains 95,730 acres within its established boundary (NPS Stats, 2011) and is located in Baxter, Marion, Newton, and Searcy Counties in northern Arkansas (Figure 1). It is one of the few undammed rivers in the continental U.S. and was declared the first national river by the U.S. Congress in 1972 (Public Law 92-237, March 1, 1972) for the purposes of “...conserving and interpreting an area containing unique scenic and scientific features, and preserving as a free-flowing stream an important segment of the Buffalo River in Arkansas for the benefit and enjoyment of present and future generations. . .” Buffalo National River is managed by the NPS and provides many types of recreation, including hiking, boating, camping and fishing. Buffalo National River is significant for its free-flowing river, karst geology, cultural landscape, unique ecosystem and exceptional recreation setting.

Erbie is one of the many access points on the western portion of the Buffalo River. Popular outdoor recreational and educational activities at Buffalo National River include hunting, fishing, camping, hiking, interpretive programs, horseback riding, and rafting, canoeing or kayaking on the river. Numerous trails wind their way through Buffalo National River providing hikers and equestrians multiple opportunities to enjoy the Ozark Mountains with their rich variety of forests and pastures. Trails in the Erbie area include the Cecil Cove Trail, Old River Trail, Hideout Hollow Trail, and Bench Trail.

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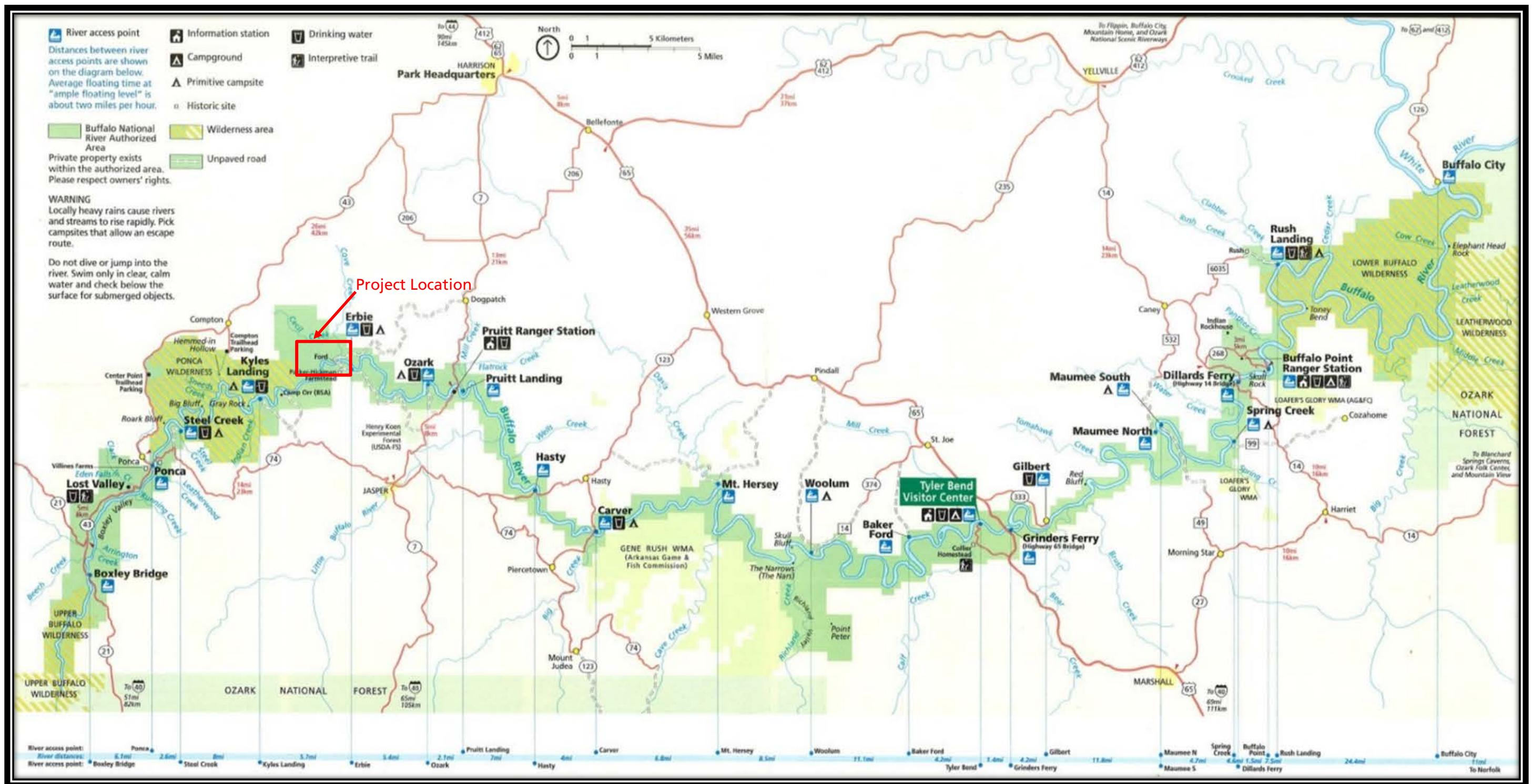


Figure 1. Map of Buffalo National River

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Buffalo National River has two major highway crossings, a number of smaller ones, and 47 access points, providing for dispersed entry to this linear park (NPS 2003a). Several roads cross through Erbie, including Compton-Erbie Road (also referred to as County Road 19), County Road 57, and County Road 79 (Figure 2). Compton-Erbie Road is located to the east of State Highway 43 and connects Compton to Erbie. In the project area, Compton-Erbie Road and County Roads 57 and 79 are generally 16-foot wide aggregate surface primitive roads. The average daily traffic count on these roads is less than 100 vehicles per day. County Road 57 and County Road 79 have concrete slab low-water crossings over which water continuously flows during normal conditions.

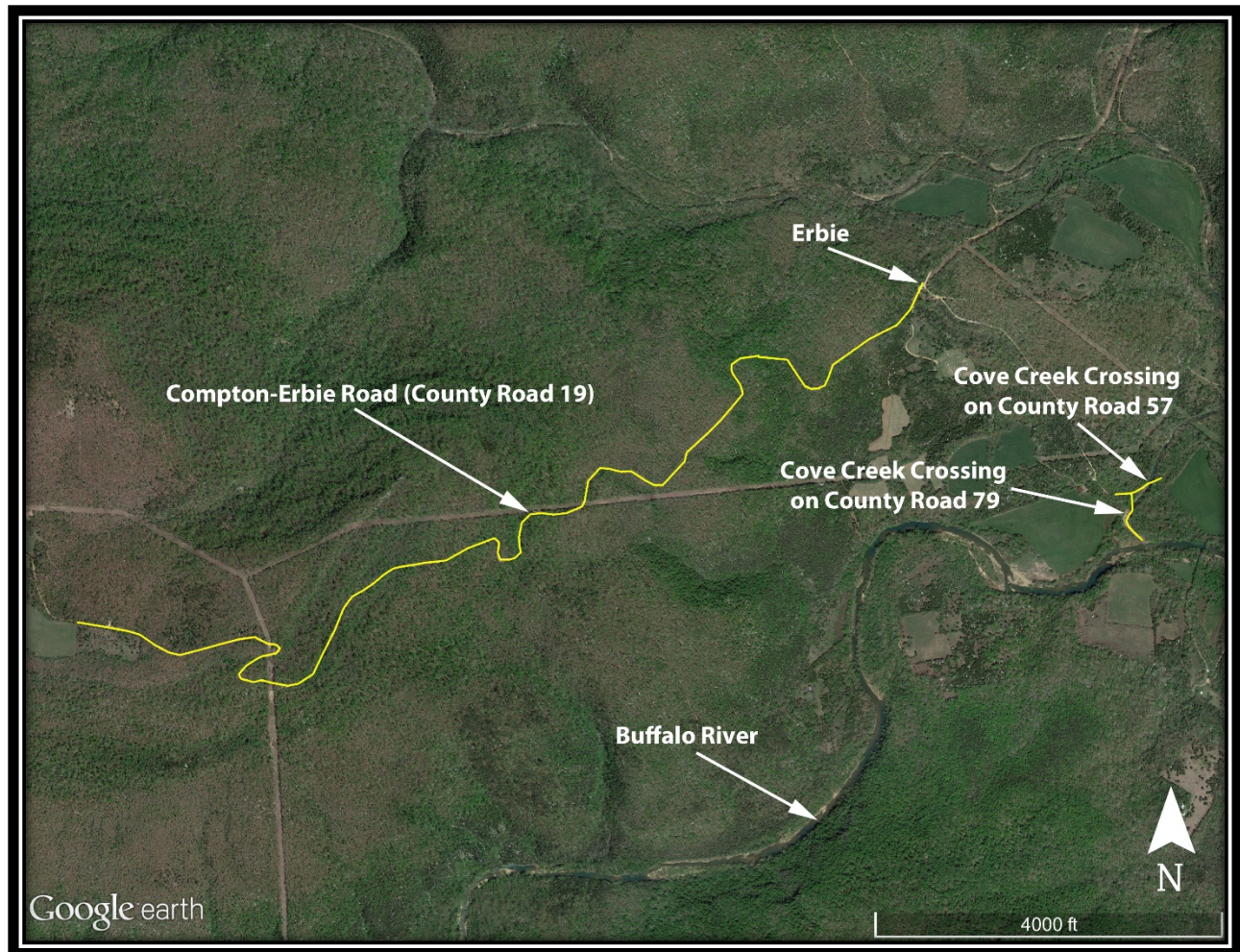


Figure 2. Location Map (Project Area Shown in Yellow)

PURPOSE AND NEED

The purpose of this project is to provide sustainable vehicular access to the Erbie area while minimizing adverse impacts to the surrounding environment.

Heavy rain and flooding over a three-day period in May of 2015 caused extensive damage to Compton-Erbie Road, the low-water crossings on County Road 57 and County Road 79, and the section of County Road 79 from its low-water crossing of Cove Creek south to the Buffalo River.

At Compton-Erbie Road, the intense rainfall from the storm overwhelmed the gravel road and its drainage system. The portion of this road that is proposed for repairs is approximately 2.58 miles long, starting at the intersection with County Road 57 and traveling to the west. Several sections of the road were washed out, and multiple culverts were clogged with debris or washed out (Figure 3). The damage was exacerbated by the substandard roadway condition and poor soils. Over time the road has lost its shape; lacking adequate drainage design features, like a crown and a cross slope or rolling dips, that would direct runoff to the adjacent ditches. Without proper drainage for road runoff, water runs down the road and erodes the road surface. The adjacent ditches eventually exceed their capacity and undergo rapid bank erosion in addition to becoming filled with road material and depositing sediment in local waterways. The soil composition also hinders road use due to its high clay content. Clay is difficult to compact, tends to lose stability when wet, and often results in rutting from vehicular use. The combination of these events and conditions has caused the roadway to become entrenched in relation to the surrounding landscape and makes it difficult for rainfall to run off of the roadway. Since the storm damage occurred, the road is now extremely difficult to drive. Visitors are recommended against using this road, as it is only traversable under dry conditions by a four-wheel drive vehicle.



Figure 3. Storm Damage to Compton-Erbie Road (County Road 19)

County Road 79, from its intersection with County Road 57 to the Buffalo River (including the low-water crossing at Cove Creek), was severely damaged by the May 2015 storm. Maintenance of this primitive road with a grader throughout the years has resulted in the road becoming lower and wider. Due to the pre-storm configuration of the road being lower than the stream bank, the flood-stage water levels diverted, creating an eroded channel along the roadway. The flood waters also carry a large amount of material downstream which is deposited on the road and into the Buffalo River (Figure 4). With each subsequent flood event, the damage reoccurs and requires repair in order to restore access to the area. The storm damage has changed the hydrology of the confluence of Cove Creek with the Buffalo River.



Figure 4. Deposit of bed materials downstream from crossing at County Road 79

The low-water crossing at County Road 79 acts as a spillway, damming up water upstream before releasing over the top at a higher velocity (Figure 5). The higher velocity increases the scour on the downstream side of the low-water crossing, and so there is now a two-foot drop in the stream channel profile and increased bank erosion. Material has also eroded from underneath the structure on the downstream side, which has weakened the stability of the low-water crossing.



Figure 5. County Road 57 Low-water Crossing

Project Background

In May of 2015, the average rainfall for Newton County was exceeded by over six inches (National Weather Service 2015). A disaster declaration was issued by the Arkansas State Governor for Newton County on May 11, 2015. The repairs for the damage were determined to be eligible for funding by the Emergency Relief for Federally Owned Roads (ERFO) program. The ERFO program was established to assist Federal agencies with the repair or reconstruction of Federal lands transportation facilities that are open to public travel and are found to have suffered serious damage by a natural disaster occurring over a wide area. In addition to repairing the damage present, the NPS aims to minimize expected damage from future storm events.

Scoping

The CEQ guidelines (1978) for implementing NEPA and the NPS's NEPA guidelines contained in *Director's Order # 12: Conservation Planning, Environmental Impact Analysis and Decision Making* (2011) and the *National Park Service NEPA Handbook* (2015) provide the framework for scoping. Scoping is an early and open process to: determine important issues, eliminate issues that are not important or relevant, identify relationships to other planning efforts or documents, define a time schedule for document preparation and decision-making, and define purpose and need, agency objectives and constraints, and the range of alternatives. Information about the proposed project was made available to the public on the NPS's Planning, Environment, and Public Comment (PEPC) website during the public scoping comment period, from August 8 to September 9, 2016. Scoping letters were also sent to Cherokee Nation of Oklahoma, Tunica-Biloxi Tribe of Louisiana, Quapaw Tribe of Oklahoma, Caddo Tribe of Oklahoma, Eastern Shawnee Tribe of Oklahoma, Absentee Shawnee Tribe, Osage Tribe of Oklahoma, Shawnee Tribe, United Keetoowah Band of Cherokee Indians in Oklahoma, Eastern Shawnee Tribe of Oklahoma, Wichita and Affiliated Tribes, the Arkansas Department of Parks & Tourism, the

Arkansas Game & Fish Commission, the United States Fish and Wildlife Service (USFWS) Arkansas Field Office, and the Arkansas Historic Preservation Program. Copies of the letters and the agency responses are located in Appendix B: Agency Coordination Letters.

ISSUES AND IMPACT TOPICS

Issues as discussed in NEPA describe the relationships between the action being proposed and the environmental (natural, cultural and socioeconomic) resources. Issues describe an association or a link between the action and the resource. Issues are not the same as impacts, which include the intensity or results of those relationships. Internal and external scoping (defining the range of potential issues) were conducted for this EA to identify what relationships exist between the proposed action and environmental resources. Issues identified through the scoping process were:

- Cove Creek's channel is unstable, as demonstrated by erosion of the stream banks, headcutting, and changing its course to flow down the road, which increases sedimentation of Cove Creek and the Buffalo River.
- When Cove Creek diverts from its natural channel to flow down the road it damages County Road 57 and limits visitor access.
- The increased amount of sediment in the stream reduces the quality of aquatic habitat for Federally-listed species that may be present in downstream of the project area and may impact the rabbitsfoot mussel's Designated Critical Habitat.
- Tree clearing needed for construction of the new low-water crossings may remove roosting and foraging trees used by the Indiana and northern long-eared bats.
- Repeated storm damage inhibits visitor access to nearby trails and recreational activities. Closure of the project area during construction would also limit visitor access and visitors would be required to use an approximately 20-mile long detour route.

Impact Topics Retained for Further Analysis

Issues that are central to the proposal were retained as impact topics for consideration and detailed analysis in this EA.

Floodplains/Streamflow Characteristics

Executive Order 11988, "Floodplain Management," and NPS Director's Order #77-2: Floodplain Management, require an examination of impacts to floodplains and potential risk involved in placing facilities within floodplains (National Park Service 2003). The proposed action would require construction within the floodplain. The replacement of the low-water crossings with new structures would change localized flooding in the project area. A Statement of Findings for Floodplains was prepared and is included in this EA as Appendix C. Therefore, *Floodplains* was retained for further analysis in this EA.

Water Quality

The *NPS Management Policies 2006* (National Park Service 2006), NPS Director's Order #77: Natural Resources Management, along with the Clean Water Act and other Federal, State, and local regulations, provide general direction for the protection of surface and groundwaters. The *NPS Management Policies 2006* state that the NPS will determine the quality of park surface and groundwater resources and avoid, whenever possible, the pollution of park waters by human activities occurring within and outside the parks. Replacement of the low-water crossings on Cove Creek would temporarily impact water quality during in-water construction activities. The repairs would also have a permanent improvement on water quality. Therefore, *Water Quality* was retained for further analysis in this EA.

Wetlands

Executive Order 11990, "Protection of Wetlands," and NPS Director's Order #77-1: Wetland Protection defines the NPS goal to maintain and preserve wetland areas (National Park Service 2008). A wetland delineation completed in July 2017 found three palustrine wetlands to be present in the study area that would be impacted by the proposed repairs. Therefore, *Wetlands* was retained for further analysis in this EA.

Species of Special Concern

In addition to NPS policies and management guidelines, the Endangered Species Act of 1973, as amended, provides for the protection of rare, threatened, and endangered species (floral and faunal). Federally-listed species regulated by the USFWS have the potential to be found in the project area. The proposed action would require tree clearing, ground disturbance, and in-water construction activities that could potentially impact species of special concern. Therefore, *Species of Special Concern* was retained for further analysis in this EA.

Visitor Use and Experience of the Park

Enjoyment of park resources and values by the people of the United States is part of the fundamental purpose of all parks (National Park Service 2006). The NPS strives to provide opportunities for forms of enjoyment that are uniquely suited and appropriate to the natural and cultural resources found in parks. Compton-Erbie Road is not currently passable for normal vehicular traffic and its improvement would allow access to the Cecil Cove Trail and nearby recreational facilities. During construction, noise would have an adverse impact on visitor experience. Therefore, *Visitor Use and Experience of the Park* was retained for further analysis in this EA.

Impact Topics Dismissed From Further Analysis

The following impact topics were initially considered but were dismissed from further analysis because the resource is not present in the project site, or because the proposed action would have no impact, have a negligible impact, or have a minor impact. A brief rationale for the dismissal of each impact topic is provided below.

Vegetation

The NPS policy is to protect the natural abundance and diversity of all naturally occurring communities. The *NPS Management Policies 2006* (National Park Service 2006), NPS DO #77: Natural Resources Management and other NPS and Park policies provide general direction for the protection of vegetation. Rehabilitation of the 2.58-mile section of Compton-Erbie Road would be completed within the existing roadway prism, and this work would not impact vegetation. The low-water crossings are located in a forested riparian area. Dominant trees include bitternut hickory (*Carya cordiformis*), American elm (*Ulmus americana*), box elder (*Acer negundo*), sweet gum (*Liquidambar styraciflua*), green ash (*Fraxinus pennsylvanica*), American linden (*Tilia americana*), and hackberry (*Celtis occidentalis*). Dominant shrubby vegetation and young trees found in riparian woods included box elder, hop hornbeam (*Ostrya virginiana*), spice bush (*Lindera benzoin*), bitternut hickory, and black haw (*Viburnum prunifolium*). In the ground cover, albeit sparse in some cases, Virginia wild rye (*Elymus virginicus*), inland wood-oats (*Chasmanthium latifolium*), hairy beakgrass (*Diarrhena obovata*), green-head coneflower (*Rudbeckia laciniata*), wingstem (*Verbesina alternifolia*), and beefsteakplant (*Perilla frutescens*) are present. Vine species were found on the ground as well in the trees and included fringed greenbrier (*Smilax bona-nox*), Virginia creeper (*Parthenocissus quinquefolia*), poison ivy (*Toxicodendron radicans*), Japanese honeysuckle (*Lonicera japonicus*), river-bank grape (*Vitis riparia*), and trumpet creeper (*Campsis radicans*) (Smith 2017). Approximately 0.25 acres of vegetation clearing would be necessary in order to replace the low-water crossings. However, forested riparian areas of similar species composition are commonly found throughout the Buffalo National River. Therefore, *Vegetation* was dismissed as an impact topic for further analysis in this EA.

Buffalo National River Wilderness

The Wilderness Act of 1964 created the National Wilderness Preservation System and recognized wilderness as “an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain.” Wilderness is further defined as “an area of undeveloped Federal land retaining its primeval character and influence without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions. . .” The Buffalo National River Wilderness was designated in 1978, and now has a total of 34,933 acres (Wilderness n.d.). In the project area, the wilderness borders the southern edge of Compton-Erbie Road for a distance of approximately 2,100 feet at the western end of the project limits. Construction activities to rehabilitate Compton-Erbie would take place within the existing roadway prism, and would not extend into the wilderness area. Therefore, *Buffalo National River Wilderness* was dismissed as an impact topic for further analysis in this EA.

Archeological Resources

The NPS defines an archeological resource as any material remains or physical evidence of past human life or activities that are of archeological interest, including the record of the effects of human activities on the environment. Archeological resources are capable of revealing scientific or humanistic information through archeological research (DO #28, 67). Arkansas Historic Preservation Program, Arkansas' State Historic Preservation Office, records indicate that five historic properties (archeological sites) are located near the project area. The proposed repairs would be completed primarily within the existing roadway prism, which was previously disturbed by the initial construction of the roads. Since the disturbance would not extend to the location of the sites, the proposed project would have no impact on archeological resources. The Arkansas Historic Preservation Program reviewed the project and concurred in a letter dated November 9, 2016 that the sites are not located within the project area. Therefore, *Archeological Resources* was dismissed for further analysis in this EA.

Cultural Landscapes

As described in DO #28, a cultural landscape is “a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person, or exhibiting other cultural or aesthetic values” (DO #28, 87). Cultural landscapes are expressed in the way land is organized and divided, patterns of settlement, land use, systems of circulation, and the types of structures that are built. The Erbie area is not part of a documented cultural landscape in the NPS Cultural Landscape Inventory. In addition, circulation patterns and use of the study area would not be impacted by the proposed action. Therefore, *Cultural Landscapes* was dismissed for further analysis in this EA.

Historic Structures, Districts, and Landmarks

A historic structure is defined by the NPS as “a constructed work, usually immovable by nature or design, consciously created to serve some human act” (DO #28, 113). For a structure, building to be listed on or eligible for listing on the National Register of Historic Places, it must possess historic integrity of those features necessary to convey its significance, particularly with respect to location, setting, design, feeling, association, workmanship, and materials. Although the project falls within one mile of the Parker-Hickman Farm Historic District, the study area includes no known historic properties. The existing low-water crossings were most likely constructed in 1988 as part of the Erbie development and are not historic. Therefore, *Historic Structures, Districts, and Landmarks* were dismissed as an impact topic for further analysis in this EA.

Indian Trust Resources

Secretarial Order 3175 requires that any anticipated impacts to Indian Trust resources from a proposed action by U.S. Department of the Interior agencies be explicitly addressed in environmental documents. The Federal Indian Trust responsibility is a legally enforceable obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights, and it represents a duty to carry out the mandates of Federal laws with respect to American Indian tribes. There are no known Indian Trust resources in the study area. Therefore, *Indian Trust Resources* was dismissed as an impact topic for further analysis in this EA.

Environmental Justice

Executive Order 12898, “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 the disproportionately high and/or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities (President of the United States, 1994).

Within a five mile radius of the project, 94.9% of the persons were white based on the data from the 2010 U.S. Census of Population and Housing compared to 95.4% for Newton County and 78.0% for Arkansas (American Community Survey). Per EPA/CEQ Guidance (Final Guidance for Incorporating Environmental Justice Concerns in the EPA’s NEPA Compliance Analysis and the CEQ’s Environment Justice: Guidance under NEPA), a community minority population is greater than 50% or “meaningfully greater” than minority population percentage in the general population or other appropriate geographic area. The study area is therefore not a minority community.

The number of persons below the 2015 poverty level in Newton County was 24.2% and in Arkansas was 18.7% (American Community Survey). Per EPA/CEQ Guidance, a low-income community has a greater percentage of persons below poverty in the general population or other appropriate geographic area. The study area is therefore a low-income community. However, the proposed project would not acquire any land from property owners and would not have any disproportionate or adverse impacts on minority or low-income populations. Therefore, *Environmental Justice* was dismissed as an impact topic for further analysis in this EA.

CHAPTER 2: DESCRIPTION OF ALTERNATIVES

NEPA requires that Federal agencies conduct a careful, complete, and analytical study of the impacts resulting from proposals that have the potential to affect the environment, and to consider alternatives to those proposals, well before any decision is made. The two alternatives are to continue current management (the No Action Alternative) and the action alternative (NPS-preferred alternative). This chapter also includes mitigation measures which would be implemented under the Action Alternative, and Alternatives Considered But Dismissed.

NO ACTION ALTERNATIVE

Under the No Action Alternative, no substantial improvements would be performed other than in accordance with routine maintenance operations. Routine road maintenance operations include grading and debris removal. Emergency repairs and replacements may be necessary, particularly as the road degrades and crossings continue to fail following extreme rain events. Analysis of the No Action Alternative is required as part of the NEPA process in order to provide a basis for the comparison of other feasible alternatives.

ACTION ALTERNATIVE: REHABILITATE ROADS AND REPLACE LOW-WATER CROSSINGS – NPS PREFERRED ALTERNATIVE

This alternative would rehabilitate Compton-Erbie Road from the intersection with County Road 57 west for 2.58 miles (Figure 2). The existing road would be reconditioned to restore a single lane road with a width varying between 10 to 12 feet. The width would vary as needed to fit within the existing roadway prism. Reconditioning is proposed because it is a low disturbance means of restoring a road element or structure to more optimal conditions without completely removing the existing road. With road reconditioning, the embankment remains largely unchanged with no excavation required, whereas the top layer of the roadbed is removed, compacted and shaped to a uniform surface. Six inches of aggregate material would then be placed over the reconditioned road bed to create the driving surface. Additional aggregate would be placed as needed to level the road and create a crown and three to four percent cross slopes (Figure 6). The rehabilitation would also include the replacement of the road base material in a 1200-foot section of the road that has particularly poor clay soils.

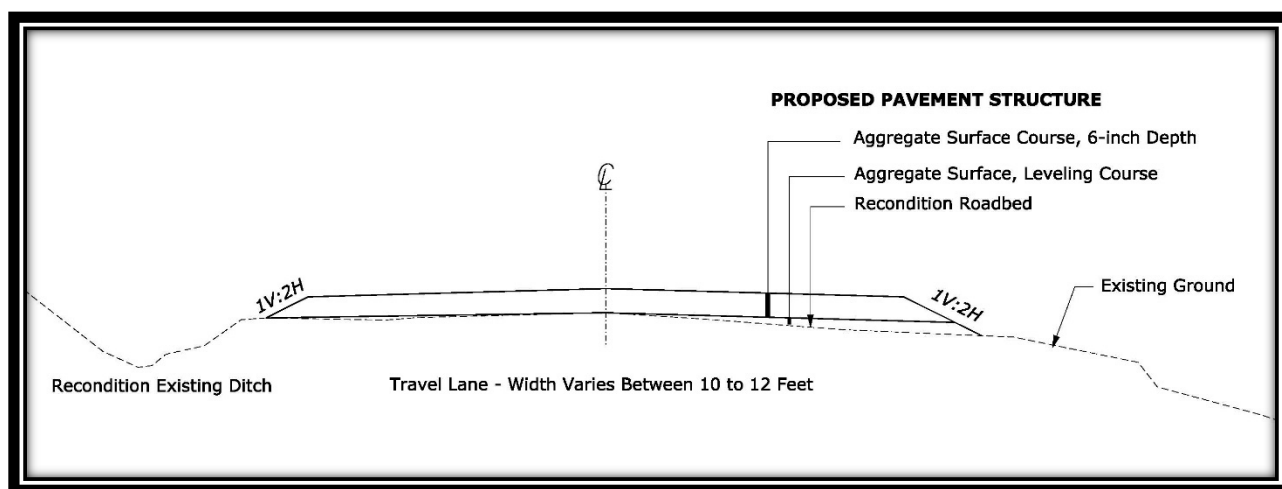


Figure 6. Roadway Typical Section

Drainage improvements would include the reconditioning of ditches, removal of two failing culverts, and redesign of the road profile to create a series of rolling dips. Water would drain from the ditch across the road at these designated low points to prevent surcharging the ditches. Articulated concrete block mats would be installed at the low points to prevent erosion at these locations. Any waste resulting from these actions would be disposed of at a designated site.

Two low-water crossings traversing Cove Creek would be replaced, one on County Road 57 and one on County Road 79 (Figure 7). This area lies in the floodplain of Cove Creek and the Buffalo River and has seen significant damage due to frequent flooding. In order to repair the damage and provide more sustainable access through this area, low-water crossings on County Road 57 and County Road 79 would be replaced, articulated concrete block mats would be installed on the approaches, and the roads and ditches on County Road 57 and County Road 79 would be reconditioned. The crossing on County Road 57 would be replaced with eight (8-foot span by 4-foot rise) box culverts and the crossing on County Road 79 would be replaced with a concrete slab.



Figure 7. Two Proposed Low-water Crossings

The first low-water crossing is located along County Road 57 at Cove Creek north of the Buffalo River, pictured in Figure 8. Temporary stream diversions would be installed, and the water behind the diversion would be pumped out through a filter bag to dewater the work area. The

work would be completed in two phases to allow stream flow to pass through the open half of the channel. The existing concrete slab would be broken up, removed, and disposed of off-site. A crane would lift and install eight pre-cast concrete box culverts side-by-side to function as a vented ford. The top elevation would be 847.07 feet, whereas the current crossing elevation is approximately 845 feet. This means that the new low-water crossing would be overtopped during flood events. However, during normal flow and minor storms, water would flow through the box culverts. The box culverts would each be eight-foot span by four-foot rise, and would be embedded approximately one foot into the streambed. This crossing would have a six-inch curb on both sides so that the edges of the crossing are known when the water level rises above the road elevation. It should be noted that both crossings are not intended for use during high water, as signs present at the approaches indicate.



Figure 8. Crossing of Cove Creek on County Road 57

Regrading to raise the roadway approaches is needed to accommodate the raised road elevation resulting from the box culvert installations. Articulated concrete block mats would be installed along the roadway approaches. The mats consist of interlocking concrete bricks, linked by cables, that when placed together form a flexible yet sturdy surface. These mats are intended to prevent erosion on exposed surfaces and provide stability. They are being used solely at the low-

water crossing approaches; since these areas are prone to erosion and instability. The mats would cover the entire 12 feet of the road surface, and would be embedded in the embankment along the road. The cross section is shown in (Figure 9).

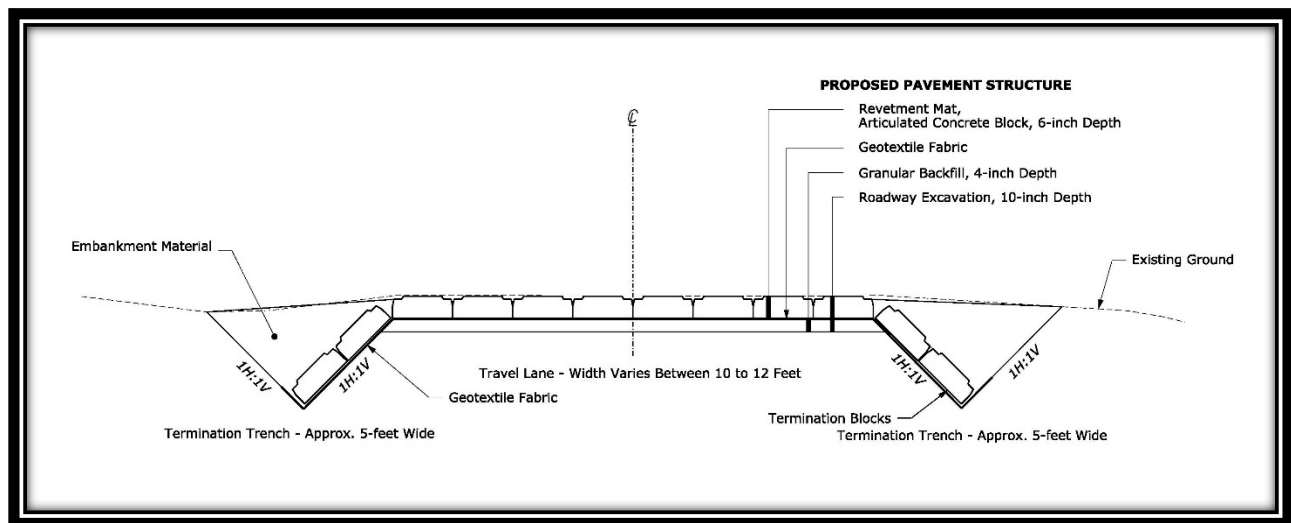


Figure 9. Typical Articulated Concrete Blocks Cross Section

As seen in Figure 10, the second crossing is located along County Road 79 at Cove Creek, immediately south of the first crossing. Temporary stream diversions would be installed, and the water behind the diversion would be pumped out through a filter bag to dewater the work area. The work would be completed in two phases to allow stream flow to pass through the open half of the channel. The existing concrete slab would be broken up, removed, and disposed of off-site. The existing concrete slab low-water crossing would be replaced with a 120-foot long by 12-foot wide concrete slab low-water crossing. The concrete slab would be eight inches thick and would be cast in place. The surface of the concrete slab would be at the same elevation as the streambed. Articulated concrete block mats (six-inches deep) would be added from the intersection with County Road 79 to the end of the project near the Buffalo River. This would be realigned to allow for positive drainage from the roadway and to account for the raised road elevation.



Figure 10. Crossing of Cove Creek on County Road 79

The project is expected to take approximately 140 calendar days to complete. During construction Compton-Erbie Road, County Road 57 and County Road 79 would be closed. The length of the closure would be approximately 25 calendar days for Compton-Erbie Road and approximately 60 calendar days for County Road 57 from the Buffalo River to the intersection with County Road 79 and northeast to the low-water crossing. Each road may be closed at the same time or at separate times depending on the construction schedule. Detours would be signed and notification of the road closures and detours would be provided to the public

Staging and Construction Access

Once construction begins, equipment and materials would need to be stored near the project site for the duration of the project. Two locations have been identified as potential staging areas that would be suitable for storing materials and equipment while also limiting impacts to the surrounding area. Both areas are east of the low-water crossings, with one located on County Road 57 and one on County Road 79. The areas are flat grassy clearings that would have reduced need for tree removal, though some removal may still be required. Any cleared areas would be revegetated.

These county roads lie in rural areas that do not typically see construction traffic. Consequently, access needs to be established so that necessary materials and equipment can reach the project

sites. In order to establish access, some tree pruning and curve widening may be required to make way for large construction vehicles moving in and out of the project staging areas. To complete installation of the box culverts on County Road 57, cranes would be placed at both ends of the crossing. Some tree pruning may be necessary to create adequate space for the crane to operate.

Mitigation Measures

Avoidance, minimization, and mitigation measures and Best Management Practices (BMPs) would prevent or minimize potential adverse effects associated with the implementation of the replacement alternatives. These measures and practices would be incorporated into the project design and construction plans.

- Temporary BMPs would be utilized to minimize erosion and sedimentation from ground disturbing activities that expose bare soil, which would otherwise negatively impact water quality. The BMPs may include the use of silt fence, fiber roll, erosion matting, or check dams. These BMPs would be used only during construction and would be removed once the disturbed area has been permanently stabilized with vegetation.
- Disturbed soil would be re-vegetated using specific native species seed mixes that do not include invasive or exotic species.
- Any soil excavated during construction would be stockpiled and reused as fill if needed. Fill material is not anticipated for this project; however, should additional soil be needed, the soils would be clean, weed-free native soils from an approved source.
- All tree removal would be done between September 30 and April 1, during the period when the Federally-listed Indiana bat and northern long-eared bat would not be using trees for roosting and foraging.
- Should construction unearth previously undiscovered archeological resources, work would be stopped in the area of any discovery and the Park would consult with the State Historic Preservation Officer/Tribal Historic Preservation Officer and the Advisory Council on Historic Preservation (ACHP), as necessary, according to §36 CFR 800.13, Post Review Discoveries. In the unlikely event that human remains are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (1990) would be followed as appropriate.

ALTERNATIVES CONSIDERED BUT DISMISSED

As mentioned previously, alternatives should be “reasonable.” Unreasonable alternatives may be those that are unreasonably expensive; that cannot be implemented for technical or logistic reasons; that do not meet park mandates; that are inconsistent with carefully considered, up-to-date park statements of purpose and significance or management objectives; or that have severe environmental impacts (National Park Service 2011).

During conceptual design, both concrete slab and concrete box culvert (vented ford) low-water crossings were analyzed for County Road 57 and County Road 79 in order to determine which crossing type best fit the conditions at each site. At the Country Road 57 low-water crossing, the existing concrete slab acts as a dam for low flow conditions, and the higher velocity water passing over the slab has eroded material on the downstream side. Installation of a new concrete slab low-water crossing would also require the installation of scour protection (riprap) on the downstream side to keep this condition from getting worse over time. The interdisciplinary team, comprised of members from FHWA and NPS, determined that the replacement of the

existing slab with a new concrete slab should be dismissed from further consideration as a repair option at this location.

During flood events, the County Road 79 low-water crossing is covered with a large amount of cobbles and debris due to its location in relation to the Buffalo River. Installing a concrete slab low-water crossing in this location would make recovery of this site after a flood event easier, because the site could be cleared of debris down to the slab. Installing box culverts would require additional equipment and effort, since the individual box culverts would need to be cleaned out to make sure they convey normal stream flow. The interdisciplinary team determined that the replacement of the existing concrete slab with a series of box culverts to create a vented ford should be dismissed from further consideration as a repair option at this location.

Table 2.1 Impact Summary		
	No Action Alternative	Action Alternative
Floodplains/Streamflow Characteristics	<i>Direct and Indirect Impacts:</i> No impact.	<i>Direct and Indirect Impacts:</i> The County Road 79 vented ford would increase backwater causing an increase in localized flooding.
Water Quality	<i>Direct and Indirect Impacts:</i> Instability of the stream channel would continue to erode stream banks and send sediment and debris downstream.	<i>Direct and Indirect Impacts:</i> Raising and regrading the road profile at the County Road 57 low-water crossing and replacing the County road 79 low-water crossing would improve stability of the channel, reducing the amount of sediment and debris sent downstream.
Wetlands	<i>Direct and Indirect Impacts:</i> Cove Creek would continue to divert from its channel during future storm events, resulting in changes to the hydrology and wetlands in the study area.	<i>Direct and Indirect Impacts:</i> Raising the road profile and straightening the alignment would permanently impact approximately 2,250 square feet of wetlands in the project area. During construction, approximately 180 square feet of wetlands would be impacted; however, this area would be restored after construction is completed.
Species of Special Concern	<i>Direct and Indirect Impacts:</i> Continued sedimentation from the erosion of the streambanks would decrease the quality of the aquatic habitat potentially available for the Federally-listed mussel and fish species.	<i>Direct and Indirect Impacts:</i> Decreased turbidity would improve aquatic habitat upstream of Designated Critical Habitat. Time of year restrictions would be implemented to avoid impacts to Federally-listed bat species.
Visitor Use and Experience	<i>Direct and Indirect Impacts:</i> Trailheads and destinations would continue to be inaccessible for visitors' enjoyment during and after storm events.	<i>Direct and Indirect Impacts:</i> Although access would be disrupted during construction, improved roads would improve the access to trails and recreational opportunities. More sustainably designed roads and low-water crossings would reduce the amount of time to restore access to the Erbie area after storm events.

CHAPTER 3: AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter describes the existing environmental conditions in and around the project area and the environmental consequences associated with the alternatives presented in Chapter 2: Alternatives. Chapter 3 is organized by impact topic, and includes the impact topics presented in Chapter 1: Purpose and Need that required further analysis: floodplains/streamflow characteristics, water quality, wetlands, species of special concern, and visitor use and experience.

For each impact topic identified in Chapter 2, the impact analysis includes a description of the direct and indirect impacts (both adverse and beneficial) and a discussion of the importance of the impacts in consideration of the resource context and the intensity of the impact. The impact analysis is based on input from an interdisciplinary team with knowledge of the resources and experience implementing similar projects.

CUMULATIVE IMPACTS

The CEQ regulations (40 CFR 1508.7) require the assessment of “cumulative impacts” which are defined as:

The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.

In January 1997, the CEQ published a handbook entitled Considering Cumulative Effects Under the National Environmental Policy Act (see <http://ceq.eh.doe.gov/nepa/ccenepa/ccenepa.htm>). The introduction to the handbook opens with, “Evidence is increasing that the most devastating environmental effects may result not from the direct effects of a particular action, but from the combination of individually minor effects of multiple actions over time.”

A cumulative impact analysis was completed for the No Action and Action Alternatives. Past, present and future actions that would impact each resource were investigated; however, no actions were found. Numerous parties were contacted to determine whether there are any reasonably foreseeable actions in the study area. Buffalo National River has no other improvements planned for this part of the park. No transportation projects are identified for the Erbie area in the Statewide Transportation Implementation Plan for 2016-2020 (DEPARTMENT 2016). Also, the Jasper/Newton County Chamber of Commerce was also consulted and no projects are anticipated in the study area.

Affected Environment

Floodplains are a vital part of our environment and their flooding is a natural occurrence. During high precipitation events, flooding of the land (or floodplain) adjoining a waterbody occurs. The low-water crossings on County Road 79 and County Road 57 both cross Cove Creek, and are therefore located in the floodway. The existing low-water crossings convey water year-round, and under normal conditions are underwater. Portions of the roadway approaches on each side of the low-water crossing are located in the floodplain. The County Road 57 low-water crossing and roadway approach from the Buffalo River are also located within the Buffalo River floodplain. The County Road 79 low-water crossing is located near the confluence of Cove Creek and Cecil Creek and is in a floodplain. The Compton-Erbie Road portion of the project area is not located in a floodplain, and so it is not discussed in this section. The floodplain provides the functions of sediment storage, floodwater storage, groundwater recharge, channel stability, water quality, and habitat. A Federal Emergency Management Administration (FEMA) Flood Insurance Rate Map is unavailable for the study area. Survey (LIDAR) was used in order to assess floodplain boundaries in the project area.

Rainfall in the study area causes the streamflow in Cove Creek to rise rapidly. As the water levels in the Buffalo River also rise and extend into the floodplain, the point at which Cove Creek meets the Buffalo River moves further upstream in Cove Creek. This results in the deposition of the bed load carried by Cove Creek at this point. The increased water volume in Cove Creek also causes the creek to change its course and travel down the road, since the roadway approach is a lower elevation than the adjacent stream bank. As the creek turns to travel down County Road 57, it causes erosion of the stream bank and sends additional debris downstream.

A Statement of Findings (SOF) for Floodplains has been prepared. The SOF can be found in Appendix C.

Environmental Consequences

No Action Alternative

Direct and Indirect Impacts. The No Action Alternative would have no impact on the 100-year floodplain limits. However, Cove Creek would continue to be unstable in this location, resulting in continued erosion of the stream banks and sedimentation of the Buffalo River.

Action Alternative

Direct and Indirect Impacts.

The replacement of the two low-water crossings would require the placement of fill material, a concrete slab, and box culverts to raise the roadway profile, which in turn would cause a minor increase in backwater conditions. Backwater includes all water upstream of a bridge, crossing, or dam and is directly related to the volume of structures in a waterway. For the County Road 57 low-water crossing, the maximum rise in backwater for the 2-year peak water level and the 10-year peak water level would be 0.95 feet and 1.4 feet, respectively. The rise in backwater dissipates upstream of the crossings. Downstream of the crossing, differences in the water levels pre- and post-construction are negligible. The County Road 79 low-water crossing would be replaced in-kind and so changes to the water surface elevations during flood events is not anticipated to change.

The box culverts of the County Road 57 crossing would be embedded in the creek and the bottom would be filled with native streambed material. This allows the streamflow to pass through the box culverts in a more natural way (and not pick up speed as it flows over the concrete slab) than the previous concrete slab. The substrate of the creek would continue through the culvert, eliminating the scour pool and normalizing the creek's velocity. The raised crossing elevation and reduced creek disturbance would allow crossing use during some minor storms that would have rendered the previous crossing unusable.

The concrete slab of the County Road 79 is being replaced in-kind and would be constructed to eliminate the drop off on the downstream side. This would result in improved streamflow conditions.

The Action Alternative would have no impact on the Buffalo River floodplain, and would have a minor impact to the Cove Creek floodplain due to the rise in backwater. Streamflow conditions are anticipated to improve because the replacement of the existing low-water crossings in a manner that would provide a more natural flow of water.

WATER QUALITY

Affected Environment

The Arkansas Department of Environmental Quality has designated the Buffalo River an Extraordinary Resource Water and a Natural and Scenic Waterway, the highest water quality designation given by the state. Water quality in the Buffalo River at present is good. The primary nonpoint source pollutants are nitrogen, phosphorus, and fecal coliform bacteria (EPA, 2012). The pollutants are primarily a result of agricultural activities.

In addition to nearby land use impacting water quality, the presence of dirt and gravel roads in this rural area and other earth disturbing activities also impact the quality of water. These areas are vulnerable to erosion from wind and water. The eroded soils in water become suspended soils in the water course, and eventually settle to the bottom of the water course as sediment. Suspended soils and excessive sedimentation can have adverse impacts to water quality if not controlled.

Water quality is monitored by the NPS at a location just upstream of the County Road 57 low water crossing for this tributary to the Buffalo River. This monitoring location is known as the Cecil Creek monitoring station (BUF-T03), although the confluence of Cecil Creek and Cove Creek is located approximately 1.06 miles upstream of the County Road 57 low-water crossing. In the past Cecil Creek has had one of the highest turbidities of areas monitored in the park, along with Beech and Richland Creeks. Turbidity is influenced primarily by the surface water runoff. The high turbidity level is thought to be mostly the result of the geology in these watersheds since the upper river has a sandstone and shale geology (Mott 1997).

Environmental Consequences

No Action Alternative

Direct and Indirect Impacts. During future flood events Cove Creek would continue to change its course to flow along the road. Sediment and aggregate would wash downstream into the Buffalo River. Erosion of the stream banks would also continue. Sedimentation and the resulting increase in turbidity of Cove Creek and the Buffalo River would continue.

Action Alternative

Direct and Indirect Impacts. During construction, approximately 1.47 acres of earth would be disturbed which increases erodible area and the potential for sediment to enter Cove Creek and travel downstream to the Buffalo River. BMPs would be installed to reduce the potential for erosion and sedimentation. The use of articulated concrete block mats on the approaches to the low-water crossings would provide increase stability so these areas would not wash out during future storm events. The southern approach to the County Road 79 low-water crossing would be raised and graded to reduce the stream's ability to change its course. These efforts to provide more stability to the stream channel would reduce erosion and sedimentation of Cove Creek and the Buffalo River and improve water quality.

WETLANDS

Affected Environment

Executive Order 11990, Protection of Wetlands, mandates that each Federal agency take action to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance their natural values. Wetlands are defined by the presence of surface and/or groundwater hydrology, hydric soils (soils that develop under wet conditions), and hydrophytic vegetation (plants that are favored by wet conditions).

Three palustrine wetland areas are present in the project area, all of which are sparsely vegetated, have shallow, sandy soils underlain by gravel and cobble, moist to saturated to inundated conditions, and low wetland functions and values. Wetland 1 (W-1) is adjacent to Wetland 2 (W-2), and is fed by water seeping from W-2. W-1 exhibits moist to wet soils, extending to the road. Vegetation is sparse and includes sycamore seedlings and saplings, common ragweed (*Ambrosia artemisiifolia*), stilt grass (*Microstegium vimineum*), beef steakplant, and rough cocklebur (*Xanthium strumarium*). W-2 is a narrow wetland containing slowly moving water fed by groundwater from Cove Creek or Buffalo River. The middle to upper portions of W-2 were formed after the 2015 flooding. Prior to the flooding this area was riparian forest. W-2 is vegetated by seedlings of Carolina willow (*Salix caroliniana*), white grass (*Leersia virginica*), and ditch stonecrop (*Penthorum sedoides*). Wetland 3 (W-3) is on the northern portion of the gravel cobble area adjacent to Cove Creek and County Road 79. This area is sparsely vegetated with sycamore seedlings, white grass, and beef steakplant. More young sycamores occur to the north and west closer to the shoreline of Cove Creek (Smith 2017). Wetlands in the project area have little vegetation, no hydric soils, and no permanent water. As a result, these wetlands are rated low in terms of the amount of hydrologic and biotic functions that they provide.

The proposed repairs qualify as Excepted Action 4.2.1.7, Maintenance, repair, or renovation of currently serviceable facilities or structures, and per *Procedural Manual #77-1: Wetland Protection*, preparation of a Statement of Findings is not required.

Environmental Consequences

No Action Alternative

Direct and Indirect Impacts. The No Action Alternative would have no impact on wetlands.

Action Alternative

Direct and Indirect Impacts. During construction, temporary stream diversions would be installed to dewater the work area for the casting of the low-water crossing on County Road 79. The stream diversions would temporarily impact approximately 180 square feet of W-3. The new water crossing and road would be constructed in roughly the same location and dimensions as the existing low-water crossing. Approximately 2,000 square feet of W-1, 200 square feet of W-2, and 50 square feet of W-3 would be permanently impacted from the reconstruction of the roadway approaches due to their proximity to the road. Reconstruction of County Road 79, from the low-water crossing south to the Buffalo River, and the approaches of the County Road 57 low-water crossing would re-establish a 12-foot wide road. Sections of these roads would be raised to improve roadway drainage and resiliency during storm events. The raised roadway profile would result in a larger roadway footprint because embankment material would be placed alongside the road to transition the road to the existing ground. The sides of the articulated concrete block mats would be buried into the ground to provide additional stability, which also enlarges the roadway footprint. Although 2,250 square feet of wetlands would be permanent impacted by the Action Alternative, impacts to wetland functions in the study area would be minimal since W-1, W-2, and W-3 have low wetland functions and values due to their limited vegetated cover and lack of hydric soils.

SPECIES OF SPECIAL CONCERN

Affected Environment

A species list for the project area was obtained from the USFWS's IPaC system. The Federally-listed threatened and endangered species potentially present in the project area include: gray bat (*Myotis grisescens*); Indiana bat (*Myotis sodalis*); northern long-eared bat (*Myotis septentrionalis*); Ozark big-eared bat (*Corynorhinus townsendii ingens*); rabbitsfoot mussel (*Quadrula cylindrica cylindrica*); snuffbox mussel (*Epioblasma triquetra*); and, Ozark cavefish (*Amblyopsis rosea*). The following species have been under review to be added to the Federally-listed threatened and endangered species; little brown bat (*Myotis lucifugus*), tri-colored bat (*Perimyotis subflavus*), western fanshell mussel (*Cyprogenia aberti*), Ozark shiner (*Notropis ozarcanus*), and Ozark chub (*Erimystax harryi*).

Gray Bat

The gray bat is the largest species of *Myotis* found in the eastern United States. They have uniform brownish-gray fur that can become chestnut brown or russet following their molt in July or August. Gray bats are distinguishable from other *Myotis* bats by their wings that attach at the ankle rather than at the base of the toes (Missouri Department of Conservation n.d.). Gray bats are also larger than most other *Myotis* species. Gray bats roost exclusively in caves and mines year round where they form large colonies, sometimes in excess of 250,000 individuals. Because of these large colonies, the bats are very vulnerable to human disturbance at their roost sites. The roost caves are generally near streams or other water bodies such as reservoirs. This species prefers to forage over streams in wooded riparian habitats, especially slab-rock river bottoms where mayflies hatch. Habitat disturbance in the forms of forest conversion to agriculture, destruction of riparian forest, river impoundment, pesticides, river siltation, and

roost disturbance are the most important factors seeming to affect this species (U.S. Fish and Wildlife Service 1982). At least one cave with hibernating gray bats is located within 3.1 miles (5 kilometers) of the project area, and at least two caves with hibernating gray bats are located within 6.2 miles (10 kilometers) of the project area. There is also at least one cave with gray bat summer bachelor colony located within 3.1 miles of the project area and two caves within 6.2 miles of the project area.

Indiana Bat

The Indiana bat has dark-brown to black fur that looks similar to many other related bat species (U.S. Fish and Wildlife Service 2006). They are temperate, insectivorous, migratory bats that hibernate colonially in caves and mines in the winter (U.S. Fish and Wildlife Service 2007). In the summer, they tend to roost and raise their young under the peeling bark of dead and dying trees. Potential roost trees include live trees and snags greater than or equal to five-inch diameter breast height that have exfoliating bark, cracks, crevices and/or hollows. They forage in riparian areas, upland forests and above ponds and fields (U.S. Fish and Wildlife Service 2015). Indiana bats roost in trees throughout the Ozarks, including Buffalo National River, during the summer. There are at least two caves with hibernating Indiana bats within 3.1 miles of the project area and three caves within 6.2 miles of the project area.

Northern Long-Eared Bat

The northern long-eared bat is a medium-size bat. It is distinguishable from other bat species by its distinct long ears which extend past the muzzle when laid forward. The northern long-eared bats' fur is typically colored a light to dark brown on the dorsal side and a light brown on the ventral side. Northern long-eared bats spend winter hibernating in caves. During the summer months, they roost in colonies or singly in cavities, crevices, or underneath the bark of both live and dead trees. In rare cases, they have also been found roosting in structures like barns and sheds. They feed on a variety of insects that include moths, flies, leafhoppers, caddisflies, and beetles. The northern long-eared bat breeding season begins in late summer or early fall and females give birth to a single pup between late May and early July. The young bats start flying after approximately 20 days and can live as long as 19 years (U.S. Fish and Wildlife Service 2015). There is at least one cave with hibernating northern long-eared bats within 3.1 miles of the project area and three caves within 6.2 miles of the project area.

Ozark Big-eared Bat

The extremely rare Ozark big-eared bat has distinctive long ears and facial glands on either side of the snout. The fur is light to dark brown depending on the age of the individual and the subspecies. Ozark big-eared bats roost in caves year round. A single pup is typically born in May or June and the young are on their own within 2 months (U.S. Fish and Wildlife Service 2015). There are no known caves in Newton County which have hibernating or summer colonies of Ozark big-eared bats.

Little Brown Bat

The little brown bat has fur that is dark brown to reddish brown on the dorsal side and slightly paler on the ventral side. While similar in appearance to the Indiana bat, the little brown bat has hairs on the toes that extend beyond the claws, differentiating it from the Indiana bat. Little brown bats are thought to hibernate in small rock crevices as well as caves and mines (Ohio Division of Wildlife n.d.). In the summer they commonly roost in man-made structures but have also been found in tree and rock crevices. They feed primarily on aquatic insects, such as stone flies and mayflies as they often forage near or over water surfaces (Wisconsin Department of

Natural Resources 2017). Although park database records do not indicate whether any caves with hibernating little brown bats are present in the project area, little brown bats are likely present in the same caves used by other bat species.

Tri-colored Bat

The tricolored bat, formerly known as the Eastern Pipistrelle, is named due to the three colors on each of its hairs; black at the base, yellow in the middle, and brown at the ends. Despite historically being one of the most common species throughout the eastern forests of America, little is known about its daytime summer and maternity roosts. Among the first bats to emerge at night, their tree top level appearance could indicate that they roost in foliage or high tree cavities and crevices. The tricolored bat seems to prefer edge habitats near areas of mixed agricultural use. Hibernation sites are found deep within caves or mines in areas of relatively warm, stable temperatures. These bats often return to their winter hibernation sites and may even choose the same spot in a site from year to year. As with many forest bat species which spend their winters underground, far more is known about their hibernacula than is known about their summer habitat (Bat Conservation International n.d.). There is one cave within 1 kilometer of the project area that is known to harbor hibernating tricolored bats. Within 3.1 miles there are an additional 22 caves (23 total) with hibernating tricolored bats. Within 6.2 miles there are an additional 6 caves (29 total) with hibernating populations of tricolored bats.

Rabbitsfoot Mussel

The rabbitsfoot is a medium to large mussel, elongate and rectangular, reaching 6 inches in length. Rabbitsfoot mussels prefer shallow areas with sand and gravel along the bank next to shoals, which provide a refuge in fast-moving rivers. Rabbitsfoot uses about a dozen species of shiners (minnows) for its host species while in the glochidia (larval) life stage (U.S. Fish and Wildlife Service 2015). The Buffalo River is designated as critical habitat for the rabbitsfoot downstream of the Erbie low water crossing to its confluence with the White River. Although there are mussel beds located within 6.2 miles of the project, no rabbitsfoot have been found.

Western Fanshell

The western fanshell is a medium sized freshwater mussel, reaching 3 inches in length with a modified circular to triangular shape. These mussels are found in rock, gravel, and soft mud bottoms only in flowing water in medium sized rivers. They are generally confined to shallow runs in predominantly clean, moderately compacted gravel-sand substrata. Western fanshell are likely present in the project area.

Snuffbox Mussel

The snuffbox is a small- to medium-sized freshwater mussel with a yellow, green or brown shell interrupted with green rays, blotches or chevron-shaped lines. The shell shape is typically triangular in females and grows up to 1.8 inches. In males, the shell shape is oblong or ovate and grows up to 2.8 inches. The snuffbox is usually found in small- to medium-sized creeks, and in areas with a swift current. Adults often burrow deep in sand, gravel or cobble substrates, except when they are spawning or the females are attempting to attract host fish. They are suspension feeders, typically feeding on algae, bacteria, detritus, microscopic animals, and dissolved organic material (U.S. Fish and Wildlife Service 2016). Although there are mussel beds located within 6.2 miles of the project, no snuffbox mussels have been found.

Ozark Cavefish

The Ozark cavefish is a blind fish that typically reaches lengths of 2.25 inches. The Ozark cavefish lives in cave streams and springs. The cave ecosystem is often dependent upon bats (especially gray bats) as a source of energy and nutrients. The cavefish primarily eats plankton and depends on sensing water movement to find food. They also eat isopods, amphipods, crayfish, salamander larvae, and bat guano. The cavefish can be found in caves within the Springfield Plateau of the Ozark Highlands in Arkansas, Missouri, and Oklahoma (U.S. Fish and Wildlife Service 2016). No Ozark cavefish are known to be present in any caves within Buffalo National River, so there would be no impact to the Ozark cavefish.

Ozark Shiner

The Ozark shiner is a freshwater minnow found in the Ozark uplands in southern Missouri and northern Arkansas in the Black River system and the White River system of which the Buffalo River is a tributary. The Ozark shiner typically inhabits rocky and sandy runs and flowing pools often near clear fast-flowing small to medium rivers. The Ozark shiner is present in the project area.

Ozark Chub

The Ozark chub is a ray finned freshwater fish found in the St. Francis and White River drainages, in southern Missouri and northern Arkansas. The species typically occurs in large, medium gradient, moderately clear streams and rivers with clean gravel bottoms as well as over gravel and rubble in runs and flowing pools of clear small to large rivers. The species has seen drastic decline with dam construction in the White, Black, and St. Francis Rivers due to its intolerance of turbidity and siltation. The Ozark chub has not been found in Cove/Cecil Creek; however, a USGS longitudinal survey in 2001 and 2002 found them to be present in the section of Buffalo River near the project area.

Other aquatic species that are likely present in the project area that have been identified by the park as having the greatest conservation need include: autumn darter (*Etheostoma autumnale*), American eel (*Anguilla rostrata*); least brook lamprey (*Lampetery aepyptera*); American brook lamprey (*Lethenteron appendix*); gilt darter (*Percina evides*); elktoe (*Alasmidonta marginata*); slippershell mussel (*Alasmidonta viridis*); Ozark pigtoe (*Fusconaia ozarkensis*); round pigtoe (*Pleurobema sintoxia*); Ouachita kidneyshell (*Ptychobranhus occidentalis*); purple lilliput (*Toxolasma lividum*); bleedingtooth mussel (*Venustaconcha pleasii*); and, rainbow mussel (*Villosa iris*).

State Endangered species are afforded protection under Arkansas Game and Fish Commission (AGFC) Regulations. It is unlawful to import, transport, sell, purchase, hunt, harass or possess any threatened or endangered species of wildlife or parts. The AGFC lists as endangered any wildlife species or subspecies endangered or threatened with extinction, listed or proposed as a candidate for listing by the USFWS, or any native species or subspecies listed as endangered by the Arkansas Natural Heritage Commission. State Endangered plant species are recognized by the Arkansas Natural Heritage Commission as being in danger of being extirpated from the state. This is an administrative designation with no regulatory authority. State Threatened species are native plant taxa which are believed likely to become endangered in Arkansas in the foreseeable future, based on current inventory information.

In Newton County, State Endangered species include the rabbitsfoot, Ozark big-eared bat, gray bat, northern long-eared bat, and Indiana bat. State endangered plant species include the small-head pipewort (*Eriocaulon koernickianum*). State Threatened plants include the: Alabama snow-wreath (*Neviusia alabamensis*), French's shooting-star (*Primula frenchii*), ovate-leaf catchfly (*Silene ovata*), royal catchfly (*Silene regia*), Appalachian filmy fern (*Trichomanes boschianum*), and dwarf bristle fern (*Trichomanes petersii*) (Arkansas Natural Heritage Commission 2015). There are no known occurrences of these species in the project area.

Environmental Consequences

No Action Alternative

Direct and Indirect Impacts. Erosion of the streambanks would continue to weaken the root systems of trees along these areas, causing them to fall and be carried downstream. The loss of several trees over time is not anticipated to have a measurable impact on Federally-listed bat species roost trees or foraging areas since no known roost trees are present in the project area and similar foraging habitat is available throughout the surrounding area. Continued sedimentation from the erosion of the streambanks would decrease the quality of the aquatic habitat potentially available for the rabbitsfoot mussel, snuffbox mussel, western fanshell and their host species as well as the Ozark shiner and Ozark chub.

Action Alternative

Direct and Indirect Impacts. No tree clearing or ground disturbance outside of the existing roadway prism is anticipated to be necessary in order to rehabilitate Compton-Erbie Road. The replacement of the low-water crossings on County Roads 57 and 79 would require some minor clearing, approximately 0.25 acres (10,900 square feet). Indiana bats and northern long-eared bats are also known to roost in suitable trees in the summer months. Tri-colored bats are also thought to roost in tree cavities and crevices. The trees in the project area are primarily bitternut hickory (*Carya cordiformis*), American elm (*Ulmus americana*), box elder (*Acer negundo*), sweet gum (*Liquidambar styraciflua*), green ash (*Fraxinus pennsylvanica*), American linden (*Tilia americana*), and hackberry (*Celtis occidentalis*), which do not ordinarily provide roosting habitat unless the trees are dead. In order to avoid potential impacts to the Indiana, northern long-eared, and tri-colored bats, tree removal would not occur between April 1 and October 15. No known maternity roost trees are present in the project area. The proposed project is not anticipated to impact habitat used by Indiana, northern long-eared, or tri-colored bats for winter hibernation. Although trees that may be used for summer roosting by Indiana, northern long-eared and tri-colored bats may be cleared in order to construct the new low-water crossings, similar habitat is widely available adjacent to the project area.

Gray bats and Ozark big-eared bats typically utilize caves year-round for winter hibernation and summer roosting. Occasionally summer roosts have been found in bridges or other structures. The Action Alternative is not anticipated to impact gray bats or Ozark big-eared bats because there would be no impacts to caves or structures located near the project area.

Little brown bats hibernate in small rock crevices as well as caves and mines, and utilize caves, structures, and trees for summer roosting. No known locations used for winter hibernation by the little brown bat would be impacted by the Action Alternative. The tree clearing time of year restriction would also help to avoid impacting the little brown bat since no tree clearing would be done while they are roosting.

Noise levels would increase during construction, for an estimated duration of six months. During this time, construction activities would primarily include excavation, grading, and the placement of aggregate material. These activities would take place during the day and would not disrupt foraging bats.

In order to reconstruct the road and low-water crossings, approximately 1.30 acres of ground would be cleared, which would expose bare, erodible soil for several weeks of time until work is completed and the area is permanently stabilized. In order to reduce the potential for sediment to erode and enter Cove Creek, which could impact the rabbitsfoot mussel, snuffbox mussel, western fanshell, Ozark shiner, Ozark chub, and other aquatic species, BMPs such as silt fence and temporary seeding would be used. Stream diversions would be installed in two phases at each of the low-water crossings, and the areas behind the diversions would be dewatered by pumping water through a filter bag. Sediment above the concrete slabs would be removed prior to removing the slabs to reduce the potential for a large sediment release during the next flood event. A large release of sediment would increase turbidity and cover the stream bed, which would harm individuals and decrease the quality of aquatic habitat in the area until the sediment can be flushed by a subsequent flood event.

Replacement of the low-water crossings is anticipated to improve the water quality and potential habitat for the Ozark shiner, Ozark chub, rabbitsfoot mussel, snuffbox mussel, western fanshell, and other aquatic species with conservation need. The County Road 57 low-water crossing would be replaced with embedded box culverts to allow for a natural substrate in the bottom of the box culvert. This increases bed roughness resulting in lower water velocities which make it easier for aquatic organisms to travel through the culverts. Although the County Road 79 low-water crossing would be replaced in-kind, the road approaches would be raised and made more stable by installing ACB mats. Increasing the stability of the stream channel and decreasing streambank erosion would also improve the quality of the aquatic habitat.

VISITOR USE AND EXPERIENCE

Affected Environment

In 2016, the NPS reported that the Buffalo National River had a total of 1,785,359 visitors and an average of 1,364,806 visitors for the past five years. (National Park Service n.d.). Buffalo National River has two major highway crossings, a number of smaller ones, and 47 access points, providing for dispersed entry to this linear park (NPS 2003a). Erbie is one of the many access points on the western portion of the River. An average of 8,474 vehicles per year traveled on Compton-Erbie Road over the last five years. During this timeframe, use of Compton-Erbie road peaks during the month of May (average of 1,846 vehicles per month). These numbers include employee, non-recreation and recreation vehicles.

The primary visitor activity in the Buffalo National River is touring the river (NPS 2000). Touring the river is popular with visitors from March through June. The most popular multi-day canoeing trip is the Ponca to Pruitt section of Buffalo River; a 26-mile distance that takes a minimum of two days to complete. This trip provides floaters the opportunity to visit and camp at the historic Erbie area. One-day float trips typically launch from Ponca, Steel Creek or Pruitt and end at Kyle's Landing (for launches from Ponca or Steel Creek) or Hasty (Buffalo Outdoor Center n.d.).

Other popular outdoor recreational and educational activities in Buffalo National River include hunting, fishing, camping, hiking, interpretive programs, horseback riding. Several hiking trails can be found in the vicinity of the project. These trails provide access to historic farmsteads, old farm fields, stream valleys, waterfalls, wooded mountainsides, and bluff-top vistas. The Cecil Cove Trail is an approximately 7.0-mile long loop trail. The trail begins near the historic Erbie Church on North Erbie Road, winds through the wooded valley following Cecil Creek, and eventually intersects with Compton-Erbie Road and follows the road for approximately 2.0 miles. Another trail accessible via Compton-Erbie Road, the Cecil Bench Trail, rises out of the creek valley and runs along a bench past an old cemetery and a couple of old home sites. Trail maps state that Compton-Erbie Road is extremely rough and vehicle use is not recommended (National Park Service 2012). Visitors must walk along Compton-Erbie Road to access the trail. The Old River Trail is a hiking and equestrian trail that starts at the Ponca low-water crossing, intertwines with the Buffalo River Trail, and includes numerous river crossings (National Park Service n.d.). In the project area, the Old River Trail follows County Road 57 south across the low-water crossing (Williams 2010).

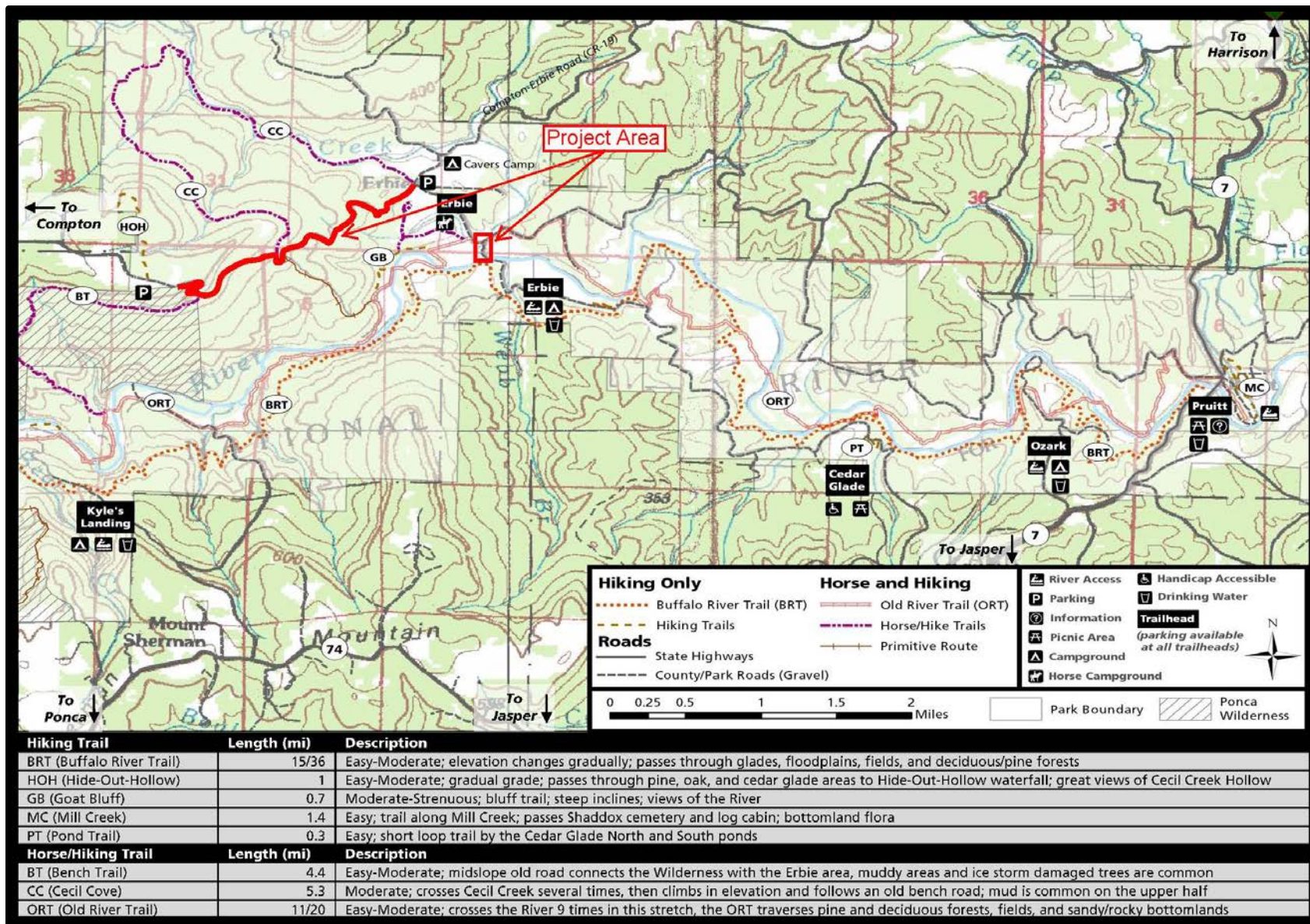


Figure 11. Erbie Area Trail Map

Storm events cause the water levels in the Buffalo River to rise, making the low-water crossing there unmanageable for most vehicles. During high-water periods, the north side of the Erbie area can be accessed from the Dogpatch-Erbie road west of Highway 7 (an approximate 20 mile detour), or by Compton-Erbie road east off Highway 43 (an approximate 39 mile detour). Across the Buffalo River to the south is the Cherry Grove Cemetery Loop trail. This trail begins at the Parker-Hickman Farm, the oldest existing farmstead on the Buffalo River, and travels through old fields and wooded bluffs to the historic cemetery (Harrison Convention & Visitors Bureau n.d.).

Environmental Consequences

No Action Alternative

Direct and Indirect Impacts. Under the No Action Alternative, the road would continue be closed to the public following storm events, which would limit access to the Erbie area. Over time, damage would worsen, lengthening the amount of time that access to the area would be limited.

Action Alternative

Direct and Indirect Impacts. During construction, sections of Compton-Erbie Road, County Road 57, and County Road 79 would be closed. These closures would range from approximately 25 calendar days on Compton-Erbie Road to approximately 60 calendar days for County Road 57 and County Road 79. The road closures would limit visitor's ability to access the trails and recreational opportunities in the Erbie area. The detour to cross the Buffalo River the next closest location (using Dogpatch-Erbie Road and Highway 7) is approximately 20 miles in length, and would inconvenience visitors that are unaware of the closure. The road closures and lengthy detour would negatively impact visitor experience. Visitors would still be able to use the river in the Erbie area, but they would need to access the river at a location upstream or downstream of the project area.

Reconstruction of Compton-Erbie Road would improve the ability for vehicles to travel along this section of the road and would also improve access to the Cecil Creek Trail which runs along the road; however, rough conditions would still be encountered for the remainder of the road outside of the park boundary. The replacement of the low-water crossings and reconstruction of the roadway approaches would improve visitor's ability to access the Buffalo River in the Erbie area, which would improve visitor experience.

CHAPTER 4: PUBLIC INVOLVEMENT AND COORDINATION

This chapter documents the scoping process for this project and includes the official list of recipients for the document. As required by NPS policies and planning documents, it is the park's objective to work with Federal, State, and local governmental and private organizations to ensure that the park and its programs are coordinated with theirs, and are supportive of their objectives, as far as proper management of the park permits, and that their programs are similarly supportive of park programs.

PUBLIC INVOLVEMENT

Comments from the public are solicited at two stages in the project planning process, public scoping and the public comment period. Information about the proposed project was made available to the public on the NPS's Planning, Environment, and Public Comment website during the public scoping comment period, from August 8, 2016 through September 9, 2016. Flyers providing details of the proposed project and contact information for comments was sent to a mailing list comprised of Federal, State, and local agencies, elected officials, organizations, and advocacy groups. A legal notice was run in The Newton County Times and The Arkansas Democrat Gazette on August 8, 2016 announcing the public scoping comment period. One comment was received, which was in support of the project.

This EA will be available for public review from April 16, 2018 through May 15, 2018. During this 30-day period, hardcopies of the EA will be available for review at the Buffalo National River Visitor Center, and the Searcy County Library located at 202 East Main Street, Marshall, AR 72650. An electronic version of this document can be found on the NPS's PEPC website at <http://parkplanning.nps.gov/buff>. This site provides access to current plans, environmental impact analyses, and related documents on public review. An electronic version may also be found at the FHWA, Eastern Federal Lands Highway Division's website at <https://flh.fhwa.dot.gov/projects/ar/>

Comments on this EA will be summarized and responded to in an Errata sheet to be appended to the decision document.

AGENCY COORDINATION AND PERMITS

Agency Coordination

Other Federal, State and local governments were contacted during the planning process. Appendix B contains copies of written correspondence with those agencies.

Endangered Species Act of 1973 Coordination and Consultation

On September 15, 2017, the FHWA sent a letter to the USFWS requesting concurrence that the project may affect, but is not likely to adversely affect the gray bat, Indiana Bat, Ozark big-eared bat, Ozark cavefish, rabbitsfoot, and snuffbox mussel. The FHWA also determined that the project would not result in any prohibited incidental take of the northern long-eared bat. In a letter dated October 2, 2017, the USFWS concurred with these determinations.

National Historic Preservation Act of 1966 Coordination and Consultations

A scoping letter was sent to the Arkansas Historic Preservation Program (AHPP), which is designated as the State Historic Preservation Office. In their response, AHPP stated that their records check found five historic properties located near or within this project area. The potential for the project to impact these known sites and any potential unknown sites was analyzed by Dr. Caven Clark, Archeologist at Buffalo National River. In a letter dated October 7, 2016, the FHWA and the NPS determined that the proposed project would have no adverse effect on historic properties because these sites were not located within the area of potential effect (APE). In a letter dated November 9, 2016, the Arkansas Historic Preservation Program concurred that sites 3NW260, 3NW673, 3NW923, 3NW1138(NW164) and 3NW1220(NW139) are not located within the APE and that the project will have no effect on historic properties.

In a response to the scoping letter for the project, the Quapaw Tribe determined that the project is not likely to adversely affect properties of cultural significance to the Quapaw Tribe in a letter dated August 24, 2016. The Osage Nation requested in a letter dated October 14, 2016 that a cultural resource survey be conducted for this project. On September 6, 2016, the United Keetoowah Band of Cherokee Indians in Oklahoma (UKB) responded by letter stating that prehistoric, ethnographic, historic, and traditional sites of value to the UKB surround the project area, and that completion of a cultural resources inventory is recommended. On September 18, 2017, letters requesting concurrence that the project would have no adverse effect on cultural resources were sent to the: Osage Nation, Cherokee Nation of Oklahoma, Tunica-Biloxi Tribe of Louisiana, Inc., Caddo Nation of Oklahoma, Absentee Shawnee Tribe of Oklahoma, Shawnee Tribe of Oklahoma, United Keetoowah Band of the Cherokee Indian Nation, and Wichita and Affiliated Tribes. In an email sent October 4, 2017, the Shawnee Tribe concurred that no known historic properties will be negatively impacted by this project. In a letter dated October 13, 2017, the Osage Nation concurred that the proposed project most likely will not adversely affect properties of cultural or sacred significance to the Osage Nation. In a letter dated October 24, 2017, the Cherokee Nation indicated that they did not foresee this project imparting impacts to Cherokee cultural resources at this time. No responses were received from the Tunica-Biloxi Tribe of Louisiana, Inc., UKB, Caddo Nation of Oklahoma, Absentee Shawnee Tribe of Oklahoma, or the Wichita and Affiliated Tribes.

Permits

If the action alternatives were implemented, several permits and notices would be required in order to construct the project. These permits include:

Clean Water Act Section 404 Permit/ Section 10 of the Rivers and Harbors Act

The Rivers and Harbors Appropriation Act of 1899 prohibits the creation of any obstruction to the navigable capacity of any of the waters of the United States. The Federal Water Pollution Control Act, more commonly known as the "Clean Water Act," under Section 404, directs the Secretary of the Army, acting through the Chief of Engineers, to issue permits for the discharge of dredged or fill material into waters of the United States at specified disposal sites. This project would discharge dredged or fill material into the waters of the United States, including special aquatic sites such as wetlands. The proposed project would most likely qualify for coverage under Nationwide Permit 14, Linear Transportation Projects. The review period is typically 45 calendar days for Nationwide Permits.

401 Water Quality Certification

The 401 Water Quality Certification is a “certification,” needed for any Federal permit involving impacts to water quality. Most 401 Certifications are triggered by Section 404 Permits issued by the U.S. Army Corps of Engineers. Typical types of projects involve filling in surface waters or wetlands. Section 401 of the Clean Water Act delegates authority to the States to issue a 401 Water Quality Certification for all projects that require a Federal permit (such as a Section 404 Permit). The "401" is essentially verification by the State that a given project will not remove or degrade existing, designated uses of “Waters of the State,” or otherwise violate water quality standards. Mitigation of unavoidable impacts and inclusion of stormwater management features are two of the most important aspects of water quality review. This certification is issued by the Arkansas Department of Environmental Quality (ADEQ). ADEQ normally issues 401 Certification within 120 days of receipt of a complete application.

Short Term Activity Authorization (STAA)

In Arkansas, any activity that causes disturbance in the water or stream include entry of machinery, debris removal from water or wetland, bridge construction/demolition and other activities conducted in any water that may cause a violation of the Arkansas Water Quality Standards must be authorized through a Short Term Activity Authorization (STAA). The STAA allows individual or entities to perform in-stream work that might cause water quality violations in Arkansas waters and must be obtained prior to beginning in-stream work. This authorization is issued by the Arkansas Department of Environmental Quality (ADEQ) – Water Division.

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