



Lincoln Boyhood National Memorial

Final General Management Plan / Environmental Impact Statement



Final
General Management Plan / Environmental Impact Statement
Lincoln Boyhood National Memorial
Spencer County, Lincoln City, Indiana

Lincoln Boyhood National Memorial was authorized by an act of Congress on February 19, 1962 (Public Law 87-407). The national memorial's current *General Management Plan* was completed more than 20 years ago and has reached the limit of its effective life span. Most of its directives have been addressed or accomplished by the national memorial staff. The ongoing evolution of the park, along with its surrounding area and other outside factors, have since resulted in new issues and challenges to be addressed for the future that are beyond the scope of the 1981 *General Management Plan*.

This document examines three alternatives for managing Lincoln Boyhood National Memorial for the next 15 to 20 years. It also analyzes the impacts of implementing each of the alternatives. The “**no-action**” **alternative**, **alternative A**, describes the existing national memorial management and trends and serves as a basis for comparison in evaluating the other alternatives. The concept for national memorial management under **alternative B**, **All Things Commemorative**, would focus on the national memorial's formal and informal commemorative settings. The memorial building would be dedicated to commemoration of the Lincoln family story. The alternative would restore some elements of the memorial building and landscape to their original design and create a partnership with the adjacent Lincoln State Park in providing a visitor center and shared administrative offices. Under the “**preferred**” **alternative C**, **Exploring Lincoln's Indiana**, national memorial management would emphasize interpretive opportunities with an emphasis on the history of the Lincoln family in southern Indiana and on the natural and sociopolitical environment of the times. The memorial building would be used for interpretation and orientation purposes. Visitors would have an array of interpretive opportunities available to them and the overall character of the experience would be interactive and educational.

The key impacts of implementing the no-action **alternative A** would be: continuing with the existing modifications to memorial building structures that depart from the original historic design, such as the obliteration of a portion of the memorial building historic road, the enclosure of the cloister, and changes to the cabin site; continued inadequate parking and traffic disruption; and the limitations in providing comprehensive interpretation of the Lincoln story as a result of the current size and configuration of the memorial building.

The key impacts of implementing **alternative B** would be: restoration of the original design of the memorial building, closure of the U.S. Post Office that is in the memorial building; the restoration of the historic roadway to the east of the memorial building and the provision of overflow parking, which would remove the tree seedlings that were recently planted; the construction of the proposed joint NPS/Lincoln State Park visitor center to improve orientation and interpretation. These changes would also result in the loss of about 4 acres of vegetation, including trees and open fields, and disrupt soils on the Lincoln State Park land; the discontinuation of costumed interpretation at the Living Historical Farm; and closure of a section of County Road 300 in the national memorial.

The key impacts of implementing **alternative C** would be: the construction of a proposed addition behind the memorial building (or new building) that could result in the loss of about 0.5 acre or less of vegetation, including trees and open fields, and disruption of soils over the same area; the restoration of the historic roadway to the east of the memorial building and the provision of overflow parking, which would remove the tree seedlings that were recently planted; and a proposed reduction in speed and the use of traffic-calming techniques for the portion of County Road 300 in the national memorial.

This *Final General Management Plan/Environmental Impact Statement* has been distributed to other agencies and interested organizations and individuals. After at least a 30-day no-action period, a “Record of Decision” on the final approved management plan will be issued by the NPS regional director. For further information, contact Superintendent, Lincoln Boyhood National Memorial, P.O. Box 1816, Lincoln City, Indiana 47552

SUMMARY

Lincoln Boyhood National Memorial was authorized by an act of Congress on February 19, 1962, (Public Law 87-407) to preserve the site associated with the boyhood and family of President Abraham Lincoln, including a portion of the original Tom Lincoln farm and the nearby gravesite of Nancy Hanks Lincoln.

The national memorial's current *General Management Plan* was completed more than 20 years ago and has reached the limit of its effective life span. Most of its directives have been addressed or accomplished by national memorial staff. The ongoing evolution of the national memorial, along with its surrounding area and other outside factors, have resulted in new issues and challenges to be addressed for the future that are beyond the scope of the 1981 *General Management Plan*. A new plan is needed to

Clearly define resource conditions and visitor experiences to be achieved at Lincoln Boyhood National Memorial.

Provide a framework for NPS managers to use when making decisions about how to best protect national memorial resources, how to provide a diverse range of visitor experience opportunities, how to manage visitor use, and what kinds of facilities, if any, to develop in the national memorial.

Ensure that this foundation for decision making has been developed in consultation with interested stakeholders and adopted by the NPS leadership after an adequate analysis of the benefits, impacts, and economic costs of alternative courses of action.

This *Final General Management Plan / Environmental Impact Statement* presents three alternatives, including the National Park Service's preferred alternative, for future management of Lincoln Boyhood National Memorial. The alternatives, which are based

on the national memorial's purpose, significance, and special mandates, present different ways to manage resources and visitor use and improve facilities and infrastructure at the national memorial.

ALTERNATIVE A: THE NO-ACTION ALTERNATIVE (CONTINUE CURRENT MANAGEMENT)

The no-action alternative consists of a continuation of existing management and trends at Lincoln Boyhood National Memorial and provides a baseline for comparison in evaluating the changes and impacts of the other alternatives. The National Park Service would continue to manage Lincoln Boyhood National Memorial as it is currently being managed. Existing operations and visitor facilities would remain in place. No significant new construction would be proposed.

The key impacts of implementing the no-action alternative A would be continuing the existing modifications to memorial structures that depart from their original designs, such as the obliteration of the road east of the memorial building, the enclosure of the cloister, and changes to the cabin site; inadequate parking and the occasional traffic disruption; and the limitations in providing comprehensive interpretation of the Lincoln story as a result of the size and configuration of the memorial building.

ALTERNATIVE B

The concept for alternative B would be to manage the national memorial's resources in a way that provides visitors with an opportunity to explore the diverse ways that people have honored the Lincolns in various formal and informal commemorative settings. The Lincoln Living Historical Farm would be an

SUMMARY

outdoor exhibit evocative of how the Lincoln farm might have appeared. This alternative would restore portions of original Olmsted-designed memorial building. A partnership would be created with the adjacent Lincoln State Park in providing for a joint visitor center and shared administrative offices.

The key impacts of implementing alternative B would be closure of the U.S. Post Office in the memorial building; removal of the tree seedlings that were recently planted to extend the historic roadway in front of the memorial building and to provide for overflow parking (although these changes would improve visitor convenience); the construction of the proposed joint NPS/Lincoln State Park visitor center to enhance the visitor experience, which would result in loss of approximately 4 acres of vegetation, including trees and open fields, and disrupt soils; the loss to visitors of costumed interpretation at the Living Historical Farm; and closure of a section of County Road 300 in the national memorial.

ALTERNATIVE C, PREFERRED

Under alternative C, national memorial management would emphasize a greater array of interpretive opportunities, with the focus on the history of the Lincoln family in southern Indiana and on the natural and sociopolitical environment of the times. The Lincoln Living Historical Farm would retain its current character, but the interpretive program would provide visitors with interpretive opportunities and demonstrations directly related to the Lincoln story and the way in which the family likely lived in Indiana. The memorial building and court would remain largely unchanged, but new administrative offices would be added to the rear of the structure. Where possible, some elements of the cloister could be returned to

their original design. The new addition or structure would harmonize in size, scale, proportion, and materials with the extant structure, and would not intrude on the historic scene.

The key impacts of implementing alternative C would be additional modification to the rear of the memorial building by adding new administrative space; the construction of the proposed addition to the memorial building (or new building) that could result in the loss of 0.5 acre or less of vegetation, including trees and open fields, and the disruption of soils over the same area; and as with alternative B, the removal of the tree seedlings that were recently planted to extend the historic roadway in front of the memorial building and provide for overflow parking, which would improve visitor convenience; and a proposed reduction in speed and the use of traffic-calming techniques for the portion of County Road 300 in the national monument.

THE NEXT STEPS

The final plan includes letters from governmental agencies, any substantive comments on the draft document, and NPS responses to those comments. Following distribution of the *Final General Management Plan / Environmental Impact Statement* and a 30-day no-action period, a record of decision approving a final plan will be signed by the NPS regional director. The record of decision documents the NPS selection of an alternative for implementation. With the signed record of decision, the approved plan can then be implemented, depending on funding and staffing. (A record of decision does not guarantee funds and staff for implementing the approved plan.)

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CHAPTER 1: INTRODUCTION



The allée, across the parking area from the memorial building at Lincoln Boyhood National Memorial.

A GUIDE TO THIS DOCUMENT

This *Final General Management Plan / Environmental Impact Statement* is organized in accordance with the Council on Environmental Quality's implementing regulations for the National Environmental Policy Act and the National Park Service's Director's Orders on "Park Planning" (DO-2) and "Environmental Analysis" (DO-12).

Chapter 1: Introduction sets the framework for the entire document. It describes why the plan is being prepared and what needs it must address. It gives guidance for the alternatives that are being considered, which are based on the national memorial's legislated mission, its purpose, the significance of its resources, special mandates and administrative commitments, servicewide mandates and policies, and other planning efforts in the area.

The chapter also details the planning opportunities and issues that were raised during public scoping meetings (see insert box below) and initial planning team efforts; the alternatives in the next chapter address these issues and concerns to varying degrees. This chapter concludes with a statement of the scope of the environmental impact analysis — specifically what impact topics were or were not analyzed in detail.

Chapter 2: Alternatives, Including the Preferred Alternative, begins by describing the management prescriptions that will be used to manage the national memorial in the future. It also consists of the continuation of current management and trends in the national memorial (alternative A, the no-action alternative). Then alternatives B and C (the preferred) are presented. Mitigative measures proposed to minimize or eliminate the impacts of some proposed actions are described just before the discussion of future studies and/or implementation plans that will be needed. The evaluation of the environmentally preferred alternative is

followed by summary tables of the alternative actions and the environmental consequences of implementing those alternative actions. The chapter concludes with a discussion of alternatives or actions that were dismissed from detailed evaluation.

Chapter 3: Affected Environment describes those areas and resources that would be affected by implementing actions in the various alternatives — cultural resources, natural resources, visitor use and experience, socioeconomic environment, and NPS operations.

Chapter 4: Environmental Consequences analyzes the impacts of implementing the alternatives on topics described in the "Affected Environment" chapter. Methods that were used for assessing the impacts in terms of the intensity, type, and duration of impacts are outlined at the beginning of the chapter.

Chapter 5: Consultation and Coordination describes the history of public and agency coordination during the planning effort; it also lists agencies and organizations who will be receiving copies of the document.

The **Appendixes** present supporting information for the document, along with references, and a list of the planning team and other consultants.

*The primary goal of **scoping** is to identify issues and determine the range of alternatives to be addressed. During scoping, the NPS staff provides an overview of the proposed project, including purpose and need and alternatives. The public is asked to submit comments, concerns, and suggestions.*

PURPOSE AND NEED FOR THE PLAN

Why We Do General Management Planning

The National Parks and Recreation Act of 1978 requires each unit of the National Park Service (NPS) to develop a general management plan), and NPS Management Policies 2001 states “[t]he Service will maintain an up-to-date general management plan for each unit of the national park system” (2.3.1 General Management Planning). But what is the value, or usefulness, of general management planning?

The purpose of a general management plan is to ensure that a park has a clearly defined direction for resource preservation and visitor use to best achieve the National Park Service’s mandate to preserve resources unimpaired for the enjoyment of future generations. In addition, general management planning makes the National Park Service more effective, collaborative, and accountable by

- providing a balance between continuity and adaptability in decision making — Defining the desired conditions to be achieved and maintained in a park provides a touchstone that allows park managers and staff to constantly adapt their actions to changing situations while staying focused on what is most important about the park.*
- analyzing the park in relation to its surrounding ecosystem, cultural setting, and community — This helps park managers and staff understand how the park can interrelate with neighbors and others in ways that are ecologically, socially, and economically sustainable. Decisions made within such a larger context are more likely to be successful over time.*
- affording everyone who has a stake in decisions affecting a park an opportunity to be involved in the planning process and to understand the decisions that are made — national parks are often the focus of intense public interest. Public involvement throughout the planning process provides focused opportunities for park managers and staff to interact with the public and learn about public concerns, expectations, and values. Public involvement also provides opportunities for park managers and staff to share information about park purpose and significance, as well as opportunities and constraints for the management of park lands.*

The ultimate outcome of general management planning for national parks is an agreement among the National Park Service, its partners, and the public on why each area is managed as part of the national park system, what resource conditions and visitor experience should exist there, and how those conditions can best be achieved and maintained over time.

INTRODUCTION

This *Final General Management Plan / Environmental Impact Statement* presents and analyzes three alternative future directions for the management and use of Lincoln Boyhood National Memorial. Alternative C is the National Park Service’s preferred alternative.

The potential environmental impacts of all alternatives have been identified and assessed.

General management plans are intended to be long-term documents that establish and articulate a management philosophy and framework for decision making and problem solving in the national park system units.

General management plans usually provide guidance during a 15 to 20 year period.

Actions directed by general management plans or in subsequent implementation plans are accomplished over time. Budget restrictions, requirements for additional data or regulatory compliance, and competing national park system priorities prevent immediate implementation of many actions. Major or especially costly actions could be implemented 10 or more years into the future.

BRIEF DESCRIPTION OF THE PARK

The national memorial, in Lincoln City, Indiana (see Vicinity map), was established in 1962 by Public Law 87-407; (see appendix A). Lincoln Boyhood National Memorial commemorates the pioneer farm where Abraham Lincoln lived from the age of 7 to 21. Located in Spencer County in southwestern Indiana, it is also the burial site for Lincoln's mother, Nancy Hanks Lincoln. Although no physical traces of the Lincolns' farm remained above ground, in the late 1800s, local residents began creating a memorial landscape at this site. It provided an opportunity for visitors to pay their respect to President Lincoln's memory and to learn more about his family's Indiana roots.

For many years, the site, the Nancy Hanks Lincoln Memorial, was maintained as a local park and picnic area. Because it was frequently neglected, state agencies became involved during the 1920s. By that time the park featured decorative elements such as ornate gates, concrete sculptures, ornamental plantings, and a picnic area.

Between 1927 and the 1940s the Indiana Department of Conservation led the effort to create a more formal Lincoln memorial. The state hired Olmsted Brothers, a renowned landscape architecture firm, to prepare a design for the memorial. Next, a landscape architect, Donald Johnson, was hired to

supervise the implementation of the Frederick Law Olmsted Jr. design. After completion, the site was maintained and interpreted as Lincoln State Park.

Efforts to get President Lincoln's Indiana roots recognized at a national level resulted in the site's 1962 designation as a national memorial. The commemorative designed landscape has since been administered and interpreted by the National Park Service. In 1976 the entire memorial was listed in the National Register of Historic Places.

PURPOSE OF THE PLAN

The approved general management plan will be the basic document for managing Lincoln Boyhood National Memorial for the next 15 to 20 years. The purposes of this general management plan are as follows:

- Confirm the purpose, significance, and special mandates of Lincoln Boyhood National Memorial.
- Clearly define resource conditions and visitor uses and experiences to be achieved in the national memorial.
- Provide a framework for NPS managers to use when making decisions about how to best protect national memorial resources, how to provide quality visitor uses and experiences, how to manage visitor use, and what kinds of facilities, if any, to develop in/near the national memorial.
- Ensure that this foundation for decision making has been developed in consultation with interested and affected parties and adopted by the NPS leadership after an adequate analysis of the benefits, impacts, and economic costs of alternative courses of action.

Legislation establishing the National Park Service as an agency and governing its management provides the fundamental direction for the administration of Lincoln Boyhood



Vicinity

Lincoln Boyhood National Memorial

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National Memorial (and other units and programs of the national park system). This general management plan will build on these laws and the legislation that established Lincoln Boyhood National Memorial to provide a vision for the national memorial's future. The "Servicewide Mandates and Policies" section calls the reader's attention to topics that are important to understanding the management direction at the national memorial.

The alternatives in this general management plan address the desired future conditions that are not mandated by law and policy and must be determined through a planning process.

The general management plan does not describe how particular programs or projects should be prioritized or implemented. Those decisions will be addressed in future more detailed planning and management efforts. All future plans will tier from the approved general management plan.

NEED FOR THE PLAN

This new management plan for Lincoln Boyhood National Memorial is needed because the national memorial's current *General Management Plan* was completed more than 20 years ago and has reached the limit of its effective life span. Most of its directives have been addressed or accomplished by NPS staff. The ongoing evolution of the national memorial, along with its surrounding area and other outside factors, have since resulted in new issues and challenges to be addressed for the future that are beyond the scope of the 1981 *General Management Plan*.

Each of these changes has implications for how visitors access and use the national memorial and the facilities needed to support those uses, how resources are managed, and how the National Park Service manages its operations.



Nancy Hanks Lincoln Hall in the memorial building at Lincoln Boyhood National Memorial.

A general management plan also is needed to meet the requirements of the National Parks and Recreation Act of 1978 and NPS policy, which mandate development of a general management plan for each unit in the national park system.

THE NEXT STEPS

The final plan includes letters from governmental agencies, any substantive comments on the draft document, and NPS responses to those comments. Following distribution of the *Final General Management Plan / Environmental Impact Statement* and a 30-day no-action period, a record of decision approving a final plan will be signed by the NPS regional director. The record of decision documents the NPS selection of an alternative for implementation. With the signing of the record of decision, the plan can then be implemented.

IMPLEMENTATION OF THE PLAN

The implementation of the approved plan will depend on future funding. The approval of a plan does not guarantee that the funding and staffing needed to implement the plan will be forthcoming. Full implementation of the approved plan could be many years in the future.

The implementation of the approved plan also could be affected by other factors. Once the general management plan has been approved, additional feasibility studies and more detailed planning and environmental documentation would be completed, as required before any proposed actions can be carried out. These more detailed plans will tier from the approved general management plan, describing specific actions managers intend to take to achieve desired conditions and long-term goals.

GUIDANCE FOR THE PLANNING EFFORT

PURPOSE AND SIGNIFICANCE

Purpose

Purpose statements are based on the national memorial's legislation and legislative history. The statements reaffirm the reasons for which the Lincoln Boyhood National Memorial was set aside as a unit of the national park system and provide the foundation for management and use of the national memorial.

The purpose of Lincoln Boyhood National Memorial is to

Preserve and interpret the site associated with the boyhood and family of President Abraham Lincoln and the grave site of Nancy Hanks Lincoln as a public memorial.

Significance

Significance statements capture the essence of the Lincoln Boyhood National Memorial's importance to our country's natural and cultural heritage. Significance statements do not inventory the national memorial's resources; rather, they describe its distinctiveness and help to place Lincoln Boyhood National Memorial within its regional, national, and international contexts. Defining the national memorial's significance helps managers make decisions that preserve the resources and values necessary to accomplish the national memorial's purpose.

The significance of Lincoln Boyhood National Memorial is as follows:

Lincoln Boyhood National Memorial contains the farm of Thomas Lincoln and the marked gravesite of Nancy Hanks Lincoln and is associated with

the formative years of Abraham Lincoln's life from age 7 to 21.

Lincoln Boyhood National Memorial was established to nationally commemorate President Abraham Lincoln. The site contains physical expressions of the nation's respect and reverence for President Abraham Lincoln, including formal and informal memorial landscapes.

SERVICEWIDE LAWS AND POLICIES

Many national park system management directives are specified in laws and policies guiding the National Park Service and are therefore not subject to alternative approaches. For example, there are laws and policies about managing environmental quality (such as the Clean Air Act, the Endangered Species Act, and Executive Order 11990 "Protection of Wetlands"); laws governing the preservation of cultural resources (such as the National Historic Preservation Act and the Native American Graves Protection and Repatriation Act); and laws about providing public services (such as the Americans with Disabilities Act) — to name only a few. In other words, a general management plan is not needed to decide, for instance, that it is appropriate to protect endangered species, control exotic species, protect archeological sites, conserve artifacts, or provide for handicap access. Laws and policies have already decided those and many other things for us. Although attaining some of these conditions set forth in these laws and policies may have been temporarily deferred at the national memorial because of funding or staffing limitations, the National Park Service will continue to strive to implement these requirements.

Some of these laws and executive orders are applicable solely or primarily to units of the national park system. These include the 1916 Organic Act that created the National Park Service, the General Authorities Act of 1970, the act of March 27, 1978, relating to the management of the national park system, and the National Parks Omnibus Management Act (1998). Other laws and executive orders have much broader application, such as the Endangered Species Act, the National Historic Preservation Act, and Executive Order 11990 addressing the protection of wetlands.

The NPS Organic Act (16 USC § 1) provides the fundamental management direction for all units of the national park system:

[P]romote and regulate the use of the Federal areas known as national parks, monuments, and reservations...by such means and measure as conform to the fundamental purpose of said parks, monuments and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.

The National Park System General Authorities Act (16 USC § 1a-1 et seq.) affirms that while all national park system units remain “distinct in character,” they are “united through their interrelated purposes and resources into one national park system as cumulative

expressions of a single national heritage.” The act makes it clear that the NPS Organic Act and other protective mandates apply equally to all units of the system. Further, amendments state that NPS management of park system units should not “derogat[e] . . . the purposes and values for which these various areas have been established.”

The National Park Service also has established policies for all units under its stewardship. These are identified and explained in a guidance manual entitled *NPS Management Policies 2001*. The alternatives considered in this document incorporate and comply with the provisions of these mandates and policies.

To truly understand the implications of an alternative, it is important to combine the servicewide mandates and policies with the management actions described in an alternative.

Table 1 shows some of the most pertinent servicewide mandates and policy topics related to planning and managing Lincoln Boyhood National Memorial; across from each topic are the *desired conditions that the staff is striving to achieve* for that topic.

The alternatives in this general management plan address the desired future conditions that are not mandated by law and policy and must be determined through a planning process.

TABLE 1. SERVICEWIDE MANDATES AND POLICIES PERTAINING TO THE NATIONAL MEMORIAL

ARCHEOLOGICAL RESOURCES	
Current laws and policies require that the following conditions be achieved in the national memorial.	
Desired Condition	Source
Archeological sites area identified and inventoried and their significance is determined and documented. Archeological sites are protected in an undisturbed condition unless it is determined through formal processes that disturbance or natural deterioration is unavoidable. When disturbance or deterioration is unavoidable, the site is professionally documented and excavated and the resulting artifacts, materials, and records are curated and conserved in consultation with the Indiana state historic preservation office and American Indian tribes. Opportunities for future research should be explored.	National Historic Preservation Act; Archeological Resources Protection Act; the <i>Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation</i> ; programmatic memorandum of agreement among the National Park Service, the Advisory Council on Historic Preservation, and the National Council of State Historic Preservation Officers (1995); <i>NPS Management Policies 2001</i> , DO 28
HISTORIC STRUCTURES	
Current laws and policies require that the following conditions be achieved for historic structures (e.g., buildings, structures, roads, and trails).	
Desired Condition	Source
Historic structures are inventoried and their significance and integrity are evaluated under National Register of Historic Places criteria. The qualities that contribute to the listing or eligibility for listing of historic structures in the national register are protected in accordance with the <i>Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation</i> (unless it is determined through a formal process that disturbance or natural deterioration is unavoidable).	National Historic Preservation Act; Archeological and Historic Preservation Act; the <i>Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation</i> ; <i>Secretary of the Interior’s Standards for the Treatment of Historic Properties</i> ; programmatic memorandum of agreement among the National Park Service, the Advisory Council on Historic Preservation, and the National Council of State Historic Preservation Officers (1995); <i>NPS Management Policies 2001</i> , DO 28 “Cultural Resource Management Guideline.”
CULTURAL LANDSCAPES	
Current laws and policies require that the following conditions be achieved for cultural landscapes.	
Desired Condition	Source
Cultural landscape inventories are conducted to identify landscapes potentially eligible for listing in the national register and to assist in future management decisions for landscapes and associated resources, both cultural and natural.	National Historic Preservation Act of 1966, as amended (16 USC 470); Advisory Council on Historic Preservation’s implementing regulations regarding the “Protection of Historic Properties” (36 CFR 800); <i>Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes</i> (1996); National Park Service’s <i>Management Policies</i> (2001); National Park Service’s <i>Cultural Resources Management Guideline</i> (DO-28, 1996)
The management of cultural landscapes focuses on preserving the landscape’s physical attributes that contributes to its historical significance.	
The preservation, rehabilitation, restoration, or reconstruction of cultural landscapes is undertaken in accordance with the <i>Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes</i> .	

RELATIONSHIP OF OTHER PLANNING EFFORTS TO THIS GENERAL MANAGEMENT PLAN

Lincoln Boyhood National Memorial is in Lincoln City, Indiana. Properties surrounding the national memorial are primarily privately owned residential and agricultural lands. Lincoln State Park, under the Indiana Department of Natural Resources, is across a two-lane highway from Lincoln Boyhood National Memorial. There are no tribal lands nearby.

LOCAL PLANS

The basic land use of the national memorial as a public recreation management area is consistent with local land use, and because the proposed management prescriptions under all the alternatives would not change these basic uses, there are no anticipated conflicts with local land use planning. The creation of additional recreation and visitor service opportunities in the national memorial, as proposed under certain of the alternatives, is consistent with existing national memorial local (non-national-memorial) land uses.

LINCOLN STATE PARK — MASTER PLAN

The adjacent Indiana Department of Natural Resources/Lincoln State Park is guided by a master plan that was released in 1987. The mission at Lincoln State Park is very different than the purpose of Lincoln Boyhood National Memorial. Although each area has a different mission, together, they provide visitors with a greater opportunity to learn and explore the Lincoln family life in Indiana.

The mission of Lincoln State Park is to

- provide a place where people can enjoy and select activities that will enrich their lives;
- provide a range of recreation facilities and natural and cultural programs for all age groups;
- provide a stimulating environment for the enjoyment and appreciation of the out-of-doors.

Lincoln State Park provides a range of outdoor recreational opportunities in addition to staged performances. The missions of the two areas complement each other providing for a diverse array of visitor activities, interpretation, and services.

IMPLEMENTATION PLANS

The National Park Service prepares detailed plans that implement the policies and goals of the general management plan. Much of the management guidance that evolves from the general management plan is further defined in more specific “implementation plans.” The following implementation plans reflect the management strategies that are presented in this general management plan: *Resource Management Plan* (1998), *Fire Management Plan* (NPS 2004), “Cultural Landscape Report” (NPS 2001), “Historic Structures Report” (NPS 2003), and “Comprehensive Interpretive Plan” (NPS 2004).

PLANNING ISSUES/CONCERNS

INTRODUCTION

Various issues and concerns were identified during the scoping process (early information gathering) for this general management plan by the general public, NPS staff, and representatives from other government agencies.

An issue is defined as an opportunity, conflict, or problem regarding the use or management of public lands. Comments were solicited at public meetings and through planning newsletters.

Comments received during scoping demonstrated that there is much that the public likes about the national memorial — its management, use, and facilities. The issues and concerns generally involve determining the appropriate visitor experience, cultural landscape, visitor facilities, and efficient NPS operations. The general management plan alternatives provide strategies for addressing the issues within the context of the national memorial's purpose, significance, and special mandates.

ISSUES

The following issues were identified for Lincoln Boyhood National Memorial.

Cultural Landscape

The cultural landscape at Lincoln Boyhood National Memorial, consisting of various historic commemorative structures and of natural and maintained settings, has evolved over the years as individuals and organizations developed ways to commemorate President Abraham Lincoln, Nancy Hanks Lincoln, and their family's life in southern Indiana. The alternatives explore different

ways to maintain the original intent of these diverse commemorative landscapes while accommodating visitation and new approaches to interpretation while providing for efficient management.

Visitor Experience

Visitors to the national memorial pursue different ways to commemorate and explore the life of the Lincolns in southern Indiana that best fit their interests and learning style. Some visitors choose to commemorate President Abraham Lincoln while others want to learn about what life was like for the Lincoln family. With few historic artifacts and no remaining structures from Thomas Lincoln's homestead, visitors depend on the National Park Service to effectively interpret Lincoln's boyhood and life and provide educational opportunities at the site of his family farm.

Traffic that is unrelated to the national memorial distracts from the mission and visitor experiences of the national memorial. Local traffic on County Roads 300 and 1625N crosses directly through the national memorial. In addition to noise, the traffic unnecessarily contributes to the circulation patterns in the national memorial.

Because Lincoln Boyhood National Memorial is directly across a two-lane highway from Lincoln State Park, many visitors have a "disconnect" of the historical and recreational opportunities that are provided in the immediate area. The two Lincoln areas, with entrances directly across from each other, contribute to the confusion of a first-time visitor of which direction to pursue. Both areas have a very different mission, although taken together they provide visitors with a complementary range of opportunities.

For visitors to explore the variety of settings and interpretive opportunities of Lincoln's life in Indiana, they will need time and facilities to relax and regroup, especially school groups and families with children.

Visitor Facilities

Because the national memorial has limited actual artifacts and structures from President Lincoln's boyhood era, visitors depend on interpretation, wayside exhibits, and museum exhibits to understand Abraham Lincoln's family and his youth. The current visitor facility at the memorial building has insufficient and inflexible space to accommodate a comprehensive range of interpretive themes in the context of Lincoln's family life in southern Indiana.

In the 1960s a demonstration farm was established at the national memorial to reflect the farming techniques and daily pioneer life that would have been used during the era of Abraham Lincoln's boyhood. The alternatives explore ways to effectively integrate the demonstration farm into the commemorative and interpretive themes of the national memorial.

Efficient NPS Operations

Facilities at the national memorial headquarters do not provide effective and adequate space for current NPS staff and associated storage requirements. The space available for the bookstore is also inadequate. The lack of adequate and appropriate space has created some inefficiencies in NPS operations.

ISSUES AND CONCERNS NOT ADDRESSED IN THE GENERAL MANAGEMENT PLAN

Not all of the issues or concerns raised by the public are included in this general management plan; other issues raised by the public were not included if they

- are already prescribed by law, regulation, or policy (see the "Servicewide Mandates and Policies" section)
- would be in violation of laws, regulations, or policies
- were at a level that was too detailed for a general management plan and are more appropriately addressed in subsequent planning documents

Boundary Adjustments

Lincoln Boyhood National Memorial currently includes the significant sites that interpret the history of the Lincoln family in southern Indiana.

Freight Trains

Railroad tracks cross through the national memorial on easements that were established long ago. The daily freight train activity can inconvenience visitors who must wait at the crossing until the train has passed. The trains are a necessity for the local economy. Based on the low intensity of the inconvenience versus the high cost associated with relocating the railroad tracks or constructing a pedestrian underpass/overpass, the idea of removing and relocating the tracks was dismissed and this issue is not explored further in this general management plan.

IMPACT TOPICS — RESOURCES AND VALUES AT STAKE IN THE PLANNING PROCESS

IMPACT TOPICS

An important part of planning is seeking to understand the consequences of making one decision over another. To this end, NPS general management plans are accompanied by full environmental impact statements. Environmental impact statements identify the anticipated impacts of possible actions on resources and on visitors and neighbors. Under each alternative, in chapter 4, impacts are organized by topic, such as “impacts on cultural resources” or “impacts on visitor experience.” Impact topics serve to focus the environmental analysis and to ensure the relevance of impact evaluation. The impact topics identified for this general management plan are outlined in this section; they were identified based on federal laws and other legal requirements, Council on Environmental Quality (CEQ) guidelines, NPS management policies, staff subject-matter expertise, and issues and concerns expressed by the public and other agencies early in the planning process (see previous section). Also included is a discussion of some impact topics that are commonly addressed, but that are not addressed in this plan for the reasons given.

IMPACT TOPICS TO BE CONSIDERED

Cultural and Archeological Resources

The National Historic Preservation Act and the National Environmental Policy Act require that the effects of any federal undertaking on cultural resources be examined. Also, *NPS Management Policies*, and *Cultural Resource Management Guideline* (Director’s Order 28) call for the consideration of cultural resources in planning proposals. Actions proposed in this plan could affect

archeological resources and historic structures and cultural landscapes.

Natural Resources

Much of the memorial is covered by successional hardwood forest. Promoting the rehabilitation and success of the oak-hickory forest/woodland is a goal identified in the national memorial’s “Resource Management Plan.” Actions proposed in some alternatives might affect the vegetation and/or soil resources of the national memorial.

Visitor Experience

The planning team identified visitor experience as an important issue that could be appreciably affected under the alternatives. The Organic Act and *NPS Management Policies 2001* direct the National Park Service to provide enjoyment opportunities for visitors that are uniquely suited and appropriate to the resources found in the national memorial. Three major aspects of visitation and enjoyment are evaluated: quality of visitor experience, the range of visitor opportunities, and the comprehensiveness of interpretation.

Socioeconomic Environment

Commuter traffic and a post office are unrelated uses that currently exist in the national memorial. Some actions proposed in the alternatives would affect these uses.

NPS Operations

Most of the national memorial’s operational activities have to be adapted within existing

facilities. The incremental pattern of this evolution has resulted in inadequate spaces and inefficiencies in operations.

IMPACT TOPICS DISMISSED FROM FURTHER CONSIDERATION

Some impact topics that commonly are considered during the planning process were not relevant to the development of this general management plan for Lincoln Boyhood National Memorial due to the following: (a) implementing the alternatives would have no effect or a negligible effect on the topic or resource or (b) the resource does not occur in the national memorial. These topics are as follows.

Museum Collection

The preservation and management of Lincoln Boyhood National Memorial's museum collection is guided by the 1996 "Collection Management Plan." The national memorial is in the process of designing a new facility that will be completed in 2005. The new facility will accommodate the current collection and house future additions while meeting NPS standards.

Indian Trust Resources

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

There are no Indian trust resources in Lincoln Boyhood National Memorial. The lands comprising the national memorial are not held in trust by the secretary of the interior for the benefit of Indians due to their status as Indians. Therefore, Indian trust resources were dismissed as an impact topic.

Sacred Sites

According to Executive Order 13007 on "Indian Sacred Sites" (1996) the National Park Service will accommodate, to the extent practicable, access to and ceremonial use of Indian sacred sites by religious practitioners from recognized American Indian and Alaska native tribes and would avoid adversely affecting the integrity of such sacred sites. Accordingly, the Peoria Tribe of Oklahoma and the Delaware Tribe of Western Oklahoma were contacted and the National Park Service has not found evidence of any sites at Lincoln Boyhood National Memorial (see appendix B).

Air Quality

The President's Council on Environmental Quality guidelines for preparing environmental impact statements requires the lead agency to analyze the impacts of the proposed action and alternatives on air quality.

Under each of the management alternatives, visitor use and administrative operations would generate similar levels of air pollutant emissions from motor vehicles and motorized equipment, water and sewage treatment operations, and propane and natural-gas-fueled appliances used to heat employee residences. Some dust and fumes would be generated during the maintenance, improvement, construction, or removal of roads, trails, and other facilities. The National Park Service would follow established policy requiring the use of energy-efficient and

environmentally friendly products and processes whenever possible.

Floodplains/Wetlands

Executive Orders 11988, “Floodplain Management,” and 11990 “Protection of Wetlands” require an examination of impacts on floodplains and wetlands and of potential risk involved in placing facilities within floodplains. Although the water resources of the memorial include a small man-made farm pond and several small ephemeral pools, none of the alternatives would change or affect the water resources.

Prime and Unique Farmlands

The Natural Resource Conservation Service in Spencer County, Indiana, was consulted in the identification of soil classification in relation to prime and unique farmlands. Scattered in different areas of the national memorial are soils that contribute to the prime and unique farmland classification. None of the proposed alternatives will add or subtract farmland under protection, or adversely impact the soils in these classifications.

Threatened or Endangered Species or Species of Concern

The national memorial is in the range of the federally endangered Indiana Bat (*Myotis sodalist*) and federally threatened bald eagle (*Haliaeetus leucocephalus*). The U.S. Fish and Wildlife Service letter of October 10, 2000, (appendix C) states that “there is no bald eagle habitat on the memorial.” The letter also reports that “there are no known Indiana bat hibernaculae within or near the Memorial.” Additionally, the U.S. Fish and Wildlife Service notes that “there are no current records of Indiana bats near the site,

but to our knowledge most of the area has not been surveyed.”

The U.S. Fish and Wildlife Service recommended a set of management practices to preserve the natural conditions for the Indiana bats for potential future habitat. These recommendations have been adopted and are being implemented by the national memorial staff (under any alternative). These recommendations are discussed in Chapter 2 under “Mitigative Measures Common to All Alternatives.” With the U.S. Fish and Wildlife Service’s conservation measures being implemented, no impacts would be anticipated.

Wildlife

To optimize wildlife abundance and diversity, the U.S. Fish and Wildlife Service recommends that the forest be managed to maintain a high diversity of native hardwoods, shrubs, and forbs. A mixed-age forest is desirable, with an abundance of old trees and snags and forbs. All alternatives continue the natural resource management strategies as described in the U.S. Fish and Wildlife Service’s letter in appendix C.

Some increased disturbance and loss of habitat could occur with proposed construction activities. However, the proposed construction in alternatives B and C would occur in areas that have already been disturbed or where human activities are already occurring. Wildlife species inhabiting the national memorial are already adapted to high levels of disturbance and human activity and would be negligibly affected by implementing any of the alternatives. None of the alternatives would be expected to cause measurable changes in the abundance or distribution of any wildlife species.

Wild and Scenic Rivers

There are no river resources within Lincoln Boyhood National Memorial.

Conformity with Local Land Use Plans

The use of the national memorial as a historic site is consistent with local land use; because the proposed management prescriptions under all the alternatives would not change these basic uses, there are no anticipated conflicts with local land use planning. The creation of additional visitor opportunities in the national memorial as proposed under certain of the alternatives is consistent with existing national memorial land uses. Therefore, given the relatively small scale of the national memorial, there is no need to analyze in detail the consistency of the alternatives with local and regional planning.

Energy Requirements and Conservation Potential

None of the alternatives presented in this environmental impact statement would result in a measurable change in energy consumption compared to current conditions.

The National Park Service would pursue sustainable practices whenever possible in all decisions regarding national memorial operations, facilities management, and developments in Lincoln Boyhood National Memorial, as called for in *NPS Management Policies 2001*.

Environmental Justice

Executive Order 12898, “Federal 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.

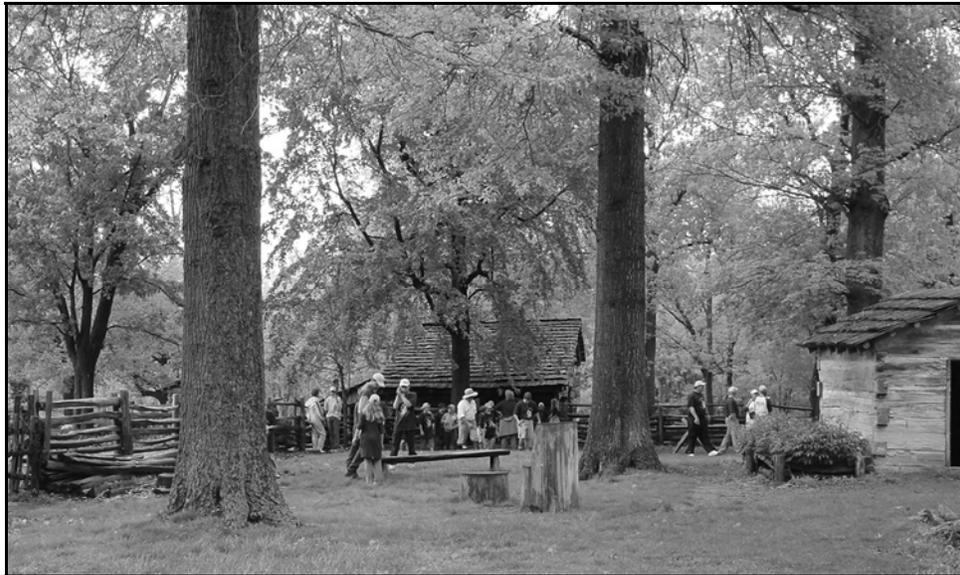
For the purpose of fulfilling Executive Order 12898, in the context of the National Environmental Policy Act, the alternatives addressed in this plan were assessed during the planning process. It was determined that none of these alternatives would result in disproportionately high direct or indirect adverse effects on any minority or low-income population or community. The following information contributed to this conclusion:

- The developments and actions in the alternatives would not result in any identifiable human health effects. Therefore, there would be no direct or indirect effects on human health within any minority or low-income population or community.
- The effects on the natural and physical environment that would occur due to any of the alternatives would not disproportionately adversely affect any minority or low-income population or community, or be specific to such populations or communities.
- The alternatives would not result in any identified effects that would be specific to any minority or low-income community.

Public Health and Safety

The proposed developments and actions in the alternatives would not result in any identifiable impacts on human health or safety. The alternatives were designed to take these factors into consideration and to remove them wherever possible.

CHAPTER 2: ALTERNATIVES, INCLUDING THE PREFERRED ALTERNATIVE



The Lincoln Living Historical Farm's barn and smokehouse at
Lincoln Boyhood National Memorial.

INTRODUCTION

Many aspects of the desired future condition of Lincoln Boyhood National Memorial are defined in the establishing legislation, the national memorial's purpose and significance statements, and the servicewide mandates and policies that were described earlier. Within these parameters, the National Park Service solicited input from the public, national memorial staff, government agencies, tribal officials, and other organizations regarding issues and desired conditions for the national memorial. Planning team members gathered information about existing visitor use and the condition of the national memorial's facilities and resources. They considered which areas of the national memorial attract visitors, and which areas have sensitive resources.

Using the above information the planning team developed a set of six management prescriptions and three alternatives to reflect the range of ideas proposed by the national memorial staff and the public.

This chapter describes the management prescriptions and the alternatives for managing the national memorial for the next 15 to 20 years. It includes tables that summarize the key differences between the alternatives and the key differences in the impacts that could be expected from implementing each alternative. (The summary of impacts table is based on the analysis in Chapter 4, "Environmental Consequences.") This chapter also describes mitigative measures that would be used to lessen or avoid impacts, the future studies that would be needed, and the environmentally preferable alternative.

MANAGEMENT PRESCRIPTIONS AND ALTERNATIVES

The building blocks for reaching an approved plan for managing a national park system unit are the management prescriptions and the

alternatives. All are developed within the scope of the national memorial's purpose, significance, mandates, and legislation.

Management prescriptions are descriptions of desired conditions for national memorial resources and visitor experiences in different areas of the national memorial. Management prescriptions are determined for each national park system unit. The management prescriptions identify the widest range of potential appropriate resource conditions, visitor experiences, and facilities for the national memorial that fall within the scope of the national memorial's purpose, significance, and special mandates. Six management prescriptions have been identified for Lincoln Boyhood National Memorial.

It may help to think of the management prescriptions as the colors an artist has to paint a picture. The alternatives in this general management plan are the different pictures that could be painted with the colors (management prescriptions) available. Each of the alternatives has an overall management concept and a description of how different areas of the national memorial would be managed (management prescriptions and related actions). The concept for each alternative gives the artist (or in this case the planning team) the idea for what the picture (alternative) is going to look like.

This *Final General Management Plan/ Environmental Impact Statement* presents three alternatives for future management of Lincoln Boyhood National Memorial. Alternative A, the "no-action" alternative that presents a continuation of existing management direction, is included as a baseline for comparing the consequences of implementing each alternative. The other "action" alternatives are alternative B and alternative C. The National Park Service's preferred alternative is C.

The action alternatives present different ways to manage resources and visitor use and improve facilities and infrastructure at the national memorial. These alternatives embody the range of what the public and the National Park Service want to see accomplished with regard to natural resource conditions, cultural resource conditions, and visitor use and experience at Lincoln Boyhood National Memorial. The actual configurations for each alternative were developed by overlaying the management prescriptions on a map of the national memorial.

As noted above in the "Guidance for Planning" section, the National Park Service would continue to follow existing agreements and servicewide mandates, laws, and policies regardless of the alternatives considered in this plan. These mandates and policies are not repeated in this chapter.

To truly understand the implications of an alternative, it is important to interpret the actions proposed in an alternative in the context of the servicewide mandates and policies (see pages 9–11).

FORMULATION OF THE ALTERNATIVES

The alternatives focus on *what* resource conditions and visitor uses and experiences/opportunities should be at the national memorial rather than on details of *how* these conditions and uses/experiences should be achieved. Thus, the alternatives do not include many details on resource or visitor use management strategies. More detailed plans or studies will be required before most conditions proposed in the alternatives are achieved.

The implementation of any alternative also depends on future funding and environmental compliance. This plan does not guarantee that the money will be forthcoming. The plan establishes a vision of the future that will guide day-to-day and year-to-year management of the national memorial, but full implementation could take many years.

IDENTIFICATION OF THE PREFERRED ALTERNATIVE

The development of a preferred alternative involves evaluating the alternatives with the use of an analysis process called “choosing by advantages” or “CBA.” Through this process, the planning team identifies and compares the relative advantages of each alternative according to a set of factors. The benefits or advantages of each alternative were compared for each of the following CBA factors:

- Promotes understanding of the Lincolns in Indiana.
- Maximize the range of visitor opportunities.
- Provides a physical/logical cohesive visitor experience.
- Preserves the formal and informal memorial landscapes.

The relationships between the advantages and costs of each alternative were established. This information was used to combine the best attributes of the initial alternatives into the preferred alternative. This alternative gives the National Park Service the greatest overall benefits for each point listed above for the most reasonable cost.

MANAGEMENT PRESCRIPTIONS

The National Park Service planning process requires the description of specific “management prescriptions” for each particular area of a park system unit. Management prescriptions identify how different areas of the national memorial could be managed for specific natural and cultural resource conditions and visitor experiences. Desired conditions for national memorial cultural and natural resources and for visitor experiences are different in each management prescription. The various prescriptions are then allocated to different geographic locations, creating a set of “management zones”. The alternative configurations could propose future conditions that are similar to or quite different from existing conditions. The management prescriptions were developed as a result of this planning effort and therefore are not applied to the no-action alternative.

The planning team has described six possible management prescriptions that could be appropriate to various areas at Lincoln Boyhood National Memorial. Ideas for the range of prescriptions came from public comments and from staff at the national memorial and the NPS Midwest Regional Office. The management prescriptions were presented to the public in *Newsletter Two* (January 2004).

MANAGEMENT PRESCRIPTIONS FOR LINCOLN BOYHOOD NATIONAL MEMORIAL

The following management prescriptions were used to develop alternatives for Lincoln Boyhood National Memorial:

Commemoration Prescription

This management prescription would include formal, designed structures and landscapes

intended to commemorate President Abraham Lincoln and his family. Resources would be managed to reestablish some of the site features represented in Olmsted’s conceptual plans. Formal, structured interpretation could be offered for visitors, but the experience in these areas would be primarily introspective and reverent. A moderate to high density of visitor use, including larger groups, could be accommodated because of the level of development.

Informal Contemplative Prescription

This prescription would emphasize natural and cultural settings used to commemorate the Lincolns. Structures and landscapes would be informal, and the visitor experience would be largely self-directed. Nonintrusive interpretive media would be appropriate as would low-key developments such as trails and benches. Because of the low level of development, visitation would be dispersed or accommodated in small groups.

Interpretive/Historic Prescription

The emphasis in this prescription would be learning about President Abraham Lincoln’s time and the story of his life in southern Indiana. Natural and cultural resources would be managed to be evocative of their appearance in the 19th century and/or illustrative of Lincoln’s life on his father’s farm. Exhibits and other interpretive media would directly relate to President Abraham Lincoln’s story, and visitors would have a range of informal and formal programs available to them. The character of the experience in this prescription would be highly interactive and educational, and developments would accommodate a high density of visitors in addition to large groups.

Rest and Relaxation Prescription

In this prescription natural settings and open spaces would be provided for visitors to relax and enjoy low-key activities such as picnicking, walking, or interacting in family or peer groups. Support facilities such as restrooms, picnic tables, and short paths would be appropriate, but interpretive media and programs would not occur here — giving visitors an opportunity for “time out” from the structure of other experiences at the national memorial.

Natural Resources Prescription

Natural resources prescription areas would be managed for the mixed-stage oak-hickory forest representative of the Lincolns’ time in Indiana. Unpaved trails, trailhead facilities (such as signs and restrooms), boardwalks, low-impact interpretive media, and interpretive programs would be appropriate in this prescription, but would not dominate the natural setting. Visitors would enjoy the forest individually or in small groups. Natural history themes would provide context for the interpretation of the Lincolns’ lives in Indiana to help visitors consider how the environment of that time shaped the Lincoln family.

Operational Support Prescription

In this prescription, resources are modified as needed to accommodate NPS operational and administrative needs, but facility design would not detract from national memorial cultural and natural resources or landscapes. Visitors would generally not be present in these areas. When public access is appropriate, it would not interfere with NPS operations. Structures and other developments to support NPS maintenance, archives, administration, staff housing, farm support, and other management activities would be included in this prescription.

CARRYING CAPACITY

The existing visitation is consistent with desired use levels that are described in the management prescriptions. There is no evidence to assume that visitation will significantly increase, or that use levels are incompatible with the desired visitor experience or the protection of the natural and cultural resources. Current trends are not showing a sign of increase or change in how visitors are encountering the national memorial.

Large groups, such as school outings, are managed by dividing into smaller groups and then dispersed throughout the national memorial so that the experience of the general visitor is not impacted. If demand increases for large groups, NPS staff would develop management and scheduling strategies to retain use levels as described in the management prescriptions to prevent overcrowding.

NPS staff would periodically evaluate the visitor experience to ensure that use levels are managed as described in the management prescriptions.



Ranger-led interpretive activity at Lincoln Boyhood National Memorial.

ALTERNATIVE A, NO-ACTION ALTERNATIVE

CONCEPT AND GENERAL MANAGEMENT STRATEGIES

This alternative describes a continuation of current management direction and trends at Lincoln Boyhood National Memorial. It provides a baseline for comparison in evaluating the changes and impacts of the other alternatives. Managers would continue to follow the special mandates and servicewide mandates and policies described earlier in the "Guidance for the Planning Effort" section of this document,

The memorial building would continue to house visitor orientation and interpretation services and some administrative offices for NPS staff. One of the national memorial's two residences would continue to house some administration offices.

The visitor experience at the allée (a general term for a walk bordered by trees or clipped hedges in a garden or park), historic cemetery, and Cabin Site Memorial would remain informal, with trails and interpretive wayside exhibits. The Trail of 12 Stones and trail to Lincoln Spring would continue to be available to visitors; the Lincoln Boyhood Nature Trail would remain, but new wayside exhibits will soon be installed along the trail.

Access to the Lincoln Living Historical Farm by road or trail would continue. Seasonal activities at the farm would continue including the demonstration programs, involving historic techniques in raising crops and livestock.

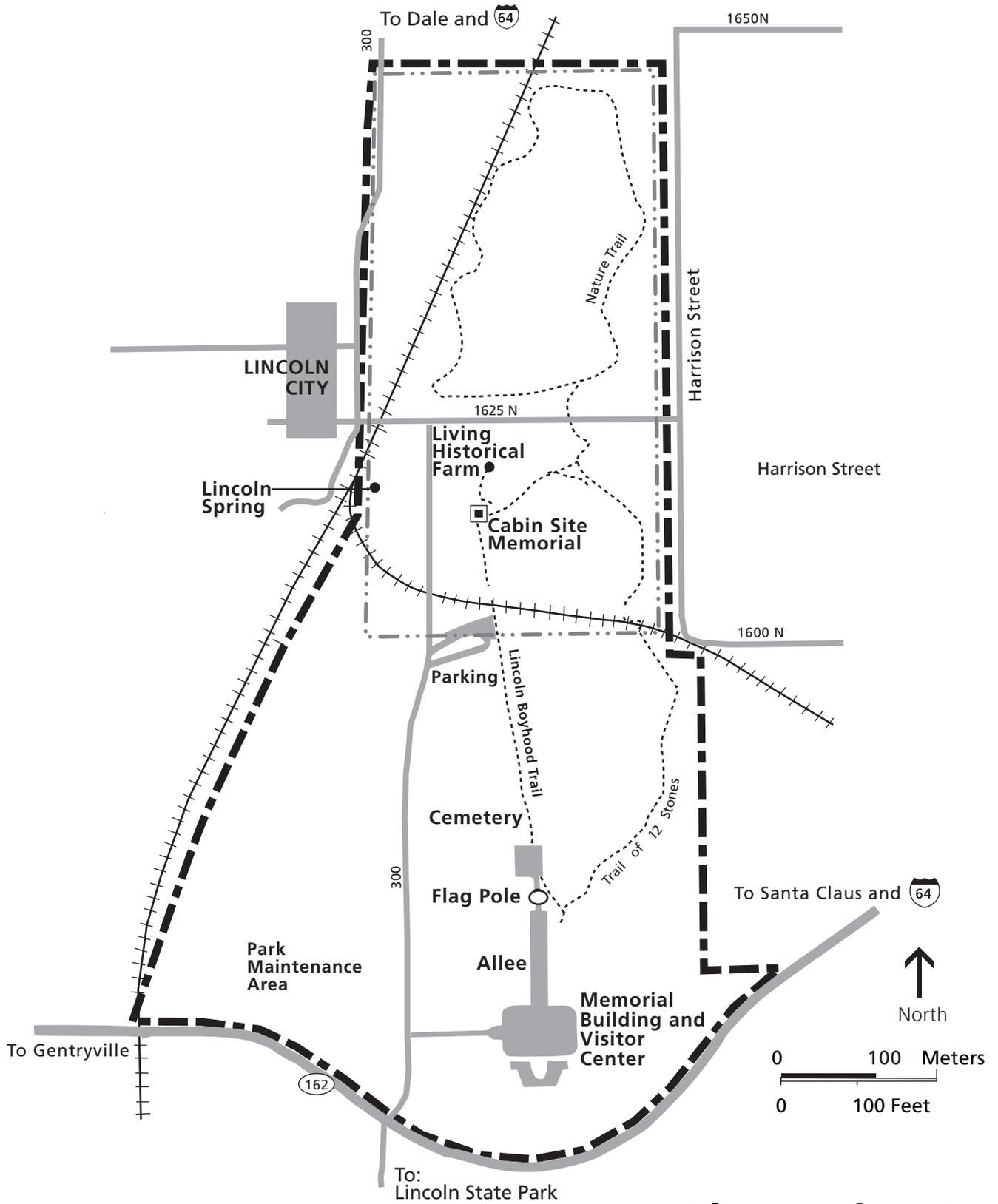
All public roads and rail crossings in the national memorial would remain as they are.

ESTIMATED COSTS: ALTERNATIVE A

TABLE 2. ESTIMATED COSTS, ALTERNATIVE A

Recurring Costs	
NPS Operations	\$915,000
Total	\$915,000
One-time (Capital) Costs	
	None

Costs shown here are not for budgetary purposes; they are only to show a very general comparison between the alternatives. Note that these costs do not include the costs for the additional plans/studies.



- Roads
- +++++ Railroad
- Memorial Boundary
- Thomas Lincoln Farm

Alternative A

Lincoln Boyhood National Memorial

National Park Service
 U.S. Department of the Interior
 DSC • 3/05 • 422/20012A



ALTERNATIVE B, ALL THINGS COMMEMORATIVE

CONCEPT

Alternative B, *All Things Commemorative*, would focus on the national memorial's formal and informal commemorative settings. Visitors would experience a variety of ways that people have honored the Lincolns, ranging from the formal Olmsted-designed landscape to the casual discovery experience of the Trail of 12 Stones.

DETAILED DESCRIPTION

The memorial building would be dedicated to commemoration of Lincoln and his family. The memorial building and allée would be included in the commemoration prescription, and actions would be taken to return some elements of the memorial building and landscape to their original design. Actions would include reopening the cloister area of the memorial building, removing the 1960s addition to the building, and extending the roadway east of the building to provide an overflow parking area. Changes to the landscape and memorial building would be guided by the national memorial's "Cultural Landscape Report" (NPS 2001), "Historic Structures Report" (NPS 2003), and appropriate laws and NPS policies.

The Cabin Site Memorial would also be in the commemoration prescription. The formal landscape surrounding the site, including plantings and trail surfaces, would be reestablished, and the approach trail would be redesigned and formalized to emphasize the commemorative intent of the site.

The National Park Service would partner with the Indiana Department of Natural Resources/Lincoln State Park to provide a joint visitor center in the state park. Visitors

would learn about the Lincoln story and the various programs, services, and experiences available to them at both areas. The national memorial would be easily accessible from the facility; some redesign of the intersection with U.S. Highway 162 would be needed to ensure visitor safety and maintain smooth traffic movement. Administrative facilities for both areas would also be located at this new facility. A trail link would be established from the memorial building to the joint visitor center.

A rest and relaxation prescription area with picnic facilities and short paths would be provided at the meadow east of the memorial building.

Most of the remainder of the national memorial would be included in the informal contemplative prescription. The national memorial trails connecting the cemetery to the Lincoln Living Historical Farm, the Trail of 12 Stones, and the nature trail would remain much as they are now, and visitors would experience them as self-discovery sites. Interpretation would be minimal, but information through publications such as brochures and trail guides would be available so that visitors would understand what the different sites commemorate.

The Lincoln Living Historical Farm, included in the informal contemplative prescription, would remain, but would change significantly in character and function. In keeping with the commemorative focus of this alternative, the farm would serve more as a commemorative exhibit than as a demonstration area. Most of the structures and other features would remain, although some minor structures could be removed to facilitate easier visitor circulation through the site. Visitors would come to the farm without a guide and experience the site as an illustration of how the Lincoln

family farm may have appeared. Wayside exhibits or other low-impact media such as publications could explain the representational nature of the farm to visitors, and would stress the values and foundation that Lincoln gained from living here in his youth. NPS staff could be available on-site to answer questions and present informal programs when suggested by visitor use levels, but costumed interpretation and demonstrations would not be presented. The overall experience would involve an outdoor experience offering a tangible commemoration of the Lincolns.

To reduce (unrelated) through traffic in the national memorial, *once the U.S. 231 reroute is complete*, the National Park Service would work with Spencer County officials to close a portion of County Road 300 (between County Road 1625N and the parking lot south of the Cabin Site Memorial). County Road 1625N would remain open through the national memorial for local access to Heritage Hills High School.

Wayside exhibits or other media at the parking area would provide visitor orientation to trails and features in the north part of the national memorial, but the existing seldom-used shelter would be removed.

The southwest portion of the national memorial (south and west of County Road

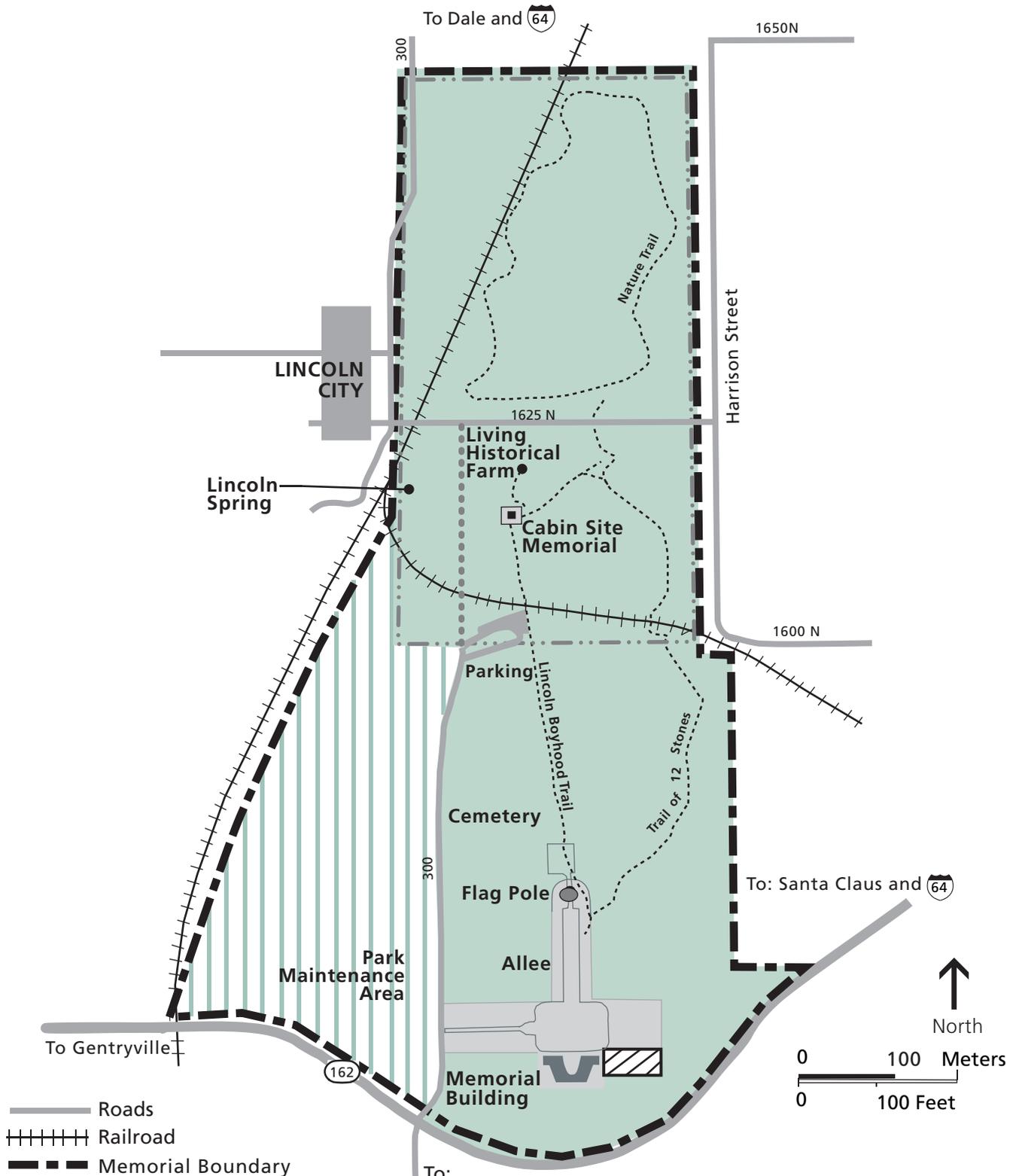
300) would be included in the operational support prescription and would serve NPS maintenance, administration, and housing needs.

**ESTIMATED COSTS:
ALTERNATIVE B**

TABLE 3. ESTIMATED COSTS, ALTERNATIVE B

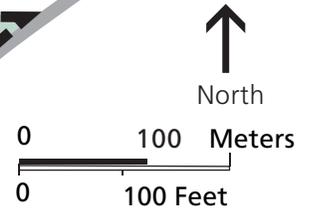
Recurring Costs	
NPS Operations	\$915,000
Total	\$915,000
One-time (Capital) Costs	
Construct joint visitor center/administrative building	\$5,200,000
Reopen cloister, extend roadway, reestablish formal landscape at cabin site, develop interpretive media, etc.)	\$500,000
Total (rounded)	\$5,700,000
Annualized life cycle costs (capital costs only) for a 25-year period	\$550,000/year

Costs shown here are not for budgetary purposes; they are only to show a very general comparison between the alternatives.



- Roads
 - +++++ Railroad
 - — — — — Memorial Boundary
 - Road to be Closed
 - · - · - Thomas Lincoln Farm
- MANAGEMENT PRESCRIPTIONS**
- █ Commemoration
 - █ Informal Contemplative
 - ▨ Rest and Relaxation
 - ▤ Operational Support

To:
Lincoln State Park
(Proposed Joint Operated
Orientation and Interpretation
Facility with Lincoln State Park
and National Park Service)



Alternative B

Lincoln Boyhood National Memorial

National Park Service
U.S. Department of the Interior
DSC • 3/05 • 422/20013A



ALTERNATIVE C, PREFERRED ALTERNATIVE, EXPLORING LINCOLN'S INDIANA

CONCEPT

In alternative C, *Exploring Lincoln's Indiana*, the national memorial would be managed to interpret the history of the Lincoln family in southern Indiana and the natural and socio-political environment of the times. Visitors would have an array of interpretive opportunities available to them and the overall character of the experience would be interactive and educational.

DETAILED DESCRIPTION

As in alternative B, the allée would be included in the commemoration prescription. However, because of the major interpretive emphasis of this alternative, the memorial building would be included in the interpretive/historic prescription to allow for additional museum exhibits and/or program areas. The structure's façade and cloister area would retain their commemorative function, and steps would be taken to restore the character of the cloister where possible (examples could include exposing the original stone wall and ceiling and possibly modifying the doors). Changes to the landscape and memorial building would be guided by the national memorial's "Cultural Landscape Report" (NPS 2001), "Historic Structures Report" (NPS 2003), and appropriate laws and NPS policies.

The memorial building would be expanded to the rear (or a separate structure could be built) to accommodate NPS administrative functions and staff offices, allowing the full extent of the memorial building to be used for interpretation and visitor services. Interpretation would emphasize Lincoln history and set the stage for other experiences at the national memorial. The new addition or structure would harmonize

in size, scale, proportion, and materials with, but be readily distinguishable from, the extant structure, and would not intrude on the historic scene.

As in alternative B, overflow parking would be provided east of the existing parking area, and a rest and relaxation prescription area with picnic facilities and short paths would be provided in the meadow area nearby.

The trail connection from the cemetery to the Cabin Site Memorial and the Lincoln Living Historical Farm would be in the interpretive/historic prescription. Interpretation along the way would expand on the stories begun at the memorial building. The overall character of the landscape would replicate as nearly as possible the environment that the Lincolns may have experienced. As in alternative B, the formal landscape surrounding the Cabin Site Memorial, including plantings and trail surfaces, would be reestablished, and the approach trail would be redesigned and formalized to emphasize the commemorative intent of the site.

The Lincoln Living Historical Farm, also in the interpretive/historic prescription, would retain its existing character and function as an interpretive demonstration facility. Emphasis would be placed on interpretive opportunities and demonstrations directly related to the Lincoln story and the way in which the family likely lived. The loop parking area south of the Living Historical Farm would serve as an orientation site for the opportunities in the north part of the national memorial, and the shelter would be upgraded to serve as an interpretive facility and a gathering place for school or other groups. A rest and relaxation prescription area with picnic facilities would be included at the site.

To enhance visitor safety and experience, NPS staff would coordinate with Spencer County in applying traffic-calming technique(s) to slow the speed of vehicles on County Road 300 through the national memorial to speed limits used for school zones. County Road 1625N would be kept open for local access to Heritage Hills High School.

The Trail of 12 Stones would be in the informal contemplative prescription in this alternative, and it would retain its existing informal character.

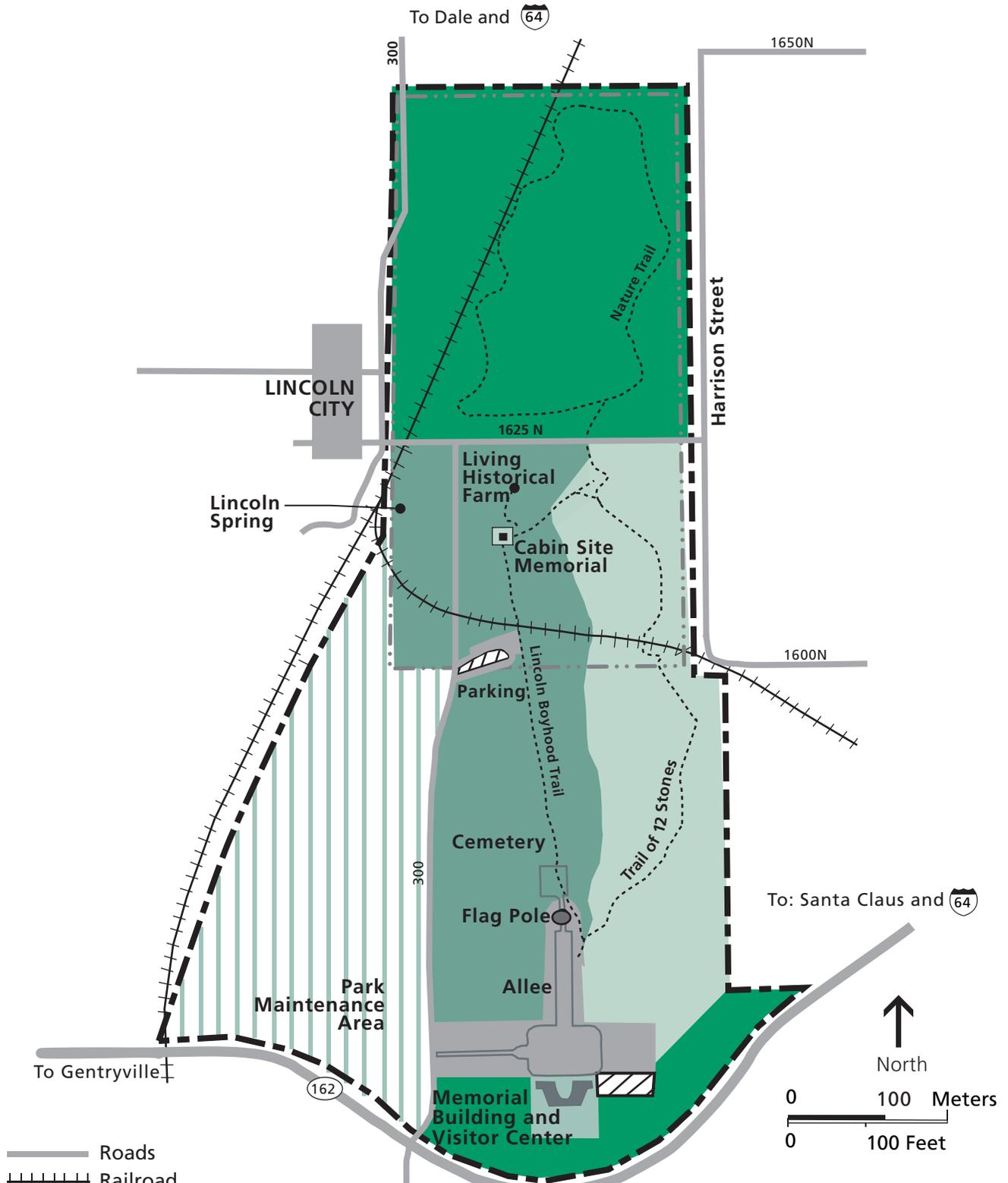
The nature trail in the north part of the national memorial would remain, but the area would be in the natural resource prescription, emphasizing management of the oak-hickory forest representative of the 19th century. This area would form a backdrop for the Lincoln story. Interpretation could address the ways in which the natural environment influenced the Lincolns' lives in Indiana. The area south of the memorial building would also be

included in the natural resource prescription.

**ESTIMATED COSTS:
ALTERNATIVE C**

TABLE 4. ESTIMATED COSTS, ALTERNATIVE C

Recurring Costs	
NPS Operations	\$915,000
Total	\$915,000
One-time (Capital) Costs	
Expand memorial building (or new building) for offices	\$1,100,000
Extend roadway, reestablish formal landscape at cabin site, develop interpretive media, upgrade shelter, etc.)	\$500,000
Total (rounded)	\$1,600,000
Annualized life cycle cost (capital costs only) for a 25-year period	\$160,000/Year



- Roads
- +++++ Railroad
- — — Memorial Boundary
- · · · · Thomas Lincoln Farm

- MANAGEMENT PRESCRIPTIONS**
- Operational Support
 - Informal Contemplative
 - Rest and Relaxation
 - Commemoration
 - Natural Resources
 - Interpretive / Historic

Alternative C (Preferred)

Lincoln Boyhood National Memorial

National Park Service
U.S. Department of the Interior

DSC • 9/05 • 422/20014A



MITIGATIVE MEASURES COMMON TO ALL ALTERNATIVES

Congress charged the National Park Service with managing the lands under its stewardship “in such manner and by such means as will leave them unimpaired for the enjoyment of future generations” (NPS Organic Act, 16 USC 1). As a result, the National Park Service routinely evaluates and implements mitigation whenever conditions occur that could adversely affect the sustainability of national park system resources.

To ensure that implementation of the action alternatives protects unimpaired natural and cultural resources and the quality of the visitor experience, a consistent set of mitigative measures would be applied to actions proposed in this plan. The National Park Service would prepare appropriate environmental review (i.e., those required by the National Environmental Policy Act, National Historic Preservation Act, and other relevant legislation) for these future actions. As part of the environmental review, the National Park Service would avoid, minimize, and mitigate adverse impacts when practicable. The implementation of a compliance-monitoring program would be considered to stay within the parameters of National Environmental Policy Act and National Historic Preservation Act and the associated compliance documents. The compliance-monitoring program would oversee these mitigative measures and would include reporting protocols.

The following mitigative measures and best management practices would be applied to avoid or minimize potential impacts from implementation of the alternatives. These measures would apply to all alternatives.

CULTURAL RESOURCES

The National Park Service would preserve and protect, to the greatest extent possible,

resources that reflect human occupation of Lincoln Boyhood National Memorial. Specific mitigative measures would include the following:

- Continue to develop inventories for and oversee research about archeological, historical, and ethnographic resources to better understand and manage the resources. Continue to manage cultural resources and collections following federal regulations and NPS guidelines. Inventory the national memorial’s collection and keep them in a manner that would meet NPS curatorial standards.
- Subject projects to site-specific planning and compliance. Make efforts to avoid adverse impacts through use of the *Secretary of the Interior’s Standards for Archeology and Historic Preservation*, and by using screening and/or sensitive design that would be compatible with historic resources. If adverse impacts could not be avoided, mitigate these impacts through a consultation process with all interested parties.
- Inventory all unsurveyed areas in the national memorial for archeological, historical, and ethnographic resources as well as cultural and ethnographic landscapes. Conduct archeological surveys in unsurveyed areas where development would occur to determine the extent and significance of archeological resources in the areas.
- Document cultural and ethnographic landscapes in the national memorial and identify treatments to ensure their preservation.
- Conduct archeological site monitoring and routine protection. Conduct data recovery excavations at archeological sites threatened with disturbance, where protection or site avoidance during design and construction is infeasible. Should archeological resources be

discovered, stop work in that location until the resources are properly recorded by NPS staff and evaluated under the eligibility criteria of the National Register of Historic Places. If, in consultation with the Indiana state historic preservation officer, the resources were determined eligible, implement appropriate measures either to avoid further resource impacts or to mitigate the loss or disturbance of the resources.

- Conduct additional background research, resource inventory, and national register evaluation where information about the location and significance of cultural resources is lacking. Incorporate the results of these efforts into site-specific planning and compliance documents.
- Mitigative measures include documentation according to standards of the Historic American Landscape Survey and of the Historic American Buildings Survey/Historic American Engineering Record as defined in the Re-engineering Proposal (October 1, 1997). The level of this documentation, which includes photography, archeological data recovery, and/or a narrative history, would depend on significance (national, state, or local) and individual attributes (an individually significant structure, individual elements of a cultural landscape, etc.) and be determined in consultation with the state historic preservation officer.

NATURAL RESOURCES

Exotic Species

- Implement a noxious weed abatement program. Standard measures could include the following elements: certify all seeds and straw material as weed-free, identify areas of noxious weeds preconstruction, treat noxious weeds or

noxious weed topsoil before construction (e.g., topsoil segregation, storage, herbicide treatment), and revegetate with appropriate native species.

Soils

Build new facilities on soils suitable for development. Minimize soil erosion by limiting the time that soil is left exposed and by applying other erosion control measures, such as erosion matting, silt fencing, and sedimentation basins in construction areas to reduce erosion, surface scouring, and discharge to water bodies. Once work is completed, revegetate construction areas with native plants in a timely period.

Threatened and Endangered Species and Species of Concern

The following mitigative actions for the conservation of Indiana bats evolved from recommendations by U.S. Fish and Wildlife Service and would be implemented in the management of Lincoln Boyhood National Memorial:

- Maintain the existing forest matrix including forested drainageways.
- Avoid minor tree-clearing in forested areas during the period April 15 to September 15. If tree-clearing is proposed during this period, the National Park Service would consult with U.S. Fish and Wildlife Service.
- To maintain an adequate supply of potential nursery roost trees, preserve all snags and large trees except where removal is necessary for safety purposes and facility construction. Trees of highest roost quality are those greater than 14 inch diameter at breast height with large amounts of exfoliating bark, but smaller trees may also be used.

- Avoid spraying of pesticides in or near forested areas.

In addition, the NPS staff is committed to

- Conduct surveys for rare, threatened, and endangered species prior to any ground disturbing activities. If found, steps would be taken to eliminate or minimize any potential impacts.
- Site and design facilities/actions to avoid adverse effects on rare, threatened, and endangered species. If avoidance is infeasible, minimize and compensate adverse effects on rare, threatened, and endangered species as appropriate and in consultation with the appropriate resource agencies.
- Implement measures to reduce adverse effects of nonnative plants and wildlife on rare, threatened, and endangered species.

Vegetation

- Monitor areas used by visitors (e.g., trails) for signs of native vegetation disturbance. Use public education, revegetation of disturbed areas with native plants, erosion control measures, and barriers to control potential impacts on plants from trail erosion or social trailing.

VISITOR SAFETY AND EXPERIENCES

- Implement a traffic control plan, as warranted.
- Implement measures to reduce adverse effects of construction on visitor safety and experience.

- Conduct an accessibility study to understand barriers to national memorial programs and facilities. Based on this study, implement a strategy to provide the maximum level of accessibility.

SOCIOECONOMIC ENVIRONMENT

During the future planning and implementation of the approved management plan for Lincoln Boyhood National Memorial, the National Park Service would work with local communities and county governments to further identify potential impacts and mitigative measures that would best serve the interests and concerns of both the National Park Service and the local communities. Partnerships would be pursued to improve the quality and diversity of community amenities and services.

SUSTAINABLE DESIGN AND AESTHETICS

Projects would avoid or minimize adverse impacts on natural and cultural resources. Development projects (e.g., buildings, facilities, utilities, and trails) or reconstruction projects (e.g., road reconstruction, building rehabilitation, and utility upgrades) would be designed to work in harmony with the surroundings. Projects would be sustainable whenever practicable, by recycling and reusing materials, by minimizing materials, by minimizing energy consumption during the project, and by minimizing energy consumption throughout the lifespan of the project.

ENVIRONMENTALLY PREFERABLE ALTERNATIVE

METHOD

The environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in Section 101 of the National Environmental Policy Act of 1969. The environmentally preferable alternative is determined by applying the criteria suggested in the National Environmental Policy Act and guided by the Council on Environmental Quality. In the National Park Service, this requirement is met by (1) disclosing how each alternative meets the criteria set forth in section 101(b), which are listed in the table below, and by (2) presenting any inconsistencies between the alternatives analyzed and other environmental laws and policies (Director's Order 12, 2.7.E). According to Section 101, this alternative would cause the least damage to the biological and physical environment and best protect, preserve, and enhance historic, cultural, and natural resources.

SUMMARY OF ANALYSIS

In this analysis alternative A continues the modifications to the cultural landscape with the enclosure of the memorial building cloister, the elimination of the symmetrical design of the memorial road and parking, and the non-park uses of the national memorial's portion of County Road 300 . There are elements of the interpretive program that depart somewhat from the park's purpose as a public memorial to President Abraham Lincoln and his family. For these reasons alternative A scored lower than alternatives B and C.

The visitor experience in exploring the Lincoln family is the primary difference between alternatives B and C. Both alternatives provided different ways to commemorate and learn about the Lincoln family. Alternative B would rely more on commemoration that is introspective and reverent self-guided experiences in exploring the national memorial. Alternative C would rely on a more diverse and active interpretive program. Both alternatives meet the evaluative criteria.

Alternative B scored slightly higher than alternative C because of social and managerial benefits of the joint NPS/state park visitor center (across the highway at Lincoln State Park). At the state park, national memorial visitors could explore a diverse range of recreational and interpretive opportunities provided by amenities at the state park and by the presence of the two agencies. Also, staff resources, administrative facilities, and programming opportunities could be shared, better coordinated, and more efficient. Therefore, alternative B is the environmentally preferable alternative.

However, the expense associated with the construction of the joint visitor center and concerns about NPS investments in facilities outside the boundaries of the national memorial prevented alternative B from being selected as the NPS preferred alternative.

TABLE 5. ENVIRONMENTALLY PREFERABLE ALTERNATIVE ANALYSIS

Criteria	Alternatives		
	A	B	C
Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.	1	2	2
Assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings.	2	2	2
Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences.	1	2	1
Preserve important historic, cultural and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity, and variety of individual choices.	1	2	1
Achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities.	2	2	2
Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.	2	2	2
Total Points	9	12	10

1 = This is given to the alternative that somewhat meets the intent of the criteria.

2 = This is given to the alternative that fully meets the intent of the criteria.

Note: There were no "low" ratings because elements that were not environmentally sound were eliminated from consideration.

TABLE 6. SUMMARY OF ALTERNATIVES

	ALTERNATIVE A – NO ACTION	ALTERNATIVE B , All Things Commemorative	ALTERNATIVE C, PREFERRED, Exploring Lincoln’s Indiana
Concept	The National Park Service would continue to manage the national memorial according to existing management direction and trends.	Alternative B would focus on the national memorial’s formal and informal commemorative settings. Visitors would experience a variety of ways that people have honored the Lincolns, ranging from the formal Olmsted-designed landscape to the casual discovery experience of the Trail of 12 Stones.	In alternative C the national memorial would be managed to interpret the history of the Lincoln family in southern Indiana and of the natural and sociopolitical environment of the times. Visitors would have an array of interpretive opportunities available to them, and the overall character of the experience would be interactive and educational. Interpretation would emphasize Lincoln history and set the stage for the other experiences at the national memorial.
Memorial Building and Surrounding Area	Continue to house visitor orientation and interpretation services and some administrative offices.	Dedicate the memorial building to commemoration of the Lincoln family story. Restore some elements of the memorial building and landscape to their original design, such as reopen the cloister and remove the 1960s addition. Extend roadway east to overflow parking, and establish new picnic area in the area east of the memorial building.	Use entire memorial building for interpretation and orientation purposes. Retain commemorative function of memorial building façade and cloister area, and take steps to return the character of the cloister where possible (e.g., possibly exposing original stone wall and ceiling and modifying the doors). Extend roadway east to overflow parking, and establish new picnic area.
Allée and Cemetery	Continue as existing.	Continue as existing.	Continue as existing.
Cabin Site Memorial	Continue as existing.	Reestablish historic design elements at cabin site.	Reestablish historic design elements at cabin site.
National Memorial Trails	Continue as existing, with new wayside exhibits along the natural trail.	Retain existing character of trails for contemplative and commemorative experiences. Allow visitors to experience them as self-discovery sites. Establish trail link from memorial building to joint visitor center. Interpretation would contribute to the commemorative experience.	Enhance interpretation along trail from the cemetery to the cabin site and Living Historical Farm. Retain nature trail but emphasize management of the oak-hickory forest as it was in the 19th century and how this natural environment influenced the Lincolns’ lives. Use a range of interpretive activities and signs along trails relating to Lincoln’s family life in Indiana.

Table 6. Summary of Alternatives

	ALTERNATIVE A – NO ACTION	ALTERNATIVE B , All Things Commemorative	ALTERNATIVE C, PREFERRED, Exploring Lincoln’s Indiana
Living Historical Farm and Surrounding Area	Continue costumed demonstrations and personal services.	Change character of farm to a commemorative landscape and exhibit of how Lincoln’s family farm might have appeared. Keep most of the structures and other features; possibly remove some minor structures to facilitate easier visitor circulation. Allow visitor interaction with the outdoor exhibit to be a self-guided experience. Use wayside exhibits or other low-impact interpretive media to explain the representational nature of the farm to visitors and stress the values and foundation that Lincoln gained from living here in his youth. Do not present costumed interpretation and demonstrations. Present overall experience as an outdoor exhibit and a tangible commemoration of the Lincolns.	Continue costumed demonstrations and personal services, with interpretive programs relative to the Lincoln family story and way of life. Have loop parking area south of the farm serve as an orientation site.
Existing Shelter	Continue as existing	Remove seldom-used shelter.	Upgrade the shelter to serve as an interpretive facility and a gathering place for school or other groups. Add rest area with picnic facilities.
Visitor Facility/ Center	Continue to use memorial building for visitor orientation, interpretation, and information.	Partner with state to construct new joint visitor center at Lincoln State Park. (Use memorial building for commemorative purposes as stated on previous page.)	Continue to use memorial building for visitor orientation, interpretation, and information.
NPS Administration	Continue to keep administrative offices in structures throughout the national memorial.	Space for administrative offices would be in the new visitor center.	Construct new addition to memorial building (or build a separate building) to accommodate administrative offices.
Road Changes	Continue as existing.	To reduce through traffic, once the U.S. 231 reroute is complete, work with county government to close the portion of County Road 300 from County Road 1625N to the lower parking lot south of the farm. Keep County Road 1625N open for local access to Heritage Hills High School.	To enhance visitor experience and safety, NPS staff would coordinate with Spencer County in using appropriate traffic calming techniques to slow the speed of vehicles on County Road 300 in the national memorial.
Recurring Costs	\$915,000	\$915,000	\$915,000
One-time Costs	none	\$5, 700, 000	\$1,600, 000
Annualized Life-Cycle Costs		\$550,000/year	\$160,000/year

TABLE 7. SUMMARY OF KEY IMPACTS OF IMPLEMENTING THE ALTERNATIVES

Note: impacts related to construction are short term in duration, while all others impacts that are described in this table should be considered long term.

	ALTERNATIVE A, NO ACTION	ALTERNATIVE B	ALTERNATIVE C, PREFERRED
Impacts on Archeological Resources	Continued management actions under the no-action alternative would include little new construction, and no adverse impacts on archeological resources would be anticipated. In the unlikely event that impacts on national-register-eligible or listed archeological resources could not be avoided, a memorandum of agreement, in accordance with 36 CFR Part 800.6, <i>Resolution of Adverse Effects</i> , would be negotiated between Lincoln Boyhood National Memorial and the Indiana state historic preservation officer (and/or the Advisory Council on Historic Preservation, if necessary). The memorandum of agreement would stipulate how the adverse effects would be mitigated.	Avoidance of national-register-eligible or listed archeological resources during excavation and construction would result in no adverse impacts on such resources. In the unlikely event that important archeological resources could not be avoided, a memorandum of agreement, in accordance with 36 CFR Part 800.6, <i>Resolution of Adverse Effects</i> , would be negotiated between Lincoln Boyhood National Memorial and the Indiana state historic preservation officer (and/or the Advisory Council on Historic Preservation, if necessary). The memorandum of agreement would stipulate how the adverse effects would be mitigated.	Same as alternative B.
Impacts on Historic Structures and Cultural Landscapes	After applying the Advisory Council on Historic Preservation’s criteria of adverse effects (36 CFR Part 800.5, <i>Assessment of Adverse Effects</i>), the National Park Service concludes that implementation of alternative A would result in <i>no adverse effects</i> on historic structures and cultural landscapes of Lincoln Boyhood National Memorial.	Same as alternative A.	Same as alternative A.

Table 7. Summary of Key Impacts of Implementing This Alternative

	ALTERNATIVE A, NO ACTION	ALTERNATIVE B	ALTERNATIVE C, PREFERRED
Impacts on Natural Resources	Impacts on natural resources in this alternative would be negligible.	Implementing alternative B would result in negligible to minor effects on soils and vegetation except for the construction of the joint NPS/Lincoln State Park visitor center that would result in moderate effects on soils and vegetation. The national memorial's resources or values would not be impaired because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the memorial's establishing legislation, (2) key to the natural or cultural integrity of the memorial or to opportunities for visitor enjoyment, or (3) identified as a goal in the memorial's <i>General Management Plan</i> or other relevant NPS planning documents.	Adverse impacts on vegetation and soils associated with implementation of alternative C would be minor, with the exception of construction of the addition to the memorial building (or new building) that would result in moderate adverse impacts on soils and vegetation. The national memorial's resources or values would not be impaired because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the memorial's establishing legislation, (2) key to the natural or cultural integrity of the memorial or to opportunities for visitor enjoyment, or (3) identified as a goal in the memorial's <i>General Management Plan</i> or other relevant NPS planning documents.
Impacts on Visitor Experience	Impacts on the visitor experience associated with the no-action alternative include continued minor to moderate adverse impacts and minor to moderate beneficial impacts. Important negative impacts would continue to result from the inadequate parking, limited interpretive opportunities at the memorial building, and traffic disruption at the Living Historical Farm. The most important beneficial effect would continue to be the personal services and costumed interpretation at the farm.	Impacts on the visitor experience associated with implementation of alternative B would be primarily beneficial and range from minor to major. Moderate adverse effects would result from discontinuing costumed interpretation at the Living Historical Farm.	Effects on visitor experience associated with implementation of alternative C would be primarily beneficial and moderate.

	ALTERNATIVE A, NO ACTION	ALTERNATIVE B	ALTERNATIVE C, PREFERRED
Impacts on the Socioeconomic Environment	<p>Lincoln Boyhood National Memorial would continue to have a beneficial impact on the social environment and economy of Spencer County, although its influence overall would continue to be negligible because it is overshadowed by the area's major industries (e.g., manufacturing).</p>	<p>In the short term, construction activity would have a beneficial although minor contribution to the local economy.</p> <p>If the joint visitor center partnership increased visitation and the length of stay, this alternative would have a minor beneficial impact on businesses that service area tourists.</p> <p>The closing of the U.S. Post Office in the memorial building would have a moderate adverse impact on about 10 postal patrons.</p> <p>Closing the short segment of County Road 300 would have a minor adverse impact on local area traffic.</p>	<p>In the short-term, construction of the administrative facility would have a beneficial, although minor beneficial and short-term contribution to the local economy.</p> <p>Retaining the U.S. Post Office would have a moderate long-term beneficial effect on about 10 local boxholders/residents that are served.</p>
Impacts on NPS Operations/Administration	<p>Continuing to house NPS administrative staff in several buildings in different locations would continue to be inefficient. These inefficiencies would continue to be a minor to moderate adverse impact on NPS operations.</p> <p>There would continue to be a moderate adverse impact on interpretive operations because administrative staff (now in a separate building) cannot substitute for interpreters at the information desk in the memorial building while the interpreters lead interpretive programs.</p>	<p>The joint visitor center called for in this alternative, with administrative office space and storage space for both the national memorial staff and the Lincoln State Park staff, would greatly improve communication and operational efficiency within and between the two areas. There could be more personal contact with visitors and opportunities to offer a greater range of visitor services. These advantages would be a major beneficial effect on NPS operations at the national memorial.</p>	<p>Consolidating offices and storage into a single location in the national memorial would increase efficiency and have a moderate beneficial impact on NPS operations. Having administrative staff available to provide back-up coverage at the information desk in the visitor center would allow interpreters more flexibility in providing visitor contact and a variety of programs. This would be a moderate beneficial effect on interpretive operations.</p>

CHAPTER 3: AFFECTED ENVIRONMENT



Trail to Lincoln Spring at Lincoln Boyhood National Memorial.

THE NATIONAL MEMORIAL

This chapter describes the existing environment of Lincoln Boyhood National Memorial and the surrounding region. It is focused on the national memorial's resources, uses, facilities, and socioeconomic characteristics that have the potential to be affected if any of the alternatives were implemented.

The 200-acre Lincoln Boyhood National Memorial is in Spencer County, Indiana. Formally established in 1818, Spencer County, Indiana, is on the banks of the Ohio River in southwest Indiana. Interstate 64 is the

approximate northern border of the county. Its terrain consists of wooded hills in the eastern and northern sections and agricultural land in the southern and western area. The county is spread over 398.7 square miles with a population density of 51.1 people per square mile.

The national memorial is located in an area known as the Wabash lowlands, with a general elevation of about 500 feet and mostly rolling plains.

THE NATIONAL MEMORIAL'S CULTURAL RESOURCES

ARCHEOLOGICAL RESOURCES

Under the authorization of the National Park Service's Systemwide Archeological Inventory Program, the Midwest Archeological Center conducted a systematic shovel-test survey of Lincoln Boyhood National Memorial. The three-year project employed close-interval (10-meter) shovel testing techniques as the entire 200 acres of the national memorial were inspected. Fifteen previously unknown prehistoric sites and 9 historic artifact scatters were reported. Most of the prehistoric sites consist of low-density scatters, and the historic sites are refuse dumps associated with residences from the remnants of Lincoln City, Indiana. The archeology narrative and findings are from Frost and Stadler's "Intensive Archeologist Resource Inventory of Lincoln Boyhood National Memorial, Spencer County, Indiana, 1997-1999: Results and Recommendations, Technical Report No. 64."

Lincoln Family Archeological Resources

Although much has been written about the early life of President Abraham Lincoln, relatively little detailed information is available about the landscape of Lincoln's parents' Indiana farm. The exact number, location, and arrangement of the Lincoln cabins and outbuildings are unknown. Many details about the early historic resources come from first-hand witnesses, but a large number of these details are fragmentary, and witnesses' statements are occasionally contradictory.

The survey produced no evidence of the tenure of Thomas Lincoln and his family. Frost and Stadler's (2000) intensive archeological resource inventory reports

that all material evidence of the Lincoln family's life in Indiana may have been destroyed by landscaping activities. Alternatively, there may not have been much evidence to destroy. Most cultural material of an organic nature would have vanished long ago.

They further report that Bearss (1967) has found evidence that many of the items used by the frontier family were made from locally available materials such as wood and leather. Thus, the material culture of a single early pioneer family might not persist in the archeological record.

American Indian Archeological Resources

The American Indian sites associated with the national memorial property consist of small lithic scatters probably associated with a short-term activity such as an overnight camp, nut collecting, or game hunting. Most of the material collected was waste material associated with the manufacture of flaked stone tools. There is not enough material to make interpretive statements about the prehistoric activities in the national memorial.

Lincoln City Archeological Resources

The archeological record is further complicated by the construction of buildings associated with the early development of Lincoln City, Indiana. Numerous roads and structures were built and removed in the northern half of the national memorial between 1872 and 1927. Very little surface evidence remains of the structures from the occupation of Lincoln City in the national memorial. Archeological surveys have identified some wells and cisterns, exotic vegetation, and house depressions that marked the locations of farms and homes.

Shovel testing through former residential sites sometimes intersected buried foundations or floors. These features are well marked on historic maps from 1927 and 1960 (Indiana Department of Conservation 1927, USDI 1962).

HISTORIC STRUCTURES AND CULTURAL LANDSCAPES

Lincoln Boyhood National Memorial is significant as both a commemorative landscape and historic site. Its meaning and use has changed over time, reflecting shifts in social and political values. It represents an attempt by individuals and local and state agencies to recognize President Abraham Lincoln's formative years in Indiana, honor the resting place of his mother, and celebrate state pride through the artistic use of native building materials and landscaping.

Thomas and Nancy Hanks Lincoln and their two children moved from Kentucky to southwestern Indiana in December 1816. They claimed 160 acres and built a rustic log structure that was finished by the following spring. In 1818 Nancy became sick and died from drinking milk from infected cows. She was buried in a small pioneer cemetery on a hill about 0.25 mile from the Lincoln home. A little more than a year later Thomas married Sarah Bush Johnston, and she brought her three children, a wagonload of furniture, and books to the Lincoln household. During the next decade, the family continued to clear land and expand their farm. In February 1830 the Lincolns sold their farm and left Indiana to be closer to Sarah's two married daughters and the fertile prairies of Illinois.

Since then, the farm changed ownership on numerous occasions and in 1871 much of the property became part of the incorporated Lincoln City. All visible remnants of the Thomas Lincoln farm have been removed except for the grave site of Nancy Hanks

Lincoln. Today, the structures that are listed in the National Register of Historic Places at the national memorial are tied to commemorating President Abraham Lincoln.

Outside the boundaries of the national memorial visitors could explore the few historic structures that were present during the time the Lincoln family lived in southern Indiana. These historic structures contribute to the Lincoln story but are not major attractions in themselves. Visitor use to these sites could increase based upon the interpretive messages and visitor orientation at the national memorial. However, negligible impacts to these other historic sites would be expected based on management and interpretive activities at Lincoln Boyhood National Memorial.

Abraham Lincoln's Indiana roots were not of national interest until his assassination in 1865. Local residents gathered to have their pictures taken in front of a structure reputed to be the Lincolns' last cabin; local residents disassembled the cabin soon after to retain the logs as mementos of the fallen president. Over the next few years, area newspapers began carrying repeated accounts of the neglect of Nancy Hanks Lincoln's grave. In 1879 the first permanent gravestone was placed at the site. A second marker, made of stone left over from the President Lincoln tomb in Springfield, Illinois, was placed at the site in 1902. A decorative cast iron fence was erected immediately around the gravesite. During this time the site was known as the Nancy Hanks Lincoln Memorial.

In 1917 local residents attempted to locate the site of the Lincoln cabin. After unearthing a few hearthstones and some pottery bits, they determined that the remains of the cabin site had been found. The county placed a stone marker on the site.

Lincoln City

The Lincoln Boyhood National Memorial is adjacent to Lincoln City and includes 80 acres of Lincoln’s original homestead. Lincoln City, Indiana, developed because of its location to the connecting railroad lines in Southern Indiana. Portions of Lincoln City extended onto lands that formerly belonged to Abraham Lincoln’s family. After the Lincolns departed for Illinois in 1830, the farm frequently changed ownership.

By 1871 four businessmen from Ohio purchased the land and established the town of Lincoln City. Bolstered by its location to numerous railroad lines, the community grew into an active railroad town. Lincoln City became a commerce center where local products were loaded onto rails and shipped throughout the country. The community housed many businesses, hotels, restaurants, homes, a school, a church, and a bulk oil station.

In 1911 a fire destroyed many of the commercial buildings and a popular hotel. Other fires destroyed many of the community structures including the railroad depot. In addition to these disasters, the railroad passenger services declined and the community followed suit. Today, a few residential homes keep Lincoln City on the Indiana map.

Source: “A Brief History of Lincoln City, Indiana,” by Hoosier Celebration ’88 Committee

In 1923 state officials authorized the Lincoln Memorial Commission to purchase land around the grave and cabin site and to “prepare and execute plans for erecting a suitable memorial to the memory of Abraham at or near his residence.” Responsibility for developing the memorial was passed to the Indiana Lincoln Union in 1926. At one of its initial meetings in 1927 the Indiana Lincoln Union decided to hire Olmsted Brothers, a well-known landscape architecture firm, to

prepare a preliminary design for the memorial.

Olmsted’s conceptual plan combined the primary vista — the allée — with the relocated highway to create a cross-axis. This cruciform arrangement provided an organizational element for circulation within the memorial; vehicular traffic was concentrated in an east-west corridor, with pedestrians traveling from the south to the north. A parking plaza and large flagpole at the intersection of the highway and allée anchored the two axes, and the flagpole provided a focal point for the south end of the allée. This arrangement established a strong spiritual imagery and a solemn atmosphere for presenting the story of the Lincoln’s experiences in Indiana.

Olmsted also proposed restoring part of the native forested landscape to form the backdrop for the formal design. A recreated forest would symbolize the primeval conditions that the pioneers struggled against, and was “the only one of now vanished features of the place characteristic of Lincoln’s time which can be reproduced without sham or falsehood.” Olmsted’s plan included limited parking space. This was later expanded to include overflow lots east of the plaza on either side of the state highway. The overflow areas appeared as meadows when not in use.

In 1931 the president of the Indiana Lincoln Union suggested another major design feature for the commemorative landscape. He thought it would be of “interest to have a collection of stones from the various points of Lincoln interest” along a wooded trail to interpret Lincoln’s life. Although the Trail of 12 Stones was not part of Olmsted’s plan, it provided a physical and allegorical link between the cabin and gravesite.

The Cabin Site Memorial was the final component of the initial landscape development. The memorial was located on the approximate site of the original Lincoln cabin. Indiana Lincoln Union officials decided that a cabin

reconstruction was inappropriate, so a proposal was made to erect a bronze memorial resembling a log cabin foundation with a fireplace and hearthstones to be placed in the approximate location and grade of the original Lincoln cabin. The design also incorporated masonry retaining walls, stone benches, and flagstone walkways. Since that time, the walkways have been removed. The paths are now graveled. Historic views from the cabin site have been impacted by the development of the Living Historical Farm (described below).

The second major construction phase at the memorial began in 1938. Although pleased with the commemorative landscape, the ILU members realized that a facility was needed to anchor visitor activities and accommodate large groups. Olmsted was again asked for a design. After much discussion and the involvement of several designers and architects, a design was chosen that involved two memorial halls connected by a semicircular curved passage (now called the cloister) defining an open memorial court. To make access to and through the cloister from the court convenient and attractive, four doorways alternating with five memorial sculptured panels were located on the inside wall of the court.

Once the National Park Service established a presence at the memorial in 1962, it set about making changes to the sites. First, the highway was relocated from between the allée and memorial building to a route south of the building. Second, and more extensive, was the adaptation of the memorial building for use as a visitor center. The National Park Service decided to enclose the cloister's north wall and add a wing to the south side to create an interpretive and administrative facility. When the memorial building was altered, the Park Service also had to make changes to the memorial court. Incremental changes to the court have continued into the present. Over time, additional changes have been made to the planting beds around the memorial build-

ing. Because no "as-built" drawings of the original landscaping around the memorial building have been located, it is difficult to determine how closely the plants now in place replicate the historic appearance.

Another major change instituted by the National Park Service was the construction of the Living Historical Farm. It was established in 1968 as part of a systemwide historical interpretive program in partnership with the Department of Agriculture and the Smithsonian Institution. Despite concern that the farm might distract visitors from the memorial's primary resources, the farm was built using agricultural structures from the immediate area. The Living Historical Farm continues to be a popular interpretive program at the memorial.

Despite NPS efforts to accommodate changing visitor needs, the landscape has a moderate level of integrity, with the exception of areas altered in the 1960s and early 1990s. Alterations that have negatively impacted the overall design include relocation and subsequent obliteration of the state highway, enclosure of the cloister and an addition to the memorial building to create visitor services, and the development of the Living Historical Farm near the Cabin Site Memorial on the historic Lincoln farm. These activities have resulted in the loss of the landscape's symmetrical organization, reorientation of circulation patterns, and conflict between historical and interpretive resources.

PROPERTIES IN THE NATIONAL REGISTER OF HISTORIC PLACES

A nomination form approved in 1976 listed the entire memorial in the National Register of Historic Places. It identified the items then on the List of Class Structures as contributing features. The list contained the following:

- Nancy Hanks Lincoln Memorial Building (HS-1)
- the Cabin Site Memorial (HS-2),
- Spencer County Memorial Plaque (HS-12)
- the Birthplace Stone (HS-12A)
- the Jones Store Rock (HS-12B)
- the Vincennes Stone (HS-12C)
- the Berry-Lincoln Store Stone (HS-12D)
- the Lexington Kentucky bricks (HS-12E)
- the Old Capitol Stone (HS-12F)
- the Gettysburg Rock (HS-12G)
- the White House Stone (HS-12H),
- the Anderson Cottage Stone (HS-12I)
- the Washington D.C. House Stone (HS-12J)
- the Culver Stone (HS-12L)
- the Nancy Hanks Lincoln Stone (HS-25)
- the cemetery iron fence (HS-26)
- the flagpole (HS-27)
- the allée walks and steps (HS-28)
- the orientation plaque (HS-29)
- the plaza stone walls (HS-30)
- the memorial stone benches (HS-31)
- the Lincoln Spring marker (HS-32)
- the cemetery gates (HS-33)
- the memorial powerhouse chimney (HS-34)

An update to the List of Classified Structures in 1993 resulted in the deletion of all the structures at the Living Historical Farm and the addition of several landscape elements that date to the national memorial's 1930s development. These structures were as follows:

- the memorial culverts (HS-1A)
- the memorial water system access (HS-1B)
- the memorial stone pillars (HS-1C)
- the other headstones in the cemetery (HS-26A-G)
- the memorial plaza (HS-30A)
- the state highway right-of-way marker (HS-36)
- the Walnut Tree marker (HS-37)
- the Old Lincoln Trace (HS-38)
- the state road culvert (HS-39)

THE NATIONAL MEMORIAL'S NATURAL RESOURCES

During the mid-1800s, most of the Lincoln farm was cleared and several buildings were erected. Lincoln City, which included the property of the memorial, was platted in the 1870s and flourished until several fires destroyed many of the town's structures in the early 1900s. The implementation of Olmsted's plans in the 1930s and 40s included formal landscaping of an allée and replanting the hardwood forest on the remainder of the property. The genetic origin of the trees planted by the Civilian Conservation Corps during this time is unknown; thus, most of the hardwoods present are of unknown origin and may not be native to the area. Most of the current vegetation is successional forest, due to the past disturbances. The hill upon which the cemetery is located is the least disturbed area and contains the oldest trees — primarily oak and hickory. The forest in the southern portion of the memorial is the most mature, having been planted between the 1920s and 1940s; the northern 40 acres was farmed until the 1970s and is in an earlier stage of succession.

Much of the memorial is covered by a successional hardwood forest. Promoting the rehabilitation and success of the oak-hickory forest/woodland is a goal identified in the national memorial's "Resource Management Plan." The rationale for this goal is to depict the conditions of the forest that the Lincoln family encountered upon their arrival in Indiana. In addition, this would achieve the broad NPS goal of natural resource protection and preservation by providing improved wildlife habitat, advocating native vegetation species, and promoting ecological processes. A 1989 analysis showed that the presettlement vegetation of Spencer County at the memorial was a mosaic of xeric and mesic oak-hickory forest on the uplands with patchy areas of mesic mixed forest grading into bottomland forests along streambanks.

As a representative "pioneer woodlot," the forest at the memorial should possess a healthy diversity of flora and fauna. At present, the forest has an abundance of canopy trees, to the detriment of understory and herbaceous species. Tulip poplar, sugar maple, and especially honeysuckle have thrived, and it has been difficult to obtain a good balance of typical oak-hickory species. There is an ongoing effort at the memorial to control invasive species and improve the overall well-being of the forest as a small, yet vital, ecosystem. This improves the integrity of the designed landscape, as it establishes a more attractive setting for the allée, cemetery, trails, and Cabin Site Memorial.

The forest in the memorial is contiguous with a much larger forest system in Lincoln State Park. The relatively large expanse of forest increases the potential diversity of migratory songbirds and other forest wildlife species that can be supported in the general area.

The actions proposed in this management plan are in the range of the federally endangered Indiana bat (*Myotis sodalis*) and federally threatened bald eagle (*Haliaeetus leucocephalus*). There is no bald eagle habitat in the national memorial. Indiana bats hibernate in caves and then disperse to reproduce and forage in relatively undisturbed forested areas associated with water resources during spring and summer. Young are raised in nursery colony roosts in trees, typically near drainageways in undeveloped areas. There are no known Indiana bat hibernaculae (winter shelters) in or near the national memorial. There is suitable summer habitat for this species present throughout the site and surrounding forest. The extensive forest landscape provides good foraging habitat for Indiana's bats, and all intermittent streams and drainageways in or contiguous to the forest provide potential roosting habitat. There are no current records of Indiana bats

in or near the site, but additional survey work is needed.

Current water resources at the memorial consist of several ephemeral pools and

streams and a small human-made farm pond. Ephemeral pools may be important breeding habitat for amphibians.

VISITOR EXPERIENCE

Between 2000 and 2003, the average yearly national memorial visitation was 140,000 visits. There are four major use periods that are consistent year to year. The peak visitor use is in June and July with about 32,000 visits per month. In May and August monthly visitor use drops to 20,000 visits. School groups add to the general visitation during April, May, and September, with an average monthly visitation of 13,000. It is the winter months when the national memorial visitation drops to an average of 2,000 monthly visits.

In summer 1997 the Cooperative Park Studies Unit of the University of Idaho surveyed visitors to the Lincoln Boyhood National Memorial. The following summary is a profile of summer visitors described by the study.

Eighty-one percent of the visitor groups consist of family. Thirty percent of the groups have five or more members. Twenty-six percent consisted of two in a group.

The age characteristics of the visitors reflect the family group with 45% between the ages of 31 and 60 years, 40% age 20 or younger, and elderly comprising 10%.

Within the past five years 37% of those sampled were repeat visitors.

Sixty-six percent of the visitors came from communities within a three-state region consisting of Indiana (48%), Illinois (10%), and Kentucky (8%).

Forty-nine percent of the groups reported that the national memorial was one of several destinations on their current trip. Lincoln Boyhood National Memorial was

the primary destination for 23% of the groups that were surveyed.

Visitor groups were asked about other places they visited while in the area around Lincoln Boyhood National Memorial. Seventy-three percent of visitor groups visited Lincoln State Park, across a two-lane highway from the national memorial. Thirty-seven percent visited the Holiday World & Splashin' Safari amusement park. Only 5% of visitor groups visited the Colonel William Jones State Historic Site.

Upon entering the national memorial most visitors (70%) began their experience at the visitor center. The most commonly visited sites were the Living Historical Farm (92%), the Cabin Site Memorial (88%), the visitor center (87%), Nancy Hanks Lincoln's grave (80%), Lincoln Boyhood Trail (51%), Trail of Twelve Stones (44%), Lincoln Spring Trail (24%), Boyhood Nature Trail (18%), and picnic areas (23%). In addition to visiting these features, 59% of the visitors enjoyed walking or day hiking in the national memorial.

Fifty-nine percent of the visitors sampled spent two or more hours visiting the national memorial. Twenty-five percent spent about an hour.

Figure 1 shows the percentages of visitor groups that participated in a variety of activities while visiting Lincoln Boyhood National Memorial.

FIGURE 1. VISITOR ACTIVITIES AT THE NATIONAL MEMORIAL

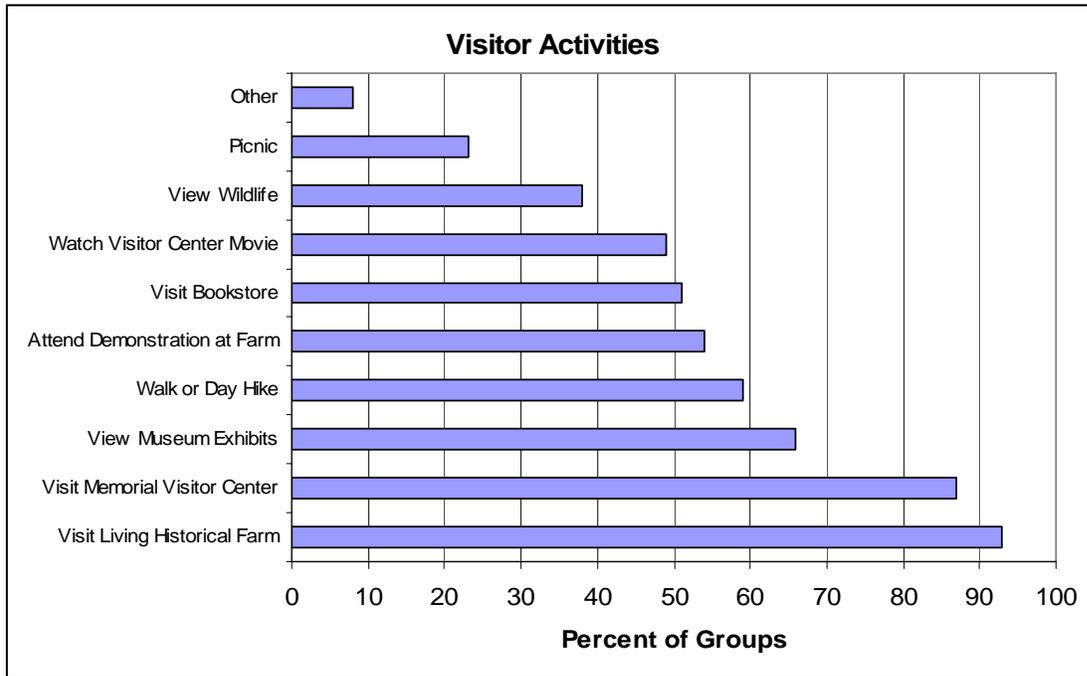


TABLE 8. MAJOR RECREATION AND CULTURAL RESOURCES IN SPENCER COUNTY, INDIANA

ATTRACTION	PURPOSE	DESCRIPTION
Lincoln State Park Indiana Department of Natural Resources	outdoor recreation, musical dramas, cultural resource	About 1,747 acres for camping, cabins, and outdoor land and water activities.
Holiday World & Splashin' Safari	recreation, amusements	The nation's first theme park.
St. Meinrad Archabbey and Seminary	architecture, cultural resource, religion	Founded in 1854, Saint Meinrad is one of only two archabbeys in the United States. There is a graduate- level School of Theology.
Lincoln Pioneer Museum and Village	cultural resource	Re-creation of a pioneer settlement.
Buffalo Run	farm and buffalo	Tours and artifacts that are commemorative of the Buffalo Trace.
Lincoln Ferry Park	outdoor recreation, cultural resource	River-front park with picnic area and shelter house. An historic site where the Lincoln family was ferried across the Ohio River into Indiana in 1816.
Spencer County Memorial Forest	cultural tours	This forest setting has a World War II Veterans memorial. There are shelter houses available for picnics and events.
Santa Claus Statue	cultural resource	A 22-foot concrete statue that was erected in 1935 and dedicated to the children of the world.
Spencer County Courthouse	cultural resource	The courthouse is a 1921 Elmer Dunlap design that features a stained-glass dome towering over a grand rotunda.
Boner Bridge	cultural resource	This is an iron bowstring bridge built in 1866 by the King Bridge and Iron Company.
Huffman Bridge	cultural resource	This is a covered bridge built during the Civil War.

THE SOCIOECONOMIC ENVIRONMENT

Spencer County, Indiana, is the primary geographic study area selected for the socioeconomic baseline. The entire 200-acre Lincoln Boyhood National Memorial is in Spencer County. Although there are socio-economic influences that extend beyond Spencer County, it appears that most of the national memorial’s demographic, economic, and infrastructure effects occur locally.

Lincoln Boyhood National Memorial’s contribution to the local and regional sociological and economic environment is minor when compared to the large influences of the manufacturing and education/health services industries.

POPULATION OF SPENCER COUNTY

The population in Spencer County for 2002 was estimated at 20,353, which is a 4.4% growth since the 1990 census. All of the communities throughout the county are small and generally rural, with the largest community being the county seat in Rockport, Indiana (population 2,146). The fastest growing community is Santa Claus, Indiana, with a 2002 population of 2, 129 — an increase of 1, 202 since 1990.

TABLE 9. LARGEST COMMUNITIES IN SPENCER COUNTY

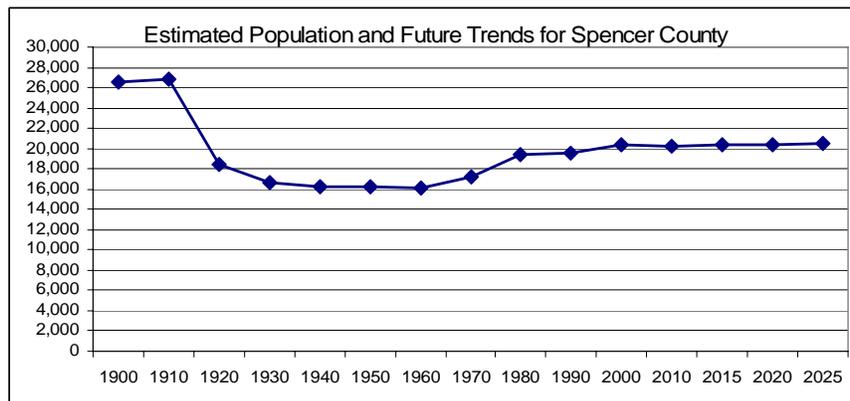
TOWN	POPULATION IN 2002	% OF COUNTY
Chrisney	530	2.60%
Dale	1,563	7.70%
Gentryville	257	1.30%
Grandview	700	3.40%
Rockport	2,146	10.50%
Santa Claus	2,129	10.50%

Spencer County’s largest population was before 1920 — about 26,800 residents. Over the next five decades the population continued to decline to its lowest level of about 16,000 residents in 1960. In the last three decades the population of the county grew by 19% to an estimated 20,353. STATS Indiana (*Indiana Business Research Center*) projects a very minor increase in population through 2025 (figure 2) reaching an estimated 20,450.

HOUSEHOLD INCOME AND POVERTY IN SPENCER COUNTY

Census 2000 estimated Spencer County’s median household income at \$43,805. Throughout the 1990s, Spencer County’s

FIGURE 2. ESTIMATED POPULATION AND FUTURE TRENDS FOR SPENCER COUNTY



SOURCE: U.S. Census Bureau and STATS Indiana Business Research Center

annual median household income averaged \$1,800 dollars higher when compared to the state of Indiana. Fifty-nine percent of Spencer County's households had total incomes below \$50,000 (Census 2000 reporting 1999 actual incomes). Twenty-three percent had household incomes between \$50,000 and \$75,000. The annual rate of poverty among Spencer County residents averaged 8% between 1989 and 2000. This rate consistently falls below the poverty rate of 9.5% for the state of Indiana.

EMPLOYMENT IN SPENCER COUNTY

Labor force for Spencer County in February 2004 is estimated at 11,460. The unemployment rate in the county was 5.6%, with 640 persons out of work but seeking jobs. Between 1990 and 2004 the rate of unemployment peaked in 1992 at 12.1% and has remained at or below 6% since 1996.

INDUSTRIES IN SPENCER COUNTY

Spencer County's economic structure is diverse and includes Holiday World (the oldest theme park in the United States), agriculture, forestry, transportation, manufacturing, publishing, tourism, construction, and energy-related industries (table 10). Although rural in appearance, Spencer County hosts three major industrial parks — Rockport Industrial site (211 acres), Dale Industrial site (230 acres), and Santa Claus Industrial site (205 acres). In 2002 manufacturing was the largest of 20 major industry sectors. It had an average wage per job of \$39,393. Manufacturing was the dominate industry in providing 28% of the employment (table 10). The 2000 US Census reports that the combined agriculture and forestry industry provided only 5.2% of the jobs in Spencer County. Jobs in the education/ health/ social services sector provided 15.6%, and retail trade contributed 12% of employment to county residents.

TABLE 10. INDUSTRY — SPENCER COUNTY, INDIANA

INDUSTRY	NUMBER OF JOBS	%
Agriculture, forestry, fishing and hunting, and mining	523	5.2
Construction	710	7
Manufacturing	2,840	28.2
Wholesale trade	386	3.8
Retail trade	1,207	12
Transportation and warehousing, and utilities	714	7.1
Information	114	1.1
Finance, insurance, real estate, and rental and leasing	354	3.5
Professional, scientific, management, administrative, and waste management services	396	3.9
Educational, health and social services	1,574	15.6
Arts, entertainment, recreation, accommodation, and food services	612	6.1
Other services (except public administration)	368	3.7
Public administration	275	2.7

SOURCE: US Census Bureau 2000

Although the tourism industry is not as dominant as manufacturing, the opportunities that are available provide visitors with a range of choices such as enjoying amusement rides at Holiday World & Splashin' Safari, participating in outdoor recreational opportunities at Lincoln State Park, and exploring the cultural resources of Lincoln Boyhood National Memorial.

VISITOR SPENDING AND ECONOMIC CONTRIBUTION

Visitors to Lincoln Boyhood National Memorial spent \$6.38 million dollars in 2001, within Spencer County, which supported a total of \$7.68 million in sales, \$2.77 million in personal income, 165 jobs, and \$4.36 million in value added. Although Lincoln Boyhood National Memorial has a positive contribution to the area economy, its influence is minor when compared with major industries such as manufacturing with year 2000 revenue of \$74,553,000.

The visitor spending and economic analysis for Lincoln Boyhood National Memorial is based on: (1) NPS recreation visit estimates for year 2001, (2) estimates of the percentage of visitors that are local, on day trips, or staying overnight in the area in campgrounds or other accommodations, (3) national memorial visitor spending profiles from visitor surveys, and (4) regional economic multipliers based on input-output models for the region. The impacts cover only the economic effects of visitor spending in the local area around the national memorial. They do not include impacts of the NPS operations/employees, construction activity, or visitor spending outside the local area.

U.S. POST OFFICE

The United States Postal Service operates a post office in the historic memorial building at Lincoln Boyhood National Memorial. For postal patrons to access the small facility, they must travel on national memorial roads, use parking spaces at the key attraction, and mix with visitors in the enclosed cloister of the memorial building. This U.S. Post Office facility services 10 box holders and a service route of 70 homes and businesses.

TRANSPORTATION

The 200-acre Lincoln Boyhood National Memorial is bisected by railroad tracks on easements that were established long ago. Daily freight train activity supports area businesses.

County Road 300 is a north/south route through the national memorial. Currently, County Road 300 provides visitors and local residents with vehicle access from Interstate Highway 64 and Dale, Indiana, which are 6 miles north of the national memorial, with connection to State Highway 162 bordering the south portion of the national memorial. A substantial number of tourists use State Highway 162 to access both Lincoln Boyhood National Memorial and Lincoln State Park.

Upon completion of the new U.S. Highway 231, the current use pattern of County Road 300 is expected to change substantially. U.S. 231 will be approximately 0.5 mile east of the national memorial and will become the major north/south travel route in the area. County Road 300 will be used primarily by local traffic, and it is anticipated that a substantial volume of use, including tourists, will move to the new U.S. 231 route.

East of the national memorial is Heritage Hill High School. Before and after school, students and faculty who reside west of the national memorial use national memorial roads to travel home. Also, local residents from and around Lincoln City use national memorial roads to access State Highway 162. Although there is an alternative route that is less than 0.5 mile away, these use patterns are well established.



Wayside exhibit at Nancy Hanks Lincoln's Grave at Lincoln Boyhood National Memorial.

NPS OPERATIONS

When the memorial building was designed and built in the 1940s, it was intended to be a memorial to President Abraham Lincoln and his family. Once the operation of the national memorial and its 200 acres were turned over to the National Park Service in 1962, the cloister between the Abraham Lincoln Hall and the Nancy Hanks Lincoln Hall was enclosed with windows and doors. With the addition of an information desk in front, offices, rest rooms, a theater, and a museum (added to the back of the building), this became the visitor center and administrative headquarters for the national memorial. Maintenance operations are housed at a separate, nearby facility.

Because of insufficient space for NPS staff at the memorial building, one of three residential houses in the national memorial is being used for administrative offices. Offices for the superintendent, administrative clerk, and secretary are at the residence. With this necessary move, all of the division chiefs are now in separate buildings from the superintendent. Because no facility has adequate storage space, supplies and equipment are also housed in different locations.

OTHER NPS SITES COMMEMORATING PRESIDENT ABRAHAM LINCOLN AND HIS FAMILY

The National Park Service manages five other sites that honor the life of President Abraham Lincoln. All these sites have interpretation, programs, exhibits and activities that highlight and commemorate various aspects of the life and family of President Abraham Lincoln. On a regular basis, NPS managers make formal and informal contacts to coordinate each sites activities, to reduce duplication, and to complement the stories told at the other sites. These activities would be encouraged and expanded on in any of the actions alternatives presented in this plan.

ABRAHAM LINCOLN BIRTHPLACE NATIONAL HISTORIC SITE (KENTUCKY)

This national historic site protects and preserves the significant resources of the birthplace of Abraham Lincoln. The national historic site commemorates the birth and early life of Abraham Lincoln and interprets the relationship of his background and pioneer environment to his service to the country as president of the United States during the crucial years of the Civil War.

LINCOLN HOME NATIONAL HISTORIC SITE (ILLINOIS)

This national historic site contains the home where Abraham Lincoln, his wife and children lived from 1844 to 1861. The home

is in the community where Abraham Lincoln developed his legal and political skills.

MOUNT RUSHMORE NATIONAL MEMORIAL (SOUTH DAKOTA)

This national memorial commemorates our national history and progress through the visages of Presidents George Washington, Thomas Jefferson, Abraham Lincoln, and Theodore Roosevelt. The sculpture busts of the four presidents are significant as commemorations of each of their efforts in addition to the unique creative endeavor of the carvings themselves.

LINCOLN MEMORIAL (DISTRICT OF COLUMBIA)

The Lincoln Memorial is a tribute to the achievements and values of President Abraham Lincoln and the freedoms in the United States. The memorial is a commemorative monument symbolizing Lincoln's lasting contribution of preserving the Union.

FORD'S THEATRE NATIONAL HISTORIC SITE (DISTRICT OF COLUMBIA)

This national historic site preserves Ford's Theater, where President Abraham Lincoln was shot, and the Peterson House where the president died.

CHAPTER 4: ENVIRONMENTAL CONSEQUENCES



Memorial building with enclosed cloister at
Lincoln Boyhood National Memorial.

INTRODUCTION

The National Environmental Policy Act requires that environmental documents discuss the environmental impacts of a proposed federal action and any adverse environmental effects that cannot be avoided if a proposed action is implemented. In this case the proposed federal action would be the adoption of a general management plan for Lincoln Boyhood National Memorial. The following portion of this document analyzes the environmental impacts of implementing the three alternatives on cultural resources, natural resources, the visitor experience, the socioeconomic environment, and NPS operations. The analysis is the basis for comparing the beneficial and adverse effects of implementing the alternatives.

Because of the general, conceptual nature of the actions described in the alternatives, the impacts of these actions are analyzed in general qualitative terms. Thus, this environmental impact statement should be considered a programmatic analysis. If and when site-specific developments or other actions are proposed for implementation subsequent to this *General Management Plan*, appropriate detailed environmental and cultural compliance documentation will be prepared in accord with the National Environmental Policy Act and National Historic Preservation Act requirements.

This chapter begins with a description of the methods and assumptions used for each impact topic. Impact analysis discussions are organized by alternative and then by impact topic under each alternative. At the end of each alternative there is a brief discussion of unavoidable adverse impacts; irreversible and irretrievable commitments of resources, the relationship of short-term uses of the environment and the maintenance and enhancement of long-term productivity, and energy requirements and conservation potential. The impacts of each alternative are briefly summarized in table 7, at the end of

Chapter 2: "Alternatives, Including the Preferred Alternative".

CUMULATIVE IMPACT ANALYSIS

A cumulative impact is described in the Council on Environmental Quality's regulation 1508.7 as follows:

Cumulative impacts are incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or nonfederal) or person undertakes such other action. Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time.

To determine potential cumulative impacts, *other* projects within and surrounding Lincoln Boyhood National Memorial were identified. The area includes Spencer County. Potential projects examined as potential cumulative actions included any planning or development activity that was currently being implemented or that would be implemented in the reasonably foreseeable future. Impacts of past actions were also considered in the analysis.

These actions are evaluated in conjunction with the impacts of each alternative to determine if there would be any cumulative effects on a particular natural or cultural resource, visitor experience, socioeconomic environment, or NPS operations.

Past Actions

The following past actions could contribute to cumulative impacts.

Agriculture. Agriculture has occurred within and outside the national memorial. Nonnative

plants and animals have been imported for use in agriculture. Fences have been built in the national memorial and elsewhere to limit the movement of animals. Along with agriculture has come the use of herbicides to kill unwanted plant species and the introduction of exotic plant species. The memorial's use of herbicides to control exotics may harm native plants as well. The memorial's use of animal feed or bedding purchased outside the memorial may also contribute to the spread of exotic plants.

Building and Occupancy of Towns. Besides agriculture, a variety of development actions have occurred in and adjacent to the memorial over time. (Additional information about past development in the memorial may be found under "Cultural Resources" in the "Affected Environment" chapter.) For example, the main road and two sets of railroad tracks are in the memorial. In the late 1800s Lincoln City once occupied lands that are now part of the national memorial.

Current and Future Actions

The agricultural and the rural nature of development continue in the areas surrounding Lincoln Boyhood National Memorial. The nearby community of Lincoln City has devolved from an economic hub in Spencer County to a small cluster of residential dwellings. Non-visitor-related traffic on County Road 300 (north/south) can intrude on the visitor experience, and nontraditional uses (jogging on trails) stem from activities at the nearby Heritage Hills High School and local residents.

National memorial visitation may grow, but not to a level that significantly alters local activities and land use. Area attractions, such as Lincoln State Park and Holiday World & Splashin' Safari, are primary destinations for visitors to Spencer County, which has secondary effects on visitation levels at the national memorial.

The construction of the new U.S. Highway 231 (about 1 mile east of the national memorial) will reroute much of the local and non-local traffic that currently travels north/south on County Road 300.

IMPAIRMENT

In addition to determining the environmental consequences of implementing the preferred and other alternatives, NPS *Management Policies 2001* (section 1.4) requires analysis of potential effects to determine whether or not proposed actions would impair national memorial resources and values.

The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park system resources and values. NPS managers always must seek ways to avoid, or to minimize to the greatest degree practicable, adverse impacts on national memorial resources and values. The laws, however, do give the National Park Service the management discretion to allow impacts on national memorial resources and values when necessary and appropriate to fulfill the purposes of the national memorial, as long as the impact does not constitute impairment of the affected resources and values.

The prohibited impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of national memorial resources and values, including the opportunities that otherwise would be present for the enjoyment of those resources or values (NPS *Management Policies 2001* 1.4.5). An impact on any national memorial resource or value may constitute an impairment. An impact would be more likely to constitute an impairment to the extent it affects a resource or value whose conservation is

- necessary to fulfill specific purposes identified in the establishing legislation of the national memorial;
- key to the natural or cultural integrity of the national memorial or to opportunities for enjoyment of the national memorial; or
- identified as a goal in the national memorial's general management plan or other relevant NPS planning documents.

A determination on impairment is made in the “Environmental Consequences” chapter in the conclusion section for each required impact topic related to the national memorial’s resources and values. An evaluation of impairment is not required for topics related to visitor use and experience, (unless the impact is resource based), NPS operations, or the socioeconomic environment.

METHODS AND ASSUMPTIONS FOR ANALYZING IMPACTS

The planning team based the impact analysis and the conclusions in this chapter largely on the review of existing literature and studies, information provided by experts in the National Park Service and other agencies, and national memorial staff insights and professional judgment. The team's method of analyzing impacts is further explained below. It is important to remember that all the impacts have been assessed assuming mitigating measures have been implemented to minimize or avoid impacts. If mitigating measures described in the "Alternatives Including the Preferred Alternative" chapter were not applied, the potential for resource impacts and the magnitude of those impacts would increase.

Director's Order 12, "Conservation Planning, Environmental Impact Analysis, and Decision Making," presents an approach to identifying the duration (short or long term), type (adverse or beneficial), and intensity or magnitude of the impact(s), and that approach has been used in this document. A short-term impact would last less than one year. A long-term impact would last more than one year and would be more permanent in nature. Where duration is not noted in the impact analysis, it is considered long term. All impacts are assumed to be long term unless otherwise stated.

Direct and indirect effects caused by an action were considered in the analysis. Direct effects are caused by an action and occur at the same time and place as the action. Indirect effects are caused by the action and occur later in time or farther removed from the place, but are still reasonably foreseeable.

The impacts of the action alternatives describe the *difference between* implementing the no-action alternative (A) and

implementing the action alternatives (B and C). To understand a complete "picture" of the impacts of implementing any of the action alternatives, the reader must also take into consideration the impacts that would occur under the no-action alternative.

CULTURAL RESOURCES

Potential impacts on archeological resources and historic structures and cultural landscapes either listed in or eligible to be listed in the National Register of Historic Places were identified and evaluated in accordance with the Advisory Council on Historic Preservation's regulations implementing Section 106 of the National Historic Preservation Act (36 CFR 800, *Protection of Historic Properties*): by (1) determining the area of potential effects; (2) identifying cultural resources present in the area of potential effects that are national register listed or eligible; (3) applying the criteria of adverse effect to affected resources; and (4) considering ways to avoid, minimize or mitigate adverse effects.

Under the Advisory Council's regulations a determination of *no historic properties affected*, *adverse effect*, or *no adverse effect* must be made for affected national register listed or eligible cultural resources. A determination of *no historic properties affected* means that either there are no historic properties present or there are historic properties present but the undertaking will have no effect upon them (36 CFR 800.4(d)(1)). 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 the alternatives that would occur later in time, be farther removed in distance, or be cumulative (36 CFR 800.5(a)(1)). A determination of *no adverse effect* means there is an effect, but the effect would not meet the criteria of an adverse effect, i.e., diminish the characteristics of the cultural resource that qualify it for inclusion in the national register (36 CFR 800.5(b)).

Thus, the criteria for characterizing the severity or intensity of impacts on national register listed or eligible archeological resources and historic structures and cultural landscapes are the Section 106 determinations of effect: *no historic properties affected*, *adverse effect*, or *no adverse effect*. A Section 106 determination of effect is included in the conclusion section for each analysis of impacts on national-register-listed or eligible cultural resources.

NATURAL RESOURCES

Analysis of natural resources was based on research, knowledge of national memorial resources, and the best professional judgment of planners and natural resource specialists who have experience with similar types of projects. Information on the national memorial's natural resources was gathered from several sources, including the U.S. Fish and Wildlife Service (see Appendix C) and the national memorial's draft "Fire Management Plan" (NPS 2002).

The definitions below assume that mitigation would be implemented. For this document, the planning team qualitatively evaluated the impact intensity for natural resources, as follows.

Negligible — Impacts would be at the lowest levels of detection and would have

no appreciable effect on resources, values, or processes.

Minor — Impacts would be perceptible but slight and localized. If mitigation were needed to offset any adverse effects, it would be relatively simple to implement and would likely be successful.

Moderate — Impacts would be readily apparent and widespread, and would result in a noticeable change to resources, values or processes. Mitigative measures would probably be necessary to offset adverse effects and would likely be successful.

Major — Impacts would be readily apparent and widespread, and would result in a substantial alteration or loss of resources, values, or processes. Mitigative measures to offset adverse effects would be needed and extensive and their success could not be guaranteed.

VISITOR USE AND EXPERIENCE

This impact analysis considers various aspects of visitor use and experience at Lincoln Boyhood National Memorial, including the effects on: the general quality of the visitor experience; the overall range of visitor opportunities; and the comprehensiveness of interpretive opportunities. The analysis is based on how visitor use and experiences would change with the way management prescriptions were applied in the alternatives.

Impacts on visitor use and experience were determined considering the best available information, including opinions from visitors and neighbors and information provided by NPS staff. This information was supplemented by data gathered through public involvement during this planning process.

For analysis purposes, impact duration, intensities, and types for visitor experience impact topics have been defined as follows:

Negligible — Visitors would likely be unaware of any effects associated with implementation of the alternative.

Minor — Changes in visitor use and/or experience would be slight but detectable, would affect few visitors, and would not appreciably limit or enhance experiences identified as fundamental to the national memorial’s purpose and significance.

Moderate — Some characteristics of visitor use and/or experience would change, and many visitors would likely be aware of the effects associated with implementation of the alternative; some changes to experiences identified as fundamental to the national memorial’s purpose and significance would be apparent.

Major — Multiple characteristics of visitor experience would change, including experiences identified as fundamental to national memorial purpose and significance; most visitors would be aware of the effects associated with implementation of the alternative.

of detection. There would be no noticeable change in any defined socioeconomic indicators.

Minor — Effects on socioeconomic conditions would be slight but detectable.

Moderate — Effects on socioeconomic conditions would be readily apparent and result in changes to socioeconomic conditions on a local scale.

Major — Effects on socioeconomic conditions would be readily apparent, resulting in demonstrable changes to socioeconomic conditions in the region.

SOCIOECONOMIC ENVIRONMENT

The National Park Service applied logic, experience, professional expertise, and professional judgment to analyze the impacts on the social and economic situation resulting from implementing actions proposed in each alternative. Economic data, historic visitor use data, expected future visitor use, and future developments of the national memorial were all considered in identifying, discussing, and evaluating expected impacts.

Assessments of potential socioeconomic impacts were based on comparisons between the no-action alternative and each of the action alternatives.

Negligible — Effects on socioeconomic conditions would be below or at the level

NPS policy calls for the effects of the alternatives to be characterized as being beneficial, adverse, or indeterminate in nature. With respect to economic and social effects, few standards or clear definitions exist as to what constitute beneficial or positive changes, and those considered adverse or negative. For example, rising unemployment is generally perceived as adverse, while increases in job opportunities and average per capita personal income are regarded as beneficial. In many instances, however, changes viewed as favorable by some members of a community are seen as unfavorable by others. For example, the impact of growth on housing markets and values may be seen as favorable by construction contractors and many homeowners, but adverse by renters and by local government officials and community groups concerned with affordability. Consequently, some of the social and economic impacts of the alternatives may be described in such a manner as to allow the individual reviewer to determine whether they would be beneficial or adverse (impact is indeterminate with respect to “type”).

NPS OPERATIONS/ ADMINISTRATION

The impact analysis evaluated the effects of the alternatives on the following aspects of park operations:

- staffing, infrastructure, visitor facilities, and services
- operations of non-NPS entities, including the U.S. Postal Service
- operations of other government agencies, such as Lincoln State Park

The analysis was conducted in terms of how park operations and facilities might vary under the different management alternatives. The analysis is qualitative rather than quantitative because of the conceptual nature of the alternatives. Consequently professional judgment was used to reach reasonable conclusions as to the intensity, duration, and type of potential impact.

Negligible — Park operations would not be affected or the effect would be at or below the lower levels of detection, and would not have an appreciable effect on park operations.

Minor — The effects would be detectable, but would be of a magnitude that would not have an appreciable effect on park operations.

Moderate — The effects would be readily apparent and would result in a substantial change in park operations in a manner noticeable to staff and the public.

Major — The effects would be readily apparent and would result in a substantial change in park operations in a manner noticeable to staff and the public and be markedly different from existing operations.

Type of Impact. Beneficial impacts would improve NPS operations and/or facilities. Adverse impacts would negatively affect NPS operations and/or facilities and could hinder the staff's ability to provide adequate services and facilities to visitors and staff. Some impacts could be beneficial for some operations or facilities and adverse or neutral for others.

IMPACTS OF IMPLEMENTING ALTERNATIVE A, NO-ACTION ALTERNATIVE

CULTURAL RESOURCES

Archeological Resources

Archeological resources adjacent to or easily accessible from trails, the Living Historical Farm, and groomed landscapes could be vulnerable to surface disturbance, inadvertent damage, and vandalism. A loss of surface archeological materials, alteration of artifact distribution, and a reduction of contextual evidence could result. However, continued ranger patrol and emphasis on visitor education would discourage vandalism and inadvertent destruction of cultural remains, and any adverse impacts would be expected to be minimal, if any.

As appropriate, additional archeological surveys and/or monitoring would precede any ground disturbance associated with construction, e.g., installation of wayside exhibits along the nature trail. National-register-eligible or listed archeological resources would be avoided to the greatest extent possible, and no adverse effects would be expected. In the unlikely event that such resources could not be avoided, an appropriate mitigation strategy would be developed in consultation with the Indiana state historic preservation officer.

Cumulative Impacts. Past development in the national memorial, e.g., the construction of County Road 300 and 1625N and two sets of railroad tracks, might have resulted in the disturbance and loss of some archeological resources during excavation and construction activities. In addition, agricultural practices and the development and expansion of communities in and near the national memorial might also have previously disturbed archeological resources. The continuation of such activities could also

result in future adverse impacts on archeological resources.

Continued monitoring of management and visitor actions at the national memorial would help to identify and avoid any future impacts on archeological resources. The continued level of management actions under alternative A could contribute adverse impacts to the impacts of other past, present, and reasonably foreseeable actions occurring both within and outside the national memorial. However, any adverse impacts associated with alternative A would be anticipated to be minimal. Thus, any adverse impacts on archeological resources resulting from implementation of alternative A would be a very small component of the overall adverse cumulative impact.

Conclusion. Continued management actions under the no-action alternative would include little new construction, and no adverse impacts on archeological resources would be anticipated. In the unlikely event that impacts on national-register-eligible or listed archeological resources could not be avoided, a memorandum of agreement, in accordance with 36 CFR Part 800.6, *Resolution of Adverse Effects*, would be negotiated between Lincoln Boyhood National Memorial and the Indiana state historic preservation officer (and/or the Advisory Council on Historic Preservation, if necessary). The memorandum of agreement would stipulate how the adverse effects would be mitigated.

Because important archeological resources would be avoided during ground disturbing activities, there would be no adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Lincoln Boyhood National Memorial; (2)

key to the natural or cultural integrity of the national memorial or to opportunities for enjoyment of the national memorial; or (3) identified as a goal in the national memorial's general management plan or other relevant NPS planning documents. Thus, there would be no impairment of the national memorial's resources or values.

Historic Structures and Cultural Landscapes

Under the no-action alternative existing conditions would remain unchanged. Visitation trends would remain stable, and there would be no construction-related impacts on historic structures and cultural landscapes.

To appropriately preserve and protect the national-register-listed or eligible historic structures and cultural landscapes, all stabilization and preservation efforts, as well as daily, cyclical, and seasonal maintenance, would be undertaken in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995). Stabilization and preservation efforts would have no adverse effects on historic structures and cultural landscapes.

Cumulative Impacts. Over the years historic structures in the national memorial and general vicinity have been adversely impacted by natural processes such as weathering, and historic structures outside the national memorial have been demolished for agriculture and development. Historic structures in the national memorial have also been adversely impacted by wear and tear associated with visitor access. In addition, changes to the memorial building that occurred during the 1960s — enclosing the cloister, adding a wing to the structure's south façade, and altering the memorial court — diminished the integrity of the structure, but not to the extent that its national register eligibility was jeopardized.

Past development in the national memorial, e.g., the construction of County Road 300 and 1625N and two sets of railroad tracks and the relocation of the highway between the allée and memorial building to a route south of the building, added nonhistoric elements to the national memorial landscape and altered land use and circulation patterns and the spatial relationships between landscape elements. The development of the Living History Farm near the Cabin Site Memorial also altered land use patterns and the spatial relationship between landscape elements in the national memorial.

Because existing conditions would remain unchanged under the no-action alternative, alternative A would not contribute to the impacts of other past, present, and reasonably foreseeable actions. Therefore, there would be no cumulative impacts on historic structures and cultural landscapes under this alternative.

Conclusion. 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 alternative A would result in *no adverse effects* on historic structures and cultural landscapes of Lincoln Boyhood National Memorial.

Because there would be no adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Lincoln Boyhood National Memorial; (2) key to the natural or cultural integrity of the national memorial or to opportunities for enjoyment of the national memorial; or (3) identified as a goal in the national memorial's general management plan or other relevant NPS planning documents, there would be no impairment of the national memorial's resources or values.

NATURAL RESOURCES

Vegetation and Soils

Alternative A would not result in any disturbance of vegetation except that caused by ongoing maintenance such as mowing and routine vegetation management.

Because most of these maintenance activities would occur over small areas that have been previously disturbed, this would be a negligible adverse impact. No disturbance to soils would be anticipated in this alternative.

Cumulative Impacts. Agriculture in and outside the national memorial, while leaving a historical/cultural landscape, has greatly reduced native plants and increased vegetation that is useful for crops or animal feed. This in turn has led to the alteration of soil and the loss of soil through erosion. Fences, built in the national memorial and elsewhere to limit the movement of domestic animals, also may limit the movement of native animals and decrease the area's desirability for wildlife.

The use of herbicides to kill unwanted plant species might also harm native plants and contribute to adverse impacts on water quality. Fertilizers used on crops also might diminish water quality. Introduced exotic plant species might crowd out native plants and become a nuisance. The memorial's use of animal feed or bedding purchased outside the memorial might contribute to the spread of exotic plants.

Natural hydrological processes have been slightly modified to create a human-made pond to provide water for nonnative animals. The creation of towns inside and outside the national memorial created an increasing human presence in the area, modified the natural soil profile, altered surface water flow, increased use of groundwater, and removed or displaced native plants and animals. Impacts on vegetation and soils from agriculture and

development of towns and cities covered wide areas and were adverse. Impacts on vegetation and soils of current and future actions inside and outside the memorial, in conjunction with the impacts of this alternative, would be major and adverse because they would result in substantial alteration of soils and vegetation. Most of the impacts would be the result of development outside the national memorial that might or might not be mitigated. The actions proposed in this alternative would contribute a very small increment to the overall cumulative impact.

Conclusion. Impacts on natural resources in this alternative would be negligible. There would be no impairment of natural resources.

VISITOR EXPERIENCE

General Quality of the Visitor Experience

In this alternative, visitors would continue to experience the memorial building with its modern modifications. The inability to experience the original Olmsted concept for the building and grounds would be considered a minor adverse impact, because, while it would affect most visitors, they would still be able to experience many elements of the historic design. Continued frustration with inadequate parking and occasional traffic disruption in the area of the memorial building would be considered a moderate adverse impact because, while these problems mostly occur during times of high visitation, they affect most visitors that come to the national memorial at those times.

Continuing the current costumed interpretive programs at the Living Historical Farm would be a moderate beneficial effect. Although the programs might not always be central to the Lincoln story, these experiences are compelling, especially for school

groups, and contribute to the overall experience for a large portion of national memorial visitors. Detrimental to the experience at the farm is the continued noise and intrusion caused by traffic on the county road section near the farm site. Although the disruptions are episodic and not continuous, because a large portion of the visitation is affected, this would continue to be a moderate adverse impact.

Occasional use of the shelter at the Living Historical Farm parking area for shelter from the rain provides a minor beneficial impact. This effect, however, is somewhat offset by the unattractiveness of the current facility.

Roads in the national memorial would continue to accommodate traffic that is not related to visitation. Depending upon the volume of traffic the noise and periodic congestion could have a minor to major adverse impact on the visitor experience.

The Overall Range of Visitor Opportunities

The range of visitor opportunities in this alternative would continue to include different types of settings — including memorial structures and trails that commemorate the life of President Abraham Lincoln and his early years in southern Indiana; costumed interpretation; historical demonstration farm; and interpretive exhibits. Recreational and picnicking opportunities would continue to be available at the adjacent Lincoln State Park. Overall there would be a moderate beneficial effect on visitor opportunities.

Comprehensiveness of Interpretive Opportunities

The capability and flexibility in providing comprehensive interpretation of the Lincoln

story are inhibited by the size and configuration of the memorial building. Space limitations contribute to this problem as well as the architectural design and layout of the structure, which was not designed as an interpretive facility. Some interpretive themes are interpreted at the site, and visitors get some important information, but the lost opportunities resulting from the less-than-optimal facility would be considered an on-going moderate adverse impact. Similarly, the comprehensiveness of the interpretive story is adversely impacted in a minor way by the lack of interpretation along the national memorial trails.

Continuation of costumed and personal services interpretation at the Living Historical Farm provides much flexibility in themes and stories and is very attractive to visitors. This would be a moderate beneficial effect, offset somewhat by the lack of interpretive programs and media available to visitors during the off season.

Cumulative Impacts

The impacts associated with the past, present and reasonably foreseeable future actions include the following.

(1) A 1997 visitor survey identified that 23% of the groups reported that the national memorial was their primary destination. The majority of visitors identified other destinations as their primary attractions such as Lincoln State Park and Holiday World & Splashin' Safari. As visitor use levels at these attractions increased or decreased, visitation at the national memorial might also be similarly influenced. It is anticipated that fluctuations in visitor attendance at these attractions would not be so drastic that they would create a beneficial or adverse impact on the visitor experience at the national memorial.

(2) The potential for future growth of businesses that rely on railroad freight services

could lead to the increased frequency of rail traffic or the increase durations of waiting times at the railroad crossing caused by longer trains passing through the national memorial. This could result in further impacts on visitor circulation in the national memorial and contribute to a minor to moderate adverse impact, depending upon the level of frequency and duration.

(3) Upon completion of the new U.S. Highway 231, the current use pattern of north/south (non-local) traffic would be relocated about 0.5 mile east of the national memorial and thereby reduce the volume of non-local traffic in the national memorial, which would have a moderate beneficial impact on the visitor experience.

Actions resulting from implementing alternative A as described previously would have a minor to moderate adverse impact on the visitor experience, such as not experiencing the original Olmsted design, inadequate parking facilities, traffic and noise intrusion not related to the national memorial, and the less than optimal interpretive facilities. However, there would be a minor to moderate beneficial impact resulting from continuing with the Living Historical Farm and the availability of the shelter in inclement weather. Those impacts associated with past, present, reasonably foreseeable future actions by others (as just described) would be a small component of the overall cumulative impact on the visitor experience.

Conclusion

Impacts on the visitor experience associated with the no-action alternative include continued minor to moderate adverse impacts and minor to moderate beneficial impacts. Important negative impacts would continue to result from the inadequate parking, limited interpretive opportunities at the memorial building, and traffic disruption at the Living Historical Farm. The most

important beneficial effect would continue to be the personal services and costumed interpretation at the farm.

SOCIOECONOMIC ENVIRONMENT

The continuation of the current management of Lincoln Boyhood National Memorial would not result in any new adverse impacts on the socioeconomic environment of Spencer County. NPS management and budgeting would not be significantly modified from the current levels of employment or maintenance and therefore would continue to have no new effects on local purchases and services.

The area residents would continue to benefit by having access to the trails and spaces of the national memorial. There would be no significant developments that would have any influence on national memorial neighbors.

Visitation levels would remain stable or grow only slightly and therefore not significantly change the current level of demand for local services that support visitors.

Local access to the U.S. Post Office in the memorial building would remain. Based on the current size of the post office and with population growth occurring outside the service area, it is expected that demand for local post office service would remain stable with little increase in use.

Local area residents, high school students/faculty, and tourists would continue to have north/south vehicular access through the national memorial. This would continue to be a minor benefit because other north/south access exist within 0.5 mile.

Under alternative A the economic effects would be negligible because economic conditions would continue to be below or at

the level of detection. There would be no noticeable change in any defined indicators. Lincoln City, once an economic influence in Spencer County, no longer influences the economics of the county or impacts the national memorial as it once did.

Cumulative Impacts

The impacts associated with the past, present, and reasonably foreseeable future actions would include the following.

(1) The adjacent town of Lincoln City was an economic hub in Spencer County at the turn of the century, with homes and businesses occupying lands that are now part of the national memorial. Today, Lincoln City consists of scattered homes surrounded by rural farms.

(2) Railroad tracks that cross through the national memorial on easements that were established long ago accommodate local freight that supports the regional economy. The rail freight service across the national memorial would continue unimpeded and the effects on the socioeconomic condition would be a minor beneficial impact with economic influence being slight but detectable.

(3) Tourism contribution to the regional economy is small in comparison with manufacturing and the five other leading industries. However, tourism in the immediate area of the national memorial would continue to have a moderate beneficial impact on the socioeconomic conditions because of employment and visitor services. Impacts would be readily apparent and result in small changes on a local scale.

The implementation of the no-action alternative (alternative A) would result in no beneficial or adverse change to the socioeconomic conditions and no additional effects

on the past, present, and reasonably foreseeable future actions. Therefore, there would be no cumulative effects on the socioeconomic conditions.

Conclusion

Lincoln Boyhood National Memorial would continue to have a beneficial impact on the social environment and economy of Spencer County, although its influence overall would continue to be negligible because it is overshadowed by the area's major industries (e.g., manufacturing).

NPS OPERATIONS/ ADMINISTRATION

In this alternative, NPS staff would continue to operate out of several buildings in different locations, including the offices in a residential unit. Communication would continue to be inefficient because the division chiefs are in separate buildings from the superintendent of the national memorial. Storage of supplies and equipment is also spread out in several facilities. Although distances between buildings are not great, these inefficiencies would continue to be a moderate adverse impact on NPS operations.

The location of the administrative function away from the memorial building would also continue to limit the interpretive division's ability to present programs on a regular basis. There are many occasions when there is only one interpreter on duty at the information desk. In the past, administrative personnel were cross-trained and could provide back-up coverage at the information desk while interpreters gave presentations. This is no longer possible and would continue to constitute a moderate adverse impact on interpretive operations.

Cumulative Impacts

The impacts associated with the past, present, and reasonably foreseeable future actions include the following.

(1) Since 1964, the National Park Service has attempted to accommodate NPS operations by using or modifying existing facilities, and then incrementally constructing additions and other structures in the national memorial.

(2) Continued changes in NPS policies, management directions, and technological evolutions have expanded the requirements associated with administrative spaces, equipment, and general storage. These changes often have specific building codes and structural requirements that must be adapted to existing facilities.

The no-action alternative (alternative A) continues the current situation of dispersed management, staff, equipment, and supplies in structures throughout the national memorial as described above. However, there would be no past, present, or reasonably foreseeable future actions that would affect NPS operations and therefore there would be no cumulative impacts on NPS operations.

Conclusion

Continuing to house NPS administrative staff in several buildings in different locations would continue to be inefficient. These inefficiencies would continue to be a minor to moderate adverse impact on NPS operations.

There would continue to be a moderate adverse impact on interpretive operations because administrative staff (now in a separate building) cannot substitute for interpreters at the information desk in the

memorial building while the interpreters lead interpretive programs.

UNAVOIDABLE ADVERSE IMPACTS

The following paragraphs describe the more important (moderate and major intensity) adverse impacts that would result from implementing this alternative. These are residual impacts that would remain after mitigation was implemented. The negligible and minor impacts are described in the foregoing analysis.

Allowing previous alterations of the memorial to remain even though the overall integrity of the memorial is medium to high would be a continuing minor to moderate adverse impact.

Continued frustration with inadequate parking and occasional traffic disruption in the area of the memorial building would be considered a moderate adverse impact.

Continued noise and intrusion caused by traffic on the county road section near the Living Historical Farm site would be moderate and adverse.

The size and configuration of the memorial building, which was not designed as an interpretive facility, would continue to limit the opportunity to provide all the desired interpretation to visitors — a moderate adverse impact.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

There would be no irreversible or irretrievable commitments of resources under this alternative.

RELATIONSHIPS BETWEEN SHORT-TERM USES OF THE ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

In this alternative, elements that have adversely affected historic landscapes and structures would remain in place. These include the relocated roadway near the memorial building, enclosure of the cloister and the addition to the building, the Living Historical Farm, and alterations to the cabin site. Visitor frustration with inadequate

parking and occasional traffic near the memorial building would continue as would noise disruptions from traffic on the county road near the Living Historical Farm.

The interpretive experiences enjoyed by visitors, including the Living Historical Farm, and those provided at the memorial would continue to be available. However, services at the memorial would continue to be limited by the size and configuration of the memorial building.

IMPACTS OF IMPLEMENTING ALTERNATIVE B

CULTURAL RESOURCES

Archeological Resources

Archeological resources adjacent to or easily accessible from picnic areas, trails, the Living Historical Farm, and groomed landscapes could be vulnerable to surface disturbance, inadvertent damage, and vandalism. A loss of surface archeological materials, alteration of artifact distribution, and a reduction of contextual evidence could result. However, continued ranger patrol and emphasis on visitor education would discourage vandalism and inadvertent destruction of cultural remains, and any adverse impacts would be expected to be minimal, if any.

As appropriate, additional archeological surveys and/or monitoring would precede any ground disturbance associated with excavation, construction, or demolition, e.g., installing wayside exhibits or other media, extending the roadway east of the memorial building, erecting the joint NPS and state visitor center facility, possibly removing some outbuildings at the Living Historical Farm, and installing picnic facilities and a trail link from the memorial building to the joint visitor center. National-register-eligible or listed archeological resources would be avoided to the greatest extent possible. If such resources could not be avoided, an appropriate mitigation strategy would be developed in consultation with the Indiana state historic preservation officer.

Cumulative Impacts. Past development in the national memorial, e.g., the construction of County Road 300 and 1625N and two sets of railroad tracks, might have resulted in the disturbance and loss of some archeological resources during excavation and construction activities. In addition, agricultural practices and the development and expansion of communities in and near the

national memorial might also have previously disturbed archeological resources. The continuation of current activities could also result in future adverse impacts on archeological resources.

As described above, actions associated with implementation of alternative B could potentially disturb archeological resources at the national memorial. If national-register-eligible or listed archeological resources could not be avoided, the impacts on such resources would be adverse. However, because archeological resources would be avoided to the greatest extent possible, the actions associated with the alternative would not be expected to contribute, or contribute only minimally, to the adverse impacts of other past, present, and reasonably foreseeable actions occurring both within and outside the national memorial. Thus, any adverse impacts on archeological resources resulting from implementing alternative B would be a very small component of the overall adverse cumulative impact.

Conclusion. Avoidance of national-register-eligible or listed archeological resources during excavation and construction would result in no adverse impacts on such resources. In the unlikely event that important archeological resources could not be avoided, a memorandum of agreement, in accordance with 36 CFR Part 800.6, *Resolution of Adverse Effects*, would be negotiated between Lincoln Boyhood National Memorial and the Indiana state historic preservation officer (and/or the Advisory Council on Historic Preservation, if necessary). The memorandum of agreement would stipulate how the adverse effects would be mitigated.

Because important archeological resources would be avoided during ground disturbing

activities there would be no adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Lincoln Boyhood National Memorial; (2) key to the natural or cultural integrity of the national memorial or to opportunities for enjoyment of the national memorial; or (3) identified as a goal in the national memorial's general management plan or other relevant NPS planning documents. Thus there would be no impairment of the national memorial's resources or values.

Historic Structures and Cultural Landscapes

To appropriately preserve and protect the national-register-listed or eligible historic resources of the national memorial, all stabilization, preservation, and rehabilitation efforts, as well as daily, cyclical, and seasonal maintenance, would be undertaken in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995). Any materials removed during rehabilitation efforts would be evaluated to determine their value to the memorial's museum collections and/or for their comparative use in future preservation work at the sites. Stabilization, preservation, and rehabilitation would have no adverse effects upon historic structures and cultural landscapes.

Removing the 1960s addition to the memorial building and reopening the structure's cloister area, in accordance with the historic structure report completed in 2003 would have a beneficial impact on the building by returning it to more of a semblance of its historic appearance and closer to the original design intent. Reestablishing a portion of the roadway east of the memorial building, in accordance with the recommendations of the cultural landscape report completed in 2001 would have a beneficial impact on the national memorial's landscape by reintroducing an important circulation

system feature back into the cultural landscape.

Careful design would ensure that the construction of picnic areas and trails, or the redesign of existing trails, would minimally affect the scale and visual relationships among landscape features. In addition, the topography, vegetation, circulation features, and land use patterns of the landscape would remain largely unaltered by such actions, resulting in no adverse effect.

Construction of the joint NPS and state operated visitor center at Lincoln State Park would have little if any impact on the national memorial's historic structures or landscapes. Visual, audible, and atmospheric intrusions would be minimal. Sensitive design of the new building, the use of appropriate materials and colors in construction, and select plantings of native vegetation as visual buffers would permit the facility to blend as much as possible into the natural surroundings of the landscape at Lincoln State Park.

In addition, the more than 0.25 mile distance between the proposed joint visitor center and the Cabin Site Memorial and Living Historical Farm, as well as the contour of the land and intervening vegetation, would lessen significantly any visual and audible intrusion of the proposed joint visitor center and its associated activities, leaving the peaceful simplicity and rural ambiance of the Cabin Memorial and Living Historical Farm sites unaffected. As a result, construction of the joint visitor center would be expected to have no adverse effect on the national memorial's historic structures and cultural landscapes.

Cumulative Impacts. Over the years historic structures in the national memorial and general vicinity have been adversely impacted by natural processes such as weathering, and historic structures outside the national memorial have been demolished

for agriculture and development. Historic structures in the national memorial have also been adversely impacted by wear and tear associated with visitor access. In addition, changes to the memorial building that occurred during the 1960s — enclosing the cloister, adding a wing to the structure's south façade, and altering the memorial court — diminished the integrity of the structure.

Past development in the national memorial, e.g., the construction of County Road 300 and 1625N and two sets of railroad tracks and the relocation of the highway between the allée and memorial building to a route south of the building, added nonhistoric elements to the national memorial landscape, and altered land use and circulation patterns and the spatial relationships between landscape elements. The development of the Living History Farm near the Cabin Site Memorial also altered land use patterns and the spatial relationship between landscape elements in the national memorial.

As described above, the impacts associated with implementing alternative B would either be beneficial or would result in no adverse effects on the national memorial's historic structures and cultural landscapes. As a result, the actions associated with alternative B would not contribute adverse impacts to any overall cumulative impact. The beneficial impacts of implementing alternative B, however, would be a small component of the overall adverse cumulative impacts associated with other past, present, and reasonably foreseeable actions both within and outside the national memorial.

Conclusion. 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 alternative B would have *no adverse effect*

on the historic structures and cultural landscapes of Lincoln Boyhood National Memorial.

There would be no adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Lincoln Boyhood National Memorial; (2) key to the natural or cultural integrity of the national memorial or to opportunities for enjoyment of the national memorial; or (3) identified as a goal in the national memorial's general management plan or other relevant NPS planning documents. Thus, there would be no impairment of the national memorial's resources or values.

NATURAL RESOURCES

Vegetation and Soils

In alternative B, extending the roadway east of the memorial building and establishing the overflow parking area would result in the loss of approximately 2 acres of vegetation as well as the removal of seedling trees that have been recently planted in the old roadbed. Soils in this same acreage would be disturbed by construction. Because the area is already disturbed and mitigating measures would be implemented, this adverse impact on soils and vegetation would be minor. The impact on vegetation removed as a result of the new visitor center and parking would be a minor adverse effect.

Some vegetation would be trampled or destroyed by visitor use in the new picnic/rest and relaxation area. Because this is a small, previously disturbed area the adverse impact would be negligible.

An additional, negligible loss of vegetation could occur as a result of reestablishing landscape features at the cabin site. This adverse impact would be offset because the new features would help to better direct and

contain visitor use at the site, thereby reducing trampling of vegetation.

Construction of the proposed joint NPS/Lincoln State Park visitor center would result in the loss of about 4 acres of vegetation, including trees and open fields, and disruption of soils. Clearing some vegetation during construction could increase the relative abundance of plants that invade disturbed areas. Increased erosion, if it occurred, could expose root systems and lead to the death of additional vegetation. Mitigating measures would reduce the long-term impact of the construction, but because of the size of the development footprint, this adverse impact would be considered moderate.

Minor beneficial impacts on vegetation would result from restoration at the site of the shelter (to be removed) near the Living Historical Farm parking area, and the restoration of the county road segment near the farm. These areas would total about 2 acres of restored vegetation and soils.

Cumulative Impacts. Agriculture in and outside the national memorial, while leaving a historical/cultural landscape, has greatly reduced native plants and increased vegetation that is useful for crops or animal feed. This in turn has led to the alteration of soil and the loss of soil through erosion. Fences, built in the national memorial and elsewhere to limit the movement of domestic animals, also might limit the movement of native animals and decrease the area's desirability for wildlife.

The use of herbicides to kill unwanted plant species might also kill native plants and contribute to adverse impacts on water quality. Fertilizers used on crops also might diminish water quality.

Introduced exotic species of plants might crowd out native plants and become a nuisance. The memorial's use of animal feed

or bedding purchased outside the memorial might contribute to the spread of exotic plants.

Natural hydrological processes have been slightly modified to create a human-made pond to provide water for nonnative animals. The existence of former communities inside and outside the national memorial created an increasing human presence in the area, modified the natural soil profile, altered surface water flow, increased use of groundwater, and removed or displaced native plants and animals. Impacts on vegetation and soils from agriculture and development of towns and cities covered wide areas and were adverse. Impacts on vegetation and soils of current and future actions inside and outside the memorial, in conjunction with the impacts of this alternative, would be major and adverse because they would result in substantial alteration of soils and vegetation. Most of the impacts would be the result of development outside the national memorial that might or might not be mitigated. The actions proposed in this alternative would contribute a very small increment to the overall cumulative impact.

Conclusion. Implementing alternative B would result in negligible to minor effects on soils and vegetation except for the construction of the joint NPS/Lincoln State Park visitor center that would result in moderate effects on soils and vegetation. The national memorial's resources or values would not be impaired because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the memorial's establishing legislation, (2) key to the natural or cultural integrity of the memorial or to opportunities for visitor enjoyment, or (3) identified as a goal in the memorial's *General Management Plan* or other relevant NPS planning documents.

VISITOR EXPERIENCE

General Quality of the Visitor Experience

In this alternative, restoration of the historic design of the memorial building (opening the cloister and removing the 1960's addition and post office) would allow visitors to experience the structure as originally envisioned by Olmsted. Because visitors can experience many elements of the Olmsted structure now, this restoration would be a minor beneficial impact on the general visitor experience. The benefit would be offset somewhat because visitors who arrive at the building in inclement weather would have less shelter from cold, wind, rain, or snow.

Extending the historic roadway in front of the memorial building and providing for overflow parking would reduce visitor frustration and traffic intrusion. Although parking and traffic problems are episodic, this would be considered a moderate beneficial impact because so many visitors would be affected. There could be some concern about visitors leaving their cars parked in the overflow area where the vehicles would be out of sight from the memorial building, but NPS staff estimates the likelihood of vandalism or theft to be small. Even though the impact on an individual or family because of damage to their car or belongings could be major, because so few people, if any, would be affected, this impact would be categorized as minor and beneficial.

Reestablishment of the historic design elements at the cabin site would improve the memorial atmosphere and give visitors the opportunity to experience the site as historically envisioned. This would have a minor, beneficial effect on the overall visitor experience.

The joint NPS/Lincoln State Park visitor center called for in this alternative would

give visitors a better overall idea of options available to them in the area and would eliminate confusion about the two Lincoln-related sites. The facility would also allow for more personal contact with visitors and would allow staff greater capability to offer a greater range of visitor services. These advantages would be a major beneficial effect on NPS/state park visitors at the national memorial. The benefit would be offset somewhat because the circulation flow from the new visitor center to the national memorial would be less convenient than now. Returning visitors might decide to bypass the visitor center altogether.

A new foot trail between the new visitor center and the memorial building and the new picnic facilities nearby would be a minor convenience for visitors and would be considered a minor beneficial effect on the overall visitor experience.

The removal of the unattractive shelter at the Living Historical Farm parking area would also be a minor beneficial effect, but there would be a corresponding adverse effect for visitors who would have used the shelter in inclement weather.

Discontinuing costumed interpretation at the Living Historical Farm would be regretted by many visitors, especially school groups. However, because the loss would be at least partly replaced by occasional staff programs and interpretive media, this would be considered a moderate adverse impact. The overall experience at the farm would be improved by eliminating traffic on the nearby county road section. Because it would improve the experience for so many visitors, this would be a moderate beneficial effect.

Overall Range of Visitor Opportunities

The joint NPS/Lincoln State Park visitor center would greatly expand visitor

awareness of experiences available at both sites and would increase the range of interpretive and recreational opportunities from which they could choose. This would constitute a major beneficial effect.

The range of opportunities in this alternative would be reduced, however, by the loss of costumed interpretation at the Living Historical Farm. Although quality interpretation could still be offered, the loss of the novelty of the living history programs would constitute a moderate adverse impact.

Comprehensiveness of Interpretive Opportunities

In this alternative, opening the cloister at the memorial building would result in a loss of interpretive space and media at this location. This could constitute a moderate adverse impact, especially for visitors who might not stop at the proposed joint visitor center. Opportunities for a greater range and richness of interpretive opportunities, however, would be created at the joint visitor center. Additional stories would be told that relate to state park and national memorial resources, further increasing the range of available information and interpretation. This would be a major beneficial effect on visitors to both the national memorial and the state park.

The proposed closure of a small section of County Road 300 in the national memorial would reroute north/south traffic to roads outside the national memorial about 0.5 mile away. This action would have moderate beneficial effect on the visitor experience.

Although interpretive media could provide high quality interpretation at the Living Historical Farm, and that information would be available year round, the loss of costumed/personal services interpretation at the farm would limit the flexibility and range of potential themes and stories. Because of

the number of visitors potentially affected, this would constitute a moderate adverse impact.

Additional increases in visitation could directly result from the new joint NPS/Indiana State Park visitor center (located at Lincoln State Park). The new visitor center would expose more area visitors to the cultural attractions of Lincoln Boyhood National Memorial and therefore have a moderate beneficial effect on the visitor experience.

Cumulative Impacts

The impacts associated with the past, present, and reasonably foreseeable future actions would include the following.

(1) A 1997 visitor survey identified that 23% of the groups reported that the national memorial was their primary destination. The majority of visitors identified other destinations as their primary attractions such as Lincoln State Park and Holiday World & Splashin' Safari. As visitor use levels at these attractions increased or decreased, visitation at the national memorial might also be similarly influenced. It is anticipated that fluctuations in visitor attendance at these attractions would not be so drastic that they would create a beneficial or adverse impact on the visitor experience at the national memorial.

(2) The potential for future growth of businesses that rely on railroad freight services could lead to the increase frequency of rail traffic or the increased durations of waiting times at the railroad crossing caused by longer trains passing through the national memorial. This could result in further impacts on visitor circulation in the national memorial and contribute to a minor to moderate adverse impact, depending upon the level of frequency and duration.

(3) Upon completion of the new U.S. Highway 231, the current use pattern of north/south (non-local) traffic would be relocated about 0.5 mile east of the national memorial and thereby reduce the volume of non-local traffic in the national memorial, which would have a moderate beneficial impact on the visitor experience.

Actions resulting from implementing alternative B would be expected to have a minor to major beneficial impact on the visitor experience by returning some of Olmsted original design elements back to a commemorative setting, improving parking, re-routing some of the nonvisitor traffic to roads outside the national memorial, and building a new joint visitor center.

The minor to moderate beneficial effects resulting from the proposed actions in alternative B would outweigh the adverse impacts of the combined past, present, and reasonably foreseeable future actions that were described above. Minor to moderate cumulative effects on the visitor experience would be beneficial.

Conclusion

Impacts on the visitor experience associated with implementation of alternative B would be primarily beneficial and range from minor to major. Moderate adverse effects would result from discontinuing costumed interpretation at the Living Historical Farm.

SOCIOECONOMIC ENVIRONMENT

The national memorial's management and budget would not be significantly modified from the current levels of employment or maintenance and thus would have no new effect on local purchases and services.

The area residents would still benefit by having access to the trails and spaces of the

national memorial. The construction of the proposed joint visitor center would be in Lincoln State Park and have negligible long-term effects on national memorial neighbors. The local economy would benefit from a minor, short-term contribution resulting from the construction.

In the long term this coordinated partnership could strengthen visitation at both NPS and state park areas and increase the length of stay in the area, which could lead to a minor beneficial effect on local businesses that provide services to tourists.

Alternative B proposes to close the U.S. Post Office in the memorial building at Lincoln Boyhood National Memorial. This action would be a long-term moderate adverse impact on 10 box holders/residents who will now have to travel up to 4 miles further for their mail service.

Alternative B proposes to close a section of County Road 300 in the national memorial. This road closure would have a minor adverse impact on local traffic that would have to reroute their north/south access by about 0.5 mile.

Under alternative B the economic effects would be negligible because economic conditions would continue to be below or at the level of detection. There would be no noticeable change in any defined indicators. Lincoln City, once an economic influence in Spencer County, no longer influences the economics of the county or impacts the national memorial as it once did.

Cumulative Impacts

The impacts associated with the past, present, and reasonably foreseeable future actions include the following.

(1) The adjacent town of Lincoln City was an economic hub in Spencer County at the turn

of the century, with homes and businesses occupying lands that are now part of the national memorial. Today, Lincoln City consists of scattered homes surrounded by rural farms.

(2) Railroad tracks that cross through the national memorial on easements that were established long ago accommodate local freight that supports the regional economy. The rail freight service across the national memorial would continue unimpeded and the effects on the socioeconomic condition would be a minor beneficial impact with economic influence being slight but detectable.

(3) Tourism contribution to the regional economy is small in comparison with manufacturing and the five other leading industries. However, tourism in the immediate area of the national memorial would continue to have a moderate beneficial impact on the socioeconomic conditions because of employment and visitor services. Impacts would be readily apparent and result in small changes on a local scale.

Actions under alternative B would have a moderate adverse impact on the 10 box holders who would be inconvenienced by the closure of the U.S. Post Office in the memorial building. Generally, actions resulting from alternative B that impact the socioeconomic conditions as described above would have a mix of minor adverse and minor beneficial effect. Adding the actions from implementation of alternative B to those from past, present, and reasonably foreseeable future actions there would be no cumulative effects on the socioeconomic conditions.

Conclusion

In the short term, construction activity would have a beneficial although minor contribution to the local economy.

If the joint visitor center partnership increased visitation and the length of stay, this alternative would have a minor beneficial impact on businesses that service area tourists.

The closing of the U.S. Post Office in the memorial building would have a moderate, adverse impact on about 10 postal patrons.

Closing the short segment of County Road 300 would have a minor adverse impact on local area traffic.

NPS OPERATIONS/ ADMINISTRATION

The joint NPS/Lincoln State Park visitor center called for in this alternative would allow both the national memorial and Lincoln State Park areas ample administrative office space and storage for their needs in a single location. Superintendents, division heads, and support staff for both areas would be in the same facility, greatly improving communication and operational efficiency within and between the two areas. Some functions and equipment could be shared between the two areas. The facility would also allow for more personal contact with visitors and would allow staff greater capability to offer a greater range of visitor services. These advantages would be a major beneficial effect on NPS operations at the national memorial.

Cumulative Impacts

The impacts associated with the past, present and reasonably foreseeable future actions include the following:

(1) Since 1964, the National Park Service has attempted to accommodate NPS operations by using or modifying existing facilities, and then incrementally constructing additions and other structures in the national memorial.

(2) Continued changes in NPS policies, management directions, and technological evolutions have expanded the requirements associated with administrative spaces, equipment, and general storage. These changes often have specific building codes and structural requirements that must be adapted to existing facilities.

Actions under alternative B as described in the above narrative would have a major beneficial effect on the modernization, efficiency, and ability to share resources with Lincoln State Park. These actions would allow the National Park Service to use existing facilities for purposes more related to their original structural objectives. Actions undertaken in this alternative would complement those of past, present and reasonably foreseeable future actions and have major beneficial cumulative effects on NPS operations.

Conclusion

The joint visitor center called for in this alternative, with administrative office space and storage space for both the national memorial staff and the Lincoln State Park staff, would greatly improve communication and operational efficiency within and between the two areas. There could be more personal contact with visitors and opportunities to offer a greater range of visitor services. These advantages would be a major beneficial effect on NPS operations at the national memorial.

UNAVOIDABLE ADVERSE IMPACTS

The following paragraphs describe the more important (moderate and major intensity) adverse impacts that would result from implementing this alternative. These are residual impacts that would remain after mitigation was implemented. The negligible and minor impacts are described in the foregoing analysis.

The loss of about 4 acres of vegetation, disruption of soils, potential soil erosion, and potential increase in the abundance of invasive plants from the construction of the joint NPS/Lincoln State Park visitor center would be a moderate adverse impact.

Discontinuation of costumed interpretation at the Living Historical Farm would be regretted by many visitors, and though it would be partly replaced by occasional staff programs and interpretive media, it would be a moderate adverse impact.

The range of opportunities would be reduced by the loss of costumed interpretation at the Living Historical Farm — a moderate adverse impact.

Although interpretive media could provide high-quality interpretation at the Living Historical Farm, and that information would be available year-round, the loss of costumed/personal services interpretation at the farm would limit the flexibility and range of potential themes and stories. Because of the number of visitors potentially affected, this would constitute a moderate adverse impact.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

If any regrading is required during demolition and construction for the visitor center there could be loss of part of the

natural soil profile. This loss would be minor, permanent, and irreversible.

RELATIONSHIPS BETWEEN SHORT-TERM USES OF THE ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

For visitors, the short-term visual intrusions from demolition, construction, and rehabilitation would give way to long-term improvements in the historic character of the memorial building and the historic landscape of this national register site (the entire memorial).

Restoration of the memorial building to its historic design (including removal of the 1960's addition and Post Office and opening up the cloister area) would benefit the historic building in the long term.

Restoring the roadway east of the memorial building would reestablish a significant element of the original landscape and circulation and reduce visitor frustration by partially mitigating parking and traffic intrusion. There would be negligible to moderate long-term effects on soils and vegetation over a relatively small area (about 2 acres) as a result of demolition and construction. The costumed interpretation of the living history farm would be partly replaced by occasional staff programs and interpretive media.

Construction of a joint NPS/Lincoln State Park visitor center would give visitors a better overall idea of options available to them in the area, eliminate visitor confusion about the two Lincoln-related sites, and result in the loss of about 4 acres of vegetation and disturbance of about the same area of soils.

IMPACTS OF IMPLEMENTING ALTERNATIVE C, THE PREFERRED ALTERNATIVE

CULTURAL RESOURCES

Archeological Resources

Archeological resources adjacent to or easily accessible from picnic areas or trails, the Living Historical Farm, and groomed landscapes could be vulnerable to surface disturbance, inadvertent damage, and vandalism. A loss of surface archeological materials, alteration of artifact distribution, and a reduction of contextual evidence could result. However, continued ranger patrol and emphasis on visitor education would discourage vandalism and inadvertent destruction of cultural remains, and any adverse impacts would be expected to be minimal, if any.

As appropriate, additional archeological surveys and/or monitoring would precede any ground disturbance associated with excavation, construction, or demolition, e.g., installing wayside exhibits or other media, upgrading the existing shelter, extending the roadway east of the memorial building, erecting a new addition/separate administrative facility, and installing picnic facilities and walking paths. National-register-eligible or listed archeological resources would be avoided to the greatest extent possible. If such resources could not be avoided, an appropriate mitigation strategy would be developed in consultation with the Indiana state historic preservation officer.

Cumulative Impacts. Past development in the national memorial, e.g., the construction of County Road 300 and 1625N and two sets of railroad tracks, might have resulted in the disturbance and loss of some archeological resources during excavation and construction activities. In addition, agricultural practices and the development and expansion of communities in and near the national

memorial might also have previously disturbed archeological resources. The continuation of current activities could also result in future adverse impacts on archeological resources.

As described above, actions associated with implementing alternative C could potentially disturb archeological resources at the national memorial. If national-register-eligible or listed archeological resources could not be avoided, the impacts on such resources would be adverse. However, because archeological resources would be avoided to the greatest extent possible, the actions associated with this alternative would be expected to not contribute, or contribute only minimally, to the adverse impacts of other past, present, and reasonably foreseeable actions occurring both within and outside the national memorial. Thus, any adverse impacts on archeological resources resulting from implementing alternative C would be a very small component of the overall adverse cumulative impact.

Conclusion. Avoidance of national-register-eligible or listed archeological resources during excavation and construction would result in no adverse impacts on archeological resources. In the unlikely event that important archeological resources could not be avoided during excavation and construction, a memorandum of agreement, in accordance with 36 CFR Part 800.6, *Resolution of Adverse Effects*, would be negotiated between Lincoln Boyhood National Memorial and the Indiana state historic preservation officer (and/or the Advisory Council on Historic Preservation, if necessary). The memorandum of agreement would stipulate how the adverse effects would be mitigated.

Because important archeological resources would be avoided during ground disturbing activities, there would be no adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Lincoln Boyhood National Memorial; (2) key to the natural or cultural integrity of the national memorial or to opportunities for enjoyment of the national memorial; or (3) identified as a goal in the national memorial's general management plan or other relevant NPS planning documents. Thus there would be no impairment of the national memorial's resources or values.

Historic Structures and Cultural Landscapes

To appropriately preserve and protect the national-register-listed or eligible historic resources of the national memorial, all stabilization, preservation, and rehabilitation efforts, as well as daily, cyclical, and seasonal maintenance, would be undertaken in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995). Any materials removed during rehabilitation efforts would be evaluated to determine their value to the national memorial's museum collections and/or for their comparative use in future preservation work at the sites. Stabilization, preservation, and rehabilitation would have no adverse effects upon historic structures and cultural landscapes.

Adding a new administrative addition or separate structure to the memorial building, and further modifying the surrounding landscape would constitute an additional change to the building's historical design. With current modifications from the 1960s, and the requirement that a new addition would follow the *Secretary of the Interior's Standards for the Treatment of Historic Properties*, this action would have no adverse effect on the structure's eligibility for

inclusion in the national register. The new addition or structure would harmonize in size, scale, proportion, and materials with, but be readily distinguishable from, the extant structure, and would not intrude on the historic scene. In addition, returning some original design elements of the cloister would have a beneficial impact on the memorial building.

Reestablishing a portion of the roadway east of the memorial building, in accordance with the recommendations of the cultural landscape report completed in 2001 would have a beneficial impact on the national memorial's landscape by reintroducing an important circulation system feature back into the cultural landscape and balancing the symmetry of the original design. Although a new picnic/rest and relaxation area would represent a different use than planned historically, the reestablishment of the open area in addition to the roadway would restore a historic landscape element and have no adverse effect on the cultural landscape.

Rehabilitating the approach trail and Cabin Site Memorial to more of a semblance of their historic appearances would lend more significance and recognition to the site, resulting in a beneficial impact.

The picnic/rest and relaxation area near the interpretive shelter would be located adjacent to the parking area so as not to intrude on the Cabin Site Memorial, resulting in no adverse effect.

Careful design would ensure that the construction of picnic areas and trails, or the redesign of existing trails, would minimally affect the scale and visual relationships among landscape features. In addition, the topography, vegetation, circulation features, and land use patterns of the landscape would remain largely unaltered by such actions, resulting in no adverse effect.

Cumulative Impacts. Over the years historic structures in the national memorial and general vicinity have been adversely impacted by natural processes such as weathering, and historic structures outside the national memorial have been demolished for agriculture and development. Historic structures in the national memorial have also been adversely impacted by wear and tear associated with visitor access. In addition, changes to the memorial building that occurred during the 1960s — enclosing the cloister, adding a wing to the structure's south façade, and altering the memorial court — diminished the integrity of the structure.

Past development in the national memorial, e.g., the construction of County Road 300 and 1625N and two sets of railroad tracks and the relocation of the highway between the allée and memorial building to a route south of the building, added nonhistoric elements to the memorial landscape, and altered land use and circulation patterns and the spatial relationships between landscape elements. The development of the Living History Farm near the Cabin Site Memorial also altered land use patterns and the spatial relationship between landscape elements in the national memorial.

As described above, the impacts associated with implementing alternative C would either be beneficial or would result in no adverse effects on the national memorial's historic structures and cultural landscapes. As a result, the actions associated with alternative C would not contribute adverse impacts to any overall cumulative impact. The beneficial impacts of implementing alternative C, however, would be a small component of the overall adverse cumulative impact associated with other past, present, and reasonably foreseeable actions both within and outside the national memorial.

Conclusion. 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 alternative C would have *no adverse effect* on the historic structures and cultural landscapes of Lincoln Boyhood National Memorial.

There would be no adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Lincoln Boyhood National Memorial; (2) key to the natural or cultural integrity of the national memorial or to opportunities for enjoyment of the national memorial; or (3) identified as a goal in the national memorial's general management plan or other relevant NPS planning documents. Thus there would be no impairment of the national memorial's resources or values.

NATURAL RESOURCES

Vegetation and Soils

As in alternative B, extending the roadway east of the memorial building and establishing the overflow parking area would result in the loss of about 2 acres of vegetation as well as the removal of seedling trees that have been recently planted in the old roadbed. Soils in this same acreage would be disturbed by construction. Because the area is already disturbed and mitigating measures would be implemented, this adverse impact would be minor.

Some vegetation would be trampled or destroyed by visitor use in the new picnic/rest and relaxation area. Because this is a small, previously disturbed area the adverse impact would be negligible.

An additional, negligible loss of vegetation could occur as a result of reestablishing

landscape features at the cabin site. This adverse impact would be offset because the new features would help to better direct and contain visitor use at the site, thereby reducing trampling of vegetation.

Construction of the proposed addition to the memorial building (or new building) would result in loss of about 0.5 acre or less of vegetation, including trees and open fields, and disruption of soils over the same area. Clearing some vegetation during construction could increase the relative abundance of plants that invade disturbed areas. Increased erosion, if it occurred, could expose root systems and lead to the death of additional vegetation. Mitigating measures would reduce the long-term impact of the construction, and this adverse impact would be considered moderate.

Cumulative Impacts. Agriculture in and outside the national memorial, while leaving a historical/cultural landscape, has greatly reduced native plants and increased vegetation that is useful for crops or animal feed. This in turn has led to the alteration of soil and the loss of soil through erosion. Fences, built in the national memorial and elsewhere to limit the movement of domestic animals, also might limit the movement of native animals and decrease the area's desirability for wildlife.

The use of herbicides to kill unwanted plant species might also kill native plants and contribute to adverse impacts on water quality. Fertilizers used on crops also might also diminish water quality.

Introduced exotic species of plants might crowd out native plants and become a nuisance. The memorial's use of animal feed or bedding purchased outside the memorial might contribute to the spread of exotic plants.

Natural hydrological processes have been slightly modified to create a human-made

pond to provide water for nonnative animals.

The creation of former communities inside and outside the national memorial in the past created an increasing human presence in the area, modified the natural soil profile, altered surface water flow, increased use of groundwater, and removed or displaced native plants and animals. Impacts on vegetation and soils from agriculture and development of towns and cities covered wide areas and were adverse. Impacts on vegetation and soils of current and future actions inside and outside the memorial, in conjunction with the impacts of this alternative would be major and adverse because they would result in substantial alteration of soils and vegetation. Most of the impacts would be the result of development outside the national memorial that might or might not be mitigated. The actions proposed in this alternative would contribute a very small increment to the overall cumulative impact.

Conclusion. Adverse impacts on vegetation and soils associated with implementation of alternative C would be minor, with the exception of construction of the addition to the memorial building (or new building) that would result in moderate adverse impacts on soils and vegetation. The national memorial's resources or values would not be impaired because there would be no major adverse impacts on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the memorial's establishing legislation, (2) key to the natural or cultural integrity of the memorial or to opportunities for visitor enjoyment, or (3) identified as a goal in the memorial's *General Management Plan* or other relevant NPS planning documents.

VISITOR EXPERIENCE

General Quality of the Visitor Experience

As in alternative B, extending the historic roadway in front of the memorial building and providing for overflow parking would reduce visitor frustration and traffic intrusion. Although parking and traffic problems are episodic, this would be considered a moderate beneficial impact because so many visitors would be affected. There could be some concern about visitors leaving their cars parked in the overflow area where the vehicles would be out of sight from the memorial building, but NPS staff estimate the likelihood of vandalism or theft to be small. Although the impact on an individual or family of damage to their car or belongings could be major, because so few people, if any, would be affected, this adverse impact would be categorized as minor.

In this alternative, some elements of the cloister could be restored, and visitors would have the opportunity to experience the structure closer to its originally designed character. The effect would be beneficial but minor.

Reestablishment of the historic design elements at the cabin site would improve the memorial atmosphere and give visitors the opportunity to experience the site as historically envisioned. This would have a minor, beneficial effect on the overall visitor experience.

Upgrading the shelter at the Living Historical Farm parking area would allow for better accommodation of groups and improve the quality of available information at the area. Because this could affect a substantial number of visitors, this change would result in a moderate beneficial effect.

The overall experience at the Living Historical Farm would be improved by reducing traffic speeds on County Road 300

in the national memorial. Because it would improve the experience and safety of so many visitors, this would be a moderate beneficial effect.

The proposed traffic-calming techniques for the portion of County Road 300 that crosses the national memorial would have a moderate beneficial effect on the visitor experience.

Overall Range of Visitor Opportunities

In this alternative, the only change in the available range of visitor opportunities would result from upgrading the shelter at the Living Historical Farm parking area. Additional space for groups and the potential for increased variety in activities and services that could be provided for groups could result in minor beneficial effects.

Comprehensiveness of Interpretive Opportunities

In this alternative the addition to the memorial building (or new administration building) would allow more space for interpretation. This would provide opportunities to increase the range and richness of interpretive themes and thus increase visitor understanding of the Lincoln story. Because of the number of visitors this would benefit, this would be a moderate beneficial effect.

Having administrative staff available at the memorial building to provide back-up coverage at the information desk would allow interpreters more flexibility in providing visitor contact and a variety of interpretive programs — a moderate beneficial impact.

Interpretation at the national memorial would also be enhanced by providing additional interpretation along the trails,

developing interpretive opportunities relative to the Lincoln family story and way of life at the Living Historical Farm and nature trail that are more supportive of the Lincoln story, and providing interpretive media at the farm for visitors in the off season. The resulting increase in visitor understanding of the Lincoln story would be a moderate beneficial impact.

Cumulative Impacts

The impacts associated with the past, present and reasonably foreseeable future actions include the following.

(1) A 1997 visitor survey identified that 23% of the groups reported that the national memorial was their primary destination. The majority of visitors identified other destinations as their primary attractions, such as Lincoln State Park and Holiday World & Splashin' Safari. As visitor use levels at these attractions increased or decreased, visitation at the national memorial might also be similarly influenced. It is anticipated that fluctuations in visitor attendance at these attractions would not be so drastic that they would create a beneficial or adverse impact on the visitor experience at the national memorial.

(2) The potential for future growth of businesses that rely on railroad freight services could lead to the increase frequency of rail traffic or the increase durations of waiting times at the railroad crossing caused by longer trains passing through the national memorial. This could result in further impacts on visitor circulation in the national memorial and contribute to a minor to moderate adverse impact, depending upon the level of frequency and duration.

Alternative C actions would be expected to have a minor to moderate beneficial impact on the visitor experience by improving parking and expanding the interpretive

services and programs including the popular costumed interpretation at the demonstration farm.

The minor to moderate beneficial effects resulting from the proposed actions in alternative C would significantly outweigh the adverse impacts of the combined past, present, and reasonably foreseeable future actions that were described above. And cumulative effects on the visitor experience would be moderately beneficial.

Conclusion

Effects on visitor experience associated with implementation of alternative C would be primarily beneficial and moderate.

SOCIOECONOMIC ENVIRONMENT

The national memorial's management and budgeting would not be significantly modified from the current levels of employment or maintenance and thereby have no new effect on local purchases and services.

Area residents would still benefit by having access to the trails and spaces of the national memorial. The local economy would benefit from a short-term contribution resulting from the construction of administrative offices behind the memorial building.

Visitation levels would remain stable or grow slightly and therefore not significantly change the current level of demand for local services that support visitors.

Local access to the U.S. Post Office in the memorial building would remain. Based on the current size of the post office and with population growth occurring outside the service area, it is expected that the demand for this office would remain stable or grow insignificantly. Retaining the post office would have a moderate, long-term beneficial

affect on 10 box holders/residents for their mail service.

Under alternative C the economic effects would be negligible because economic conditions would continue to be below or at the level of detection. There would be no noticeable change in any defined indicators. Lincoln City, once an economic influence in Spencer County, no longer influences the economics of the county or impacts the national memorial as it once did.

Cumulative Impacts

The impacts associated with the past, present and reasonably foreseeable future actions would include the following.

(1) The adjacent town of Lincoln City was an economic hub in Spencer County at the turn of the century, with homes and businesses occupying lands that are now part of the national memorial. Today, Lincoln City consists of scattered homes surrounded by rural farms.

(2) Railroad tracks that cross through the national memorial on easements that were established long ago accommodate local freight that supports the regional economy. The rail freight service across the national memorial would continue unimpeded and the effects on the socioeconomic condition would be a minor beneficial impact with economic influence being slight but detectable.

(3) Tourism contribution to the regional economy is small in comparison with manufacturing and the five other leading industries. However, tourism in the immediate area of the national memorial would continue to have a moderate beneficial impact on the socioeconomic conditions because of employment and visitor services. Impacts would be readily

apparent and result in small changes on a local scale.

Generally, actions resulting from implementing alternative C that impact the socioeconomic conditions as described would have a mix of minor adverse and minor beneficial effects. Adding the actions from implementation of alternative C to those from past, present, and reasonably foreseeable future actions, there would be negligible cumulative effects on the socioeconomic conditions.

Conclusion

In the short-term, construction of the administrative facility would have a minor beneficial and short-term contribution to the local economy.

Retaining the U.S. Post Office would have a moderate long-term beneficial effect on about 10 local boxholders/residents who are served.

NPS OPERATIONS/ ADMINISTRATION

Adding administrative office space to the memorial building, as called for in this alternative, would allow for consolidation of offices and storage into a single location in the national memorial. The resulting efficiencies would have a moderate beneficial impact on NPS operations. Having administrative staff available at the memorial building to provide back-up coverage at the information desk would allow interpreters more flexibility in providing visitor contact and a variety of interpretive programs. This would be a moderate beneficial effect on interpretive operations.

Cumulative Impacts

The impacts associated with the past, present and reasonably foreseeable future actions include the following.

(1) Since 1964 the National Park Service has attempted to accommodate NPS operations by using or modifying existing facilities, and then incrementally constructing additions and other structures in the national memorial.

(2) Continued changes in NPS policies, management directions, and technological evolutions have expanded the requirements associated with administrative spaces, equipment, and general storage. These changes often have specific building codes and structural requirements that must be adapted to existing facilities.

Actions under alternative C as described in the above narrative would have a moderate beneficial effect on the modernization and efficiency for administrative management of the national memorial. Actions undertaken in this alternative would complement those of past, present and reasonably foreseeable future actions and have a moderate beneficial cumulative effect on NPS operations.

Conclusion

Consolidating offices and storage into a single location in the national memorial would increase efficiency and have a moderate beneficial impact on NPS operations. Having administrative staff available to provide back-up coverage at the information desk in the visitor center would allow interpreters more flexibility in providing visitor contact and a variety of programs. This would be a moderate beneficial effect on interpretive operations.

UNAVOIDABLE ADVERSE IMPACTS

The following paragraphs describe the more important (moderate and major intensity) adverse impacts that would result from implementing this alternative. These are residual impacts that would remain after mitigation was implemented. The negligible and minor impacts are described in the foregoing analysis.

Further modification of the landscape surrounding the memorial building would be a moderate adverse impact.

The loss of 0.5 acre or less of vegetation, disruption of soils, potential soil erosion, and potential increase in the abundance of invasive plants from the construction of the addition to the memorial building (or new building) would be a moderate adverse impact.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

If any regrading is required during demolition and construction of administrative offices, there could be loss of part of the natural soil profile. This loss would be minor, and permanent and irreversible.

RELATIONSHIPS BETWEEN SHORT-TERM USES OF THE ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

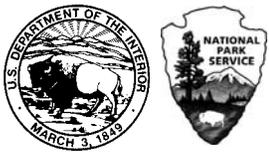
For visitors, the short-term visual intrusions from demolition, construction, and restoration would give way to long-term improvements in the historic character of the historic landscape of the national memorial.

There would be further modification of the memorial building (or a new building) to add administrative office space.

Restoration of the roadway east of the memorial building would reestablish a significant element of the original landscape and circulation and reduce visitor frustration by partially mitigating parking and traffic intrusion.

There would be negligible to moderate long-term effects on soils and vegetation over a relatively small area (about 2 acres) as a result of extending the roadway east of the memorial building, establishing the overflow parking area, and constructing the addition on the memorial building.

Upgrading the shelter at the Living Historical Farm parking area would allow for better accommodation of groups and improve the quality of available information in the area. Using traffic-calming techniques on the section of County Road 300 in the national memorial would improve visitor safety and experiences by reducing traffic speeds.



As the nation's principal conservation agency, the Department of the Interior has the responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.