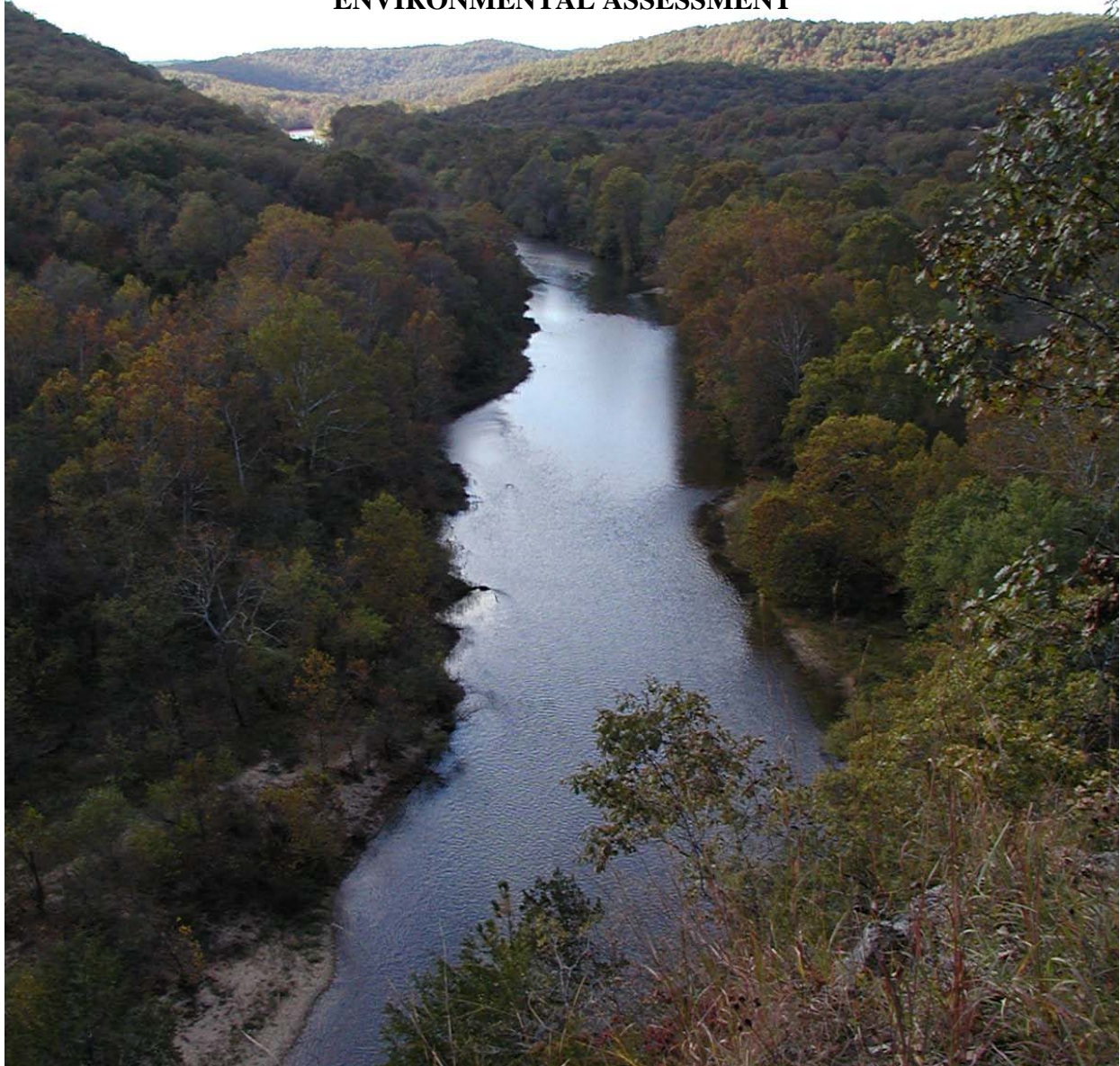




Ozark Trail Association Current River Trail

ENVIRONMENTAL ASSESSMENT



OZARK NATIONAL SCENIC RIVERWAYS
April 2016

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PROJECT SUMMARY

INTRODUCTION

The National Park Service (NPS) is proposing, in cooperation with The Ozark Trail Association (OTA), the Current River Trail in the section of the Current River Valley from Current River State Park to Brushy Creek. This proposed trail will be part of the Ozark Trail system, a designated National Recreation Trail.

This document complies with both the *National Environmental Policy Act* of 1969, as amended, and Section 106 of the *National Historic Preservation Act* of 1966, as amended.

PURPOSE OF AND NEED FOR THE ACTION

In 2008 the OTA began developing the concept of a trail in this section of the Current River Valley and contacted the Ozark National Scenic Riverways (ONSR), Department of Natural Resources Division of State Parks (DNR/MSP), and the L-A-D Foundation (L-A-D) about their proposal. Presently this area does not have any long distance hiking opportunities and the new General Management Plan recommends developing new hiking trails that connect with the Ozark Trail. The proposed trail will be constructed and maintained exclusively by OTA resources comparable to the operational method that OTA maintains the Ozark Trail. The Ozark Trail Association is a volunteer based 501(c)3 organization founded in 2002. Since that time, the OTA has constructed over 50 miles of new trail and has 90% of the 360 miles of Ozark Trail under adoption. OTA volunteers contribute over 10,000 hours annually towards meeting the OTA's mission "*To develop, maintain, preserve, promote and protect the rugged, natural beauty of the Ozark Trail.*"

The following needs have been identified in association with the proposed Current River Trail project area and will be addressed to achieve the stated purpose of this project:

- This area of the park does not have any long distance hiking opportunities.
- Most of the recreation opportunities area limited to floating the river.
- New General Management Plan states that new trails connecting with the Ozark Trail may be desired and considered.

OVERVIEW OF THE ALTERNATIVES

Two alternatives are addressed in this environmental assessment:

Alternative A - No action (no new trail developed)

Alternative B – Construct new Current River Trail as proposed in the alternative description.

SUMMARY OF IMPACTS

Impacts of the proposed alternatives were assessed in accordance with the *National Environmental Policy Act* and the NPS Director's Order 12: Conservation Planning, Environmental Impact Analysis, and Decision-making. Several impacts topics were dismissed from further analysis because the proposed action would result in no impacts or negligible to minor or short-term impacts to those resources. No major impacts are anticipated as a result of this project.

HOW TO COMMENT

Agencies and the public are encouraged to review and comment on the contents of this environmental assessment during a 30-day public review and comment period. We invite you to comment on this plan and you may do so by any one of two methods. The preferred method of providing comments is on the NPS planning website: <http://parkplanning.nps.gov/OZAR>. You may also submit written comments to:

Superintendent, Ozark National Scenic Riverways
Attn: Ozark Trail Association – Current River Trail
P.O. Box 490
Van Buren, MO 63965

Only written comments will be accepted. Please submit your comments within 30 days of the posting of the notice of availability on the Planning, Environment and Public Comment (PEPC) web site. Comments will not be accepted past the 30 day deadline. Please be aware that your entire comment will become part of the public record. If you wish to remain anonymous, please clearly state that within your correspondence, although we cannot guarantee that personal information, such as email address, phone number, etc. will be withheld.

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1.0 PURPOSE AND NEED

BACKGROUND

The National Park Service (NPS) is proposing, in cooperation with The Ozark Trail Association (OTA), the Current River Trail in the section of the Current River Valley from Current River State Park to Brushy Creek. This proposed trail will be part of the Ozark Trail system, a designated National Recreation Trail. In 2008 the OTA began developing the concept of a trail in this section of the Current River Valley and contacted the Ozark National Scenic Riverways (ONSR), Department of Natural Resources Division of State Parks (DNR/MSP), and the L-A-D Foundation (L-A-D) about their proposal. Presently this area does not have any long distance hiking opportunities and the new General Management Plan recommends developing new hiking trails that connect with the Ozark Trail. The proposed trail will be constructed and maintained exclusively by OTA resources comparable to the operational method that OTA maintains the Ozark Trail. The Ozark Trail Association is a volunteer based 501(c)3 organization founded in 2002. Since that time, the OTA has constructed over 50 miles of new trail and has 90% of the 360 miles of Ozark Trail under adoption. OTA volunteers contribute over 10,000 hours annually towards meeting the OTA's mission *"To develop, maintain, preserve, promote and protect the rugged, natural beauty of the Ozark Trail."*

PURPOSE

The purpose of creating Ozark National Scenic Riverways (ONSR) as stated in the park's enabling legislation is for "...conserving and interpreting unique scenic and other natural values and objects of historic interest, including preservation of portions of the Current River and Jacks Fork River in Missouri as free-flowing streams, preservation of springs and caves, management of wildlife, and provisions for use and enjoyment of the outdoor recreation resources thereof by the people of the United States." (P.L. 88-492) Using this legislation as guidance, the purposes that have been defined are identifying a hiking trail route that will meet the following objectives:

- Provide a varied and scenic route that highlights the unique features of the area.
- Reinforce the non-motorized primitive recreational opportunities in this section of the river corridor.
- Connect with the trail network of the Current River State Park, the new Echo Bluff State Park (former Camp Zoe property) and Roger Pryor Pioneer Backcountry.
- Be designed and designated for foot-only traffic.

NEEDS

The following needs have been identified in association with the proposed Current River Trail project area and will be addressed to achieve the stated purpose of this project:

- This area of the park does not have any long distance hiking opportunities.
- Most of the recreation opportunities area limited to floating the river.
- New General Management Plan states that new trails connecting with the Ozark Trail may be desired and considered.

This Environmental Assessment/Assessment of Effect has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, regulations of the Council on Environmental Quality (CEQ) (40 CFR 1508.9), and the National Park Service Director's Order (DO)-12 (Conservation Planning, Environmental Impact Analysis, and Decision-making).



Figure 1- Vicinity Location Map.

Purpose and Significance of the Park

Ozark National Scenic Riverways was established in 1964 “for the purpose of conserving and interpreting unique scenic and other natural values and objects of historic interest, including preservation of portions of the Current River and the Jacks Fork River in Missouri as free-flowing streams, preservation of springs and caves, management of wildlife, and provisions for use and enjoyment of the outdoor recreation resources...” (NPS 1964).

Applicable Regulatory Requirements and Coordination

This Environmental Assessment (EA) has been prepared to evaluate the impacts of the alternatives described in Section 2.0. The EA is prepared in accordance with the National Park Service’s Director’s Order No. 12: Conservation Planning, Environmental Impact Analysis, and Decision Making, and its accompanying Handbook, and the provisions of the National Environmental Policy Act of 1969 (NEPA) (PL#91-190, 42 USC 4321-4247). Detailed procedures for developing this document comply with the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 CFR 1500-1508). The NPS is governed by laws, regulations, and management plans before, during, and after any management action considered under any NEPA analysis. The following are those that are applicable to the proposed action.

National Environmental Policy Act, 1969, as Amended

NEPA was passed by Congress in 1969 and took effect on January 1, 1970. This legislation established this country’s environmental policies, including the goal of achieving productive harmony between human beings and the physical environment for present and future generations. It provided the tools to implement these goals by requiring that every federal agency prepare an in-depth study of the impacts of “Federal actions significantly affecting the quality of the human environment” and alternatives to those actions and required that each agency make that information an integral part of its decisions. NEPA also requires that agencies make a diligent effort to involve the interested members of the public before they make decisions that affect the environment.

NEPA is implemented through Council on Environmental Quality (CEQ) regulations (40 CFR 1500–1508) (CEQ 1978). The NPS has in turn adopted procedures to comply with the act and the CEQ regulations, as found in Director’s Order 12: Conservation Planning, Environmental Impact Analysis, and Decision-making (NPS 2001), and its accompanying handbook.

National Park Service Organic Act of 1916

By enacting the NPS *Organic Act* of 1916, 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 wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations” (54 USC 100101). The *Organic Act* and its amendments afford the NPS latitude when making resource decisions that balance resource preservation and visitor recreation.

Because conservation remains predominant, the NPS seeks to avoid or to minimize adverse impacts on park resources and values. However, the NPS has discretion to allow impacts on park resources and values when necessary and appropriate to fulfill the purposes of a park (NPS 2006a). While some actions and activities cause impacts, the NPS cannot allow an adverse impact that would constitute impairment of the affected resources and values (NPS 2006a). The *Organic Act* prohibits actions that permanently impair park resources unless a law directly and specifically allows for the acts (54 USC 100101). 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 2006a). 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 2006a).

Endangered Species Act

The *Endangered Species Act* (ESA) was enacted in 1973 with the purpose to protect endangered and threatened species and to provide a means to conserve their ecosystems. The law is administered by the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration, National Marine Fisheries Service. Any federal agency action that may affect endangered, threatened, or proposed species must be evaluated in consultation with these two agencies. The federal agency involved must work to conserve listed species and make sure that their actions do not jeopardize the continued existence of a listed species. Development of a plan to modify a federal project is developed in conjunction with the USFWS and the National Marine Fisheries Service so minimal impact would occur to listed species and their habitat.

National Parks Omnibus Management Act of 1998

The *National Parks Omnibus Management Act* underscores NEPA and is fundamental to NPS park management decisions. Both acts provide direction for articulating and connecting the ultimate resource management decision to the analysis of impacts, using appropriate technical and scientific information. Both also recognize that such data may not be readily available and provide options for resource impact analysis should this be the case.

The *National Parks Omnibus Management Act* directs the NPS to obtain scientific and technical information for analysis. The NPS handbook for Director's Order 12 states, "if such information cannot be obtained due to excessive cost or technical impossibility, the proposed alternative for decision will be modified to eliminate the action causing the unknown or uncertain impact or other alternatives will be selected" (NPS 2001).

Other legislation and executive orders, which may be applicable to the activities addressed in this EA, include:

- Section 404 of the Clean Water Act permitting and State water quality certification through Section 401 of the Act.
- Executive Order 11990, Protection of Wetlands.
- The Fish and Wildlife Coordination Act (16 U.S.C. 661-667e)
- Executive Order 11988, Floodplain Protection.

NATIONAL PARK SERVICE MANAGEMENT POLICIES 2006

The *NPS Management Policies 2006* (NPS 2006a) is the basic NPS-wide policy document, adherence to which is mandatory unless specifically waived or modified by the NPS Director or certain departmental officials, including the U.S. Secretary of the Interior. Actions under this EA are in part guided by these management policies.

Impairment

According to *NPS Management Policies 2006*, an action constitutes an impairment when an impact "...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" (NPS 2006a). Whether an impact meets this definition depends on the particular resources and values that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in

question and other impacts. “An impact to any park resource or value may... constitute impairment. An impact would be more likely to constitute an 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, or
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or
- identified in the park’s general management plan or other relevant NPS planning documents as being of significance (NPS 2006a).”

Impairment findings are not necessary for visitor use and experience, visitor and employee safety, park operations and management, or socioeconomics because impairment findings relate back to park resources and values. These impact areas are not generally considered to be park resources or values according to the *Organic Act*, and cannot be impaired the same way an action can impair park resources and values. An impairment determination for the preferred alternative will be provided in the finding of no significant impact.

DIRECTOR’S ORDERS

Director’s Order 12: Conservation Planning, Environmental Impact Analysis, and Decision Making and Handbook

NPS Director’s Order 12 and its accompanying handbook (NPS 2001) lay the groundwork for how the NPS complies with NEPA. Director’s Order 12 and the handbook set forth a planning process for incorporating scientific and technical information and establishing a solid administrative record for NPS projects.

NPS Director’s Order 12 requires that impacts to park resources be analyzed in terms of their context, duration, and intensity. It is crucial for the public and decision makers to understand the implications of those impacts in the short and long term, cumulatively, and within context, based on understanding and interpretation by resource professionals and specialists. Director’s Order 12 also requires that an analysis of impairment to park resources and values be made as part of the NEPA document.

Natural Resources Management Reference Manual NPS-77

The purpose of this document is to provide guidance to park managers for all planned and ongoing natural resource management activities. Managers must follow all federal laws, regulations, and policies. This document provides the guidance for park management to design, implement, and evaluate a comprehensive natural resource management program (NPS 2004).

Other regulatory requirements, which may be applicable to the activities addressed in this EA, include:

- Director’s Order No. 77-1, Wetland Protection.
- Director’s Order No. 77-2, Floodplain Management.

PAST PLANNING EFFORTS

2015 General Management Plan and Environmental Impact Statement

A general management plan (GMP) provides park managers with the direction, goals, and objectives for making decisions on park operations. A new GMP, with a record of decision signed January 22, 2015, has been established for the park. The new plan establishes management zones for areas within the ONSR

boundary. The zones apply only to those land areas for which the NPS has fee title ownership. Management zones tell how areas of the ONSR will be managed. The different zones prescribe a range of desired resource conditions and visitor experiences, and include statements about the appropriate kinds and levels of management, use, and facilities.

This trail proposal will principally occur in a natural zone, with a small segment in the developed zone at Round Spring where it will connect with the Round Spring Trail. A hiking trail is consistent with the desired resource conditions and visitor experiences, and the appropriate kinds and levels of management, use, and facilities, which are established for these zones.

1991 Roads and Trails Study and Environmental Assessment

The purpose of 1991 Roads and Trails Study was to inventory and the roads and trail systems in ONSR in meeting visitor use needs while protecting the resources for which the park was established. This proposed trail was not considered in this study and is a recent proposal by the OTA. This trail proposal could only be considered by completing an environmental assessment, however the 1991 Roads and Trails Study does not exclude other trails from being considered.

As a result of the 2015 GMP, future studies and implementation plans were identified. A new roads and trails plan was one of those identified in the GMP. This plan is in the early stages of effort and, if approved, this trail proposal will be included.

2.0 ALTERNATIVES

As a result of the public and internal scoping process, a no-action alternative and action alternative for addressing the purpose and need were selected for analysis in this EA. A proposed trail route has been developed in cooperation with OTA, Ozark National Scenic Riverways (ONSR), Department of Natural Resources Division of State Parks (DNR/MSP), and the L-A-D Foundation (L-A-D). This new trail will be designated for hiking only. The new trail route will connect Current River State Park, the new Echo Bluff State Park (the former Camp Zoe property), Round Spring Trail, and will tie into the Brushy Creek Trail in the Roger Pryor Backcountry. Brushy Creek Trail connects with the long distance Ozark Trail. Each of the alternatives has been analyzed independently. The alternatives that have been evaluated are:

Alternative A - No action (no new trail developed)

Alternative B – Construct new Current River Trail as proposed in the alternative description.

2.1 Description of Alternatives

Alternative A – No action.

No new trail will be constructed based on this proposal and no long distance hiking opportunities in this area of the park. The goal as stated in the new General Management Plan to have new trails connecting with the Ozark Trail will not be achieved with this proposal.

Alternative B – This proposed trail will offer a different and equally impressive view of this water-carved landscape. The Current River viewed from above, as it is from several points along the proposed route, is among Missouri's most beautiful and inspiring landscapes. This will take users on foot through this landscape, through dark hollows and along towering bluffs, beneath richly diverse hardwood and pine forests, across open glades offering sweeping vistas of the river valley below, and passing by waterfalls and clear, cold spring-fed streams. These are the landscape attributes which define this exceptional region, and this trail will provide intimate access to their beauties and mysteries.

Current River Trail, Access and Routing. The proposal for the Current River Trail would be an approximately 21.6 mile long route, beginning at Current River State Park, through the new Echo Bluff State Park, connect with the Round Spring Trail near Missouri State Highway 19 on the east side of Current River, continue down the Current River Valley connecting with the Brushy Creek Trail in the Roger Pryor Backcountry. There would also be an approximately 2.5 mile loop trail east of Round Spring. Trailhead access would be at the two state parks, Round Spring, or at the Himont Trailhead where an approximately 5-mile segment of the Brushy Creek Trail would connect hikers to the Current River Trail. Hiking could be in either direction. A complete trail route description with maps is at the end of the alternative's description beginning on page 10.

The proposed trail would cross property managed by the NPS, DNR/MSP, and L-A-D, including some properties that the Federal Government owns interest in the form of a scenic easement. The total approximate length of the proposed trail is 21.6 miles, of which approximately 10.8 miles is within the legislated boundaries of ONSR. Of that 10.8 miles inside the park boundaries, 7.9 is on NPS fee title owned land and 2.9 miles is on non-fee land with a Federal scenic easement. The remainder of the trail mileage will be outside of the ONSR boundary where no Federal interest exists, as such it has been determined that Federal action stops at the ONSR Boundary. The EA will analyze the specific impacts inside of the ONSR boundary and consider cumulative impacts for the entire proposed trail.

Other existing trails in the area offer opportunities for even longer through-hiking experiences. For example, the Current River Trail connects to the Brushy Creek Trail which leads to the Himont Trailhead. From here hikers could connect to the Laxton Hollow Trail which in turn joins the Ozark Trail and extends south to Owl's Bend. The total hiking distance from Round Spring to Owl's Bend alone would be more than 40 miles.

Trail users could easily combine a float down the Current River from Round Spring and a hike back through one of the largest and most primitive areas of the Ozarks. Since prime season for hiking is off-season for canoe use, such a float/hike loop could extend the canoe season for visitors and those who serve them.

Trail Construction. The following specifications are based on OTA's standard trail construction methods for hiking trails.

Layout design – Full bench cut, rolling contour trail.

Tread width – 18" to 24"

Sustained grade – 10 percent

Maximum grade – 15 percent (Not to exceed 100 feet in length. May be exceeded on stone step sections)

Corridor – width, 6' – height, 8'

Surface – Natural surface. The tread may be armored where required using natural and manufactured materials such as a geo-textile. Construction of stone steps using native materials may be part of the design.

The trail will be predominantly constructed by manual means. Mechanized assistance using a small skid steer in areas where use of machinery will not adversely impact the environment may be considered. Light brush and vegetation would be cut back as necessary to maintain the corridor, nothing over 4 inch DBH would be cut. Trail can be rerouted up to 100 feet on either side of the designated route in order to mitigate any unforeseen resource impacts, difficult ground, or to take advantage of any scenic views or educational opportunities. Trail will be signed and blazed with the standard OTA markings.

Route Description. The route generally avoids the Current River valley floor with most of it along the side and tops of the ridges. This will take advantage of the scenic view of the river valley and offer solitude from the activities on the river. Camping along the trail will be available and regulated by the land management agency that the trail is crossing. Camping on NPS fee owned land is only allowed at designated camping sites.

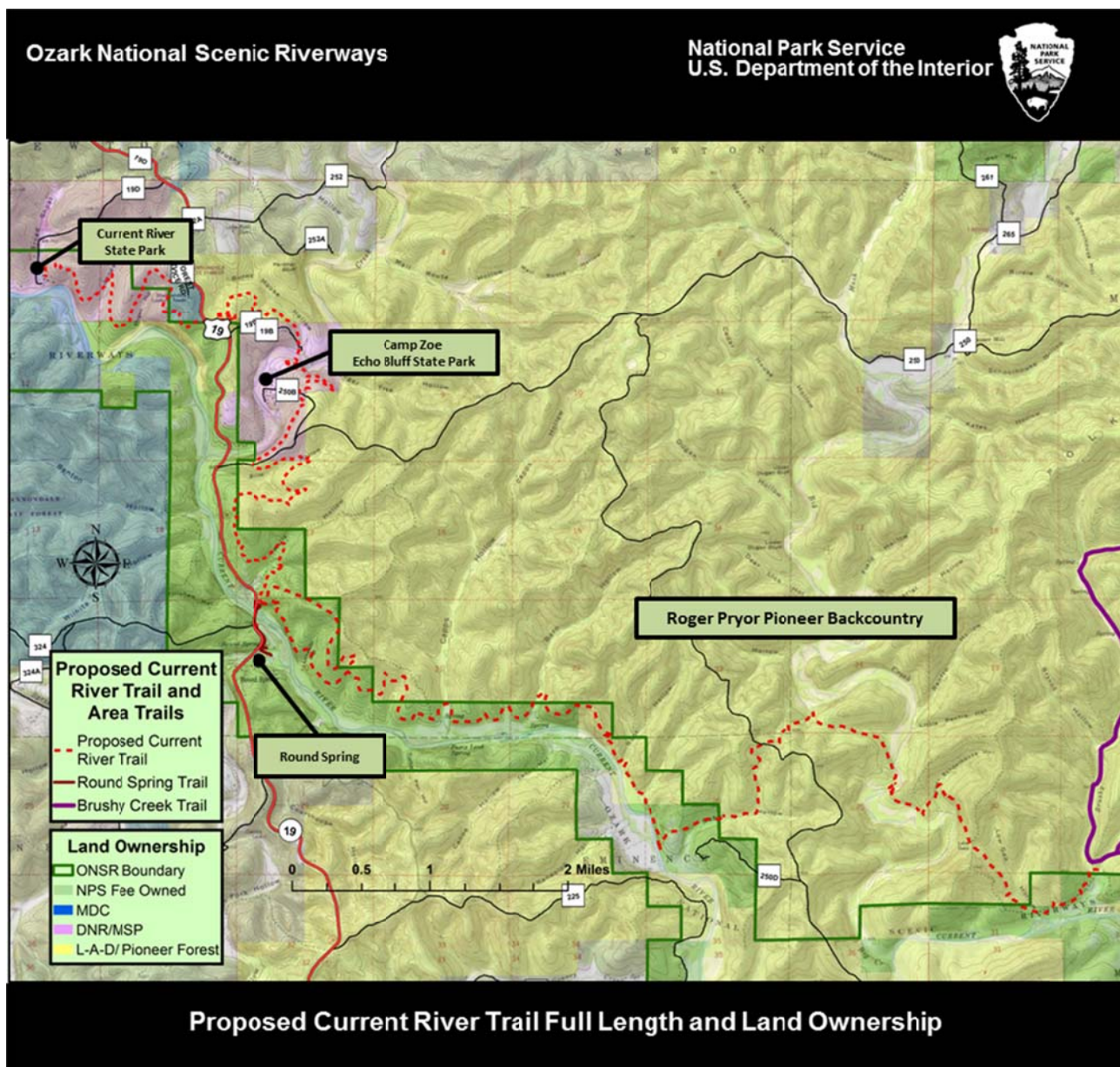


Figure 2 – Proposed Current River Trail Full Length and Land Ownership

Specific Trail Route Description

Map 1 (Figure 3).

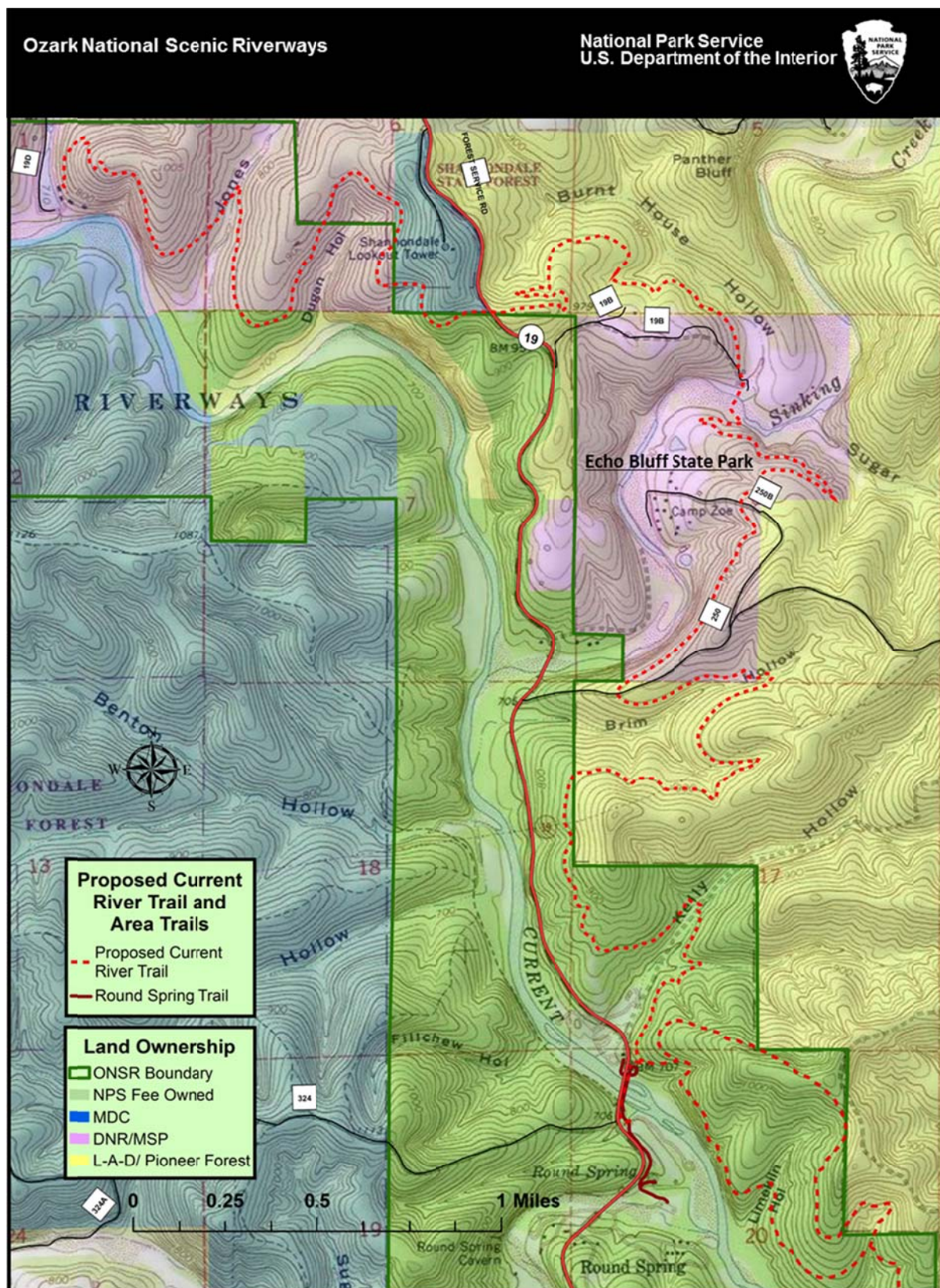
- North end of trail beginning at Current River State Park. This portion of the state park also has a federal scenic easement. Trail climbs up the ridge between Broad Shoal and Jones Hollow.
- Trail then drops down in to Jones Hollow and then back up the ridge and around Dugan Hollow. A small portion of the trail enters NPS fee owned property and then back into the state park.
- Trail leaves ONSR boundary at the upper end of Dugan Hollow. It then follows a contour about half way up the ridge around west and then south of Shannondale Lookout Tower, briefly entering NPS fee owned land and then on to L-A-D owned property outside of the ONSR boundary.
- The trail then enters the new Echo Bluff State Park, crosses Sinking Creek, and on to L-A-D property.
- The trail reenters ONSR on NPS fee owned land south of Brim Hollow.
- Trail stays part way up the ridge east of Missouri State Highway 19, crosses Kelly Hollow and then connects to the Round Spring Trail at the north end of the Highway 19 Pedestrian Bridge across the Current River.
- The Round Spring Loop portion of the trail starts at this point, the trail climbs up the ridge towards Limekiln Hollow.
- The trail stays above the bluff and then turn back north at the top of the ridge to return back to the Round Spring Trail connection.

Map 2 (Figure 4).

- From the Round Spring Loop, the trail continues east going downstream.
- The trail route tends to stay part way up the edge of the ridge above the river except at points where it crosses the various hollows like Capps Hollow, Barn Hollow and Root Hollow.
- This section of the trail veers back and forth between NPS fee owned land and L-A-D property. The L-A-D property inside of the ONSR Boundary has a federal scenic easement.
- Just upstream of Cabin Hollow, the trail turns back up the ridge up the hollow and leaves the ONSR Boundary.

Map 3 (Figure 5).

- After leaving ONSR at Cabin Hollow, the trail is then on L-A-D property for several miles.
- While on L-A-D property it traverses the Big Creek Valley.
- The trail reenters the ONSR boundary at Low Gap hollow.
- Trail stays part way up the ridge to Brushy Creek, mostly on NPS fee owned land, but a small portion on L-A-D property with a scenic easement.
- The trail heads up Brushy Creek leaving the ONSR and connecting with the Brushy Creek Trail.



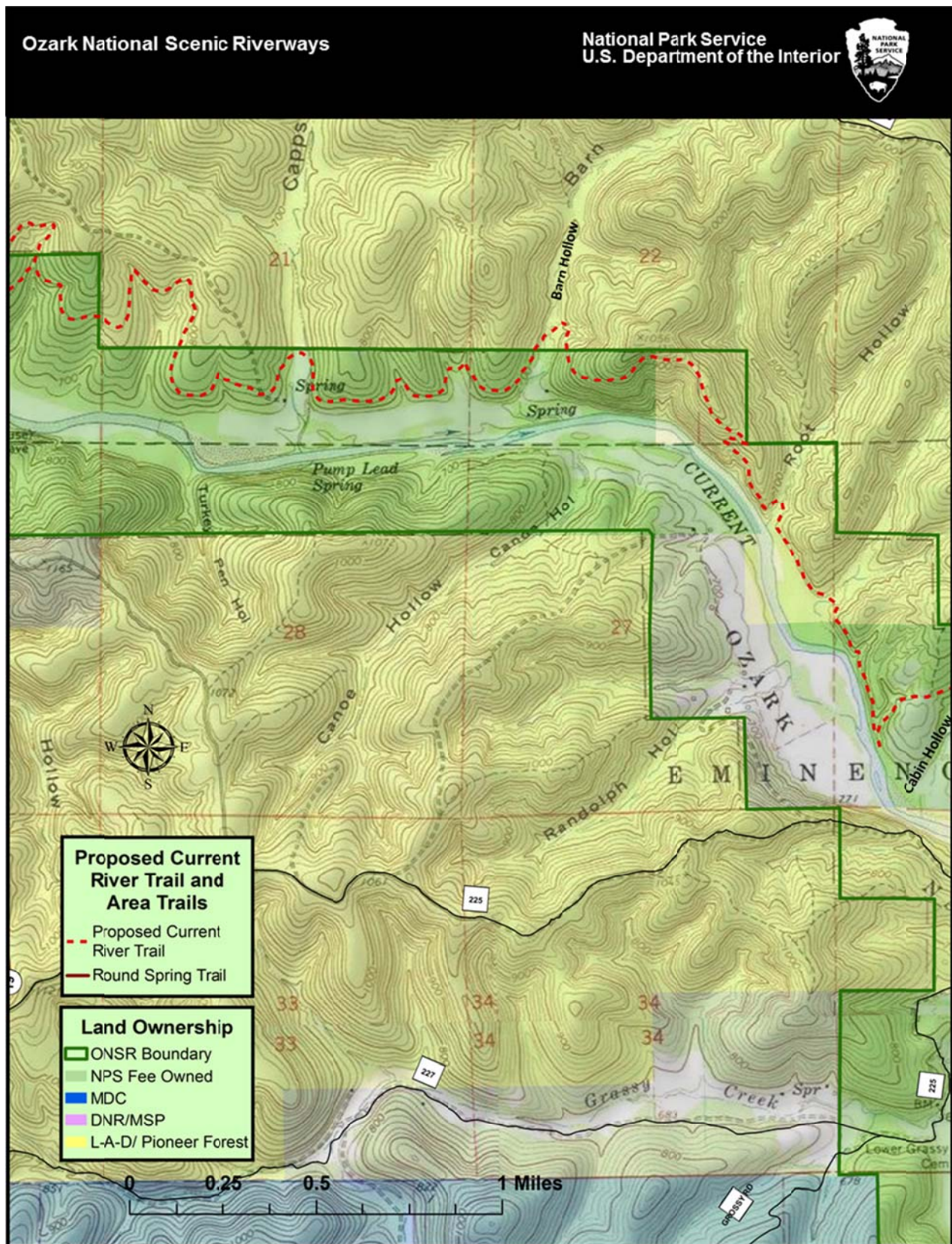


Figure 4 – Map 2 Round Spring Loop to Cabin Hollow.

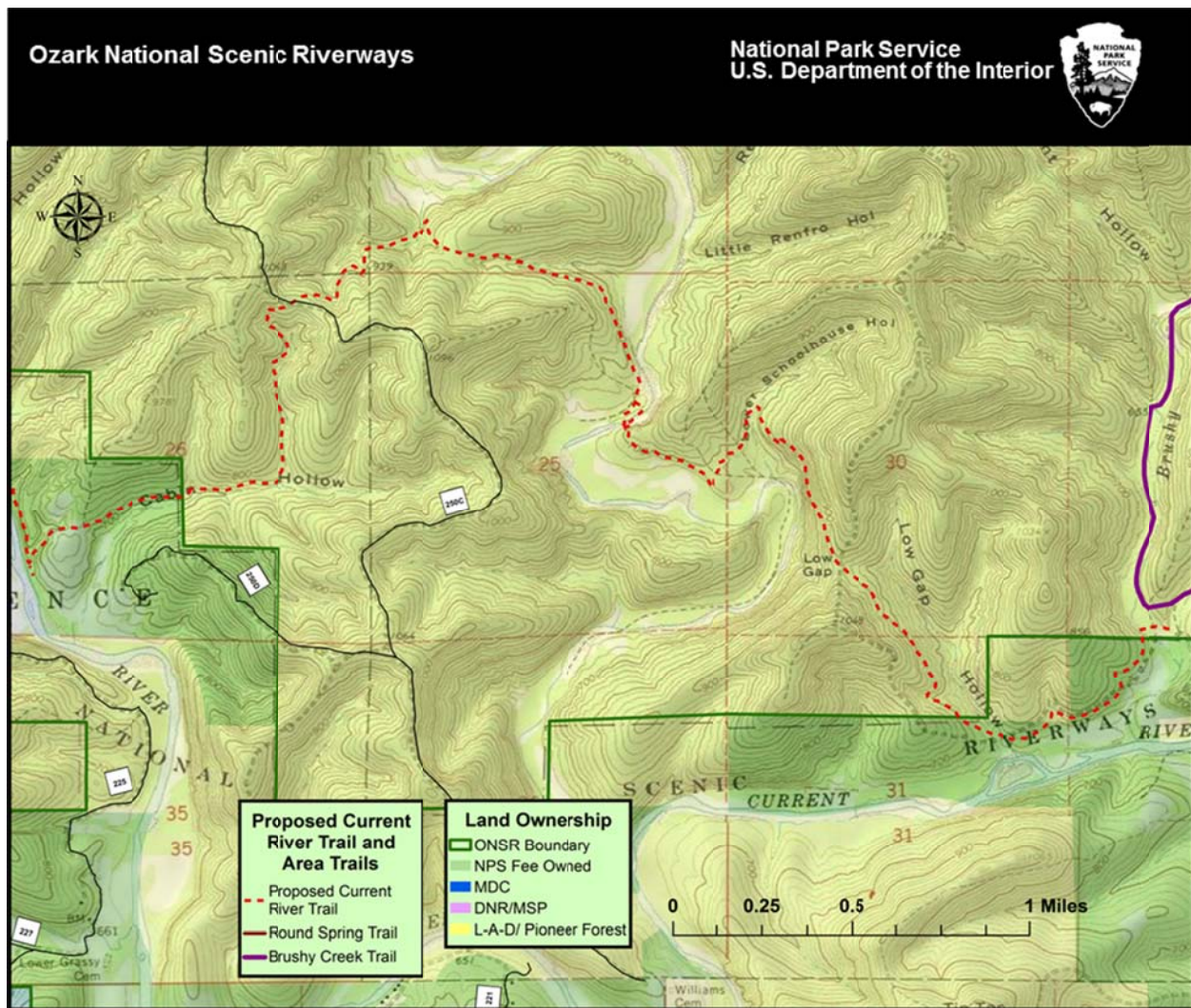


Figure 5 – Map 3 Cabin Hollow to Roger Pryor Backcountry, Low Gap Hollow to Brushy Creek.

2.2 Comparison of Alternative Effects

Table 1: Summary of the Impact Analysis.

RESOURCE AREAS		Alternative A (No-Action)	Alternative B (Construct Trail)
	Soils	Negligible	Negligible
	Water Quality	Negligible	Minor Adverse
	Threatened, Endangered, and Species of Special Concern	No Effect	May Affect/Not Likely to Adversely Affect
	Visitor Use and Experience (Including Safety)	Negligible	Minor Beneficial
	Cultural Resources (Archeology)	Negligible	Minor Adverse

2.3 Alternatives Considered But Dismissed

One other route was considered north of Round Spring. In that alternative, the trail would have crossed Missouri State Highway 19 further south just north of Sinking Creek. The terrain was determined to be significantly steeper in the narrow corridor between the highway and the river, and there were some resource concerns in that section. Once the DNR/MSP acquired the Camp Zoe property (now Echo Bluff State Park) and issued plans to develop that into a state park, that alternative to the trail routing was dropped in favor of directly connecting the new state park. Due to the landscape of the narrow river valley, and the desire for a varied and scenic route, no other alternatives were determined to be feasible on that section of the Current River.

2.4 Agency Preferred Alternative

The agency preferred alternative is Alternative B, Construct the new Current River Trail. This alternative was identified by the agency because it fulfills the goals outlined in the purpose and need while causing the least amount of resource impact.

3.0 AFFECTED ENVIRONMENT

This chapter of the environmental assessment describes existing resources and environmental conditions in the site specific project areas potentially affected by the alternative proposals being considered. These sites are indicated in the project description, maps, and route description, along the Current River valley.

Impact Topics Selected for Analysis

Topics addressed in this section and subsequently analyzed in Section 4 (Environmental Consequences) were selected based on their relevance as indicated by site visits, project scoping, reference documents, regulatory agency input, and ONSR personnel. The topics chosen for analysis are extensive and include:

- Soils
- Water quality
- Threatened, endangered, and species of special concern
- Visitor use and experience
- Cultural resources (Archeology)

3.1 Soils

Some soil types within the project area are categorized with a rating of *very limited*, indicating one or more features are unfavorable for the specified use without major soil reclamation, special design, or expensive installation procedures. This project has identified special design applications based on the Ozark Trail Association's (OTA) standards to help mitigate unfavorable conditions, to include a rolling contour trail layout design. Soil erosion is an indirect and largely avoidable impact of trails and trail use. To help avoid erosion, the proposed trail will have a sustained grade of 10 percent and a maximum grade of 15 percent. Areas with maximum grade will not exceed 100 feet in length. For areas that do exceed this length, stone steps will be installed. Manufactured materials such as geo-textile will help with reduce surface erosion. The potential for user-created trails may increase the area of compacted soil. However, because the trail will be signed and blazed with the standard OTA markings, thus helping urge trail users to stay on the trails, this is not anticipated to be a concern.

The information presented in the environmental consequences section, which describes soils within the study areas, is taken from the Soil Survey of Shannon County, Missouri, part of the National Cooperative Soil Survey conducted by the Natural Resources Conservation Service. Soils occurring within the project area are illustrated in and characterized in the attached custom soil resource report for Shannon County, Missouri – Current River Trail (appendix 2).

3.2 Water Quality

Environments within the proposed trail route along NPS lands which may be influenced by water quality include tributary streams and discrete areas adjacent to trail which may receive trail runoff. The proposed trail alignment within NPS lands crosses 5 smaller intermittent stream channels and 1 perennial stream.

Intermittent streams may flow during wet periods but can be dry at other times. During drier periods, they may have pools periodically along their length. Perennial streams tend to flow some water throughout the year, though flow decreases during drying periods. Streams channels provide habitat and travel pathways for both aquatic and terrestrial species. Trail runoff during precipitation may also carry some material to sites adjacent to the trail, modifying soil conditions in certain locations.

3.3 Federally Threatened and Endangered Species

Federally listed species were identified through discussions with park staff, informal consultation with the U.S. Fish and Wildlife, and the (State) Missouri Department of Conservation Natural Heritage Database. Formal consultation was initiated with the U.S. Fish and Wildlife Service during the scoping period for this

project. A list of federal threatened, endangered, and special concern species that are known to occur or may occur within or adjacent to the project area within the boundaries of Ozark National Scenic Riverways was requested. Based on distribution and/or historical information, habitat for the following Sensitive Species may be present or affected, within the project areas and the possible impacts are addressed in the environmental consequences analysis.

Gray Bat (*Myotis grisescens*)

Indiana Bat (*Myotis sodalis*)

Northern long-eared Bat (*Septentrionalis grisescens*)

Ozark Hellbender (*Cryptobranchus alleganiensis bishopi*)

Gray Bat (*Myotis grisescens*)

Gray bats (*Myotis grisescens*) are one of the few species of bats in North America that inhabit caves year-round. Foraging of gray bats in summers is strongly correlated with open water of rivers, streams, lakes or reservoirs. Gray bats have very specific habitat requirements resulting in an estimated 95% of the species rangewide population hibernating in only nine caves each winter (USFWS, Gray bat recovery plan).

Within 1 mile of the project area are one Priority 1 and one Priority 2 hibernacula's, one major bachelor colony, and several caves with minimal and/or transient residents. Gray bats may travel up to 21 miles between prime feeding areas and occupied caves; however most caves are within 0.6 – 2.5 miles from foraging locations (USFWS, Species Take Avoidance Measures). Proposed trail work for both Alternative A and Alternative B will have no impact to prime foraging habitat/areas for this species.

Indiana Bat (*Myotis sodalis*)

Indiana bats (*Myotis sodalis*) hibernate in caves or mines during the winter where the ambient temperature remains below 10°C (50.0°F) but infrequently drops below freezing, and the temperature is relatively stable (USFWS, Indiana bat draft recovery plan). In summer, most reproductive females occupy roost sites under the exfoliating bark of live or dead trees and trees with large, thick slabs of peeling bark. Generally roost sites are ≥ 5 inches diameter at breast height (dbh) and include 33 different species of trees. Cavities are typically not used. Primary roosts usually receive direct sunlight (i.e. canopy gaps) for more than half the day. Habitats in which maternity roosts occur include riparian zones, bottomland and floodplain habitats, wooded wetlands, and upland communities. Indiana bats forage primarily around, not within, the canopy of trees, but they occasionally descend to the subcanopy and shrub layers (USFWS, Northern Long-Eared Bat Interim Conference and Planning Guidance).

Over 96 percent of Missouri's known hibernating Indiana bat population occurs in 5 caves or mines (Priority 1 sites). Within 1 mile of the project area is a Priority 2 hibernaculum and several other caves with minimal and/or transient residents. Alternative A will have no impact to prime foraging habitat or roost sites for this species. Alternative B could impact a minimal amount of woodland/forest foraging habitat and roost sites.

Northern long-eared Bat (*Septentrionalis grisescens*)

Northern long-eared bats (*Myotis septentrionalis*) hibernate in caves and mines of various sizes with constant temperatures, high humidity, and no air currents. Primary roost locations include small crevices or cracks, often with only the nose and ears visible. During the summer, bats roost singly or in colonies underneath bark, in cavities or in crevices of live trees and dead trees and/or snags, typically ≥ 3 inches dbh. Over 35 species of trees have been documented as roost habitat. Canopy coverage roosts have shown to vary from state to state, with 56 percent canopy cover being typical for Missouri (USFWS, Northern Long-Eared Bat

Interim Conference and Planning Guidance). This bat seems opportunistic in selecting roosts, using tree species based on presence of cavities or crevices or presence of peeling bark.

Breeding begins in late summer or early fall when males begin to swarm near hibernacula and in spring, they emerge from their hibernacula. Females migrate to summer areas where they roost in small colonies, giving birth to a single pup from late May to late July.

This species spends more time closer to the ground than Indiana bats, gleaning insects from vegetation. Most hunting occurs above the understory, 1 to 3 m above the ground, but under or within the canopy (USFWS, Northern Long-Eared Bat Interim Conference and Planning Guidance).

The northern long-eared bat is one of the bats most affected by white-nose syndrome with its numbers declining by 99 percent in northeastern caves and mines where it hibernates. Summer surveys have confirmed this level of decline at 93 to 98 percent. There is currently no evidence of northern long-eared bat populations recovering as compared to other bat species (Mitchell).

Ozark Hellbender (*Cryptobranchus alleganiensis bishopi*)

The Ozark hellbender is a unique and environmentally sensitive species found only in the clean, clear rivers of the Ozarks. This strictly aquatic salamander typically found under large flat slabs of rock, in swift flowing rivers and streams and is extremely vulnerable to habitat disturbance and changes in water quality. Studies conducted on Ozark and eastern hellbenders in the 1970's, 1980s, and 1990s show that hellbender populations have declined by an average of 77% with a strong shift in age structure to larger and older adults. Due to obvious population declines, the Ozark hellbender is federally listed as an endangered species by U.S. Fish and Wildlife Service under the Endangered Species Act. Research is being conducted as to the reasons for such a dramatic decline in population numbers, including reproductive problems, degrading water quality/habitat destruction, and the occurrence of disease or parasites causing limb abnormalities

3.4 Visitor Use and Experience

Hiking opportunities are limited in this area of ONSR. The only NPS trails are the .2 miles of the Round Spring Interpretative Trail, which is the developed zone. Hiking is identified in the GMP as a desired recreational experience along a free-flowing river, and is also identified as one of the desired activities in the zones that comprise this proposal. This proposed activity will also have the potential to interact with other visitor experiences.

3.5 Cultural Resources (Archeology)

Approximately six miles of the trail runs through fee land of the Ozark National Scenic Riverways. Trail installation may include clearing brush, leveling or grading the ground surface, building stone steps, installing water bars, and laying down crushed rock or other surface-hardening materials. These trail installation techniques have the potential to disturb intact archeological deposits. The trail route must also be considered as a potential threat since high traffic through or adjacent to highly visible historic sites could lead to looting or other types of impacts.

Ozark National Historic Scenic Riverways contains numerous cultural resources like historic structures, cultural landscapes, ethnographies, and archeological sites. The archeological sites range from large prehistoric settlements to more ephemeral campsites as well as sites that reveal information about the historic occupations of the region.

Impact Topics Dismissed from Further Analysis

The impact topics listed in this section are not fully evaluated in this environmental assessment because they were not identified during scoping as being of concern, nor is it anticipated that implementation of the action alternative would substantially affect these resources.

- Invasive Plants
- Environmental Justice
- Indian Trust Resources

There were no other impact topics that were considered present in the project area.

4.0 ENVIRONMENTAL CONSEQUENCES

This section of the EA forms the scientific and analytic basis for the comparisons of alternatives as required by 40 CFR 1502.14. This discussion of impacts (effects) is organized in parallel with Section 3.0 (Affected Environment) and is organized by resource area. For each resource area, a brief description of the methodologies used to evaluate the impacts is presented, followed by discussions of the No-Action Alternative and each action alternative. To the extent possible, the direct, indirect, short-term, long-term, beneficial, and adverse impacts of each alternative are described for each resource area. The study area for each resource impact is assessed in direct relationship to those resources affected in the immediate site-specific local area where alternative actions are proposed (Alternatives A & B). Cumulative impacts are discussed in the context of the definition given in 40 CFR 1508.7.

The impact analysis involved the following steps:

- Identifying the area that could be affected.
- Comparing the area of potential effect with the resources selected for evaluation.
- Identifying the intensity (negligible, minor, moderate or major), context (Are the effects site-specific, local, or even regional?), duration (Are the effects short-term or long-term?), and type (direct or indirect) of effect, both as a result of this action and from a cumulative effects perspective.
- Identifying whether effects would be beneficial or adverse. The criteria used to define the intensity of impacts associated with the analyses are presented in the methodologies of the individual impact topics.
- Identifying mitigation measures that may be employed to offset or minimize potential adverse impacts.
- The impact analyses were based on professional judgment using information provided by park staff, relevant references and technical literature citations, and subject matter experts.

Cumulative Impacts: The CEQ regulations, which implement NEPA, require assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” (40 CFR 1508.7). If applicable, cumulative impacts are addressed in each separate analysis of a resource area.

Intensity, Duration, and Type of Impact - Intensity thresholds are evaluated on a continuum scale from barely detectable (negligible) to substantial alteration of current conditions (major) with certain measurable milestones in between (minor and moderate). Duration of impacts are evaluated based on the short-term, during the implementation of the alternative, or long-term nature, beyond the implementation of the alternative, of alternative-associated changes on existing conditions. Type of impact refers to the beneficial or adverse consequences of implementing a given alternative. More exact interpretations of intensity, duration, and type of impact are given for each resource area examined as required. Professional judgment is used to reach reasonable conclusions as to the intensity and duration of potential impacts.

4.1 Soils

METHODOLOGY

Potential impacts were assessed based on the extent of disturbance to soils, including natural undisturbed soils, the potential for soil erosion resulting from disturbance, and limitations associated with soils. Analysis of possible impacts to soils were based on the review of existing literature and maps, information provided by the NPS and other agencies, and professional judgment. This section assesses the potential effects of the proposed construction for the trail project.

STUDY AREA

The geographic study area for impacts on soils includes both project areas for the proposed actions at the park as well as associated areas that would be used for construction staging for equipment and supplies. It is expected that construction activities would not occur outside these areas. The study area for cumulative analysis includes the entire park and immediately adjacent areas.

IMPACT THRESHOLDS

Soil impacts were determined by examining the potential effects of the proposed actions. The impact intensities for soils are defined as follows:

- **Negligible:** The action would result in a change to soils, but the change would be so small that it would not be of any measurable or perceptible consequence.
- **Minor:** The action would result in impacts on soils, but the change would be small and localized and of little consequence.
- **Moderate:** The action could result in a change to soils; the change would be measurable and of consequence. Mitigation measures would be necessary to offset adverse impacts and would likely be successful.
- **Major:** The action would result in a noticeable change to soils; the change would be measurable and would result in a severely adverse impact. Mitigation measures necessary to offset adverse impacts would be needed and would be extensive, and their success would not be guaranteed.
- **Beneficial:** A beneficial impact would occur when actions were taken to actively preserve, stabilize or return soils to its pre-existing condition.
- **Duration:** Short-term impacts occur during the implementation of the alternative; long-term impacts extend beyond implementation of the alternative.

ALTERNATIVE A – No action (no new trail developed)

Analysis: The condition of the soils in the project area would remain the same if the proposed action did not occur. There would be no compaction and soil displacement from trail construction and use in the proposed trail area.

Cumulative Impacts: The cumulative effects would remain the same. There are no known trails currently in the project area so cumulatively this number would not increase.

Conclusion: No impacts to the current site would occur under this alternative.

ALTERNATIVE B – Construct new Current River Trail as proposed in the alternative description.

Analysis: The trail tread would compact about 2.7 acres of soil and remove it from vegetative productivity. With a maximum corridor width of 6 feet, approximately up to 2 feet on either side of the trail could be cleared of vegetation; making 8 acres the maximum area for potential disturbance. The likelihood soil disturbance resulting from complete vegetation removal would be minimal as only vegetation imposing the trail tread would be cleared/removed. Additionally, the rolling contour trail design layout will help allow water to sheet across the trail, creating little damage from erosion. In areas where mechanized assistance from a small skid steer are necessary, the potential for further compaction and soil disturbance will occur.

In the project area, the potential adverse impacts to soils from trail construction and use would include compaction, erosion and displacement. Once the trail is constructed and hiking traffic occurs, compacted soils would resist erosion and soil displacement and provide durable treads that support traffic. From this perspective, soil compaction is considered beneficial.

Soil particles displaced from the trail prism would be intercepted by vegetation, organic material on the soil surface, or other surface roughness. Vegetation and soil impacts would occur predominantly during the first year of use, with minor changes thereafter.

Cumulative Impacts: The trail construction would occur over 11 miles located on the hillside, east of the Current River. Trail construction and soil disturbance could impact a maximum of 8 acres. Vegetation and soil impacts would occur predominantly during the first year of use with minor changes thereafter. The soil loss resulting from this project is expected to be so minimal that cumulative soil loss is also expected to be minimal. As there are no other proposals past, present or future, in the project area, there are no cumulative impacts.

Conclusion: The soil loss resulting from this project should be negligible, minimal and localized with little consequences.

4.2 Water Quality

METHODOLOGY

In order to assess the magnitude of water quality impacts to park waters under the proposed alternatives, waterways were identified within the project area. State water quality standards governing waters of the park, and baseline water quality data were examined. Possible construction and operation related effects including soil compaction and increase in runoff were considered.

STUDY AREA

The geographic study area for impacts on water quality includes project areas for the proposed trail development and operation within NPS lands. The study area for cumulative analysis includes the entire park.

IMPACT THRESHOLDS

Given the above methodology and assumptions, the following impact thresholds were established in order to describe the relative changes in water quality (both overall, localized, short and long term, cumulative, adverse and beneficial) under the alternatives.

- **Negligible:** Impacts are chemical, physical, or biological effects that would not be detectable, would be well below water quality standards or criteria, and would be within historical or desired water quality conditions.
- **Minor:** Impacts (chemical, physical, or biological effects) would be detectable but would be well below water quality standards or criteria and within historical or desired water quality conditions.
- **Moderate:** Impacts (chemical, physical, or biological effects) would be detectable but would be at or below water quality standards or criteria; however, historical baseline or desired water quality conditions would be altered on a short-term basis.
- **Major:** Impacts (chemical, physical, or biological effects) would be detectable and would be frequently altered from the historical baseline or desired water quality conditions; and/or chemical, physical, or

biological water quality standards or criteria would be slightly and singularly exceeded on a short-term basis.

- **Beneficial:** A beneficial impact would occur when actions were taken to that would preserve or return water quality standards.
- **Duration:** Short-term impacts occur during the implementation of the alternative; long-term impacts extend beyond implementation of the alternative.

ALTERNATIVE A – No action (no new trail developed)

Analysis: No new trail construction or operation would result in no additional water quality impacts beyond current conditions. Hiking could occur within that section of the park along existing old roads or pathways, or through dispersed use.

Cumulative Impacts: No new trail construction or operation would result in no additional water quality impacts beyond current conditions. Trail construction would not tie this area into existing trails on adjacent public-welcome trails.

Conclusion: Alternative A (No-Action) would result in a negligible effects conclusion.

ALTERNATIVE B – Construct new Current River Trail as proposed in the alternative description.

Analysis: Tread construction would incorporate standard techniques to appropriately manage water drainage including water bars, steps, and minimizing grade percentage. Mechanical assistance during construction from a small skid steer in certain areas may occur.

Use of trail may result in compaction and increase of runoff within discrete tread reaches. Periodic inspection and maintenance will be important to correct any maintenance concerns early. Tread armoring using natural or manufactured materials, such as geotextiles, will be utilized to create a stable surface and minimize maintenance. Foot crossings of tributaries will utilize strategic stepping stones to cross streams causing minimal disturbance to streambed.

Cumulative Impacts: Within this river section, the proposed hiking trail would add a novel trail pathway and additional hiking use, as no formal hiking trail currently exists within NPS lands on the east side of Current River within this reach. Trail construction will tie this area into adjacent public-welcome trails, including a connection to the existing Ozark Trail leading to other NPS lands.

New trail construction and operation would result in initial development effects (minor, short-term effects) and operational effects (minor, long-term effects).

Conclusion: Alternative B would result in minor, short-term effects during construction, and minor, long-term effects during operation.

4.3 Federally Threatened and Endangered Species

METHODOLOGY

Identification of state and federally listed species was accomplished through discussions with park staff, informal consultation with U.S. Fish and Wildlife Service, and utilization of the (State) Missouri Department of Conservation Natural Heritage Database.

An analysis of the potential impacts to each species listed in the letter is included in this section. At Ozark National Scenic Riverways it has been determined that none of the alternatives would adversely affect any of the listed species. The completed environmental assessment will be submitted to the U.S. Fish and Wildlife Service for its review. If the agency concurs with the finding of the National Park Service, no further consultation will be required.

Primary steps in assessing impacts on listed species were to determine (1) which species are found in areas likely to be affected by management actions described in the alternatives, (2) current and future use of the project area, (3) habitat loss or alteration caused by the alternatives, and (4) displacement and disturbance potential of the actions and the species' potential to be affected by the activities. The information contained in this analysis was obtained through best professional judgment of park staff and experts in the field, and by conducting literature review.

STUDY AREA

The geographic study area for impacts on Cultural landscapes includes both project areas for the proposed actions at the park as well as associated areas that would be used for construction staging for equipment and supplies. It is expected that construction activities would not occur outside these areas. The study area for cumulative analysis includes the entire park and immediately adjacent areas.

IMPACT THRESHOLDS

The Endangered Species Act defines the terminology used to assess impacts to listed species as follows:

- **No effect:** When a proposed action would not affect a listed species or designated critical habitat, or listed species or designated habitat is not present.
- **May affect / not likely to adversely affect:** Effects on special status species are discountable (i.e., extremely unlikely to occur and not able to be meaningfully measured, detected, or evaluated) or are completely beneficial.
- **May affect / likely to adversely affect:** When an adverse effect to a listed species may occur as a direct or indirect result of proposed actions and the effect either is not discountable or is completely beneficial.
- **Is likely to jeopardize proposed species / adversely modify proposed critical habitat:** The appropriate conclusion when the National Park Service of the U.S. Fish and Wildlife Service identifies situations in which the proposal could jeopardize the continued existence of a proposed species or adversely modify critical habitat to a species within or outside park boundaries.
- **Duration:** Short-term impacts occur during the implementation of the alternative; long-term impacts extend beyond implementation of the alternative.

ALTERNATIVE A – No action (no new trail developed)

Analysis: No new trail construction or operation would result in any additional impacts to riverine habitat. Hiking could occur within that section of the park along existing old roads or pathways, or through dispersed use.

Cumulative Impacts: This alternative would not result in additional impacts to riverine habitat. Trail construction would not tie this area into existing trails on adjacent public-welcome trails. The nearest known localities of northern long-eared bats occur within 1 mile of the project area. Alternative A will have no impact to prime foraging habitat for this species or roost sites.

Conclusion: Alternative A (No-Action) would result in no effects to federally or state listed threatened, endangered, or species of conservation concern are expected as a result of implementing the no-action alternative. No caves or critical habitat will be affected.

ALTERNATIVE B – Construct new Current River Trail as proposed in the alternative description.

Analysis: Proposed trail corridor alignments are located primarily on side-slope and valley ridges, away from the Current River channel habitat and the majority of the floodplain. Use of trail may result in compaction and increase of runoff within discrete tread reaches, though foot pad pressure is generally low. Proposed trail corridor location and placement would help provide a filtering mechanism from the buffer of soils and vegetation between the trail and Current River. Periodic inspection and maintenance will be important to correct any maintenance concerns early. Tread armoring using natural or manufactured materials, such as geotextiles, may be appropriate in some locations to create a stable surface and minimize maintenance. Foot crossings of tributaries will utilize strategic stepping stones to cross streams causing minimal disturbance to streambed.

Within this river section, the proposed hiking trail would add a novel trail pathway and additional hiking use, as no formal hiking trail currently exists within NPS lands on the east side of Current River within this reach. Trail construction will tie this area into adjacent public-welcome trails, including a connection to the existing Ozark Trail leading to other NPS lands.

Gray bats, Indiana bats and northern long eared bats are known to occur in three high priority caves located within 1 mile of the proposed project area. Indiana, gray and northern long-eared bats have been documented near the project area, but no adverse effects are anticipated given the project will not impact caves and is not visible from any nearby Threatened and Endangered bat occupied caves. Any tree ≥ 3 dbh containing suitable roosting habitat for northern long eared bats should not be removed during the pup season of June 1–July 31 (USFWS, Northern Long-eared Bat Interim 4(d) Rule). Any trees containing suitable roosting habitat for Indiana bats should be removed between November 1 and March 31 to avoid impacts to roosting bats (USFWS, Species Take Avoidance Measures). Emergence surveys should be conducted to determine valid roosts trees if removal during this time frame is required.

Cumulative Impacts: No cumulative effects to federally threatened and endangered species or species of conservation concern are expected as a result of implementing Alternative B. There will be no measurable direct or indirect effects on existing bat populations from Alternative B since any change in forested habitat would be relatively small and preventable by conducting emergence surveys.

Conclusion: Alternative B would result in may affect/not likely to adversely affect threatened, endangered and species of conservation concern.

4.4 Visitor Use and Experience

METHODOLOGY

Staff observation of what visitors currently experience combined with information obtained from NPS personnel on the various visitation use patterns were used to estimate the effects of each of the proposed actions. The following methodology was applied in evaluating how each of these proposed actions would impact visitor use and experience.

The purpose of this impact analysis is to determine if the proposed actions in this area of the park is compatible or in conflict with the purpose of the park, its visitor experience goals, and the direction provided by the NPS *Management Policies*. Thus, these policies and goals were integrated into the impact thresholds. To determine impacts, the current and past uses of the area were considered and the potential effects of the proposed trail on visitor experience analyzed.

STUDY AREA

The geographic study area for impacts on Visitor Use and Experience includes both project areas for the proposed actions at the park as well as associated areas that would be used for construction staging for equipment and supplies. It is expected that construction activities would not occur outside these areas. The study area for cumulative analysis includes the entire park and immediately adjacent areas.

IMPACT THRESHOLDS

- **Negligible:** Visitors would not likely be aware of the effects associated with changes proposed for visitor use and enjoyment of park resources.
- **Minor:** Visitors would likely be aware of the effects associated with changes proposed for visitor use and enjoyment of park resources; however the changes in visitor use and experience would be slight and likely short term. Other areas in the park would remain available for similar visitor experience.
- **Moderate:** Visitors would be aware of the effects associated with changes proposed for visitor use and enjoyment of park resources. Changes in visitor use and experience would be readily apparent and likely long term. Some visitors who desire to continue their chosen activity would be required to pursue their choice in other available local or regional areas.
- **Major:** Visitors would be highly aware of the effects associated with changes proposed for visitor use and enjoyment of park resources. Changes in visitor use and experience would be readily apparent and long term. The change in visitor use and experience proposed in the alternative would preclude future generations of some visitors from enjoying park resources and values. Some visitors who desire to continue their chosen activity would be required to pursue other available local or regional areas.
- **Beneficial:** A beneficial impact would occur when actions were taken to actively improve visitor experience and safety in the commonly visited and used sites of the park.
- **Duration:** Short-term impacts occur during the implementation of the alternative; long-term impacts extend beyond implementation of the alternative.

ALTERNATIVE A – No action (no new trail developed)

Analysis: In the no new trail developed alternative, there would be no change to the visitor use and enjoyment.

Cumulative Impacts: There would not be any cumulative impacts associated with the no action alternative.

Conclusion: Alternative A (No-Action) would result in a negligible impact effects conclusion.

ALTERNATIVE B – Construct new Current River Trail as proposed in the alternative description.

Analysis: The construction of the proposed trail would open areas of the park to land based recreation where little to none existed before. This section of the river is dominated by river based activities and camping. A hiking trail in a natural zone would fit the concept of visitor experience prescribed for this zone. This zone calls for visitors to encounter intact natural resources, features, and systems. Experiences could include opportunities for solitude, contemplation, and self-reliance, all of these would be provided with a hiking trail.

The trail would also provide link to the main Ozark Trail through the Brushy Creek Loop Trail. This would provide a direct link to the Ozark Trail at three distinct points in ONSR; the proposed Current River Trail, Powder Mill Campground, and through the Big Spring Trail System. This will offer a long distance hiking opportunity to this section of the park. In addition, this also connects with the Round Spring Trail and adds a 2.5 mile loop available at that location. This loop trail will provide campers and day-use visitors at Round Spring with a moderate trail loop, with picturesque overlooks of the Current River and scenic woodlands. Combination trips of hiking upstream, then floating downstream, would become viable with this proposed trail. The trail will also provide a direct, land based recreational link with the park's partner land agencies in the area.

Cumulative Impacts: The addition of this proposed trail will provide recreation not only on ONSR managed land, but with our state and private partners. The cumulative impact would be beneficial for ONSR and those partners by providing additional opportunities for visitors to the area.

Conclusion: Alternative B would result in beneficial minor long-term impact. No other type of visitor use would be adversely impacted.

4.5 Cultural Resources (Archeology)

METHODOLOGY

Based on existing Regulations and Policies (Section 106 review), the scoping, identification, assessment, and consultation called for in 36 CFR 800.8 should be carried out in coordination with NEPA review as follows:

- Conduct Section 106 review when screening a project that may be categorically excluded from NEPA review to see whether "extraordinary circumstances" exist requiring further review (40 CFR 1508.4). Whether such extraordinary circumstances are found to exist based on historic property impacts will depend on the severity of the impacts and what the agency's NEPA procedures say, but even if no further review is required under NEPA, Section 106 review must be completed.
- During preparation of any EA, conduct Section 106 review in order both to comply with Section 106 itself and in order to determine whether historic resources will be adversely affected, and if so, whether measures can be implemented to reduce adverse effects to a less than significant level. The results of the

review should be reported in the FONSI if one is issued, with an explanation of how Section 106 review has resulted in avoiding significant adverse effect.

Note that Section 106 does not deal with impacts on all types of cultural resources, or all cultural aspects of the environment; it deals with impacts on properties included in or eligible for the National Register of Historic Places. Other authorities, such as the American Indian Religious Freedom Act and Executive Order 12898 may require consideration of other cultural resource types, and NEPA itself provides for considering all aspects of the cultural environment, for example, the cultural use of natural resources. So complying with Section 106 does not guarantee that all impacts on all cultural resource types have been addressed in NEPA analysis.

The park archeologist was consulted to determine that no previously recorded arch sites exist within the project area. However in addition to this preliminary guidance, the finalized trail route on park owned land was surveyed for archeological resources in August of 2015.

A 100% pedestrian inventory of the trail route was completed within the park boundary. A Geographic Information Systems (GIS) map of the slope and a visual survey were used to identify areas of less than 25% slope. Those areas were flagged for shovel test inventory. No artifacts or above ground archeological remains were observed during the pedestrian survey.

A total of 24 shovel tests (ST) were excavated in places of less than 25% slope. Three were positive for cultural material and together yielded a frag of milkglass and two chert debitage. The results of this survey are discussed in more detail in Dempsey's (2015) trip report. No further archeological work is recommended in advance of trail construction in these three areas of the park.

STUDY AREA

The geographic study area for impacts on cultural resources includes both project areas for the proposed actions at the park as well as associated areas that would be used for construction staging for equipment and supplies. It is expected that construction activities would not occur outside these areas. The study area for cumulative analysis includes the entire park and immediately adjacent areas.

IMPACT THRESHOLDS

Thresholds for Intensity, Duration and Type of Impact:

- **Negligible:** Impact is at the lowest levels of detection, barely perceptible, and not measurable.
- **Minor: Adverse:** disturbance of archeological site(s) and/or alteration of a pattern(s) or feature(s) of the landscape results in little, if any, loss of integrity. The determination of effect for Section 106 would be *no adverse effect*. **Beneficial:** maintenance and preservation of an archeological site(s). For Cultural Landscapes, landscape patterns and features preserved in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*. The determination of effect for Section 106 would be *no adverse effect*.
- **Moderate: Adverse:** disturbance of archeological site(s) and/or alteration of a pattern(s) or feature(s) of the landscape would result in an overall loss of integrity. The determination for Section 106 would be *adverse effect*. A memorandum of agreement is executed among the National Park Service and applicable state or tribal historic preservation officer and, if necessary, the Advisory Council on Historic Preservation in accordance with 36 CFR 800.6(b). Measures identified in the MOA to minimize or mitigate adverse impacts reduce the intensity of impact under NEPA from major to moderate. **Beneficial:** stabilization of a site and/or rehabilitation of a landscape or its patterns and features in

accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*. The determination of effect for Section 106 would be *no adverse effect*.

- **Major: Adverse:** disturbance of archeological site(s) and/or alteration of a pattern(s) or feature(s) of the landscape would result in an overall loss of integrity. The determination of effect for Section 106 would be *adverse effect*. Measures to minimize or mitigate adverse impacts cannot be agreed upon and the National Park Service and applicable state or tribal historic preservation officer and/or Advisory council are unable to negotiate and execute a memorandum of agreement in accordance with 36 CFR 800.6(b). **Beneficial:** active intervention to preserve a site and/or restore a landscape or its patterns and features in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*. The determination of effect for Section 106 would be *no adverse effect*.

ALTERNATIVE A – No action (no new trail developed)

Analysis: Not building the proposed trail would have no effect on any cultural resources. Conditions would remain static.

Cumulative Impacts: Negligible.

Conclusion: Alternative A (No-Action) would result in negligible impacts to cultural resources

ALTERNATIVE B – Construct new Current River Trail as proposed in the alternative description.

Analysis: Archeological survey of the proposed route only located three isolated artifacts. Construction of the new trail would not adversely impact any previously unknown archeological sites. Research into cultural resource and historic databases has determined that the proposed route of the trail would not impact any cultural landscapes, historic structures, or ethnographies. Regional experts have confirmed this assessment.

Cumulative Impacts: The presence of the trail would cause minor adverse disturbances to cultural resources within Ozark National Scenic Riverways.

Conclusion: Alternative B would result in minor adverse impacts.

5.0 CONSULTATION AND COORDINATION

5.1 Public Involvement

On July 22, 2013 a public scoping release was used to notify local, State, and Federal representatives, interested agencies, and the general public of the proposed Current River Trail. This letter was electronically posted along with contact information on how to obtain more information or comment on the action. Mailings were also sent to a select list of interested parties and stakeholders. A total of seventy-two (72) responses to the scoping notice were received. The responses were reviewed and filed in the administrative record kept at ONSR headquarters in Van Buren, Missouri.

5.2 Agency Consultation

Ethnographic Review

An ethnographic tribal identity study has been completed for Ozark National Scenic Riverways by Dr. Maria Zedeno which identified those Native American Tribes that have historic cultural affiliation with lands now included in the park. Native American groups having demonstrable affiliation to the region are:

- a. Cherokee Nation
- b. Keetoowah Band Cherokee
- c. Osage Nation
- d. Delaware Tribe
- e. Delaware Nation
- f. Eastern Shawnee Tribe
- g. Shawnee Tribe
- h. Absentee Tribe

In November 2010, Reed Detring, Superintendent of ONSR, James E. Price, Ph.D., Chief of Resource Management, ONSR, and Joe Strenfel, Environmental Protection Specialist, ONSR, consulted with leaders of these Tribes in Oklahoma in compliance with Section 101(d)(6)(b) of the NHPA. Consultation also included an update on the development of the park's new General Management Plan and the alternatives to tracking and responding to park projects using PEPC. In July 2013, the public scoping notification for this project was mailed to the affiliated tribes to solicit input for the proposal. The completed environmental will be sent their review and input.

Section 106

On July 22, 2013 a letter regarding the intended action was sent to the Missouri State Historic Preservation Officer in Jefferson City, Missouri to obtain input on the Proposed Current River Trail project area. A response to this request was received on July 30, 2013, thanking the park for the consultation and requesting to review the environmental assessment when complete.

Section 7 – Endangered Species Act Compliance

On July 22, 2013 a letter regarding the intended action was sent to the U.S. Fish and Wildlife Service (USFWS) Field Supervisor in Columbia, Missouri to obtain information on Threatened and Endangered species within the vicinity of Proposed Current River Trail project area. A response to this request was received on December 20, 2013. In it the USFWS noted potential federally-listed threatened or endangered species or critical habitat within the areas for the proposed project. Additional mitigation measures were also recommended. The completed environmental will be sent to the USFWS for their review and input.

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APPENDICES

Appendix 1: Public Scoping Notice and Letter

Public Scoping Notice

Ozark National Scenic Riverways News Release

For Immediate Release

Faye Walmsley

July 22, 2013

573-323-4844

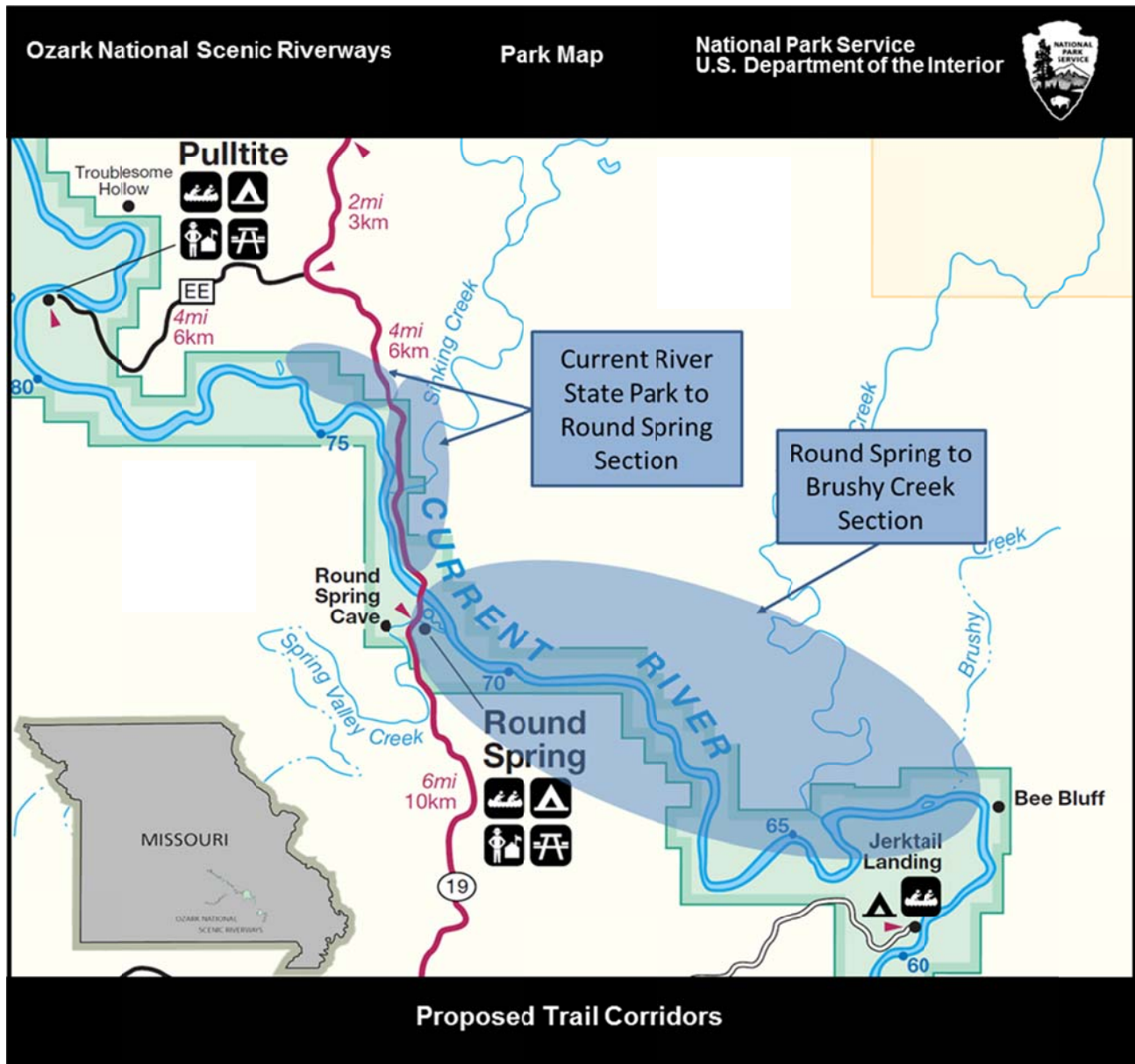
Ozark National Scenic Riverways Seeks Public Input Regarding the Proposed Current River Trail

Van Buren, MO- Ozark National Scenic Riverways (ONSR) Superintendent, William N. Black, invites the public to comment on a proposed Current River Trail designated for hiking only. Presently, the section of the park from the Current River State Park to the Brushy Creek area does not have any long distance hiking opportunities. Most of the recreation is limited to activities on the river. This proposal is a cooperative planning activity between ONSR, the Ozark Trail Association (OTA), the L-A-D Foundation, and the Missouri Department of Natural Resources (DNR).

The goal is to identify a hiking trail route that will meet the following objectives:

- Provide a varied and scenic route that highlights the unique features of the area.
- Reinforce the non-motorized primitive recreational opportunities in this section of the river corridor.
- Connect with the trail network of the Current River State Park and Roger Pryor Pioneer Backcountry.
- Be designed and designated for foot-only traffic.

This proposal will be examining different route alternatives in a corridor along north and east of the Current River, starting at the Current River State Park to Round Spring, and then down river from Round Spring to the Brushy Creek area. The trail will cross land managed by ONSR, L-A-D, and DNR. See map below for the proposed trail corridor.



A 30-day public comment period about the proposal for the Current River Trail has begun. Public input is being solicited to help define any issues to be addressed in an upcoming Environmental Assessment (EA). Public comments received during this 30-day “scoping” period will be used to develop the EA. When the EA is completed and released for review, the public will be encouraged to comment.

Public comment will be accepted through August 30, 2013 and may be submitted online by selecting Ozark National Scenic Riverways at the NPS Planning, Environment and Public Comment website, ***<http://parkplanning.nps.gov>***, or sent to:

Superintendent – Current River Trail
Ozarks National Scenic Riverways
P.O. Box 490
Van Buren, MO 63965

Commenters should be aware that their comments, including names and home addresses, are considered public information and may be released to the public. However, individual commenters may request that their name and home address be withheld from public release by stating this in their comment letter.

Ozark National Scenic Riverways preserves the free-flowing Current and Jacks Fork Rivers, the surrounding natural resources, and the unique cultural heritage of the Ozark people.

-NPS-

Appendix 2: Soils Report

See Attached

Appendix 3: Archeological Survey

See Attached