
National Park Service
U.S. Department of the Interior
Vicksburg National Military Park



Environmental Assessment

Rehabilitation and Restoration of the Shirley House

November 2009



**U.S. Department of the Interior
National Park Service**

**Environmental Assessment:
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**Vicksburg National Military Park
Warren County, Mississippi**

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Summary

The National Park Service proposes to rehabilitate and restore the Shirley House at Vicksburg National Military Park, Mississippi. The Shirley House is listed on the National Register of Historic Places, and is one of only two remaining antebellum structures in the park.

Since the early 1900s, the structure has undergone several episodes of restoration and rehabilitation. A substantial portion of the interior finishes were gutted during the first phase of a remodeling project in the 1960s, but were never replaced, resulting in missing, damaged, or weak support beams and framing members. Emergency stabilization measures have been implemented in recent years, but the building remains closed to the public and access is limited only to those park employees performing necessary inspections and repairs.

These concerns have been addressed in this environmental assessment (EA), and 3 alternatives are considered.

Alternative A, the No Action Alternative: Routine inspections and maintenance would continue but the building would not be open for visitor use. Precautions would be taken to help ensure safety of visitors in the building vicinity. Over the long term, if the building suffered major deterioration, it would not be rehabilitated or restored, resulting in the loss of a significant historic structure and a vital interpretive opportunity.

Alternative B (Preferred Alternative): The exterior of the house would be rehabilitated, and damaged or missing historic fabric would be replaced to match its 1860s appearance. The main level of the house would be restored to its 1860's appearance to the greatest extent practical and opened to the public. The rooms of the first floor would be opened to viewing and used to house exhibits on themes approved in the park's Long Range Interpretive Plan. The attic and basement of the house would be preserved as-is and used for mechanical equipment, but would not be open to the public. No heating or cooling system would be installed in the structure. Only ventilation via ducts (no cooling) would

be available in summer. Additional modifications would include installation of mechanical, security, fire detection, and fire suppression systems. These modifications also would provide for a safe means of visitor egress, and would help ensure the health, comfort, safety, and security of visitors and park staff, as well as complying with applicable building and safety codes.

Alternative C: This alternative would be identical to Alternative 2, except that (i) the structure would be staffed by National Park Service personnel or volunteers during operating hours; (ii) all rooms on the first floor would be open and visitors would be able to enter each room; (iii) exhibits would be supplemented with reproductions of period furniture, in accordance with a Historic Furnishings Plan; and (iv) the structure would be fully heat/air conditioned for visitor comfort and preservation of reproduction items.

Alternative B is the preferred alternative of the National Park Service.

This environmental assessment evaluated the effects of these alternatives on natural and cultural resources, as well as on visitor experience and the human environment. Among other benefits, the rehabilitation of the Shirley House would improve the condition of an important park resource and greatly enhance the visitor experience. The alternatives analyzed in this environmental assessment would not result in major environmental impacts or impairment to park resources or values.

Note to Reviewers and Respondents

Reviewers should provide their comments on the EA during the review period. This will allow the National Park Service to analyze and respond to comments at one time, thus avoiding undue delay in the decision-making process. Reviewers are encouraged to structure their participation in the National Environmental Policy Act process so that it is meaningful and alerts the agency to the reviewer's position and contentions. Comments on the EA should be specific and should address the adequacy of the analysis and the merits of the alternatives discussed. 40 CFR 1503.3.

Comments on this EA must be delivered or postmarked no later than **December 3, 2009**. If you wish to comment on this EA, electronic comments are preferred. The National Park Service's Planning, Environment, and Public Comment (PEPC) web site and an email address are both available for this purpose:

PEPC: <http://parkplanning.nps.gov/vick>
E-mail: VICK_Superintendent@nps.gov.

Mailing Address: Superintendent, Vicksburg National Military Park, 3201 Clay Street, Vicksburg, MS 39183

Important Notice: Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comment to withhold your

personal identifying information from public review, we cannot guarantee that we will be able to do so.

1.0 PURPOSE AND NEED FOR ACTION

1.1 Introduction

The National Park Service (NPS) is considering a proposal to rehabilitate and restore the Shirley House at Vicksburg National Military Park, Warren County, Mississippi. This action is needed to preserve this important National Register property, improve visitor interpretative and accessibility opportunities, protect public and employee health, safety and welfare, and improve park operational efficiency.

The Shirley House is one of two remaining Civil War buildings at Vicksburg National Military Park. The Shirley House was close to the Union siege lines and played a prominent role in the 47-day effort to capture Vicksburg, serving as the headquarters of the 45th Illinois Infantry. It is listed on both the National Register of Historic Places and the Park's List of Classified Structures. The building also played a prominent role in the activities of African-Americans, both military and civilian, during the period of Union occupation of Vicksburg and Reconstruction. When the Federal government purchased the building from the Shirley family it did so with the promise to make it the "most conspicuous object on the battlefield." Given its present condition, these promises are unfulfilled.

1.2 Purpose and Need for the Project

National Park Service *Management Policies 2006* and *Director's Order 28* stress the need for protection and preservation of significant historic properties such as the Shirley House. The park's General Management Plan (GMP), Interpretive Prospectus (IP), Comprehensive Interpretive Plan (CIP), and Cultural Resource Management Plan (CRMP) all call for rehabilitation and restoration of the historic Shirley House because it is one of two surviving Civil War structures in the park, and is situated adjacent to the Illinois Monument, a primary destination for most of the park's one million annual visitors. In the past, safety concerns arising out of the condition of the Shirley House have restricted badly needed work, resulting in failed under the Government Performance and Results Act (GPRA), as well as goals outlined in the park's GMP, IP, CIP, and CRMP.

Despite multiple restoration efforts over the past century, the Shirley House is presently not suitable for any kind of public use. Part of the safety problems are related to the age of the building, but uncompleted phases of the 1960s and 1980s rehabilitation projects also resulted in missing, damaged, or weakened support beams, framing members, floors, and ceilings. To partially address this situation, interim stabilization work was completed in 2005. Nevertheless, safety concerns have led this historic building to be closed to visitor use, and the house has been posted "Do Not Enter – Unsafe to Occupy." Only authorized personnel are allowed to enter the building; employees who do go into the building are exposed to occupational risks due to violations of Life Safety Codes. In addition, as a very old wooden frame structure with a cedar shake roof, the Shirley House

has no fire blocks in the walls nor a fire detection or sprinkler system, placing it at risk of loss from fire and collapse and threatening both visitor and staff safety.

Optimum visitor experience at Vicksburg is not being offered because the Shirley House currently is inaccessible to visitors and most park staff, and access is limited to only those park employees performing necessary repairs and inspections. As a crucial and integral part of the park story, the Shirley House needs to be open to visitors. However, given its present condition, visitors cannot enter the building nor fully appreciate its historic significance.

The shortcomings described above must be addressed for the project to be considered a success. As described by the December 2003 Value Analysis conducted for this project, the specific project purposes are:

- Maintain integrity of this National Register property and retain compatibility with other historic park structures;
- Protect public and employee health, safety, and welfare by meeting Occupational Safety and Health Administration standards for safe and effective entry and exit, and by reducing the need for hazardous maintenance activities; and
- Provide enhanced visitor interpretation and educational opportunities, including access to the Shirley House for a broader understanding of its place in American history.

An environmental assessment (EA) analyzes the proposed action and alternatives and their impacts on the environment. This EA analyzes the no action alternative and two action alternatives for rehabilitation and restoration of the Shirley House to determine their impacts on the environment. This EA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969; Council on Environmental Quality regulations for implementing the National Environmental Policy Act (40 *Code of Federal Regulations* Parts 1500-1508); National Park Service's *Director's Order (DO) #12 and Handbook: Conservation Planning, Environmental Impact Analysis, and Decision Making* (NPS 2001); and the National Historic Preservation Act of 1966 and its implementing regulations at 36 *Code of Federal Regulations* 800.

The proposed treatments to the structure and restoration of missing elements would be designed to ensure compliance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (NPS 1995b). Under these standards, there are four distinct, but interrelated, approaches to the treatment of historic properties – Preservation, Rehabilitation, Restoration, and Reconstruction. The treatment *Preservation* focuses on the maintenance and repair of existing historic materials and retention of a property's form as it has evolved over time. *Rehabilitation* acknowledges the need to alter or add to a historic property to meet continuing or changing uses while retaining the property's historic character. *Restoration* is undertaken to depict a property at a particular period of time in its history, while removing evidence of other periods. *Reconstruction* re-creates vanished or non-surviving portions of a property for interpretive purposes. The treatments

chosen for the Shirley House are based on a variety of factors, including the historical significance of the building, its physical condition, proposed use, and enhanced interpretive potential.

1.3 Park Purpose and Significance

Vicksburg National Military Park in Vicksburg, Mississippi was established on February 21, 1899. The park is the site of a 47-day Civil War siege of Confederate troops by Union forces under the command of General Ulysses S. Grant. The Vicksburg campaign was waged from March 29 to July 4, 1863 and included battles in west-central Mississippi at Port Gibson, Raymond, Jackson, Champion Hill, and Big Black River, as well as operations against Confederate forces defending the city of Vicksburg. Vicksburg, which was heavily fortified and located on a high bluff overlooking a bend in the Mississippi River, was aptly dubbed the “Gibraltar of the Confederacy.” Its surrender on July 4, 1863, coupled with the July 3rd defeat of Confederate General Robert E. Lee at the battle of Gettysburg, marked the turning point of the Civil War, and foreshadowed the eventual downfall of the Confederacy. When Vicksburg fell, the Union gained control of the Mississippi River and effectively isolated the states of Arkansas, Texas, and most of Louisiana – a region upon which the South depended heavily for recruits and supplies. Vicksburg National Military Park serves as a lasting memorial to both the soldiers and civilians who suffered through the turmoil and tragedy of the American Civil War.

The Shirley House is centrally located along the east edge of the narrow, curved park. The structure is located in an area that was the focal point of Union assaults and is the only surviving wartime structure on the battlefield (the Pemberton House also was present during the war, but is located outside of the battlefield proper). The house was abandoned by the Shirley family after the war and remained in disrepair until its purchase in 1900 following the establishment of Vicksburg National Military Park.

As stated in the park’s general management plan (1980), the purpose of Vicksburg National Military Park is the “preservation and protection of existing earthworks, fortifications, structures, monuments, memorials, and other outstanding natural and historical features within its jurisdiction in such as way to provide the visitor with a pleasing and rewarding experience. It is also to further the visitor’s understanding and appreciation of the ordeal experienced by all persons of both North and South at Vicksburg during the months of May, June, and July 1863.”

Vicksburg National Military Park is significant because:

- The park encompasses 1,800 acres and is one of the more densely monumented battlefields in the world, as over 1,350 monuments, markers, tablets, and plaques dot the historic landscape;
- The park preserves and maintains the largest collection of outdoor sculpture in the southeastern United States;

- The park preserves nine historic fortifications, over 20 miles of reconstructed trenches, approaches and parallels, 15 bridges (9 of which are historic structures), five historic buildings (two ante-bellum homes—the Shirley House and General Pemberton’s Headquarters), 149 historic cannon and carriages, a visitor center, the U.S.S. Cairo gunboat and museum, and 17 miles of hard-surfaced roads; and
- The park preserves Vicksburg National Cemetery with over 18,300 interments, the largest number of Civil War soldiers of any national cemetery in the United States.

1.4 Project Background, Other Projects and Plans, Objectives, Scoping, and Value Analysis

1.4.1 Project Background

Originally constructed in 1837 as Wexford Lodge and used as a private home until the Battle of Vicksburg, the Shirley House has been restored or modified several times with varying degrees of success. The two-story wood frame house was severely damaged during the Civil War and remained unoccupied for more than two decades. By the end of the 19th century it was in ruins. Scavengers had stripped the home of much of its siding, windows, and interior woodwork, and brick had been removed from the piers and foundation. Historic records note that large structural elements such as porches and balconies were missing.

In 1900 the property was purchased from Alice Shirley Eaton for the purpose of restoration and opening as a war memorial in the newly established Vicksburg National Military Park. Funding became available in 1902 for restoration of the home, and apparently was a “sincere effort...to restore the building as nearly as possible to the original” (NPS 2004 HSR). For the next 28 years the house was used as park headquarters and was occupied by a caretaker.

In 1931, under the jurisdiction of the War Department, the house was extensively “reconditioned” to meet the specifications of Major J.B. Holt as a residence. The reconditioning resulted in major structural changes and the loss of character-defining features. Later work occurred under the National Park Service in 1939 and again in 1965-1966; the house continued to be used as a residence until 1965. The interior ceilings, walls, and flooring were removed during the first phase of the 1960s renovation project, but were never replaced due to lack of funding.

The current project aims to complete the exterior rehabilitation and restoration of the structure and to include interior rehabilitation and restoration to correct structural deficiencies, resulting in the preservation of this important National Register property. Rehabilitation would allow recurring preservation work to be performed in a safe environment, meeting all Life Safety Codes.

A fire detection/suppression system would be installed to forestall loss of the building from fire, and would reduce threats to adjacent resources, visitors, and staff. Installation of mechanical systems, rehabilitation and restoration of some interior spaces, and addition of new exhibits would allow the main hallway on the first floor of the building to be opened to visitors, further enhancing the park's interpretive program. Visitors would gain a better understanding of the role the building played during the siege and defense of Vicksburg, during the Union occupation of the city, and during Reconstruction times. Rehabilitation and restoration would enable the park to meet its GPRAs goals.

1.4.2 Other Projects and Plans

The Shirley House rehabilitation and restoration project would be consistent with the Vicksburg National Military Park general management plan (NPS 1980). This document is the primary planning guide for Vicksburg National Military Park. All other planning documents must conform with and tier from the general management plan. Rehabilitation and restoration of the Shirley House under the proposed action supports the purpose of the park as defined in the general management plan, "...to maintain and, where necessary, restore the historical integrity of the sites, structures, and objects significant to the commemoration and interpretation of the Civil War history of Vicksburg"(NPS 1980).

Several projects and plans that the National Park Service has in place, in progress, or planned for the near future may affect decisions regarding this project to stabilize and restore the Shirley House. As part of the analysis and consideration of potential direct, indirect, and cumulative impacts, the project team identified the following potential projects that may occur in or near the project area.

Cemetery Improvement Project –The walls surrounding the Vicksburg National Cemetery have recently been repaired, reconstructed, and restored to comply with Congressional legislation, restore the historic cultural landscape, and enhance visitor and employee safety. This project included the preservation of the existing east and west walls by cleaning and repairing the existing brick and mortar. On the north and south boundary of the cemetery, masonry walls were reconstructed to fully enclose the cemetery, restore the character-defining elements of the cultural landscape, and improve the safety of visitors and staff.

Mint Springs Bluff and Bayou Project – The "soil nail wall project" would stabilize the southern bluff below the park road and Indian mound. The project would construct two levels of concrete retaining walls that would extend down the slope from the upper roadway to an intermediate bench and further down the slope towards Mint Springs Bayou. An environmental assessment and finding of no significant impact has been completed by the U.S. Army Corps of Engineers.

Land Acquisition – Vicksburg National Military Park is in the process of negotiating for acquisition of two tracts of land within a small triangle adjoining the northeast portion of

Vicksburg National Cemetery. The tracts lie north of the cemetery and are in an area bordered on the west by U.S. Highway 61 and on the east by Givens Road.

Additional Road Work – Road improvements are in progress or completed for several routes within the park, including the South Loop Tour Road, Confederate Avenue, Connecting Avenue, and the National Cemetery Road. Work on these roadways would involve reconstructing to some degree any missing or deteriorated pieces of roadway, improving parking areas and bridge surfaces, repairing or replacing curbs, and installing drains. In addition, work on the Park Tour Road would result in the replacement of two historic bridges. The bridges do not conform to American Association of State Highway and Transportation Officials (AASHTO) specifications and are of insufficient strength to support the weight of heavy tour buses and the amount of visitation that exists in the park today.

Fire Management Plan – The park has prepared and periodically updates a fire management plan and environmental assessment. Prescribed fire is a valuable tool which is used to maintain the historic landscape of the park. Regular use of fire helps control the spread of exotic plants, which present notable management challenges at the park.

Vegetation Management Plan – The park has developed a vegetation management plan, which establishes measures to be taken to protect native vegetation and control invasive species such as kudzu and privet that threaten the historic landscape.

Vista Clearing – A ten-acre vista clearing project has been completed along the south loop at the Railroad Redoubt so that visitors can view the battle lines as they appeared during the Civil War. Approval has been obtained to undertake additional, similar clearing projects in the park as funding becomes available.

1.4.3 Objectives

The preservation of vital cultural and natural resources, as well as the protection of public health and safety, are mandated by National Park Service policy. The primary objectives for improvements to the Shirley House were determined by park and regional staff, and were integral in the development of the plan to stabilize and restore the structure. The objectives of this action are to:

- Preserve and maintain the integrity of this National Register property and retain compatibility with other historic park structures,
- Improve and enhance visitor interpretation and educational opportunities, including access to the Shirley House for a broader understanding of its place in American history,
- Protect public and employee health, safety and welfare by meeting Occupational Safety and Health Administration standards for safe and effective entry and exit, and by reducing the need for hazardous maintenance activities, and

- Improve the park’s operational efficiency and sustainability and meet goals established pursuant to the Government Performance and Results Act.

1.4.4 Scoping

National Park Service internal discussions led to identification of the main issues and impact topics to be addressed in this environmental assessment. The U.S. Fish and Wildlife Service was contacted regarding endangered and threatened species compliance for this project. The U.S. Fish and Wildlife responded on July 6, 2009 that no endangered or threatened species occur within the project area.

Over the past few years, the Mississippi State Historic Preservation Officer (SHPO) has been involved in many of the projects occurring at Vicksburg, including rehabilitation of the Shirley House. A letter from the SHPO dated February 17, 2004 provided concurrence on a plan for the Shirley House submitted by the park to the National Park Service Development Advisory Board. Thereafter, the park sent the SHPO a followup Section 106 consultation letter describing the project and inviting continuing agency participation. This letter was sent to the SHPO on June 30, 2009. By letter dated July 13, 2009, the SHPO approved the installation of a fire suppression system in the Shirley House.

This environmental assessment will be sent to relevant agencies for their review and comment, and agency comments on the project will be addressed in the final compliance documents. As part of the ongoing compliance, the park also will draft a separate assessment of effect form to seek formal SHPO review and concurrence with the National Park Service determination of project effect. Copies of letters to and from the above regulatory agencies are contained in Appendix A.

A summary of the consultation and coordination efforts for this project may be found in the “Consultation and Coordination” section of this environmental assessment.

1.4.5 Value Analysis

The value analysis for this project was conducted by the National Park Service in December 2003, and was facilitated by Hartrampf Inc. (NPS 2003). During the value analysis process, an interdisciplinary planning team refined and evaluated design options. The process helped to ensure that all viable project alternatives were considered, evaluation factors were sound, solutions were cost effective, an independent opinion was provided, and all National Park Service objectives were satisfied by the chosen alternative. Potential impacts to the natural environment were also assessed. The value study team examined several alternatives during the preliminary building program for the Shirley House. Two of the preliminary alternatives were considered, but were dismissed (see “Alternatives Considered but Dismissed” later in this environmental assessment), and a third was developed further in the conceptual design phase (see CBA alternative 4, below).

Additional alternatives were developed during the conceptual design phase for the house and the surrounding site (see Conceptual Design Alternatives A-C, below). Three suitable conceptual alternatives were then selected for further development and full analysis using the Choosing by Advantages (CBA) process (CBA alternatives 1-3). During the CBA process, one additional alternative was developed (CBA Alternative 4); this exploited advantages from the other alternatives under consideration, and became the basis of the preferred alternative described later in this environmental assessment as Alternative B.

Conceptual Design Alternative A/CBA Alternative 1. Under this alternative, an exterior manlift would be installed, and visitors would enter and exit through the front door. Mechanical units would be placed in the basement, and sprinklers installed through the structure.

Conceptual Design Alternative B/CBA Alternative 2. This alternative proposed an interior manlift with a front entry and back exit. Mechanical ventilation would circulate air throughout the building, and sprinklers would be installed in the basement and first floor with smoke detectors housed in the attic space.

Conceptual Design Alternative C/CBA Alternative 3. This alternative would provide a rampway for ADA (Americans with Disabilities Act) access with a front entry and back exit. Mechanical units would be placed in the attic, and a water mist fire suppression system installed to protect the building from fire.

Conceptual Design Alternative D/CBA Alternative 4, Preferred Option. This alternative drew from other CBA alternatives 1 and 2 above and was selected as the preferred alternative during the CBA process. The selection of this alternative during the CBA process was based on the following factors:

- It would result in preservation of a historic structure that is listed on the National Register of Historic Places, a property considered vital to the park's interpretive program.
- It would reduce the potential for loss of or damage to the building and adjacent resources from fire.
- It would facilitate future maintenance operations replacing missing or damaged structural materials.
- It is the treatment path recommended by the Secretary of Interior Standards.

1.5 ISSUES, CONCERNS, AND DERIVATION OF IMPACT TOPICS

1.5.1 Issues and Concerns

Issues and concerns affecting this proposal were identified from past National Park Service planning efforts, and input from state and federal agencies. In addition to meeting the primary objectives of the project, several critical issues have also been identified

relative to rehabilitation of the Shirley House. These issues were identified during internal and public scoping for the proposed action.

- The present structural condition of the Shirley House threatens further deterioration of this significant National Register of Historic Places property.
- When acquired, the building was to be the “most conspicuous object on the battlefield.” In its present condition, these promises are unfulfilled.
- This old wooden frame, cedar shake-roofed structure has no fire blocks in the walls nor a fire detection or sprinkler system, placing it at risk of loss from fire. Should the fire spread, it would threaten visitor and staff safety as well as other park resources.
- Given its present condition, visitors cannot enter the Shirley House nor fully appreciate its historic significance as an integral park of the park story.

1.5.2 Impact Topics

Based in part on the issues raised during internal scoping, the interdisciplinary team identified a number of resources and values that potentially could be affected by implementation of the proposed action. These resources and values generated “impact topics” for further analysis, as set forth in Table 1.1. Candidate impact topics were identified based on legislative requirements, executive orders, topics specified in *Director’s Order #12 and Handbook* (NPS 2001), *Management Policies 2006* (NPS 2006), guidance from the National Park Service, input from other agencies, public concerns, and resource information specific to Vicksburg National Military Park.

**TABLE 1.1
IMPACT TOPICS AND APPLICABLE LEGAL AND POLICY REQUIREMENTS**

Impact Topic	Relevant Regulations or Policies
Climate Change	National Park Service Management Policy 1.6 (2006)
Air Quality	Federal Clean Air Act (CAA); CAA Amendments of 1990 (CAAA); National Park Service Management Policy, 4.7.1 (2006)
Aquatic Resources	National Park Service Management Policy 4.6 (2006); Federal Water Pollution Control Act [The Clean Water Act of 1972 (as amended in 1977)]; Magnuson-Stevens Fishery Conservation and Management Act
Hydrology and Water Quality	Executive Order 12088 (Federal Compliance with Pollution Control Standards); Executive Order 11990 (Protection of Wetlands); National Park Service Management Policy 4.6.3 (2006); Federal Water Pollution Control Act [The Clean Water Act of 1972 (as amended in 1977)]

Floodplains and Wetlands	Executive Order 11990 (Protection of Wetlands); Clean Water Act Section 404; National Park Service Director's Order #77-1; Executive Order 11988 (Floodplain Management); Federal Coastal Zone Management Act; National Park Service Management Policies 4.6.4, 4.6.5, and 9.1.1.6 (2006)
Geology	National Park Service Management Policy 4.8 (2006)
Soils	National Park Service Management Policy 4.8.2.4 (2006)
Vegetation	National Park Service Management Policy 4.4.2 (2006) ; Executive Order 13112 (Invasive Species)
Fish and Wildlife	National Park Service Management Policy 4.4.2 (2006); Executive Order 13186 (Migratory Birds)
Species of Special Concern and their Habitats	Endangered Species Act of 1973; National Park Service Management Policy 4.4.2.3 (2006); 40 Code of Federal Regulations 1500 (regulations for implementing the National Environmental Policy Act)
Ecologically Critical Areas or other Unique Natural Resources	36 Code of Federal Regulations 62 (criteria for national natural landmarks); National Park Service Management Policies (2006)
Natural Soundscape/Noise	National Park Service Management Policy 4.9 (2006)
Natural Lightscape (night sky)	National Park Service Management Policy 4.10 (2006)
Cultural Resources (i.e., important scientific, archeological, and other cultural resources, including historic properties listed or eligible for the National Register of Historic Places)	Section 106 of the National Historic Preservation Act (16 U.S.C. 470 et seq.); Section 110 of the National Historic Preservation Act; 36 Code of Federal Regulations 800; Secretary of the Interior's Standards for the Treatment of Historic Properties (36 CFR Part 68); National Environmental Policy Act (42 U.S.C. 4321 et seq.); Executive Order 13007 (Indian Sacred Sites); National Park Service Director's Order 28; National Park Service Management Policy 5.3.5 (2006); Native American Graves Protection and Repatriation Act (NAGPRA); Archeological Resources Protection Act (ARPA); National Parks Act of August 25, 1916 ("Organic Act"); Antiquities Act of 1906; 40 CFR 1500 (regulations for implementing National Environmental Policy Act), section 1508.27
Sacred Sites	Executive Order 13007 (Indian Sacred Sites); National Park Service Management Policy 5.3.5.3.2 (2006)
Indian Trust Resources	Department of the Interior Secretarial Order No. 3206; Secretarial Order No. 3175

Visitor Use and Experience	National Parks Act of August 25, 1916 (“Organic Act”); National Park Service Management Policy 8.2 (2006)
Public Health and Safety	National Park Service Management Policy 8.2.5 (2006); U.S. Coast Guard Boating Safety Regulations
Park Operations	National Park Service Management Policy 9.1 (2006)
Concessionaires and Contracts	National Park Service Management Policy 10.2 (2006)
Economics and Socioeconomics	40 Code of Federal Regulations 1500 (regulations for implementing National Environmental Policy Act)
Transportation (local and regional)	National Park Service Management Policy 9.2 (2006)
Socially or Economically Disadvantaged Populations	Executive Order 12898 (Environmental Justice)
Accessibility for Individuals with Disabilities	National Park Service Management Policy 9.1.2 (2006); Architectural Barrier Act of 1968 (42 U.S.C. 4151 et seq.); Rehabilitation Act of 1973 (29 U.S.C. 701 et seq.); Americans with Disabilities Act of 1990 (Public Law 101-336, 104 Stat. 327);Uniform Federal Accessibility Standards
Mineral and Agricultural Resources	National Park Service Management Policy 8.7 and 8.6.7 (2006)
Prime and Unique Agricultural Lands	Council on Environmental Quality 1980 memorandum on prime and unique farmlands; 40 Code of Federal Regulations 1500 (regulations for implementing National Environmental Policy Act), section 1508.27
Energy Requirements and Conservation Potential; Natural or Depletable Resource Requirements and Conservation Potential	National Park Service Management Policy 9.1.7 (2006) ; 40 CFR 1500 (regulations for implementing National Environmental Policy Act), section 1502.16
Urban Quality, Historic and Cultural Resources, and Design of the Built Environment	40 Code of Federal Regulations 1502.16 (regulations for implementing the National Environmental Policy Act); National Park Service Director’s Order #12
Community Character	National Park Service Management Policy 8.11 (2006)

Possible Conflicts between the Proposal and Land Use Plans, Policies, or Controls for the Area Concerned (including local, state, or Indian tribe) and the Extent to which the Park Would Reconcile the Conflict	40 Code of Federal Regulations 1500 (regulations for implementing National Environmental Policy Act), sections 1502.16, 1506.2(d))
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All of the impact topics listed above were presented and discussed by the planning team during the scoping process. At the end of this process, the planning team selected a subset of these topics for detailed analysis in the EA, as discussed in more detail below.

1.5.3 Impact Topics Analyzed in this Environmental Assessment

Regulations issued by the Council on Environmental Quality require the National Park Service to “identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review . . . , narrowing the discussion of these issues in the statement to a brief presentation of why they will not have a significant effect on the human environment or providing a reference to their coverage elsewhere” (40 CFR 1501.7(a)(3)).

Of the impact topics initially listed, the following were considered environmental issues warranting further study, and are carried through the EA for detailed analysis:

- Historic structures and landscapes
- Public health and safety
- Visitor use and experience, including accessibility for individuals with disabilities
- Park operations
- Energy requirements and conservation potential (This impact topic will be dealt with under the heading “Sustainability and Long-term management.” See section 3.6.5 below.)

1.5.4 Impact Topics Dismissed from Detailed Analysis with Rationale for Dismissal

The resource topics described in this section will not be included or evaluated in this environmental assessment. These impact topics were not identified during scoping as being of concern. Additional reasons for their dismissal are provided below.

Climate Change: Restoration and rehabilitation of the Shirley House would have no measurable impact on climate change. Similarly, ongoing climate change would not affect the Shirley House in any appreciable way.

Air quality: During construction at the Shirley House, there would be highly localized, short-term, negligible impacts on air quality due to the small scale of the project, and

because best management practices would be used to minimize fugitive dust and emissions from construction equipment.

Hydrology and Water Quality. The proposed action would have no effects on hydrology or water quality. Best management practices would be employed to minimize any adverse effects to water quality during construction.

Floodplains and wetlands: Executive Orders 11988 and 11990, “Floodplain Management” and “Wetlands,” respectively, require analysis of impacts on floodplains and regulated wetlands. None of the alternatives would occur within or affect a floodplain. There are no wetlands regulated under the provisions of Section 404 of the Clean Water Act, or areas designated as wetlands using the classification system approved by the national Park Service, within the areas of potential effect.

Ecologically critical areas or other unique natural resources: Vicksburg National Military Park does not contain any designated ecologically critical areas, wild and scenic rivers, or other unique natural resources, as referenced in 40 *Code of Federal Regulations* 1508.27.

Endangered, threatened, or protected species and critical habitats: Coordination with the U.S. Fish and Wildlife Service and the Mississippi Department of Natural Resources revealed that no federally or state-listed threatened or endangered species are known to exist at Vicksburg National Military Park, nor does any known critical habitat exist at the park. No further consultation pursuant to Section 7 of the Endangered Species Act is required.

Natural soundscapes: Because of its proximity to the Vicksburg metropolitan area, there is little expectation by visitors of experiencing a natural soundscape in areas adjacent to the building. Short-term noise generated by small-scale construction equipment associated with rehabilitation of the house would not noticeably change the ambient levels of human-caused noise that are typical in the park’s urban environment. The project would not have any long-term effects on noise levels in the area.

Conflicts with land use plans, policies, or controls: Whenever actions taken by the National Park Service have the potential to affect the planning, land use, or development patterns on adjacent or nearby lands, the effects of these actions must be considered. None of the alternatives addressed in this assessment would have the potential to affect other land use plans, policies, or controls.

Archeological resources: The potential for finding *in situ* prehistoric or historic archeological remains at the Shirley House is very low because of the amount of soil disturbance around the building during the Civil War and during subsequent 20th century landscape and structural modifications. Nevertheless, the mitigation measures spelled out in this EA (see below) describe the measures to be taken in the unlikely event that archeological resources are discovered during the course of the project.

Paleontological resources: There no known paleontological resources in the immediate project area.

Museum Collections. Currently there are no museum collections housed within the Shirley House. None of the park’s museum collections would be affected by implementation of any alternative.

Indian trust resources: Indian trust assets are owned by American Indians but are held in trust by the United States. According to Vicksburg National Military Park staff, Indian trust assets do not occur within the park. Therefore, there would be no effects on Indian trust resources from any of the alternatives.

Soils, Vegetation, and Wildlife. The area around the house is disturbed soil covered by mowed lawn; trees flanking the lawn have grown up during the recent past. There are no threatened or endangered species within the project area. The Shirley House is within an urban area with limited habitat for wildlife.

Wilderness: There are no wilderness areas within Vicksburg National Military Park.

Socioeconomic environment: Council on Environmental Quality regulations for implementing the National Environmental Policy Act (NEPA), 40 CFR 1500, direct economic analyses of federal actions that will affect local or regional economies. None of the alternatives described in this environmental assessment would have notable effects on local or regional economic activities because of their small scale and limited temporal span.

Natural or depletable resource requirements and conservation potential: The use of fuel is addressed under the category “Energy requirements and conservation potential.” To the maximum extent possible, the rehabilitation and restoration of the Shirley House would use the original materials. The use of new construction materials that would be incorporated into the building would not be detectable compared to the volumes of these materials used for other construction in the Vicksburg area.

Prime and unique agricultural lands: Prime farmland has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. Unique agricultural land is land other than prime farmland that is used for production of specific high value food and fiber crops. Both categories require that the land is available for farming uses. Lands within Vicksburg National Military Park are not available for farming and therefore do not meet the definitions.

Environmental Justice. Executive Order 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 disproportionately high and adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. None of the alternatives analyzed in this assessment would have

disproportionate effects on populations as defined by the U.S. Environmental Agency's 1996 guidance on environmental justice.

2.0 PROJECT ALTERNATIVES

This section of the EA considers a total of three alternatives for meeting the objectives described above in the “Purpose and Need” section. These alternatives include two (2) “action” alternatives and one “no-action” alternative. The no action alternative would involve the continuation of current management.

As part of the design analysis and project planning, a range of alternatives was considered. Those actions or alternatives that were not realistically feasible or did not adequately meet the project purpose and need were dismissed. A discussion of the actions or alternatives that were eliminated from further consideration follows the description of the No Action Alternative and the two action alternatives.

2.1 Alternative A – No Action (continue current management)

Regulations promulgated by the President’s Council on Environmental Quality (CEQ) require National Park Service to consider a “no action” alternative. The no action alternative serves as a baseline against which to compare the impacts of the other alternatives under consideration.

In the present instance, the No Action Alternative is defined as continuation of current management of the Shirley House. The No Action Alternative provides a basis for comparing the management direction and environmental consequences of the action alternatives. Should the No Action Alternative be selected, the National Park Service would respond to future needs and conditions associated with the house without major actions or changes from the present course. Currently, cyclical maintenance activities include periodic inspections of the exterior and interior conditions of the Shirley House to identify and assess possible safety hazards as well as leaking roof sections, drainage problems, broken windows, signs of rodent and insect infestation, vegetation encroachment, tree blow-downs, and vandalism. Minor repairs are made as problems are reported. These actions would continue under Alternative A. Over the long term, if the building suffered major deterioration, it would not be rehabilitated or restored, resulting in the loss of a significant historic structure and a vital interpretive opportunity.

2.2 Alternative B – Rehabilitate and Restore the Shirley House (Preferred Alternative)

Under Alternative B, the exterior of the Shirley House would be restored by replacing missing or damaged fabric with the same or similar materials and design to approximate its early 1860s appearance. The interior of the structure would be stabilized and new flooring, walls, ceilings, and support beams installed where needed.

The attic and basement of the house would be preserved as-is and used for mechanical equipment, but would not be open to the public. No heating or cooling system would be installed in the structure. Only ventilation via ducts (no cooling) would be available in summer.

Smoke detection and dry pipe fire suppression equipment (sprinkler system) would be installed in the Shirley House. The fire suppression system inside the house would be primarily concealed by installing the system beneath floors, within walls, and above ceilings. This would limit the effects of installation on the appearance of this historic property. Water for fire suppression would be supplied via a pump in the basement. Water would be provided from the Culkin Water District. An intrusion-detection and monitoring system (with interior and exterior cameras) also would be installed to alert park staff to potential vandalism or theft problems.

The main level of the house would be restored to its 1860's appearance to the greatest extent practical and opened to the public. The rooms of the first floor would be opened to viewing and used to house exhibits on themes approved in the park's Long Range Interpretive Plan. Junction boxes would be installed in the ceilings and floors of each room on the first floor to provide electricity for future exhibits. Some form of protection, e.g., plexiglass shields, would be installed in each room housing an exhibit. No bathrooms or water fountains would be installed in the house.

The failing concrete stair next to the parking lot, leading to the house, would be replaced with one meeting code. A mechanical lift would be installed adjacent to the exterior rear wall of the house to provide access from the lower porch into the small room at the western end of the back porch. The main entry to the house would be in the front, with an exit available through the rear via a new code-compliant stair which would be added in the rear. The historic four-leaf door opening on to the back porch will be repaired and adapted for accessibility. The historic rear railing detail would be adapted to meet code and facilitate public use of the rear porch. An exterior stair would be added at the southwest corner of the house where this very steep area has eroded from informal foot traffic.

2.3 Alternative C– Rehabilitate and Restore the Shirley House, with Heating and Air Conditioning in the Structure

This alternative would be identical to Alternative 2, except as follows:

The structure would be staffed by National Park Service personnel or volunteers during operating hours. All rooms on the first floor would be open and visitors would be able to enter each room. Exhibits would be supplemented with reproductions of period furniture, in accordance with a Historic Furnishings Plan. The structure would be fully heat/air conditioned for visitor comfort and preservation of reproduction items.

Table 2.1 provides a summary of the elements associated with each of the alternatives evaluated in this environmental assessment.

Table 2.1: Comparison of the Elements of Each Alternative

Element	<u>Alternative A</u> No action / Continue Current Management	<u>Alternative B</u> Rehabilitate and Restore the Shirley House (Preferred Alternative)	<u>Alternative C</u> Rehabilitate and Restore the Shirley House with Heating and Air Conditioning
Structure General and Exterior	Ongoing inspections and general maintenance to ensure roof is intact, leaks are blocked, drainage problems are corrected, rodent and insect controls are in place, and damage from vandals is repaired.	Restore to 1860s appearance by replacing missing or damaged fabric.	Same as Alternative B.
Basement	Ongoing inspections and general maintenance to protect integrity of structure	Install ventilation ducts, intrusion detection system, and fire detection and suppression system (sprinkler system).	Install heating and air conditioning system, intrusion detection system, and fire detection and suppression system (sprinkler system).
First Floor	Same as above	Recondition and/or replace doors, windows, casings, hardware, lintels, thresholds, stairs, floors, woodwork, and trim in style appropriate to the 1860s. Install some form of protection, e.g., plexiglass shields, in each room housing an exhibit. No bathrooms or water fountains. Install intrusion detection system and fire detection and	Same as B, except that in lieu of/in addition to exhibits, add reproduction furnishings in accordance with Historic Furnishings Plan.

		protection system (sprinkler system). Ventilation only.	
Attic	Same as above	Rehabilitate for stability; install fire detection and suppression system. Ventilation only.	Rehabilitate for stability; install fire detection and suppression system. Heating and air conditioning system.
Front Entry	Same as above	Restore front entry and steps to their 1860 appearance, and provide for visitor access.	Same as Alternative B
Rear Porch	Same as above	Install mechanical lift adjacent to the exterior rear wall of the house to provide access from the lower porch into the small room at the western end of the back porch. Make exit available through the rear of the house via a new code-compliant stair which would be added in the rear. Repair and adapt historic four-leaf door opening on to the back porch for accessibility. Adapt the historic rear railing detail to meet code and facilitate public use of the rear porch.	Same as Alternative B
Site and Landscape	Same as above, plus maintenance of lawn area, maintain barricade at front of building	Construct new concrete stairway adjacent to outside southwest corner of the house to provide safe visitor access around the perimeter of the building. Replace existing concrete	Same as Alternative B

		stairway and walk leading from the parking lot to the Shirley House with a new stair and walkway.	
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2.4 Mitigation Measures

For all action alternatives, best management practices and mitigation measures would be used to prevent or minimize potential adverse effects associated with the project. These practices and measures would be incorporated into the project construction documents and plans.

Resource protection measures undertaken during project implementation would include, but would not be limited to, those listed in below in Table 2.2. The impact analyses in the “Affected Environment and Environmental Consequences” section were performed assuming that these best management practices and mitigation measures would be implemented as a part of all the action alternatives.

Table 2.2: Mitigation measures and Best Management Practices

Potential Adverse Effect on:	Mitigation Measure or Best Management Practice
Cultural Resources	<p>If not already accomplished, extant historic portions of the house that require reconstruction or restoration would be documented as called for in the <i>Secretary of the Interior’s Standards for the Treatment of Historic Properties</i> (NPS 1995b) prior to any disassembly.</p> <p>Documentary evidence from period plans, maps, and drawings and from the presence of existing structural elements would be used to provide for accurate reconstruction and rehabilitation of the structure. Wherever possible, the design, texture, color, materials, and scale of the original elements would be ascertained from existing information.</p> <p>Wherever feasible, historic elements such as bricks would be retained and reused. New materials (bricks and mortar) of the appropriate color, shape, size, texture, and appearance would be carefully selected to accurately replicate the form and character of the original structure.</p> <p>To limit impacts on the landscape around the Shirley House, wherever possible construction activities such as storage of new or removed materials, vehicular traffic, staging areas, and movement and placement of machinery would occur in a previously disturbed area away from the view of park visitors.</p>

	<p>To minimize ground disturbance, all staging areas, materials stockpiling, vehicle storage, and other construction-related facilities and areas would be located in a previously disturbed area or on hardened surfaces such as the existing parking areas. Mortar would be mixed at the staging areas and transported to the part of the house under construction.</p> <p>Areas around the exterior of the Shirley House disturbed by restoration and rehabilitation would be revegetated with grass and landscape plantings and other landscape elements as appropriate. The types and locations of replacement vegetation would be carefully chosen to, where possible, replicate historic elements of the cultural landscape while avoiding introduction of problem exotic plants.</p> <p>Historical, architectural, and archeological records would be reviewed to determine the levels of previous disturbance in the area of potential effect (such as basement floors or areas surrounding the foundations and back steps). Should areas of archeological potential be identified, further investigations would be conducted and appropriate mitigating measures would be developed prior to ground-disturbing activities.</p> <p>Potential ground-disturbing activities such as removal of existing walks and stairways would be carefully planned because these areas may harbor presently unknown archeological resources. Construction documents would include stop-work provisions should archeological resources be uncovered and the contractor would be apprised of these protective measures during the pre-construction conference. Areas known to contain sensitive cultural resources would be identified in the construction operations plan.</p> <p>Work limits would be established and clearly marked to protect resources, and all protection measures would be clearly stated in the construction specifications. Workers would be instructed to avoid conducting activities beyond the construction zone and their compliance monitored by the project Contracting Officer's Technical Representative.</p> <p>Archeological monitoring of ground disturbance in currently inaccessible paved areas or areas beneath and adjacent to existing structures (walkways, steps, basement flooring, etc.) would help ensure that all cultural resources were identified and documented during the construction process.</p> <p>If previously unknown archeological resources were discovered, work would be stopped in the area of any discovery, protective measures would be implemented, and procedures outlined in <i>36 Code of Federal</i></p>
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	<p><i>Regulations 800</i> would be followed. Resources would be evaluated for their National Register of Historic Places significance, and adequate mitigation of project impacts (in consultation with appropriate agencies) and adjustment of the project design would take place to avoid or limit the adverse effects on resources.</p> <p>Personnel would be educated about the nature of the cultural resources at the project site and the need for protection. Stop-work provisions would be included in construction documents in the event that archeological resources were uncovered. Although, in many cases, the preferred method to protect identified archeological resources is to avoid further disturbance by relocation of the impact to another non-sensitive site, the preferred method here would be professional documentation of the find prior to additional ground-disturbing activities.</p> <p>To reduce unauthorized collecting, construction personnel would be educated about cultural resources in general and the need to protect any cultural resources encountered. Work crews would be instructed regarding the illegality of collecting artifacts on federal lands to avoid any potential Archeological Resources Protection Act violations. This would include instructions for notifying appropriate personnel if human remains were discovered.</p>
Construction-related effects on soils	<p>Standard best management practices to limit erosion and control sediment release would be employed. Such measures include use of silt fencing, limiting the area of vegetative disturbance, use of erosion mats, and covering banked soils to protect them until they are reused.</p>
Public Health and Safety	<p>An accident prevention program would be a required submittal. This plan would include job hazard analyses associated with each major phase of the proposed project and would emphasize both worker and public safety. It would include planning for emergency situations, including fires, tornados, building collapse, explosions, power outages, and rainstorms.</p> <p>The plan would also take into consideration the nature of the construction, site conditions, including seasonal weather conditions and the degree of risk or exposure associated with the proposed activity. Regular project inspections and safety meetings would ensure the safety of the premises both to construction staff and visitors.</p> <p>A defined work area perimeter would be maintained to keep all construction-related impacts within the affected area. All paved areas that are subject to vehicular and pedestrian traffic would be kept clean of construction debris and soils. Sweeping of these areas would be implemented as necessary.</p>

	<p>Visitor safety would be ensured both day and night by fencing of the construction limits of the proposed action. Areas not safe for public entry would be marked and signed for avoidance. Unsafe conditions would be inspected for and corrected as soon as practicable to minimize the potential for staff or visitor injury.</p> <p>To the degree possible, impacts would be mitigated by the use of best management practices to reduce generation of dust and by limits on the types of chemicals (low VOC ratings) used in new construction and the rehabilitation.</p>
<p>Visitor Experience</p>	<p>Educational materials and interpretive information would describe the work and importance of the activity so visitors would understand the construction process and the need for restoration. Information would be prepared and distributed to park visitors by park staff. Signage and programs also would provide safety information for visitors.</p> <p>Visitor information to minimize adverse effects to visitors from changes in parking availability near the Illinois Monument would be developed.</p> <p>Specific provisions would ensure that the majority of material deliveries were made during the week, rather than on weekends or holidays. By the same token, most of the disruptive work would not occur on weekends or holidays. Disruptive early morning or late evening deliveries would be minimized to the extent possible. The contractor will be encouraged to deliver the majority of materials in the early morning hours, before 10:00 a.m.</p> <p>All construction equipment would be equipped with mufflers kept in proper operating conditions, and when possible, equipment would be shut-off rather than allowed to idle. Standard noise abatement measures would include the following elements: a schedule that minimizes impacts to adjacent noise-sensitive areas, use of the best available noise control techniques wherever feasible, use of hydraulically or electrically powered impact tools when feasible, and location of stationary noise sources as far from sensitive public use areas as possible.</p>
<p>Sustainability and Conservation Potential</p>	<p>The contractor would be encouraged to use carpooling and other techniques that would minimize the trip generation of the construction activity. Shipment of materials in full loads would also be encouraged, and vehicles and equipment would be maintained to minimize pollution generation.</p> <p>Restoration and rehabilitation of the Shirley House would incorporate energy efficient and sustainable design to minimize energy consumption.</p>

2.5 Environmentally Preferred Alternative

The NPS Handbook for implementing Director's Order #12 (*Conservation Planning, Environmental Impact Analysis, and Decision Making*) requires that EAs identify the environmentally preferred alternative. Simply put, "this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources." (Q6a) (516 DM 6 4.10(A)(5)).

The Council on Environmental Quality (CEQ) regulations and National Park Service Policy state that environmental assessments prepared pursuant to NEPA must include a section stating how each alternative analyzed in detail would or would not achieve the requirements of NEPA sections 101 and 102(1) and other environmental laws and policies. 40 CFR 1502.2(d). This requirement is met within the National Park Service by (a) describing how each alternative meets the criteria set forth in NEPA section 101(b), and (b) identifying any conflicts between the alternatives analyzed in detail and other environmental laws and policies.

Section 101(b) of the National Environmental Policy Act identifies six criteria for assessing whether a proposed federal action complies with the national environmental policy as set forth in the act. Specifically, the act directs that a proposed federal action should:

- Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.
- Ensure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings.
- Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences.
- Preserve important historic, cultural and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice.
- Achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities
- Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

In the National Park Service, the No Action alternative may also be considered in identifying the environmentally preferred alternative. However, in the present instance, continuing current management of the Shirley House would be the least effective course in meeting the above criteria. Without further rehabilitation and repair, there is a strong potential for the Shirley House to suffer further severe damage from the wind, water, rodents and insects. In its present condition, the building poses a safety threat to staff and visitors alike, and a continuation of these conditions would only exacerbate the threat.

Alternatives B and C fully address the park’s need to enhance public health and safety and safeguard vital historic resources. The park was created to preserve the cultural and natural resources and interpret for the visiting public the story of this Civil War battlefield. Rehabilitating and restoring the Shirley House, and providing fire detection and suppression systems in the building would improve the park’s ability to meet its mandate to preserve these resources. In addition, rehabilitation of the Shirley House would enhance the visitor opportunities in this heavily used part of the park, be consistent with National Park Service policy, and protect public (and staff) health and safety.

Both alternatives B and C would achieve the requirements of NEPA sections 101 and 102(1). However, Alternative B (preferred alternative) would do so by using less energy than Alternative C. Therefore, Alternative B (preferred alternative) is the environmentally preferable alternative. The scoring for the individual alternatives is set forth in Table 2.3 below.

TABLE 2.3: ENVIRONMENTALLY PREFERABLE ALTERNATIVE ANALYSIS

CRITERIA	ALTERNATIVES		
	A	B	C
1. Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.	2	5	5
2. Ensure safe, healthful, productive, and aesthetically and culturally pleasing surroundings for all Americans.	1	5	5
3. Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences.	2	5	4
4. Preserve important historic, cultural, and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and a variety of individual choices.	2	5	5
5. Achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life’s amenities.	2	5	4
6. Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.	2	5	3
Total Points*	11	30	26

* Five points were given to the alternative if it fully meets the criteria; four points if it meets nearly all of the elements of the criteria; three points if it meets more than one element of the criteria; two points if it meets only one element of the criteria; and one point if the alternative does not meet the criteria.

2.6 How the Alternatives Meet the Objectives of the Proposed Action

Table 2.4 provides a comparative summary of alternatives and whether each alternative would meet the project objectives. As shown on the table, both action alternatives would successfully meet all of the objectives of this project. The alternative of no action/continue current management would not meet any of the project objectives.

Table 2.4: Ability of the Alternatives to Meet Project Objectives

Objectives	Alternative A No Action/Continue Current Management	Alternative B Rehabilitate and Restore the Shirley House (Preferred Alternative)	Alternative C Rehabilitate and Restore the Shirley House with Heating and A/C
Protect cultural resources by preventing loss of these resources and by maintaining and improving the condition of the resources.	No	Yes	Yes
Protect public, health, safety, and welfare.	No	Yes	Yes
Improve the efficiency of park operations.	No	Yes	Yes

2.7 Alternatives Considered but Dismissed

Two additional alternatives were considered but dismissed as either being infeasible or not able to meet project objectives. The first of these proposed to rehabilitate and open the entire house for National Park Service and public use. This alternative would involve

a great deal of structural work, resulting in significant disruption of historic fabric. The attic and basement spaces proved to be inadequate for the proposed uses, and the proposed adaptive use would be too costly to justify. Thus this alternative was dismissed.

The second dismissed alternative would have kept the house closed to the public, but would have encouraged visitors to view the interior of the structure through the windows. This alternative was rejected because it failed to fulfill the National Park Service’s commitment to the Shirley Estate, and was not in compliance with the park’s General Management Plan (1980).

2.8 Summary of Impacts

Table 2.5 briefly summarizes the effects of each of the alternatives on the impact topics that were retained for analysis. More detailed information on the effects of the alternatives is provided in the “Affected Environment and Environmental Consequences” section.

Table 2.5: Summary of Environmental Impacts

Impact Topic	<u>Alternative A</u> No Action/Continue Current Management	<u>Alternative B</u> Rehabilitate and Restore the Shirley House (Preferred Alternative)	<u>Alternative C</u> Rehabilitate and Restore the Shirley House with Heating and A/C
Historic structures and landscapes	Continuing current management would have impacts to the historic structure that were long-term, direct, moderate to major, and adverse. Impacts to cultural landscapes would continue as at present, with non-historic elements present on the exterior of the structure. Impacts would be long-term, direct, minor, and adverse.	Restoring and rehabilitating the Shirley House would have impacts to the historic structure that were long-term, direct, moderate, and beneficial. Site enhancements for accessibility and public safety would result in impacts to the cultural landscape that were long-term, direct, minor to moderate, and adverse.	Impacts would generally be the same as Alternative B. Some minor adverse impacts would result to the historic structure from installation of a heating and cooling system.
Visitor use and experience, including accessibility for	Continued closure of the Shirley House would result in impacts to visitor	By allowing public access to the interior of the Shirley House for the first time in	Generally tame as Alternative B, but the addition of a heating/cooling

<p>individuals with disabilities</p>	<p>use and experience that were long-term, direct, moderate to major, and adverse.</p>	<p>decades, as well as making possible associated interpretive programs, restoration and rehabilitation of the Shirley House would result in impacts to visitor use and experience that were long-term, direct, moderate to major, and beneficial.</p>	<p>system under this alternative would increase the comfort level for many visitors as they toured the house. On the other hand, the controlled climate would give visitors a less historically accurate impression of life as it was experienced by the Shirley family. Impacts to visitor use and experience would be long-term, direct, moderate to major, and beneficial.</p>
<p>Public health and safety</p>	<p>Continuing current management would protect public health and safety, but would do so by relying on short-term measures rather than permanent rehabilitation and repairs. Impacts to public health and safety would be long-term, direct, minor, and adverse.</p>	<p>Alternative B would enhance public health and safety by restoring and rehabilitating the structure sufficiently to ensure long-term preservation. This approach would allow the Shirley House to be opened for public use. Impacts to public health and safety would be long-term, direct, minor to moderate, and beneficial.</p>	<p>Same as Alternative B, plus heating/cooling system called for by this alternative would provide additional health and safety benefits to those persons vulnerable to hot or cold temperatures. Impacts to public health and safety would be long-term, direct, minor to moderate, and beneficial.</p>
<p>Park operations</p>	<p>Ongoing repair and maintenance of the Shirley House would create long-term, direct, adverse effects on park operations of moderate intensity</p>	<p>Park operations would experience long-term, direct, minor benefits as the need for wall maintenance and the repair burden was reduced. Emergency</p>	<p>Same as Alternative B, except that installation of a heating/cooling system would add to the park's maintenance inventory and would</p>

	as the escalating deterioration diverted staff from other necessary park functions.	repair activities would be replaced by lower-intensity regular maintenance, and staff could focus their attention on other resource and park management matters.	result in higher utility costs.
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3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 Introduction

The National Environmental Policy Act requires before any federal agency undertakes a major action, it must discuss the environmental impacts of that action, feasible alternatives to that action, and any adverse environmental effects that cannot be avoided if the proposed action is implemented. Accordingly, this section describes the environmental consequences associated with the alternatives. It is organized by impact topics, which allow a standardized comparison between alternatives based on issues. Consistent with NEPA, the analysis also considers the context, intensity, and duration of impacts, indirect impacts, cumulative impacts, and measures to mitigate impacts. National Park Service policy also requires that “impairment” of resources be evaluated in all environmental documents

The first part of this section discusses the methodology used to identify impacts and includes definitions of terms. The impact topics are then analyzed with reference to each of the three alternatives. The discussion of each impact topic includes a description of the affected environment for that topic, an analysis of the positive and negative effects of each alternative, a discussion of cumulative effects, if any, and a conclusion. The conclusion includes a discussion of whether, and to what extent, the alternative would impair park resources and values.

3.2 Methodology

Generally, the methodology for resource impact assessments follows direction provided in the Council on Environmental Quality (CEQ) Regulations for Implementing the National Environmental Policy Act, Parts 1502 and 1508. The impact analysis and the conclusions in this part are based largely on the review of existing literature and park studies, information provided by experts within the National Park Service and other agencies, park staff insights and professional judgment.

The impacts from the three alternatives were evaluated in terms of the context, duration, and intensity of the impacts, as defined below, and whether the impacts were considered beneficial or adverse to park resources and values.

3.2.1 Context

Each impact topic addresses effects on resources inside and outside the park, to the extent those effects are traceable to the actions set forth in the alternatives.

3.2.2 Duration

Short term Impacts – Those that would occur within one year of construction.

Long-term Impacts – Those that would continue to exist after completion of construction.

3.2.3 Impact Intensity

3.2.3(a) Intensity Definitions for Impact Topics Analyzed in this Document

For this analysis, intensity or severity of impact is defined as follows:

TABLE 3.1: IMPACT INTENSITY DEFINITIONS

Impact Topic	Negligible	Minor	Moderate	Major
CULTURAL RESOURCES				
Historic Structures	The impact would be at the lowest level of detection or barely perceptible and not measurable. For purposes of section 106, the determination of effect would be <i>no adverse effect</i> .	The impact would not affect the character defining features of a structure or building listed on or eligible for the National Register of Historic Places. For purposes of section 106, the determination of effect would be <i>no adverse effect</i> .	The impact would alter a character defining feature(s) of the structure or building but would not diminish the integrity of the resource to the extent that its national register eligibility would be jeopardized. For purposes of section 106, the determination of effect would be <i>no adverse effect</i> .	The impact would alter a character defining feature(s) of the structure or building, diminishing the integrity of the resource to the extent that it is no longer eligible to be listed on the national register. For purposes of section 106, the determination of effect would be <i>adverse effect</i> .
Cultural Landscapes	The impact is at the lowest levels of detection or barely perceptible and not measurable. For purposes of section 106, the	The impact would not affect the character-defining features of a cultural landscape listed on or eligible	The impact would alter a character defining feature or features of the cultural landscape but would not diminish the	The impact would alter a character-defining feature(s) of the cultural landscape, diminishing the integrity of the

Impact Topic	Negligible	Minor	Moderate	Major
	determination of effect would be <i>no adverse effect</i> .	for the National Register of Historic Places. For purposes of section 106, the determination of effect would be <i>no adverse effect</i> .	integrity of the landscape to the extent that its national register eligibility would be jeopardized. For purposes of section 106, the determination of effect would be <i>no adverse effect</i> .	resource to the extent that it would no longer be eligible to be listed on the national register. For purposes of section 106, the determination of effect would be <i>adverse effect</i> .
VISITOR USE AND EXPERIENCE				

Impact Topic	Negligible	Minor	Moderate	Major
<p>Visitor Use and Experience (including accessibility for individuals with disabilities)</p>	<p>Visitors would likely be unaware of any effects associated with implementation of the alternative. There would be no noticeable changes in visitor use and/or experience or in any defined indicators of visitor satisfaction or behavior.</p>	<p>Changes in visitor use and/or experience would be slight but detectable, but would not appreciably diminish or enhance critical characteristics of the visitor experience. Visitor satisfaction would remain stable.</p>	<p>Few critical characteristics of the desired visitor experience would change and/or the number of participants engaging in an activity would be altered. The visitor would be aware of the effects associated with implementation of the alternative and would likely be able to express an opinion on the changes. Visitor satisfaction would begin to either decline or increase as a direct result of the effect.</p>	<p>Multiple critical characteristics of the desired visitor experience would change and/or the number of participants engaging in an activity would be greatly reduced or increased. The visitor would be aware of the effects associated with implementation of the alternative and would likely express a strong opinion about the change. Visitor satisfaction would markedly decline or increase.</p>

Impact Topic	Negligible	Minor	Moderate	Major
Public Health and Safety	Public health and safety would not be affected, or the effects would be at low levels of detection and would not have an appreciable effect on the public health or safety.	The effect would be detectable, but would not have an appreciable effect on public health and safety.	The effect would be readily apparent, and would result in substantial, noticeable effects on public health and safety on a local scale. Changes in rates or severity of injury could be measured.	The effects would be readily apparent, and would result in substantial, noticeable effects on public health safety on a regional scale. Changes could lead to changes in mortality.
NPS OPERATIONS AND MANAGEMENT				
Park Operations	The effect would be at or below the level of detection, and would not have an appreciable effect on park operations and management.	The effects would be detectable, but would be of a magnitude that would not have an appreciable effect on park operations and management.	The effects would result in a change in park operations and management in a manner readily apparent to staff and possibly to the public.	The effects would result in a substantial and widespread change in park operations and management in a manner readily apparent to staff and the public.

3.2.3(b) Impacts on Cultural Resources and Section 106 of the National Historic Preservation Act

Cultural resources typically are understood to include archeological sites, buildings, structures, districts, landscapes, and objects, along with ethnographic sites and landscapes, as defined in the National Historic Preservation Act. The National Historic Preservation Act (NHPA) and its implementing regulations provide guidance for deciding whether cultural resources are of sufficient importance to be determined eligible for listing on the National Register of Historic Places. Historic properties (i.e., archeological, landscape, collections, and ethnographic resources) determined to be eligible for listing in

the National Register of Historic Places must be associated with an important historic context, i.e. possess significance – the meaning or value ascribed to the item, and have integrity of those features necessary to convey its significance, i.e., location, design, setting, workmanship, materials, feeling and association.

An adverse effect occurs whenever an impact alters, directly or indirectly, any characteristic of a cultural resource that qualifies it for inclusion in the National Register. Adverse effects could include diminishing the integrity of the resource's location, design, setting, materials, workmanship, feeling, or association. Adverse effects also include reasonably foreseeable effects caused by the alternative that would occur later in time, be farther removed in distance, or be cumulative (36 *Code of Federal Regulations* Part 800.5, Assessment of Adverse Effects). A determination of no adverse effect means there is an effect, but the effect would not diminish in any way the characteristics of the cultural resource that qualify it for inclusion in the National Register. Beyond the requirements of Section 106 of the NHPA, the park will consider all sites to be eligible for the National Register of Historic Places until an evaluation is done to determine a property's true eligibility.

In this document, impacts to archeological resources, historic structures, and cultural landscapes are described in terms of type, context, duration, and intensity, which is consistent with the regulations of the Council on Environmental Quality that implement NEPA. These impact analyses are intended, however, to comply with the requirements of both NEPA and Section 106 of the NHPA. In accordance with the Advisory Council on Historic Preservation's regulations implementing Section 106 of the NHPA (36 CFR Part 800, Protection of Historic Properties), impacts on cultural resources were also identified and evaluated by (1) determining the area of potential effects; (2) identifying cultural resources present in the area of potential effects that are either listed in or eligible to be listed in the National Register of Historic Places; (3) applying the criteria of adverse effect to affected, national-register-eligible or -listed cultural resources; and (4) considering ways to avoid, minimize, or mitigate adverse effects.

The Advisory Council's regulations for Section 106 compliance require a determination of either *adverse effect* or *no adverse effect* for affected national-register-listed or -eligible cultural resources. An *adverse effect* occurs whenever an impact alters, directly or indirectly, any characteristic of a cultural resource that qualifies it for inclusion in the national register, e.g., diminishing the integrity (or the extent to which a resource retains its historic appearance) of its location, design, setting, materials, workmanship, feeling, or association. Adverse effects also include reasonably foreseeable effects caused by actions proposed in the alternatives that would occur later in time, be farther removed in distance, or be cumulative (36 CFR 800.5, *Assessment of Adverse Effects*). A determination of *no adverse effect* means there is an effect, but the effect would not diminish the characteristics of the cultural resource that qualify it for inclusion in the National Register. Beyond the requirements of Section 106 of the NHPA, the park will consider all sites to be eligible for the National Register of Historic Places until an evaluation is done to determine a property's true eligibility.

CEQ regulations and the National Park Service's *Conservation Planning, Environmental Impact Analysis and Decision Making* (Director's Order #12) also call for a discussion of mitigation, as well as an analysis of how effective the mitigation would be in reducing the intensity of a potential impact, e.g., reducing the intensity of an impact from major to moderate or minor. Any resultant reduction in intensity of impact due to mitigation, however, is an estimate of the effectiveness of mitigation under NEPA only. It does not suggest that the level of effect as defined by Section 106 is similarly reduced. Cultural resources are nonrenewable resources, and adverse effects generally consume, diminish, or destroy the original historic materials or form, resulting in a loss in the integrity of the resource that can never be recovered. Therefore, although actions determined to have an adverse effect under Section 106 may be mitigated, the effect remains adverse.

A Section 106 summary is included in the impact analysis sections. The Section 106 summary is an assessment of the effect of the undertaking (implementation of the alternative), based upon the criterion of effect and criteria of adverse effect found in the Advisory Council's regulations. For purposes of this environmental assessment, the discussion of historic resources (structures) is combined with cultural landscapes. Impact topics related to archeological resources, collections, and ethnographic resources were dismissed (see "Impact Topics Dismissed from Further Analysis with Rationale for Dismissal").

Definitions of impact intensity as regards historic structures and cultural landscapes are set forth in Table 3.1.

3.2.4 Impact Type

Unless otherwise noted, impacts would be adverse.

CEQ regulations and the National Park Service's *Conservation Planning, Environmental Impact Analysis and Decision-making* (Director's Order #12) call for a discussion of the appropriateness of mitigation, as well as an analysis of how effective the mitigation would be in reducing the intensity of a potential impact, e.g. reducing the intensity of an impact from major to moderate or minor. The action alternative assumes that park managers would apply mitigation measures to minimize or avoid impacts (see Table 2.2 above). If appropriate mitigation measures were not applied, the potential for resource impacts would increase and the magnitude of those impacts would rise.

3.2.5 Direct versus Indirect Impacts

Direct effects would be caused by an action and would occur at the same time and place as the action. Indirect effects would be caused by the action and would be reasonably foreseeable but would occur later in time, at another place, or to another resource.

3.3 Cumulative Impacts

Regulations implementing NEPA issued by the CEQ require the assessment of cumulative impacts in the decision-making process for federal actions. Cumulative impacts are defined

as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

The cumulative impacts analyzed in this document consider the incremental effects of the three alternatives in conjunction with past, current, and future actions at the park. Cumulative impacts were determined by combining the effects of a given alternative with other past, present, and reasonably foreseeable future actions. The impact analysis and conclusions are based on information available in the literature, data from National Park Service studies and records, and information provided by experts within the National Park Service and other agencies. Unless otherwise stated, all impacts are assumed to be direct and long-term.

To assess cumulative impacts, it was necessary to identify other past, ongoing, or reasonably foreseeable future actions at and around Vicksburg National Military Park. Past and ongoing actions include, but are not limited to:

- The original construction of the house, and its ongoing restoration and maintenance;
- Future interpretation and education programs at the park;
- Continuing loss of historic structures in the area;

Reasonably foreseeable projects and plans in the immediate vicinity of the Shirley House were identified previously under "Other Projects and Plans" in the "Purpose and Need" section. Other reasonably foreseeable projects and plans include the continuing development of the Vicksburg, Mississippi, metropolitan area and the region.

3.4 Impairment of Park Resources or Values

In addition to determining the environmental consequences of the preferred and other alternatives, the 2006 NPS *Management Policies* and Director's Order 12 require analysis of potential effects to determine if actions would impair park resources or values.

The fundamental purpose of the National Park System, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, is to conserve the resources and values of each unit of the system. Although Congress has given the National Park Service management discretion to allow certain impacts within individual units, that discretion is limited by statutory requirement that the National Park Service must leave resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible National Park Service manager, would harm the integrity of unit resources or values, including opportunities that otherwise would be present for the enjoyment of those resources or values. Impairment may result from National Park

Service activities in managing the unit, visitor activities, or activities undertaken by concessionaires, contractors, and others operating in the unit.

To determine whether actions and management prescriptions involving park resources would result in impairment, each alternative was evaluated to determine if it had a major adverse effect on a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation of Vicksburg National Military Park;
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- identified as a goal in the General Management Plan or other relevant National Park Service planning documents.

A determination on impairment is included in the impact analysis section for all impact topics relating to park resources and values.

3.5 Topics Dismissed from Further Analysis

The topics dismissed from further analysis, and the reasons therefore, are discussed in section 1.5.4 of this document.

3.6 Analysis of Impact Topics

For each impact topic analyzed below, the analysis includes a brief description of the affected environment and an evaluation of the effects of implementing each alternative. Developing the impact analyses has involved the following steps:

Define issues of concern, based on internal and external scoping.

Identify the geographic area that could be affected.

Define the resources within that area that could be affected.

Impose the action on the resources within the area of potential effect.

Identify the effects caused by the alternative, in comparison to the baseline represented by the No Action Alternative, to determine the relative change in resource conditions.

Characterize the effects based on the following factors:

- Whether the effect would be beneficial or adverse.
- The intensity of the effect, either negligible, minor, moderate, or major. Impact-topic-specific thresholds for each of these classifications are provided in Table 3.1. Threshold values were developed based on federal and state standards,

consultation with regulators from applicable agencies, and discussions with subject matter experts.

- Duration of the effect, either short-term or long-term, as well as the area affected by the alternative.
- Whether the effect would be a direct result of the action or would occur indirectly because of a change to another resource or impact topic. An example of an indirect impact would be increased structural deterioration that would occur due to opening the house to visitation without appropriate safeguards.

Determine whether impairment would occur to resources and values that are considered necessary and appropriate to fulfill the purposes of Vicksburg National Military Park.

Determine cumulative effects by evaluating the effect in conjunction with the past, current, or foreseeable future actions for Vicksburg National Military Park and the region.

3.6.1 HISTORIC STRUCTURES AND LANDSCAPES

3.6.1.1 Background

The town of Vicksburg was founded in 1811 and incorporated in 1825. One of the homes built near the young community was Wexford Lodge, constructed in 1837 by Irish immigrant Nicholas Gray on a tract of land purchased from T.H. Goodall. Located east of the city on the Jackson Road, the thoroughfare that linked Vicksburg with the state capital, Wexford Lodge became a prominent community landmark. The house was situated in a pastoral area, surrounded by fields and forest, with access to natural springs (NPS 2004:10-11). Wexford Lodge was advertised for sale in 1849, and described as:

A most desirable residence in a healthy location, 2 ½ miles from town. The dwelling is 40 by 60 feet, containing nine rooms, seven large ones and a wide passage. There is on the premises a cistern, a spring of never failing water, stable, henhouse, etc. Attached 14 acres of good rich land, a variety of fruit trees, fine range for cattle, winter and summer. Also a 16 acre lot adjoining and well suited for building and gardening... (Winschel 1993:6).

Nicholas Gray deeded the property to Ben Johnson, who subsequently deeded it to James Shirley on New Year's Day, 1851. James Shirley and his wife Adeline Quincy Shirley were New Englanders who had come to the South so that Judge Shirley could establish a law practice in Vicksburg. Their move to Wexford Lodge from the northeast part of Vicksburg was intended to escape the recurring plague of yellow fever omnipresent in the low lying areas along the Mississippi River.

By 1860, tension between the Northern and Southern states over economic factors, states' rights, slavery, and other issues had reached a fever pitch, and the South considered secession. All over the South, states' rights advocates argued with federal authorities over

ownership of federal property. Late in 1860, South Carolina voted to remove itself from the Union, and Union troops moved to Fort Sumter where the first shots of the Civil War were fired on April 12, 1861. Over the next 4 years, Union and Confederate armies fought battles in many states, resulting in thousands of deaths and injuries, and devastation of the landscape.

Union tactics included blockades of the southern coastline and use of naval action on major rivers such as the Mississippi. On May 18, 1863, the Union army under the command of General Ulysses S. Grant laid siege to the city of Vicksburg, a “fortress city” said by President Lincoln to be the key to winning the war. The North needed to control the lower Mississippi River to open it as an avenue of commerce as well as to split the Confederacy in two.

It quickly became obvious that Vicksburg was to become a major battleground, and as Union supporters, the Shirley family found themselves in an extremely sensitive position, both literally and figuratively. Early in May, 1863, Mr. Shirley left his wife and small son Quincy and journeyed to Clinton, Mississippi, to bring daughter Alice home from the Central Female Institute [Hillman College] so the entire family could be together. Before he could return, the rail lines and other transportation arteries were destroyed by the Union troops, so Mr. Shirley, then 69 years old, decided to walk the 40 miles back to Vicksburg.

At first, the federal troops were repulsed, but Grant’s army cut off Vicksburg’s supply and communications lines and began to build approaches to the Confederate defenses. The Confederates, “knowing that they must soon retreat behind their fortifications at Vicksburg, began their preparations by destroying what they could outside, and burned all the houses in the vicinity” (Winschel 1993:20). The Shirley House was directly between the two armies but Mrs. Shirley’s steadfast refusal to leave her home delayed its destruction. As the Union Army moved into the hills east of the house, a Confederate soldier attempted to torch the house but was shot before he could finish his task. The house was “greeted with a shower of bullets and shell from the advancing army” that tore away part of a chimney and shattered a bedstead on the second floor so Mrs. Shirley hung a sheet on a broom handle and hung it out of the upper front porch to signal a truce (Winschel 1993:20). For the next three days Mrs. Shirley and the servants huddled in the chimney corner where they were shielded from the small arms fire. Meanwhile, their servants dug a cave in a hillside back of the house.

During the month and a half long siege the Shirley House was taken over as headquarters for the 45th Illinois Infantry. The building quickly became a field hospital for the dead and dying, and Mrs. Shirley and her son were removed to the cave for their safety.

During the siege, the landscape around the house was completely devastated by cannon fire and by construction of defensive earthworks. A deep trench was dug in front of and parallel to the house to allow Union troops to move forward towards Confederate lines while remaining under cover. Trees were cleared or shot away, and hundreds of

bombproof shelters were built around the house to protect Union soldiers against Confederate artillery fire.

After a short time, the Shirley family left the cave, first staying at the home of a planter, and then when the battle again approached, moving into an empty Negro cabin. The Confederates under General John Clifford Pemberton dug in and held out for a month and a half, but surrendered on July 4, 1863 after receiving word that General Robert E. Lee had retreated at Gettysburg. The surrender at Vicksburg completed the Union hold on the Mississippi River and marked the turning point of the Civil War. Over the next 21 months Vicksburg was occupied by Union troops, serving as a base for Federal operations throughout the region until the end of the war. It was from Vicksburg that Major General William T. Sherman began his "March to the Sea" in February 1864.

After the siege ended, the family moved into a vacant house in Vicksburg. Most of their prized possessions had been looted or destroyed, and Wexford Lodge had been badly damaged. His health undermined by stress and deprivation, sixty-nine year old James Shirley died August 9, 1863, a short time after the siege ended. The rest of the family eventually left Vicksburg, never to occupy their old home again.

After the siege of Vicksburg, Wexford Lodge was "uninhabitable" (NPS 2004:16). It was used as a smallpox hospital by Federal forces in 1864 before being abandoned. Mrs. Shirley filed a claim with the War Department for damages to her home, but it was denied under a law forbidding expenses for repair of a house damaged by the occupation in a state recently in rebellion (Winschel 1993:25). Over the next quarter century, the Shirley House "fell into ruin by neglect and decay" (Ibid.).

Vicksburg continued to be occupied by Federal troops through Reconstruction, until 1877. Colored troops patrolled the streets, loyalty oaths were required, and plantations were confiscated and leased to "carpetbaggers," Northerners who became active in the political and economic life of the South. In conjunction with newly freed slaves and local collaborators, the carpetbaggers formed new governments and greatly altered the South's economic, judicial, and educational systems. However, these interlopers were deeply resented by many Southerners, and in 1874 the citizens of Vicksburg cast out the carpetbaggers. A bloody riot ensued and a number of blacks took refuge in the abandoned Wexford Lodge. When the building was stormed by whites, seven blacks were killed.

By the time the government acquired the house in 1900, the building was in ruins. Weather and decay had added to the damage done by vandals and scavengers who had apparently stripped the house of most of its siding and windows and probably much of its interior woodwork as well. The front porch and balcony were completely missing and even the brick piers of the rear porch and much of the brick foundation were missing, presumably demolished in order to salvage the brick. The wood-shingled roof had deteriorated as well, and the west gable and most of the roof on that side of the house had collapsed entirely (NPS 2004:23).

On February 21, 1899, Vicksburg National Military Park was established to commemorate the campaign and siege and defense of Vicksburg, and in recognition of the historical importance of this battleground along the north, east, and south edges of the city of Vicksburg. Originally, the park encompassed about 1,200 acres and included the national cemetery, land area of the Union siege lines, some of the original earthworks, and the Confederate defense lines used during the 1863 military action. The establishing act mandated that the park maintain the “present outlines of field and forest,” that is, preserve the historic scene. States were given the authority to establish and place markers and memorials honoring units involved in the siege. The legislation also required that the earthworks used during the Siege of Vicksburg in 1863 be restored.

Recognizing the significant role that the Shirley House played in the Civil War, the Federal government purchased the house and 60 acres of land from Alice Shirley in May, 1900. The remains of James and Adeline Shirley were removed from the Cedar Hill Cemetery and re-interred behind the house in April that same year. Park Engineer E.E. Betts drew up the specifications and in the summer of 1902 bidding began for restoration of the Shirley House to “approximately to the condition in which it was at the beginning of the siege in 1863” (NPS 2004:24). E.J. McGraw won the contract, and by mid-November 1902 had completed the work.

It is unclear exactly what was done to the structure, although inferences can be made from the photographs and the plans submitted by McGraw. Later studies and structural investigations indicate that a number of compromises were made in 1902, probably due to the “severely limited project budget” (NPS 2004:25). It appears that little was done to the basement other than repairs to the brick foundation, and that the second floor probably was not restored.

Over the next quarter century, the Shirley House served as the park headquarters, occupied by custodian William T. Rigby who had been hired to preserve the structure. During his occupation, the only known alternations to the building were replacement of the wooden front porch floor and steps with concrete (ca. 1914) and installation of a composition roof (ca. 1921) (NPS 2004:25-26).

After Rigby died, Major J.B. Holt was appointed superintendent of the park and immediately began to plan to remodel the Shirley House for his family to occupy. He submitted a proposal for “reconditioning” of the house in May, 1930, but the War Department denied his proposal on the grounds that the proposed work was so extensive that it “would change the character of this house completely” (NPS 2004:27). Holt altered his proposal to overcome the Department’s opposition, and obtained money to begin work in the spring of 1931.

Unfortunately, before the War Department found out what had been going on, Holt had made as many as 26 significant alterations to the house and additional changes to the grounds, resulting in the loss of “much of the original character of the house” (NPS 2004:28). These changes included electrical wiring, floor furnaces in several rooms, plumbing (using the historic cistern west of the house as a septic tank), three new

bathrooms, reconfiguration of the historic rooms at the west end of the back porch, new door openings, enclosure of the east end of the back porch for a kitchen, new oak flooring over the original floors, new rusticated stone mantels to replace the historic wooden mantle pieces, and a staircase to the basement, which was “excavated, partitioned, and finished to create three additional rooms, a bath, and a hallway. The attic was reconfigured (closets and a bath added, and Masonite insulating board used to finish walls and ceilings). The exterior changes included construction of a wood-framed garage at the northwest side of the house, enclosure of the space below the back porch as a carport, and installation of concrete steps and walkways in front of the house. Other alterations were made to the fenestration at the basement level, as well as new screening, louvers, and removal of the trellis in front.

In 1933, administration of the nation’s military parks was transferred from the War Department to the Department of the Interior. The National Park Service was given jurisdiction of the park and it was added to the National Park System. The National Park Service continued to use the house as park headquarters until 1937, and it served as a residence until 1965. Alternations to the house continued - a wood floor was installed over the historic brick floor in the old basement dining room, the remaining dirt floor in the basement was concreted, fireplaces and chimneys were completely rebuilt, sand-finished plaster was replaced with smooth plaster, glass replaced solid panels in the front and rear doors, canvas awnings and louvered blinds were installed, and the composition roofing was replaced with metal roofing. A historic structures report completed in 1939 documented most of the alternations made to the house over the previous 40 years (Wilshin 1939).

Another restoration of the house was begun in 1965 with the compilation of a historic structure report on the house by National Park Service architect Orville Carroll. The building was vacated, and some of the interior additions made by Major Holt were removed so that the building could be more thoroughly investigated. These changes included removal of : the first floor bathroom, gas space heaters, floor furnaces, gas piping, excel wiring, concrete porch floor and steps, basement ceiling boards, and some siding.

Carroll’s investigations revealed that the 1902 restoration had not allowed for proper repair of the building, leaving behind deteriorated sills, a deformed attic floor and gable ends, and separation of the back porch from the house. The house had settled, and deterioration from rot and termites had taken its toll, resulting in the need to “essentially gut the interior of the house for a second time” (NPS 2004:32). Bids were solicited in January, 1966, but because the resulting proposal was nearly double the \$37,450 estimate, the project was undertaken with day labor.

Subsequently more structural material was removed: the wooden floor from the basement dining room, the interior door and window casings, baseboards and trim, exterior trim, brick piers and concrete slab under the rear porch, plaster ceilings, and chimney tops above the roofline. Replacement and repair work included sills, floor joists, siding, exterior door frame headers, corner braces, wall plates and studs, porch beams,

foundations, and roof members and roofing (NPS 2004:36-38). Although additional funds for the project were released in 1967, it appears that much of the work concentrated on the exterior of the building, and “the interior remained only a shell” (NPS 2004:38).

Lacking a metal roof over the front porch, the 1967 rebuilt porch was in ruinous condition by the early 1980s, as were the posts on the back porch. Some work may have been completed at that time to correct these deficiencies, but documentation of the extent of that work is lacking.

3.6.1.2 Affected Resources

Historic Structure. The Shirley House is a white, two-story wood-framed, side-gabled building set on a brick foundation, with a basement exposed on the back. Two brick chimneys are visible from the front of the house; one interior chimney is set towards the north end of the wood shingle roof and the other is at the south end of the house. Both chimneys are on the west slope of the end gable roof. A two-tier portico frames and shades the front door entry, which is flanked by evenly balanced wood sash windows, two on a side. The ground drops away sharply from the front of the house, allowing for a ground-level basement entry on the south and east sides of the structure. The rear of the building has a long raised porch, with basement access below. The gross square footage of the house is 6700 square feet, with 2600 square feet in the basement, 2600 square feet on the main level, and 1500 square feet of space in the attic.

This end gable building is set on a small north-south trending landscaped knoll at the east edge of the park, at One Shirley Circle adjacent to the intersection of Union Avenue and Old Jackson Road. The Illinois Monument and a small parking area are a short distance northwest of the house. Behind the house is a mounded area containing grave markers for James and Adeline Shirley as well as a concrete foundation or low enclosure of unknown function. At the front of the house the mowed lawn is bisected by a concrete sidewalk that leads south towards the adjacent street and drops down over the brow of the hill on steep, narrow concrete stairs. Large deciduous trees flank the lawn on the sides of the house and rear of the lot. An informal path has been worn in the grass at the front southwest corner of the house, and has contributed to soil erosion in this area. A cistern, used for fire protection, is buried in the front lawn.

War damage, abandonment, scavengers, plus extensive restoration and rehabilitation have made major changes to the Shirley House. During the 20th century a number of activities have further disturbed the historic and prehistoric resources that may remain. These activities include restoration and rehabilitation of the structure, modifications to walkways, landscaping, and excavations of nearby areas for utilities, monuments, and roadways. However, this work has not seriously compromised the appearance of the exterior façade of the building, which remains much the same as it was at the beginning of the siege of Vicksburg. The basic layout of the house interior also remains much the same as it was during the 1800s. Furthermore, there are significant elements of the antebellum structure that have survived decades of rude treatment. These elements include:

- Much of the masonry and wood framing.
- Flooring, which can be identified by its having been sash sawn, in the rear (north) half of Room 100; in about half of Room 101, excepting 7'-9" on west side, 3' on east side, and two or three cuts for furnaces, etc.; and in most of Room 104 except on the center of the north side.
- Doors, which can be identified by the brownish graining that remains beneath later layers of paint, including the altered folding doors to the back porch from the hall, the relocated basement door in the hall, and the double doors between Rooms 104 and 105. The other doors are antebellum or else reproductions from 1902 (besides paint layering, embossed hinges with spindles are their key identifying mark), except for the front doors and the door from Room 103 onto the back porch, which are modern.
- Most of the skirting, paneling, treads, risers, balustrade on the staircase.
- Casing and frames survive with the original doors, and some antebellum elements remain with some of the historic 1902 doors as well.
- Baseboard is original in Room 100; on the east wall and on the east side of the north wall in Room 101; on the east wall and at the east end of the south wall in Room 102; and on the south and west walls in Room 104.
- Some original plaster survives on the chimney breast. Historic plaster from 1902 survives in several locations.

It should also be noted that the 1902 restoration has significance in its own right. In keeping with the *Secretary's Standards*, materials from that era are to be preserved wherever possible.

Cultural Landscape. Historic cultural landscapes represent a complex subset of cultural resources resulting from the interaction between people and the land. Cultural landscapes are shaped through time by historical land-use and management practices, politics, war, property laws, levels of technology, and economic conditions. Cultural landscapes are a living record of an area's past, providing a visual chronicle of its history. The dynamic nature of human life contributes to the continual reshaping of cultural landscapes. This makes them a good source of information about specific times and places, but renders their long-term preservation a challenge.

A cultural landscape by definition occupies a geographic area that incorporates natural and cultural elements that are associated with a historic activity, event, or person. The National Park Service recognizes four categories:

- historic designed landscapes (i.e., incorporates a deliberate human element to the modification and use of a particular piece of land),
- historic vernacular landscapes (reflects on values and attitudes about land over time),
- historic sites (sites significant for their association with important events, activities, and people; at these areas, existing features and conditions are defined

and interpreted primarily in terms of what happened there at particular times in the past), and

- ethnographic landscapes (landscapes associated with contemporary groups that use the land in a traditional manner).

The character-defining features of a cultural landscape include spatial organization and land patterns; topography; vegetation; circulation patterns; water features; and structures or buildings, site furnishings, and objects (*Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes, 1996*).

A Cultural Landscape Report was completed for the park in October 2009 (NPS 2009). The report identifies historic-character-defining features of the park, analyzes the landscape's National Register significance and integrity, and identifies preferred treatments, including a strategy for battlefield restoration. Generally speaking, the cultural landscape of the park encompasses the historic landscape of the battlefield, as well as its monuments, roads, earthworks, and structures. The Shirley House and its immediate surroundings form an integral and vital part of the park's cultural landscape.

The Shirley House was built on high ground on a knoll far enough removed from the low lying land along the river so that its occupants could avoid the muggy heat and mosquitoes of the bottom lands while maintaining a view of the surrounding area. The house, built "after the southern fashion" was part of a larger plantation. The siting and orientation of the house on the land with relevance to the ancillary buildings and to the rest of the property were typical and part of local tradition (Winschel 1993:12).

Circulation patterns form an important part of the Shirley House landscape. Originally the house was placed close to the Jackson Road to make it easy to access both Vicksburg and Jackson, Mississippi, at a time when roadways were unpaved mud. A short U-shaped driveway was placed in front of the house to make the house accessible from the main road, and to allow visitors to enter the front door via a wide walkway and a flight of steps.

The driveway, the walkway border of flowering plants, the vegetable gardens, and the fruit trees described by Alice Shirley as part of the working plantation were destroyed in the war, but the present-day arrangement of the house on the landscape, and its lawns and walkways, are reminiscent of the setting of the old house.

These features all help to define the character of this historic scene, and are an integral part of the overall landscape that conveys a special sense of place and history to the visitor.

Cultural Resources Listed in the National Register of Historic Places. The analysis of project impacts on cultural resources focuses on historic properties, which include that subset of cultural resources that are listed in, or eligible for listing in, the National Register of Historic Places. Within the area evaluated in this document, historic

properties are Vicksburg National Military Park and Cemetery, which were listed in the National Register of Historic Places in 1966, and the Shirley House (listed in the National Register of Historic Places in 1977). General Pemberton's Headquarters is also a National Historic Landmark. The most significant spaces associated with the Shirley House are the front porch, the entire first floor, the rear porch and yard, the dining room in the basement, and an open zone stretching from the attic through the central stair and into the main hall.

3.6.1.3 Environmental Consequences

ALTERNATIVE A (No Action/Continue Current Management)

Analysis. Under Alternative A, the National Park Service would maintain the Shirley House as a stabilized shell. The building would deteriorate at a faster rate than if restored and rehabilitated because it would not be occupied or otherwise used, and would be subject to less frequent maintenance and repair than if open to visitors. The current emergency stabilization measures would be maintained, but long-term structural repairs would not be implemented. Impacts to the historic structure would be long-term, direct and indirect, moderate to major, and adverse. Impacts to cultural landscapes would continue as at present, with non-historic elements present on the exterior of the structure. Impacts would be long-term, direct, minor, and adverse.

Cumulative Effects. Continuing current management would add to the ongoing deterioration and even loss of historic structures in the local area and region at large. It would also impact interpretive programs at the park by continuing to limit opportunities for interpreting the siege of Vicksburg and its aftermath. Cumulative impacts would be long-term, direct, minor, and adverse.

Conclusion. Continuing current management would have impacts to the historic structure that were long-term, direct, moderate to major, and adverse. Impacts to cultural landscapes would continue as at present, with non-historic elements present on the exterior of the structure. Impacts would be long-term, direct, minor, and adverse. Overall cumulative impacts would be long-term, direct, minor, and adverse.

Impairment. In the short term, the No-action Alternative would not result in impairment of the park's cultural resources or values because the Shirley House would continue to be maintained, albeit minimally, and would continue to occupy its historic place in the cultural landscape. Impairment could occur over the long term if regular maintenance failed to prevent major deterioration of the structure.

ALTERNATIVE B (Rehabilitate and Restore the Shirley House) (Preferred Alternative):

Analysis. Alternative B would enhance and protect the resource value of the Shirley House by restoring the exterior fabric of the structure and by rehabilitating and restoring the building's first floor. The proposed work would also correct structural deficiencies,

thereby allowing the long-term preservation of this important National Register property. A fire detection/suppression system and a security system would be installed to forestall loss or damage to the building from fire or vandalism. These actions would help protect this important cultural resource by restoring the integrity and character of the house, improving its general condition, effecting preservation as guided by National Park Service standards, protecting it from casualty, and retarding further deterioration from wind, water, rodents, and insects. All work performed on the structure would be done in such a way as to minimize impacts on, and allow preservation of, the remaining historic fabric.

Impacts to the cultural landscape would be minor to moderate and adverse. The failing concrete stair next to the parking lot, leading to the house, would be replaced with one meeting code. A mechanical lift would be installed adjacent to the exterior rear wall of the house to provide access from the lower porch into the small room at the western end of the back porch. The historic rear railing detail would be adapted to meet code and facilitate public use of the rear porch. An exterior stair would be added at the southwest corner of the house where this very steep area has eroded from informal foot traffic. These actions would improve accessibility and public safety while having only minor to moderate adverse impacts on the surrounding cultural landscape.

Cumulative Impacts. Alternative B would partially offset past deterioration and destruction of the house and increase the stock of well-maintained historic structures in the local area and region. Cumulative impacts would be long-term, direct, minor, and beneficial.

Conclusion. Restoration and rehabilitation activities would have impacts to the historic structure that were long-term, direct, moderate, and beneficial. Cumulative impacts would be long-term, direct, minor, and beneficial. Site enhancements for accessibility and public safety would result in impacts to the cultural landscape that were long-term, direct, minor to moderate, and adverse.

Impairment. Alternative B would restore and rehabilitate one of only two Civil-War era structures in the park. Impacts to the surrounding cultural landscape would be minor. Therefore, Alternative B would not result in impairment of park resources and values.

ALTERNATIVE C (Rehabilitate and Restore the Shirley House with Heating and Air Conditioning):

Analysis. Impacts would be the same as for Alternative B, except that installation of a heating and cooling system could detract from the integrity of the restored house by adding obviously non-historic elements (e.g., thermostat, registers, etc.) to the structure. Impacts to the historic structure would be long-term, direct, minor, and adverse. These impacts would be outweighed by the beneficial impacts resulting from restoration and rehabilitation of the structure.

Cumulative Impacts. Same as Alternative B.

Conclusion. Restoration and rehabilitation activities would have impacts to historic structures that were long-term, direct, moderate, and beneficial. Some minor adverse impacts would result to the historic structure from installation of a heating and cooling system. Site enhancements for accessibility and public safety would result in impacts to the cultural landscapes that were long-term, direct, minor, and adverse. Cumulative impacts would be long-term, direct, minor, and beneficial.

Impairment. Alternative C would restore and rehabilitate one of only two Civil-War era structures in the park. Impacts to the surrounding cultural landscape would be minor. Therefore, Alternative C would not result in impairment of park resources and values.

Section 106 Summary

After applying the Advisory Council on Historic Preservation's criteria of adverse effects (36 CFR Part 800.5, *Assessment of Adverse Effects*), the National Park Service concludes that implementation of the preferred alternative (Alternative B – Rehabilitate and Restore the Shirley House) would not have an adverse effect on historic structures or the cultural landscape of Vicksburg National Military Park.

The environmental assessment includes mitigation measures that would help reduce potential adverse effects on cultural resources, and all work would be performed in compliance with the *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* (NPS 1995a). For example, construction activities would be carefully planned to avoid damage to historic fabric. Work around the periphery of the structure and in the yard would be monitored by an archeologist meeting the Secretary of the Interior's standards.

Wherever feasible, historic elements such as bricks would be retained and reused. New materials (bricks and mortar) of the appropriate color, shape, size, texture, and appearance would be carefully selected to accurately replicate the form and character of the original structure.

Documentary evidence from period plans, maps, and drawings and from the presence of existing structural elements would be used to provide for accurate reconstruction and rehabilitation of the structure. Wherever possible, the design, texture, color, materials, and scale of the original elements would be ascertained from existing information. Prior to initiation of any reconstruction activities, these elements would be carefully documented as described in the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (NPS 1995b).

To avoid any unauthorized collecting from areas where construction is proposed, work crews would be educated about cultural resources in general and the need to protect any cultural resources encountered. Work crews would be instructed regarding the illegality of collecting artifacts on federal lands to avoid any potential violations. In the unlikely event that previously unknown cultural resources were discovered during construction,

work would be halted in the vicinity of the resource, and procedures outlined in 36 *Code of Federal Regulations* 800 would be followed.

The Mississippi State Historic Preservation Office (SHPO) has been involved in this project from the beginning. To complete the Section 106 process, the park will draft an assessment of effect form, which will be forwarded to the SHPO along with this EA.

Discussions of the project between the National Park Service and the Mississippi SHPO indicate a preliminary finding of *no adverse effect*, as defined in Section 106 of the National Historic Preservation Act. However, SHPO comments on the project will be addressed in the final compliance documents. Should the need arise, additional mitigation measures also would be developed in consultation with the SHPO.

3.6.2 VISITOR USE AND EXPERIENCE

3.6.2.1 Affected Environment

Vicksburg National Military Park is located on the north side of Vicksburg, Mississippi, less than a mile from Interstate 20. The park receives approximately 1 million visitors per year who stay an average of 2 hours each (NPS 2003d). Travel to the park is accomplished largely by private automobile or by charter bus. The nearest commercial airport is in Jackson, Mississippi, approximately 50 miles to the east (NPS 2003a).

The most popular activity at the park is touring the battlefield and cemetery by car, charter bus, or on foot. The park has a main visitor center with interpretive displays, a bookstore, and a theater that presents an 18-minute introductory film. The visitor center is the usual starting point for embarking on the 16-mile-long interpretive loop that passes through the Union siege and Confederate defense lines.

Vicksburg National Military Park has a high concentration of monuments and historic structures, with over 1,350 monuments, markers, tablets and plaques, 70 bronze castings, 149 cannon and carriages, 9 historic bridges, 6 buildings, and an ironclad river gunboat (the U.S.S. Cairo). Vicksburg National Cemetery also contains approximately 18,000 headstones (NPS 2003a).

Midway through the interpretive loop, visitors encounter the Union gunboat, the U.S.S. Cairo. This ironclad, river class gunboat was sunk in December 1862 by underwater Confederate mines just north of Vicksburg in the Yazoo River. The Cairo was raised in 1964, acquired by Vicksburg National Military Park in 1973, and restored in 1985 to give visitors the opportunity to experience this unique piece of military hardware. The nearby U.S.S. Cairo Museum houses a variety of artifacts recovered from the Cairo during salvage operations (NPS 2003a).

Adjacent to the U.S.S. Cairo is Vicksburg National Cemetery. Established in 1866, it contains 18,300 graves, the identities of more than 13,000 of which are unknown. Most

of the dead were Union soldiers from the Civil War, but soldiers from the Spanish-American War, World War I, World War II, and the Korean War also are interred here (NPS 2003a).

Designated as “Tour Stop No. 2” along the park’s 16-mile-long driving tour route, the Shirley House is situated along Old Jackson Road next to the Illinois Monument, the largest and most impressive monument in the park. This area was the focal point of military operations during the siege and defense of Vicksburg. Every year the park hosts about one million visitors, 98 percent of whom stop to see the Illinois Monument and to view the Shirley House. The Shirley House is a key element in the park’s legislative mandate to interpret the history of Vicksburg, including both the battle and the period encompassing the Union occupation of Vicksburg through Reconstruction times.

3.6.2.2 Environmental Consequences

ALTERNATIVE A (No Action/Continue Current Management)

Analysis. Continuing current management would mean that the Shirley House would remain closed to visitation and visitors could only experience the Shirley House from the outside. Opportunities would thus be lost for interpreting the house and its role in the Vicksburg campaign and subsequent history. Visitors would also gain a somewhat inaccurate idea of the house’s historic appearance in the rear of the building.

Cumulative Impacts. Continuing current management would undermine local and regional efforts to preserve structures associated with the Vicksburg Campaign and interpret them for the public. Cumulative impacts would be long-term, direct, moderate, and adverse.

Conclusion. Continued closure of the Shirley House would result in impacts to visitor use and experience that were long-term, direct, moderate to major, and adverse. Cumulative impacts would be long-term, direct, moderate, and adverse.

ALTERNATIVE B (Rehabilitate and Restore the Shirley House) (Preferred Alternative):

Analysis. Visitor services and enjoyment would be enhanced under this alternative. By using the house as a vital part of the interpretive program, the Campaign and Siege of Vicksburg, the Union occupation, and Reconstruction could be understood in a much broader historical context. The visitor experience would be expanded and enhanced, and increased visitation could be more easily accommodated.

Installation of mechanical systems, rehabilitation and restoration of some interior spaces, and addition of new exhibits would allow the main hallway on the first floor of the building to be opened to visitors, further enhancing the park’s interpretive program. Visitors would gain a better understanding of the role the building played during the siege

and defense of Vicksburg, during the Union occupation of the city, and during Reconstruction times. Rehabilitation and restoration would also better enable the park to meet its goals under the Government Performance and Results Act.

Cumulative Impacts. Restoring and rehabilitating the Shirley House and opening it to public visitation would contribute to ongoing efforts locally and regionally to preserve and interpret historic structures associated with the Vicksburg campaign, including, for example, the recent opening of the Pemberton Headquarters building in downtown Vicksburg. Restoration and rehabilitation of the Shirley House would result in cumulative impacts to visitor use and experience would be long-term, direct, moderate, and beneficial.

Conclusion. By allowing public access to the interior of the Shirley House for the first time in decades, as well as making possible associated interpretive programs, restoration and rehabilitation of the Shirley House would result in impacts to visitor use and experience that were long-term, direct, moderate to major, and beneficial. Cumulative impacts would be long-term, direct, minor, and beneficial.

ALTERNATIVE C (Rehabilitate and Restore the Shirley House with Heating and Air Conditioning):

Analysis. Impacts to visitor use and experience under Alternative C would be very similar to those under Alternative B. The addition of a heating/cooling system under this alternative would increase the comfort level for many visitors as they toured the house. On the other hand, the controlled climate would give visitors a less historically accurate impression of life as it was experienced by the Shirley family.

Cumulative Impacts. Same as Alternative B.

Conclusion. As with Alternative B, restoration and rehabilitation of the Shirley House would result in impacts to visitor use and experience that were long-term, direct, moderate to major, and beneficial. Cumulative impacts would be long-term, direct, minor, and beneficial.

3.6.3 PUBLIC HEALTH AND SAFETY

3.6.3.1 Affected Environment

Vicksburg National Military Park is responsible for maintaining safe conditions for the protection of the health and safety of both its employees and the public. This not only applies to providing safe facilities, utilities, and grounds within the park, but also includes National Park Service program and project operations. Despite the park's proximity to an urban area, visitors are exposed to several hazards associated with the locality, including

heat, mosquitoes, irritating plants, encounters with feral animals, and occasional snakebite.

The current condition of the Shirley House is such that it is not safe for occupancy or regular visitation by the public. Emergency stabilization measures have made it possible for park staff to enter the structure as necessary, but regular visitation by the public is not feasible. As a result, the structure remains closed to the public, as it has been for decades.

3.6.3.2 Environmental Consequences

ALTERNATIVE A (No Action/Continue Current Management)

Analysis. Under this alternative, the National Park Service would ensure the safety of the public and park staff by keeping the Shirley House closed to all public entry and limiting staff entry as necessary and appropriate. Recent emergency stabilization measures have dramatically reduced any threat of structural failure, so allowing the public to view the structure from outside, while preventing actual entry into the house, should be sufficient to protect public health and safety.

Cumulative Impacts. Continuing current management would mean reliance on past emergency stabilization measures and ongoing closures to protect public health and safety. Scarce resources would continue to be focused on protecting public health and safety in this area, rather than focusing on other areas where these resources may be needed. Cumulative impacts would be long-term, direct, minor, and adverse.

Conclusion. Continuing current management would protect public health and safety, but would do so by relying on short-term measures rather than permanent rehabilitation and repairs. Impacts to public health and safety would be long-term, direct, minor, and adverse.

ALTERNATIVE B (Rehabilitate and Restore the Shirley House) (Preferred Alternative):

Analysis. Modifications to the Shirley House under Alternative B would include installation of mechanical, security, fire detection, and fire suppression systems. These modifications also would provide for a safe means of visitor egress, and would help ensure the health, comfort, safety, and security of visitors and park staff, as well as complying with applicable building and safety codes.

Rehabilitation would allow recurring preservation work to be performed in a safe environment, meeting all Life Safety Codes. In addition, rehabilitation would alleviate any threat of building collapse to a greater extent than the emergency stabilization measures completed in recent years.

Cumulative Impacts. Rehabilitating and restoring the Shirley House would reverse decades of risk to public health and safety by making the house more structurally sound. Resources currently diverted to protecting public health and safety at the Shirley House could be re-focused to other areas where such resources are needed. Cumulative impacts would be long-term, direct, minor to moderate, and beneficial.

Conclusion. Restoration and rehabilitation of the Shirley House would allow the structure to be opened for public use while at the same time enhancing the health and safety of the public and park staff. Impacts to public health and safety would be long-term, direct, minor to moderate, and beneficial.

ALTERNATIVE C (Rehabilitate and Restore the Shirley House with Heating and Air Conditioning):

Analysis. The impacts of Alternative C on public health and safety would be substantially the same as those of Alternative B. The addition of a heating/cooling system under this alternative could further protect the health of those persons vulnerable to hot or cold temperatures.

Cumulative Impacts. Same as Alternative B.

Conclusion. As with Alternative B, restoration and rehabilitation of the Shirley House under Alternative C would allow the structure to be opened for public use while at the same time enhancing the health and safety of the public and park staff. This alternative would provide additional health and safety benefits to those persons vulnerable to hot or cold temperatures. Impacts to public health and safety would be long-term, direct, minor to moderate, and beneficial.

3.6.3.4 PARK OPERATIONS

3.6.3.4.1 Affected Environment

The superintendent at Vicksburg National Military Park is responsible for managing the park, its staff, concessionaires, all of its programs, and its relations with persons, agencies, and organizations interested in the park. Park staff provides the full scope of functions and activities to accomplish the park's objectives, including interpretation and education, resource protection, law enforcement, emergency services, public health and safety, and fee collection.

Maintenance staff at the park consists of one full-time and one part-time employee assigned to maintain the 40-acre national cemetery. These staff members are assisted by 4 seasonal/Centennial employees during summer months in the cemetery. There are 14 full-time maintenance employees tasked with the maintenance of the rest of the park.

Typically the park will staff around 4-6 summer/Centennial employees, some of which are carried over into the winter season as budget allows.

The facilities and maintenance staff are responsible for maintaining the historic structures of the park, performing grounds-keeping and keeping park facilities in working order. The existing deteriorated condition of the Shirley House requires ongoing attention.

3.6.4.2 Environmental Consequences

ALTERNATIVE A (No Action/Continue Current Management)

Analysis. Under the No Action Alternative, the maintenance and repair workload continually would continually increase to keep the structure from significant deterioration. This would result in long-term, moderate, adverse effects on park operations where the escalating deterioration would divert staff from other necessary park functions, and could be noticeable by the public.

Cumulative Impacts. Many projects planned for the park would contribute to cumulative effects on park operations. These projects have the potential to increase or decrease demands made on park staff to ensure effective management of park resources and visitor experiences.

Successful completion of the U.S. Army Corps of Engineers' soil nail wall project would benefit park operations by reducing the need for temporary, and largely ineffective, efforts to stabilize the bluff at this location. This would provide a minor, long-term benefit to park operations. Beneficial effects would also be expected from restoration of the Shirley House and from park road improvements as the frequent need for repair or maintenance of these structures would be reduced. The No Action Alternative would detract slightly from the cumulative beneficial effects of these projects on park operations.

Conclusion. Ongoing repair and maintenance of the Shirley House would create long-term, direct, adverse effects on park operations of moderate intensity as the escalating deterioration diverted staff from other necessary park functions.

ALTERNATIVE B (Rehabilitate and Restore the Shirley House) (Preferred Alternative):

Analysis. Under any of the action alternatives, rehabilitation, restoration, and reconstruction of the Shirley House would produce long-term, minor benefits on park operations. These benefits would result from a reduction in park maintenance and repair needs based on the following:

Long-term maintenance needs would decrease, and longer intervals could be scheduled between cyclic operations. Reactive repair could be replaced with regularly scheduled maintenance activities.

Staff requirements to monitor hazards and safety issues could be reduced.

Short-term adverse effects of negligible to minor intensity would be generated by the need to manage the contractor and project, and some staff time would be required in implementation of the project. These increased burdens would end when project construction ended.

The park's operational efficiency and sustainability would be improved by using sustainable building materials, and long-term maintenance efforts would be reduced by enhancing the long-term stability of the structure. The presence of fire detection, fire suppression, and security systems would help prevent structural loss or damage by fire or vandalism. Intrusion alarms would allow the park to identify potential vandalism before severe damage was done, reducing the amount of park staff time needed to maintain the building.

Cumulative Impacts. Cumulative effects from other projects would be similar to those described for Alternative A. Either of the action alternatives would slightly enhance the cumulative beneficial effects of other projects on park operations.

Conclusion. Under either action alternative, park operations would experience long-term, direct, minor benefits as the need for wall maintenance and the repair burden was reduced. Emergency repair activities would be replaced by lower-intensity regular maintenance, and staff could focus their attention on other resource and park management matters.

ALTERNATIVE C (Rehabilitate and Restore the Shirley House with Heating and Air Conditioning):

Analysis. The impacts of Alternative C on park operations and management would be substantially the same as those of Alternative B. However, energy use would be greater under this alternative than under either alternatives A or B due to the use of a heating/cooling system, resulting in higher utility costs. In addition, the installation of a heating/cooling system under this alternative would add another system to the park's infrastructure that would need to be maintained and replaced over time.

Cumulative Impacts. Same as Alternative B.

Conclusion. Under either action alternative, park operations would experience long-term, direct, minor benefits as the need for wall maintenance and the repair burden was reduced. Emergency repair activities would be replaced by lower-intensity regular maintenance, and staff could focus their attention on other resource and park management matters.

3.6.5 SUSTAINABILITY AND LONG-TERM MANAGEMENT

Consideration of long-term impacts and the effects of foreclosing future options are addressed in this section. The intent of this analysis is to identify sustainable development that meets the needs of the present without compromising the ability of future generations to meet their needs. Included in the analysis is an assessment of the energy requirements of the project and the potential for energy conservation.

Unavoidable Adverse Impacts

The intent of this determination is to identify whether the proposed action or alternatives would result in impacts that could not be fully mitigated or avoided. In the present case, the installation of a mechanical lift would have minor to moderate adverse impacts on the historic structure and the cultural landscape, but these impacts are outweighed by the benefits of improving access to the structure.

Relationship of Short-Term Uses and Long-Term Productivity

The intent of this determination is to identify whether the proposed action or alternatives would result in trading the immediate use of the land for any long-term management possibilities or the productivity of park resources that would affect future generations. It is intended to determine whether the proposed action or alternatives would be sustainable actions that could continue over the long-term without environmental problems.

Under either of the action alternatives, the park's operational efficiency and sustainability would be improved by using sustainable building materials, and long-term maintenance efforts would be reduced because of the use of new materials (where necessary and appropriate) and techniques to stabilize the structure. In addition, the preferred alternative does not call for installation of a heating/cooling system. The absence of such a system would prevent increased energy usage and fuel costs.

Irreversible or Irretrievable Commitments of Resources

The intent of this evaluation is to identify whether the proposed action or alternative would result in effects that could not be changed over the long term or would be permanent. An effect on a resource would be irreversible if the resource could not be reclaimed, restored, or otherwise returned to its condition before the disturbance. An irretrievable commitment of resources involves the effects on resources that, once gone, cannot be replaced or recovered. In the present instance, the intent of the project is to preserve, restore, and rehabilitate the historic Shirley House. Neither of the action alternatives would result in irreversible or permanent impacts or cause a permanent commitment of resources.

4.0 CONSULTATION AND COORDINATION

Scoping is the effort to involve agencies and the general public in determining the issues to be addressed in the environmental document. Among other tasks, scoping determines important issues and eliminates issues not important; allocates assignments among the interdisciplinary team members and other participating agencies; identifies related projects and associated documents; identifies other permits, surveys, or consultations required by other agencies; and creates a schedule which allows adequate time to prepare and distribute the environmental document for public review and comment before a final decision is made. Scoping includes early input from any interested agency or any agency with jurisdiction by law or expertise. At a minimum for National Park Service projects, agency scoping includes input from the Advisory Council on Historic Preservation, the State Historic Preservation Officer, and the U.S. Fish and Wildlife Service.

The Mississippi State Historic Preservation Office has been involved in this project from its inception, and its staff participated in the project value analysis. On June 30, 2009 letters were sent to the SHPO and to the Advisory Council on Historic Preservation inviting their participation in this project (see Appendix A). As part of the Section 106 process, the park also will draft an assessment of effect form, which will be forwarded to the SHPO along with this environmental assessment. Comments received from the SHPO will be reflected in the final compliance documents.

The U.S. Fish and Wildlife Service was contacted by letter regarding this project on June 30, 2009. The U.S. Fish and Wildlife Service responded to this consultation letter with information that no federally listed endangered, threatened, or candidate species are present in the project area. The original letter sent by the National Park Service to which the U.S. Fish and Wildlife Service responded can be found in Appendix A.

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APPENDIX A

Correspondence with Government Agencies