

resources management plan

PEA RIDGE NATIONAL MILITARY PARK

natural resources

cultural resources



Division of Natural Sciences
Southwest Region · National Park Service
Department of the Interior

RESOURCES MANAGEMENT PLAN
FOR
PEA RIDGE NATIONAL MILITARY PARK



April, 1976

Prepared by: Pea Ridge National Military Park Staff and Southwest
Region Office of Natural Science

Reviewed by: Southwest Region Offices of History, Archeology, Planning,
Maintenance, Interpretation, and Resources Management

Concurred by: *Kevin McMillin*
Superintendent, Pea Ridge National Military Park

Approved for Implementation by: *JR Thompson*
ACTING Regional Director, Southwest Region



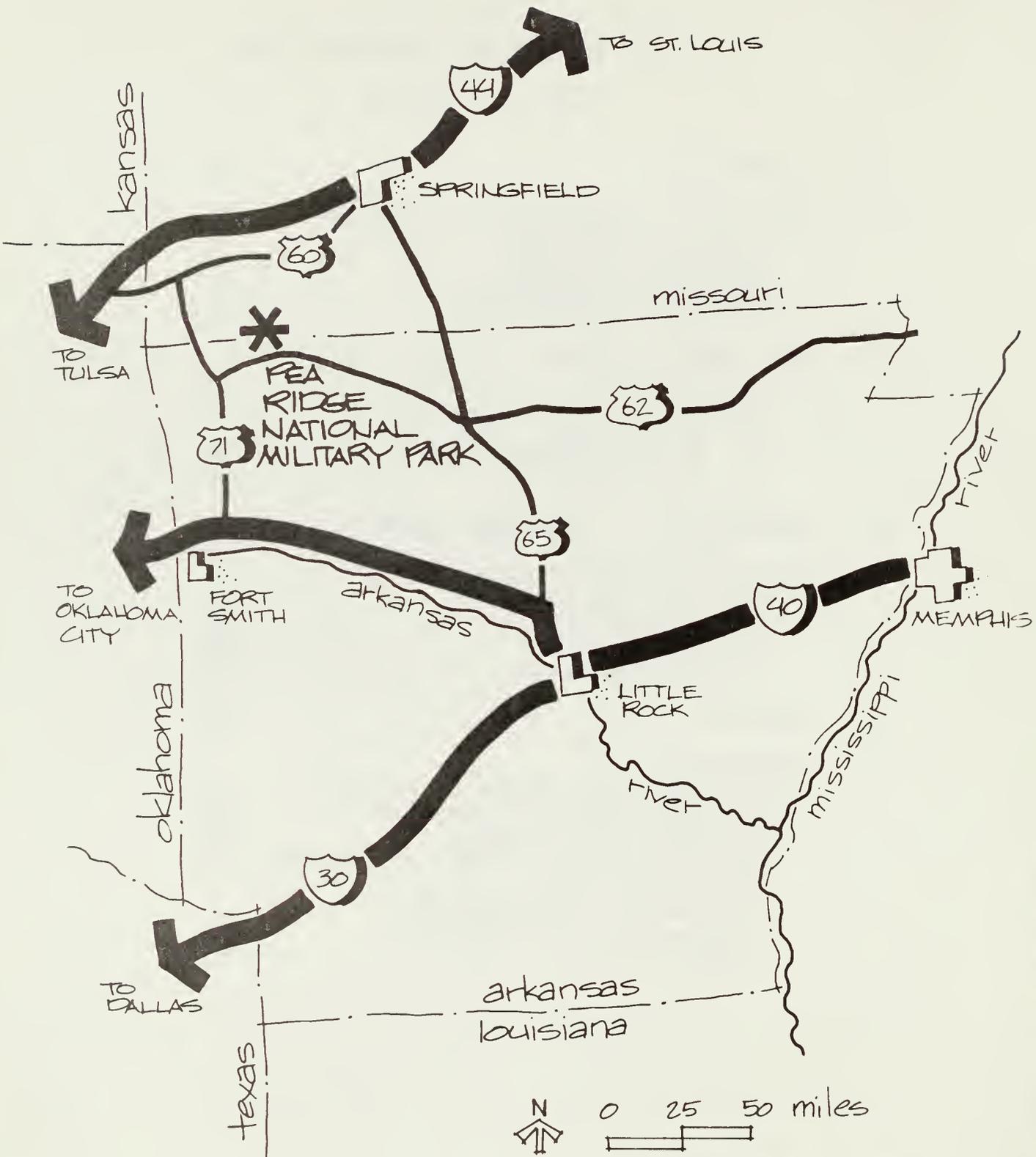
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PEA RIDGE NATIONAL MILITARY PARK

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region

RESOURCES MANAGEMENT PLAN

A Resources Management Plan is a strategic planning document and a key factor in good management and preservation of the resource.

This plan is a set of project statements which include proposed action for implementation as well as 5-year programming sheets for management and research actions. Other sections of the plan serve as an introduction and a set of guidelines. Project statements are determined on the basis of approved Management Objectives and Land Classification. Management Constraints and Completed Research serve as guidelines for projects. The Plan serves the Superintendent in two ways: 1) as a manual for management activities that will preserve the environment or achieve an environmental status quo to comply with Park Service Standards, and 2) a set of research projects and priorities that are designed to obtain additional information for management and interpretation.

STATEMENT OF MANAGEMENT AND PLANNING

PURPOSE:

The Pea Ridge National Military Park was established by an Act of Congress approved July 20, 1956 (70 Stat. 592). The purpose of the Park is stated in the organic act and in other appropriate acts as follows: "...The Pea Ridge Battlefield...shall be...dedicated and set apart as a unit of the National Park System for the benefit and enjoyment of the people of the United States, under the name of Pea Ridge National Military Park."

"The National Park Service...shall administer...the Park, subject to the provision of the Act entitled, and Act to establish a National Park Service and for other purposes, approved August 25, 1916 (39 Stat. 535)."

This latter act further defines the purpose of the park as follows: "To conserve the scenery and the natural and historic objects and the 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."

MANAGEMENT CATEGORY

Historical

BASIC DATA HIGHLIGHTS

General Management

Pea Ridge National Military Park is a management component under the supervision of the Regional Director, National Park Service, Southwest Regional Office, Santa Fe, New Mexico.

Resources Description

Pea Ridge National Military Park contains within it the actual terrain over which the battle raged March 7 and 8 of 1862. The only physical above-ground military remains of this battle, Union trenches overlooking Little Sugar Creek, are within the Park's Detached Area, 1-1/2 miles (2.4 Kilometers (km)) south of headquarters. The Battle of Pea Ridge, termed the "Gettysburg of the West," was one of the largest, in numbers of men involved, to be fought during the Civil War, West of the Mississippi River. The Federal victory saved Missouri for the Union.

There were two separate and distinct actions in the Battle of Pea Ridge, the battle for Leetown at the extreme West of the Park, and the battle for Elkhorn Tavern on the east side.

The entire area is under proprietary jurisdiction.

The land acquisition program has been completed under present authorization. The Park contains 4,278.75 acres (1732 ha). There are no inholdings.

The Park has three residences for Park employees, two constructed in 1963 and the third of World War I vintage.

There are no period buildings remaining near the Leetown site, but period fences have been replaced and historic roads restored. An active reforestation program has been carried out in this area.

The historic Elkhorn Tavern, dating back to the 1830's has been carefully reconstructed and is open for visitors.

A 7.5 mile (12 km) Interpretive Tour Road connects all outstanding interpretive sites on the field with Park headquarters, a visitor center containing a museum and AV room. The Detached Area is connected with the battlefield by the Old Telegraph Road. This area is not yet interpreted.

The Park is located seven miles (11 km) east of the town of Pea Ridge and 10 miles (15 km) north of Rogers, Arkansas, and is in the rolling hills region known as the foothills of the Ozarks. Pea Ridge mountain, located within the Park, has an altitude of 1,610 feet (491 m). The remainder of the Park is a high plateau leading up to the ridge. The immediate vicinity consists of forests interspersed with hay fields. The heaviest agricultural industries are cattle, poultry, and hog production. The region was not permanently populated until the middle 1830's when settlers of Scotch-Irish, German, and English blood arrived. The descendants of the first settlers are still living in the locality.

The wildlife in the Park is about the same as originally, with the exception of elk, bear, and mountain lions which are no longer found in the area. Long, warm, humid summers and short, sharp, severe winters are to be expected. Summer temperatures reach 100° F. (38° C) winter lows are -15° F. (-26° C). Annual precipitation is 45" (1.1 m) and much of it falls as snow between January 1 and April 20. High winds, 30-50 mph (48-80 km/hr) are frequent, and tornadoes are common in the region.

Resource Use and Environmental Consideration

Because of the entrance fee and the energy crisis, Park visitation declined in 1973 and 1974. Visitation appears to be increasing slightly in 1975.

TABLE 1

ANNUAL VISITATION AT PEA RIDGE NATIONAL MILITARY PARK

1962	36,610	1969	134,990
1963	44,694	1970	135,785
1964	68,804	1971	136,721
1965	96,207	1972	184,585
1966	104,087	1973	112,000
1967	127,587	1974	86,288
1968	142,245	1975	120,000

Present use requirements of the Park visitor center by the staff show a considerable problem with the limited space. There is a serious and growing need for additional storage area. At this time, items required for daily use must be stored in the offices and corridors and therefore occupy needed work space. Materials and items for long-term storage present an even greater encroachment on the available work area.

Already in the program is an expansion of the maintenance apron. The Park must meet its needs for effective use of personnel and equipment.

Museum exhibits and panel displays have been in use for a number of years and require up-dating and refurbishing.

An area of concern in background research has been the lack of meaningful information developed in the archeological investigations conducted to date.

There is a need for assistance with this situation from the proper office.

The Park's historical research has been completed in large part with sufficient data obtained to provide adequate interpretation of the Park story.

As the interpretive program is expanded to new sites within the Park, Leetown and the Detached Area as examples, the need for additional research in coordination with a new archeological project will be required.

A National Environmental Study Area has been developed at Pea Ridge. A Park Manual has been prepared and program expansion will continue consistent with the limitations of personnel availability and funding. Group use of the study area will show a continual increase as this expansion takes place.

Picnicking and hiking facilities are available in the Park. At present there is a 10-mile (16 km) Boy Scout trail that provides the Scouts with an award winning activity. It is planned to open for public use, 14 miles (22 km) of historic trails. Horseback riding is encouraged on special bridle trails.

Regional Description

Pea Ridge National Military Park is in Benton County, Arkansas, Townships 20 and 21 North, Ranges 28 and 29 West of the principle meridian. Highway 62 runs through the Park along the south boundary, and U.S. Highway 72 along the west boundary. Highway 62 has been rebuilt and two turning lanes have been added within the Park. The Park is 10 miles (16 km) north of Rogers, Arkansas, population 13,000 and 17 miles (27 km) east of Bentonville, Arkansas, population 7,000.

The Beaver Lake Corps of Engineers Project is expanding, and housing and real estate developments like Bella Vista Village and Holiday Island are succeeding. Anticipated visitor numbers will not overtax the Park's physical features, such as the Tour Road, visitor center, and trails, but will require an increase in personnel, particularly in the Maintenance Division.

The Beaver Lake impoundment is a magnet for the rapidly developing real estate projects. At the present, these projects are not a major threat to the Park.

MANAGEMENT OBJECTIVES

1. General Management

Fees will be charged within the Park and optimum level of information and interpretive services will be offered from Memorial Day through Labor Day.

Work with State and County officials to develop zoning regulations which will prevent or suitably restrict commercial and non-conforming developments in the vicinity of the Park.

Establish with State and County agencies and with local landowners for management and protection purposes cooperative agreements in the areas of fire control, apprehension of poachers, and zoning.

Obtain the necessary staffing, facilities, equipment, and funds so that the natural and historic resources and the physical facilities can be adequately managed and protected and so that high standards of service and protection can be provided to the visitor on a year-round basis.

Examine the adequacy of the current boundary for inclusion of all historic resources and scenic buffer areas necessary to "round out" the Park boundary.

2. Resources Management

To provide for the historical, architectural, and archeological research necessary to insure the authenticity of restoration and interpretation.

Preserve, restore (where appropriate), and maintain the historical integrity of the structures, sites, and objects significant to the Park story, and to retain the 1862 appearance of the battlefield

To institute programs in the area of natural history so that the Park will be better equipped to provide for the perpetuation and conservation of the natural values of the Park environment.

3. Visitor Use

Encourage neighboring school districts to make full use of Park facilities for historical and environmental studies.

Provide compatible public use facilities in areas of the Park presently in non-use so as to reduce the impact of visitor pressure on the historic resources.

Obtain facilities and equipment needed to upgrade the interpretive program, both within the present installations and those required for the Park detached area and the Leetown site.

II. LAND CLASSIFICATION

The Park was established as a historical site but serves in several capacities now including hiking trails and general outdoor recreation. The loop road, therefore, has been tentatively identified as "general outdoor recreation" pending the completion of the new General Management Plan.

Special Use Considerations

1. Picnic Area

A developed picnic area, 150' x 300' (46 x 91 meters) containing 20 tables is located immediately adjacent to the auto tour road near the visitor center. An improved, paved, parking area contains ten spaces. Drinking water, elevated fire grates, and trash receptacles are provided. Flush toilets are available at the visitor center, 150 yards (173 meters) distant.

2. Boy Scout Hiking Trail

This trail is an officially recognized historic hiking trail approved by the Boy Scouts of America and listed in their literature and maps which are distributed nationwide. Completion of the ten mile (16 kilometers) trail entitles the participants to obtain a large patch or medal signifying their accomplishment.

The trail begins and ends at the visitor center and generally follows the layout of the auto tour road. By utilizing former roads, historic traces, and open fields, the trail connects the most important historic sites associated with the Battle of Pea Ridge. By answering a series of questions while they hike, the participants gain a deeper understanding of the significance and the events of the battle. The trail is maintained by brush-hogging an 8-foot (2.4 meter) strip two or three times a summer. Approximately 1,500 scouts hike this trail each year.

3. Horse Trail

To accommodate the increasing numbers of people bringing horses in the park, a 10-mile (16 kilometer) horse trail was established in late fall of 1975. This trail keeps the horses off the auto tour road

and Boy Scout Trail, and provides a near-natural environment for riding under trail conditions.

The brochure which is provided horseback riders carries a safety message, a resource preservation message, and interpretative information to aid the visitor in an appreciation of the historic resources. The trail starts and ends near the visitor center, crosses the tour road in two locations, and utilized old roads, open fields, and existing fire roads. It parallels the Lee Town Battlefield and passes the Elkhorn Tavern, one of the more historically interesting structures at the battlefield. Brush-hogging several times a season keeps the 12-foot (4 meter) trail in good condition.

First-year use of this trail is estimated at 100-200 horses. Nine saddle-clubs are active in the surrounding area.

DESIGNATION AS "MANAGEMENT PLAN"

It is fully recognized that certain portions of the Resource Management Plan may more closely resemble a research plan than a management plan. The reason for this is simply that, in many areas, basic data for proper management are lacking. Thus, the funding of research projects to acquire basic data for intelligent management purposes may take priority over other activities. Most areas undertake some form of vegetative management, yet data on fire history, role of exotic plants and animals, successional patterns and stages, and basic inventories of plants and animals are often lacking.

The research projects proposed in this current plan are designed to provide information on which to base sound management projects that will satisfy both management objectives of the area and NPS mandate under the 1916 Organic Act. The plan itself is not just this one document, but rather is designed as an ongoing process to be revised every year as projects are completed and new input is available. Since management will naturally replace research as a priority in the future, the present use of the term is justified.

CULTURAL RESOURCES



Fig. 1

THE EXTERIOR OF ELKHORN TAVERN HAS BEEN RESTORED.
A NEED NOW EXISTS TO ACCURATELY REFURNISH THE
INTERIOR FOR ADEQUATE INTERPRETATION OF THE SITE.

FRED MANG Photo

1. Project: Removal of Modern Intrusions in Elkhorn Tavern

To complete the desired setting at the Elkhorn Tavern, the modern restroom facilities should be removed and the Tavern returned to its original appearance. The interpretation of the Tavern is hampered by this modern facility in the building.

Action (New Maintenance)

Remove the modern restrooms and replace with a historic kitchen.

Research

A 10-238 package 130, "Elkhorn Tavern Comfort Station," has been submitted and approved and is attached at the end of this section.

Alternatives

No action. If the building remains the same, it would be entirely out of character with the eventual refurnishing of the Tavern as it appeared in 1862.

2. Project: Refurnishing Elkhorn Tavern

At the present time, there are very few resources in the Tavern which are suitable for use in interpreting the building.

Action (New Maintenance)

Refurnishing of the Tavern as it was when the battle began in 1862.

Research

10-238 package 116 "Refurnishing Elkhorn Tavern" has been submitted and approved and is attached at the end of this section.

Alternatives

No action. As this is the prime interpretive resource in the park, this would sharply limit the interpretive value of the structure.

3. Project: Archeological Site Survey

No comprehensive archeological survey of the park has been accomplished. Such a survey, including extensive remote sensing studies, could produce information useful to management and interpretation of the resources and would comply with Executive Order 11593.

Action (Research): Conduct an intensive on-the-ground survey in conjunction with remote sensing studies to locate prehistoric and buried historic structures and sites.

Alternatives: No action. Executive Order 11593 of 1971 requires a comprehensive cultural inventory of all federal lands. Therefore this alternative is not acceptable. Also, the Service could not carry out its responsibilities in regard to preservation of archeological resources if the resources are not identified.

4. Project: A study to Determine the Historic Setting in the Area Surrounding the Elkhorn Tavern

Little information is available concerning the orchard, garden, out-buildings, etc., which were located in the general vicinity of the Tavern.

Action (Research)

A study to determine for what purposes the Cox family used the area surrounding the Tavern--type of apple trees in the orchard, what might have been grown in the garden, how large the blacksmith shop was, etc.

Alternatives

No action. This would be detrimental to the proposed development of the Tavern itself. To make the Tavern appear as it originally did would also need to have the area surrounding the Tavern appear as it did.

Fig 2

MUCH OF THE ACTION OF THE BATTLE OF PEA RIDGE OCCURRED
IN THE VICINITY OF ELKHORN TAVERN. STUDIES ARE NEEDED TO
TO ADD TO THE UNDERSTANDING AND INTERPRETATION OF THE BATTLE.

FRED MANG Photo



5. Project: Location of Historic Structures

Determine location and nature of various structures and features existing at the time of the Battle of Pea Ridge. Information is needed on Leetown, Winton Springs, Detached Area, Elkhorn Tavern, Tanyard, and Williams Hollow.

Action (Research)

A 10-238 (pkg 114) has been submitted and approved for archeological test excavations to locate, identify and delineate various structures. Remote sensing studies will be accomplished in an effort to identify site locations prior to any excavations.

Alternatives

No action.

6. Project: Relocation of Utility Lines Which Detract from the Historical Setting and Scene of the Park

The telephone and electric lines which are visible from various portions of the tour road detract from the historical scene and scar the landscape.

Action (New Maintenance)

Undergrounding of the utility lines. This would restore the battlefield appearance and reduce the necessity of utility maintenance personnel from often entering the park where visitors are not allowed. This would be another step in returning the battlefield to its original appearance in 1862.

Research

A 10-238 package 134, "Undergrounding Utility Lines," has been submitted and approved and is attached at the end of this section.

Alternatives

No action. This would be unacceptable, as keeping the historical scene as near intact as possible is both needed and expected.

7. Project: Access Road to the Site of the Village of Leetown

The first day of the Battle of Pea Ridge was fought around Leetown. If the full interpretive value of Leetown is to be utilized, a short access spur from the park tour road to the town site is needed. At the present time, the Boy Scout trail is the only access to the town site.

Action (New Maintenance)

Construct a spur road and parking area at Leetown.

Research

A 10-238 package 110 "Leetown Access Road and Parking Area" has been submitted and approved and is attached at the end of this section.

Alternatives

No action.

8. Project: Lack of an Interpretive Plan for the Detached Area

The detached area, which is isolated from the major portion of the park, has the only physical remains of the battle that are still present today--trenches dug by the Union Army prior to the battle. Very little interpretation is now available at the site. The importance of the area is not easily understood by the visitors who visit this section of the park.

Action (Research)

A study to determine the best way to interpret this area to the visiting public.

Research

Project should be included in area interpretive prospectus.

Alternatives

No action. This, however, would be detrimental to the purpose of the park--to preserve the historical integrity and interpret the story of the battle to the visitors.

9. Project: Remote Sensing Studies

This project proposes to utilize remote sensing techniques such as Infra-red (IR) and color IR film and proton magnetometer surveys in an attempt to delineate the extent and location of prehistoric and buried historic structures, sites, and features.

Action (Research)

Aerial photography of Pea Ridge and environs, followed by a complete interpretation of that photography and the preparation of detailed maps from the study. This would be followed by a magnetometer survey of areas which potentially contain archeological features.

This undertaking and the information derived from the work will be coordinated with a surface site survey. Potential sites or features would be tested to identify any underlying features.

Alternative

The remote sensing work could be confined to Pea Ridge and little of the surrounding area. This would allow only a limited overview of the prehistoric settlement and the historic development.

Region (or Professional Office) Southwest	Base (or other originator) Pea Ridge N M P	Developed Area Park General
--	---	--------------------------------

Level ed De.	PSC #	PACKAGE TITLE
G	1 1 0	CONSTR ACCESS RD + PARKING AREA Leetown

<input type="checkbox"/> New Package. <input type="checkbox"/> Addition to an existing package. <input checked="" type="checkbox"/> Revision to an existing package.	Complete for Development related Packages only						
	CAPACITY	USE	CLASS	CRIP AREA	STATE	CENS DIST	COUNTY
				0 8	0 5	0 3	BENTON

Will additional operating funds and/or additional positions be required upon completion of this package?
 YES NO

If yes, make certain a Form 10-237, Detail of Program Requirements, is prepared for this package.

Package Description

An access road consisting of 300'x18' two-way road, 300'x12' one-way road, parking area to accommodate 10 cars (30'x100'), 2 buses (24'x40'), and a concrete walk 5'x100'.

Package Justification

This development is necessary for interpretation of the Leetown site per approved Plan. Opening up of the Leetown site and identification of the road and houses are necessary for complete interpretation and visitor understanding of the Battle of Pea Ridge. Cost estimated at \$32,001.

CATEGORY B

Management's Requirements (See reverse for outline. Use blank sheets for additional space.) AREA PRIORITY NO. 19

Class A estimate required <input checked="" type="checkbox"/>	II. ARCHEOLOGY <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Class B estimate required <input type="checkbox"/>	III. HISTORIC ARCHITECTURE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Class C estimate required <input checked="" type="checkbox"/>	IV. HISTORY <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
I. PLANNING - DESIGN - CONSTRUCTION	V. MUSEUM EXHIBITS AND AUDIOVISUALS
A. MASTER PLAN - COMPLETION OR REVISION <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	A. MUSEUM EXHIBITS <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
B. RESOURCE MANAGEMENT PLANS <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	B. CURATORIAL SERVICES <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
C. INTERPRETIVE PROSPECTUS <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	C. WAYSIDE EXHIBITS <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
D. DEVELOPMENT CONCEPT PLAN <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	D. AUDIOVISUALS <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
E. BUILDINGS AND UTILITIES REQUIRED (INCLUDING DETAILS ON ANY COMMERCIAL UTILITY CONNECTIONS REQUIRED) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
F. ROADS &/OR TRAILS REQUIRED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

SEE ITEM NO. 2 ON ATTACHED BO'S AND CONT'S LIST.

Originator's title Lynn R. Wightman, Supy. Park Ranger	Date 7/20/73	Approving Signature (Supy. or other offg.) <i>[Signature]</i> Special Agent in Charge (Structure) <i>[Signature]</i>
<input type="checkbox"/> Approved for estimating by Professional Office(s)		APR 2

Office (Professional Office)	Pack (or Other Originator)	Developed Area
Southwest	Pea Ridge N M P	Park General

FIG #	PACKAGE TITLE
	116 REFURNISHING ELKHORN TAVERN

New Package.	Complete for development related Packages only					
	CAPACITY	EST. YEAR	EST. COST	COUNTY		
Addition to an existing package.						
Revision to an existing package	0 0 2 0 5 E	0 4 0 5 0 3		BENTON		

1 additional operating funds and/or additional positions be required upon completion of this package?

YES NO

If yes, make certain a Form 10-237, Detail of Program Requirements, is prepared for this package.

Package Description * to depict the way it was when the Battle of Pea Ridge. Refurnish the Tavern as a period (1862) field hospital. Develop also, audiovisual program to support and complete the interpretive package for this area.

Package Justification

This empty structure is the most famous landmark on the Pea Ridge Battlefield, refurnishing and supporting audiovisual program is needed to make this an effective interpretive exhibit. Approximately 70,000 visitors visit the Tavern each year here they receive only token knowledge of the reason for its importance to the historical scene because of the lack of interpretive development. The Tavern has electricity. Cost is estimated to be \$10,000.

* In current 75 FY PARKS (called DSC 11/2/74)
 Changes per McKibbin in tele con of 10/29/74
 RP 002.0 4-34 5,000

CATEGORY A

Management's Requirements (See reverse for outline. Use blank sheets for additional space.) AREA PRIORITY NO. 2

Class A estimate required

Class B estimate required

Class C estimate required

PLANNING - DESIGN - CONSTRUCTION YES NO

A. MASTER PLAN - COMPLETION OR REVISION

B. RESOURCE MANAGEMENT PLANS

C. INTERPRETIVE PROSPECTUS

D. DEVELOPMENT CONCEPT PLAN

E. BUILDINGS AND UTILITIES REQUIRED (INCLUDING DETAILS ON ANY COMMERCIAL UTILITY CONNECTIONS REQUIRED)

F. ROADS &/OR TRAILS REQUIRED

SEE ITEM NO. 3 ON ATTACHED DO'S AND CONT'S LIST.

II. ARCHEOLOGY YES NO

III. HISTORIC ARCHITECTURE YES NO

IV. HISTORY YES NO

* V. MUSEUM EXHIBITS AND AUDIOVISUALS YES NO

A. MUSEUM EXHIBITS

B. CURATORIAL SERVICES

C. WAYSIDE EXHIBITS

D. AUDIOVISUALS

*See reverse

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Prepared by	Date	Approving Signature (Supr. or other orig.)	Date
Lynn R. Wightman, Supv. Park Ranger	12/20/73	David J. Garrison	12/21/73
Approved for estimating by Professional Office (P)		Regional Director (Signature)	Date
		Thompson	1-4-74

TO WAGO/ANIN 902 02-05

Region (or Professional Office) Southwest	Park (or Other Originator) Pea Ridge N M P	Developed Area Park General
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Level Area Code	PKG #	PACKAGE TITLE
		U N D E R G R O U N D I N G U T I L I T Y L I N E S

<input checked="" type="checkbox"/> New Package. <input type="checkbox"/> Addition to an existing package. <input type="checkbox"/> Revision to an existing package.	Complete for Development related Packages only						
	CAPACITY	YEARS of Construction	EST. DATE	CRIT ERIA	STAT.	CONG DIST	COUNTY
		5	E	0 2	0 5	0 3	BENTON

Will additional operating funds and/or additional positions be required upon completion of this package?
 YES NO
 If yes, make certain a Form 10-237, Detail of Program Requirements, is prepared for this package.

Package Description
 Undergrounding and/or rerouting of utility lines, specifically telephone and electric lines.

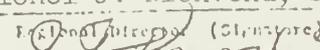
Package Justification
 Telephone and electric lines have been erected on various portions of the Park. Some of these are highly visible and detract from historic and scenic values. While some of the lines serve Park facilities, some merely traverse Park lands while serving other clients. Undergrounding or relocating these lines would restore the battlefield appearance and reduce or eliminate the necessity of utility maintenance personnel from entering the Park, (often going into areas where visitor vehicles are prohibited.)

CATA

Manager's Requirements (See reverse for outline. Use blank sheets for additional space.)

Class A estimate required
 Class B estimate required
 Class C estimate required

A survey was taken in 1965 that indicated 7,290' of power lines and 1,900' telephone lines require undergrounding, and 17,380' of powerlines and 9,600' of telephone lines require relocation. Estimate for undergrounding at that time was \$61,500 and relocation at \$7, It is now believed that a portion of the 7,290' of power line could be relocated rather than undergrounding thus reducing the estimated cost.

Originator-Title Lynn R Wightman, Supv. Park Ranger	Date 1/15/74	Approving Signature (Supt. or other orig.) Lionel J. Bienvenu, Superintendent	Date 1/15/74
<input type="checkbox"/> Approved for estimating by Professional office(s)		Additional Signature (Signed) 	

Location (or Professional Office) Southwest	Park (or Other Originator) Pea Ridge N M P	Developed Area Elkhorn Tavern
---	--	---

PKG #	PACKAGE TITLE
130	CONSTR ELKHORN TAVERN COMFORT STATION

New Package.	Complete for Development related Packages only			
Addition to an existing package.	CAPACITY	COST EST.	SECT.	COUNTY
Revision to an existing package.	6 N	2 012	015	013 BENTON

11 additional operating funds and/or additional positions be required upon completion of this package?

YES NO

If yes, make certain a Form 10-237, Detail of Program Requirements, is prepared for this package.

Package Description

Construct new comfort station to permit removal of existing restrooms from Elkhorn Tavern

Package Justification

Kitchen area of historic Elkhorn Tavern has been converted into restroom for the public. This has destroyed the integrity of the Tavern. Refurnishing of Elkhorn Tavern will result in the restoration of the period kitchen. To permit this, a separate comfort station is needed.

CATEGORY B

Management's Requirements (See reverse for outline. Use blank sheets for additional space.) Class A estimate required <input checked="" type="checkbox"/> Class B estimate required <input type="checkbox"/> Class C estimate required <input checked="" type="checkbox"/> PLANNING - DESIGN - CONSTRUCTION	AREA PRIORITY NO. <u>12</u> II. <u>ARCHAEOLOGY</u> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO III. <u>HISTORIC ARCHITECTURE</u> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IV. <u>HISTORY</u> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO V. <u>MUSEUM EXHIBITS AND AUDIOVISUALS</u> YES NO A. MUSEUM EXHIBITS <input type="checkbox"/> <input checked="" type="checkbox"/> B. CURATORIAL SERVICES <input type="checkbox"/> <input checked="" type="checkbox"/> C. WAYSIDE EXHIBITS <input type="checkbox"/> <input checked="" type="checkbox"/> D. AUDIOVISUALS <input type="checkbox"/> <input checked="" type="checkbox"/>
A. MASTER PLAN - COMPLETION OR REVISION <input type="checkbox"/> <input checked="" type="checkbox"/> B. RESOURCE MANAGEMENT PLANS <input type="checkbox"/> <input checked="" type="checkbox"/> C. INTERPRETIVE PROSPECTUS <input type="checkbox"/> <input checked="" type="checkbox"/> D. DEVELOPMENT CONCEPT PLAN <input type="checkbox"/> <input checked="" type="checkbox"/> E. BUILDINGS AND UTILITIES REQUIRED (INCLUDING DETAILS ON ANY COMMERCIAL UTILITY CONNECTIONS REQUIRED) 1/ F. ROADS &/OR TRAILS REQUIRED 1/	YES NO <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>

SEE ITEM NO. 3 ON ATTACHED DD'S AND CONT'S LIST.

Originator's Title Lynn R. Wightman, Supv. Park Ranger	Date 2/20/73	Approving Signature (Supt. or other offg.) <i>Lionel J. Green</i>
Approved for estimate by Professional Office(s)	RESPONSIBLE OFFICER (Signature) APR 23 1973	

RESEARCH

ACTIVITIES AND 5-YEAR PROGRAMMING SHEET

Pkg. No.	Area Priority	RMP Ref. No.	Project Title	Year 1		Year 2		Year 3		Year 4		Year 5	
				NPS Cost/ M.Y. \$1000	Date Submitted								
1		H-1	Removal of modern intrusions in Elkhorn Tavern	1.5	22.5								
2		H-2	Refurnishing Elkhorn Tavern	1.0	15	1.0	15	1.0	15	1.0	75		
3		H-3	Archeological Site Survey	.1	20								
4		H-4	Restoration of historic setting at Elkhorn Tavern	2	60								
5		H-5	Determination of location of various historic structures	.1	40								
6		H-6	Relocating utility lines	.5	50								
7		H-7	Access Road to Leetown	.5	20								
8		H-8	Interpretive Plan-Detached Area	0.1	1								
9		H-9	Remote Sensing Studies	0.1	2								

NATURAL RESOURCES

1. Project: Natural Resource Basic Inventory

The paucity of basic natural resource data creates a credibility gap in formulation of sound management plans and decisions. This gap must be filled to comply with Natural Science Studies Activity Standards.

Action (Research)

Initiate research projects to complete the parks natural resources inventory and prepare an area ecosystem map. Begin map with data presently available and add natural science data as they become available.

Research

Several studies are necessary to provide the monument with a basic natural resources inventory. They include:

- A. Inventory all vascular plants and all significant nonvascular plants denoting those species that are considered rare and/or endangered, of unusual size, or of visitor and scientific interest.
- B. Inventory all of the vertebrates and invertebrates, and denote those species that are considered rare and/or endangered or of high visitor scientific interest.
- C. Prepare list of known fungi and bacteria in the monument area.
- D. Inventory all significant geological features and processes; e.g., caves, fossils, and rock systems.
- E. Inventory all of the hydrological features; e.g., streambeds, springs, groundwater, and other water resources.

2. Project: Soils Inventory and Analysis

An inventory and distribution map and textural and chemical analysis of major soil types found within the park are required to formulate sound management decisions, contribute to interpretive and management needs, and to comply with Natural Science Studies Activity Standards.

Action (Research)

Initiate research. Investigate the possibility of contracting this research with the Soil Conservation Service.

Research

A soils study should include an analysis of the texture and erosion potential, and related geological features. A soils map should be prepared to illustrate the various soil types and areas which may offer an unstable building base.

3. Project: Faunal Factors

The distribution and abundance of species, population dynamics, and migratory patterns for faunal populations are required to formulate sound resource management plans, contribute to interpretive needs, and to comply with Natural Science Studies Activity Standards.

Action (Research-Continued Maintenance)

Initiate research and continue documentation of out-of-ordinary faunal sightings. Continue cooperative activities with State and Federal wildlife management agencies, as well as appropriate departments at the University of Arkansas, Fayetteville.

Research

- A. Explore the feasibility of monitoring the fluctuations in certain small mammal populations or in their distribution patterns as indicators of changing environmental conditions.
- B. Initiate research needed to determine and maintain compatible predator-prey ratios.
- C. Initiate research to determine the feasibility of reintroduction of certain extirpated species to the park's ecosystem.

4. Project: Ecosystem Analysis

The lack of complete analysis of the area's ecosystem may limit planning and decision making. This study must be made in order to comply with Natural Science Studies Activity Standards.

Action (Research)

Initiate research study.

Research

This all-inclusive study involves all phases of the area's natural resources and is therefore a final step in a comprehensive analysis. An ecosystem analysis involves the measurement of primary energy input into the system and energy flowthrough, including the nutrient and mineral cycles of the ecosystem. This project, in all probability, will never be completed since processes within an ecosystem are dynamic and new data will be added to the analysis as they become available. A computer program should be developed to aid in this analysis.

5. Project: Hazardous Trees in High Visitor Use Areas

For various reasons--particularly Dutch Elm disease, lightning strikes, and aging--trees are falling or losing limbs during periods of wind, rain, and ice. These trees present a hazard to Park visitors.

Action (Continued Maintenance)

Routine maintenance of trees and other vegetation is provided by the park staff. Damaged or diseased trees are removed to prevent further deterioration. When facilities not available to the park staff are required, the work will be contracted by professionals. A planting plan should be reviewed annually by landscape architects from the Regional Office and the Superintendent.

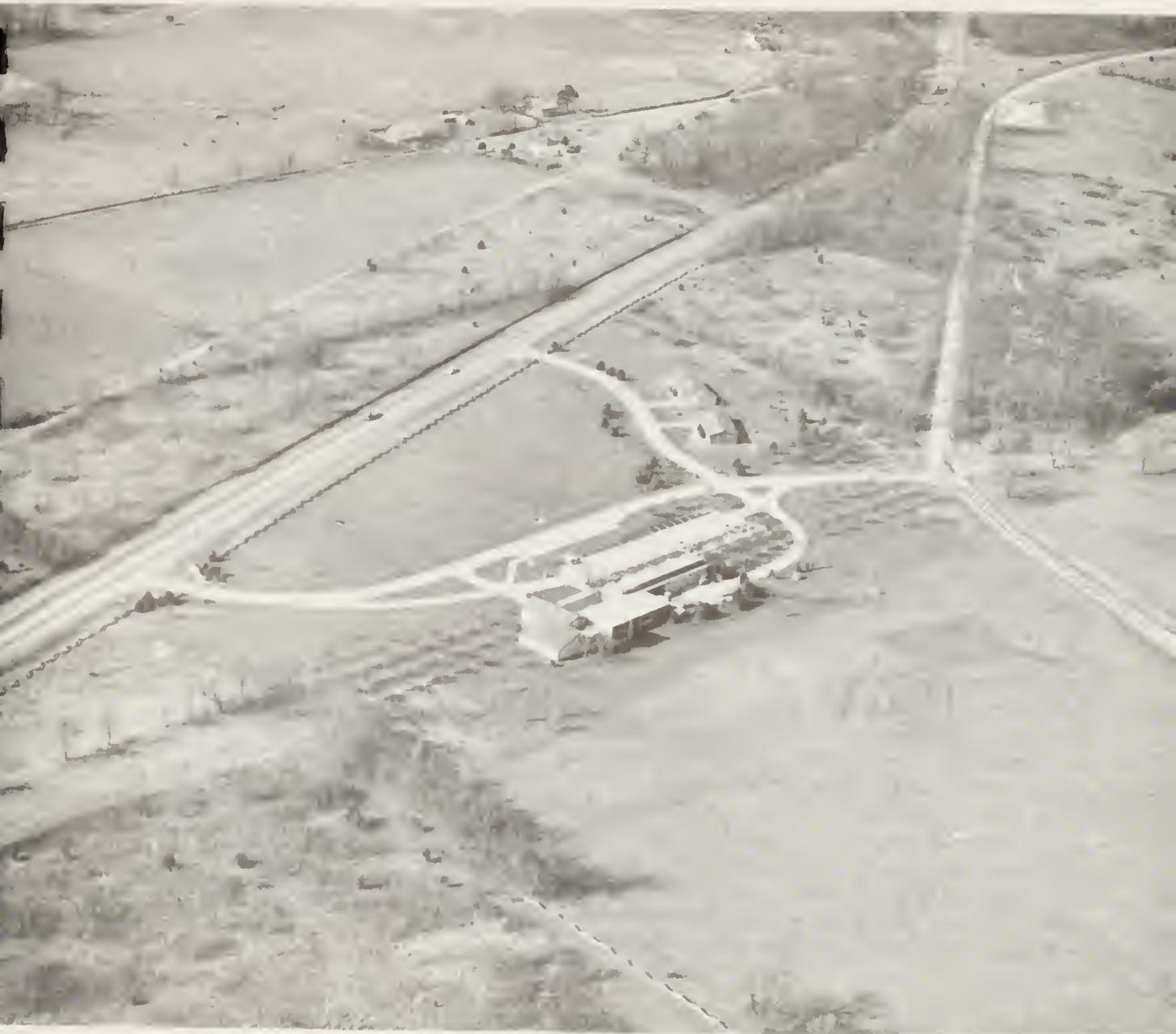


Fig. 3 THE VISITOR CENTER AND PARK RESIDENCES POSE SPECIAL PROBLEMS IN VEGETATIVE MANAGEMENT.

FRED MANG Photo

6. Project: Forest and Ornamental Tree Pest Control

Since aesthetic value is one of the Park's primary assets, defoliation of ornamental trees and shrubs and forest trees in high visitor use areas presents an eyesore and decreases the quality of the park experience. The main offenders are Apple Scab and Cedar-Apple Rust that infect the Flowering Crabapple and Hawthorne trees in the vicinity of the Visitor Center, and Bagworm and Fall Webworm that defoliate forest trees and a few ornamentals. In order to prevent future eyesores and possible epidemic situations from occurring, it is necessary to closely monitor the insect and disease conditions in the forested and landscaped areas.

Action (Continued Maintenance)

Pesticide application on an annual basis is the most effective way to control these pests. Apple Scab and Cedar-Apple Rust should be treated in the early spring when the young leaves are just emerging. Several fungicides are recommended for these pests, which require only one application.

Saturation application of insecticide, preferably Thuricide 90-TS containing the bacterium Bacillus thuringiensis, to infected trees is recommended during the first two weeks in June for adequate reduction of the bagworm population. Fall webworm, on the other hand, requires spot spraying of this same insecticide during August and September. It can also be controlled by pruning of limbs when webs are small. Forested areas should be closely monitored by ground inspection to spot outbreaks. Cooperation and consultation will be sought with the U.S. Forest Service, Division of Pest Control Laboratory staff at Pineville, Louisiana; the Horticulture and Entomology Departments, University of Arkansas, Fayetteville; and the Benton County Extension Agent, USDA.

7. Project: Feral and Diseased Animals

Occasionally feral animals, primarily dogs and cats, disturb trash and garbage cans in visitor use areas and harass the wildlife of the Park. Diseased animals, primarily wild animals, may pose a threat to visitor safety.

Action (Continued Management)

Animals considered dangerous or a particular nuisance should be destroyed or captured and removed to more remote areas of the Park.

8. Project: Erosion

Erosion is not a primary problem of Park Management; however, several areas have eroded and there is danger of serious topsoil loss and isolated deterioration of fire roads within the Park.

Action (Continued Maintenance)

Erosion sites should be repaired in such a way that further erosion problems will be eliminated. An effort should be made to locate and monitor areas of possible future erosion. The access road on the east side of the Park should be noted particularly.

9. Project: Introduction of Wild Turkeys

Evidence indicates that wild turkeys were present in the Pea Ridge area in the past, but they have since disappeared from the Park. This project proposes research to investigate the feasibility of reestablishment of a small flock of this large native bird.

Action (Research)

An investigation into the cause of the decline of turkeys within the park area and research on habitat and population dynamics of the wild turkeys will be initiated. If it is determined that conditions are favorable for reestablishment of the species, positive action will be recommended through a cooperative program with the State Fish and Game Department.

Research

The first step is to survey the area to determine if the species is still present, and if so to determine reasons for its presence in some areas and absence in others. The causes of the initial decline of turkey numbers at Pea Ridge should be investigated as well as the carrying capacity of the Park, and whether there is sufficient habitat to maintain a flock of turkeys. Several considerations must also be studied in order to assure that this introduction is compatible with NPS policy and philosophy. Close liaison with the Arkansas Department of Game and Fish is necessary. Recommendations on reestablishment will be made after a thorough weighing of several limiting factors such as habitat deterioration, climatic influences and trends, competition, poaching, and predation.

10. Project: Reestablishment of Tall-Grass Prairie

There is evidence that there were portions of tall-grass prairie in the Pea Ridge vicinity during the time of the battle. As both a reconstruction of the past and the preservation of a portion of the natural habitat, it is proposed to reestablish a portion of the original prairie.

Action (Research)

Research has been initiated to determine what species of plants and animals were present in the original tall-grass prairie. In addition, research will be necessary on the role of fire in maintaining the prairie community. Virtually all the native prairie flora has been extirpated within the park and in the surrounding areas as well.

To begin filling this gap in the natural scene, a prairie reestablishment project was initiated in 1975. The project consists of a one-acre plot adjacent to Leetown Battlefield in the western portion of the park. After seedbed preparation, Big Bluestem, Little Bluestem, Sideoats Gramma, Switch Grass, and Indian Grass were seeded in small plots. Some native forbs were also transplanted into the plot. Successful regeneration will enable this project to be interpreted to park visitors and give them a greater understanding of the natural scene and the role of the environment upon man. Future plans include seeding a second one-acre plot.

11. Project: Management of Deer Herd

In the 1950's when the Park was established, there was no legal hunting of deer in Benton County. With the protection of wildlife afforded by the Park, the resident deer population increased until, in the mid-1960's, the Arkansas Game and Fish Department felt that there were enough deer to open a season. Casual observations now indicate that the herd may be increasing at a rate which could be detrimental to the vegetation, soils, and other wildlife on the Park.

Action (Research)

Initiate discussions with the Arkansas Game and Fish Department to monitor the resident herd for both numbers and vigor. In the event that the Game and Fish Department are unable to assist in this project, initiate as an independent project in connection with vegetative studies and conduct periodic deer surveys.

Research

This study should determine the population of the deer herd which inhabits the Park, its age structure, the available habitat, the productivity and carrying capacity for ungulates, and what impacts the deer may have on the environment. In the event that the herd is exceeding the carrying capacity for deer, this study should also recommend methods for control of the herd.

12. Project: Vegetative Management Plan

A Planting Plan for the Visitor Center, Residences, and the Maintenance Area was approved in 1963. A recent casual vegetative survey shows that the original plan is no longer an accurate representation of what is there. For instance, small groupings of red cedar have not been contained and have spread at a rapid rate. Other changes indicate that more informed management is necessary.

Action (New Maintenance, Research)

Through both research and judicious management, restore the vegetative patterns to those most compatible with the nature and use of the resource.

Research

Use old records to determine the extent of the vegetative changes at Pea Ridge and the severity of the encroachment of red cedar.

Work Program

Mechanical removal of some trees and bushes may be desirable. Reestablishment of certain species in certain areas could be done in order to conform with the natural patterns of the past more closely, and still be compatible with the use of the resource.

Fig. 4

VEGETATIVE MANAGEMENT MAINTAINS THE HISTORIC SCENE AND SCATTERED FIELDS CREATE AN "EDGE EFFECT" WHICH IS BENEFICIAL TO WILDLIFE. DEER ARE OFTEN SEEN FEEDING IN THE FIELDS SHOWN BELOW.

NPS Photo



13. Project: Reforestation by Transplanting and Planting of New Trees

Reforestation has been an integral part of Park Management since its inception on March 8, 1960. Natural succession has been the primary tool of reforestation; however, some planting of new trees and transplanting of native species has also taken place. Reforestation of several areas of the Park by transplanting and planting of new trees is vital if the complete historic scene is to be restored. Reforestation along U. S. Hwy. 62--a portion of the southern boundary--is also necessary to shield the Park tour road from commercial establishments adjacent to the Park.

Action (Continued Maintenance)

Continue to foster management practices which will enhance natural succession of old field areas. Step-up a planned program for transplanting and planting of new trees in critical areas of the park--between the Park tour road and U. S. Hwy. 62, along the old State Hwy. 72 road bed, etc.

V. PROGRAMMING SHEETS AND RESEARCH PRIORITIES

Includes

Maintenance and Management

Research

ACTIVITIES AND 5-YEAR PROGRAMMING SHEET

Pkg. No.	Area Priority	RMP Ref. No.	Project Title	Year 1		Year 2		Year 3		Year 4		Year 5	
				NPS Cost/ M.Y. \$1000									
N5			Hazardous Trees in High Visitor Use Areas	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
N6			Forest and Ornamental Tree Pest Control	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
N7			Feral and Diseased Animals										
N8			Erosion										
N13			Reforestation by Trans- planting and Planting of New Trees	250	250	300	300	300	300	300	300	300	300

ACTIVITIES AND 5-YEAR PROGRAMMING SHEET

Pkg. No.	Area Priority	RMP Ref. No.	Project Title	Year 1		Year 2		Year 3		Year 4		Year 5	
				NPS Cost/ M.Y. \$1000	Date Submitted								
1.		N10	Reestablishment of Tall Grass Prairie	5.7	5.0	5.6							10-237 10-238
2.		N11	Management of Deer herd		5.0	5.0	3.0						
3.		N1	Natural Resource Basic Inventory										
		A.	Inventory all vascular plants and all significant nonvascular plants			6.5	5.0	5.0				5.0	
		B.	Inventory all vertebrates and Invertebrates								7.5	7.5	
		C.	Inventory all known fungi and Bacteria										
		D.	Inventory all significant geological features and processes										
		E.	Inventory all hydrologic features										
4.		N3	Faunal Factors										
5.		N9	Introduction of Wild Turkeys										
6.		N4	Ecosystem Analysis										
7.		N12	Vegetative Management Plan										

ACTIVITIES AND 5-YEAR PROGRAMMING SHEET

Pkg. No.	Area Priority	RMP Ref. No.	Project Title	Year 1		Year 2		Year 3		Year 4		Year 5		Date Submitted
				NPS M.Y.	Cost/ \$1000									

8. N2 Soils Inventory and Analysis

IV. OVERVIEW

IV. OVERVIEW

The following is a review of all actions proposed within the Pea Ridge National Military Park Resources Management Plan, and outlined within the four categories described within the Management Program.

I. THOSE ACTIONS WHOSE IMPLEMENTATION WILL HAVE A SIGNIFICANT AND MEASURABLE EFFECT ON THE ENVIRONMENT

No such actions are planned. Each project in the Resources Management Program was considered on its own merit and, in every case, those actions planned do not have a significant and measurable effect on the environment. All of the actions fall into categories II, III, or IV.

II. THOSE ACTIONS WHICH WILL CONTINUE EXISTING MAINTENANCE

Natural Resources Projects 3, 5, 6, 7, 8 and 13 fall into this category. These projects are already ongoing and include continued activities by the park staff. Those activities may be of management or actual maintenance in character.

III. THOSE ACTIONS WHICH WILL INITIATE NEW MAINTENANCE

Cultural Resources Projects 1, 2, 6 and 7; and Natural Resources Project 12 fall into this category. These projects include those already addressed within the park's Master Plan or designed to place more emphasis upon programs already underway within the park.

IV. THOSE ACTIONS WHICH WILL ENTAIL RESEARCH

Cultural Resources Projects 3, 4, 5, 8 and 9; and Natural Resources Projects 1, 2, 3, 4, 9, 10, 11 and 12 fall into this category. These projects all include investigations into various phases of the area's systems prior to development of further management determinations. Some of these determinations will require an action plan that will be added to Appendix E. Specific Management Plan, and may require an Environmental Assessment.

DETERMINATION: It is determined that all actions outlined above are maintenance and research in character and do not significantly affect the environment or cause controversy. Therefore, in accordance to the following paragraph of "Guidelines for the Preparation of Review of Environmental Assessments and Statements" (National Park Service, July 29, 1974, page 6),

"Based on an overview of all actions affecting the environment, the Responsible Official may determine that many plans, projects,

VI. APPENDICES

APPENDIX A

CONSTRAINT DOCUMENTS

These documents are available at either the Regional Office or the Park Office.

A. ANNOTATED MANAGEMENT CONSTRAINTS

All constraints at Pea Ridge are in the form of Special Use Permits.

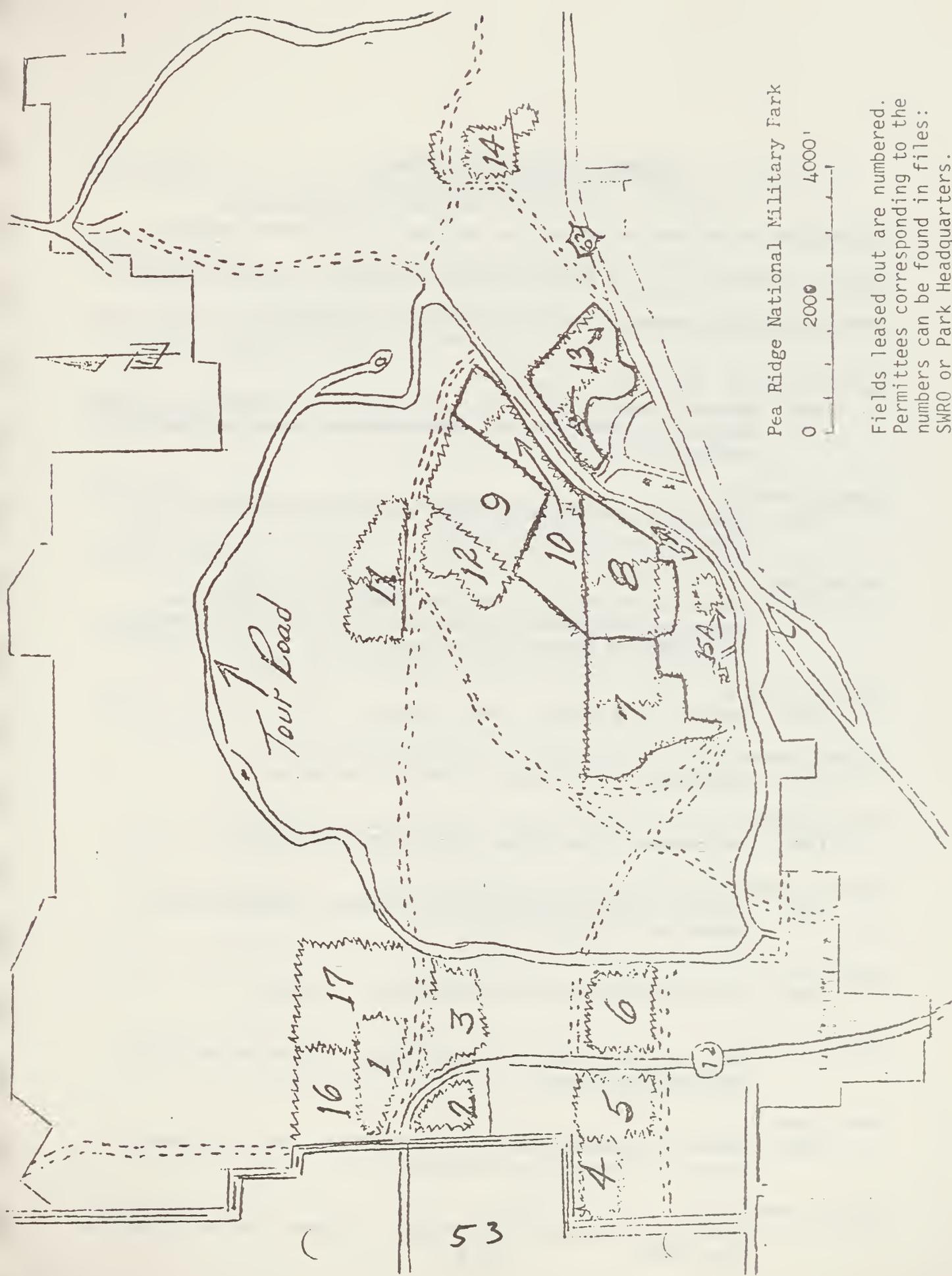
A. Agricultural Use Permits: Currently there are 12 permittees and 17 permits, each one issued for 3 years and renewable if terms are met. See map following for locations. These permits are for the use of historic fields for hay production and/or pasture. Two include the taking of seed. The terms require the lessee to provide for soil maintenance and reasonable management control measures. In return the Park receives minimal fees plus "maintenance of the historic scene" without the cost of personnel and fertilizer. Fee rates change periodically and currently are: \$1.75/acre (\$0.71/ha) for hay, \$2.00/acre (\$0.81/ha) for pasture and \$2.50/acre (\$1.01/ha) for seed. This nets something over \$1120.00/year for the Park. Slow turnover in lessees and a long waiting list indicates this practice will continue.

B. Utilities Use Permits:

Carroll Electric Cooperative Corporation Berryville, Arkansas	no fee
Pea Ridge Telephone Company (Western Arkansas Telephone) Gentry, Arkansas	\$5.00

Both have right-of-way along highways 62 and 72.

C. Access Use Permits: W.H. Markey and William C. Turney, both of Route 1, Garfield, Arkansas, for \$1.00/year have access roads to their private residences through the Park's buffer zone, the former off the county road and the latter off U.S. Highway 62. A third access permit was denied in 1972.



Pea Ridge National Military Park

0 2000 4000'

Fields leased out are numbered.
 Permittes corresponding to the
 numbers can be found in files:
 SWRO or Park Headquarters.

HISTORY - COMPLETED RESEARCH

In addition to the use of books, the Park has the following research reports, studies, etc., on file in the Park library. The following were completed by Park personnel and region research historian.

Appleman, Roy E. and Edwin C. Bearss

- 1956 Boundary Report, Pea Ridge National Military Park (authorized) Historical Justification. (The Appleman report was made at an earlier date.)

Bearss, Edwin C.

- 1962 Historical Land Ownership Map, Part of the Master Plan, Pea Ridge National Military Park.

Bearss, Edwin C.

- 1962 Documented Narrative to Support Historical Features and Vegetative Cover Shown on the Pea Ridge Historical Base Map. First Revision March 1962, 81 pages.

Bearss, Edwin C.

- 1962 Battle of Pea Ridge. Over 21 pages.

Bearss, Edwin C.

- 1962 Artillery at Pea Ridge. 74 pages plus notes.

Bearss, Edwin C.

- 1962 The Indians at Pea Ridge. 164 pages plus notes.

Bearss, Edwin C.

- 1965 Leetown, Elkhorn Tavern Grounds, Federal Earthworks, and Tanyard as of March, 1862.

Bland, R. A.

- 1966 Col. Harrison and the Post Colonies. 4 pages.

Bland, R. A.

- Medal of Honor Winners at Pea Ridge. 8 pages on or about the summer of 1966.

Bond, John W.

- 1961 Historic Buildings and Structures Report, Part I, Elkhorn Tavern. 25 pages plus exhibits.

Bryce, John W. Jr.

- From Wilson's Creek to Pea Ridge. 18 pages plus notes written about 1967.

Hyde, David L.

1965 Documentary Report for Painting of the Death of General
Ben McCulloch at Leetown Battlefield. 24 pages.

Handley, Larry

1969 Williams Hollow Hospital. 5 pages.

Judd, Henry A. and Buford L. Pickens

1965 Historic Structures Report, Part I, Architectural Section
on Elkhorn Tavern.

Leonard, David

1973 Winton Springs Historic Structure Report.

Peter, Ted C.

1964 The Indians at Pea Ridge. 4 pages.

Stinson, Dwight E. Jr.

1963 Historic Buildings and Structures Report, Part I, Elkhorn
Tavern. 121 pages.

Wuest, Ann

1964 Cavalry in the Battle of Pea Ridge. 5 pages

Addition to above list:

HISTORY - BIBLIOGRAPHY

Pea Ridge National Military Park has a small library on material pertaining to the Civil War and Pea Ridge in particular.

The following list of books, magazine articles, etc., which pertain in some significant way to the battle of Pea Ridge, can be found in the Park's library or at the University of Arkansas library in Fayetteville.

Abel, Annie Heloise, Ph.D.

1919 The American Indian as Participant in the Civil War.
Approximately 369 pp. typescript.

Anderson, Ephraim McD.

Campaigns of the First Missouri Confederate Brigade. An excerpt from Memoirs Historical and Personal. 71 pp., also Order of Battle of Pea Ridge, 1868, 6 pp. typescript.

Anonymous

Battlefield of Pea Ridge, Arkansas. Battlefield Folklore. Garfield, Ark., Washington County Historical Society, 1958, 18 pp.

Anonymous

Battlefield of Pea Ridge, Arkansas. Battlefield Folklore. Battlegrams and generals. Garfield, Arkansas, Castle Battlefield Museum, 1939., 65 pp.

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Battlefield of Pea Ridge, Arkansas. The clamorous struggle behind the battle of Pea Ridge, Garfield, Ark., Battlefield Museum, 1945. 16 pp. including map.

Baxter, William

Pea Ridge and Prairie Grove: or Scenes and Incidents of the War in Arkansas. Poe and Hitchcock, Cincinnati, Ohio, 1864.

Bearss, Edwin C.

Battle situation map for the Battle of Pea Ridge, March 7-8, 1862. Compiled and drawn by Edwin C. Bearss, January 1957. R.P.W. With historical notes and illustrations. Authorities for Historical base map cited in margin.

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Elkhorn Tavern History. Shofner's, Rogers, Arkansas, 1962. pp. 13-18. Article from booklet The Battle of Pea Ridge, 1862.

- Bond, John W.
The Pea Ridge Campaign. Shofner's, Rogers, Arkansas, 1962.
pp. 4-12. Article from booklet The Battle of Pea Ridge, 1862.
- Britton, Wiley
Battle of Pea Ridge. Copies from The Civil War on the Border,
62 pp. (pages 214 to 275), book published about 1890. Copy-
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Times Illustrated. 1967.
- Burrow, Roy Douglass
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- Carr, Eugene A.
Report of Col. Eugene A. Carr Third Illinois Cavalry. March 10,
1962, typescript, 20 pp.
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Chronicles of Oklahoma, Vol. 25 No. 4, Winter 1947-48. 8 pp.
- Corbin, Willian E.
A Star for Patriotism. Published by William E. Corbin,
Monticello, Iowa (1972). pp. 96-107.
- Cunningham, Frank
General Stand Watie's Confederate Indians. pp. 58-65. The
Naylor Company, San Antonio, 1959.
- Dodge, G. M.
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- Duncan, Robert Lipscomb
Reluctant General; The Life and Times of Albert Pike. pp. 209-
231. E. P. Dutton & Co., Inc., New York, 1961.
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Dysart Diary, January 1, 1862, to January 21, 1863.
- Evans, C. A., editor
Confederate Military History. Vol. IX (Kentucky and Missouri):
Vol. X (Arkansas and Louisiana). Confederate Publishing Co.,
Atlanta, 1899.

Fenton, John

John Fenton Letters, Sept. 1861 to April 1862. Photostat copy and also typescript, 6 pp.

Fischer, LeRoy H., and Gill, Jerry

Confederate Indian Forces Outside of the Indian Territory. Oklahoma Historical Society, Oklahoma City, 1969.

Gammage, W. L.

The Camp, the Bivouac, and the Battlefield. (History of the 4th Arkansas Regiment). Southern Press, Little Rock, 1958. Original publication by Cooper & Kimball, Selma, Alabama, 1864.

Hartje, Robert G.

Van Dorn; The Life and Times of a Confederate General. Vanderbilt University Press, Nashville, Tennessee. 1967.

King, James T.

War Eagle, A Life of General Eugene A. Carr. University of Nebraska Press, Lincoln, Nebraska. 1963.

Lavender, John W.

They Never Came Back: The Story of Co.F., Fourth Arkansas C.S.A. The Perdue Co., Pine Bluff, Arkansas, 1956.

Leeper, Wesley T.

Rebels Valiant: Second Arkansas Mounted Rifles. Pioneer Press, Little Rock, 1964.

Park, Hugh

Pea Ridge: The Place Where the South Lost the Civil War. Press-Argus Printers, VanBuren, Arkansas, 1961.

Payne, M. A.

Memoirs of A. M. Payne on Battle of Pea Ridge. (1911?) Typescript, 10 pp.

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Report of Brig. Gen. Albert Pike, CS Army, Commanding Department of Indian Territory. 19 pp., March 14, 1862, Typescript.

Rea, Ralph

Sterling Price - The Lee of the West. Pioneer Press, Little Rock, 1959.

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The Life and Service of Gen. Ben McCulloch. The Sleck Company,
Austin, Texas, 1958. Reproduction of first printing.
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Commanders at Pea Ridge. Shofner's, Rogers, Ark., 1962. pp. 23-
28. Article from booklet The Battle of Pea Ridge, 1862.
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Life in Benton County. Shofner's, Rogers, Ark., 1962, pp. 21.
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pp. 43. Article from booklet The Battle of Pea Ridge, 1862.
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Trail of Tears. Shofner's, Rogers, Ark., 1962, pp. 44. Article
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Douglas Texas Battery, CSA. Published by The Hill Junior
College Press, 1971, Hillsboro, Texas. 209 pp.

APPENDIX D

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APPENDIX E

Collections and Locations

Natural Sciences

None

History

Pea Ridge National Military Park has a wide variety of artifacts connected with the Civil War period. A small portion of the collection deals directly with the battle of Pea Ridge while a majority of the artifacts are articles of the general period of the Civil War era. The park also has on loan a collection of items on display in the visitor center which were originally owned by a soldier who fought here during the battle. A large part of the collection was donated by local residents who came in contact with the historical items during the some 100 years it was in private ownership.

APPENDIX F

INFORMATION BASE CHECKLIST FOR PEA RIDGE NATIONAL MILITARY PARK.

BASIC THEMATIC MAP FILE

Regional Features

Population Centers - Socio-Economic Profile. Northwest Arkansas Economic Development District. 1972. Contains population projections (PERI).
1972 Housing Element Report - Northwest Arkansas Regional Planning Comm.

Political Subdivisions - Congressional record (SWRO)
Arkansas State Directory (PERI)

Land Use - Northwest Arkansas Regional Planning Commission. Various reports on Rural Land Use, Open Space and Recreation, Commercial, Industrial.(PERI)

Outdoor Recreation Facilities - Northwest Arkansas Economic Development District, Inc. 1973. Report entitled Areawide Recreation Plan.(PERI)

Transportation, Communication, Utilities - Available from Northwest Arkansas Regional Planning Commission, Springdale, AR.

Overnight Accommodations - Available from Northwest Arkansas Regional Planning Commission, Springdale, and local Chambers of Commerce.

Land Ownership - County land ownership map maintained by County Judge, County Courthouse, Bentonville, AR

Park Specific

Topography - There is a USGS map at 1:24,000 of Pea Ridge and vicinity. Map # N3622.5-W940017.5, dated 1958. Available at Park. Air photos of Benton County (includes Park) dated March 4, 1969, 1:20,000 (PERI)

Geology - Geologic information on Pea Ridge is limited and should be so noted in the Plan.

Land Use and Ownership - Deeds and abstracts concerning private land purchased for the Park are maintained at park. Master deed listing for status of lands as of December 31, 1975, maintained at Park and SWRO. Information regarding the ownership of lands adjacent to the Park may be obtained by consulting plat maps, County Assessors office, Benton County Courthouse, Bentonville, Arkansas.

Soils - Soil Conservation Service began County wide soil survey (including the Park) in Fall of 1974. Completed reports have not been received as yet. Current information available from SCS in Fayetteville, AR.

Hydrology - Most of the hydrological features of the Park may be discerned on the USGS map of Pea Ridge. Related hydrologic information is available in reports of the Northwest Arkansas Regional Planning Commission relating to septic tank contamination of ground water and solid waste systems. Available at Park. A detailed hydrologic map must be a research project.

Vegetation - Air photos are available at Park (see Topography above). Historic vegetation maps in park files describe vegetation at the time of the Battle of Pea Ridge.

Final Report on Vegetation of Pea Ridge National Military Park, By Chris Wright, Gordon E. Bradford, David E. Classen, 1970. Describes the vegetation cover of the Park. (PERI)

Wildlife - There are no wildlife maps of Pea Ridge as such.

Cultural - There has been no archeological survey of the Park. Partial archeological survey by Rex Wilson (NPS) contains sketches of archeological sites surveyed.

Rec., Develop., and Support Facilities - As built drawings of Park facilities and architectural plans are available at the Park.

NARRATIVE FILE

Climate - Partial data are available from the Park staff. A brief summary of general climatic conditions is contained in the 1962 Master Plan Narrative.

Socioeconomic Environment - Socioeconomic data are available in the Reports published by Northwest Arkansas Economic Development District, Harrison. 1972 report is available at the Park. Related materials available from Northwest Arkansas Regional Planning Commission, Springdale.

Business and Industry - Available from the Northwest Arkansas Economic Development District; Employment Security Division, Rogers; local Chambers of Commerce.

Geology - Comprehensive geologic information on the Park is not readily available. Related information can be gleaned from reports of NWARPC (such as physical features study) and Department of Geology at U of A, Fayetteville.

Land Use and Ownership - See Land Use and Ownership map file description.

Soils - See reference to SCS County soil survey above.

Hydrology - See Hydrology map file description. Narrative information connected with well drilling at the Park should be available in SWRO or Denver Service Center.

Vegetation - Several studies relating to vegetation have been done at Pea Ridge. Mr. Edwin C. Bearss, in 1962, wrote a documented narrative to support historical features and vegetative cover shown on the Pea Ridge historical base map. The Wright report on vegetation (see vegetation, map section) which contains considerable information on varieties and types of plant species. A Masters Thesis by H. H. Shugart in 1968 entitled Ecological Succession of Breed Birds Populations in Northwestern Arkansas contains valuable information on plant succession. Dr. E. E. Dale of the University of Arkansas, Botany Dept., is currently directing a prairie reestablishment project and compiled a bibliography on native prairie vegetation in this region. All the above references are available at PERI.

Wildlife - No complete narrative on the wildlife at Pea Ridge is available. Several research projects have been carried on at Pea Ridge as follows: Island Game Population Dynamics, Philip S. Gipson, 1967; The Taxonomy, Reproductive Biology, Food Habit and Range of Wild Canis (Canidae) in Arkansas, Philip S. Gipson, 1972. Final Report on Population Densities of Small Mammals in Relation to Specific Habitat, Johnsey, Malinen, 1971; Home Range, Circadian Activity and Body Temperature of the Southern Woodchuck, *Marmota Monax Monax*, in Northwestern Arkansas, Hayes, 1971.

A study on the Southern flying squirrel at Pea Ridge is now in the planning stages. The above reports are available at the Park.

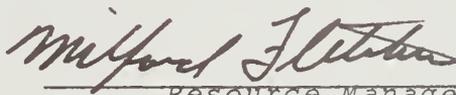
Cultural - Historical resources and values of the Park have been well researched and documented. Archeological resources are not as well known. Needed research in these areas is delineated in the cultural section of the Resource Management Plan.

Rec., Develop., and Support Facilities - This information is general in nature and available at the Park.

APPENDIX G

ANNUAL REVIEW, CHANGES AND DATES

The Resource Management Plan will be reviewed annually by the Superintendent and the Regional Resource Management Plan Coordinator. Necessary changes will be initiated at the Park area for approval by the General Superintendent and the Regional Director.

 4/7/76

Resource Management Date
Plan Coordinator



