

National Park Service
U.S. Department of the Interior

Buffalo National River
Arkansas



FINDING OF NO SIGNIFICANT IMPACT for the ERBIE ROAD IMPROVEMENTS

June 2018

INTRODUCTION

The Environmental Assessment (EA) for the Erbie Road Improvements and this Finding of No Significant Impact (FONSI) constitute the record of the environmental impact analysis and decision-making process for making improvements to the Erbie area in Newton County, Arkansas. The National Park Service (NPS) and Federal Highway Administration (FHWA) have selected the Action Alternative, as identified in the EA. This FONSI summarizes the findings of the EA and incorporates the public input provided during the public comment period, which extended from April 16, 2018 through May 15, 2018.

BACKGROUND

The Erbie area of Buffalo National River was damaged by rain and subsequent flooding in May of 2015, which included a portion of Compton-Erbie Road and two low-water crossings. Repair of the damage and additional improvement are needed to restore access to the Erbie area and reduce the likelihood of damage from future storm events.

SELECTED ALTERNATIVE

Based on the analysis presented in the EA, the NPS and FHWA have selected the NPS Preferred Alternative (Action Alternative) for implementation. Under this alternative, Compton-Erbie Road (County Road 19) will be rehabilitated from the intersection with County Road 57 west for a distance of 2.58 miles. The existing road will be reconditioned to restore a single lane road with a width varying between 10 to 12 feet. The width will vary as needed to fit within the existing roadway prism. Six inches of aggregate material will then be placed over the reconditioned road bed to create the driving surface. Additional aggregate will be placed as needed to level the road and create a crown and three to four percent cross slopes. The rehabilitation will also include the replacement of the road base material in a 1200-foot section of the road that has particularly poor clay soils.

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

Two low-water crossings traversing Cove Creek will be replaced, one on County Road 57 and one on County Road 79. The first low-water crossing is located along County Road 57 at Cove Creek north of the Buffalo River. Temporary stream diversions will be installed, and the water behind the diversion will be pumped out through a filter bag to dewater the work area. The work will be completed in two phases to allow stream flow to pass through the open half of the channel. The existing concrete slab will be broken up, removed, and disposed of off-site. A crane will lift and install eight pre-cast concrete box culverts side-by-side to function as a vented ford. The top elevation will be 847.07 feet, whereas the current crossing elevation is approximately 845 feet. This means that the new low-water crossing will be overtopped during flood events. However, during normal flow and minor storms, water will flow through the box culverts. The box culverts will each be eight-foot span by four-foot rise, and will be embedded approximately one foot into the streambed. This crossing will 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.

Regrading to raise the roadway approaches is needed to accommodate the raised road elevation resulting from the box culvert installations. Articulated concrete block mats will be installed along the roadway approaches. 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 will cover the entire 12 feet of the road surface, and will be embedded in the embankment along the road.

The second crossing is located along County Road 79 at Cove Creek, immediately south of the first crossing. Dewatering during construction and removal of the existing low-water crossing will follow the same method describe for the County Road 57 low-water crossing. The existing concrete slab low-water crossing will be replaced with a 120-foot long by 12-foot wide concrete slab low-water crossing. The concrete slab will be eight inches thick and will be cast in place. The surface of the concrete slab will be at the same elevation as the streambed. Articulated concrete block mats (six-inches deep) will be added from the intersection with County Road 79 to the end of the project near the Buffalo River. This will be realigned to allow for positive drainage from the roadway and to account for the raised road elevation.

The project is expected to take approximately 140 calendar days to complete. During construction Compton-Erbie Road, County Road 57 and County Road 79 will be closed. The length of the closure will 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 will be signed and notification of the road closures and detours will be provided to the public

MITIGATING MEASURES AND BEST MANAGEMENT PRACTICES (BMPs)

The following are mitigation measures and BMPs related to construction activities to be implemented under the Selected Alternative (Action Alternative).

- Temporary BMPs will be utilized to minimize erosion and sedimentation from ground disturbing activities that expose bare soil, which will otherwise negatively impact water quality. The BMPs may include the use of silt fence, fiber roll, erosion matting, or check dams. These BMPs will be used only during construction and will be removed once the disturbed area has been permanently stabilized with vegetation.
- Disturbed soil will be re-vegetated using specific native species seed mixes that do not include invasive or exotic species.
- Any soil excavated during construction will be stockpiled and reused as fill if needed. Fill material is not anticipated for this project; however, should additional soil be needed, the soils will be clean, weed-free native soils from an approved source.
- Tree removal will not occur between April 1 and October 15, in order to avoid the period when the Federally-listed Indiana bat and the northern long-eared bat use trees for roosting and foraging.
- Should construction unearth previously undiscovered archeological resources, work will be stopped in the area of any discovery and the Park will 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) will be followed as appropriate.

OTHER ALTERNATIVES ANALYZED IN THE EA

The No Action Alternative was also considered, as described in Chapter 2 of the EA. 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 benchmark to compare what would happen to the environment if current management were continued into the future with other feasible alternatives.

ALTERNATIVES DISMISSED FROM FURTHER ANALYSIS IN THE EA

The NPS and FHWA considered and dismissed from further analysis one alternative before development of the range of reasonable alternatives for full impact analysis. A description of this preliminary alternative and the reason for its dismissal is provided in Chapter 2 of the EA.

THE SELECTED ALTERNATIVE AND SIGNIFICANCE CRITERIA

As defined in 40 CFR § 1508.27(b), significance is determined by examining the following 10 criteria. A discussion on why the Selected Alternative (Alternative D) will not have a significant effect on the human environment follows each criterion.

1. *Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.*

There will be no significant impacts as a result of implementing the Selected Alternative. Effects from the Selected Alternative to the resources analyzed in the EA are described below.

Floodplains/Streamflow Characteristics: The replacement of the two low-water crossings will require the placement of fill material, a concrete slab, and box culverts to raise the roadway profile, which in turn will cause a minor increase in backwater conditions. 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 will 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 will 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 will be embedded in the creek and the bottom will 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 will continue through the culvert, eliminating the scour pool and normalizing the creek's velocity. The raised crossing elevation and reduced creek disturbance will allow crossing use during some minor storms that will have rendered the previous crossing unusable. The concrete slab of the County Road 79 is being replaced in-kind and will be constructed to eliminate the drop off on the downstream side. This will result in improved streamflow conditions. The Selected Alternative will have no impact on the Buffalo River floodplain, and will 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 will provide a more natural flow of water.

Water Quality: During construction, approximately 1.47 acres of earth will be disturbed which increases erodible area and the potential for sediment to enter Cove Creek and travel downstream to the Buffalo River. BMPs will 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 will provide increase stability to prevent these areas from washing out during future storm events. The southern approach to the County Road 79 low-water crossing will be raised and graded to reduce the stream's ability to change its course. These efforts to provide more stability to the stream channel will reduce erosion and sedimentation of Cove Creek and the Buffalo River and improve water quality. Regrading, replacing swelling clays with proper road base materials, installing a surface course of gravel, replacing damaged culverts, and installing rolling dips with articulating concrete block mats in the dips will reduce sediment discharge from the Compton-Erbie Road. These actions will reduce water flow down the roadway and reduce discharge of sediment from concentrated flows of runoff.

Wetlands: Three palustrine wetlands are present in the project area. These wetlands are vegetated with species such as sycamore seedlings/saplings, white grass, and beef steakplant; although vegetation is sparse because of frequent disturbance during flood events. Temporary stream diversions installed during construction of the County Road 79 will temporarily impact approximately 180 square feet of W-3. The new water crossing and road will 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 will 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 will re-establish a 12-foot wide road. Sections of these roads will be raised to improve roadway drainage and resiliency during storm events. The raised roadway profile will result in a larger roadway footprint because embankment material will be placed alongside the road to transition the road to the existing ground. The sides of the articulated concrete block mats will be buried into the ground to provide additional stability, which also enlarges the roadway footprint. Although 2,250 square feet of wetlands will be permanent impacted by the Action Alternative, impacts to wetland functions in the study area will 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: Indiana, northern long-eared, gray, Ozark big-eared, little brown and tri-colored bats have the potential to be present in the project area. 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 will 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. In order to avoid potential impacts to the Indiana, northern long-eared, and tri-colored bats, tree removal will 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 Selected Alternative is not anticipated to impact gray bats or Ozark big-eared bats because there will 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 will be impacted by the Selected Alternative. The tree clearing time of year restriction will also help to avoid impacting the little brown bat since no tree clearing will be done while they are roosting. Noise levels will increase during construction, for an estimated duration of six months. During this time, construction activities will primarily include excavation, grading, and the placement of aggregate material. These activities will take place during the day and will not disrupt foraging bats.

Aquatic species of special concern that may be present in the project area include the rabbitsfoot mussel, western fanshell, snuffbox mussel, Ozark shiner, and Ozark chub. In order to reconstruct the road and low-water crossings, approximately 1.30 acres of ground will be cleared, which will 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, and Ozark chub, BMPs such as silt fence and temporary seeding will be used. Stream diversions will be installed in two phases at each of the low-water crossings, and the areas behind the diversions will be dewatered

by pumping water through a filter bag. 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, and western fanshell. The County Road 57 low-water crossing will 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 will be replaced in-kind, the road approaches will be raised and made more stable by installing articulated concrete block mats. Increasing the stability of the stream channel and decreasing streambank erosion will also improve the quality of the aquatic habitat.

2. *The degree to which the action affects public health or safety.*

Implementation of the Selected Alternative will improve the sustainability of the roads in the Erbie area, making them more resilient during future storms. The Selected Alternative will be beneficial to public health and safety.

3. *Unique characteristics of the geographic area such as proximity to historic or cultural resources, parklands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.*

Wetlands: Three palustrine wetlands are located adjacent to the road in the project area. These wetlands are sparsely vegetated and are frequently disturbed during storm events when Cove Creek diverts from its channel to flow along the road. Because they are located adjacent to the existing roads, they will be impacted a result of raising the road and anchoring the articulated concrete block mats. Approximately 2,250 square feet of palustrine wetlands will be permanent impacted by the Selected Alternative. Impacts to wetland functions in the study area will be minimal since wetlands in the project area have low wetland functions and values due to their limited vegetated cover and lack of hydric soils.

Buffalo National River Wilderness: In the project area, the Ponca wilderness unit boundary is 100 feet south of 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 will take place within the existing roadway prism, and will not extend into the wilderness area. Rehabilitation efforts will decrease concentrated runoff from impacting the wilderness resources.

No historic or cultural resources, parklands, prime farmlands, or ecologically critical areas occur in the vicinity of the project area. The Buffalo River is not a designated component of the National Wild and Scenic Rivers System; however, Section 4 of the Buffalo River's enabling legislation contains the language of Section 7(a) of the Wild and Scenic Rivers Act. The Selected Alternative will have no direct impact to the Buffalo River, but will replace low-water crossings on a tributary to the Buffalo River. The replacement of the low-water crossings will not have a direct and adverse effect of the values for which the Buffalo National River was designated.

4. *The degree to which the effects on the quality of the human environment are likely to be highly controversial.*

There were no highly controversial effects identified during the preparation of the EA or the public review period.

5. *Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risks.*

Potential impacts from implementation of the Selected Alternative are not highly uncertain and do not involve unique or unknown risks.

6. *The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.*

The Selected Alternative will not establish a precedent for future actions.

7. *Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.*

The Selected Alternative, when considered with other reasonably foreseeable past, present and future projects, is anticipated to result in cumulative effects. None of the anticipated effects are significant.

8. *The degree to which the action may adversely affect items listed or eligible for listing in the National Register of Historic Places, or other significant scientific, cultural or historic resources.*

Consultation per Section 106 of the National Historic Preservation Act was completed with the State Historic Preservation Office (also referred to as the Arkansas Historic Preservation Program) regarding the potential for the proposed project to adversely affect cultural resources. FHWA and the NPS determined that the proposed project would have no adverse effect on historic properties. In a letter dated November 9, 2016, the Arkansas Historic Preservation Program concurred that the project will have no effect on historic properties.

9. *The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.*

Informal consultation per Section 7 of the Endangered Species Act of 1973, as amended was completed with the United States Fish and Wildlife Service (USFWS). 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.

10. Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

Applicable Federal, State, and local laws and requirements were considered in the development of the improvements to the Erbie area. The Selected Alternative does not violate any Federal, State, or local environmental protection laws.

PUBLIC INVOLVEMENT

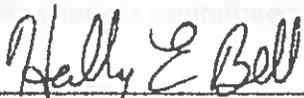
This EA was made available for public review from April 16, 2018 through May 15, 2018. Letters providing information about the availability of the EA were sent to the mailing list. During this period, copies of the EA were available for review at the Buffalo National River Visitor Center, and the Boone County Library located at 221 W. Stephenson Avenue, Harrison, AR 72601. An electronic version of this document was uploaded on the NPS's PEPC website at <http://parkplanning.nps.gov/buff>. A legal notice was run in the Newton County Times and the Arkansas Democrat Gazette announcing the public comment period. One piece of correspondence was received during the public comment period for the EA. The comment received on the EA is addressed in an Errata Sheet attached to this FONSI.

SECTION 4(f)

Section 4(f) of the U.S. Department of Transportation Act of 1966, 49 U.S.C. 303(c), states that the use of land from a significant publicly-owned public park, recreation area, or wildlife and waterfowl refuge, or any significant historic site (as determined by the officials having jurisdiction over the resource) as part of a Federally-funded or approved transportation project is permissible only if there are no feasible and prudent alternatives to the use and that the proposed action includes all possible planning to minimize harm to the protected property resulting from such use. The project is for Federal lands transportation facilities identified in the NPS' inventory. Per 23 U.S.C. 138(a), the project is exempt from Section 4(f) review and approval.

CONCLUSION

As described above, the Selected Alternative does not constitute an action meeting the criteria that normally requires the preparation of an Environmental Impact Statement (EIS). The Selected Alternative will not have a significant effect on the human environment. Environmental impacts that could occur are limited in context and intensity, with generally adverse impacts that are localized, short-to long-term, and range from negligible to moderate. There are no unmitigated adverse effects on public health and safety, threatened or endangered species, sites or districts listed in or eligible for listing in the National Register of Historic Places or other unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, significant cumulative effects, or elements of precedence were identified. Implementation of the action will not violate any Federal, State, or local environmental protection law. Based on the foregoing, it has been determined that an EIS is not required for this project and thus will not be prepared.

Recommended: 
Holly E. Bell
Planning and Programs Manager
Eastern Federal Lands Highway Division
Federal Highway Administration

06-12-2018
Date

Recommended: 
Laura A. Miller
Acting Superintendent
Buffalo National River
National Park Service

9 July 2018
Date

Approved: 
Kurt A. Dowden
Chief, Business Operations
Eastern Federal Lands Highway Division
Federal Highway Administration

06-12-2018
Date

Approved: 
Cameron H. Sholly
Regional Director
Midwest Region
National Park Service

8/16/18
Date

APPENDIX A NON-IMPAIRMENT DETERMINATION

The Prohibition on Impairment of Park Resources and Values

National Park Service (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 requirement (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 National Park Service. 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.

What is Impairment?

NPS *Management Policies 2006*, Section 1.4.5, *What Constitutes Impairment of Park Resources and Values*, and Section 1.4.6, *What Constitutes Park Resources and Values*, provide an explanation of impairment.

Impairment is an impact that, in the professional judgment of the responsible National Park Service manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values.

Section 1.4.5 of *Management Policies 2006* states:

An impact to any park resource or value may, but does not necessarily, constitute impairment. An impact would be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or
- Identified as a goal in the park's general management plan or other relevant NPS planning documents as being of significance.

An impact would be less likely to constitute an impairment if it is an unavoidable result of an action necessary to preserve or restore the integrity of park resources or values and it cannot be further mitigated.

Per Section 1.4.6 of *Management Policies 2006*, park resources and values that may be impaired include:

- the park's scenery, natural and historic objects, and wildlife, and the processes and condition that sustain them, including, to the extent present in the park: the ecological, biological, and physical processes that created the park and continue to act upon it; scenic features; natural visibility, both in daytime and at night; natural landscapes; natural soundscapes and smells; water and air resources; soils; geological resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structures, and objects; museum collections; and native plants and animals;
- appropriate opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing them;
- the park's role in contributing to the national dignity, the high public value and integrity, and the superlative environmental quality of the national park system, and the benefit and inspiration provided to the American people by the national park system; and
- any additional attributes encompassed by the specific values and purposes for which the park was established.

Impairment may result from NPS activities in managing the park, visitor activities, or activities undertaken by concessionaires, contractors, and others operating in the park. Impairment may also result from sources or activities outside the park, but this would not be a violation of the Organic Act unless the NPS was in some way responsible for the action.

How is an Impairment Determination Made?

Section 1.4.7 of *Management Policies 2006* states, "[i]n making a determination of whether there would be an impairment, an NPS decision maker must use his or her professional judgment. This means that the decision-maker must consider any environmental assessments or environmental impact statements required by the National Environmental Policy Act of 1969 (NEPA); consultations required under Section 106 of the National Historic Preservation Act (NHPA); relevant scientific and scholarly studies; advice or insights offered by subject matter experts and others who have relevant knowledge or experience; and the results of civic engagement and public involvement activities relating to the decision.

Management Policies 2006 further define "professional judgment" as "a decision or opinion that is shaped by study and analysis and full consideration of all the relevant facts, and that takes into account the decision maker's education, training, and experience; advice or insights offered by subject matter experts and others who have relevant knowledge and experience; good science and scholarship; and, whenever appropriate, the results of civic engagement and public involvement activities relation to the decision.

Non-Impairment Determination for the Selected Alternative

This determination on impairment has been prepared for the Preferred Alternative as described on page 16 of the Environmental Assessment (EA). An impairment determination is made for all resource impact topics analyzed for the Selected Alternative. An impairment determination is not made for visitor use and experience because impairment findings relate back to park resources and values, and these impact areas are not generally considered to be park resources or values according to the Organic Act, and cannot be impaired in the same way that an action can impair park resources and values.

Floodplains/Streamflow Characteristics

The Selected Alternative will have no impact on the Buffalo River floodplain, and will have a minor long-term 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 will provide a more natural flow of water. The Selected Alternative will have a long-term beneficial impact to streamflow characteristics. Therefore, the Selected Alternative will not result in impairment to floodplains or streamflow characteristics.

Water Quality

The Selected Alternative will have short-term adverse impacts to water quality because of the ground disturbance during construction of the new low-water crossings. During construction, best management practices (BMPs) will be used for erosion and sediment control to minimize impacts to water quality. The improved stability of the stream channel will reduce erosion and sedimentation of Cove Creek and the Buffalo River and improve water quality. Also, reconstruction of Compton-Erbie Road will reduce sediment discharge from concentrated flows of runoff. The Selected Alternative will have a long-term beneficial impact to water quality. Therefore, the Selected Alternative will not result in impairment to water quality.

Wetlands

The Selected Alternative will impact approximately 2,250 square feet of palustrine wetlands. Sections of County Road 79 will be raised to improve roadway drainage and resiliency during storm events. Impacts to wetland functions in the study area will 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. Improving the stability of the stream channel may also allow wetlands in the project area to more thoroughly revegetate because they will not be repeatedly damaged during storm events. The Selected Alternative will have a long-term minor adverse impact to wetlands; however, the wetlands will likely experience improved functions and values. Therefore, the Selected Alternative will not result in impairment to wetlands.

Species of Special Concern

The Selected Alternative will result in short-term adverse impacts due to the tree clearing and noise and ground disturbance from construction activities. Mitigation measures and BMPs will be implemented to avoid and minimize impacts to species of special concern. The Selected Alternative will result in long-term beneficial impacts because the improved stability of the stream channel and decreased streambank erosion will improve the quality of the aquatic habitat. Endangered Species Act consultation was completed with the United States Fish and Wildlife

Service (USFWS). USFWS concurred that the Selected Alternative “may affect, but is not likely to adversely affect” any Federally-listed species. There will be no impacts to State-listed species. Therefore, the Selected Alternative will not result in impairment to species of special concern.

The NPS has determined that implementation of the Preferred Alternative, as described as the Action Alternative on page 16 of the EA and identified as the Selected Alternative in the Finding of No Significant Impact, will not result in impairment of park resources and values at the Buffalo National River. This determination is based on a thorough analysis of the environmental impacts described in the EA, the agency comments received, and the application of the provisions of the *NPS Management Policies 2006*. The road improvements in the Erbie area will maintain the Park’s ability to safely serve visitors by providing safe vehicular access to the Erbie area while minimizing impacts to Park resources.

ERRATA AND RESPONSES TO COMMENTS
Environmental Assessment for the Erbie Road Improvements

The following changes have been made to the Environmental Assessment for the Erbie Road Improvements (May 2018) to correct minor statements of fact, update information, and disclose minor adjustments to the preferred alternative and impact analysis. Additions to the text are identified by underlines and deletions are marked by ~~strikeout~~ unless otherwise noted.

ERRATA

Chapter 2: Description of Alternatives, Action Alternative, Mitigation Measures (page 21)

All tree removal would be done between ~~September 30~~ October 15 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.

RESPONSE TO COMMENT

One piece of correspondence was received during the public comment period. The comment and response are as follows:

1. **Comment:** It would be really good if you used the current county road numbers, when referencing the roads. They have only been in use for 8 or 10 years, and are the only signs that are up. Great that some repairs are being planned.

Response: Thank you for your comment.

Appendix C: Draft Floodplain Statement of Findings

Draft Statement of Findings
Executive Order 11988: Floodplain Management

Erbie Road Improvements
Buffalo National River
Project Number AR ERFO BUFF 2015-1(2)

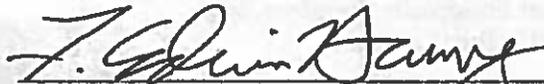
Recommended:



Superintendent, Buffalo National River

07-26-18
Date

Certified for Technical Adequacy and Servicewide Consistency:



Chief, Water Resources Division, Washington Office

7/31/2018
Date

Approved:



Director, Midwest Region

8/16/18
Date

Introduction

Executive Order (EO) 11988: Floodplain Management, requires the National Park Service (NPS) and other Federal agencies to evaluate the likely impacts of action in floodplains. NPS Director's Order 77-2: *Floodplain Management* and the *Procedural Manual 77-2: Floodplain Management* provide NPS policies and procedures for complying with EO 11988.

This Statement of Findings (SOF) has been prepared to comply with EO 11988. The FHWA and NPS have also prepared and made available an Environmental Assessment (EA) for Compton-Erbie Road Improvements. In the EA, the NPS identified the proposed rehabilitation of the Compton-Erbie Road and replacements of the low-water crossings on County Road 57 and County Road 79 as the proposed action and preferred alternative.

The SOF presents the rationale for the proposed improvement of the low-water crossings on County Road 57 and County Road 79 in the floodplain area and documents the anticipated effects. The proposed project is a Class 1 Action, per Director's Order #77-2. Class 1 Actions include manmade features which by their nature require individuals to occupy the site and are prone to flood damage. Avoidance of impacts to the floodplain is not possible because the existing low-water crossings are located in the 100-year floodplain; therefore, any improvements made to the crossings would be located in the floodplain.

Proposed Action

Under the proposed action, Compton-Erbie Road would be rehabilitated for a length of 2.58 miles. The rehabilitation work would occur within the existing roadway prism, and is not located in a floodplain. The proposed action would also replace two low-water crossings that carry County Road 57 and County Road 79 across Cove Creek.

The first low-water crossing is located along County Road 57 at Cove Creek north of the Buffalo River, and is referred to as the Cove Creek 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. 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 into the streambed approximately one foot. The roadway approaches to the low-water crossings would be reconstructed, and articulated concrete block mats would be installed.

The second crossing is located along County Road 79 at Cove Creek, immediately south of the first crossing, and is referred to as the Erbie 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 would be added from the intersection with County Road 79 to the end of the project near the Buffalo River.

Site Description

Buffalo National River contains 95,730 acres within its established boundary and is located in Baxter, Marion, Newton, and Searcy Counties in northern Arkansas. It is one of the few undammed rivers in the continental United States 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 located in the western portion of the Buffalo National River. At Erbie, visitors are able to access the River and there is also a location to obtain drinking water. Several roads cross through Erbie, including Compton-Erbie Road (also referred to as County Road 19), County Road 57, and County Road 79. 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 on these roads is less than 100. County Road 57 and County Road 79 have low-water crossings over which water continuously flows during normal conditions.

Floodplains in the Study Area

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 floodplain (Figure 2). 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. The County Road 19 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 (Figure 1).

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.

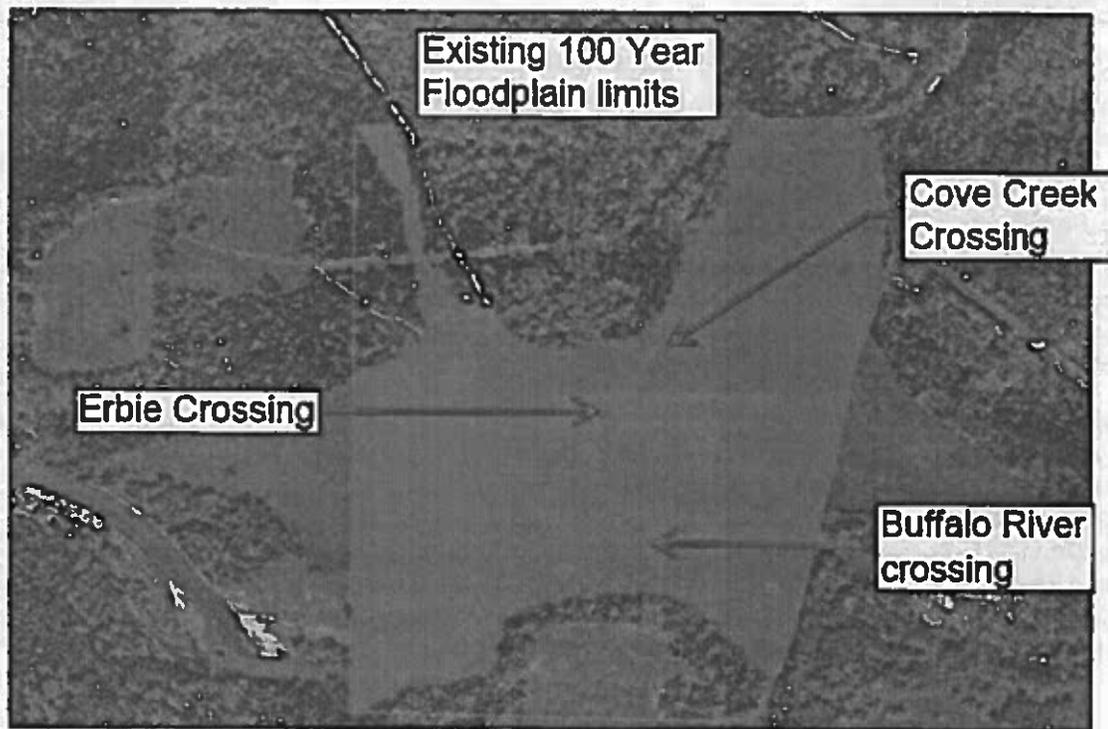


Figure 1. Floodplain Map of the Study Area

Impacts to Floodplains

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. 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 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 minor rise in backwater.

The box culverts of the County Road 57 crossing would be embedded in the creek and the bottom would be filled with natural 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 flow 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.

Both low-water crossings are entirely underwater during the 2-year return period. Since the entire area is underwater during the 100-year event, the proposed low-water crossings would have no change to the water surface elevation of the 100-year event.

Justification for Use of the Floodplains

The proposed actions are needed for park personnel to access and safe passage for maintenance purposes and provide visitors access to nearby trailheads. 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. 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 to be deposited on the road and into the Buffalo River. With each subsequent flood event, the damage reoccurs and requires repair in order to restore access to the area. The storm damage has totally changed the hydrology of the confluence of Cove Creek with the Buffalo River. The low-water crossing at County Road 79 has scoured on the downstream side which has eroded material from underneath the structure. This has weakened the stability of the low-water crossing.

The study area lies within the 100-year floodplain. The low-water crossings would be replaced along approximately the same alignment, minimizing the impact to floodplains. There is no practicable alternative site within which to conduct the proposed action. No occupancy of floodplain areas will be encouraged by the implementation of this project.

Investigation of Alternative Sites

In addition to the proposed action, a No Action alternative was considered. The purpose of this project is to provide sustainable vehicular access to the Erbie area while minimizing adverse impacts to the surrounding environment. Alternatives Considered But Dismissed include replacing the County Road 57 low-water crossing with a concrete slab (instead of box culverts) and replacing the County road 79 low-water crossing with box culverts (instead of a concrete slab). These alternatives would have the same impacts as the proposed action, as the alignment and footprint would be about the same.

Other Permits

In order to construct the project, additional permits and approvals would be necessary.

United States Army Corp of Engineers (USACE) 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. The proposed project would most likely qualify for coverage under Nationwide Permit 3, Maintenance, or Nationwide Permit 14, Linear Transportation Projects. There is no associated fee, and the review period is typically 45 calendar days for Nationwide Permits.

NPDES (National Pollutant Discharge Elimination System) Permit

This project would likely disturb less than five acres of bare soil and has automatic coverage under the Arkansas DEQ Stormwater Program, NPDES General Permit No. ARR15000. Project would only require a "Site with Automatic Coverage (Less than 5 Acres) Construction Site Notice. This general permit regulates stormwater discharges at land disturbance construction sites, and must be obtained prior to conducting any land disturbance activity. The removal of vegetation leaves bare soil which is more vulnerable to erosion. As stormwater flows over a construction site, it can pick up pollutants like sediment, debris and chemicals and transport these to a water body.

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.

Mitigative Actions

The low-water crossings would be replaced at approximately the same location. The top of the box culvert low-water crossing on County Road 57 would be 847.07 feet, whereas the current concrete slab elevation is approximately 845 feet. This low-water crossing would be overtopped by the 2-year event and would have no change to the 100-year event water surface elevation. The proposed action would not have an adverse impact on the floodplain and its associated value.

The new low-water crossings are designed to be consistent with the intent of the standards and criteria of the National Flood Insurance Program (44 CFR Part 60).

Minimization and mitigation include the protection of human health and safety, protection of investment, and protection of floodplain resources and processes. The construction of new low-water crossings would replace existing investments. Risk to the investment exists and would continue to exist after the low-water crossings are replaced. The NPS would repair or reconstruct the facility if and when damage occurs. Protection of floodplain resources and processes was achieved to the extent possible.

Conclusion

The NPS and FHWA conclude that there is no practical alternative to improve sustainable vehicular access to the Erbie area in Buffalo National River, and that the floodplain and its associated value would not be adversely impacted. Permits with other Federal and State agencies would be obtained prior to construction activities. The NPS finds the preferred alternative to be acceptable under *Executive Order 11988: Floodplain Management*.

References

National Park Service. (2003). *Procedural Manual #77-2: Floodplain Management*.

