



**AKERS CONCESSIONER LAND ASSIGNMENT
ENVIRONMENTAL ASSESSMENT**



OZARK NATIONAL SCENIC RIVERWAYS

March 2013

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PROJECT SUMMARY

INTRODUCTION

The National Park Service (NPS) is proposing to delineate a dedicated land assignment for the Akers Concession operation within the Ozark National Scenic Riverways. The proposed action alternatives would designate a parking area for the Akers Concession Canoe operations and would involve the construction of gravel lots with accesses to a road.

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

The purpose of the project is to designate a single land assignment sized and located appropriately to handle the operations for the Akers Canoe Rental as required for the concessions contract. The land assignment site will be selected and designed to improve safety and the visitor experience around the Ranger Station, Day Use Area and Concessions Store. Reducing and managing congestion around the visitor use areas and the Ranger Station will promote a safe and pleasant environment for the visitor.

The following needs have been identified in association with river access within the Akers Ferry project area and will be addressed to achieve the stated purpose of this project:

- No well defined area for concessioner to park vehicles and stage equipment. Divided or undefined areas complicate enforcement actions that may be needed for ensuring a quality visitor experience and preventing negative resource impacts.
- Areas currently under use compete for space adjacent to the Akers Store for public use and public parking.
- A specific land assignment is required for the new concession prospectus/contract. A lack of specificity in the contract language hinders efforts to evaluate contractor performance.

OVERVIEW OF THE ALTERNATIVES

Three alternatives are addressed in this environmental assessment:

Alternative A - No action

Alternative B - New land assignment constructed with access from Shannon County Road KK-373.

Alternative C - New land assignment constructed with access from Missouri State Highway KK.

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: Akers Concessioner Land Assignment
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 to delineate a dedicated land assignment for the Akers Concession operation within the Ozark National Scenic Riverways. Akers is near the north end of the Current River in south-central Missouri. The area is typical of much of Ozark National Scenic Riverways, with steep-sided dolomite knolls and convoluted, deeply eroded rivers and streams. The Current River and Gladden Creek are the primary drainages in Akers Ferry. These drainages can flood when heavy rains occur. Soils are shallow and very rocky on hills and ridges; the bottomlands have deeper and more fertile soils. Logging, cultivation, grazing, and other human activities and developments have altered most of Akers Ferry's biotic communities.

Akers Ferry serves as a major canoe launching site on the Current River. During weekends and holidays in the peak use season, hundreds of canoes are launched and taken out each day. The area also includes a group campground, concession store and canoe rental, picnic day use facilities, visitor contact/ranger station, and maintenance facilities. Access to the area is by way of Missouri highways KK and K and an NPS-owned, concession-operated ferry that crosses the Current River.

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 for this are:

- Designation of a single land assignment sized and located appropriately to handle the operations for the Akers Canoe Rental as required for the concessions contract. A clearly delineated Land Assignment will empower NPS management to effectively manage the contract associated with the concessions activity.
- The land assignment site will be selected and designed to improve safety and the visitor experience around the Ranger Station, Day Use Area and Concessions Store. Reducing and managing congestion around the visitor use areas and the Ranger Station will promote a safe and pleasant environment for the visitor.

NEEDS

The following needs have been identified in association with river access within the Akers Creek project area and will be addressed to achieve the stated purpose of this project:

- No well defined area for concessioner to park vehicles and stage equipment. Divided or undefined areas complicate enforcement actions that may be needed for ensuring a quality visitor experience and preventing negative resource impacts.
- Areas currently under use compete for space adjacent to the Akers Store for public use and visitor parking.

AKERS CONCESSIONER LAND ASSIGNMENT ENVIRONMENTAL ASSESSMENT

- A specific land assignment is required for the new concession prospectus/contract. A lack of specificity in the contract language hinders efforts to evaluate contractor performance.

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 “major 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” (16 USC 1). 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 (16 USC 1a-1). 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* (16 USC 5901 et seq.) 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 et seq.)
- Executive Order 11988, Floodplain Protection.
- 36 CFR 2.12, Audio disturbances, and 3.7, Noise Abatement
- 43 CFR Part 46, Implementation of the National Environmental Policy Act (NEPA) of 1969; Final Rule.

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.

- Director's Order 47, Soundscape Preservation and Noise Management

1984 General Management Plan and Development Concept Plan

A general management plan (GMP) provides park managers with the direction, goals, and objectives for making decisions on park operations. The current GMP provided the foundation for actions undertaken in previous developments in the park and will continue to be used to guide and/or develop management actions. A new GMP is being developed and is expected to be put into operation within the next 2–3 years. Until that time, any proposals in this EA must be consistent with the 1984 GMP. The development concept plans included within the GMP are site specific development recommendations for the redesign, replacement, relocation, or upgrading of facilities.

2.0 ALTERNATIVES

As a result of the public and internal scoping process, the no-action alternative and two action alternatives for addressing the purpose and need were selected for analysis in this EA. Each of the alternatives has been analyzed independently. The alternatives that have been evaluated are:

Alternative A - No action

Alternative B - New land assignment constructed with access from Shannon County Road KK-373.

Alternative C - New land assignment constructed with access from Missouri State Highway KK.

The descriptions of alternatives B and C are based on preliminary designs and information available at the time of this writing. Approximate distances, areas, and layouts used to describe the alternative were estimated based on sound engineering practice and may change during the actual design. The design and layout specifications were provided by the Midwest Region Civil Engineering staff in cooperation with the park's maintenance division. The impact analysis took into account the likely impacts associated with the typical construction of an aggregate surfaced area.

The following graphic, showing the cross section of the proposed aggregate surface, is common to both of the action alternatives, B and C.

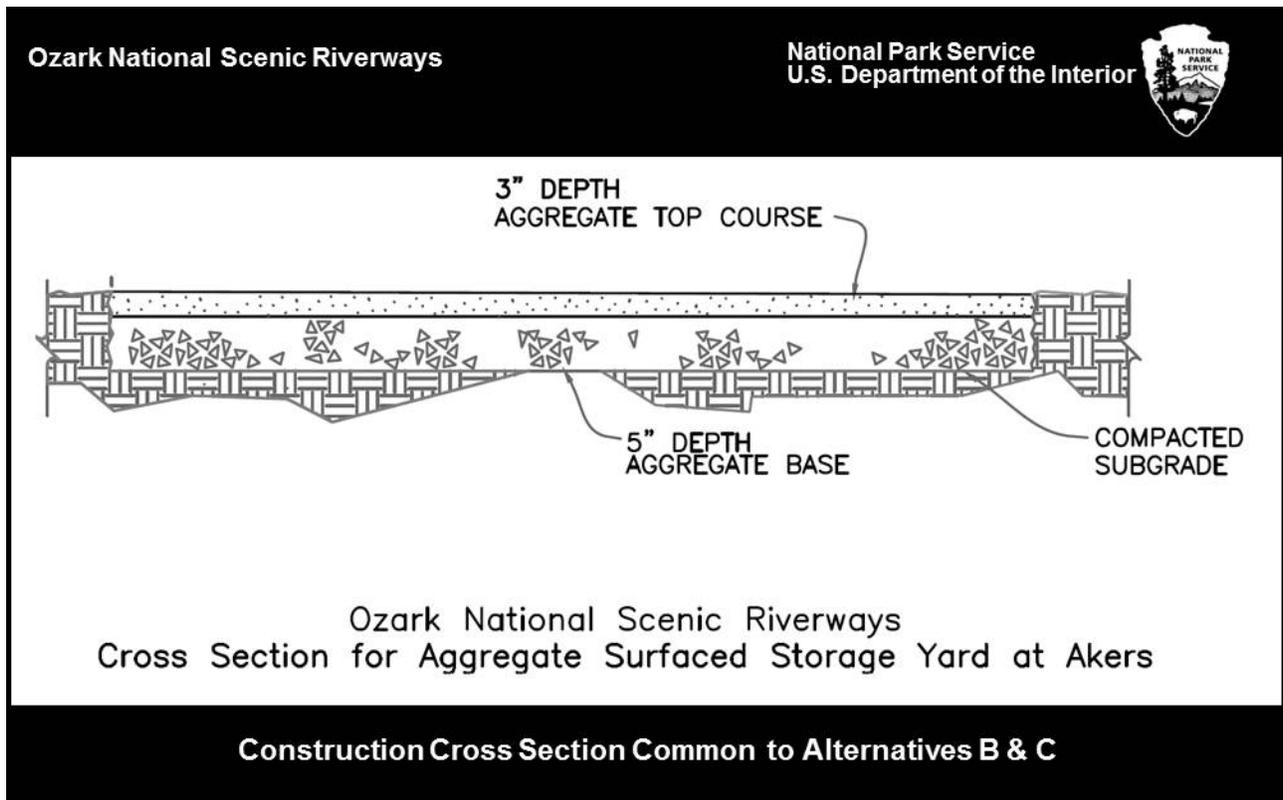


Figure 2 - Surface Cross Section.

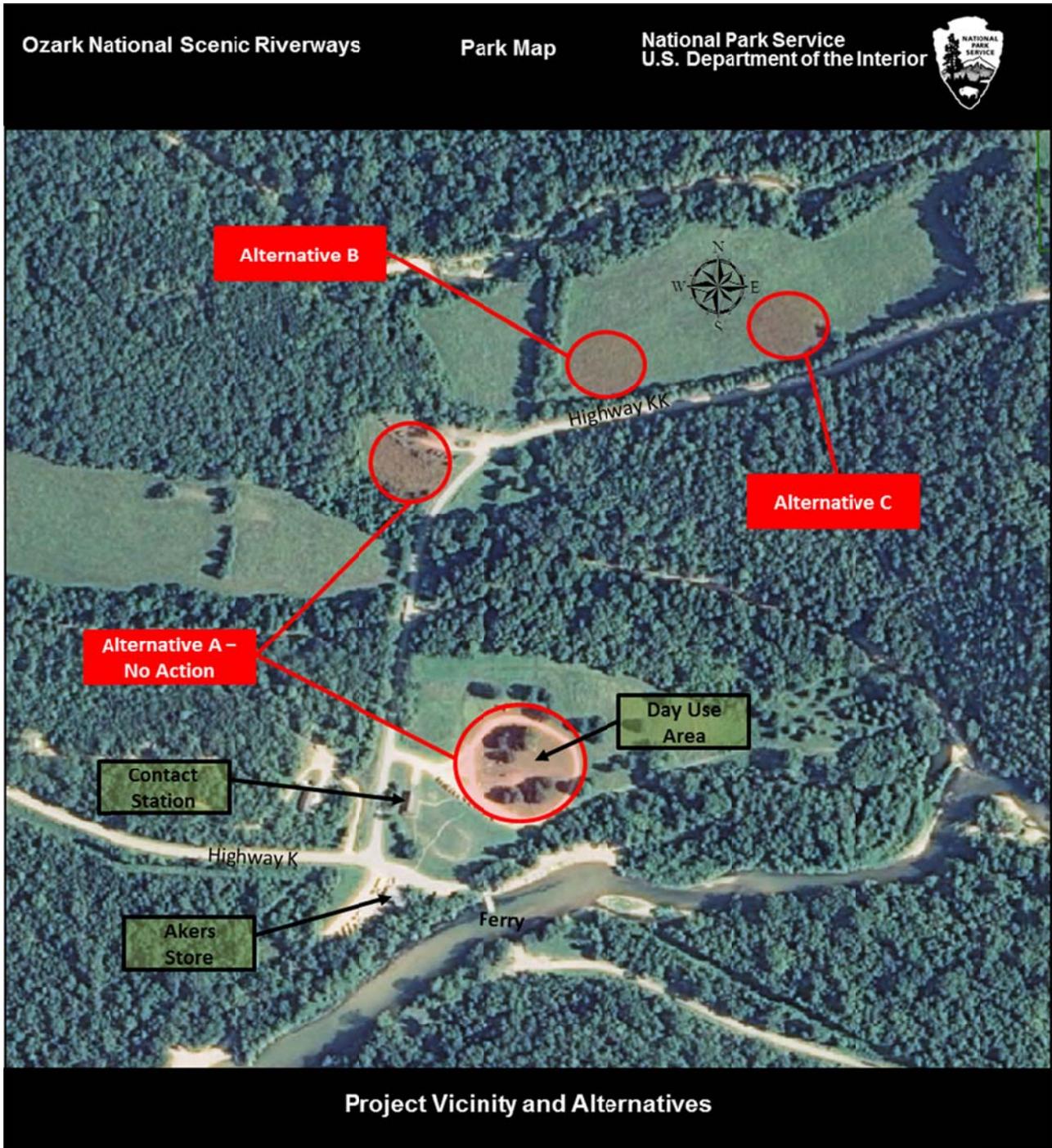


Figure 3 - Project Area.

2.1 Description of Alternatives

Alternative A – No action.

This would include allowing the concessioner to use the existing areas that they are parking in now, contact station, store, and old land assignment next to Highway KK. There would be minimal restrictions on the number and loiter time of concessioner vehicles and equipment around the Ranger Station, Day Use Area, or Akers Store.



Figure 4 - Alternative A (No-Action) Existing Conditions Site Map.

Alternative B –Construction of up to a 50,000 square foot gravel base lot with a 2,000 square foot driveway in the field next to Gladden Creek just east of Shannon County Road KK-373. The lot will be situated in southwest corner of the field with access from county road KK-373. The lot will be placed above the 100 year flood line of Gladden Creek. Construction would start with the removal of an estimated 1300 cubic yards of topsoil and 8-10 small to medium trees removed.

The lot and driveway construction would include the estimated placement of 5800 square yards of aggregate base course, 5800 square yards of aggregate top course, 32 lineal feet of culvert, 100 cubic yards of select fill, and 50 square yards of riprap. The top of the aggregate fill for the lot will match the existing field elevations, with the exception that some localized low spots will need to be filled to provide a uniform surface grade. The driveway access to the county road will be built up to match the road bed. The gravel lot will be delineated either with either a fence or wheel stops.

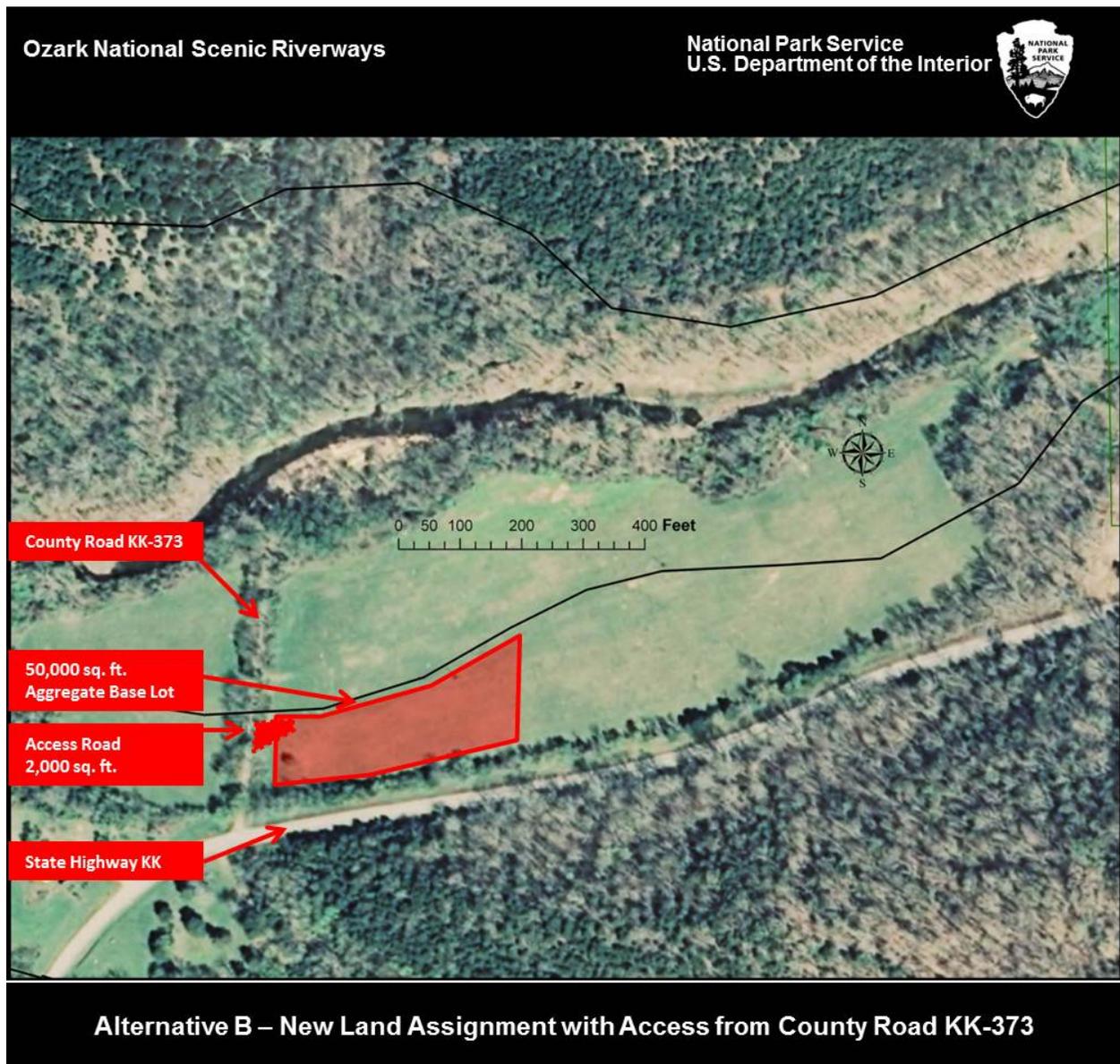


Figure 5 - Alternative B – Proposed Action.

The 1300 cubic yards of removed soil will be stockpiled on site until it is removed for use or sold. If necessary, the stockpiled soil will be stabilized with a cover crop based on recommendations from the natural resource staff. The number and loiter time of concessioner vehicles and equipment will be limited in the Akers area using the concessions contract as the means of enforcement. The existing land assignment at the curve of Highway KK will no longer be maintained and allowed to re-vegetate.



Figure 6 - Ground level photograph of the field showing the approximate positions of Alternatives B and C in relation to Missouri State Highway KK

Alternative C- Construction of up to a 50,000 square foot gravel base lot with a 7,000 square foot driveway in the field next to Gladden Creek east west of Shannon County Road KK-373. The lot will be situated midway in the south portion of the field next to Highway KK. A ramp will be constructed to provide direct access to highway KK. The lot will be placed above the 100 year flood line of Gladden Creek. Construction would start with the removal of an estimated 1400 cubic yards of topsoil and 12-15 small to medium trees removed.

The lot and driveway construction would include the estimated placement of 6300 square yards of aggregate base course, 6300 square yards of aggregate top course, 32 lineal feet of culvert, 600 cubic yards of select fill, and 230 square yards of riprap. The top of the aggregate fill for the lot will match the existing field elevations, with the exception that some localized low spots will need to be filled to provide a uniform surface grade. The driveway access to Highway KK will be built up to match the road bed. The gravel lot will be delineated either with either a fence or wheel stops.

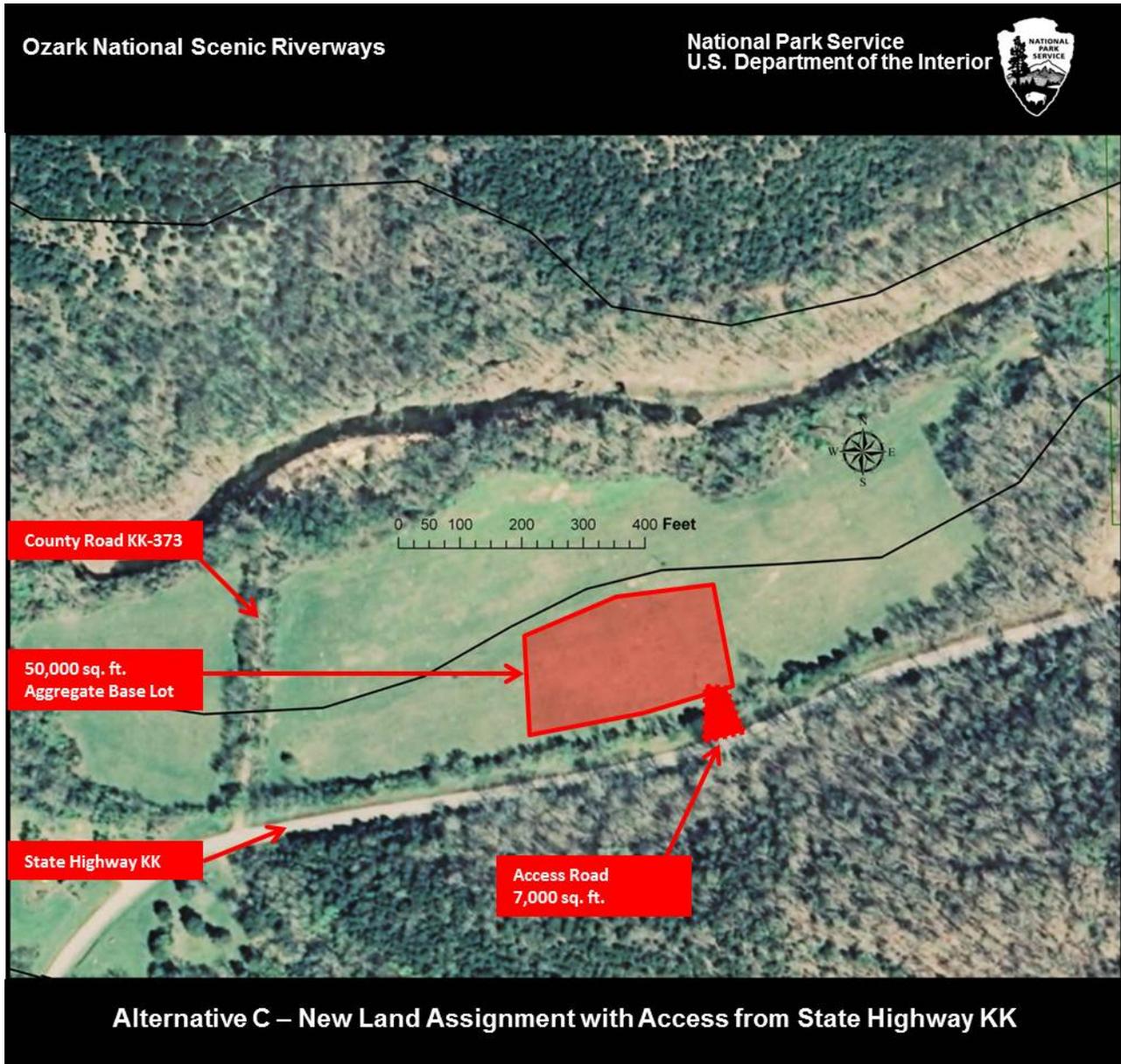


Figure 7 - Alternative C – Proposed Action.

The 1300 cubic yards of removed soil will be stockpiled on site until it is removed for use or sold. If necessary, the stockpiled soil will be stabilized with a cover crop based on recommendations from the natural resource staff. The number and loiter time of concessioner vehicles and equipment will be limited in the Akers area using the concessions contract as the means of enforcement. The existing land assignment at the curve of Highway KK will no longer be maintained and allowed to re-vegetate.

2.2 Comparison of Alternative Effects

Table 1: Summary of the Impact Analysis.

		Alternative A (No-Action)	Alternative B New land assignment constructed with access from Shannon County Road KK-373	Alternative C New land assignment constructed with access from Missouri State Highway KK
RESOURCE AREAS	Soils	Minor adverse	Minor adverse	Minor adverse
	Soundscape	Minor adverse	Minor beneficial	Minor beneficial
	Water Quality	Negligible	Negligible	Negligible
	Floodplain	Negligible	Negligible	Negligible
	Threatened, Endangered, and Species of Special Concern	No Effect	May affect/not likely to adversely effect	May affect/not likely to adversely effect
	Visitor Use and Experience (Including Safety)	Moderate adverse	Moderate beneficial (Visitor Use & Exp.) Minor Adverse (Safety)	Major beneficial
	Cultural Resources (Landscape, Archeology)	Negligible	Negligible	Negligible

2.3 Alternatives Considered But Dismissed

After extensive internal and public scoping, several alternatives were considered but were later dismissed because of issues that could not be resolved. The initial scoping considered any area up to one mile from the Akers Ranger Station/Visitor Contact Station. Because of the limited capacity of the Akers Ferry, any area on the right bank, descending, of the Current River across from the Akers Concession Store was dismissed. Other alternatives considered but eliminated by the planning team include:

- Old Amphitheater Site – This site is across the road west of the concession store and was once the amphitheater for the campground. The area available was too small and because of the slope of the ground would have required large amounts of cut and fill. There are also prehistoric archeological concerns with this location.
- Area behind Maintenance Buildings – This site is directly west behind the maintenance yard up the ridge. This area has poor access to the highways, and is relatively narrow which would require large amounts of fill. It is also covered in trees which would have to be removed.

- Lower Gladden Creek Field – Highway KK crosses the creek at this point, and it would lie in the field upstream of the highway. The highway takes a significant drop to descend to the creek and would present a serious safety hazard to traffic since the sight lines for vehicles would be very short.
- Existing Land Assignment at Highway KK – This site is on the last curve before Highway KK crosses Gladden Creek and stops at the junction with Highway K. It has been used by concessioners for parking vehicles for many years. This area is not level and lies on a sharp curve with poor site lines for vehicles driving north and east on Highway KK. The site would require significant amounts of cut and fill material to make it level. There are also archeological concerns with this location.

2.3 Environmentally Preferable Alternative

The environmentally preferable alternative is determined by applying the criteria suggested by the Council on Environmental Quality (CEQ), which provides direction in its guidance Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations (1981). CEQ defines the environmentally preferable alternative as: "...this means the alternative that causes the least damage to the biological and physical environment. It also defines the preferred alternative as the one that best protects, preserves, and enhances historic, cultural, and natural resources." Using these criteria, it was determined that Alternative C, New land assignment constructed with access from Missouri State Highway KK, provides the greatest level of protection of resources of the alternatives evaluated in this EA.

2.4 Agency Preferred Alternative

The agency preferred alternative is Alternative C, New land assignment constructed with access from Missouri State Highway KK. This alternative was chosen by the agency because it fulfills the goals outlined in the purpose and need while causing the least amount of resource impact of the action alternatives.

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, 1) the immediate area of Akers Ranger Station/Visitor Contact Station and old land assignment next to Highway KK (Alternative A), 2) in a field next to Gladden Creek with access from Shannon County Road KK-373 (Alternative B), and, 3) in a field next to Gladden Creek with access from Missouri State Highway KK (Alternative C).

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
- Soundscape
- Water quality
- Floodplain
- Threatened, endangered, and species of special concern
- Visitor use and experience (including safety)
- Cultural resources (Landscape and Archeology)

3.1 Soils

Soils are classified by a complex taxonomy that includes soil associations, series, and phases. Soil associations represent the largest and most general classification. A soil association is a landscape that has a distinctive proportional pattern of soils and is named for the major soil types that it represents. It normally consists of one or more major soil series and at least one minor soil series. A soil series is a collection of soils that have major layers similar in thickness, arrangement, and other important characteristics, but may differ in surface layer texture. Each soil series is named for a town or other geographic feature near the location where the series was first observed and mapped. Soil phases are more detailed classifications that differentiate soils of the same series based on characteristics that affect the use of the soils, such as the texture of the surface soil, slope, or stoniness (USDA 1999).

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 – Akers Land Assignment (appendix 2).

3.2 Soundscape

The Akers Ferry developed area is one of the most visited and used sites on the Upper Current River. The summer season between Memorial and Labor Day is the peak of activity, with most of that on Friday, Saturday and Sundays. As reported in the 2011 concession reports, Akers Ferry access represented 32 percent of the access by visitors on the Upper Current. This amounted to over 38,000 recorded visitors.

Typical sounds would include the voices and vehicles of visitors, sounds of the concessioner buses and trailers pulling through, and the loading and unloading of canoes and kayaks.

This sound is heard within the day use area, towards the store, and down on the access areas. However, unlike other popular access points on the Upper Current, Akers does not have a family campground and the associated sounds that occur with that activity. For example like Pulltite or Round Spring access and campgrounds do have this association of sounds that come with camping.

3.3 Water Quality

The proposed no action and action alternatives are located near the confluence of Gladden Creek and Current River, near the Akers visitor access area in Shannon County.

The Current River is designated as an Outstanding National Resource Waters (ONRW) because of its high overall water quality (10 CSR 20-7.031). ONRWs have national recreational and ecological significance and receive special protection against any degradation. In Missouri's water quality standards, ONRWs are classified as Tier Three waters. For these waters, no degradation, except for temporary degradation, of water quality is allowed in accordance with the Missouri antidegradation rule.

Gladden Creek, a tributary of the Current River within the proposed action area, is designated as a losing stream, downstream to approximately the Hwy KK bridge crossing. Losing streams lose 30% or more of their flow during low flow conditions through permeable geologic materials into the bedrock aquifer.

Water quality monitoring data from the Current River at Akers since 1995 show all parameters to be within the expected range for both the site and the Current River (e.g. pH, temperature, dissolved oxygen, bacteria, alkalinity, total nitrogen, and total phosphorus). Gladden Creek was first sampled in 2011, and no trend information is currently available.

3.4 Floodplain

Both of the action alternatives and the no action alternative would have the potential to have activities occur in a floodplain. For the no action alternative the Current River and Gladden Creek floodplains are involved. The two action alternatives would involve the floodplain of just Gladden Creek. A hydrologic investigation was completed by the USGS in 1990 details the floodplain in the Akers Ferry area.

Executive Order (EO) 11988 (Floodplain Management) requires Federal agencies to minimize occupancy of and modification to floodplains. Specifically, the EO prohibits Federal agencies from funding construction in the 100-year floodplain unless there are no practicable alternatives. The statement of findings requirement is not applicable in this case since this is an excepted action listed in Director's Order No.77-2, Floodplain Management.

Floodplains are a very important component of a river's natural processes. They slow and disperse the energy of floodwaters, providing diverse habitat for wildlife and plants that thrive on flood disturbance. Large woody debris and fine river sediment collects in floodplains increasing biodiversity in these areas. However, the floodplain in the action alternatives is now open fields that are cut annually for hay.

3.5 Federally Threatened and Endangered Species

State and federally listed species were identified through discussions with park staff, informal consultation with the U.S. Fish and Wildlife, and the Missouri Department of Conservation (MDC) 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.

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. Since hellbenders' primary means of respiration is cutaneous (through the skin), introduced toxins are readily absorbed and can cause either direct mortality or interference with physiological processes, effectively reducing individual fitness and recruitment (Mayasich and Phillips 2003). Depending on the results of the current hellbender research, more actions may need to be taken in the future to reduce impacts to this species by humans. This species is currently state ranked as S1 which is defined as critically imperiled in the nation or state because of extreme rarity or because of some factor(s) making it especially vulnerable to extirpation from the state. Typically 5 or fewer occurrences or very few remaining individuals (<1,000) occur. The global ranking is G3G4T2Q, with T2 defined as a rank to a subspecies or variety and Q referring to questionable taxonomy.

Indiana Bat (*Myotis sodalis*)

Indiana bats are insectivorous, eating primarily moths, but also mosquitoes and aquatic insects. Indiana bats hibernate through the winter in caves and abandoned mines. Female bats enter hibernation in early autumn, shortly before the males. They emerge from hibernation in early spring and begin migrating to their summer roosting and foraging areas. Home range size of the Indian bats varies by individual as well as time of year; however, they can average 625 hectares during the fall and 255±89 hectares in the spring. They have a wide nocturnal foraging area during the summer months as well (Burgess 2010).

More than 85 percent of Missouri's total population of Indiana bats hibernates in only eight specific locations, three of which are located in Shannon, Washington and Iron counties of Missouri (MDC). No caves in the vicinity of either project area have a known Indian bat population. Summer roosting Indiana bats have been recorded in northern Missouri. Indiana bats summer along streams and rivers in north Missouri, raising their young under bark of certain trees.

Gray Bat (*Myotis septentrionalis*)

Gray bats live in caves year-round, unlike Indiana bats which roost under the bark of trees during the summer months. Missouri has more than 5,000 caves, yet gray bats hibernate in only three of them (MDC, mdc.mo.gov/node/5436). The park has three *Priority One* caves within its boundary, of which are no less than 5 miles away from the project site. The project has no caves within the scope of the proposed project site, therefore effects to gray bats required no further analysis.

3.6 Visitor Use and Experience (Including Safety)

Akers Ferry is the busiest access in the Upper Current District based on the number of visitors serviced by concessioner operations. The majority of visitors to Akers are floaters who have rented their tubes or canoes from private concessionaires who are under contract with the park to provide equipment (e.g. tubes, canoes, life jackets) and shuttle services for the public. Facilities include a ranger/visitor contact station with restrooms, camp store, river access, vehicle ferry, group camp sites, and a day use/picnic area.



Figure 8 - Akers Day Use Area on typical summer weekend.

3.7 Cultural Resources (Landscape and Archeology)

The Akers area has long been occupied by human populations. Archeological research in the area has demonstrated that prehistoric Native Americans lived there at least as early as 10,000 years ago. The area has attracted human populations for millennia due to its location at the juncture of Gladden Creek with the Current River. Throughout prehistoric and historic times there has been almost continuous occupation of the high alluvial landform between these two streams. Adjacent ridgetops were employed for mortuary practices evidenced by the presence of stone cairns.

Archeological investigations have revealed that Euro-American settlement occurred there as early as 1830. And, throughout the latter half of the 19th century, the area served as a crossing point on the Current River as well as a small hamlet. Because of these abundant and significant cultural resources, the area was nominated for inclusion in the National Register of Historic Places and was subsequently approved to hold that status.

Impact Topics Dismissed from Further Analysis

Concession operations was considered for analysis, but was dismissed because it was addressed through the concession contracts program. In addition Recreation Resources was also considered, but that topic was best placed under Visitor Use and Experience and was not significant enough to be analyzed as its own topic.

AKERS CONCESSIONER LAND ASSIGNMENT ENVIRONMENTAL ASSESSMENT

Changes in park operations would not occur and was not analyzed. 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, C). 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 land assignment.

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

Analysis: This would include allowing the concessioner to use the existing areas that they are parking in now, contact station, store, and old land assignment next to Highway KK. There would be minimal restrictions on the number and loiter time of concessioner vehicles and equipment around the Ranger Station, Day Use Area, or Akers Store.

The use of the existing areas in which the concessioners are now parking in, contact station, store, and old land assignment next to Highway KK will have some minor compaction during the peak of the concessioner's season and there will be some negligible erosion issues due to surface water runoff and lack of vegetation during this time as well. No action would have Minor impact on soils.

Cumulative Impacts: Repeated use over time will increase the compaction potential and will also decreased the needed vegetation to reduce surface water runoff, this will also increase the potential erosion. Cumulative impacts on soil would be a Minor impact.

Conclusion: Alternative A (No-Action) would result in Minor impact.

ALTERNATIVE B – New land assignment constructed with access from Shannon County Road KK-373.

Analysis: Construction of up to a 50,000 square foot gravel base lot with a 2,000 square foot driveway in the field next to Gladden Creek just east of Shannon County Road KK-373. The lot will be situated in southwest corner of the field with access from county road KK-373. The lot will be placed above the 100 year flood line of Gladden Creek. Construction would start with the removal of an estimated 1300 cubic yards of topsoil and 8-10 small to medium trees removed.

The lot and driveway construction would include the estimated placement of 5800 square yards of aggregate base course, 5800 square yards of aggregate top course, 32 lineal feet of culvert, 100 cubic yards of select fill, and 50 square yards of riprap. The top of the aggregate fill for the lot will match the existing field elevations, with the exception that some localized low spots will need to be filled to provide a uniform surface grade. The driveway access to the county road will be built up to match the road bed. The gravel lot will be delineated either with either a fence or wheel stops.

The 1300 cubic yards of removed soil will be stockpiled on site until it is removed for use or sold. If necessary, the stockpiled soil will be stabilized with a cover crop based on recommendations from the natural resource staff. The number and loiter time of concessioner vehicles and equipment will be limited in the Akers area using the concessions contract as the means of enforcement. The existing land assignment at the curve of Highway KK will no longer be maintained and allowed to grow up. Upon written request and approval by the park, the concessioner may be authorized the ability to install a single story maintenance/storage shed of no more than 1,200 square feet within the land assignment. The concessioner will be required to remove the shed at the end of the contract.

Alternative B would have a minor impact on the Secesh silt loam complex and the Gladden silt loam complex. The Secesh silt loam complex has a 0 to 3 percent slope and is rarely flooded. The Secesh silt loam complex can potentially contain partially hydric soil components. "Partially hydric" means that at least one component of the map unit is rated as hydric, and at least one component is rated as not hydric. Based on field observations of Alternative B site, the proposed site does not contain hydric soil components.

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

"Rare" means that flooding is unlikely but possible under unusual weather conditions. The chance of flooding is 1 to 5 percent in any year.

The Gladden silt loam complex has a 0 to 3 percent slope and is occasionally flooded. "Occasional" means that flooding occurs infrequently under normal weather conditions. The chance of flooding is 5 to 50 percent in any year.

This project storage yard area will have 8 inches of top soil removed from both complexes and replaced with 8 inches of compacted coarse gravel. This will retard infiltration and increase runoff. The soil depth at the Alternative B site here can range from 60-80 inches providing for downward filtering of water and intermittent vehicle drips of gas and oil. This is in addition to the base surface materials used in the lot construction. After compaction, however, this area will become more impervious to filtering of water. Management of runoff could include construction of a low berm ringing the site by utilizing the construction topsoil, and planting of Root Production Method (RPM) trees to still flow velocity, entrain sediment, and filter runoff.

Cumulative Impacts: Analysis of cumulative impacts would indicate that there would be a minor cumulative impact on soils in the project area due to the removal of topsoil and replacement with compacted

gravel aggregate. This will increase runoff and decrease infiltration and could potentially increase sheet and rill erosion on soils downslope of the parking/storage lot.

Conclusion: Alternative B would result in a minor soils impact. This site would also be subject to “Occasional” flooding based on the Gladden silt loam complex. This could potentially increase erosion and maintenance on the parking/storage lot.

ALTERNATIVE C – New land assignment constructed with access from Missouri State Highway KK.

Analysis: Construction of up to a 50,000 square foot gravel base lot with a 7,000 square foot driveway in the field next to Gladden Creek east west of Shannon County Road KK-373. The lot will be situated midway in the south portion of the field next to Highway KK. A ramp will be constructed to provide direct access to highway KK. The lot will be placed above the 100 year flood line of Gladden Creek. Construction would start with the removal of an estimated 1400 cubic yards of topsoil and 12-15 small to medium trees removed.

The lot and driveway construction would include the estimated placement of 6300 square yards of aggregate base course, 6300 square yards of aggregate top course, 32 lineal feet of culvert, 600 cubic yards of select fill, and 230 square yards of riprap. The top of the aggregate fill for the lot will match the existing field elevations, with the exception that some localized low spots will need to be filled to provide a uniform surface grade. The driveway access to Highway KK will be built up to match the road bed. The gravel lot will be delineated either with either a fence or wheel stops.

The 1300 cubic yards of removed soil will be stockpiled on site until it is removed for use or sold. If necessary, the stockpiled soil will be stabilized with a cover crop based on recommendations from the natural resource staff. The number and loiter time of concessioner vehicles and equipment will be limited in the Akers area using the concessions contract as the means of enforcement. The existing land assignment at the curve of Highway KK will no longer be maintained and allowed to grow up. Upon written request and approval by the park, the concessioner may be authorized the ability to install a single story maintenance/storage shed of no more than 1,200 square feet within the land assignment. The concessioner will be required to remove the shed at the end of the contract.

Alternative C would have a minor impact on the Secesh silt loam complex. The Secesh silt loam complex has a 0 to 3 percent slope and is rarely flooded. The Secesh silt loam complex can potentially contain partially hydric soil components. "Partially hydric" means that at least one component of the map unit is rated as hydric, and at least one component is rated as not ydric. Based on field observations of Alternative C site, the proposed site does not contain hydric soil components.

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

"Rare" means that flooding is unlikely but possible under unusual weather conditions. The chance of flooding is 1 to 5 percent in any year.

This project parking/storage lot area will have 8 inches of top soil removed from Secesh complex and replaced with 8 inches of compacted coarse gravel. This will retard infiltration and increase runoff. The soil depth at the Alternative C site here can range from 60-80 inches providing for downward filtering of water and intermittent vehicle drips of gas and oil. This is in addition to the base surface materials used in the lot construction. After compaction, however, this area will become more impervious to filtering of water. Management of runoff could include construction of a low berm ringing the site by utilizing the construction

topsoil, and planting of Root Production Method (RPM) trees to still flow velocity, entrain sediment, and filter runoff.

Cumulative Impacts: Analysis of cumulative impacts would indicate that there would be a minor cumulative impact on soils in the project area due to the removal of topsoil and replacement with compacted gravel aggregate. This will increase runoff and decrease infiltration and could potentially increase sheet and rill erosion on soils downslope of the parking/storage lot.

Conclusion: Alternative C would result in a minor soils impact. This site would also be subject to “Rare” flooding based on the Gladden silt loam complex. This could potentially increase erosion and maintenance on the parking/storage lot.

4.2 Soundscape

METHODOLOGY

As stated in the *Director’s Order-47*, natural sounds are intrinsic elements of the environment that are often associated with parks and park purposes. They are inherent components of the “scenery and the natural and historic objects and the wildlife” protected by the NPS Organic Act. Noise has the potential to distract visitors from the resource and from safely engaging in recreational activities. In Ozark National Scenic Riverways the ambient sounds associated with the natural setting are an integral component of the resource the park is mandated to preserve. Because visitor use at the park is focused on water related activities (canoeing, tubing, motorboating, fishing, kayaking, rafting) the acoustic environment includes human-generated sounds which can impact the natural ambient sounds along the river during periods of high use (summer weekends). Also as stated in the *Director’s Order-47*, sounds made from appropriate recreational activities are acceptable. For the purposes of this analysis impacts to the soundscape will reference visitor experiences and existing conditions. Context, time of day, duration and intensity of noise together determine the level of impact for an activity associated with human-generated sound.

Analysis of the activities that occur in the Akers Ferry developed area were conducted and input was provided by the Park Rangers duty stationed on the Upper Current. The activities associated with concessioner activity on a land assignment would have the most significant change if one the action alternatives were selected. It is these activities; the parking and moving of buses, trailers, and the loading/unloading trailers, that would have an impact to the soundscape for this project. The sounds made by visitors would not change.

STUDY AREA

The geographic study area for impacts on soundscape includes both project areas for the proposed actions at the park as well as the Akers Ferry visitor use areas. It is expected that changes in the soundscape would not occur outside these areas. The study area for cumulative analysis includes the entire park and immediately adjacent areas.

IMPACT THRESHOLDS

- **Negligible:** Natural sounds would prevail; activities associated with noise (human-generated sound) would be very infrequent or absent.
- **Minor:** Natural sounds would predominate within the human-generated sounds from appropriate recreational activities can be heard occasionally.

- **Moderate:** Natural sounds would predominate, but activities associated with noise would occur occasionally at low to moderate levels. Human activity associated with noise is consistent with park objectives, noise would predominate during daylight hours during periods of peak use on summer weekends. During mid-week in summer, and other seasons of the year, noise (activity) would not be overly disruptive to noise-sensitive visitor activities and natural sounds could still be heard.
- **Major:** Natural sounds would be impacted by activities associated with noise frequently or for periods of extended time. Where activities associated with human-generated noise are consistent with park objectives, the natural soundscape would be impacted most of the day throughout the week during the summer season. Noise would disrupt conversation for long periods of time, and make enjoyment of other activities in the area difficult.
- **Beneficial:** A beneficial impact would occur when actions were taken to actively reduce disruptive human generated sounds in the immediate area.
- **Duration:** Short-term impacts occur during the implementation of the alternative; long-term impacts extend beyond implementation of the alternative.

ALTERNATIVE A – No action

Analysis: In this alternative, there would be no change to the soundscape that now exists. The concessioner activities associated with parking buses, and loading trailers would still occur in the area by the store and in the day use area. These sounds can also be heard at the access points.

Cumulative Impacts: Alternative A (No-Action) would not result in any cumulative effects on the soundscape. These activities already exist in the Akers area.

Conclusion: Alternative A (No-Action) would result in minor short-term and long-term impacts to the soundscape if the concessions operations are allowed to continue to use existing sites for parking and storage activities.

ALTERNATIVE B – New land assignment constructed with access from Shannon County Road KK-373.

Analysis: In this action alternative, most concessioner activities associated with parking buses, and loading trailers would be moved away from the store and day use area approximately a quarter mile away in the Gladden Creek valley. This would include the striking sound equipment is made while loading trailers, and the moving and parking of concession vehicles. The distance, topography and vegetation between the new land assignment site and the Akers Ferry developed area would adequately mask these sounds from the visitors. As a result the soundscape where park visitors are using will be improved. Concessioners' main activity in the day use area and at the store would be to pull and pick up or drop off visitors.

Cumulative Impacts: Alternative B would not result in any cumulative effects on the soundscape.

Conclusion: Alternative B would result in minor long-term beneficial impacts to the soundscape if the concessions operations are moved to this site. There would be minor short-term impacts at the new land assignment site during the construction phase of the project.

ALTERNATIVE C – New land assignment constructed with access from Missouri State Highway KK.

Analysis: In this action alternative, most concessioner activities associated with parking buses, and loading trailers would be moved away from the store and day use area approximately a quarter mile away in the Gladden Creek valley. This would include the striking sound equipment is made while loading trailers, and

the moving and parking of concession vehicles. The distance, topography and vegetation between the new land assignment site and the Akers Ferry developed area would adequately mask these sounds from the visitors. As a result the soundscape where park visitors are using will be improved. Concessioners' main activity in the day use area and at the store would be to pull and pick up or drop off visitors.

Cumulative Impacts: Alternative C would not result in any cumulative effects on the soundscape.

Conclusion: Alternative C would result in minor long-term beneficial impacts to the soundscape if the concessions operations are moved to this site. There would be minor short-term impacts at the new land assignment site during the construction phase of the project.

4.3 Water Quality

METHODOLOGY

In order to assess the magnitude of water quality impacts to park waters under the various alternatives, the following methods and assumptions were used:

1. State water quality standards governing the waters of the park were examined.
2. Baseline water quality data were examined.
3. Possible construction related effects include: sediment entering the river during excavation in preparation of a lot and sediment runoff from the construction site.
4. Possible operations related effects include: compaction of soils during operations and increase in runoff, gas and oil leakage onto ground within parking area.

STUDY AREA

The geographic study area for impacts on water quality would include the areas downstream of Gladden Creek and Current River from the 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 project area in the park and areas immediately adjacent to the project area.

IMPACT THRESHOLDS

Given the above water quality issues and 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

Analysis: Alternative A, the no action alternative, includes two existing areas of concessioner operation and storage. These sites are located on opposite sides of Gladden Creek, with one site also on a terrace of the Current River. Continuing current operations would include concessioner vehicles parking and maneuvering, watercraft and trailer storage, and watercraft retrieval during the recreational summer season. During the off-season operations would include watercraft, trailer, and vehicle storage.

Best management practices recommend at least a 100 foot buffer for streams, springs, and sinkholes to create a runoff filter from land-based activities. No springs or sinkholes are known from Alternative A areas. These no action sites achieve a buffer of approximately 100 feet for the Current River, and approximately 350 feet and 450 feet respectively for Gladden Creek. The northern use area is located on a ridge, with a moderate slope down to Gladden Creek. The use area is fringed by shrub and tree vegetation. Runoff from this site is directed along both sides of the ridge, including a portion that is channeled down the Hwy K road ditch to Gladden Creek. This ditch is moderately vegetated. The soil depth at the northern site can range from 60-70 inches providing for downward filtering of water and intermittent vehicle drips of gas and oil, until compaction creates a more impervious surface. The southern use area is located on a flat, wide terrace, with minimal slope, which is edged by a grass, shrub, and tree layer. Runoff from the site will tend to stay and filter through soil layers on site, except during significant rainfall. Soil depth here can also range from 60-70 inches, providing for downward filtering of water and intermittent vehicle drips of gas and oil, but which may become less so as compaction occurs.

Cumulative Impacts: Cumulatively, runoff from the two No action operation sites is currently filtered by both vegetated buffers and moderately vegetated road ditch prior to entering watercourses. Slowing of flow velocity, retention of sediment, and adsorption of vehicle fuel/lubricants is mitigated by maintaining these best management practices buffers. In addition, proper vehicle maintenance will avoid oil and gas leakages, and placement of collection pads under vehicles during off-season storage will help prevent these materials from initially entering the water pathway.

Conclusion: Alternative A (No-Action) would result in negligible to minor water quality effects.

ALTERNATIVE B – New land assignment constructed with access from Shannon County Road KK-373.

Analysis: Alternative B involves construction and operation of a new, up to 50,000 square foot aggregate lot and related driveway, and subsequent removal of current operations from the 2 No action sites. Alternative B replaces the two No action locations with a single site, located farther upstream along Gladden Creek. Operations occurring here would include concessioner vehicles parking and maneuvering, watercraft and trailer storage, and watercraft retrieval during the recreational summer season. During the off-season, activities would include watercraft, trailer, and vehicle storage.

The Alternative B site is located on a creek terrace, with a shallow slope down to Gladden Creek, approximately 400 feet away. Best management practices recommend at least a 100 foot buffer for streams, springs, and sinkholes to create a runoff filter from land-based activities. After proposed construction, the site would retain 250 feet of grassy field vegetation, and 150 feet of forested stream buffer in between the construction site and Gladden Creek. No springs or sinkholes are known from the construction and operation site. However, a small spring rises at the edge of the Gladden Creek low floodplain, approximately 300 feet from the Alternative B location. Some runoff from the Alternative B lot would likely be entrained in the County Road KK-373 roadside ditch via a new culvert. County Road KK-373 is a minimally constructed native-base dirt/gravel road. Currently, runoff can get entrained in the roadbed, north of Alternative B site. Improvement of road construction and maintenance practices would help in properly managing surface runoff before meeting the Gladden Creek floodplain.

The soil depth at the Alternative B site here can range from 60-70 inches providing for downward filtering of water and intermittent vehicle drips of gas and oil. This is in addition to the base surface materials used in the lot construction. After compaction, however, this area will become more impervious to filtering of water. Management of runoff could include construction of a low berm ringing the site by utilizing the construction topsoil, and planting of Root Production Method (RPM) trees to still flow velocity, entrain sediment, and filter runoff.

Cumulative Impacts: Cumulatively, runoff from the Alternative B site will be filtered by vegetated buffers or appropriately sized, moderately vegetated road ditch, prior to entering watercourses. In addition, a planted berm to catch runoff would help slow flow velocity, entrain sediment, and adsorb potential vehicle fuel/lubricants. In addition, proper vehicle maintenance will avoid oil and gas leakages, and placement of collection pads under vehicles during off-season storage will help prevent these materials from initially entering the water pathway.

Removal of operation activities from Alternative A would also serve to improve runoff quality from these sites.

Conclusion: Alternative B would result in negligible to minor water quality effects.

ALTERNATIVE C – New land assignment constructed with access from Missouri State Highway KK.

Analysis: Alternative C also involves construction and operation of a new, up to 50,000 square foot aggregate lot and driveway, and subsequent removal of current operations from the 2 No action sites. Alternative C replaces the two No action locations with a single site, and is located farther upstream along Gladden Creek. Operations which would occur include concessioner vehicles parking and maneuvering, watercraft and trailer storage, and watercraft retrieval during the recreational summer season. During the off-season operation would include watercraft, trailer, and vehicle storage.

The Alternative C site is located on the same terrace and elevation as Alternative B, with a shallow slope down to Gladden Creek, approximately 350 feet away. Best management practices recommend at least a 100 foot buffer for streams, springs, and sinkholes to create a runoff filter from land-based activities. After construction, the site would retain approximately 225 feet of grassy field vegetation, and 125 feet of forested stream buffer. No springs or sinkholes are known from the construction and operation site. The soil depth here can range from 60-70 inches providing for some downward filtering of water and intermittent vehicle drips of gas and oil, which will tend to lose the ability as the surface materials become compacted. This is in addition to the base surface materials used in the lot construction. In addition, management of runoff could include construction of a low berm ringing the site by utilizing the construction topsoil, and planting of Root Production Method (RPM) trees to still runoff flow velocity, entrain sediment, and filter runoff contents.

Cumulative Impacts: Cumulatively, runoff from the Alternative C site will be filtered by vegetated buffers or appropriately sized, moderately vegetated road ditch, prior to entering watercourses. A planted berm to catch runoff would help slow flow velocity, entrain sediment, and adsorb potential vehicle fuel/lubricants. In addition, proper vehicle maintenance will avoid oil and gas leakages, and placement of collection pads under vehicles during off-season storage will help prevent these materials from initially entering the water pathway.

Removal of operation activities from Alternative A would also serve to improve runoff quality from these sites.

Conclusion: Alternative C would result in negligible to minor water quality effects.

4.4 Floodplain

METHODOLOGY

On-site visits were conducted using the USGS floodplain delineation maps to determine possible impacts to the floodplain. River and creek channels have a limited capacity for water. When this capacity is exceeded, flooding of the adjoining land, commonly called the floodplain, occurs. Floodplains then convey and store this water, serving as a vital part of our environment, and naturally flood, often without risk to people. However, the effectiveness of a river and floodplain to convey and store flood-water can be adversely affected by human activity. As well as their importance in providing natural storage for floodwater, floodplains can also provide fertile agricultural land, valuable habitat for wildlife and plants, and a recreational resource. Impact analysis was based on the on-site inspection of the study area, review of existing literature and studies, and professional judgment.

STUDY AREA

The geographic study area for impacts on floodplains 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

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

- **Negligible:** There would be very little change in the ability of a floodplain to convey floodwaters, or its values and functions. Project would not contribute to flooding.
- **Minor:** Changes in the ability of a floodplain to convey floodwaters, or its values and functions, would be measurable and local, although the changes would be only just measurable. Project would not contribute to flooding. No mitigation would be needed.
- **Moderate:** Changes in the ability of a floodplain to convey floodwaters, or its values and functions, would be measurable and local. Project could contribute to flooding. The impact could be mitigated by modification of proposed facilities in floodplains.
- **Major:** Changes in the ability of a floodplain to convey floodwaters, or its values and functions, would be measurable and widespread. Project would contribute to flooding. The impact could not be mitigated by modification of proposed facilities in floodplains.

- **Beneficial:** A beneficial impact would occur when actions were taken to actively preserve, stabilize or return the floodplain 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

Analysis: Currently the concessioner is allowed to park and store vehicles and equipment in the day use area in front of the ranger station. Part of this area is within the 100-yr flood line. In time of heavy rain activity this equipment is removed from the area. Alternative A does not propose any activities or developments in 100-yr floodplain areas. There would be no new facilities and no change in existing operations.

Cumulative Impacts: Alternative A would not impact floodplains because no changes in facilities or activities are proposed.

Conclusion: Alternative A (No-Action) would result in negligible short-term or long-term impacts to the floodplain.

ALTERNATIVE B – New land assignment constructed with access from Shannon County Road KK-373.

Analysis: The construction of a 50,000 square foot gravel would be placed in the valley of Gladden Creek. This area is currently an open agricultural field that is cut annually for hay. According to the USGS hydrological investigation, the 100-yr floodplain generally does not rise more than 16 to 20 feet above the elevation of the Gladden Creek bed. The proposed site is placed above the 100-yr floodplain based on maps using data extrapolated from the hydrological investigation. Site surveys by the Resource Management and Maintenance staff concluded that parts of the proposed lot closest to Gladden Creek may be within that 20 foot elevation, and could be impacted by flood events. This may require the concessioner to remove equipment in times of heavy rain which is typically done at the existing land assignment sites.

The construction of the lot would not impede water flow over the field that currently exists. The open field does not restrict this water flow. If the concessioner may put a 1200 square foot portable drying shed on the land assignment as is currently allowed by the contract, it is recommended that it is placed on the highest point of the lot away from the creek. Using this site would move much of the concessioner land assignment activity down below the ranger station away from Current River up Gladden Creek.

Cumulative Impacts: Alternative B would not result in any cumulative effects within the floodplain. These activities already exist in the Akers area.

Conclusion: Alternative B would result in negligible short-term or long-term impacts to the floodplain.

ALTERNATIVE C – New land assignment constructed with access from Missouri State Highway KK.

Analysis: The construction of a 50,000 square foot gravel would be placed in the valley of Gladden Creek, higher up in the valley from alternative B. This area is currently an open agricultural field that is cut annually for hay. According to the USGS hydrological investigation, the 100-yr floodplain generally does not rise more than 16 to 20 feet above the elevation of the Gladden Creek bed. The proposed site is placed above the 100-yr floodplain based on maps using data extrapolated from the hydrological investigation. Site surveys by the Resource Management and Maintenance staff concluded that parts of the proposed lot closest to Gladden Creek may be within that 20 foot elevation, and could be impacted by flood events. This may

require the concessioner to remove equipment in times of heavy rain which is typically done at the existing land assignment sites.

The construction of the lot would not impede water flow over the field that currently exists. The open field does not restrict this water flow. If the concessioner may put a 1200 square foot portable drying shed on the land assignment as is currently allowed by the contract, it is recommended that it is placed on the highest point of the lot away from the creek. Using this site would move much of the concessioner land assignment activity down below the ranger station away from Current River up Gladden Creek.

Cumulative Impacts: Alternative B would not result in any cumulative effects within the floodplain. These activities already exist in the Akers area.

Conclusion: Alternative C would result in negligible short-term or long-term impacts to the floodplain.

4.5 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 wildlife and wildlife habitat includes a one-mile radius of the project areas for the proposed land assignment construction at the park as well as associated areas that would be used as 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 project area in the park and areas immediately adjacent to the project area.

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

Analysis: No effects to federally protected species are expected as a result of implementing the no-action alternative. The current site conditions and/or operations of Alternative A have no known effects on federal listed species.

Cumulative Impacts: Because no changes to the existing site or site operations are expected, no cumulative impacts on federally protected species are expected.

Conclusion: Alternative A would have no effect on the Indiana bat, Gray bat and the Ozark hellbender.

ALTERNATIVE B – New land assignment constructed with access from Shannon County Road KK-373.

Analysis: The new access in Alternative B would remove approximately 8-10 small trees (approximately 6 inch diameter at breast height or less) along the field edge. Although no known summer roost sites have been documented within the park, the nominal amount of trees being removed reduces the loss of any potential Indian bat roost habitat. This alternative does not impact potential habitat for the Indiana bat, therefore no long-term adverse effects to this species are anticipated.

The potential for sedimentation runoff which may impair Ozark hellbenders is reduced as the Alternative B site is located in an existing agricultural field. The agricultural field and forested riparian zone along Gladden creek creates approximately a 350 to 400 foot buffer.

Cumulative Impacts: The cumulative impacts of this alternative would reduce the amount of small diameter trees currently located along the west side of the current agricultural hay field. A 50,000 square foot lot and 2,000 square foot driveway would be constructed within the existing agricultural field, thus increasing vehicle traffic and public use to this particular area.

Conclusion: Alternative B may affect/not likely to adversely affect the Indiana bat, Gray bat or the Ozark hellbender.

ALTERNATIVE C – New land assignment constructed with access from Missouri State Highway KK.

Analysis: The new access in Alternative C would remove approximately 12-15 small to medium sized trees along the field edge. Although no known summer roost sites have been documented within the park, the nominal amount of trees being removed reduces the loss of any potential Indian bat roost habitat. This

alternative does not impact potential habitat for the Indiana bat, therefore no long-term adverse effects to this species are anticipated.

The potential for sedimentation runoff which may impair Ozark hellbenders is reduced as the Alternative C site is located in an existing agricultural field. The agricultural field and forested riparian zone along Gladden creek creates approximately a 350 to 400 foot buffer.

Cumulative Impacts: The cumulative impacts of this alternative would reduce the amount of small to medium sized trees along the south side of the current agricultural hay field. A 50,000 square foot lot and 7,000 square foot driveway would be constructed within the existing agricultural field, thus increasing vehicle traffic and public use to this particular area.

Conclusion: Alternative B may affect/not likely to adversely affect the Indiana bat, Gray bat or the Ozark hellbender.

4.6 Visitor Use and Experience (Including Safety)

METHODOLOGY

Staff observations of the Akers Ferry Public Use Area have revealed numerous visitor use conflicts and safety issues resulting in poor and unacceptable visitor experience and resource degradation.

The concessionaire, Akers Ferry Canoe Rental, utilizes the same parking lot as the public for the staging of buses, vans, and trailers for river day trippers. Visitors, with their private vehicles, heavily use the same parking lot for parking and launching of their own personal canoes, kayaks, and tubes causing congestion especially on weekends and holidays. This is creating overcrowding conditions, involving large commercial vehicles moving around smaller parked vehicles, in tight spaces, as visitors are getting ready for a day on the river: gathering gear, eating snacks, carrying watercraft while going between parked busses and vans.

This concession needs a secure area that is outside this day use area to park required commercial vehicles and trailers related to canoe livery operations. This will eliminate hazards between pedestrians, concession fleet, and private visitor vehicles.

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. This would include activities of visitors around the Akers day use area. 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 Akers Ferry Area.
- **Duration:** Short-term impacts occur during the implementation of the alternative; long-term impacts extend beyond implementation of the alternative.

ALTERNATIVE A – No action

Analysis: This alternative would result in a continued poor visitor experience and multiple safety concerns involving the mixing of commercial vehicles, private vehicles and visitors enjoying a multitude of recreational activities associated with river trip staging. This area will remain overcrowded and difficult to share the limited space resulting from non-structured parking and visitor use. The unsafe conditions for the visiting public will continue.

Cumulative Impacts: Alternative A would not result in any cumulative effects on Visitor Use and Experience.

Conclusion: Alternative A (No-Action) would result in negative moderate impacts associated with no changes to the proposed visitor use and enjoyment of park resources. No changes in visitor use and experience would be readily apparent and likely long term resulting in poor visitor experiences. Some visitors, who desire not to experience the overcrowding, would choose other nearby or regional river recreation areas especially if no action is pursued.

ALTERNATIVE B – New land assignment constructed with access from Shannon County Road KK-373.

Analysis: This alternative is easily accessible to County Road KK-373 but would require several trees to be removed from the road right of way to allow larger commercial buses to operate safely on this roadway. This parking area would require a large amount of fill to be added to construct this area outside of the flood plain.

The intersection of KK-373 and KK Highway has a steep approach to the roadway that would not be safely negotiated with a commercial bus and trailer unit. This intersection would also require a full size bus and trailer to turn into the oncoming traffic lane when turning West on the down side of a hill with limited visibility. This alternative would relieve the pressure from the Akers Ferry Public Use area, but would expose the concession operator to increased risk of a motor vehicle accident at the KK and KK-373 intersection.

Cumulative Impacts: Alternative B would not result in any cumulative effects on Visitor Use and Experience.

Conclusion: Alternative B would result moderate beneficial impacts to visitor 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. This moderate impact would occur to actively improve

visitor experience and safety in the commonly visited and used area of the Akers Ferry Public Use Area. However, safety is still a concern with this alternative since the access to KK Highway is not easily used by commercial bus and trailer units. This would result in a minor adverse impact to safety.

ALTERNATIVE C – New land assignment constructed with access from Missouri State Highway KK.

Analysis: This area is also easily accessible to KK Highway and allows for safe visual distances in both directions when a commercial vehicle and trailer unit is entering the highway. This intersection must be constructed but the elevation changes are minimal between the parking area and the roadway. A minimal amount of brushy vegetation would have to be removed to accommodate this newly constructed intersection. The parking area is slightly higher in the field and would require less fill to remain above the flood zone and would serve a well-defined area that could be fenced to allow for increased security. The fenced area would be landscaped to be less visually intrusive from the highway. This alternative would relieve the commercial and private vehicle pressure and conflict from the Akers Ferry Public Use. The alternative would also allow for the safe operations of commercial vehicles entering the highway and to the traveling public.

Cumulative Impacts: Alternative C would not result in any cumulative effects on Visitor Use and Experience.

Conclusion: Alternative C would result in would result in Major beneficial impacts 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. The changes in visitor use and experience proposed in the alternative would improve visitor recreational use of the area, visitor value of the site, visitor enjoyment, and lessen resource degradation. Visitors will safely negotiate the Akers Day Use Area without fear of commercial vehicle impacts. Even through the concession operation might desire to continue their present operation, they would be required to pursue the alternatives proposed with this project.

4.7 Cultural Resources (Landscape, Archeology)

This topic includes an analysis of the archeological resources located at the three locational alternatives and the cultural landscape in the Akers area, including features listed in the National Register of Historic Places.

METHODOLOGY

All areas within the three locational alternatives have been subjected to pedestrian survey by professional archeologists. Archeologists from the NPS Midwest Archeological Center, the University of Missouri-Columbia, and Southwest Missouri State University (now Missouri State University) have conducted rather extensive archeological surveys encompassing the entire Akers area. Alternative A is on a major archeological site that is part of a district listed in The National Register of Historic Places and current activity and overflow parking on that location has the potential to produce adverse impacts to the archeological site. Findings from these assessments combined with Park Archeologist’s knowledge were employed to estimate the effects of the actions on the vernacular landscape, including the Ozark Hamlet.

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. This would include the Akers Hamlet area. 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*.
- **Duration:** Short-term impacts occur during the implementation of the alternative; long-term impacts extend beyond implementation of the alternative.

ALTERNATIVE A – No action

Analysis: Since no actions would occur there would be no impact to the present Akers Cultural Landscape.

Cumulative Impacts: Since there would be no adverse impacts with this alternative, no mitigative measures are mandated.

Conclusion: Alternative A (No-Action) would have a negligible short and long-term effect on cultural resources at Akers.

ALTERNATIVE B – New land assignment constructed with access from Shannon County Road KK-373.

Analysis: This proposed location contains no prehistoric archeological deposits after extensive survey and shovel testing. Construction of the proposed project would not adversely impact any archeological resource. No structures, historic or otherwise lies within the direct impact zone of this alternative.

Cumulative Impacts: This alternative would not cause adverse impacts to subsurface archeological resources lying within the direct impact zone of construction.

Conclusion: Soil disturbance in this area would have no adverse impacts on any archeological sites.

ALTERNATIVE C – New land assignment constructed with access from Missouri State Highway KK.

Analysis: This proposed location has been extensively surveyed both by pedestrian archeological survey as well as systematic shovel testing and no sites have been detected within its bounds.

Cumulative Impacts: There would be no cumulative impacts on archeological sites within the Direct Impact Zone since it has been determined by professional archeologists that no such sites in this location.

Conclusion: Construction associated with this alternative area would have no long-term adverse impacts on buried archeological deposits since none are known to exist there. No historic buildings will be affected since there are none within the proposed project area.

5.0 CONSULTATION AND COORDINATION

5.1 Public Involvement

On July 22, 2011 a public scoping release was used to notify local, State, and Federal representatives, interested agencies, and the general public of the proposed action to make a land assignment in the area of Akers Ferry. 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 two 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. No historic accounts or archeological evidence have been found associating these Tribes with the subject tracts of land within the Akers or Gladden Creek area. 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.

Section 106

On July 25, 2011 a letter regarding the intended action was sent to the Missouri State Historic Preservation Officer in Jefferson City, Missouri to obtain input on the Akers Ferry project area. A response to this request was received on August 4, 2011, thanking the park for the consultation and requesting to review the environmental assessment when complete.

Section 7 – Endangered Species Act Compliance

On July 25, 2011 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 the Akers Ferry project area. A response to this request was received on August 9, 2011. In it the USFWS noted that there no records of federally-listed threatened or endangered species or critical habitat within the potential areas for the proposed project. However, Ozark Hellbeneders

(*Cryptobranchus alleganiensis bishopi*), proposed(now listed) as federally endangered, have been captured at a site roughly 2.5 miles downstream from the Akers Ranger Station. In addition, the gray bat (*Myotis grisescens*) and Indiana bat (*Myotis sodalis*), both federally endangered, likely occur in the area.

Based on this information, USFWS did not foresee impacts to the Ozark Hellbender, gray or Indiana bats, other federally-listed species, or critical habitat. However,they requested that the park contact thier office once the exact location of the land assignment is determined and the Environmental Assessment is available for public and regulatory

Land Disturbance Permits

On July 25, 2011 a letter regarding the intended action was sent to the director of the Missouri Department of Natural Resources(department) in Jefferson City, Missouri to obtain input on the Akers Ferry project area. A response to this request was received on August 24, 2011. In the response the department noted that prior to beginning any earth work disturbing an area of one acre or more, the park will need to secure a Land Disturbance Permit from the department. Valuable resource waters could require additional conditions or a specific permit. Valuable resource waters include losing streams, outstanding resource waters, public drinking water supplies, critical habitat for endangered species, impairments due to sediment or unknown pollutants, permanent streams or major reservoirs, biocriteria reference locations, wetlands, or sinkholes or other direct conduits to groundwater. If one of the action alternatives is selected then a land disturbance permit will be applied for by the park.

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APPENDICES

Appendix 1: Public Scoping Notice and Letter

Public Scoping Notice

Ozark National Scenic Riverways News Release

For Immediate Release

July 25, 2011

Faye Walmsley

573-323-4844

**Ozark National Scenic Riverways Seeks Public Input Regarding
Akers Concessioner Land Assignment**

Van Buren, MO- Ozark National Scenic Riverways Superintendent, Reed E. Detring, invites the public to comment on a proposal designating a land assignment for the Akers Concessioner operations. A concessioner land assignment is a minimally improved area where a concessioner is authorized to park, store and stage vehicles, equipment and material related to business operations. Currently, there is not a well defined area for the Akers Concessioner to park vehicles and equipment. The areas normally used for concessioner parking and equipment storage conflict and compete with other users since they are near or adjacent to the Akers Store, Ranger Station and park visitor areas. In addition, the new Akers Concession Contract Prospectus requires specific land assignment language in the document.

The park's objective is to designate a single land assignment sized and appropriately located to meet the operational needs of the Akers Canoe Rental as required for the new concession contract. A clearly delineated land assignment will allow park management to effectively manage the contract associated with the concession's activity. The selected and designed land assignment site will improve the visitor experience and promote safety around the Ranger Station, Day Use Area and Concession's Store by reducing and managing congestion.

The park will examine different alternative sites up to 1 mile from the Akers Ranger Station that meet the above stated goals. Site selection will primarily be based on its ability to provide the operational elements needed by a concession, insure a quality visitor experience, and maintain the values adequate to an area within a National Park Service Unit. This includes - but is not limited to – efficient functionality for the concessions operation without compromising aesthetics, resource protection, visitor safety, and enhanced visitor experience.

A 30-day public comment period about the proposal to designate a land assignment for the Akers Concessioner operations 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 25, 2011 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 – Akers Concession Land Assignment
Ozarks National Scenic Riverways
404 Watercress Drive
Van Buren, MO 63965
Fax: 573-323-4140

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: Custom Soil Resource Report

See Attached Report