FINDING OF NO SIGNIFICANT IMPACT

LANDSCAPE REHABILITATION

VICKSBURG NATIONAL MILITARY PARK

On June 1, 2009, the National Park Service (NPS) issued an Environmental Assessment (EA) analyzing impacts associated with rehabilitation of portions of the historic landscape at Vicksburg National Military Park (the park). The study was required to evaluate landscape rehabilitation of portions of the park's battlefields as recommended by the Cultural Landscape Report (CLR).

The purpose of this document is to record the decision of the NPS and to declare a Finding of No Significant Impact (FONSI) pursuant to the Council on Environmental Quality's (CEQ) regulations for implementing the National Environmental Policy Act Of 1969 (NEPA).

Background

The park and Vicksburg National Cemetery (the National Cemetery) are located in Vicksburg, Mississippi, and comprise a unit of the NPS. The park and National Cemetery combined encompass more than 1,800 acres and form one of the more densely monumented battlefields in the world with more than 1,340 monuments, markers, tablets, and plaques that dot the historic landscape. The park includes historic earthen fortifications, reconstructed trenches and other military features, historic bridges, historic buildings, historic cannon/carriages, a visitor center, the USS Cairo gunboat and museum, and 17 miles of tour roads that document the components of the Union and Confederate armies during the siege.

The NPS faces many challenges associated with the long-term management and maintenance of the park. As part of the planning process intended to support decisions regarding management of the park, NPS has prepared a CLR for the park. The CLR is intended to provide NPS with an assessment of the character-defining features of the park landscape, document historic and existing conditions, and develop specific treatment recommendations to ensure the future protection of the park and its natural and cultural resources. The NPS prepared an EA that analyzed the Preferred Alternative and the other proposed alternatives in the CLR and their potential impacts on the environment.

Today, the Vicksburg battlefield bears little resemblance to the landscape at the time of the siege. Management practices since the establishment of the park have allowed parklands to be naturally reforested. Areas that were once cleared during the siege are now forested as a result of natural vegetative regeneration and plantings by the Civilian Conservation Corps in the 1930s to reduce soil erosion. These areas now provide important wildlife habitat in a unique loess soil bluff environment. If an informed, comprehensive plan for landscape rehabilitation is not developed and implemented, then

the existing park condition will continue to misrepresent the historic battlefield condition and potentially reduce visitor understanding of the events the park commemorates. There could also be negative impacts on natural resources and habitat if future restoration efforts are implemented piecemeal without adequately considering cumulative environmental consequences.

The CLR was developed to provide a clear direction to manage the landscape in ways that commemorate the campaign, siege, and defense of Vicksburg, as required by Congress, by preserving resources and enhancing visitor understanding and appreciation of the events that occurred here while providing a variety of experiences and complying with other laws and regulations.

Purpose and Need for the Proposed Action

The purpose of the CLR is to guide landscape treatment and maintenance so that the park meets its mandate to "commemorate the campaign, siege and defense of Vicksburg, and to preserve the history of the battles and operations of the siege and defense on the ground where they were fought and were carried on. ..." The park's authorizing legislation further includes specific actions to meet the overall purpose: "to restore the forts and the lines of fortification, the parallels and approaches of the two armies, or so much thereof as may be necessary to the purposes of the park." Together, the CLR and EA seek to provide a clear direction to manage the landscape in ways that commemorate the campaign, siege, and defense of Vicksburg, as required by Congress, by preserving resources and enhancing visitor understanding and appreciation of the events that occurred here while providing a variety of experiences and complying with other laws and regulations.

The park has analyzed the landscape comprehensively to determine if and what changes are warranted to enhance preservation of the landscape's historic character and integrity and improve visitor understanding and experience.

Alternatives Considered

The NPS considered four alternatives in the EA process: three action alternatives and a "No-Action" Alternative (see below). The alternatives are described in more detail in the EA.

***Alternative A:* No-Action/Continue Current Management**

The No-Action Alternative describes the action of continuing the current management operations and conditions. It does not imply or direct discontinuing the current action or removing existing uses, development, or facilities. 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, NPS would respond to future needs and conditions associated with the park without major actions or changes in present course.

Alternative B: **Preservation through Best Management Practices (BMPS)**

Under Alternative B, the park would preserve resources by BMPS to areas within the park. Interpretation would become the primary means for commemoration and communication of the site history to the visitor. This alternative would involve the development of new exhibits, waysides, signage, and other interpretive features at different locations around the park. Also, three 10-acre sites would be converted to a new landcover type intended to best protect against soil erosion based on the recommendations of local ecologists and plant scientists. These sites would be monitored and the approach adapted based on evaluation of the success of the resulting plant communities. Additional areas of the park would then be converted over time using this adaptive approach.

Under this alternative, the park would establish and utilize BMPs to best protect the remaining evidence of the landscape, which influenced and endured the Civil War siege and which represents the setting experienced by those engaged in it. The resulting BMPs would focus on retaining the existing soil profile of the park, which would protect the last aboveground evidence of the earthworks constructed by the opposing armies, and any surviving below-ground archeological evidence. The BMPs would therefore focus primarily on soil erosion control to ensure the survival of extant evidence of the siege but would also consider the role of vegetative cover composition, park maintenance, water resource protection, and wildlife habitat, and their inter-related systems. These BMPs would include such options as continued use of turf grasses and the consideration of alternatives such as warm season grasses or savanna (a combination of grasses and widely spaced hardwood trees).

Alternative C: **Rehabilitate /Maintain Key Areas of Military Engagement**

Under Alternative C, the park would rehabilitate the park landscape, primarily by rehabilitating Civil War military resources. Alternative C would implement landcover changes within the park to reveal the historic landscape of the Civil War siege in the areas that collectively represent physical resources at key military engagement sites for meeting the legislative mandate of the park to "commemorate the campaign and siege and defense of Vicksburg," and "restore the forts and the lines of fortifications, the parallels and the approaches of the two armies, or so much thereof as may be necessary to the purposes of the park." Identification of the key areas was based on careful review and understanding of the military terrain that molded the events of September 1862 through July 1863 and its ability to convey the full range of important military events and activities that occurred there. Preservation and stabilization of important natural, cultural, and historic resources are assumed under rehabilitation. Rehabilitation accommodates new uses and can make historic associations more apparent. Furthermore, enhanced interpretive, park operations, and visitor use and experience elements would be included in Alternative C.

The key areas that would be considered priorities for maintaining open vegetative cover or where enhanced views and access are highly desirable to meet the park's mission of telling the story of the siege and attacks are:

- **Area 1 – Old Jackson Road/Battery DeGolyer/Third Louisiana Redan.** The stories of Union mining and related activities; the crater; the May 22, 1863, attacks; and the Shirley House would best be told here. Of the three key areas, this would be the easiest to maintain. Implementation of this alternative would benefit from the removal of the Old Administration Building, which would be addressed further by the park in a future planning process.

- **Area 2 – Railroad Redoubt/Fort Garrott.** The stories of how Confederate fortifications guarded key terrain such as supply lines and the May 19 and 22, 1863, attacks would best be told here. This area would be the second easiest to maintain. Natural resource challenges include gleyed soils (soil that has been saturated over a long period of time, therefore reducing the iron and manganese content) and wetland areas.

- **Area 3 – Graveyard Road/Stockade Redan.** This is the best place to tell the story of combat; the May 19 to 22, 1863, attacks; the construction methods and components of Stockade Redan; and a key Union avenue of approach. This would be the most difficult of the three to maintain. Natural resource challenges include wetlands, heavy forest, and Mint Spring Bayou.

Alternative C would also include the re-establishment of spatial patterns associated with the 1863 battlefield landscape within view of the tour road corridor, such as key visual connections between artillery positions of the opposing armies, fields of fire, and exposure of terrain features that can be tied to the military engineering of the two lines. This approach would prioritize interventions that enhance the experience of the visitor touring the park within a vehicle, as many visitors do. This alternative would incorporate a combination of judicious woodland clearing, thinning, and limbing up of canopy trees to enhance visual accessibility along the auto tour route. Selective rehabilitation of only portions of the battlefield would not provide a completely accurate depiction of the historic landscape during the battle and siege period.

Alternative D: **Rehabilitate/Maintain the Broad Spectrum of Military Engagements**

Under Alternative D, an extensive area of the park would be rehabilitated by the removal of woodlands to reveal a broad spectrum of sites of military engagement. Alternative D assumes that interpretation and education of visitors would feature authentic connections between physical resources and military events, using military terrain analysis as the basis for revealing the key stories associated with the Vicksburg landscape.

Implementation of Alternative D would enhance the legibility of Civil War-era resources and associations through the removal of forest cover that has grown up since the end of the siege and currently obscures many visual and physical relationships that were important to the events that occurred at Vicksburg in 1863. Tree clearing would occur in

areas identified through military terrain analysis as key to the battle and siege tactics of Union and Confederate commanders, and to their understanding. Interpretation would be provided to help visitors understand what happened within these modified areas. Later additions to the landscape that support visitor use of the park and NPS administration of the site, as well as late 19th and early 20th century commemoration of the Civil War, would be retained to interpret the park's enabling legislation. Alternative D assumes that the best way to "commemorate the siege and preserve the history of the battles and operations of the siege and defense on the ground where they were fought and were carried on ..." is to reveal the landform, topography, and earthen fortifications associated with Union and Confederate lines and the landscape that was modified to offensive and defensive purposes between them. Preservation and stabilization of important natural, cultural, and historic resources are assumed under rehabilitation, and would be taken into consideration as part of all implementation procedures.

The key areas that would be rehabilitated under Alternative D are:

- The extent of the Union and Confederate lines and the landscape between them between Thayer's Approach and Fort Garrott, with buffer plantings to be established or remain in association with the visitor center, maintenance area, and Clay Street.

- Fort Hill and the landscape north and west of Thayer's Approach would not be cleared because there was little military activity in this area, and most of the park's forest and natural resources, wetlands, and Mint Spring Bayou exist within this area. Forest would also be retained in the area behind the Illinois Monument up to Old Jackson Road to protect the steeply sloped topography that could not otherwise be maintained, and to provide a visual screen for modern Jackson Road.

- Other areas that would not be cleared are south of Fort Garrott and Grant's Circle, which provide a visual buffer from Interstate 20 and would be difficult to maintain with vegetative cover. Parkland outside the tour road would not be cleared so that the existing visual screen would remain intact. Selective tree removal near the Tennessee Monument would be conducted to interpret the challenging nature of the landform and the obstacles faced by a Union advance in this area.

Alternative D recognizes that areas remain that were cleared but that may not be feasible to clear today due to the potential for severe soil erosion.

Alternatives Considered but Dismissed

Two alternatives were considered but dismissed. The two alternatives were Alternative E – Restoration to Civil War Siege Period (circa 1863) and Alternative F – Restoration to Park Development Period (1899 to 1917). Implementation of either of these alternatives would require the re-acquisition of former parkland that has been heavily impacted by

adjacent development. Both alternatives would require extensive tree clearing and replanting of ground cover. Extensive resources would be required to maintain the ground cover. Monumentation would be removed, and interpretive resources would be displayed at an alternative location to avoid introducing elements that are out of character with the restoration periods. Exceptions would also have to be made for the inclusion of features that do not date to the specified restoration period, such as commemorative monuments and the Visitor Center, which would negate the guiding concept of the alternatives. For these reasons, Alternatives E and F were dismissed as being not reasonable.

Selected Alternative

The NPS has chosen Alternative C (Rehabilitate/Maintain Key Areas of Military Engagement) as the selected alternative. Through the EA process, the NPS has determined that this alternative successfully fulfills identified objectives without resulting in a significant impact to the human environment.

The park's project team developed five objectives of the CLR. The five objectives are:

- To facilitate understanding and interpretation of the park story
- To experience history up close
- To protect physical features and resources from degradation
- To provide opportunities for a variety of visitor experiences while maintaining the historic character and integrity of the landscape and managing visitor use
- To develop sustainable ways of maintaining the landscape

Alternative C provides the most desirable combination of actions for meeting these objectives and fulfilling the park's mission to manage the landscape in ways that commemorate the campaign, siege, and defense of Vicksburg, as required by Congress, by preserving resources and enhancing visitor understanding and appreciation of the events that occurred while providing a variety of experiences and complying with other laws and regulations. Alternative C would provide the widest range of benefits to park visitors, the natural and cultural environments, and park maintenance, with minimal environmental degradation. Alternative C was chosen because it provides the greatest benefit to park resources, with minor to moderate adverse environmental impacts.

Mitigation and Minimization Measures of the Selected Alternative

The selected alternative will require clearing of vegetation within wetlands and along stream buffers. The park prepared a Wetland Statement of Findings (SOF), as required by NPS policy, to document the proposed wetland impacts and develop minimization and mitigation for the impacts. The park would conduct wetland mitigation activities, including maintaining and replanting stream and wetland buffers, restoring disturbed wetland areas, and conducting invasive species removal in wetlands to mitigate impacts. The wetland and stream buffer mitigation is described in the Wetland SOF and includes:

- After clearing, 7.01 acres of stream corridor and palustrine wetland in the Two-mile Creek and Mint Spring Bayou areas outside the 50-foot streambank buffer would be replanted with native grasses. Woody vegetation would be allowed to naturally regenerate in this area but would be maintained at a maximum height of 15 feet using commercial pruning and trimming equipment. Privet and other exotic species control in these areas would be conducted to avoid re-introduction of invasive species.

- A 50-foot buffer (25 feet per side) of native scrub-shrub vegetation would be maintained at a 15-foot height or less along impacted stream corridors. Within the 50-foot streambank buffer, trees taller than 15 feet would be removed, while trees shorter than 15 feet would remain. The 50-foot streambank buffer would be replanted with native species as necessary to maintain woody vegetation along the streambanks. Vegetation in this area would be maintained at a maximum height of 15 feet using commercial pruning and trimming equipment. Native species would be replanted in this area.

- A total of 0.20 acre of wetland currently maintained in herbaceous vegetation along Union Avenue downslope from the Michigan Monument would be replanted with native plant species. This area, cleared more than 30 years ago and currently maintained as a grassed field, would be allowed to return to a forested wetland. Native species would be replanted in this area.

- Approximately 0.50 acre of a 1.16-acre parcel containing "Dry Bayou," a natural spring that has been disturbed by development, would be restored by removing debris, removing non-native vegetation, and replanting with native wetland plant species. The spring is adjacent to the National Cemetery and was disturbed during construction of commercial facilities on the parcel. The park acquired the "Dry Bayou" property in 2003.

- The park would eradicate exotic plants on approximately 22 acres of forested wetlands in the Durden Creek watershed. Privet and other invasive exotics would be removed from this area.

Environmentally Preferred Alternative

Of the four alternatives described above, Alternative C was identified as environmentally preferred in the EA. The environmentally preferred alternative is determined by applying criteria set forth in NEPA, as guided by regulations issued by the CEQ. The CEQ regulations provide direction that "[t]he environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA's Section 101(b). Generally this means the alternative which causes the least damage to the biological and physical environment. It also means the alternative that best protects, preserves, and enhances historic, cultural, and natural resources." This includes alternatives that:

- Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;

- Assure for all generations safe, healthful, productive, and aesthetically 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; and

- Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

The NPS has determined that Alternative C is the environmentally preferred alternative because it is the alternative that best achieves consistency with the above 6 bulleted values of Sections 101 and 102(1) of NEPA. In this case, the selected alternative is also the environmentally preferred alternative for the park. Important cultural resources identified in the park's enabling legislation (the cultural landscape) will be better protected and interpreted through limited battlefield restoration. This alternative best protects and helps preserve the historic, cultural, and natural resources in the park for current and future generations.

Why the Selected Alternative will Not Have a Significant Effect on the Human Environment

Consideration of the effects described in the EA, and a finding that they are not significant, is a necessary and critical part of this FONSI, as required by 40 CFR §1508.13. Significance criteria are defined in 40 CFR § 1508.27. These criteria direct NPS to consider direct, indirect, and cumulative impacts of the proposed action, as well as the context and intensity of impacts:

Context. This measure of significance considers the setting within which an impact was analyzed in the EA, such as the affected region, society as a whole, affected interest, and/or a locality. The selected alternative affects only the immediate local area, in terms of resources, employees, and/or visitors. Therefore, any possible impact is limited to this level of least significance.

Intensity. This measure of significance refers to the severity of impacts, which may be both beneficial and adverse, and considers measures that will be applied to minimize or avoid impacts. As directed by 40 CFR § 1508.27, intensity is evaluated by considering the following factors:

Impacts that may be both Beneficial and Adverse

The selected alternative will have impacts on soils that are minor, short term, and adverse, while impacts to water quality will be negligible, long term, and adverse. Impacts to vegetation and wildlife will be minor, long term, and adverse. In contrast, impacts to cultural resources (specifically the cultural landscapes in the park) would be moderate in intensity, long-term and beneficial. In light of the foregoing, the proposed action would not result in significant impacts on the human environment.

Degree of Effect on Public Health and Safety

The implementation phase of Alternative C will be carefully designed to avoid disturbing park visitors. The public will be excluded from any active project area anytime work on the ground is in progress; therefore, there will be no adverse effects to public health and safety.

Unique Characteristics of the Geographic Area such as Proximity to Historic or Cultural Resources, Park Lands, Prime Farmlands, Wetlands, Wild and Scenic Rivers, or Ecologically Critical Areas

Lands at the park contain wildlife habitat, streams, wetlands, and historic and archaeological sites. The selected alternative will provide long term moderate beneficial impacts to cultural resources within the park. Based on the EA findings, it has been determined that the selected alternative will not have significant impacts to unique characteristics in the immediate vicinity or regionally. The NPS will implement specific mitigation actions to partially offset proposed wetland impacts from clearing There are no other unique characteristics of the geographic area that are affected by the proposed landscape rehabilitation.

Degree to which Effects on the Quality of the Human Environment are Likely to be Highly Controversial

Department of the Interior regulations implementing NEPA provide that the term "controversial" refers to "circumstances where a substantial dispute exists as to the environmental consequences of the proposed action and does not refer to the existence of opposition to a proposed action, the effect of which is relatively undisputed." 46 CFR § 46.30. In the present instance, no substantial dispute exists as to the environmental consequences of the selected alternative. Commenters did not identify any substantial environmental impacts omitted from or mischaracterized by the EA. Therefore, the effects from the selected alternative are not likely to be highly controversial.

Degree to which the Possible Effects on the Human Environment are Highly Uncertain or Involve Unique or Unknown Risks

The effects of the selected alternative are relatively straightforward and easily predicted. The selected alternative attempts to compensate for these risks by including specific mitigation actions that protect as much as possible the cultural and natural resources of the park. The NPS has determined that the extent and degree of uncertainty regarding impacts or unique or unknown risks is not significant.

Degree to which the Action Establishes a Precedent for Future Actions with Significant Effects or Represents a Decision in Principle about a Future Consideration

Nothing in the selected alternative establishes a precedent that would result in significant effects in the management of the park or any other areas in the National Park System. The CLR will be used by the park to guide future landscape management within existing park management guidelines.

Whether the Action is Related to Other Actions with Individually Insignificant but Cumulatively Significant Impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact to the environment.

There are no significant cumulative impacts associated with the selected alternative.

Degree to which the Action may Adversely Affect Districts, Sites, Highways, Structures, or Objects Listed or Eligible for Listing in the National Register of Historic Places (NRHP) or may Cause Loss or Destruction of Significant Scientific, Cultural or Historic Resources

The NPS, as a Federal land-holding agency, is required to locate, inventory, and nominate properties to the NRHP, and to exercise caution to protect such properties under Section 106 of the National Historic Preservation Act (NHPA). The park in its entirety is listed on the NRHP. The EA was written in compliance with Section 106 of the NHPA. The selected alternative will provide long term moderate beneficial impacts to cultural resources within the park. The Mississippi Department of Archives and History participated in the "Choosing by Advantages" process that selected Alternative C as the preferred alternative.

After applying the Advisory Council on Historic Preservation's criteria of adverse effects (36 CFR Part 800.5, *Assessment of Adverse Effects*), NPS concludes that implementation of the selected alternative (Alternative C) would not have an adverse effect on cultural resources at the park; rather, the proposed project would have beneficial effects to the cultural landscapes within the park. The Mississippi State Historic Preservation Officer has concurred with the selection of Alternative C as the preferred alternative via letter dated June 24, 2009.

Degree to which the Action May Affect an Endangered or Threatened Species or Critical Habitat

Historical review and field observations were performed to identify the presence of threatened or endangered species or potential habitat for these species. There are no known federally listed species that reside within the park, although one delisted but monitored bird species (bald eagle [*Haliaeetus leucocephalus*]) and one federally endangered bird species (interior least tern [*Sternaantillarum athalassos*]) use and may use, respectively, the park on a transitory basis. The selected alternative will not affect any federally threatened or endangered species.

There are two state listed animal species and two state-listed plant species that are known to exist within the park. The selected alternative may have minor short-term adverse effects to these species during land clearing, but would have negligible long-term adverse effects. The selected alternative would have long-term minor to moderate long-term benefits to the prairie nymph, a species that grows in the open park meadows.

The park coordinated with both the U.S. Fish and Wildlife Service (USFWS) and the Mississippi Department of Wildlife, Fisheries, and Parks as part of the NEPA process. The USFWS indicated that there are no records of any federally listed rare, threatened, or endangered species or species of concern within the project area. The USFWS has concurred with the selection of Alternative C as the preferred alternative via letter of June 3, 2009.

Whether the Action Threatens a Violation of Federal, State, or Local Law or Requirements Imposed for the Protection of the Environment

The selected alternative does not threaten a violation of any Federal, State, or local law or requirement imposed for the protection of the environment.

Impairment

In addition to reviewing the list of significance criteria, the NPS has determined that implementation of the selected alternative will not result in impairment to the park's resources and values. This conclusion is based on a thorough analysis of the environmental impacts described in the site-specific EA, public comment, relevant scientific studies and professional judgment as guided by the direction in NPS *Management Policies 2006*.

Public Involvement

The EA was released for public review on June 1, 2009. Availability of the EA was announced through the local media, mailings to a list of interested parties, through the park web page at http://www.nps.gov/vick, and through the NPS Planning, Environment and Public Comment (PEPC) website at http://parkplanning.nps.gov/vick.

park web page at http://www.nps.gov/vick, and through the NPS Planning, Environment and Public Comment (PEPC) website at http://parkplanning.nps.gov/vick.

A total of eight comments were received by the NPS during the EA comment period. Four comments expressed support for Alternative C (NPS selected alternative), two comments expressed preference for Alternative D, and the remaining comments contained questions related to the proposed project. Six comments were from individual citizens, one comment was from the U.S. Army Corps of Engineers, and one comment was from the U.S. Fish and Wildlife Service. The NPS has identified several concerns as substantive comments and has prepared responses. These responses are included in the errata sheets attached hereto and made a part of this FONSI.

Conclusion

The selected alternative (Alternative C – Rehabilitate/Maintain Key Areas of Military Engagement) does not constitute an action that normally requires preparation of an Environmental Impact Statement (EIS). The selected alternative will not have a significant effect on the human environment. Negative environmental impacts that could occur are minor to moderate in scope. There are no unmitigated adverse impacts on public health, public safety, threatened or endangered species, sites or districts listed in or eligible for listing in the NRHP or other unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, cumulative effects or elements of precedent were identified. Implementation of the selected alternative will not violate any Federal, State or local environmental protection laws.

Based on the forgoing, it has been determined that an EIS is not required for this project and thus will not be prepared.

Recommended: John Bundy 8/12/09

Mr. John Bundy
Acting Superintendent, Vicksburg
National Military Park

Date

Approved: [signature] 8/26/09

for Mr. David Vela
Regional Director, Southeast Region

Date

VICKSBURG NATIONAL MILITARY PARK

ENVIRONMENTAL ASSESSMENT

LANDSCAPE REHABILITATION

ERRATA

As required by National Park Service Director's Order No. 12, the following errata sheets respond to all substantive comments submitted on the Environmental Assessment (EA) entitled "Vicksburg National Military Park, Environmental Assessment for Landscape Rehabilitation."

Substantive comments from various individuals and organizations have been consolidated and paraphrased for purposes of this document. The comments, with NPS' responses, are set forth below. They follow a correction to the list of figures of the EA.

EA Table of Contents, List of Figures, page vii: The list of figures omits a reference to Figure 2-2, "Alternative C – Rehabilitate/Maintain Key Areas of Military Engagement." Figure 2-2 is located on page 2-12 of the EA.

Comment: "BMPs" come in all shapes and forms. What specifically will be done and when?

As described in section 2 of the EA, specific Best Management Practices (BMPs) will be developed by a team of park and regional personnel for the establishment and maintenance of the recommended landcover types. Proposed BMPs for battlefield rehabilitation are included in the EA as Appendix B. There is currently no defined schedule for implementation of the preferred alternative, but it is anticipated to begin within the next 3 to 5 years, contingent upon the availability of funding.

Comment: I also encourage your department to give more attention to the trenches. In order to meet the objective of "understanding --the campaign, siege, and defense" it is critical to develop this part of the Park. The original trench line is still visible in places, but is fast eroding. I recommend a small section of this line be chosen and then rebuilt using some more permanent support system than earth.

Rehabilitation of trenches will be conducted within the battlefield rehabilitation areas discussed for the preferred alternative (Alternative C), which will include monitoring the areas for erosion after the rehabilitation activities are complete. Also included as a part of the preferred alternative (Alternative C), is the establishment of three removable

exhibits that will facilitate visitor understanding of missing military features, including approach trenches (page 2-17 in the EA).

Comment: As a Civil War historian, I would prefer Alternative D, simply because I would like to be able to go through the Park and see what soldiers on each side saw.

Comment: I prefer Alternative D or whatever version of that alternative that will bring about the restoration of the 1863 ground cover in a sustainable way, mitigated by incompatible vistas from outside of the Park's boundaries and other such factors.

As noted, Alternative D would have rehabilitated more of the cultural landscape. However, the National Environmental Policy Act (NEPA) process requires consideration of many additional factors. Alternative C was selected as the preferred alternative. Alternative C provides visitors with the highest level of historic interpretation and diverse experiences while reducing environmental impacts.

Comment: Why is the USS Cairo not listed as a tour stop? Will it be a different tour?

The designated tour stops within the park were established prior to the construction of the USS Cairo Gunboat and Museum area. The USS Cairo is located between tour stops 7 and 8, but is not a designated tour stop.

Comment: How will increased cost (minimum of $65,000) be handled? Will additional funding be made available for this additional effort, or will money be taken from other programs? How is mitigation activities prioritized if funding is not forthcoming?

Additional funding will be required to implement the preferred alternative, and will not be diverted from existing park programs or projects. Measures will be initiated for wetlands mitigation and will include exotic species removal on approximately 22 acres along water courses not affected by battlefield rehabilitation. Exotic plant species control is already a major concern and ongoing project in the park, and is undertaken through means of prescribed burning, services of the NPS Exotic Plant Management Teams, and mechanical removal by contracted services and volunteer projects (i.e., AmeriCorps). Additionally, revegetation and reforestation will be allowed to occur naturally in concert with any future management plan(s) for replanting of native species.

Comment: (Vicksburg NMP) will lose some natural wildlife cover

Comment: The loess hardwood forest is imperiled in Mississippi because of extensive habitat modification historical agricultural conversion, and because of the current threat of additional fragmentation resulting from homesteading and urbanization around population centers. Invasion of exotic shrubs and kudzu, and effects associated with

commercial timber management (this includes conversion to pine forests and regeneration problems following clearcutting or high-grading of hardwood forests) are other factors that render this subtype vulnerable to additional decline.

Comment: The current plan is creating more edge effect reducing the amount of contiguous forest land available for wildlife.

The NPS, in its objective to provide a variety of visitor experiences while meeting its mandate to "commemorate the campaign, siege and defense of Vicksburg," recognizes the importance of the loess bluff hardwood forests located within the park. The NPS considered the impact of the preferred alternative to forested areas during the NEPA process. Species preference and use of forest edges is noted in Appendix F. Alternative C was selected as the preferred alternative. Alternative C provides visitors with the highest level of historic interpretation and diverse experiences while reducing environmental impacts. After implementation of the preferred alternative, over 1,110 acres of forests would remain protected in the park.

Comment: What steps will be taken to assure reforestation is a success?

A detailed monitoring and contingency plan for the proposed reforested areas would be developed as described on page 2-14 in the EA.

Comment: How does removal of exotic plants mitigate for loss of hardwood forest?

Removal of invasive plants is not proposed as mitigation for loss of hardwood forest. Removal of invasive plant species is a key component of the mitigation for rehabilitation in wetland areas and along stream buffers. By eradicating the invasive species, native vegetation will be better able to flourish in the park.

Comment: I hope you will include hardwoods and also include trees, shrubs, and grasses that provide food and shelter for a variety of wildlife in the reforested areas.

The reforested areas will include a variety of native species, including hardwood shrubs and grasses. A proposed list of native species for the replanting is included as Appendix A in the EA.

Comment: Will the NPS address any of these actions as outlined in the Comprehensive Wildlife Conservation Strategy?

The *Mississippi Comprehensive Wildlife Conservation Strategy 2005 – 2015* (Mississippi Department of Wildlife, Fisheries and Parks, 2005) actions cover a number of ecosystem management recommendations that are followed by NPS. These include ongoing

ecosystem research/inventories, recovery plans (where necessary), habitat restoration, BMPs, streamside buffer management, retention, preservation, and conservation of habitat, control of invasive species, habitat corridors, discouraging incompatible uses, and providing public access. All of these actions are considered and addressed under the NPS planning guidelines and NEPA.

Comment: Are any of these species slated for monitoring? "SPECIES OF GREATEST CONSERVATION NEED ASSOCIATED WITH LOESS HARDWOOD FORESTS"

Of the species listed in the full comment, only six have been documented during species inventories at the park (these include five birds and one bat). As described in the EA on page 2-14, enhanced monitoring of plants of special concern, birds, mammals, amphibians, reptiles, and water quality would be conducted in association with clearing or other changes in landcover.

Comment: Mitigation - the plan states that "approximately" 20-25 acres of currently cleared land would be reforested, but this area was not designated on the map. Reforesting in some areas could hurt wildlife, rather than help.

The reforestation areas under the preferred alternative are shown in the EA on Figure 2-2 on page 2-12. Most of these areas are located near or adjacent to park boundaries. Reforestation in these areas will benefit wildlife using the park by providing additional habitat, as well as providing additional vegetative screening from adjacent residential and commercial development.

Comment: What species will be monitored? During monitoring what will be the threshold that would trigger a decision that a change needs to be made?

As described in the EA on page 2-14, enhanced monitoring of plants of special concern, birds, mammals, amphibians, reptiles, and water quality would be conducted in association with clearing or other changes in landcover. A detailed monitoring and contingency plan for the proposed reforested areas would be developed.

Comment: I find references to changes in birds and reptiles, etc. occasioned by the clearing of postwar ground cover irrelevant. Unless the Park provides unique or unusual habitat, the impact on non-threatened species of plants and animals should not be a factor in determining how to manage this National Military Park.

Vicksburg National Military Park protects important areas of loess hardwood forest, an imperiled ecosystem that provides significant habitat for a number of animals and plants. Both law and internal policy require the NPS to consider the impacts that clearing in these areas may have on native flora and fauna. Accordingly, in pursuing its objective to

provide a variety of visitor experiences while meeting its mandate to "commemorate the campaign, siege and defense of Vicksburg," the NPS is required to consider the impact of the alternatives to wildlife and wildlife habitat during the NEPA process.

Comment: Will there be a way to clear the areas so that wildlife is prompted to move to nearby areas as the woods are cleared?

Visual intrusions, vibrations, and noise from the initiation of construction activity will generally provide impetus for animal species to relocate to other areas away from the construction activity. Monitoring of birds, mammals, amphibians, and reptiles, would be conducted in association with clearing or other changes in landcover.

Comment: Any work involving the discharge of dredged or fill material (e.g., mechanized land clearing, including stump removal; filling for various purposes, including construction of walking trails; land grading to modify slopes; bed preparation for replanting; ditching, etc.) into jurisdictional waters of the United States will require a Department of the Army Section 404 permit prior to beginning work.

Based on the proposed activity described in the preferred alternative, the project does not require a Section 404 permit as it will not require mechanized land clearing, stump removal, filling, land grading, bed preparation, ditching, or other fill/discharge activity within wetlands or streams. If the project scope changes so that impacts to wetlands or streams are proposed, the park will contact the U.S. Army Corps of Engineers to initiate the Section 404 permitting process.