

Chapter 1. Introduction

Introduction

This document presents the Cultural Landscape Report and Environmental Assessment (CLR/EA) for Pea Ridge National Military Park (the park) in northwest Arkansas, the largest American Civil War battlefield west of the Mississippi. This CLR/EA presents detailed documentation of Pea Ridge's historical development, evaluation of existing condition, analysis of landscape characteristics, determination of contributing features, and treatment recommendations.

This work builds upon the numerous studies, investigations and documents that already exist for the park. These include the 2005 General Management Plan/Environmental Impact Statement (GMP/EIS), 2012 Long Range Interpretive Plan (LRIP), and Vegetation Management Plan (VMP) amongst others. Archeological studies include research and mapping prepared by historian Edwin Bearss. Other studies include the 1984 National Register of Historic Places nomination (NRHP), and numerous natural resource reports.

This CLR/EA is the primary document used to guide implementation of the GMP/EIS preferred alternative. This CLR/EA will establish a preservation philosophy and a framework to guide treatment to enhance resource condition and visitor experience, support interpretive programming, and streamline compliance for implementation.

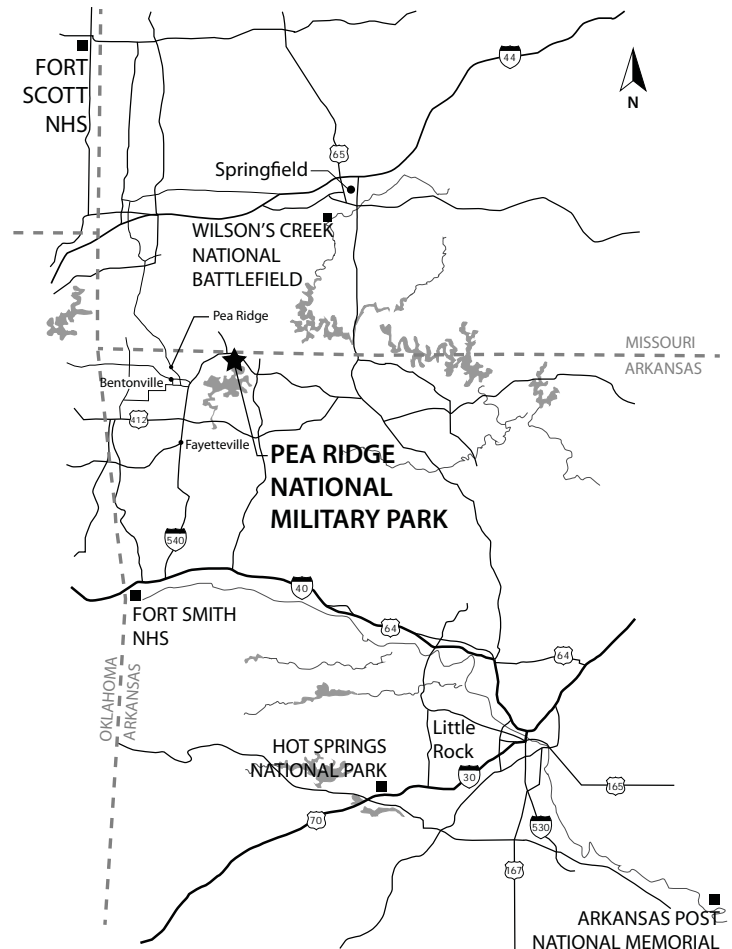


Figure 1-1. Pea Ridge National Military Park is near Pea Ridge, Arkansas, and fourteen miles northeast of Bentonville, Arkansas (MB: Vicinity Map 2013).

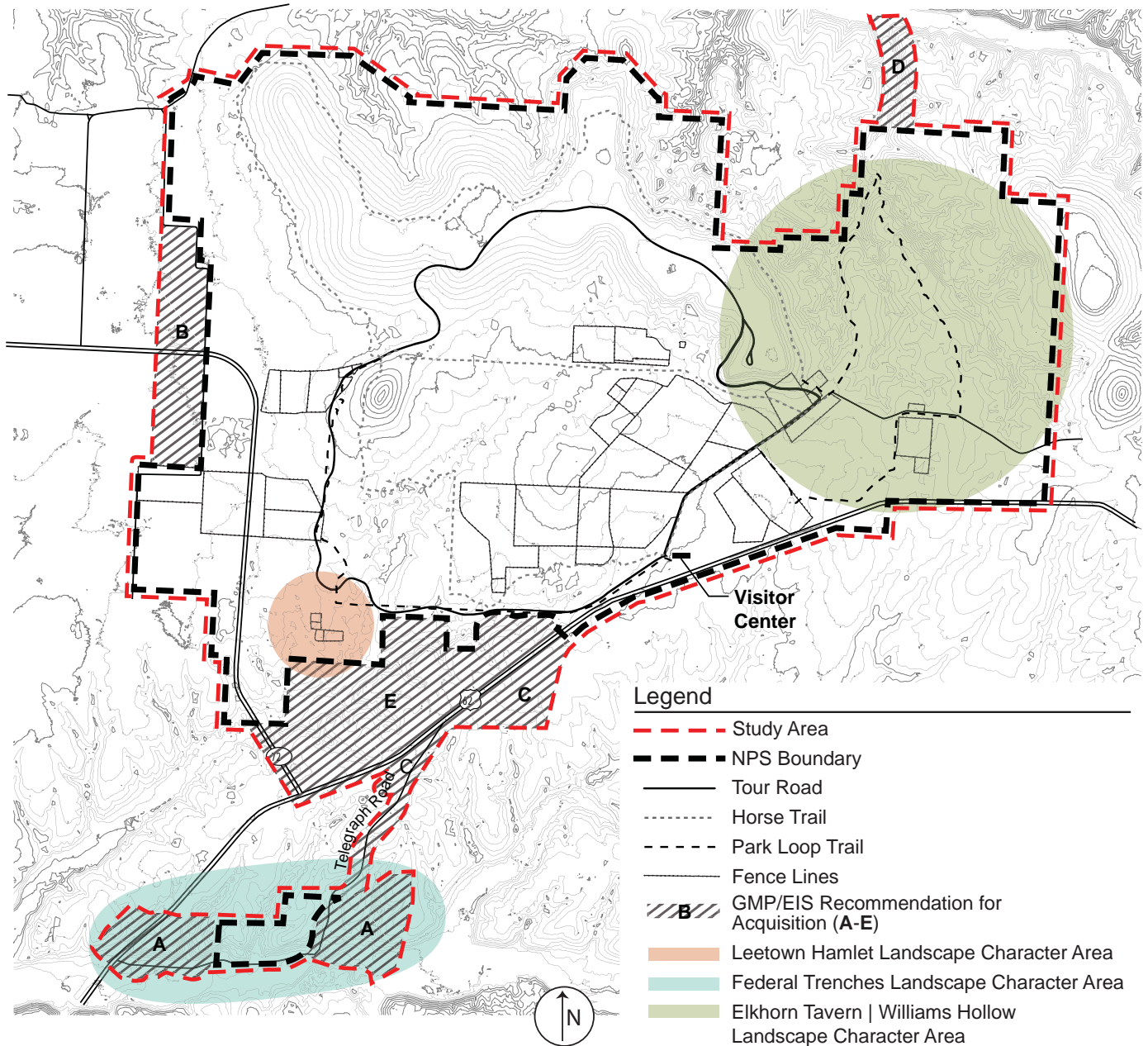


Figure 1-2. The study area encompasses the boundaries of the entire park as well as five areas adjacent to the park boundaries identified by the GMP/EIS for potential acquisition due to their importance during the Civil War battle. Three landscape character areas have features that distinguish them from the remainder of the study area. These are Leetown Hamlet, Federal Trenches, and Elkhorn Tavern/Williams Hollow (MB: Study Area).

Study Area and Landscape Character Areas

Pea Ridge National Military Park (the park) is near Pea Ridge, Arkansas, and fourteen miles northeast of Bentonville, Arkansas (Figure 1-1). In March of 1862, the Union Army of the Southwest led by Brigadier General Samuel Curtis defeated the Confederate Army of the West under the command of Major General Earl Van Dorn in a bloody two-day battle in this remote northwest corner of the state. This decisive victory permanently turned the tide of the Civil War west of the Mississippi, ensured that Missouri would remain in the Union, and allowed Union forces to take control of the lower Mississippi River.

Pea Ridge National Military Park was established on July 20, 1956, to commemorate the Battle of Pea Ridge, and to preserve the site of the battle, the largest Civil War engagement west of the Mississippi River. This 4,300-acre park encompasses nearly ninety percent of the actual battlefield. The park's numerous resources include archeological sites, historic sites, structures, collections and cultural landscape features associated with the battle and the agrarian community once found at Pea Ridge.

Pea Ridge National Military Park is situated in the foothills of the Ozark Mountains. Elkhorn Mountain defines the northern portion of the park. It is the highest point in the park with the remainder of the land to the south on a high plateau. The park is within portions of Township 20 and 21 North within the Ranges of 28 and 29 West in the Garfield and Pea Ridge quadrangles. U.S. Highway 62 extends through the park, but is slated for realignment in 2015. Arkansas Highway 72 extends into the park near its western edge.

Pea Ridge National Military Park's national significance is recognized by its listing in the National Register of Historic Places due to

its association with the Civil War and efforts to commemorate that period in our nation's history. The park's period of significance is 1862 to 1865, and includes the dates of March 7 and 8, 1862, when Union and Confederate troops clashed resulting in a Union victory. In the 1960s, as part of the Mission 66 program, the National Park Service (NPS) completed facilities for the park. The visitor center, Tour Road, overlooks and interpretive stops opened to the public in 1963.

The study area (Figure 1-2) encompasses the boundaries of the entire park as well as five areas adjacent to the park boundaries identified by the GMP/EIS for potential acquisition due to their importance during the Civil War battle. The main section of the park is generally located north of U.S. Highway 62, encompassing the majority of the battleground. A second, smaller discontinuous parcel is located to the south along the bluffs of Little Sugar Creek where Curtis' troops constructed trenches in anticipation of an assault from the south.

Three landscape character areas have been identified as having features that distinguish them from the remainder of the study area (Figure 1-2). These are Leetown Hamlet, Federal Trenches, and Elkhorn Tavern/Williams Hollow.

Leetown Hamlet

This landscape character area encompasses the archeological landscape of Leetown Hamlet, a small settlement that played an important role as a field hospital during the Battle of Pea Ridge. The town site, immediate surroundings, and Leetown Cemetery are within this landscape character area. The limits are generally described as being south of Old Leetown Road and west of Lee Creek.

The Federal Trenches

This landscape character area encompasses the southern, discontinuous parcel of the park where extant earthworks remain from the Battle of Pea Ridge. These are the only features built as part of the military battle. This area includes the parcel within the park boundaries, and two parcels on either side identified by the GMP/EIS as potential acquisitions due to their significance to the battle.

Elkhorn Tavern and Williams Hollow

The Elkhorn Tavern / Williams Hollow landscape character area is in the northern portion of the study area. It generally includes Williams and Cross Timber hollows, Telegraph Road and the tanyard, Elkhorn Tavern and its immediate surroundings as well as the Clemens' House site and fields, and Huntsville Road. This area served as Confederate headquarters, and was the setting of several battles on March 7 and 8, 1862.

Project Purpose and Need

Project Purpose

The purpose of this project is to provide guidance for preserving the cultural landscape of Pea Ridge National Military Park as the historic site of the Battle of Pea Ridge. This project will include guidance on preserving the character of the agrarian and wooded landscape that shaped the course of the battle and the Civil War.

This project will document the historic and current physical conditions of the site of the Battle of Pea Ridge. It will identify landscape characteristics, patterns and features that convey the historical significance and character of the cultural landscape.

This CLR/EA will provide guidance on preserving features and places such as the Federal Trenches and Leetown Hamlet, and will address appropriate modifications to existing visitor facilities such as the overlooks and Tour Road.

This project will guide the long-term stewardship of Pea Ridge NMP for the enjoyment of current visitors and future generations by improving cultural resource protection, and providing a cohesive, unified visitor experience.

Project Need

The proposed project addresses the need to preserve the park's historically significant features. The project is needed to supplement current baseline information. The project will generate the needed baseline documentation, supplement existing historical, archeological and natural resource data, provide recommendations for future study, and provide guidance for treatment and resource protection.

The proposed project is needed to document the changes to the cultural landscape over time, to transfer knowledge, and to provide holistic and integrated guidance for the long-term preservation and stewardship of the cultural landscape. The project is also needed to connect cultural landscape maintenance to other resource management plans and projects.

Project Goals

This CLR/EA addresses the following goals.

- Document the battlefield resources and evaluate their current physical condition. Document resource threats and ensuing impacts including invasive plants, loss of spatial patterns, erosion or other archeological threats.

- Document resources of the Trail of Tears to support their interpretation through collaborative planning with associated tribal representatives. Trail of Tears resources include the trail itself and a possible campsite along the trail at Ruddick's field. The trail is part of the Trail of Tears National Historic Trail and is managed by the park as a cultural resource.
- Consult with other federal and state agencies and natural resource experts to confirm previous treatments to achieve a desired landscape condition and provide guidance on completing treatment and planning for long term maintenance.
- Provide a synthesis/summary of existing archeological information and make recommendations for further investigation.
- Explore enhancing interpretation at archeological sites: Federal Trenches, Leetown Hamlet, and Clemens' House site and field. Consider introducing fences and visual cues to protect resources and to provide a cohesive, unified visitor experience.
- Identify opportunities for accommodating universal access across the site, especially in the Elkhorn Tavern area.
- Provide detailed guidance for smaller landscape component areas: Federal Trenches, Leetown Hamlet and Cemetery (including the Mayfield house), Winton Springs and Winton Springs House, Ford Farm and Ford Cemetery, east overlook, Foster's Farm and Fields (including Sturdy Cabin), Elkhorn Tavern, and Clemens' Farm.
- Establish a set of guiding principles for reclaiming the road corridor once U.S. Highway 62 is moved to the southern edge of the park. Establish general parameters for removal of the existing

parking area and sidewalks, and addition of new parking at the visitor center, Elkhorn Tavern, and new horse trailer entry at the southeast corner of the park.

- Integrate CLR/EA existing conditions with service-wide Facility Maintenance Software System (FMSS) "Maintained Landscape" and "Maintained Archeological Site" data; generate hierarchy and work orders that can be entered into FMSS to implement the selected alternative at the conclusion of the project.

Methodology

The CLR/EA was conducted at a thorough level of investigation, documentation for historical research, existing condition assessment, landscape analysis, and treatment recommendations. The thorough level research methodology, as defined by the NPS, focused on the use of select documentation of known and presumed relevance, including primary and secondary sources that are easily available.^{1,1}

The existing condition investigation was conducted according to best practices. A review of readily available documentation was undertaken. It included information from Pea Ridge National Military Park (the park), the National Park Service's Midwest Regional Office (NPS-MWRO), and the National Park Service's Midwest Archeological Center (NPS-MWAC). This review included planning documents, administrative reports, technical reports, natural resource studies, and correspondence. Review of historical documentation included the NRHP nomination for Pea Ridge National Military Park, and historic drawings, photographs, and correspondence available from primary and secondary sources.

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

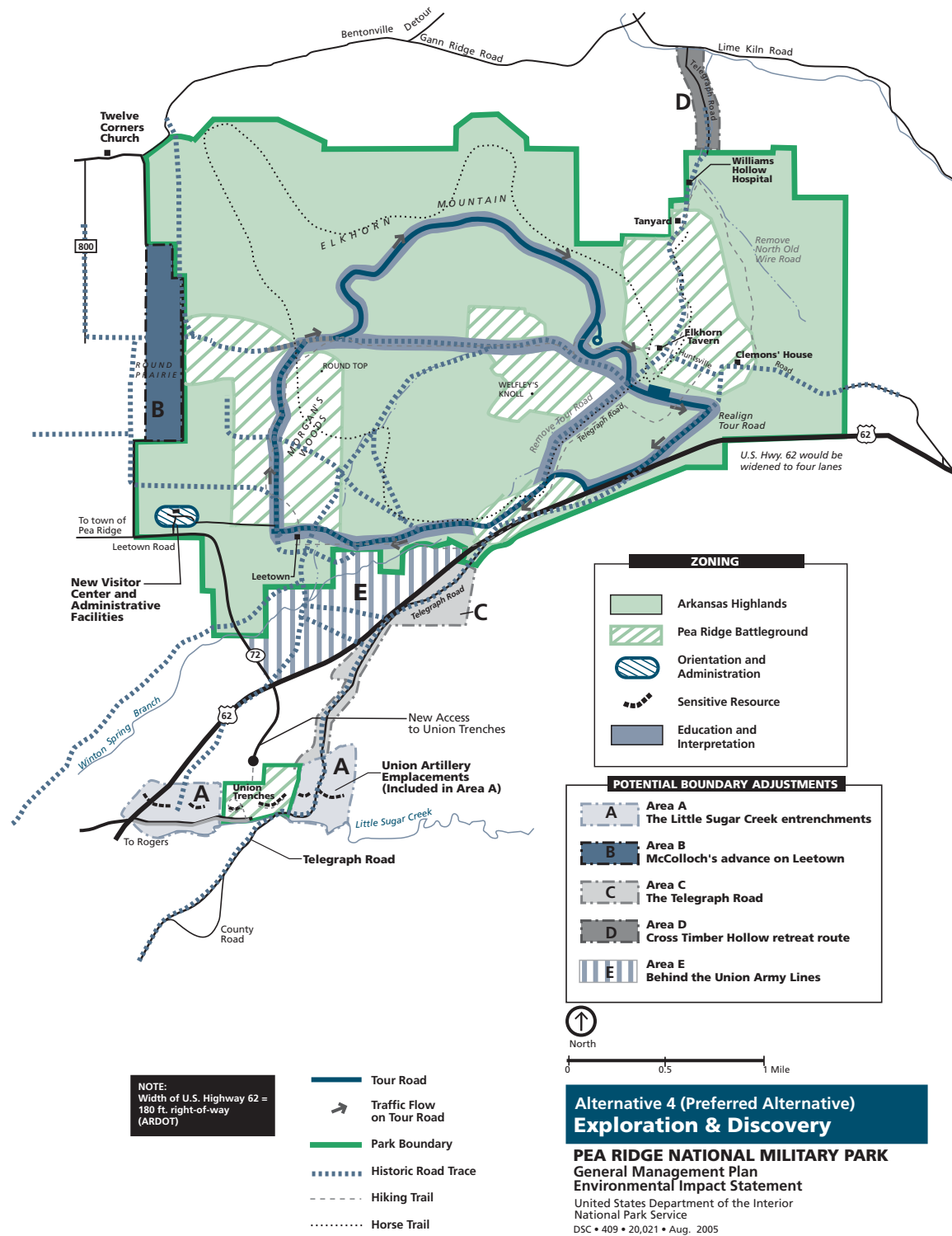


Figure 1-3. In addition to management policies, Pea Ridge NMP is guided by the preferred alternative of the General Management Plan/Environmental Impact Statement, 2005 (PeaGMP_09-20-05.pdf).

Background information provided by the park as a GIS database was used to prepare the CLR/EA drawings. Site investigations in June and October 2013, documented existing conditions. Archeological research focused on review of previous archeological investigations performed within the park, including those undertaken by Rex Wilson in the 1960s, and others from 2000 to 2013. The CLR/EA did not include any additional archeological investigations.

This CLR/EA has been prepared in compliance with the National Environmental Policy Act (NEPA) of 1969, and implementing regulations 40 CFR Parts 1500-1508 and National Park Service (NPS) Director's Order (DO) – 12 and Handbook, Conservation Planning, Environmental Impact Analysis, and Decision-making. In addition, this CLR/EA was prepared in compliance with the requirements of Section 106 of the National Historic Preservation Act (NHPA), in accordance with the Advisory Council on Historic Preservation's (ACHP) regulations implementing section 106 (36 CFR Part 800.8, Coordination with the National Environmental Policy Act).

Park Purpose and Significance

Pea Ridge National Military Park was established to preserve and protect the landscapes and resources associated with the Battle of Pea Ridge. The park interprets the battle as an integral part of the social, political, and military history of the Civil War, and provides roads, trails, markers, buildings and other facilities for the care and accommodation of visitors as necessary.

Pea Ridge NMP encompasses nearly ninety percent of the combat sites of the Battle of Pea Ridge, a battle that was significant for a Union victory that prevented the Confederacy from gaining physical and political control of Missouri. Union control of Missouri

subsequently provided a secure logistical base to embark upon a campaign to control the lower Mississippi River Valley. The battle was the first major engagement outside Indian Territory where Cherokee troops fought for the Confederacy. The Federal Trenches above Little Sugar Creek are the only constructed features remaining from the battle. They are remnants of the first entrenchments dug in the Civil War's Trans-Mississippi theater of operations.

Management Philosophy

Management Summary

The management of Pea Ridge NMP is guided by the 2005 General Management Plan and Environmental Impact Statement (GMP/EIS) that provides measures for resource protection, visitor use and park operations. Additional guiding documents include the 2012 Long Range Interpretive Plan (LRIP), 2011 List of Classified Structures update (LCS) and 2008 Cultural Landscape Inventory (CLI). A Vegetation Management Plan is currently being prepared to guide the management of vegetation park-wide.

- The GMP/EIS organized the park into five management zones. (Figure 1-3.) The Pea Ridge Battleground zone encompassed about twenty-five percent of the park and focused on preserving the historic battlefield landscape. The Federal Trenches is within the Sensitive Resources management zone to provide this area with the highest level of resource protection. Elkhorn Tavern and Tour Road are within the Education and Interpretation zone. The Orientation and Administration zone included the visitor center, and maintenance and administrative facilities. The remainder of the park is within the Arkansas Highlands zone. A goal of the GMP/EIS is to provide visitors with a broad range of

experiences including opportunities to immerse themselves in key battle areas to understand the history of Pea Ridge. Visitors would also have choices in the type, intensity and duration of their experiences as guided by interpretive media and programs.

- The LRIP outlined recommendations for future interpretive services, facilities and media to provide a high quality interpretive experience with actions to occur within seven to ten years of the plan's approval. The LRIP identified six primary interpretive themes associated with the Battle of Pea Ridge and one theme to capture the Trail of Tears events. The primary interpretive goal and thematic focus is to immerse the visitor into the Battle of Pea Ridge with different levels of experience. The LRIP supports retaining the Tour Road but recommends reversing direction of travel and adding Little Sugar Creek and the Federal Trenches as an interpretive stop. The LRIP supports the relocation of U.S. Highway 62, introduction of a fee station, increased parking and pedestrian access to Welfley's Knoll, and potential elimination of the west overlook.
- The LCS identified thirteen features that must be preserved/maintained. Of these, eleven were determined to be eligible for listing in the NRHP including three built outside the 1862 to 1865 period of significance. Elkhorn Tavern and Ford Cemetery are noted to be managed as historic resources pending a final Determination of Eligibility. The LCS also noted a period of significance of 1956 to 1963, that is likely associated with park facilities designed and constructed as part of NPS's Mission 66 program.
- The CLI documented topography, views, circulation, structures and land use associated with the cultural landscape of

the park, and noted that the historic site must be preserved and maintained.^{1,2}

Management Issues

The following summarizes management issues identified during the existing condition evaluation and field investigations.

External Impacts

The population of the Bentonville-Rogers-Pea Ridge area surged in the 1990s. Although growth has slowed somewhat, the increasing population in the region remains a catalyst for opportunities and concerns at the park.

- Regional population growth affects visitor use and experiences. Increased traffic impacts the park's aesthetic values and visitor safety. There is also potential for increased visitor numbers and on-going requests from adjacent residents for new amenities within the park.
- Development at park edges is on-going. In some places, adjacent development is beginning to diminish the visitor experience as housing and facilities are now appearing in viewsheds that were previously open. This development negatively impacts the historic setting of the Pea Ridge battlefield.
- Related infrastructure and utility needs from increased population is negatively impacting the park landscape. Proposals for utility corridors near the park will directly impact the views of the adjacent rural landscape from the park.
- Arkansas Highway 72 splits the battlefield into two sections, making the west portion inaccessible to park visitors and difficult for park staff to manage. The highway is visible from within the park, diminishing the integrity of the battlefield.

1.2 The CLI identified Elkhorn Tavern as non-contributing. This CLR/EA treats Elkhorn Tavern as a contributing feature pending further evaluation. The LCS and CLI note the building to be preserved and maintained as a historic resource.

U.S. Highway 62 Mitigation

Due to increased traffic in the Pea Ridge area and the desire of the NPS to relocate U.S. Highway 62 outside the park boundary, the highway will be moved south of the park in 2015. A negotiated settlement between the park and the Federal Highway Administration (FHWA) and the Arkansas State Highway and Transportation Department (AHTD) resulted in the shift of the highway alignment to the south edge of the park.

- The environmental assessment for the highway relocation is complete. An environmental assessment is currently underway for mitigation work associated with the movement of the highway (Tour Road changes, entrance and new parking.)
- This CLR/EA provides guidance on reclaiming the existing road corridor and on modifications associated with parking and access within the park.
- The relocation of the highway offers opportunities to better protect sensitive cultural resources including portions of the battlefield, archeological sites associated with General Curtis' headquarters, and Telegraph Road.
- In 2013, MWAC conducted preliminary archeological investigations of the four proposed highway realignments. Several features were revealed in some of the alternative road alignments.^{1.3}

Potential Threats to Cultural Resources

Pea Ridge NMP has the potential to reveal important information about the Civil War through the extensive archeological resources within the park.

1.3 De Vore, Steven L. "Intensive Archeological Inventory with Metal Detectors and Shovel Testing of Four Alternative Actions for the Federal Highway Administration's Park Mitigation Actions Associated with the Proposed U.S. Highway 62 Rerouting Construction Project at Pea Ridge National Military Park, Arkansas: A preliminary Summary of Results." National Park Service, Midwest Archeological Center, 2013.

- These underground resources may be threatened by erosion, burrowing animals, overgrown vegetation, and occasional illegal looting.

Visitor Issues / Experiences

Most visitors are interested in the Civil War history, however recreational use within the park is increasing. There is a need for better and safer visitor experiences, and ways for visitors to connect with all aspects of the cultural landscape. Outside groups have requested expanding recreational opportunities within the park. There is also a need to address current and potential future conflicts between user groups.

- Many battlefield sites and associated areas are reached via the Tour Road, however several others are difficult to reach.
 - There is limited visitor access to the Federal Trenches. As a discontinuous parcel, park visitors often do not visit the site. Once there, the trenches are only reached by a steep trail. It is not possible to adapt the site to be universally accessible if the parking remains in its current location due to the steep terrain.
 - The tanyard site is only reachable by trail and the rutted road of Telegraph Road north of Elkhorn Tavern. This area is not currently interpreted for visitors.
 - The area of General Curtis' headquarters is not readily identifiable.
- A better wayfinding system for visitors is needed, particularly for those on foot and horseback.
 - A clear system with routes, directional and informational signs, and visitor information is essential for a full visitor experience.
 - Interpretation of the historic resources should be part of this system.

- The park has received requests from outside groups for more trail use and additional trails for equestrians. In addition, conflicts between user types occur. These include those between bicyclists and equestrians, and between trail users and special events. The park does not have a current trail plan.
- The park has received requests from individuals and groups to install commemorative monuments within the park.
- Horseback riding activities are highly popular. Pressure from the community to increase this use has grown.

Park Boundary

The GMP/EIS identified five areas outside the current park boundaries for consideration for acquisition.

These parcels identified by the GMP/EIS for acquisition are included within the CLR/EA study area (Figure 1-2.)

- Parcel A is an area where extant trenches remain from the Battle of Pea Ridge.
- Parcel B would extend the park boundary further to the west to include more of the historic battlefield.
- Parcel C would include a two-mile segment of Telegraph Road to the south of the park boundary and would connect the Federal Trenches with the rest of the park.
- Parcel D, north of Elkhorn Tavern and Williams Hollow, would encompass a 1/4 mile corridor along Cross Timber Hollow and Telegraph Road to its junction with Lime Kiln Road.
- Parcel E, approximately 200 acres of land south of the existing park boundary and extending to U.S. Highway 62, would encompass part of the Union Army's supply area.

Determination of Contributing Features and Extent of Historic Resources

A determination of the significance of many features including structures, roads and remnants is needed. In addition, the park's administration and visitor facilities were built in the 1960s, as part of the Mission 66 program. An understanding of their significance is needed. Other sites outside the park boundary may have historical relevance to the Battle of Pea Ridge.

- Determination of contributing versus non-contributing is needed for known remnant structures and features. For places such as Ford Cemetery a determination of whether or not features date to the period of significance or if they are of later construction is needed.
 - The park has many roads and trails, some of which may date to the time of the battle. A determination is needed to identify which roads and trails are significant and which may be removed.
 - Other ancillary features such as wells, walls and foundations exist and may or may not contribute to the park's significance.
- Elkhorn Tavern was rebuilt after the Civil War, presumably on the original foundation with some original material. In the 1960s, the building was rehabilitated by the NPS to reflect its appearance in the 1880s.
- Three monuments were added to the park to commemorate the Union and Confederate soldiers and leaders. Two were installed in the 1880s as part of the reunion of veterans from both sides. Another was installed in 1935.
 - The Monument to the Brave Confederate Dead and the Monument to the Reunited Soldiery are in the Elkhorn Tavern area.
 - The U.S. Army Headquarters Monument is located along U.S. Highway 62 and marks the site of the Union army headquarters.

- As part of the establishment of Pea Ridge NMP, the NPS built a number of structures and buildings between 1960 and 1965. These included the Tour Road with parking and overlooks, maintenance and housing areas, and a visitor center. Many have remained relatively unchanged, including the east overlook. The visitor center was extensively remodeled in 2000.
- Two places near the park are historically connected to the battle but are outside the park boundaries.
 - Dunagin's Farm was the site of the February 1862 battle between General Curtis's Union Army and Confederate troops. This battle led to the Battle of Pea Ridge in March 1862. The farm remains relatively the same parcel of land as that of 1862, and is in private ownership. There is concern that it could be sold and redeveloped in a manner not conducive to interpreting its important Civil War history.
 - Telegraph Road from the southern park boundary to the Federal Trenches is thought to be the same route of the historic 1830s road. Most of the road is open to public use, except for the southernmost portion on private property.
- Telegraph Road, north of the park boundary, is thought to follow the same route as the historic 1830s road that served as a travel route for Confederate soldiers and for Trail of Tears' refugees.

Guidance Needed for Appropriate Resource Protection and Further Study

Guidance is needed to appropriately preserve extant features and the physical landscape of the Battle of Pea Ridge. Investigations could also extend to understand the site's pre-war condition to better understand its appearance prior to the battle. Recommendations for additional or further study related to archeological resources or other topics is needed. Guidance for the appropriate treatment of cultural resources is needed.

- Detailed recommendations for the preservation and management of the trench and the associated landscape of the Federal Trenches are needed. This could include an earthworks plan similar to those developed for other earthen military fortifications.
- On-going archeological investigations and surveys will be instrumental in revealing the historic record of the battle. These could also include investigations into the site prior to its role in the Civil War.
- The visitor center is located in a visible location immediately adjacent to important areas of the battle. The GMP/EIS recommends a new location on the west edge of the park.
- The NRHP nomination was prepared in 1984 for the entire park, however it does not include all aspects or features of the cultural landscape that contribute to Pea Ridge NMP's significance. The CLI completed in 2008 provided additional and more specific information that the NRHP nomination lacked. An update to the NRHP may be needed. The Arkansas SHPO has recommended Pea Ridge NMP be evaluated for potential National Historic Landmark (NHL) designation.^{1.4}

1.4 NPS-MWPO

Sustainability and Climate-Friendly Solutions

Opportunities exist for Pea Ridge NMP to adopt policies and solutions conducive to sustainability and that address climate change.

- Park staff is participating in the Clean Cities Coalition, and the Climate Friendly Parks program.
- Measures that address sustainability should be integrated with the preservation of cultural resources to ensure resources are protected.
- Climate change is already impacting vegetation and wildlife. Measures to address present-day and future climate change will need to be accomplished in a manner that protects cultural resources.

Related Laws, Regulations, Policies, Orders and Planning Documents

Several guiding laws and policies, as well as previous plans and research documents, provide background and management information for this CLR/EA. Relevant laws, policies, and plans are described below.

Guiding Laws and Policies

National Environmental Policy Act of 1969, as Amended

NEPA was passed by Congress in 1969, and took effect on January 1, 1970. This legislation established the country's environmental policies, including the goal of achieving a productive harmony between human beings and the physical environment for present and future generations. NEPA provides the tools to implement these goals by requiring that every federal agency prepare an in-depth study of the impacts of "major federal actions having a significant effect on the environment" and alternatives to those actions. NEPA also requires that each agency makes that information an integral part of its decision-making process. In addition, NEPA requires that agencies make a diligent effort to involve interested members of the public before agencies make decisions affecting the environment. NEPA is implemented through regulations of the Council on Environmental Quality (CEQ) (40 CFR 1500-1508).

National Historic Preservation Act of 1966, as Amended

The NHPA, as amended, protects buildings, sites, districts, structures, and objects that have significant scientific, historic, or cultural value. The act established affirmative responsibilities of federal agencies to preserve historic and prehistoric resources. Effects on properties that are listed on, or that are eligible for listing on, the National

Register of Historic Places (National Register) must be taken into account in planning and operations. Any property that may qualify for listing on the National Register must not be inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate.

Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties. The Advisory Council on Historic Preservation (ACHP) is then afforded a reasonable opportunity to comment. The historic preservation review process mandated by Section 106 is outlined in regulations issued by the ACHP. Revised regulations, known as "Protection of Historic Properties" (36 CFR Part 800), were updated on August 5, 2004.

In addition to considering the effects of their undertakings on historic properties, Section 110 of the NHPA requires federal agencies to establish a historic preservation program to identify and protect historic properties under their management or control. The plans must include a process for evaluating historic properties for listing on the National Register.

NPS Organic Act of 1916

By enacting the NPS Organic Act of 1916, Congress directed the U.S. Department of the Interior and 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 a manner and by such a means as will leave them unimpaired for the enjoyment of future generations" (16 United States code [USC] section 1).

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

or values.^{1.5} Whether an impact meets this definition depends on the particular resources 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 would be less likely to constitute an impairment if it is an unavoidable result of an action necessary to preserve or restore the integrity of park resources or values and it cannot be further mitigated.

NPS Management Policies 2006

NPS Management Policies 2006, provides guidance for all management decisions, including decisions related to cultural resources. Cultural resources, including cultural landscapes and historic structures, are addressed in section 5.0, which states the NPS cultural resources management program involves "...stewardship to ensure that cultural resources are preserved and protected, receive appropriate treatments (including maintenance) to achieve desired conditions, and are made available for public understanding and enjoyment." The policy goes on to state that "Each park's resource stewardship strategy will provide comprehensive recommendations about specific actions needed to achieve and maintain the desired resource conditions and visitor experiences for the park's cultural resources."

Director's Order-12 (2001, rev. 2011) and Handbook (2001)

DO-12 (NPS 2011) and Handbook (NPS 2001) provides the instruction or procedures by which the NPS complies with NEPA and for practicing environmental impact assessment and resource conservation. DO-12 and Handbook provide the framework

1.5 National Park Service. Management Policies, Department of the Interior. National Park Service. Washington D.C.

for the NPS's approach in environmental analysis, public involvement, and making resource-based decisions. The order and handbook require a full and open evaluation, interdisciplinary approach, and technical and scientific analysis of management decisions.

Director's Order-28: Cultural Resource Management

DO-28 (NPS 2002) elaborates on the existing laws for cultural resources including, but not limited to, the 1916 NPS Organic Act, NPS Management Policies 2006, and NHPA. DO-28 offers guidance in applying the laws and regulations regarding cultural resource management to establish, maintain, and refine park cultural resource programs.

Executive Order 11593, "Protection and Enhancement of the Cultural Environment"

Executive Order (EO) 11593 mandates that all agencies 1) compile an inventory of the cultural resources for which they are the trustee, 2) nominate all eligible government properties to the National Register, 3) preserve and protect their cultural resources, and 4) ensure that agency activities contribute to the preservation and protection of nonfederally owned cultural resources.

Executive Order 11990, "Protection of Wetlands"

EO 11990, "Protection of Wetlands" is an order to avoid adverse impacts associated with the destruction or modification of wetlands. The order requires agencies to "take action to minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agencies'

responsibilities".^{1.6} The order applies to acquisition, management, and disposition of federal lands and facilities construction and improvement projects that are undertaken, financed, or assisted by federal agencies, and federal activities and programs affecting land use.

2011 Guidance for Nonimpairment Determinations and the NPS NEPA Process

New guidance for nonimpairment determinations was approved by the NPS in September 2011. The new guidance states that nonimpairment determinations will only be required for the preferred alternative in NEPA documents and that the determination will be appended to the decision document (FONSI or Record of Decision (ROD)) (previously included in the analysis for each resource area). The new guidance will be included in the upcoming revised DO-12 Handbook. Based on the new guidance, the nonimpairment determination will be appended to the decision document for this EA.

2005 GMP/EIS, 2011 LRIP, VMP

In addition to NPS management policies, Pea Ridge NMP is guided by the GMP/EIS (Figure 1-3), including the preferred alternative prepared in 2005. The park is also guided by management strategies and priorities, the Long Range Interpretive Plan (LRIP), and the Vegetation Management Plan (VMP) as previously mentioned.

1963 Master Plan

The 1963 master plan guided the development of visitor, administrative and maintenance facilities for Pea Ridge NMP. All existing NPS facilities were initially built

1.6 May 24, 1977, 42 Federal Register [FR] 26961

between 1960 and 1965, in compliance with the 1963 master plan. The plan compiled with the then current-day NPS standards and policies, but did not include NEPA compliance as it was not required at the time.

The 1963 master plan articulated several objectives that remain relevant today. These include restoring and maintaining fields and woodlands as they were in 1862, and preserving Elkhorn Tavern, foundations of Leetown buildings and structures, the trenches and other appurtenances of 1862. In addition, the 1963 master plan aimed to establish and maintain the system of historic trace roads that existed in 1862. Development of new facilities was restricted to ensure the preservation of the battlefield.

1983 Visitor Use and Development Plan

The Visitor Use and Development Plan proposed an addition to the visitor center to provide adequate space for visitor use and operations, removal of modern features at Elkhorn Tavern to reflect the historic landscape, and improved access to the Federal trenches. The addition to the visitor center was completed in the 1990s. The other actions approved in that plan have not been implemented.

Transportation Study

In conjunction with the GMP/EIS, a transportation study was prepared to evaluate traffic conditions within the park and on the park boundaries relating to park access, safety, visitor use, visitor experience, and interpretation.

2005 Fire Management Plan

The Fire Management Plan (FMP) was developed in 2005, and outlined a detailed program of actions to be taken by the park to meet the fire management goals for the area.

The fire management program at the park was developed to balance the park's goals with the goals of the National Fire Plan (USDA and USDOJ 2000). Park goals are found in the GMP/EIS. Resource management objectives determined whether fire may be used as a tool to manipulate vegetation and how fire will be managed.

Heartland Exotic Plant Management Plan

The Heartland Inventory and Monitoring Network (HTLN) is part of the nationwide Inventory and Monitoring Program of the NPS. HTLN parks in eight states (Arkansas, Indiana, Iowa, Kansas, Minnesota, Missouri, Nebraska, and Ohio) proposed the establishment of an exotic plant management team (EPMT) action plan to control exotic plants cooperatively. This would support restoration of native vegetation in several ecosystem types associated with tallgrass prairies, eastern deciduous forests, interior highlands, and the Mississippi floodplain within the parks. The approach used a cooperative/collaborative program to achieve economy of scale that augments exotic plant programs existing in the parks, monitors effects for adaptive management, and centralizes data management for parks. The program would also require the allocation of resources to target species and locations, where success is most feasible and critical resources (i.e., threatened species, restoration areas, and significant cultural landscapes) are most threatened. The EPMT plan would be proactive in the treatment of exotic invasive species before threats become severe.

Environmental Assessment, Avoca to Gateway, NEPA Study (U.S. Highway 62)

The Arkansas State Highway and Transportation Department (AHTD) has proposed to widen U.S. Highway 62 from two lanes to four lanes from Avoca to Gateway, including the reconfiguration of the U.S. Highway 62 intersection with Arkansas Highway 37 in Benton County, Arkansas. The purpose of the improvements is to provide increased capacity, alleviate traffic congestion, and improve safety. A portion of U.S. Highway 62 is along the southern boundary of the park and would be rerouted as part of this project. The new section would be rerouted south of the existing U.S. Highway 62 to avoid the park (south of Avoca and the Arkansas-Missouri railroad line). The existing U.S. Highway 62 would remain a two-lane road and would be used as the entrance route for visitors to the park.

Environmental Assessment Impact Topics

Scope of the Report

This Environmental Assessment (EA) has been prepared to evaluate potential effects on environmental, socioeconomic, and cultural resources from the proposed treatment alternatives and a no action alternative. The CLR/EA provides the decision-making framework that:

- 1) analyzes a reasonable range of alternatives to meet objectives of the proposal;
- 2) evaluates potential issues and impacts to the park's resources and values; and
- 3) identifies mitigation measures to lessen the degree or extent of these impacts.

Impact topics evaluated in detail in this EA are cultural resources, vegetation, visual resources, visitor experience, and park operations. Some impact topics were dismissed because the project would result in no more than minor effects. No major effects were identified as a result of implementing the proposed alternatives in an initial analysis of effects.

The public, regulatory agencies, and other stakeholders have had an opportunity to comment on this CLR/EA. Comments received will be considered in the final evaluation of effects.

Scoping

Scoping is an early and open process to determine the breadth of issues and alternatives to be addressed in an environmental assessment. Park staff and resource professionals of the NPS Midwest Regional Office conducted internal scoping. This interdisciplinary process defined the purpose and need, identified potential actions to address the need, determined the likely issues and impact topics, and identified the relationship of the proposed action to other planning efforts at the park.

As part of tribal consultation, scoping letters were sent to federally recognized tribes for consultation with the park on June 3, 2013, to determine if any ethnographic or other resources are in the project area and to inquire whether local tribes wanted to be involved in the environmental compliance process. The tribes and governments that received letters were:

- Absentee Shawnee Tribe
- Caddo Nation
- United Keetoowah Band of Cherokee Indians
- Shawnee Tribe of Oklahoma
- Quapaw Tribe of Oklahoma
- The Osage Nation
- Muscogee (Creek) Nation of Oklahoma
- The Chickasaw Nation
- Cherokee Nation of Oklahoma

The NHPA (16 USC 470 et seq.) requires the consideration of impacts on cultural resources, either listed in or eligible to be listed in, the National Register. Park staff sent a scoping letter to the Arkansas SHPO on June 3, 2013, to solicit input on issues of concern. The park will continue to consult with the SHPO to determine the effects of the action alternatives on eligible historic resources and to develop mitigation for impacts on historic features, if any, from the preferred alternative.

The park also sent a scoping letter on June 3, 2013, to the U.S. Fish and Wildlife Service (USFWS) to solicit input on issues of concern. The USFWS Arkansas Field Office responded to the scoping letter in a letter dated September 5, 2013, concurring with the NPS determination that the proposed CLR/EA would have no effect on listed species. In accordance with Section 7 of the Endangered Species Act, the park initiated consultation with the USFWS on June 3, 2013, with a letter that included the park's determination that the proposed CLR/EA would have no effect on listed species. The park will also forward this CLR/EA to the USFWS for review and

comment. The USFWS will review this CLR/EA to determine if they concur with the park's findings of effect, and whether additional conservation measures are needed to protect listed species.

Issues and Impact Topics

An important part of the decision-making process is seeking to understand the consequences of making one decision over another. This CLR/EA identifies the anticipated impacts of possible actions on certain resources, park visitors, and neighbors. The impacts are organized by topic, such as "vegetation" or "public health and safety." Impact topics serve to focus the environmental analysis and ensure the relevance of impact evaluation.

Impact topics were developed from the questions and comments brought forth during scoping; site conditions; staff knowledge of the park resources; and any laws, regulations, policies, or orders applicable to the project. Some topics were dismissed from detailed analysis because the resource is not present in the study area, or because the action alternatives would either have no effect on the impact topic, or the effects would be negligible to minor. Some impact topics were retained even though the effects of the alternatives would be negligible to minor because the impact topic is a particularly sensitive resource, or was identified as an important topic in scoping.

Impact Topics Selected for Analysis

The issues identified during scoping that are evaluated in this CLR/EA are potential effects on the following resources (Table 1-1.).

- Cultural landscapes, archeological sites, and historic structures/objects;
- Vegetation;
- Wildlife;
- Visual resources;
- Visitor experience;
- Park operations.

Table 1-1. The retained impact topics, the reasons for retaining the topic, and relevant laws, regulation, and policies.

Table 1. Impact Topics Retained And Relevant Laws, Regulations, And Policies		
Impact Topic	Reasons for Retaining Impact Topic	Relevant Laws, Regulations and Policies
Cultural Landscapes, Archeological Sites, and Historic Structures/ Objects	The treatment recommendations for cultural landscapes are key issues of the CLR/EA. Because implementing one or more of the alternatives may result in changes to cultural landscapes and historic structures and because ground disturbances may affect archeological sites (i.e., disturb buried artifacts) this topic was retained for further analysis.	Sections 106 and 110 of the NHPA; ACHP implementing regulations regarding the "Protection of Historic Properties" (36 CFR 800); DO-28: <i>Cultural Resource Management Guidelines</i> ; <i>NPS Management Policies 2006</i> ; <i>Secretary of the Interior's Standards for the Treatment of Historic Properties</i> ; NEPA; <i>Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes</i> (1996); <i>Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation</i> ; DO-28A: <i>Archeology</i> (NPS 2004)
Vegetation	Vegetation disturbance could occur and the introduction of invasive nonnative species is possible from ground-disturbing activities. Because the alternatives have the potential to affect vegetation, this topic was retained for further analysis.	NPS Organic Act; <i>NPS Management Policies 2006</i> ; <i>Resource Management Guidelines</i> (NPS-77); Federal Noxious Weed Control Act; EO 13112, "Invasive Species" (NPS 1999)
Wildlife	Changes in vegetation may alter wildlife habitat and could affect wildlife in the project area. Because the CLR/EA alternatives have the potential to affect wildlife habitat, this topic was retained for further analysis.	NPS Organic Act; enabling legislation; <i>NPS Management Policies 2006</i> ; NPS-77
Visual Resources	Modifications to the cultural landscape proposed in the CLR/EA alternatives may alter the views for park visitors; therefore, this topic was retained for further analysis.	<i>NPS Management Policies 2006</i>
Visitor Experience	The CLR/EA alternatives could affect overall visitor understanding of the park, including interpretive and educational opportunities and, therefore, this topic was retained for further analysis.	NPS Organic Act; <i>NPS Management Policies 2006</i>
Park Operations	Park operations and maintenance activities could be affected by the CLR/EA alternatives; therefore, this topic was retained for further analysis.	<i>NPS Management Policies 2006</i>

Impact Topics Dismissed from Further Consideration

The following impact topics or issues were eliminated from consideration because either the resources are not present in the areas proposed for management implementation or because the effects, if any, would be negligible to minor.

Soils

The United States Department of Agriculture, Natural Resources Conservation Service (NRCS) has surveyed the soils in the park, with most soils mapped as loams.^{1.7} Erosion by local streams and rivers carved the Pea Ridge landscape into its characteristic ridges, plateaus, valleys, and ravines. The impervious surfaces (e.g., parking lots, houses, and driveways) associated with surrounding developments have the potential to increase surface runoff in the park area, impacting local drainages, erosion rates, peak flows, and channel morphology. Increased surface runoff increases the rate of stream channel incision. Erosion and incision already threaten horse and foot trails in the park and have potential to threaten the historic context of the park. In the detached unit, earthworks (including rifle pits and trenches) are being degraded by surface runoff and erosion.

Implementing the action alternatives of this CLR/EA includes activities such as ground clearing, vegetation removal, and potential grading activities. Many of these activities would occur in previously disturbed areas, although some activities could occur within undisturbed soils. Soil disturbance could cause erosion; however, mitigation measures would be in place to limit the amount of soil runoff from the proposed activities. Measures to minimize adverse effects on soils during

treatment and maintenance activities would include implementing erosion- and sediment-control measures such as installing silt fencing and minimizing disturbance. With mitigation, the alternatives would have local long-term minimal adverse effects. Because impacts on soils would be minimal, this impact topic was dismissed from further analysis in this CLR/EA.

Geology

The NPS Organic Act and NPS Management Policies 2006, direct the NPS to preserve and protect geologic resources and maintain natural geologic and coastal processes. The Mississippian-age Boone Formation is the primary geologic unit in the park vicinity.^{1.8}

This unit is susceptible to karstification including cave and sinkhole development. Locally, this limestone-rich unit is capped by resistant sandstones, possibly of the Batesville Sandstone unit. This resistant unit caps the highest hills in the region. Dissected plateaus, ridges separated by valleys and ravines, and gently rolling open areas characterize the landscape at the park. These landforms have strong connections to the historical context of the area.

Under the action alternatives, few impacts on site geology would occur from the shallow surface excavation and grading required to implement the CLR/EA alternatives. As a result, the action alternatives would have little to no impacts on geologic resources in the study area. Because impacts on geologic resources would be minimal, this impact topic was dismissed from further analysis in this CLR/EA.

1.7 Natural Resource Conservation Service (NRCS). 2013. Web Soil Survey of Benton County, Arkansas. Soil Survey Staff. United States Department of Agriculture. Available at: <http://websoilsurvey.nrcs.usda.gov/>. Accessed: August 5, 2013.

1.8 U.S. Geological Survey (USGS). 1993. Geologic Map of Arkansas

Water Resources

The Clean Water Act; section 10 of the Rivers and Harbors Appropriation Act; EO 12088, “Federal Compliance with Pollution Control Standards”; and NPS Management Policies 2006, direct the NPS to avoid or minimize human-caused pollution of waters and to avoid obstructing the navigable capacity of waters of the U.S. Two intermittent streams occur within the park boundaries.

Under the action alternatives, there would be small areas of excavation, grading, and exposure of soil material, which would increase the potential for sediment to enter the streams until work is complete and vegetation is reestablished. The transport of sediment to the intermittent streams would be minimized using best management practices (BMPs) to contain sediment and control erosion. Because the action alternatives would have no more than a minimal impact on water resources, this impact topic was dismissed from further analysis in this CLR/EA.

Floodplains

EO 11988, “Floodplain Management” requires an examination of impacts on floodplains and potential risks involved in placing facilities within floodplains. NPS Management Policies 2006, and DO-77-2: Floodplain Management provide guidelines for proposed actions in floodplains. The action alternatives would not include constructing new permanent structures or discharging fill material into the floodplain and would have no impacts on existing floodplains.

The action alternatives would also have no impacts on natural floodplain values (e.g., river processes or aquatic habitat) and the ability of the floodplains within the park to function naturally. There would be no increase in risk to life or property. Because there would be no impacts on floodplains,

this impact topic was dismissed from further analysis in this CLR/EA.

Wetlands

EO 11990, “Protection of Wetlands”; NPS Management Policies 2006; and DO-77-1: Wetland Protection direct that wetlands be protected and that wetlands and wetland functions and values be preserved. These orders and policies further direct that direct or indirect impacts on wetlands be avoided when practicable alternatives exist. The Vegetation Classification and Mapping of Pea Ridge National Military Park report (2012) documented that wetlands occur within a marsh at the southwest portion of the park and, based on descriptions in the report, potentially may occur within the areas identified as Bottomland Deciduous Forest and Silver Maple Forest.

Buffer zones would be established around these areas for all action alternatives to prevent disturbance from implementing treatment alternatives. Because the buffer zones would ensure that the alternatives would have no impact on wetlands, this topic was dismissed from detailed discussion in this CLR/EA.

Land Use

In accordance with NPS Management Policies 2006, the NPS must apply appropriate land protection methods to protect park resources and values from incompatible land uses. The overall land use of the park as a depiction of a specific era would not change under any of the action alternatives. The park would be maintained under NPS management as a historic site and cultural landscape, with the land use remaining as open space, fields, and wooded areas. The action alternatives would not result in modification of the land use; therefore, this topic was dismissed from further analysis in this CLR/EA.

Prime or Unique Farmland

In 1980, the CEQ directed federal agencies to assess the effects of their actions on farmland soils classified as prime or unique by the NRCS. Prime farmland is defined as soil that particularly produces general crops such as common foods, forage, fiber, and oil seed and is available for these uses; and unique farmland produces specialty crops such as fruits, vegetables, and nuts.

Seven soil map units that occur in the park are prime farmlands and two map units are prime farmland if drained.^{1.9} These units make up about thirteen percent of the park. Most of the prime farmlands are in the central and west portion of the park and include a mix of cleared fields and hardwood forests. No unique farmlands are within the park.

Potential effects of the proposed alternatives on prime farmland in the park include constructing new facilities and vegetation management treatments. The extent of the effects is related to the amount of land disturbance caused by construction and operation of park facilities and the extent of vegetation management treatments.

Under the action alternatives, fewer than ten acres would be converted from prime farmland to building sites and parking lots associated with new facilities. This represents at most about one percent of the 935 acres of prime farmland in the park and would result in a long term, negligible, adverse effect. Vegetation management treatment alternatives would be implemented on much of the prime farmland, but the alternatives would not affect the classification of the areas because their capability to produce common foods, forage, fiber, and oil seed would not be diminished.

1.9 Natural Resource Conservation Service (NRCS). 2012. Web Soil Survey of Benton County, Arkansas. Soil Survey Staff. U.S. Department of Agriculture. Available at: <http://websoilsurvey.nrcs.usda.gov/>. Accessed: August 5, 2013.

Overall, the proposed alternatives would at most result in local long term negligible adverse effects on prime farmland. Because effects would be negligible, this topic was dismissed from further analysis. Prime farmland in the park may be affected by a change in vegetation management; however, because the action alternatives would occur in previously disturbed areas, and no prime farmland would be irreversibly converted to other uses, this topic was dismissed from further analysis in this CLR/EA.

Special Status Species

Special status species include species listed as threatened or endangered under the Endangered Species Act of 1973, as amended (16 USC 1531 et seq.) and other species considered sensitive by the park. Federally threatened and endangered species are protected under the ESA. Section 7 of the ESA requires Federal agencies to promote the conservation purposes of the ESA and to consult with the USFWS to ensure that effects of actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of listed species.

The USFWS lists nine threatened, endangered, or candidate species that may be affected by projects in the park.^{1.10} The listed species are:

- Piping plover (*Charadrius melodus*)
- Neosho Mucket clam (*Lampsilis rafinesqueana*)
- Rabbitsfoot clam (*Quadrula cylindrica cylindrica*)
- Cave crayfish (*Cambarus aculabrum*)
- Arkansas darter (*Etheostoma cragini*)
- Ozark cavefish (*Amblyopsis rosae*)
- Gray bat (*Myotis grisescens*)
- Indiana bat (*Myotis sodalis*)
- Ozark big-eared bat (*Corynorhinus (=plecotus) townsendii ingens*)

1.10 U.S. Fish and Wildlife Service (USFWS). 2012a. Information, Planning, and Conservation System. Environmental Conservation Online System. Accessed: October 27, 2012. Site updated: August 6, 2013.

Based on park resource data and staff knowledge, no federally listed or special status species are present in the park that would be affected by the action alternatives. Because no special status species would be adversely impacted by the alternatives, this topic was dismissed from further analysis in this CLR/EA.

Public Health and Safety

In accordance with NPS Management Policies 2006, the NPS will seek to provide a safe and healthful environment for visitors and employees. Conditions in the park are similar to those of surrounding areas and do not pose unusual threats to public health and safety and no hazardous materials are known to be present in the park. None of the proposed alternatives would increase risks to public health and safety because standard best practices would be used during design and construction of new facilities and during vegetation management activities. Because there would be no increased risk to public health and safety, this topic was dismissed from further analysis in this CLR/EA.

Air Quality

The Clean Air Act of 1963 (42 USC 7401 et seq.) was established to promote public health and welfare by protecting and enhancing the nation's air quality. The act establishes specific programs that provide special protection for air resources- and air quality-related values associated with national park system units. Section 118 of the Clean Air Act requires a national park system unit to meet all federal, state, and local air pollution standards.

The action alternatives include minor earthwork that would temporarily increase dust and vehicle emissions, which would result in localized effects on air quality. Vehicle emissions would rapidly dissipate; and visibility, deposition, and other air

quality-related values are not expected to be appreciably impacted. Any effects would be temporary, slight, and adverse. Neither overall park air quality nor regional air quality would be more than slightly affected by the temporary increase in emissions. The no action alternative would have no effect on existing air quality; therefore, air quality was dismissed as an impact topic in this CLR/EA.

Climate Change

Climate change refers to any significant change in average climatic conditions (e.g., mean temperature, precipitation, or wind) or variability (e.g., seasonality and storm frequency) lasting for an extended period (decades or longer). Recent reports by the U.S. Climate Change Science Program, the National Academy of Sciences, and the United Nations Intergovernmental Panel on Climate Change (IPCC) provide evidence that climate change is occurring as a result of rising greenhouse gas (GHG) emissions and could accelerate in the coming decades.^{1.11} While climate change is a global phenomenon, it manifests differently depending on regional and local factors. General changes that are expected to occur in the future as a result of climate change include hotter, drier summers; warmer winters; warmer water; higher ocean levels; more severe wildfires; degraded air quality; heavier downpours and flooding; and increased drought. Climate change is a far-reaching, long-term issue that could affect the park, its resources, visitors, and management. Although some effects of climate change are considered known or likely to occur, many potential impacts are unknown. Much depends on the rate at which the temperature would continue to rise and whether global emissions of GHGs can be reduced or

1.11 IPCC. 2007. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Core Writing Team, Pachauri, R.K. and Reisinger, A. (Eds.) IPCC, Geneva, Switzerland. pp 104.

mitigated. Climate change science is a rapidly advancing field and new information is being collected and released continually.

When considering climate change in an environmental analysis, the NPS must address both how the proposed project contributes to climate change, as indicated by GHG emissions associated with the project, and how climate change would impact park resources, and specifically those resources impacted by the project.

Although implementation activities associated with the action alternatives would contribute to GHG emissions, such emissions would be temporary and/or sporadic. Any effects of implementation-related GHG emissions on climate change would not be discernible at a regional scale, however, as it is not possible to meaningfully link the GHG emissions of such individual project actions to quantitative effects on regional or global climatic patterns.

Impacts from climate change to the natural and cultural resources in the park could occur over time; however, the treatment alternatives would incorporate flexible management techniques, using the best available technology, for facilities and resource management. Because the action alternatives would result in minimal impacts on climate, climate change was dismissed as an impact topic in this CLR/EA.

Lightscape

In accordance with NPS Management Policies 2006, the NPS strives to preserve natural ambient lightscapes, which are natural resources and values that exist in the absence of human-caused light. The proposed alternatives may result in a minor use of nighttime lighting, specifically at any proposed structures. However, in compliance with NPS policies and design guidelines,

potential effects of this lighting would be minimized, resulting in localized and minor adverse effects at most. Only a small area would be affected by the additional lighting and it would have a negligible impact on the night sky. Therefore, lightscape was dismissed as an impact topic.

Paleontological Resources

NPS Management Policies 2006 directs the NPS to protect, preserve, and manage paleontological resources. Some of the geologic formations in the park are known to contain fossils of various plants and invertebrates, but no paleontological resources have been recorded in the park and the park's museum collection does not include fossils.^{1.12} Because the park is not known to contain scientifically important paleontological resources, it is unlikely there would be any effects on this resource; therefore, paleontological resources was dismissed as an impact topic in this CLR/EA.

Ethnographic Resources

The NPS defines ethnographic resources as any "site, subsistence, or other significance in the cultural system of a group traditionally associated with it".^{1.13}

The American Indian tribes traditionally associated with the lands of the park were apprised of the proposed project by letter. No comments were received from the tribes regarding ethnographic resources during the scoping period. Copies of the CLR/EA will be forwarded to each associated American Indian tribe for review and comment. No specific issues related to ethnographic resources have been identified in past

1.12 Hunt, R., J. Kenworthy, V. Santucci. 2008. Paleontological Resource Inventory and Monitoring Heartland Network. Natural Resource Technical Report NPS/NRPC/NRTR-2008/132. October.

1.13 NPS Director's Order #28: Cultural Resource Management. 2002.

consultations for actions in the park or as of the date of this publication. If subsequent issues or concerns are identified, appropriate consultations would be undertaken.

Because it is unlikely that ethnographic resources would be affected by the preferred alternative, and because appropriate steps would be taken to protect any ethnographic resources that are inadvertently discovered, ethnographic resources was dismissed as an impact topic.

Indian Trust Resources

Secretarial Order 3175 requires that any anticipated impacts on Indian trust resources from a proposed project or action by Department of the Interior agencies be explicitly addressed in environmental documents. The federal Indian trust responsibility is a legally enforceable fiduciary obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights. The order represents a duty to carry out the mandates of federal law with respect to American Indian and Alaska Native tribes.

None of the lands of the park are trust resources according to this definition. In addition, neither the Bureau of Indian Affairs (BIA) Eastern Regional office nor the various agencies of the BIA indicated the park contains Indian trust resources; therefore, Indian trust resources was dismissed as an impact topic in this CLR/EA.

Museum Collections

Museum collections include historic artifacts, natural specimens, and archival and manuscript material. These collections may be threatened by fire, vandalism, natural disasters, and careless acts. The preservation of museum collections is an on-going process of preventive conservation, supplemented by conservation treatment, when necessary. The primary goal is preservation of artifacts in

the most stable condition possible to prevent damage and minimize deterioration.

The action alternatives would not impact the current museum objects of the park. The proposed action alternatives may produce new museum accessions, including archeological objects. These new accessions would make minor beneficial contributions to the understanding of the park's natural and cultural resources. Because the effects on the museum collection would be minor and beneficial, museum collections was dismissed as an impact topic.

Environmental Justice

EO 12898, "General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing the disproportionately high and/or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. According to the Environmental Protection Agency, environmental justice is the "fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies."

The goal of "fair treatment" is not to shift risks among populations, but to identify potentially disproportionately high and adverse effects, and identify alternatives that may mitigate these impacts. Minority

populations make up approximately twenty-three percent of the population in Benton County.^{1.14} Residents living below the poverty level are 11.8 percent, compared to 18.4 percent statewide.

Although minority and low-income populations are present in Benton County, no actions in the alternatives would have disproportionate health or environmental effects on these populations or communities as defined in the Environmental Protection Agency's "Draft Environmental Justice Guidance" (July 1996); therefore, environmental justice was dismissed as an impact topic in this CLR/EA.

Wilderness

The Wilderness Act and NPS Management Policies 2006 require that all lands administered by the NPS be evaluated for their suitability for inclusion within the National Wilderness Preservation System. Areas suitable for wilderness designation are those that generally have the qualities of being untrammeled, natural, undeveloped, and offering solitude or a primitive and unconfined type of recreation.

The park is not located within existing or proposed wilderness boundaries and, therefore, is not subject to Wilderness Act requirements. Because there would be no direct impacts on wilderness resources and values, this topic was dismissed from further evaluation in this CLR/EA.

Natural Soundscapes

An important part of the NPS mission is preservation of natural soundscapes associated with national park system units as indicated in NPS Management Policies 2006

and DO-47: Sound Preservation and Noise Management. Natural soundscapes exist in the absence of human-caused sound. The natural ambient soundscape is the aggregate of all natural sounds within the park, together with the physical capacity for transmitting natural sound through air, water, or solid material. Acceptable frequencies, magnitudes, and durations of human-caused sound varies among national park system units, as well as potentially throughout each park unit, but are generally greater in developed areas and less in undeveloped areas.

The action alternatives would introduce additional noise from implementation of the treatment alternatives, but the additional noise would be slight and temporary. For these reasons, natural soundscapes was dismissed as an impact topic in this CLR/EA.

1.14 U.S. Census Bureau. 2013. Benton County Quick Facts. Available at: <http://quickfacts.census.gov/qfd/states/05/05007.html>. Last revised: March 11.



Figure 2-1. The two-day Battle of Pea Ridge took place on March 7 and 8, 1862, and was a victory for the Union, assuring that the state of Missouri would remain part of the Union. Andy Thomas, *That Beautiful Charge* (ThatBeautifulCharge.jpg).