



NATIONAL PARK SERVICE | U.S. DEPARTMENT OF THE INTERIOR



# LOOKOUT MOUNTAIN BATTLEFIELD UNIT

of Chickamauga and Chattanooga National Military Park

General Management Plan Amendment / Environmental Assessment

January 2015



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



**Chickamauga and Chattanooga National Military Park  
Tennessee and Georgia**

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and Chattanooga National Military Park**





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**Summary**

The purpose of this General Management Plan Amendment / Environmental Assessment is to analyze alternatives for guiding the management of Lookout Mountain Battlefield for the next 15–20 years. The Lookout Mountain Battlefield unit is part of the Chickamauga and Chattanooga National Military Park, which was authorized by an act of Congress on August 19, 1890 (Public Law 51-806). After the battle of Chickamauga, Union soldiers retreated to the city of Chattanooga and Confederate soldiers gained the high ground surrounding the city. The Lookout Mountain Battlefield unit is important to the interpretation of the key battles waged over the city of Chattanooga.

The National Park Service completed a general management plan for the Chickamauga and Chattanooga National Military Park in 1987. Since that time, about 545 acres have been added to the Lookout Mountain Battlefield unit. This amendment to the 1987 general management plan is needed to define the resource conditions and visitor experiences to be achieved in the newly added acres and the Lookout Mountain Battlefield unit in its entirety.

This plan provides a basis for National Park Service managers to use when making decisions about how to best protect resources, identify appropriate areas for visitor access and facilities, and determine how to manage operations.

This plan examines three alternatives for managing Lookout Mountain Battlefield. It also analyzes the impacts of implementing each of the alternatives. Alternative A (no action) describes the continuation of existing management and trends and serves as the basis for evaluating the other alternatives. The two action alternatives (alternative B and alternative C) present a spectrum of resource treatments, visitor experience, and opportunities to access the battlefield. Alternative C is the National Park Service preferred alternative.

This General Management Plan Amendment / Environmental Assessment has been distributed to other agencies, interested organizations, and individuals for their review and comment. Readers are encouraged to comment on this plan through the National Park Service planning website at <http://parkplanning.nps.gov/chch> or by sending comments to Superintendent, Chickamauga and Chattanooga National Military Park, PO Box 2128, Fort Oglethorpe, Georgia 30742. The public comment period for this document will last for 30 days after the document has been posted to the NPS website listed above and the availability of the document has been announced in the media.



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# CHAPTER 1: BACKGROUND





## A GUIDE TO THIS DOCUMENT

This General Management Plan Amendment / Environmental Assessment (GMP Amendment) for the Lookout Mountain Battlefield unit of Chickamauga and Chattanooga National Military Park (the park) articulates the management philosophy and establishes the frame work for long-term decision making for the Lookout Mountain Battlefield unit. General management plans typically provide guidance for 15 to 20 years.

Three alternatives for the management and use of Lookout Mountain Battlefield are presented. Alternative C is the National Park Service (NPS) preferred alternative. In accordance with regulations and policies, the potential environmental impacts of all alternatives have been identified and assessed in this plan.

The planning document is organized in accordance with the Council on Environmental Quality (CEQ) implementing regulations for the National Environmental Policy Act of 1969, as amended; the National Park Service's "Park Planning Program Standards," and Director's Order 12 and Handbook: *Conservation Planning, Environmental Analysis, and Decision-making*.

**Chapter 1: Introduction** sets the frame work for the entire document. It describes why the plan is being prepared and what needs it must address. It gives guidance for the management alternatives that are being considered—guidance that is based on park legislation, its purpose, the significance of its resources, special mandates and administrative commitments, and servicewide laws and policies.

Chapter 1 also details the planning opportunities and issues that were raised during public scoping meetings and initial planning team efforts; the alternatives in chapter 2 address these issues and concerns.

In addition, the introduction defines the scope of the environmental impact analysis—specifically what impact topics were or were not analyzed in detail. The chapter concludes with a description of next steps in the planning process and describes implementation of the plan.

**Chapter 2: Alternatives, Including the Preferred Alternative**, begins by describing the development of the alternatives and identifies the management zones that would be used to manage the park in the future. It includes the continuation of current management practices and trends in the park (alternative A, no action). Two action alternatives for managing the park (alternative B and alternative C [the preferred alternative]) are presented next. Mitigation measures proposed to minimize or eliminate the impacts of some proposed actions in the alternatives are described, followed by a discussion of future studies or implementation plans that would be needed. The environmentally preferable alternative and the NPS preferred alternative are identified next, followed by a discussion of alternatives or actions that were considered but dismissed from detailed evaluation. The chapter concludes with summary tables of the alternatives and the environmental consequences of implementing those alternatives.

**Chapter 3: The Affected Environment** describes those areas and resources that would be affected by implementing the actions contained in the alternatives. It is organized according to the following topics: cultural resources, natural resources, visitor use and experience, and park operations.

**Chapter 4: Environmental Consequences** describes the methods used for assessing impacts in terms of the intensity, type, and duration of impacts. It then analyzes the

effects of implementing the alternatives on the impact topics described in the “Affected Environment” chapter.

**Chapter 5: Consultation and Coordination** describes the history of public and agency coordination during the planning effort, including American Indian consultations, and

any future compliance requirements. It also lists agencies and organizations that will be receiving copies of the document.

**Appendixes, Selected References, and a list of Preparers and Consultants** are found at the end of the document.



## INTRODUCTION: PURPOSE AND NEED FOR THE PLAN

### WHY THE NATIONAL PARK SERVICE DOES GENERAL MANAGEMENT PLANNING

The National Parks and Recreation Act of 1978 requires each unit of the national park system to have a general management plan (GMP); *NPS Management Policies 2006* states “[t]he Service will maintain a management plan for each unit of the national park system” (2.3.1 General Management Planning). So, what is the value or usefulness of general management planning?

The purpose of a general management plan is to ensure that a national park system unit (park unit) has a clearly defined direction for resource preservation and visitor use to best achieve the NPS 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, which defines the desired conditions to be achieved and maintained in a park unit and provides a touchstone that allows NPS managers and staff to constantly adapt their actions to changing situations, while staying focused on what is most important about the park unit
- analyzing the park unit in relation to the surrounding ecosystem, cultural setting, and community, which helps NPS managers and staff understand how the park unit 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 unit an opportunity to be involved in the planning process and to understand the decisions that are made—park units are often the focus of intense public interest and public involvement throughout the planning process providing opportunities for NPS managers and staff to interact with the public to learn about their concerns, expectations, and values and to provide opportunities for NPS managers and staff to share information about the park unit’s purpose and significance and the opportunities and constraints for management of park lands

The ultimate outcome of general management planning for park units 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 experiences should exist, and how those conditions can best be achieved and maintained over time.

General management plans are intended to be long-term documents that establish and articulate a management philosophy and frame work for decision making and problem solving in national park system units. General management plans usually provide guidance for 15 to 20 years.

A general management plan also is necessary to meet the requirements of the National Parks and Recreation Act of 1978, *NPS Management Policies 2006*, and NPS policies that mandate development of a general management plan for each unit in the

national park system. The National Parks and Recreation Act requires that all general management plans include the following:

- measures for resource preservation
- indications of the types and general intensities of development (visitor circulation and transportation patterns, systems, and modes), including general locations, timing of implementation, and anticipated costs
- identification of and implementation commitments for visitor carrying capacities
- indications of potential boundary modifications

## **BRIEF DESCRIPTION OF LOOKOUT MOUNTAIN BATTLEFIELD**

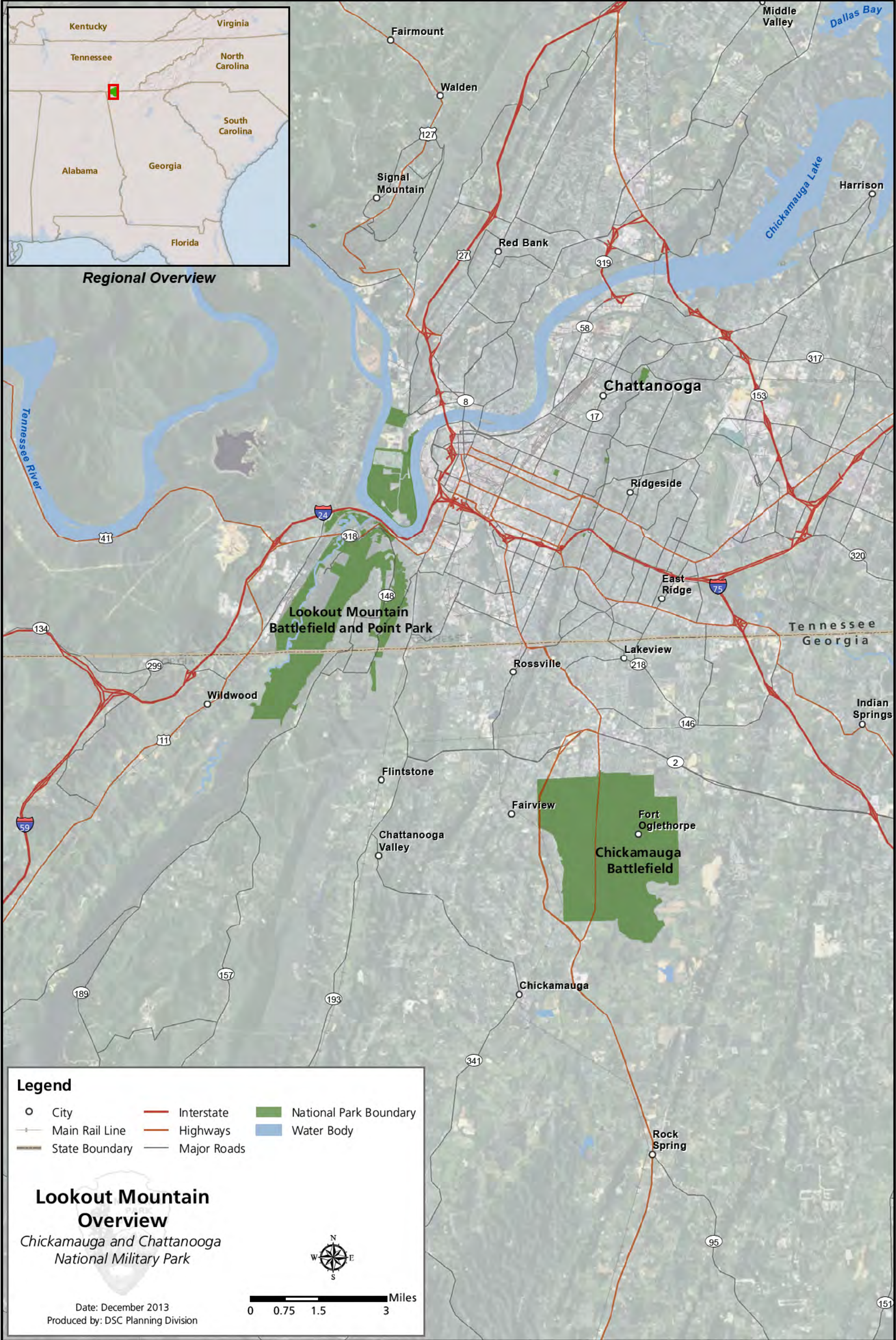
Chickamauga and Chattanooga National Military Park is in the Cumberland Mountains of the southern Blue Ridge. Park headquarters are in Fort Oglethorpe, Georgia; Chattanooga, Tennessee, is the largest metropolitan area in the vicinity of the multiple units and reservations of the park. The overall topography of the area is characterized by broad valleys and coves separated by a series of high ridges and numerous streams. Lookout Mountain Battlefield is the park's second-largest park unit, consisting of about 3,345 acres located predominantly in Hamilton County, Tennessee, with contiguous acreage extending south into Dade and Walker counties, Georgia.

NPS lands wrap around the northern point of Lookout Mountain, including Point Park at the northern summit and portions of the mountain's east and west flanks (see "Lookout Mountain Overview" map). Lookout Mountain rises directly across the Tennessee River from a peninsula known as Moccasin Bend (the Moccasin Bend National Archeological District, established in 2003, is

the newest park unit). (See "Lookout Mountain Battlefield Unit" map.) Lookout Mountain is essentially a long, stratified limestone ridge trending northeast to southwest at an elevation between about 1,800 and 2,214 feet above sea level. It divides the Lookout Valley on the west from the Chattanooga Valley on the east. The mountain's side slopes gradually rise to a steep escarpment or bluff (over 320 feet high in places) that separates the lower slopes from the upper highland plateau. The western slope of Lookout Mountain remains predominantly forested, while the mountain's eastern and northern slopes have been extensively cleared for housing and other development. There is development near or along the boundary of all units of the park. Numerous areas of NPS lands on Lookout Mountain contain waterfalls, caves, springs, and geologic stratification associated with a major fault line.

Lookout Mountain Battlefield commemorates a portion of the Civil War fighting that occurred during the battles for Chattanooga (November 23–25, 1863) between Union Army forces, then under the overall command of Maj. Gen. Ulysses S. Grant and Confederate Gen. Braxton Bragg's Army of Tennessee. Following the Battle of Chickamauga (September 18–20, 1863), Union Maj. Gen. William S. Rosecrans's defeated Army of the Cumberland was held under siege in Chattanooga by Bragg's Confederate forces who blocked communication lines and supply routes (including the Tennessee River), and commanded strategic high ground positions on Lookout Mountain, Orchard Knob, and Missionary Ridge. The siege began to collapse by late October following the opening of a supply line into Chattanooga and the arrival of Maj. Gen. Joseph Hooker's reinforcements to relieve the besieged troops. Successful Union Army engagements at Brown's Ferry and Wauhatchie further weakened the Confederate hold on Chattanooga (NPS 1999).

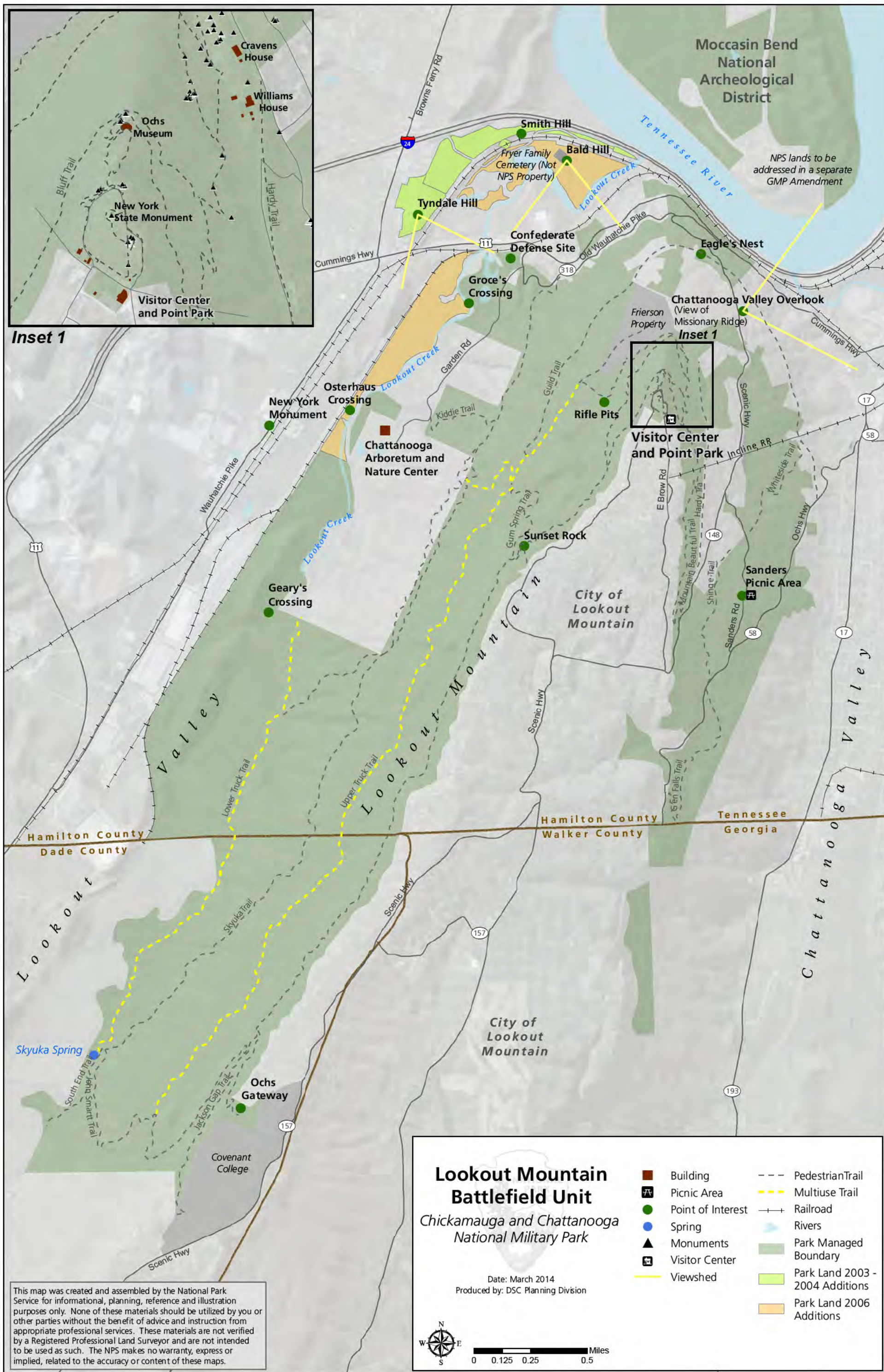
















Additional reinforcements arrived in the area in mid-November under the command of Maj. Gen. William T. Sherman. On November 23rd, Union forces seized the Confederate position on Orchard Knob. The following day (November 24) Hooker's troops advanced up the north and west slopes of Lookout Mountain and successfully overtook Confederate positions in what became known as the "Battle Above the Clouds" because of the foggy conditions that persisted throughout most of the day. The Cravens farm, situated on a level bench on the mountain's north face below the ridge crest, was a key strategic position relinquished by the outnumbered Confederate defenders after heavy fighting. On November 25th, with most of Bragg's army then concentrated on Missionary Ridge, Grant ordered Sherman and Hooker to advance, respectively, on the Confederate right and left flanks. Delays and stiff Confederate resistance initially checked these advances. However, troops led by Maj. Gen. George H. Thomas (held in reserve at the center of the Union line at Orchard Knob) routed Confederate positions at the base of Missionary Ridge; then launched a daring charge up the steep slope and succeeded in breaking through the Confederate defenses at the ridge crest. In the aftermath of the battle, the strategic rail center of Chattanooga was firmly under Union control. The defeated Confederate forces retreated south into Georgia, opening the pathway for Sherman's Atlanta campaign the following spring (NPS 1999).

The Lookout Mountain Battlefield was included in the congressional legislation establishing Chickamauga and Chattanooga National Military Park on August 19, 1890 (26 Stat. 333, 1890), "for the purpose of preserving and suitably marking for historical and professional military study the fields of some of the most remarkable maneuvers and most brilliant fighting in the war of the rebellion" ("Appendix A: Park Enabling Legislation"). The legislation was the first to authorize the preservation of an American battlefield, and it served as the conceptual

basis for the establishment of other national battlefields, memorials, monuments, and historic parks in the United States. An 1893 appropriations act authorized the federal government to purchase lands on the north end of Lookout Mountain for inclusion in the national military park. Subsequent appropriations added acreage in the vicinity of Cravens House and in the area set aside for the establishment of Point Park at the northern crest of Lookout Mountain.

Since 2001, the Trust for Public Land has acquired and conveyed to the National Park Service other key Lookout Mountain parcels including the 24-acre Ruby Falls tract, and Smith Hill and Tyndale Hill at the northern foot of the mountain. Most recently, in 2008, the park acquired 382 additional acres from the CSX Railroad Company in Lookout Valley along the mountain's northwestern flank. Altogether, between 1999 and 2008, about 545 acres have been added to the Lookout Mountain Battlefield unit, expanding the park's opportunities to enhance visitor experiences and understanding.

## **REQUIREMENTS OF THE NATIONAL ENVIRONMENTAL POLICY ACT**

This GMP Amendment is subject to the requirements of the National Environmental Policy Act, which requires an assessment of the environmental impacts, both adverse and beneficial, of those actions proposed by the federal government before those actions are implemented. When there are actions that could have a significant impact on the natural or human environment, the agency is required to prepare an environmental impact statement.

An environmental assessment for this GMP Amendment has been prepared in accordance with the National Environmental Policy Act and implementing regulations, 40 *Code of Federal Regulations* (CFR) Parts 1500–1508, and Director's Order 12 and *Handbook for Environmental Impact Analysis*.

## **PURPOSE OF THE GENERAL MANAGEMENT PLAN AMENDMENT**

The approved GMP Amendment provides the basis for managing Lookout Mountain Battlefield for the next 15 to 20 years. The plan's purposes are as follows:

- Confirm the purpose, significance, and special mandates of the Lookout Mountain Battlefield unit of Chickamauga and Chattanooga National Military Park.
- Define the desired resource conditions and visitor uses and experiences to be achieved for Lookout Mountain Battlefield, including additional lands recently acquired by the park on the unit's north end.
- Provide a frame work to assist park managers when making decisions about how to best protect park resources, how to provide quality visitor uses and experiences, how to manage visitor use, and what types of facilities, if any, to develop in or near Lookout Mountain Battlefield.

The planning process also ensures that this basis for decision making has been developed in consultation with interested stakeholders and adopted by the NPS leadership after an adequate analysis of the potential impacts of alternative courses of action.

Chickamauga and Chattanooga National Military Park was originally established under the administration of a commission appointed by the U.S. Secretary of War. Administration of the park was later transferred from the War Department to the National Park Service in 1933. The Organic Act, the 1916 legislation establishing the National Park Service as a federal agency, provides the central direction for the administration of the military park (and other units and programs of the national park system). This GMP Amendment builds on the laws and policies that established and

continue to govern the National Park Service and the national military park to provide a long-term management vision for the Lookout Mountain Battlefield unit.

## **NEED FOR THE GENERAL MANAGEMENT PLAN AMENDMENT**

This GMP Amendment for the Lookout Mountain Battlefield unit is necessary because the park's last general management plan (completed in 1987) is now outdated and opportunities are available for more comprehensive management of the park unit. Additionally, new lands have been added to the Lookout Mountain Battlefield unit on several occasions. The majority of approximately 545 acres were added between 1999 and 2008. Therefore, there is no overall guidance for managing these new lands. These additional lands, located primarily along Lookout Mountain's northern and western flanks, allow the park to incorporate important vantage points and battle-related sites (e.g., Tyndale Hill, Bald Hill, Battle of Wauhatchie sites, Geary's Crossing) into expanded visitor access and interpretation.

A historic structure report and cultural landscape report for the historic Cravens House and farm site were completed in 2012 and 2013, respectively. Information and recommendations provided by those reports assists NPS managers with the selection of appropriate treatment, visitor use, and interpretive strategies for that property. Management options for other areas of Lookout Mountain Battlefield include potential visitor transportation improvements to accommodate auto tours, parking, and vehicle turnouts. Because historic viewsheds have been obscured in several instances, the plan considers the enhancement of views from multiple locations to improve the interpretation of the battles of Lookout Mountain and Missionary Ridge. There is also a need to protect lands and viewsheds outside park boundaries from encroaching development, and as feasible the park would pursue partnerships with other

landowners and agencies to mutually advance protection objectives. Enhanced recreational opportunities would also be explored such as linking the park's trail system to the larger regional trail network.

Proposed changes to Lookout Mountain Battlefield have implications for how visitors access and use the area, what facilities are needed and appropriate to support those uses, how the area's resources are protected and managed, and how NPS operations are conducted in fulfilling the park's mission.

## FOUNDATION FOR PLANNING AND MANAGEMENT

A general management plan defines the legal and policy requirements that direct the park unit's basic management responsibilities and describes the resources and values that are fundamental to achieving the park unit's purpose. Although all units of the national park system must be managed in compliance with a large body of federal laws and policies, each park unit has its own specific purpose, established by Congress or the president, which provides the context for management.

The foundation for planning and management provides the base upon which all future park planning efforts are built, including this GMP Amendment. The foundation identifies what is most important to the park unit through an examination of the enabling legislation and the development of purpose and significance statements and primary interpretive themes; it also identifies any special mandates that affect management of the park unit. The foundation also identifies fundamental resources and values that are essential to maintaining the park's purpose and significance. The foundation for Chickamauga and Chattanooga National Military Park, including Lookout Mountain Battlefield and Moccasin Bend National Archeological District, was developed with input from park staff and stakeholders.

The foundation was instrumental in the development of the GMP Amendment. Elements of the foundation may be found below. An increased emphasis on government accountability and restrained federal spending make it imperative that park staff and stakeholders have a shared understanding of the park's foundation for planning and management purposes to ensure that goals related to the park's fundamental resources and values are achieved.

### PARK PURPOSE

Purpose statements convey the reason(s) for which a national park unit was set aside as part of the national park system. Grounded in an analysis of park legislation and legislative history, purpose statements also provide primary criteria against which the appropriateness of plan recommendations, operational decisions, and actions are tested—they provide the foundation for the park's management and use.

The purpose of Chickamauga and Chattanooga National Military Park is as follows:

To preserve, protect and interpret for the benefit of the public the nationally significant history, stories and resources associated with the Civil War campaign for Chattanooga including the battles of Chickamauga and Chattanooga; and the 12,000 years of American Indian presence on the Moccasin Bend Peninsula.

### PARK SIGNIFICANCE

Significance statements capture the essence of the park's importance to our country's natural and cultural heritage. Significance statements do not inventory park resources; rather, they describe the park's distinctiveness and why the area is important within its regional, national, and international contexts. Defining the park's significance helps managers make decisions and focus their efforts on the protection of resources and enjoyment of those values that are directly related to the park's purpose.



The significance statements for Chickamauga and Chattanooga National Military Park are as follows:

### **Veteran Participation**

The participation of both Union and Confederate Chickamauga and Chattanooga veterans in the creation of the national military park provided a heightened degree of accuracy and legitimacy to the marking of specific battle locations and the placement of monuments and other commemorative features.

### **Research Opportunities**

The park was established in part for the purpose of historical and professional military study and continues to offer exceptional opportunities for the study of some of the most remarkable maneuvers and most brilliant fighting of the Civil War.

### **Civil War Resources**

The park preserves resources associated with one of the deciding campaigns of the Civil War, where a Union victory assured access through the “Gateway to the Deep South,” ultimately hastening the end of fighting and the reunification of the United States.

- Soldiers of 29 of the 34 existing states participated in the campaign.
- The slopes of Lookout Mountain and Missionary Ridge presented unusually formidable natural obstacles to military operations requiring extraordinary efforts and persistence by the soldiers to overcome.
- Chickamauga had the highest casualty rate of any two-day battle in the Civil War.

### **American Indian Culture**

Located on important geographic crossroads, the Moccasin Bend National Archeological District is the best preserved, most important, and most concentrated archeological assemblage representing the sequence of southeastern American Indian cultures known to be extant in the Tennessee River Valley.

### **Moccasin Bend National Archeological District**

The Moccasin Bend National Archeological District provides an outstanding opportunity for education and research and furthering the understanding of the periods of American Indian habitation, including those of transitional Paleo-Indian/Archaic, Archaic, Woodland, Mississippian, and historic periods.

### **Trail of Tears Resources**

The park includes Trail of Tears resources, which mark the tragic forced removal of American Indians (primarily Cherokee) from their southeastern homelands. Powerful stories tell of the struggle for survival and the triumph of the American Indian spirit.

### **Spiritual Importance**

Moccasin Bend National Archeological District retains profound spiritual importance for many contemporary American Indian tribes with ancestral ties to the area.

### **FUNDAMENTAL RESOURCES AND VALUES**

Fundamental resources and values are systems, processes, features, visitor experiences, stories, and scenes that deserve

primary consideration in planning and management because they are essential to maintaining the park's purpose and significance. The following fundamental resources and values have been identified for Chickamauga and Chattanooga National Military Park:

- Battlefields and Related Sites
- Commemorative Features
- Archeological Resources of the Civil War and American Indian Habitation of Moccasin Bend
- Ethnographic Resources
- Strategic and Important Views

Chickamauga and Chattanooga National Military Park contains other resources and values that may not be fundamental to the purpose and significance of the park, but are important to consider in management and planning decisions. The following other important resource has been identified for Chickamauga and Chattanooga National Military Park:

- Museum Collections

## INTERPRETIVE THEMES

Interpretive themes are ideas, concepts, or stories that are central to the park's purpose, significance, identity, and visitor experience. The interpretive themes define concepts that should be available to every visitor. Themes also provide the frame work for the park's interpretation and education programs; influence visitor experience; and provide direction for planners and designers of the park's exhibits, publications, and audiovisual programs. Subsequent interpretive planning may elaborate on these themes.

Interpretive themes have not yet been finalized for Chickamauga and Chattanooga National Military Park. The final interpretive themes would be consistent with the purpose, significance, and fundamental resources and values of the park.

## SPECIAL MANDATES AND ADMINISTRATIVE COMMITMENTS

Special mandates are legislative or judicial requirements that are specific to a particular park unit of the national park system. They are typically mandated by Congress or by the courts. Administrative commitments are agreements that have been reached through formal, documented processes. Examples include cooperative agreements. A list of administrative commitments is maintained in the park. The following special mandates have been identified for the park.

**26 Stat. 1887–1891. An act to establish a national military park at the battlefield of Chickamauga. August 19, 1890.**

Sec. 1 “...each and all of these herein described roads shall, after the passage of this act, remain open as free public highways, and all rights of way now existing through the grounds of the said park and its approaches shall be continued.”

**29 Stat. 1894–1897. An Act Authorizing the Secretary of War to make certain uses of national military parks. May 15, 1896.**

“That the Secretary of War is hereby authorized, within the limits of appropriations which may from time to time be available for such purpose, to assemble, at his discretion, in camp at such season of the year and for such period as he may designate, at such field of military maneuvers, such portions of the military forces of the United States as he may think best, to receive military instruction there.”

### **NATIONAL PARK SERVICE SERVICEWIDE LAWS AND POLICIES**

This section (expanded in appendix E) discusses some of the most pertinent servicewide laws and policies related to planning and managing Chickamauga and

Chattanooga National Military Park, which the park must comply with regardless of this GMP Amendment planning effort. The table in appendix E shows the desired conditions and strategies based on these laws and policies that park management must strive to meet. It is important to note, regardless of which alternative is chosen to implement from this GMP Amendment that the park must comply with all of these laws and policies. The plan alternatives address the desired future conditions that are not mandated by law and policy and must be determined through a planning process.

The National Park Service must comply with law and policy to protect environmental quality and resources, to preserve cultural resources, and to provide public services. Applicable law and policy related to resource management includes the Clean Water Act of 1972; the Endangered Species Act; the National Historic Preservation Act of 1966, as amended (NHPA); the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA); and Executive Order 11990, “Protection of Wetlands.” Law and Policy related to public services and access includes the Americans with Disabilities Act of 1990 (ADA), the Architectural Barriers Act Accessibility Act Standards, the Final Outdoor Developed Area Guidelines, the Rehabilitation Act of 1973, and the Fair Housing Act. A general management plan is not needed to decide that it is appropriate to protect endangered species, control nonnative species, protect archeological sites, conserve artifacts, or provide for access to all people based on the laws, policies, and guidance noted above. Laws and policies have already decided these and many other management-related actions for the National Park Service. The National Park Service would work to meet these requirements with or without a general management plan.

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 that addresses the protection of wetlands.

The NPS Organic Act (16 *United States Code* [USC] 1) provides the central 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 wild life 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 inter-related 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 units should not “derogate[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 2006*. The “action” alternatives (alternatives B and C) considered in this GMP Amendment incorporate and comply with the provisions of these mandates and policies.

Public Law 95-625, the National Parks and Recreation Act, requires the preparation and timely revision of general management plans for each unit of the national park system. Section 604 outlines several requirements for general management plans, including measures for the protection of area resources and indications of the types and general intensities of development. *NPS Management Policies 2006* reaffirms this legislative directive.

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.

## SCOPE OF THE GENERAL MANAGEMENT PLAN AMENDMENT

The general public, NPS staff, and representatives from organizations identified various issues and concerns during project scoping (early information gathering) conducted in 2009 (see appendix B). General management planning at that time included the entire Chickamauga and Chattanooga National Military Park. During scoping, NPS staff provided an overview of the proposed project, including the purpose and need for the GMP Amendment. Comments were solicited at public meetings, through planning newsletters, and on the NPS planning website (see the “Consultation and Coordination” chapter). It was subsequently decided to narrow the planning focus to a GMP Amendment for the Lookout Mountain Battlefield unit. The comments received during early scoping in 2009 were considered in the development of this amendment.

Comments received during scoping demonstrated there are many things people like about the Lookout Mountain Battlefield unit—its management, resources, and visitor opportunities. The issues and concerns expressed generally involve protecting park cultural and natural resources, controlling invasive plant species and other threats to the park, and providing for an enjoyable visitor experience. An issue is defined here as an opportunity, conflict, or problem regarding the use and management of public lands. The GMP Amendment alternatives provide strategies for addressing the issues within the context of the park’s purpose and significance while remaining compatible with desired resource conditions.

While this general management plan provides guidance for the Lookout Mountain Battlefield unit of Chickamauga and Chattanooga National Military Park for the next 15 to 20 years, it does not

- describe how particular programs or projects would be implemented or prioritized—these decisions are deferred to detailed implementation planning
- provide specific details and answers to all the issues facing the park
- provide funding commitments for implementation of the plan

### ISSUES AND OPPORTUNITIES TO BE ADDRESSED

Many aspects of the desired future conditions for Lookout Mountain are defined in the enabling legislation, the park’s purpose and significance statements, and existing laws and policies. The resolution of questions or issues that have not already been addressed by the enabling legislation or laws and policies are the basis for developing different alternatives or approaches to managing the park. As with any decision-making process, there are key decisions that, once made, would dictate the direction of subsequent management strategies.

Based on internal and external comments received and information supported by research and management experience, the following management issues and opportunities were identified for Lookout Mountain. The bulleted items following each issue reflect the goal to be addressed through proposed actions in the GMP Amendment.

### Resource Management

- Restore and rehabilitate the cultural landscape at the Cravens Reservation to appropriately reflect the 1863 battle period and rehabilitate the landscape at Point Park to

approximate the appearance as it was during the commemorative period.

- Control the dense stands of trees that have compromised important historic views (e.g., those from Point Park) and the overall cultural landscape.
- Provide education about the natural resources associated with recently acquired lands at Lookout Mountain Battlefield. Develop appropriate management prescriptions that meet stewardship objectives.
- Develop management practices that would support protecting, maintaining, and restoring native biodiversity and ecosystem health in the Lookout Mountain Battlefield.
- Protect cultural and natural resources from damage by inadvertent visitor use impacts, and from looting and other illegal activities (e.g., damage and vandalism of monuments).

## Partnerships

- Expand partnership opportunities as appropriate to enhance the National Park Service presence in the community and to support education, interpretation, stewardship initiatives, and visitor experience.
- Work effectively with partners, neighbors, agencies, and others to address factors outside the Lookout Mountain Battlefield boundary that have the potential to impact or encroach upon park resources.
- Increase the use of volunteers for interpretation and stewardship opportunities.

## Visitor Experience

- Ensure the park's resources and stories are relevant to the public and visitors in anticipation of cultural and demographic changes over the next 20-plus years.
- Determine an appropriate range of recreational activities at Lookout Mountain Battlefield.
- Promote appropriate recreational activities with minimal impact to resources.
- Determine appropriate levels and types of access to provide for an enhanced visitor experience given the range of allowable activities.
- Determine the primary programs, facilities, and services to be made accessible to visitors of all ability levels.
- Expand interpretive opportunities at Lookout Mountain Battlefield.

## Operations and Facilities

- Determine the needed, efficient, and sustainable infrastructure or facilities to support access for appropriate activities at Lookout Mountain Battlefield .
- Reduce incidences of illegal uses and activities at Lookout Mountain Battlefield.
- Rehabilitate or restore, as appropriate, important historic structures at Lookout Mountain Battlefield (e.g., Ochs Observatory and Cravens House).
- Determine the primary facilities, infrastructure, and equipment to be made accessible to existing and new staff at Lookout Mountain Battlefield.

## ISSUES AND OPPORTUNITIES NOT ADDRESSED IN THIS GENERAL MANAGEMENT PLAN AMENDMENT

Not all of the issues and concerns raised by the public are included in this GMP Amendment; they may be part of the day-to-day management of the park, the suggested actions are against law or policy, or the suggested actions may be covered by existing law or policy (e.g., management of endangered species).

Some of the issues and concerns raised by the public and the reasons for their exclusions are discussed in the following sections.

### PLANNING FOR MOCCASIN BEND NATIONAL ARCHEOLOGICAL DISTRICT

In 2003, 755 acres were added to Chickamauga and Chattanooga National Military Park as the Moccasin Bend National Archeological District unit of the park. There is currently no comprehensive planning document for this unit of the park, but planning is needed to define desired conditions for resources and visitor experience. The National Park Service chose to separate the planning for Lookout Mountain Battlefield from the planning for the Moccasin Bend unit in order to focus efforts on each park unit individually. Comprehensive planning for the Moccasin Bend unit would take place as a separate effort.

### CLIMATE CHANGE

Climate change refers to any substantial changes in average climatic conditions or climatic variability lasting for an extended period of time (decades or longer). Recent reports by the U.S. Climate Change Science Program, the National Academy of Sciences,

and the United Nations Intergovernmental Panel on Climate Change (IPCC 2007) provide clear evidence that climate change is occurring and is likely to accelerate in the coming decades. The effects of climate change on national parks are beginning to emerge as both science and the impacts of climate change become clearer; however, it is difficult to predict the full extent of the changes that are expected under an altered climate regime.

In response to climate change, the National Park Service prepared a strategy involving science, mitigation, adaptation, and communication (NPS 2010). A *Green Parks Plan* has been published that requires the National Park Service to reduce greenhouse gas emissions and adapt facilities at risk from climate change (NPS 2012a). The National Park Service recognizes that the drivers of climate change are outside the control of the agency. However, climate change is a phenomenon and those impacts throughout the national park system cannot be discounted. Some of these impacts are already occurring or are expected in the Lookout Mountain Battlefield unit in the time frame of this management plan. Increasingly, the National Park Service is considering climate change in its management actions, including actions to mitigate effects and adapt to climate change, while also meeting park goals. Therefore, climate change is included in this document to recognize its role in the changing environment of the park, provide an understanding of its impact, and incorporate climate change into park management decision making.

There are two different issues to consider with respect to climate change: (1) what is the contribution of the proposed action to climate change such as greenhouse gas emissions and the “carbon footprint,” and (2)

what are the anticipated effects of climate change on park resources and visitors that are affected by the management alternatives? Because the contribution in comparison to the region of the proposed actions in all of the alternatives to climate change is negligible, the first issue has been dismissed as an impact topic (see table 1).

Although climate change is a global phenomenon, it manifests differently depending on regional and local factors. Climate change is expected to result in many changes to the forests of the eastern United States. Some of these changes are already occurring. In the Eastern Woodlands and Forests bioregion, which includes the park, changes already recorded include warmer average annual temperatures, earlier dates of runoff, a longer frost-free period, and a longer growing season. Regional climate projections for the southeastern United States include increased frequency of extreme heat events, decreased frequency of extreme cold events, and decreased severity of cold events (Diffenbaugh et al. 2005 In Schramm and Loehman 2011). Mean annual temperatures as compared to the 1971–99 average, is projected to increase 2 degrees Fahrenheit (°F) to 3°F in the region by mid-century and 4°F to 7°F by the end of the century, depending on the greenhouse gas emissions scenario (NPS–SRI 2013). Warming by mid-century is projected for all seasons, with the greatest increases likely in summer and fall. The number of days with maximum temperatures greater than 95°F is projected to increase 25 to 30 days per year by mid-century while the number of days with minimum temperatures below freezing is projected to decrease by approximately 20 days (NPS–SRI 2013). Projections identify drier and hotter summers. Considerably warmer temperatures and a more variable precipitation regime, including heavier rain events and an increased number of days between rain events, may lead to both more frequent droughts and more severe flooding and erosion (NPS–SRI 2013; Sustainable Tennessee Organization 2012). Rising temperatures are likely to increase forest fire

hazards, increase the length of the fire season, and contribute to larger fires. Climate change may also increase conditions for the spread of pests and nonnative plant species and alter wildlife species' ranges (Schramm and Loehman 2011).

This GMP Amendment primarily focuses on Lookout Mountain Battlefield's cultural resources and visitor use, facilities, and access. All of the facilities addressed herein are outside the designated 100-year floodplain. Climate change could affect park resources such as water flow timing and volume and the frequency and intensity of storms. These changes could have impacts on the area's vegetation and wildlife populations, public facilities, and access and use of the park. But it is not yet possible to determine when, how, or where these changes would occur and if they would impact visitor use, facilities, and access options considered in this plan. The impacts of climate change could affect the park's historic structures, which are vulnerable to changes in temperature, wind and moisture, as well as infestation of pests (UNESCO 2007 In Schramm and Loehman 2011).

Climate change is a far-reaching and long-term issue that could affect the park unit, its resources, visitors, and management beyond the scope and time frame of this GMP Amendment. Although some effects of climate change are known or considered likely to occur, many potential impacts are unknown. Much depends on the rate at which temperatures continue to rise and whether global emissions of greenhouse gases can be mitigated before serious ecological thresholds are reached.

Climate change science is a rapidly advancing field—and new information is being collected and released continually. Because the drivers of climate change are largely outside the control of park staff, the National Park Service alone does not have the ability to prevent climate change from affecting resources within the national park system. The full extent of the effects of climate



change to resources and visitor experience is not known, nor do managers and policy makers yet agree on the most effective responses for minimizing effects and adapting to change. Thus, unlike the other issues noted above, this GMP Amendment does not provide definitive solutions or direction for resolving the issue of controlling the effects of climate change on Lookout Mountain Battlefield. Rather, the GMP Amendment provides some general direction and strategies that can help minimize the park unit's contribution to climate change (see the desired conditions related to climate change and sustainability in appendix E). The GMP Amendment also recognizes that management actions and the facilities being proposed in all of the alternatives need to be adopted with future climate change in mind because past conditions are not necessarily useful guides for future planning.

The impacts of climate change on the park unit are not expected to differ among the alternatives, and the lack of qualitative and quantitative information about climate change effects adds to the difficulty of predicting how these impacts would be realized in the Lookout Mountain Battlefield unit. Additionally, management actions that are inherently part of each alternative, such as

managing nonnative plants to prevent spreading, would not fundamentally change with the anticipated added effects of climate change. Also, the range of variability in the potential effects of climate change is large in comparison to what is known about the future under an altered climate regime in the park in particular, even if larger-scale climatic patterns have been predicted for the Eastern Woodlands and Forests bioregion. Therefore, the potential effects of this dynamic climate on national park resources were included in "Chapter 3: Affected Environment." However, these effects are not analyzed in "Chapter 4: Environmental Consequences" in general with respect to each alternative because of the uncertainty and variability of outcomes, and because these outcomes or management are not expected to differ among the alternatives.

Per guidance issued by the Department of the Interior (USDI), the National Park Service, the Council on Environmental Quality (CEQ), and the GMP Amendment planning team have carried forward some discussion of the current state of climate change knowledge as it relates to the resources that could be affected by the management alternatives described in this GMP Amendment. This discussion is included in "Chapter 3: Affected Environment."

## IMPACT TOPICS INCLUDING TOPICS CONSIDERED AND TOPICS DISMISSED

### IDENTIFICATION OF IMPACT TOPICS

The NPS planning team identified impact topics for comparison of the environmental consequences of each alternative. These impact topics were identified based on federal laws, regulations, and executive orders; NPS *Management Policies 2006*; issues and concerns raised by the public and other agencies; and NPS staff subject-matter knowledge.

Impact topics were retained if there could be appreciable impacts on the human environment from the actions of the alternatives considered. All other impact

topics have been dismissed from detailed analysis. Impact topics were dismissed if they were determined not to be relevant to the development of this GMP Amendment because either: (1) implementing the alternatives would have no effect, negligible effect, or minor effect on the resource, or (2) the resource does not occur in the park.

Table 1 lists the impact topics that were considered for this plan, noting which topics were retained versus dismissed. Topics that were retained for analysis are discussed in more detail in “Chapter 3: Affected Environment” and “Chapter 4: Environmental Consequences.”

**TABLE 1. IMPACT TOPICS RETAINED AND DISMISSED FOR LOOKOUT MOUNTAIN BATTLEFIELD  
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Impact Topic	Retained or Dismissed	Rationale	Relevant Law, Regulation, or Policy
<b>IMPACT TOPICS RETAINED</b>			
<b>Historic Structures / Sites / Cultural Landscapes</b>	Retained	The Lookout Mountain Battlefield unit contains a wide array of historic structures and sites associated with the 1863 Battle of Lookout Mountain and the national military park’s subsequent commemorative and development period (1890–1942). Among these important resources are the Cravens House, various commemorative monuments and sites (e.g., Point Park), and newly acquired lands (e.g., Tyndale Hill, Bald Hill, Smith Hill). Cultural landscape resources, particularly those identified for recommended treatment at the Cravens House, contribute to the site’s historical integrity. Proposed actions to enhance visitor interpretation and the preservation treatment and management of historic properties have the potential to affect the historic character, fabric, and other qualities contributing to the significance of these properties. The topic of historic structures, sites, and cultural landscapes was therefore retained for analysis in this GMP Amendment.	Sections 106 and 110 of the 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>The Secretary of the Interior’s Standards for the Treatment of Historic Properties</i> (1995); <i>The Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes</i> (1996); NPS Director’s Order 28: <i>Cultural Resources Management</i> ; NPS <i>Management Policies 2006</i> ; Programmatic Agreement among the National Park Service, the Advisory Council on

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			Historic Preservation, and the National Conference of State Historic Preservation Officers (2008)
<b>Archeological Resources</b>	Retained	Although few systematic archeological surveys and investigations have been completed for the Lookout Mountain Battlefield, historic archeological resources associated with the 1863 battle period have been identified at the Cravens House and other areas. There is also a potential for the discovery of presently unidentified prehistoric archeological resources. Some actions proposed under the planning alternatives entail ground-disturbing construction activities (e.g., development of access roads, trails, parking areas) that could potentially affect presently unidentified archeological resources. The topic of archeological resources was therefore retained for analysis in this GMP Amendment.	Sections 106 and 110 of the National Historic Preservation Act of 1966, as amended (16 USC 470); NPS Director's Order 28: <i>Cultural Resources Management; The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation</i> ; NPS <i>Management Policies 2006</i> ; Director's Order 28A: <i>Archeology</i> (2004); Archaeological Resources Protection Act (1979); Antiquities Act (1906)
<b>Federally Threatened and Endangered Species (large-flowered skullcap, Indiana bat, northern long-eared bat)</b>	Retained	One federally and state listed species is documented on Lookout Mountain: the threatened large-flowered skullcap ( <i>Scutellaria montana</i> ), a perennial herb. Two other bat species, the federally endangered Indiana bat ( <i>Myotis sodalis</i> ) and the northern long-eared bat ( <i>Myotis septentrionalis</i> ), a federal candidate for listing, are probably present, although they have not been officially documented as being present. To be cautious, for the purposes of this environmental assessment, both bat species are assumed to be present in the Lookout Mountain Battlefield unit. These species may occur in areas that may be affected by actions in the alternatives. Thus, these species were retained for further analysis. Several other federal and state listed species were dismissed from further analysis (see below).	Endangered Species Act; NPS Organic Act; NPS <i>Management Policies 2006</i>

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Impact Topic	Retained or Dismissed	Rationale	Relevant Law, Regulation, or Policy
<b>Soils</b>	Retained	The Organic Act and NPS <i>Management Policies 2006</i> require the National Park Service to protect and conserve geologic resources, including soils. Soils are a key resource that affect the area's productivity, drainage patterns, and erosion. Soils also provide structural support to buildings and other developed facilities. Although most of the proposed developments would occur in areas that have already been disturbed, construction and use of the facilities would affect Lookout Mountain's soils. Any impacts that would adversely affect these resources would be of concern to NPS managers and the public.	NPS Organic Act NPS <i>Management Policies 2006</i>
<b>Vegetation</b>	Retained	Although much of the native vegetation on Lookout Mountain has been altered or lost, native vegetation is still an important natural resource. The Organic Act and NPS <i>Management Policies 2006</i> require the National Park Service to protect and conserve native plants and vegetation communities that could be affected by visitors, park management actions, and external sources. A variety of actions are proposed in the alternatives that would both benefit and adversely affect vegetation. The spread of nonnative vegetation is also a concern in the area.	NPS Organic Act NPS <i>Management Policies 2006</i>
<b>Visitor Use and Experience (including visitor safety)</b>	Retained	Providing opportunities for visitors to access, use, and enjoy the national military park is mandated by both law and NPS policies. The ways that visitors use and experience the park would be affected by the alternatives presented in this plan. These changes would be of concern to visitors, NPS managers, and the public. Additionally, because the park presents potential risks to visitors, safety is an important concern and was also retained for analysis in this GMP Amendment.	NPS Organic Act NPS <i>Management Policies 2006</i>
<b>Park Operations</b>	Retained	Park operations refers to activities and programs of NPS staff and volunteers to adequately protect park resources and provide for effective visitor experiences. These activities include education and interpretation, treatment of historic properties and other sites / resources, enforcement activities, and routine maintenance. Alternatives proposed by the current GMP Amendment are anticipated to affect to varying degrees particular	NPS <i>Management Policies 2006</i>

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Impact Topic	Retained or Dismissed	Rationale	Relevant Law, Regulation, or Policy
		aspects of park operations (e.g., park staffing, maintenance activities, operational efficiencies). Therefore, this impact topic is analyzed in detail in this GMP Amendment.	
<b>IMPACT TOPICS CONSIDERED AND DISMISSED</b>			
<b>Wildlife</b>	Dismissed	Although use levels would likely increase as a result of the actions in the alternatives being considered, the increase in use levels would likely be relatively small and occur in mostly developed areas. Most of the changes being proposed would be in areas that already are used by visitors and where wildlife populations and habitat have already been altered. Any adverse impacts that would occur from changes in visitation and new developments under the alternatives would be minor or less in magnitude.	NPS Organic Act NPS <i>Management Policies 2006</i>
<b>Federal and State Listed Species of Concern (other than the large-flowered skullcap, Indiana bat, northern long-eared bat)</b>	Dismissed	<p>The federal and state endangered gray bat (<i>Myotis grisescens</i>) occurs on Lookout Mountain. However, no actions are being taken in the alternatives that would affect the caves where this species likely occurs—the alternatives would have no effect on the gray bat.</p> <p>Several other state listed threatened and endangered species are believed to occur in the park (see appendix F). Although several of these species have been documented in other units of Chickamauga-Chattanooga National Military Park, most of these species either do not occur on Lookout Mountain because their habitat is not present, or they are believed to be rare or uncommon. Golden-winged warblers are frequent migrants on Lookout Mountain, but are unlikely to breed there (N. Klaus, Sr. Wildlife Biologist, Nongame Conservation Section, GA Dept. of Natural Resources, pers. comm., 8-19-13). None of the state listed species are known to reside in the areas that would be affected by the alternatives. Before any ground-disturbing activities would occur, the areas would be surveyed to determine if any of these species occur there. If the species were found in an area, appropriate conservation measures would be taken to avoid or minimize impacts to these species in</p>	NPS <i>Management Policies 2006</i> <i>Endangered Species Act</i>

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Impact Topic	Retained or Dismissed	Rationale	Relevant Law, Regulation, or Policy
		consultation with resource agencies. Facilities and actions would be identified and designed to avoid adverse effects. Work would be conducted outside critical periods for the specific species. Restrictions on uses may be considered if appropriate.	
<b>Geologic Resources (including caves)</b>	Dismissed	None of the alternatives would result in ground disturbance that would affect geologic resources or geologic processes. No actions are being proposed that would affect the caves on Lookout Mountain. Thus, this impact topic was dismissed.	NPS Organic Act NPS <i>Management Policies 2006</i>
<b>Water Quality and Quantity</b>	Dismissed	Lookout Creek is the only drainage in the Lookout Mountain Battlefield unit. There is one noteworthy spring (Skyuka Spring). No developments or changes in visitor activities are proposed in the alternatives that would be adjacent to these water sources and affect water quality or quantity. Although some restrooms are proposed in the alternatives, they would be designed and built so they would not affect water quality. Thus, this impact topic was dismissed.	NPS Organic Act Clean Water Act Executive Order 12088, "Federal Compliance with Pollution Control Standards NPS <i>Management Policies 2006</i>
<b>Floodplains and Wetlands</b>	Dismissed	The only wetlands and floodplain in the Lookout Mountain Battlefield unit are along Lookout Creek. No developments or changes in uses or visitor activities are proposed in the alternatives that would noticeably affect the Lookout Creek floodplain or wetlands. There would not be any evident changes in vegetation, soils, or hydrology as a result of the alternatives. Because there are not expected to be any impacts on floodplains and wetlands from the alternatives in this plan, this impact topic was dismissed.	Clean Water Act; NPS <i>Management Policies 2006</i> Director's Order 77-2: <i>Floodplain Management</i> Executive Order 11988: "Floodplain Management" Director's Order 77-1: "Wetland Protection" Executive Order 11990: "Protection of Wetlands"
<b>Air Quality</b>	Dismissed	Although use levels likely would slightly increase as a result of the alternatives, the changes in vehicular traffic would not be expected to cause national ambient air quality standards to be exceeded because visitation increases would be relatively minor. Any amount of pollutants added because of the actions proposed in the alternatives would be negligible compared to existing levels. Because no changes are being proposed that would substantially decrease air quality in the area, this impact topic was dismissed.	Clean Air Act NPS <i>Management Policies 2006</i>

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<b>Impact Topic</b>	<b>Retained or Dismissed</b>	<b>Rationale</b>	<b>Relevant Law, Regulation, or Policy</b>
<b>Soundscapes</b>	Dismissed	Lookout Mountain provides a quiet escape from the hustle and bustle of metropolitan life. The National Park Service strives to maintain or reduce existing noise impacts within the area, so Lookout Mountain can continue to serve as a refuge from the nearby urban environment. The proposed actions under the alternatives would increase use levels, but mostly in areas that already are used by people. Noise levels due to construction activities would occur in localized areas, but would be spread out over time and space, resulting in a short-term minor, adverse impact. Likewise, noise levels probably would slightly increase in these localized areas, due to increased visitor use levels, but this use would likely be spread out over time and would result in a minor adverse impact to the natural soundscape. Consequently, this impact topic was dismissed.	<i>NPS Management Policies 2006</i> Director's Order 47: <i>Soundscape Preservation and Noise Management</i>
<b>Night Sky</b>	Dismissed	<i>NPS Management Policies 2006</i> state that the National Park Service will preserve, to the greatest extent possible, the natural lightscapes of parks, including natural darkness. There are no actions proposed in this plan that would affect the night sky in the Lookout Mountain Battlefield unit. Thus, night sky was dismissed from further analysis.	NPS Organic Act <i>NPS Management Policies 2006</i>
<b>Prime and Unique Farmlands</b>	Dismissed	Prime farmlands are defined as lands that have the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and are also available for these uses. Prime farmlands have the soil quality, growing season, and moisture supply needed to produce economically sustained high yields of crops when treated and managed according to acceptable farming methods, including water management. In general, prime farmlands have an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, acceptable salt and sodium content, and few or no rocks. Unique farmlands are lands other than prime farmlands that are used for the production of specific high value food and fiber crops.	CEQ 1976 Memorandum; Analysis of Impacts on Prime and Unique Farmland in Environmental Impact Statement Department of the Interior Environmental Statement Memorandum No. ES77-3.

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Impact Topic	Retained or Dismissed	Rationale	Relevant Law, Regulation, or Policy
		No unique farmlands are known in the Lookout Mountain Battlefield unit. There are areas with prime farmland (and areas with farmland of statewide importance) on the west side of the park unit, but the developments being proposed in the alternatives would largely avoid these areas—none of the alternatives would adversely affect soils. Thus, this impact topic was dismissed.	
<b>Museum Collections</b>	Dismissed	<p>Among the park’s museum collection are objects and archival materials relating to the Battle of Chickamauga (September 18–20, 1863) and the Battles for Chattanooga (November 23–25, 1863). The museum collection includes the Longstreet Thomas manuscripts that focuses on the battles and the Civil War in the Western Theater; Civil War artifacts; the Fuller Collection of American Military Longarms; furnishings for the historic Cravens House (ca. 1866); and archival material relating to the early administration of the park (ca. 1890–1920). The museum collection is primarily housed in facilities at the park (Chickamauga Battlefield Visitor Center, Lookout Mountain Battlefield Visitor Center, and the Cravens House). Most of the archeological collection is stored at the Southeast Archeological Center in Tallahassee, Florida. The park’s herbarium is stored at the University of Tennessee in Chattanooga.</p> <p>The park’s Museum Collection Management Plan (2006) includes a scope of museum collection statement. Among the plan’s recommendations is the treatment of objects exhibited at the Cravens House. The house lacks a climate control system, and there are few original objects displayed there associated with the Cravens family. Original objects (e.g., chairs, kitchen utensils, photos) would be removed from the house and stored in the park’s museum collection facility. Other objects (period representations not original to the house or the Cravens occupancy) would be deaccessioned as appropriate.</p> <p>Because the alternatives in the present GMP Amendment are consistent with the overall direction and treatment</p>	<p>National Historic Preservation Act; American Indian Religious Freedom Act; Archeological and Historic Preservation Act; Archeological Resources Protection Act; Native American Graves Protection and Repatriation Act; NPS <i>Management Policies 2006</i>; Department of the Interior Manual on Museum Property Management 411 DM; NPS <i>Museum Handbook</i>; Director’s Order 24: <i>Museum Collections Management</i> and Director’s Order 28: <i>Cultural Resources Management</i>; 36 CFR 79 “Curation of Federally-Owned and Administered Archaeological Collections”</p>



**TABLE 1. IMPACT TOPICS RETAINED AND DISMISSED FOR LOOKOUT MOUNTAIN BATTLEFIELD  
GMP AMENDMENT AND ENVIRONMENTAL ASSESSMENT**

Impact Topic	Retained or Dismissed	Rationale	Relevant Law, Regulation, or Policy
		recommended in the Museum Collection Management Plan for the disposition of Cravens House items, and no changes are recommended for management of the collections at Lookout Mountain Battlefield Visitor Center, the topic of museum collections was dismissed from further analysis in this plan.	
<b>Ethnographic Resources</b>	Dismissed	<p>As defined by the National Park Service, an ethnographic resource is “a site, structure, object, landscape, or natural resource feature assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it” (NPS-28). Ethnographic resources typically hold significance for contemporary, traditionally associated groups whose sense of purpose, existence as a community, and identity as an ethnically distinctive people are closely linked to particular resources and places.</p> <p>Chickamauga and Chattanooga National Military Park does not currently have an ethnographic overview and assessment. Such a study would provide comprehensive background information on ethnographic resources traditionally associated with contemporary groups, summarize the types and uses of these resources, and identify data gaps. NPS staff have identified the need for an ethnographic overview and assessment primarily with regard to Moccasin Bend National Archeological District and the cultural connections that several American Indian tribes retain for that particular park unit. Although no ethnographic investigations have been completed for Lookout Mountain Battlefield, it is unlikely that actions proposed by this GMP Amendment would have greater than negligible to minor adverse impacts on ethnographic resources should they exist in project areas. Traditional access to such resources is also not expected to be impeded by proposed actions. The topic of ethnographic resources was therefore dismissed from further analysis in this GMP Amendment.</p>	Sections 106 and 110 of the National Historic Preservation Act of 1966, as amended (16 USC 470); Native American Graves Protection and Repatriation Act of 1990; NPS Director’s Order 28: <i>Cultural Resources Management</i> ; NPS <i>Management Policies 2006</i> ; Executive Order 13007, “Indian Sacred Sites” (1996)

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GMP AMENDMENT AND ENVIRONMENTAL ASSESSMENT**

Impact Topic	Retained or Dismissed	Rationale	Relevant Law, Regulation, or Policy
<b>Socioeconomics</b>	Dismissed	None of the actions in the alternatives would substantially alter visitor use levels or visitor use patterns that would have more than a minor effect on local businesses or local residents. Likewise, none of the alternatives would have more than a minor effect on local demographics, services, housing, employment, or the aesthetic quality of adjacent communities.	National Environmental Policy Act
<b>Public Health and Safety</b>	Dismissed	The proposed developments and actions in the alternatives would not result in any identifiable adverse impacts on human health or safety. Furthermore, visitor safety is addressed under the topic of visitor use and experience. Therefore, public health and safety was dismissed from further analysis.	CEQ Regulations Director's Order 12: <i>Handbook</i>
<b>Natural or Depletable Resource Requirements and Conservation Potential</b>	Dismissed	None of the alternatives being considered would result in the extraction of resources from Lookout Mountain. Relatively small quantities of depletable resources would be used in the development of facilities, such as parking areas, viewing areas, and trails, in the alternatives, but the impact on these resources would be minimal. Under all alternatives, ecological principles would be applied to ensure that park natural resources are maintained and not impaired.	Council on Environmental Quality (CEQ) Regulations
<b>Carbon Footprint</b>	Dismissed	For the purposes of this planning effort, "carbon footprint" is defined as the sum of all emissions of carbon dioxide and other greenhouse gases (e.g., methane and ozone) that would result from implementation of any of the alternatives. It has been determined that the action alternatives described in this document would only emit a negligible amount of greenhouse gases that contribute to climate change. No substantial changes in motorized travel are proposed under the alternatives, and development of just a few new trails and parking lots are proposed under the alternatives. Because of the negligible amount of greenhouse gas emissions that would result from the alternatives, a quantitative measurement of their carbon footprints was determined by the planning team not to be practicable.	<i>NPS Environmental Quality Division's Draft Interim Guidance: Considering Climate Change in NEPA Analysis Green Parks Plan</i>

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Impact Topic	Retained or Dismissed	Rationale	Relevant Law, Regulation, or Policy
Environmental Justice	Dismissed	<p>Presidential Executive Order 12898 requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing the disproportionately high and/or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. According to the Environmental Protection Agency, environmental justice is the "... fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies." The goal of "fair treatment" is not to shift risks among populations, but to identify potentially disproportionately high and adverse effects and identify alternatives that may mitigate these impacts.</p> <p>Environmental justice was considered and dismissed from further analysis for the following reasons:</p> <ul style="list-style-type: none"> <li>▪ The park staff and planning team solicited public participation as part of the planning process and gave equal consideration to all input from persons regardless of age, race, income status, or other socioeconomic or demographic factors.</li> <li>▪ Implementation of the alternatives would not result in any identifiable adverse human health effects. Therefore, there would be no direct or indirect adverse effects on any minority or low-income population.</li> <li>▪ The impacts associated with implementation of the alternatives would not disproportionately affect any minority or low-income population or community.</li> <li>▪ Implementation of the alternatives</li> </ul>	Executive Order 12898, "General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations"

**TABLE 1. IMPACT TOPICS RETAINED AND DISMISSED FOR LOOKOUT MOUNTAIN BATTLEFIELD  
GMP AMENDMENT AND ENVIRONMENTAL ASSESSMENT**

Impact Topic	Retained or Dismissed	Rationale	Relevant Law, Regulation, or Policy
		would not result in any identified effects that would be specific to any minority or low-income community.	
<b>Conformity with Land Use Plans, Policies, or Controls</b>	Dismissed	The basic land use of the park as a public recreation and resource management area is in conformance with local land use plans. The creation of additional visitor opportunities in the park as proposed in the alternatives would be consistent with existing park uses and local land use plans, policies, or controls for the area. Therefore, this topic was dismissed from detailed analysis.	CEQ Regulations Director's Order 12: <i>Handbook</i>
<b>Energy Requirements and Conservation Potential</b>	Dismissed	Under all alternatives, the National Park Service would continue to implement its policies of reducing costs, eliminating waste, and conserving resources by using energy-efficient and cost-effective technology. Irrespective of this GMP Amendment, NPS staff would continue to look for energy-saving opportunities in all aspects of park operations. Sustainable practices would be pursued whenever possible in all decisions regarding park operations, facilities management, and developments. Although there may be differences in the number of motorized vehicles operating in the various alternatives, noticeable increases in overall energy consumption in the park would not be expected due to the alternatives.	NPS <i>Management Policies</i> 2006 CEQ Regulations <i>Green Parks Plan</i> (2012a)

## RELATIONSHIP OF OTHER PLANNING EFFORTS TO THIS GMP AMENDMENT

Several plans have influenced or would be influenced by the approved Lookout Mountain Battlefield GMP Amendment. These plans have been prepared by the National Park Service and other agencies and organizations.

### NATIONAL PARK SERVICE PLANS

#### **Resources Management Plan (1982; revised 1984)**

The Resources Management Plan, although now dated, identified natural and cultural resource issues and problems at the national military park and presented alternative actions for improving conditions. The plan noted that natural resource concerns related primarily to visitor and employee safety, the stabilization of natural resources to arrest further deterioration, reestablishing the appearance of the historic scene, and adherence to the basic principles of the park's establishing legislation. The risk of destructive wildfires throughout the park was identified, the result of a heavy overload of fire fuels and dense vegetation. On Lookout Mountain, the spread of nonnative species (particularly kudzu) and water pollution threats from sewage seepage were specifically noted.

The plan identified cultural resources issues associated with the preservation of the park's commemorative monuments and markers, historic structures (notably the Cravens House on Lookout Mountain), historic roads and trails, collections, and other resource topics. Factors impinging on the park's ability to adequately preserve and restore the historic scene included increased commercial and commuter traffic through the park, conflicting recreational uses, vandalism and other impacts affecting the integrity of

historic structures and objects, the lack of a historic base map (including a vegetation map) to guide the restoration of the historic scene, and land development pressures encroaching on the park boundary. The need for systematic archeological inventory of park lands, particularly in Tennessee, was also identified.

The National Park Service has largely discontinued the preparation of resource management plans, instituting instead a program of long-range resource stewardship strategies for parks. The future resource stewardship strategy envisioned for Chickamauga and Chattanooga National Military Park would evaluate the park's fundamental resources and values. It would also incorporate the desired conditions established by the GMP Amendment, together with scientific and scholarly understanding of park resources, to develop a comprehensive strategic plan for achieving and maintaining resource protection. This GMP Amendment examines the current status of resources on Lookout Mountain and will provide recommendations to achieve desired conditions, including appropriate preservation treatments for selected properties (e.g., Cravens House).

#### **Fire Management Plan (1985, revised 2004)**

Among the considerations of Chickamauga and Chattanooga National Military Park's Fire Management Plan was the use of prescribed fire to remove overgrown vegetation in efforts to preserve the historic scene and approximate the appearance of selected areas to conditions existing at the time of the 1863 battles. In some park locations, long-standing fire suppression efforts have led to the buildup of dense

stands of trees and understory vegetation that contribute to fuel loading. Fire management strategies enable NPS managers to proactively respond to destructive wildfires that pose risks to human safety and threaten natural and cultural resources. In some instances, the use of controlled burns also provides a means of restoring important historic settings and views to enhance interpretation (NPS 1985).

On Lookout Mountain, wildfires could occur in areas of dense hardwood and pine forest and where a thick understory of honeysuckle, privet, kudzu and other vegetation have become established. A Southern Pine Bark Beetle infestation in the 1970s resulted in substantial areas of dead and diseased pine trees (primarily along Lookout Creek) that added to fuel loads. Because of the presence of residential areas near Lookout Mountain Battlefield, it was determined that Lookout Mountain fire management areas would be classified entirely as a fire protection zone (i.e., the use of prescribed fire would not be permitted, and all fires would be immediately suppressed).

### **General Management Plan / Development Concept Plan / Environmental Assessment (1987)**

The objectives of the park's general management plan were to establish basic management strategies to ensure the protection of the park's significant cultural resources, to foster better visitor understanding of the battles of Chickamauga and Chattanooga, and to plan for needed visitor facilities. A 6,000-square-foot addition to the Chickamauga battlefield visitor center was proposed to accommodate visitor services and administrative functions. The plan called for improved parkwide orientation and interpretive programs. It was noted that the battlefields would not be restored to their 1863 appearance, but the landscapes at key interpretive sites would be managed to resemble their appearance at the time of the battles. The park would work with

landowners and developers to eliminate visual intrusions and mitigate visual impacts. To this objective, the powerlines at the Chickamauga battlefield and the Cravens House on Lookout Mountain would be placed underground to remove these intrusions on the historic landscape. This GMP Amendment assesses the management strategies and proposals for Lookout Mountain to ensure, where applicable, consistency with previous planning objectives (NPS 1987b).

### **Land Protection Plan (1993 addendum)**

This addendum to the park's initial 1983 Land Protection Plan indicated that the National Park Service was continuing to work with park neighbors, county planning and zoning commissions, and the private sector to reduce land use impacts on the park's historic landscape. At the time of this addendum, proposed relocation of U.S. Highway 27 along the western boundary of Chickamauga Battlefield was identified as the park's most pressing concern in efforts to reduce traffic levels and encroaching development. The plan acknowledged the findings of the 1993 Civil War Sites Advisory Commission that listed the Chickamauga Battlefield among the top 20 endangered Civil War battlefields due to suburban urbanization and development along park boundaries. The critical need for a systematic boundary study to address related land uses and land protection strategies was identified in efforts to protect the historic battlefield sites and the historic landscape from intrusions. The plan noted that the park had actively participated in greenway planning and development in cooperation with local authorities and the NPS Southeast Regional Office's Rivers, Trails, and Conservation Assistance Program. It was noted that the Old Wauhatchie Pike Greenway had been approved along the northern perimeter of Lookout Mountain to protect the historic road and clean up potentially hazardous dump sites. It was also observed that future

incompatible use of the Williams property near the historic Craven House on Lookout Mountain could impact the historic setting of the Cravens House. Connection of Lookout Mountain to the regional trail and greenway system remain important considerations for this GMP Amendment as well as continued efforts to protect and improve the historic setting at selected sites and vantage points from intrusive development.

### **Statement for Management (1995)**

The statement for management identified Chickamauga and Chattanooga National Military Park's purpose and significance, and listed overall management objectives for visitor experience, interpretation, related / adjacent lands, cultural resources (including the cultural landscape), and roads / transportation. Among the issues identified in the document were the relocation of U.S. Highway 27 to the west of the Chickamauga Battlefield unit (construction began in 1994), the long-term preservation of American Indian and Civil War resources on Moccasin Bend, and concerns regarding the appropriateness of certain recreational uses in the park. It was noted that the National Park Service does not have consistent jurisdiction over park areas in Tennessee and Georgia, and that law enforcement efforts at Lookout Mountain Battlefield are complicated by the variety of jurisdiction types existing there (exclusive, concurrent, and proprietary) with the involvement of multiple state, county, and municipal agencies. It was recognized that conversion to concurrent jurisdiction in Tennessee was essential for the park to effectively utilize the services of state and local law enforcement resources. It was also noted that rock features on Lookout Mountain were becoming increasingly popular for climbers, particularly cliff faces on the west side of the mountain and the Eagles Nest area on the north slope (NPS 1995a).

This GMP Amendment examines the issues presented in the Statement of Management to

determine if conditions have changed and/or if other opportunities are available to improve the management of the Lookout Mountain Battlefield unit.

### **Historic Structure Report: Robert Cravens House and Dairy (2012)**

The historic structure report for Cravens House documented the historical context for the house and site and the chronological development and use of the property (NPS 2012a). The report provided a detailed physical description of the house along with treatment recommendations. The ultimate treatment recommended in the report was for the exteriors and interiors of the Cravens House and dairy building to be preserved to reflect their current appearance but in good repair. The report further recommended that comprehensive site interpretation be undertaken to address pre-Civil War issues and the Cravens' early occupancy; the nature of the house and dairy during the Civil War; post-Civil War issues and the Cravens' return to the site; and later restoration of the buildings during the 1950s. The report also identified the need for urgent maintenance repairs necessary to protect the integrity of the buildings. Information from the report assists in the long-term preservation of the Cravens House in conjunction with the cultural landscape report recommendations.

### **Cultural Landscape Report: Cravens House (2013)**

The cultural landscape report established preservation objectives for the Cravens House and assessed the character-defining features of the associated landscape and a portion of the adjacent Lookout Mountain Battlefield (NPS 2013a). The report incorporated research conducted into the historical development of the site, documented existing conditions, and evaluated the character and integrity of the cultural landscape. The report was conducted in conformance with *The*

*Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes.* Treatment recommendations provided in the report have helped frame the preservation actions identified in the alternatives for this GMP Amendment. Recommendations for rehabilitation and restoration treatments were made for specific areas of the Cravens' property, with primary regard to the protection and management of topography, vegetation, archeological resources, buildings and structures, views and vistas, and small-scale features.

## **PARTNERSHIP PLANS / STUDIES**

### **Chattanooga Area Civil War Sites Assessment**

This assessment, initiated in 1994, was the result of the partnership among the American Battlefield Protection Program, the Association for the Preservation of Civil War Sites, the Chattanooga-Hamilton County Regional Planning Agency, the Coosa Valley Regional Development Center, the Georgia Historic Preservation Division, the Southeast Tennessee Development District, the National Park Service, and area citizens. Project partners evaluated 38 Chattanooga area sites selected for their historical significance, including battlefield sites, encampments, and hospital sites. Desired conditions for the various sites were established, and sites were assessed in efforts to prioritize which should receive attention for protection and interpretation. Among the Tennessee sites identified for priority attention were Lookout Mountain Battlefield and Moccasin Bend National Archeological District. It was also recognized that project partners would strive to incorporate protection and interpretation efforts into regional greenway planning activities and community education programs to build

regional support for Civil War resource preservation. This GMP Amendment considers the recommendations presented in this assessment and explores continued opportunities for public and private partnerships.

### **Trail Development: Tennessee Riverwalk Southside Extension**

The Lookout Mountain Conservancy has recently acquired land parcels that have been added to John Wilson Park at the foot of Lookout Mountain. The expanded John Wilson Park (outside Lookout Mountain Battlefield and within the city limits of Chattanooga) provides public access for several trails traversing the north and east slopes of Lookout Mountain. The newly acquired acreage is intended to provide an access point or gateway linking an extension of the Tennessee Riverwalk to the Lookout Mountain Battlefield trail system. As envisioned by the Conservancy, additional trails would be developed to complete an overall trail network including the Guild-Hardy Trail and Old Wauhatchie Pike Greenway, and extending about 93 miles from Point Park in Lookout Mountain Battlefield to Gadsden, Alabama, at the southern end of Lookout Mountain. In partnership with the Trust for Public Land, the National Park Service has provided planning and technical assistance to Hamilton County, Tennessee, and the City of Chattanooga in efforts to complete the Tennessee Riverwalk Southside Extension, a 3-mile riverwalk trail connecting downtown Chattanooga with the St. Elmo community. As part of this GMP Amendment, the National Park Service would further partner with the Lookout Mountain Conservancy and trail groups to expand and connect Lookout Mountain trails to the regional trail system.



## NEXT STEPS IN THE PLANNING PROCESS

### FINALIZING THE GENERAL MANAGEMENT PLAN AMENDMENT

After distribution of the GMP Amendment, there will be a 30-day public review and comment period, after which the NPS planning team will evaluate comments from other federal agencies, organizations, businesses, and individuals regarding the GMP Amendment and make revisions as appropriate. After this public review, the plan may be approved with a “Finding of No Significant Impact” (FONSI) assuming there are no significant impacts identified during public review. If significant impacts are identified, a notice of intent to initiate an environmental impact statement may be prepared. A “Finding of No Significant Impact” would document the NPS selection of an alternative for implementation. Once the FONSI is signed, the planning process is complete and the selected alternative would become the new management plan for the Lookout Mountain Battlefield unit and would be implemented over the next 15 to 20 years. It is important to note that not all of the actions in the alternative would necessarily be implemented immediately.

### IMPLEMENTING THE GENERAL MANAGEMENT PLAN AMENDMENT

The approval of this GMP Amendment does not guarantee that the funding and staffing needed to implement the plan will be forthcoming. Implementation of the

approved plan will depend on future NPS funding levels; servicewide priorities; and on partnership funds, time, and effort. It could be affected by factors such as changes in NPS staffing, visitor use patterns, and unanticipated environmental changes. For example, drought, flooding and erosion, and forest fires in the future may affect implementation of the plan. The National Park Service may conclude, after analysis of the best scientific information available, that certain elements of the GMP Amendment requiring significant financial investment need to be modified or not pursued. Regardless, full implementation of the GMP Amendment could be many years in the future. Once the GMP Amendment has been approved, additional feasibility studies and more detailed planning, environmental documentation, and consultation would be completed, as appropriate, before certain actions in the selected alternative can be carried out. Ongoing and future consultation with the Tennessee and Georgia state historic preservation officers, associated tribes and other concerned parties would occur, as necessary, in accordance with Section 106 of the National Historic Preservation Act regarding undertakings affecting historic properties, including the removal of selected historic buildings.

Future program and implementation plans describing specific actions that managers intend to undertake and accomplish would tier from the desired conditions and long-term goals set forth in this GMP Amendment.



# CHAPTER 2: ALTERNATIVES





## INTRODUCTION

Chapter 2 describes three alternatives for managing the Lookout Mountain Battlefield unit of Chickamauga and Chattanooga National Military Park over the next 15 to 20 years. The alternatives reflect the range of actions and desired conditions for the park that the public and NPS staff would like to see accomplished regarding natural and cultural resource conditions, visitor use and experience, and park operations. Alternative A presents a continuation of current management direction and is included as a baseline for comparing the consequences of implementing each of the other action alternatives. Alternative B and alternative C (the preferred alternative) present different ways for the National Park Service to manage resources and visitor use and to improve facilities and infrastructure at Lookout Mountain Battlefield.

As noted in chapter 1, the National Park Service would continue to follow existing agreements, servicewide laws, and policies regardless of the alternative selected. Therefore, these laws and policies are not repeated in this chapter. In addition, many of the desired future conditions for

Chickamauga and Chattanooga National Military Park are further defined in the establishing legislation and the park's purpose and significance statements.

Before describing the alternatives, this chapter explains how the alternatives were developed and how alternative C was identified as the preferred alternative. Other sections describe the management zones (a key element of the alternatives) and the approaches taken to address visitor use management and boundary adjustments. After the alternatives are described, mitigation measures that would be used to reduce or avoid impacts are listed, needed future studies and implementation plans are noted, the environmentally preferable alternative is identified, and actions are noted that the planning team considered but dismissed. At the end of the chapter, there are tables that summarize the key differences among the alternatives, the costs of the alternatives, and the differences in impacts that would be expected from implementing each alternative based on the analysis in "Chapter 4: Environmental Consequences."

## FORMULATION OF THE ALTERNATIVES

The National Environmental Policy Act and NPS *Management Policies 2006* require that park unit managers consider a full range of reasonable alternatives, including a “no-action” alternative. An “alternative” is a set of actions or directions that address management of the entire park unit, including its resources, visitors, facilities, and staff operations. Each alternative typically includes an overall management concept; a management zoning scheme; a description of area-specific desired conditions and actions; the identification of partnership opportunities if applicable; potential boundary adjustments, if appropriate; and implementation and cost considerations.

The no-action alternative is a baseline for comparing the effects of the action alternatives. It is the continuation of current management actions and directions into the future.

The NPS planning team developed the alternatives in this document using a variety of sources. Many aspects of the desired conditions of the Lookout Mountain Battlefield unit are defined in the establishing legislation, the park’s purpose and significance statements, fundamental resources and values, and the servicewide laws and policies that were described earlier. Within these parameters, the National Park Service solicited input from the public, NPS staff, governmental agencies, tribal officials, and others regarding issues and desired conditions for the park. Planning team members also gathered information about existing visitor use and the condition of the park’s resources and facilities.

During the public comment period, one public meeting was held. The majority of comments received expressed concern regarding designation of multiuse trails in the park. Most commenters represented a number of bicycling organizations and were

in support of alternative C. Other commenters did not support the multiuse designations and commented on natural and cultural resource protection and the likelihood of increased safety and user conflict issues. Substantive comments included suggestions to alleviate potential conflict between bicyclists and other users. These were used to further refine the alternatives. Please see appendix C for the full comment analysis and response report.

The GMP Amendment alternatives for the Lookout Mountain Battlefield unit were developed under a broad conceptual framework intended to highlight potential differences among competing sets of resource conditions and visitor experience. These alternatives have focused on what resource conditions and visitor uses and experiences and opportunities should occur at the park, rather than on details of how these conditions and uses and experiences should be achieved. Thus, the alternatives do not include many details on how actions related to resource or visitor use management would be implemented in the future.

More detailed plans or studies would be required before many conditions proposed in the alternatives are achieved. The implementation of any alternative also depends on future funding and environmental compliance. This GMP Amendment does not guarantee that funding would be forthcoming. Rather the plan establishes a vision of the future that would guide day-to-day and year-to-year management of the park and full implementation could take many years.

Because all of the proposed actions must be consistent with the purpose and significance of the park, a number of proposed actions are common to more than one alternative. However, these actions could be emphasized or implemented differently under the various alternative concepts. The National Park

Service would continue to follow existing agreements and servicewide laws and policies regardless of the alternatives considered in this GMP Amendment. For example, all new facilities would be designed to address NPS standards and guidelines for energy efficiency and environmental sustainability. All the alternatives would also be carried out to ensure natural and cultural resources are managed in accordance with applicable laws and policies.

## COMMERCIAL VISITOR SERVICES

Units of the national park system are special places, saved by the American people so the experience of the country's natural and cultural heritage is available to everyone. The national parks movement of the mid-19th century was fueled by a determination to save beautiful and historic places in the United States, in part to keep them from being "populated" with hotels, curio shops, and amusements.

Over commercialization and development can spoil the very character of the places visitors come to see. Yet, some kinds of commercial activities are appropriate and may be necessary in national park units. They help visitors enjoy natural and cultural wonders to which they might not otherwise have access. Often commercial providers help protect park resources, too.

All commercial activities that occur within lands administered by the National Park Service must be authorized by a permit, contract, or other written agreement (36 *Code of Federal Regulations* [CFR] 5.3). Commercial activities may be authorized through a range of legal authorities using a variety of legal instruments, depending on the type and location of the activity involved. The National Park Service must determine what types and levels of commercial activities are

permissible under applicable laws and regulations. At a minimum, all commercial activities must operate in a manner that is consistent with the mission of the park and should provide high-quality visitor experiences while protecting important natural, cultural, and scenic resources. Other requirements may also apply.

The NPS Organic Act of 1916 that established the National Park Service and the 1998 Concessions Act emphasize conservation and preservation of park resources, while allowing their use and enjoyment by means that leave them unimpaired for future generations. The 1998 Concessions Act places limitations on the types and kinds of public accommodations, facilities, and services that may be authorized. The type of authorization issued depends on an analysis of the proposed activity. Public accommodations, facilities, and services must be "necessary and appropriate for public use and enjoyment" of the park unit in which they are located and must be "consistent to the highest practicable degree with the preservation and conservation of the resources and values of the unit" (16 USC 5951). For example, if a proposed activity is found to be appropriate, but not necessary, then a commercial use authorization may be issued. If an activity is found to be necessary and appropriate, then a concession contract may be issued.

The NPS Organic Act, the purpose and significance of the park, and this GMP Amendment together form the basis for determining commercial visitor services that are necessary and/or appropriate for Lookout Mountain Battlefield. The criteria in table 2 would be used to evaluate existing and potential future commercial visitor services at Lookout Mountain Battlefield to determine if these activities are necessary and/or appropriate.



TABLE 2. CRITERIA TO EVALUATE EXISTING AND POTENTIAL COMMERCIAL ACTIVITIES

Necessary	Appropriate
<p>A service that is <b>necessary</b> accomplishes <b><u>one or more</u></b> of the following:</p> <ol style="list-style-type: none"> <li>1. The service contributes to visitor understanding and appreciation of park purpose and significance.</li> <li>2. The service enhances visitor experiences consistent with park area philosophies.</li> <li>3. The service assists the park in managing visitor use and educating park visitors.</li> <li>4. The service is an essential service or facility not available within a reasonable distance from the park.</li> </ol>	<p>A service that is <b>appropriate</b> accomplishes <b><u>all</u></b> of the following:</p> <ol style="list-style-type: none"> <li>1. The service is consistent with the purpose and significance of the park.</li> <li>2. The service is consistent with laws, regulations, and policies.</li> <li>3. The service does not compromise public health and safety.</li> <li>4. The service does not significantly impact or impair park resources or values.</li> <li>5. The service does not unduly conflict with other park uses and activities.</li> <li>6. The service does not exclude the general public from participating in limited recreational opportunities.</li> </ol>

Based on the above criteria, the GMP Amendment planning team has identified the following types of activities that could be considered at Lookout Mountain Battlefield:

- specialized battlefield tours
- water-based tours (e.g., canoe and kayak tours)
- equestrian, climbing, and bike tours in areas already designated for this use
- hiking tours (e.g., bird-watching walks)
- education-based tours

Over the life of this GMP Amendment, additional activities may be considered and would be evaluated based on this criteria. Some activities are illegal within the park and therefore would not be considered eligible

for any type of commercial visitor use agreement with the National Park Service.

### POTENTIAL BOUNDARY ADJUSTMENTS

The National Parks and Recreation Act of 1978 requires general management plans to address whether boundary modifications should be made to park units. In the case of the Lookout Mountain Battlefield unit, no specific boundary adjustments were identified as being needed. Thus, none of the alternatives propose changes to the park boundary. However, this GMP Amendment does not preclude future consideration of boundary adjustments should needs or conditions change.

# MANAGEMENT ZONES

## INTRODUCTION

Management zones are a key element of the alternatives for managing the Lookout Mountain Battlefield unit. These zones are only applied to the two action alternatives and describe the desired conditions for cultural and natural resources; visitor experience; and appropriate kinds and levels of management, development, and access in different areas of the park. Together, they identify the widest range of potential resource conditions, visitor experience, and facilities for the park that fall within the scope of its purpose and significance.

Four management zones were identified for the Lookout Mountain Battlefield unit under the action alternatives: battlefield preservation zone, interpretive zone, natural resource protection zone, and recreation zone. Each of these zones has its own set of desired resource conditions, expected visitor experiences, and appropriate activities and facilities. In formulating the action alternatives, the management zones were placed in different locations or configurations on a map of the park according to the overall concept of each alternative.

## BATTLEFIELD PRESERVATION ZONE

Management in this zone would focus on retaining and enhancing the general historic character of those core portions of the Lookout Mountain landscape having evidence or strong associations with the 1863 battle period. This would provide visitors with an insight into the general conditions that the combatants encountered during November 1863 and would help facilitate the visitor's understanding of the battle. Commemorative features planned and put in place by Civil War veterans would be preserved. Visitors would have the

opportunity to learn about the efforts made by veterans to memorialize the battles and soldiers on both sides.

## Visitor Experience

Visitors in this zone would experience evidence of the physical environment and feeling of the battlefield as it was in 1863. Guided and self-guided tours would allow visitors to experience the battlefield for themselves, while learning about the Lookout Mountain Battlefield unit's important resources. Visitors of all abilities would find opportunities for quiet contemplation of the meaning of the battle, the sacrifices of the men who fought there, and the impact on civilians whose homes were occupied during the battle.

## Resource Condition

NPS management would work to return the battlefield landscape to its 1863 appearance to as great a degree as feasible, while preserving the monuments, markers, tablets, and plaques planned and placed by Civil War veterans. Cultural and natural resources would be rehabilitated to conditions representative of the Civil War time period to support visitor understanding and in-depth interpretation of the battle. Resource protection and preservation would be the primary focus. Whenever possible, all noncontributing structures would be removed from the cultural landscape. Nonhistoric external intrusions could be screened.

## Appropriate Activities or Facilities

Recreational activities that have minimal impact and allow for quiet contemplative

activities such as walking, administrative roads, viewing resources, and attending interpretive tours would be appropriate within this zone. Cultural resources such as historic buildings, monuments, markers, tablets, artillery, and the remains of Civil War fortifications would be present. Other facilities, as necessary to support visitors, may include driveways, parking accommodations, wayside exhibits, interpretive media, informational kiosks, way-finding signs, trailheads, and trails.

## **INTERPRETIVE ZONE**

This zone would provide support for fulfilling the park's objectives for orientation, education, and interpretive programs. Management in this zone would focus on retaining or enhancing the historic character of the battlefield landscape. This would help provide visitors with an insight into the conditions that the combatants and civilians encountered during November 1863 and would help facilitate the visitor's understanding of the battle. Commemorative features planned and put in place by Civil War veterans would be preserved. Visitors would have the opportunity to learn about the efforts made by veterans to memorialize the battles and soldiers on both sides.

### **Visitor Experience**

Visitors would receive information and orientation about the park and the Civil War Campaign for Chattanooga. The main focus of these sites would be to provide information to visitors of all abilities. A picnicking area could also be provided.

### **Resource Condition**

Some cultural or natural resources may be found in this zone. Any existing cultural and natural resources in the zone would be managed according to NPS *Management Policies* 2006. Important cultural resources in

this zone would be protected. For example, resources could be contained within a museum collection, curatorial archive, research library, or within exhibits that provide greater visitor understanding of the events of the Chattanooga Civil War Campaign, or they could be left in place. If previously unknown significant resources, such as archeological sites, were discovered in these areas, appropriate management actions would be implemented (i.e., preserving sites in situ or conducting data recovery. If sites could not be adequately preserved in place.)

### **Appropriate Activities or Facilities**

The main activity occurring in these zones would be education and learning. Passive recreational activities such as walking could occur in these interpretive areas.

Facilities could include parking areas, trails, wayside exhibits, a visitor center or contact station, research library, staff offices, and administrative roads.

## **NATURAL RESOURCE PROTECTION ZONE**

Management of this zone would primarily focus on protecting natural resources.

### **Visitor Experience**

Visitors would have greater opportunities to experience solitude and quiet while using trails use in this area. Interpretive media might be developed to inform visitors of the special and fragile nature of this area and the need to tread lightly. Natural resource preservation would take precedence over visitor use in this zone.

## **Resource Condition**

This zone would include primarily natural areas that do not contain important cultural resources identified as having primary associations with the battle or commemorative periods of the park. Any existing cultural resources in the zone would be managed according to NPS policies regarding tolerance for disturbance. Natural resource preservation would be the highest priority for NPS management in this zone. Resource protection measures consistent with NPS policy would be applied. Management in this zone would focus on protecting threatened or endangered species and encouraging the reestablishment of natural processes.

## **Appropriate Activities or Facilities**

Appropriate activities in this zone would be limited to research and passive recreational uses such as hiking and wildlife watching, for visitors of all abilities, but could also include resource stewardship activities. Additional recreational uses such as horseback riding, hiking, and mountain biking, would be appropriate on multiuse trails and unpaved roads. Habitat restoration for threatened and endangered species would be a priority. Interpretive programs and exhibits may provide information about natural resource issues or ongoing research activities. No other facility development would occur in this zone.

## **RECREATION ZONE**

This zone would be designated for several different types of recreational activities.

## **Visitor Experience**

Visitors of all abilities could pursue recreational activities with some interpretive opportunities present. Natural and cultural resources would provide the visual backdrop within these settings. Space would be designated for passive recreational activities, such as picnicking, as well as for some very specialized recreation activities such as rock climbing and rappelling.

## **Resource Condition**

Any existing cultural and natural resources in the zone would be managed according to NPS policies. Wayside exhibits would provide greater visitor understanding of park resources and the Civil War events that occurred in this area. If a previously unknown resource, such as an archeological site, was discovered within this area, appropriate management actions would be implemented (i.e., preserving sites in situ or conducting data recovery if sites could not be adequately preserved in place).

## **Appropriate Activities or Facilities**

Activities would include picnicking, hiking, and biking, as well as specialized recreational activities such as rock climbing and rappelling. Caving would not be permitted. Facilities may include administrative roads, parking, restrooms, picnic tables, informational kiosks, wayside exhibits, way-finding signs, trails, and trailheads.

## VISITOR USE MANAGEMENT AND VISITOR CAPACITY

General management plans for national park system units, including the Lookout Mountain Battlefield unit of Chickamauga and Chattanooga National Military Park, must address visitor use management and visitor capacity. Managing visitor use in national park units is inherently complex and depends not only on the number of visitors, but also on where the visitors go, what they do, and the “footprints” they leave behind. The National Park Service defines visitor use management as the proactive and adaptive process of planning for and managing characteristics of visitor use and the physical, social, and managerial setting. This is achieved through a variety of strategies and tools to sustain desired resource conditions and visitor experience. Visitor use characteristics may include amount, type, timing, and distribution of visitor use, including activities and behaviors. In short, visitor use management strives to maximize the benefits of visitor use while meeting resource and experiential protection goals. As part of the visitor use management process, visitor capacity is the maximum amount and type of visitor use that an area can accommodate while sustaining desired resource conditions and visitor experiences consistent with the values for which the area was established. In managing for visitor use, Chickamauga and Chattanooga National Military Park staff relies on a variety of management tools and strategies rather than relying solely on regulating the number of people in the park. In addition, the ever-changing nature of visitor use requires a deliberate and adaptive approach to visitor use management.

The basis for making visitor use management decisions in this general management plan are the purpose, significance, special mandates, and management zones associated with the park. The purpose, significance, and special mandates define why the park was

established and identify the most important resources, values, and visitor opportunities that would be protected and provided. The management zones in each action alternative describe the desired resource conditions and visitor experience. The zones, as applied in the alternatives, are consistent with and help the National Park Service achieve its specific purpose, significance, and special mandates. As part of the NPS commitment to implement visitor use management, the park staff would abide by these directives for guiding the types and levels of visitor use that would be accommodated while sustaining the quality of park resources and visitor experience consistent with the purpose of Chickamauga and Chattanooga National Military Park.

In addressing visitor use management, the National Park Service identifies visitor-caused issues and impacts and then develops indicators, thresholds, and potential future management strategies allocated by management zones. Indicators are measureable variables that would be monitored to track changes in resource conditions and visitor experience. Thresholds represent the minimum acceptable conditions for those indicator variables. The indicators and thresholds are important feedback mechanisms that help the National Park Service make decisions about managing all aspects of visitor use to ensure that desired conditions are being attained and that park legislative and policy mandates are being fulfilled. Management strategies include the actions that would be taken to achieve desired conditions and related legislative and policy mandates. The basis for visitor use management comprises the qualitative descriptions of desired resource conditions, visitor experience opportunities, and general levels of development that are described in the management zones. It is an iterative,

ongoing process that includes the following steps:

1. Prescribe the desired conditions of resources and visitor experience for a given area. These conditions are based on the park's purpose, significance, and fundamental resources and values.
2. After gaining an understanding of visitor-caused issues and impacts, select measurable indicators—characteristics or conditions—that reflect the status of resource and visitor conditions.
3. Set quantifiable thresholds, or minimally acceptable conditions, against which the indicator is measured.
4. Develop a systematic and periodic monitoring system to measure established indicators.
5. Assess existing conditions, thereby establishing a baseline for future measurements.
6. Assess whether or not a management action must be taken because existing conditions are determined to be close to the thresholds, and then taking the action.
7. Continue to monitor conditions to determine the effectiveness of ongoing or new management actions.
8. Adapt by revising management strategies when indicated.

These components provide a defensible process for taking informed action to manage elements of visitor use based on desired conditions in a park unit.

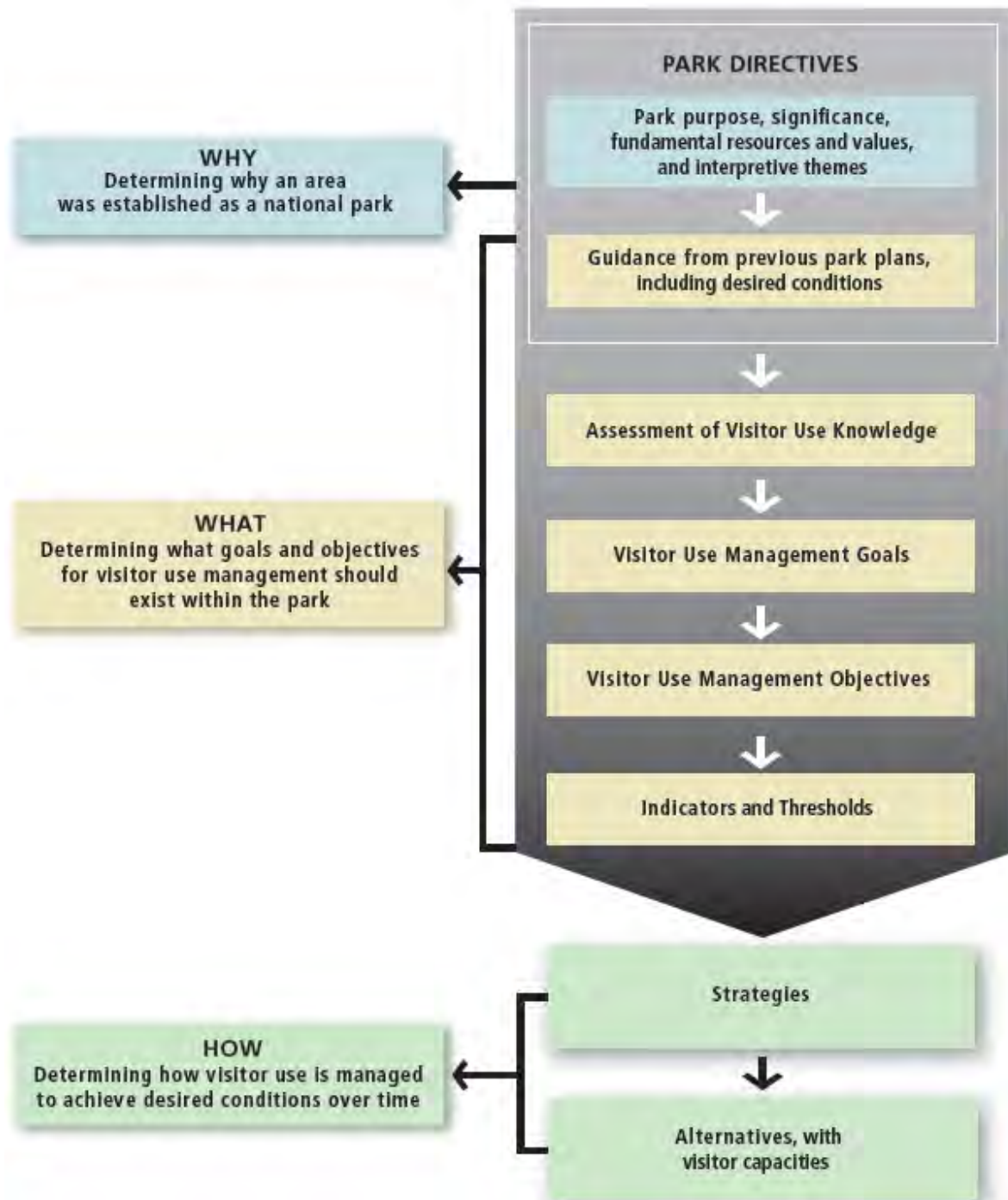
The graphic on the following page further illustrates the visitor use management decision-making process:

The GMP alternatives for the Lookout Mountain Battlefield unit were developed under a broad conceptual frame work intended to highlight potential differences among competing sets of resource conditions

and visitor experience. These alternatives have focused on what resource conditions and visitor use and experience should be included at the park, rather than on details of how these conditions, uses, and experiences should be achieved. Thus, the alternatives do not include many details on how actions related to resource or visitor use management would be implemented. Although this GMP Amendment has taken the first steps outlined in the visitor use management decision-making process, the identification of specific indicators, thresholds, and management actions would occur during implementation-level planning.

This GMP Amendment addresses visitor use management and visitor capacity in the following ways:

- The basis for visitor use management decision making is described in the management zones section, which outline desired resource conditions, visitor experience opportunities, and general levels of development and management for different areas of the park.
- The plan identifies the existing and potential resource and visitor experience concerns in the park that serve as the basis for considering indicators, thresholds, and management strategies.
- This plan also includes identification of issues and impacts that could contribute to potential indicators that could be monitored as needed in the future to help identify, if desired, conditions that are not being met due to unacceptable impacts from public use. In the future, when the park selects an indicator to monitor, a corresponding threshold would be identified.





- This plan also suggests a general range of actions under alternatives B and C that may be taken, as needed, to avoid and minimize unacceptable impacts from public use.
- The last steps of visitor use management decision making, which would continue indefinitely outside of this GMP Amendment, are monitoring the park's indicators and thresholds and taking management actions to minimize impacts when necessary.

The visitor use management program described here could be implemented as part of a future planning effort. If new management strategies are needed in the future that require additional planning and compliance, then those proposed visitor use policy changes would be available for public review and comment.

## OVERVIEW OF CURRENT AND POTENTIAL USE-RELATED ISSUES AND IMPACTS

The following visitor use related issues and impacts were identified during the planning process:

- Inadvertent damage to cultural and natural resources may be occurring due to visitor use.
- Litter, looting, and other illegal activities (e.g., damage to and vandalism of monuments) are impacting cultural and natural resources.
- Visitor use has affected some native vegetation in the Lookout Mountain Battlefield unit. Off-trail hiking and rock climbing have damaged vegetation. At least two plant species: mountain spleenwort (*Asplenium*

*montanum*) and round-leaf catchfly (*Silene rotundifolia*), have been trampled and crushed by climbers. Lichens are also absent on cliff faces of popular climbing routes (NPCA 2009).

- Among the trails receiving heavy visitor use are those connecting visitor attractions (e.g., the trail linking Point Park with Cravens House) and trails extending to the southeastern and southwestern portions of the park.
- During public meetings, some commenters were supportive of some forms of recreation (such as walking, jogging, road biking, and horseback riding) as long as they don't damage the park; others oppose most, if not all, forms of recreation in the park. Because of these concerns, the park may decide to further investigate the visitor use and user conflicts that may be occurring.

## POTENTIAL VISITOR USE MANAGEMENT INDICATORS AND RELATED MANAGEMENT ACTIONS

Based on some of the most pressing existing or potential visitor-related issues and impacts in the park, the following section outlines possible resource and visitor experience indicators that may be monitored to assess those impacts. The applicability of each indicator to management zones could be identified as more information is gathered. Also, a general range of potential management actions is identified for each indicator, but this list may not be inclusive of all management actions that may be considered in the future. Further, some management actions may not be appropriate in all zones. The final selection of any indicators and thresholds for monitoring purposes or the implementation of any management actions that affect use would comply with the

National Environmental Policy Act, the National Historic Preservation Act, and other laws, regulations, and policies, as needed.

Potential visitor use management indicators may include:

- Incidences of vandalism or theft to cultural resources each year  
Possible management strategies include:
  - prioritize documentation of resources in high visitor use areas
  - continue monitoring
  - educate visitors on the sensitivity of resources and the need to protect archeological sites, including with signage
  - target education to groups that are accessing areas with sensitive resources
  - increase ranger presence or patrols
  - increase enforcement and documentation
  - reroute trails
  - create physical barriers
  - area closures
- Incidences / amount of litter  
Possible management strategies include:
  - educate visitors on Leave No Trace ethics
  - provide trash receptacles in strategic locations
  - increase efforts to remove trash
- Area of disturbance to vegetation *or* number/density of user-created trails  
Possible management strategies include:
  - educate visitors about the importance of staying on trails
  - eradicate excess trails
  - provide directional trail signs and signs encouraging visitors to stay on trails
- Crowding /number of people at one time at attraction sites or on trails  
Possible management strategies include:
  - educate visitors about the best times to visit popular areas
  - educate visitors about alternative park attractions and sites
  - educate visitors on Leave No Trace ethics
  - rehabilitate social trails
  - monitor visitor use levels
  - reduce group size limits
  - limit number of day hikers (e.g., permit system)
- Number of complaints regarding user conflicts  
Possible management strategies include:
  - implement signage and education about trail etiquette
  - separate trail uses
  - change the design of a trail to accommodate multiple user groups
  - limit a particular type of use

## ALTERNATIVES

The following pages describe in detail the three alternatives that have been developed for the GMP Amendment. Tables 3 and 4, at the end of the chapter, provide a summary of the elements of each alternative and the potential environmental impacts of each respectively.

### ALTERNATIVE A: NO-ACTION ALTERNATIVE

Alternative A provides a baseline for evaluating the changes and impacts presented in the other alternatives. Under the no-action alternative, the National Park Service would continue to manage the Lookout Mountain Battlefield unit as it currently does. However, the names of the zones have been changed for consistency with the other alternatives. Point Park, the Lookout Mountain Battlefield Visitor Center, Cravens House, Sunset Rock, and several trails and trailheads would remain the primary visitor attractions and access points to the battlefield. The visitor experience would continue to be largely self-guided.

The Lookout Mountain Battlefield Visitor Center and Point Park would continue to serve as the primary locations for visitor interpretation. The visitor center would continue to house interpretive exhibits, including the large 1874 James Walker painting (*The Battle Above the Clouds*), and a cooperating association bookstore. Educational programs would be offered throughout the year, and ranger-led tours at Point Park and the Cravens House would be offered seasonally. Interpretive signs are currently in place at Point Park, Cravens House, and Sunset Rock.

No visitor access (or very limited access) would be available to many of the recently acquired and preserved areas of the

battlefield (e.g., Tyndale Hill, Bald Hill, Geary's Crossing [formerly Wauhatchie Site 4], Smith Hill [formerly Wauhatchie Site 3], and the New York Monument [formerly Wauhatchie Site 2]). Wauhatchie Site 1 would be incorporated in the Lookout Mountain Battlefield unit and public access to the site would continue.

All commemorative features (monuments, markers, tablets) would remain and be preserved. Current vegetation management at selected areas at Point Park and the Cravens House area would continue to protect historic viewsheds. The current level of natural resource management would continue for the Lookout Mountain Battlefield and new lands.

Visitors would continue to access Lookout Mountain Battlefield primarily by vehicle, the Incline Railway, and by foot. The present type and level of recreational visitor activities would continue.

### Point Park / Lookout Mountain Battlefield Visitor Center

Limited free parking would continue to be provided at the Lookout Mountain Battlefield Visitor Center. Metered street parking in the Town of Lookout Mountain would continue to be provided adjacent to the visitor center, including parking for buses and recreational vehicles (RVs). Picnic tables would be added to the lawn area on the northwest side of the visitor center.

Park staff would continue to clear underbrush and manage vegetation growth at Point Park to maintain selected views. Permanent exhibits for the Ochs Museum would be developed and installed.

### **Cravens House**

The Cravens House would continue to be preserved and managed as a historic house museum with limited seasonal hours of operation. The kitchen/dairy building would be preserved and stabilized. Two small parking lots would remain that currently provide visitor parking at Cravens House.

The exteriors of the nearby Williams House and its associated outbuildings would also be preserved but maintained at minimal treatment levels. Two storage sheds adjacent to the Williams House would be retained for grounds maintenance and equipment storage. The driveway behind the Williams House garage would provide administrative access.

### **Cummings Bottom / Additional Lands**

The Cummings Bottom area (including Tyndale Hill, Smith Hill and Bald Hill) would remain gated, with no public access provided. There would be no interpretation of site resources and only limited resource patrols. No visitor parking would be available at Tyndale Hill, Bald Hill, Smith Hill, the Chattanooga Valley Overlook site, or at the Confederate Defense site. No facility improvements are anticipated for the Chattanooga Valley Overlook site, the Confederate Defense site, Geary's Crossing, or Jackson Gap.

### **Trails**

Recreational use of the battlefield trails would continue (hiking, biking, and horseback riding where allowed) with connections to the larger trail network provided by the City of Chattanooga, Hamilton County, Lookout Mountain Conservancy, and the Chattanooga Arboretum and Nature Center. Existing trails that connect main visitor attractions would be maintained, as would trails that extend to the southeastern and southwestern portions of the park.

### **Sanders Road Picnic Area**

The Sanders Road picnic area would continue to be available for public use. The three existing restroom buildings would remain closed because of waterline failures.

### **Sunset Rock**

No changes to existing structures, uses, or park management of this area would occur. Rock climbing would continue to be allowed.

### **Eagle's Nest**

No changes to existing structures, uses, or park management of this area would occur. Rock rappelling would continue to be allowed.

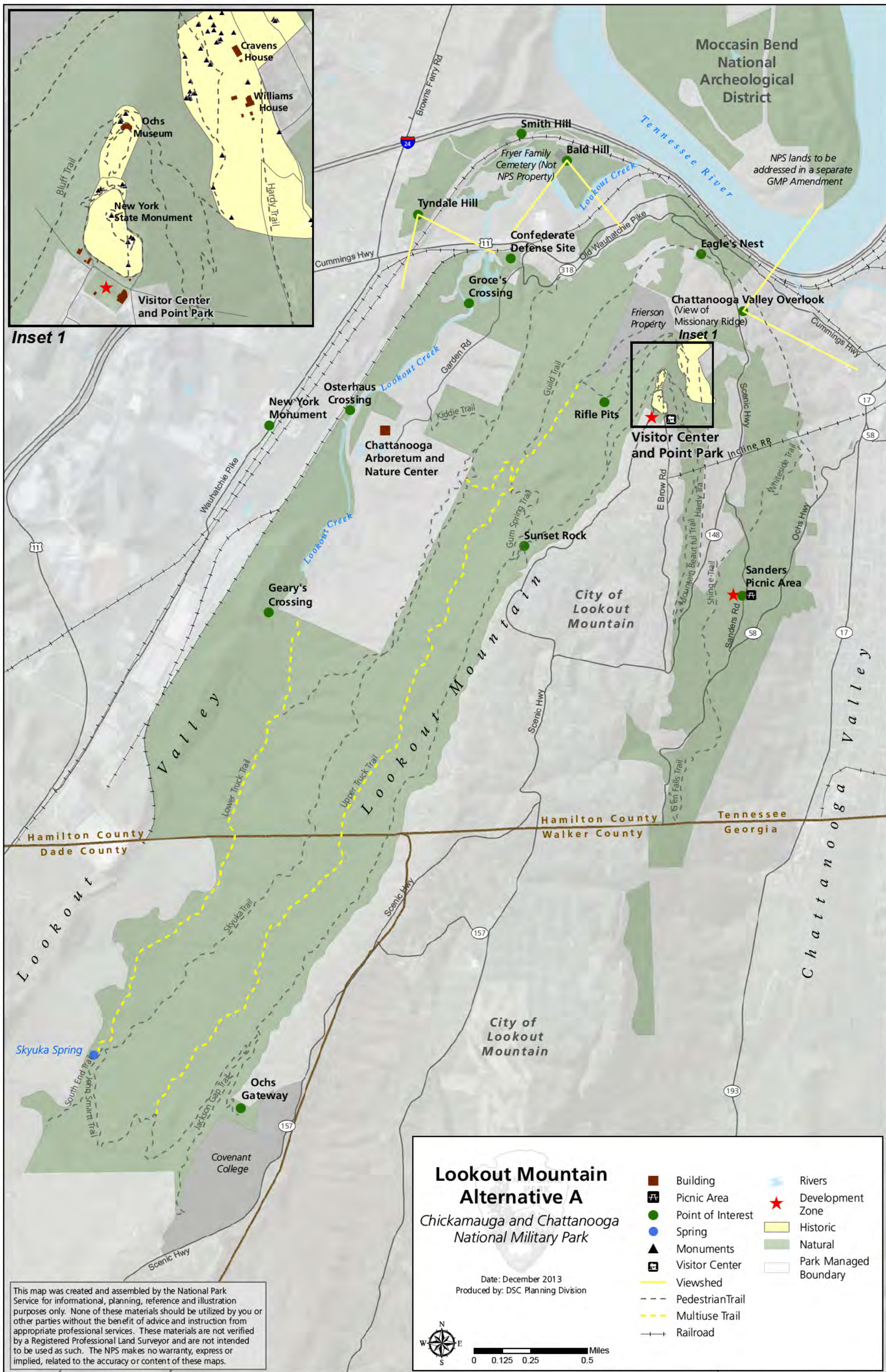
### **Natural Resources – General**

Efforts would continue, as staff and funding permit, to inventory, monitor, and control as much as possible the spread of nonnative invasive plants, such as kudzu, on Lookout Mountain. Some mechanical removal and spraying of nonnative plants would continue. There would also continue to be some selective removal of vegetation for viewshed management purposes.

### **Partnerships / Preservation Opportunities**

The park would pursue opportunities to preserve additional portions of the Lookout Mountain Battlefield unit in accordance with the Land Protection Plan (NPS 1993). Through Public Law 73-207, the National Park Service has the authority to acquire lands within 1 mile of the authorized 1934 boundary comprising the Lookout Mountain Battlefield unit.









Partnerships would continue with the Friends of Chickamauga and Chattanooga National Military Park, Friends of Moccasin Bend National Park, the Lookout Mountain Conservancy, City of Chattanooga, Hamilton County, and Town of Lookout Mountain. Informal partnerships with trail groups would also continue.

## Estimated Costs and Staffing

Identification of these costs does not guarantee future NPS funding. Project funding may not come all at once; it would likely take many years to secure and may be partially obtained through partners, donations, or other non-NPS federal sources. Although the National Park Service hopes to secure this funding, the park may not receive enough funding to achieve all desired conditions within the time frame of this management plan (the next 15–20 years). Costs have been broken down into two categories: annual operations costs and one-time costs. Annual costs for alternative A include the costs associated with ongoing maintenance, utilities, staffing, supplies, and materials. One-time costs for alternative A include projects such as stabilization of buildings, removal of buildings, and development of permanent exhibits for the Ochs Museum.

The cost estimates below (in 2013 dollars) are only intended to indicate a general relative comparison of costs among the alternatives; they are not to be used for budgeting purposes.

**Annual Costs.** Existing annual operating costs for the park would not change under alternative A. Employee salaries and benefits make up a large portion of the park’s annual operating costs. Under this alternative, the park’s annual operating budget would remain at \$3,179,000.

**One-time Costs.** It is estimated that alternative A would require one-time costs of \$472,144. These costs would improve

operational efficiency of park management by removing two deteriorated buildings in Point Park. Resources would be protected through preservation and stabilization of the Cravens House and kitchen/dairy buildings. In addition, permanent exhibits for the Ochs Museum would be developed and installed.

## NPS Staffing

The current number of full-time equivalent (FTE) employees is 29.59 permanent and 7.65 seasonal FTE employees. Existing levels of authorized staff would not change.

## ALTERNATIVE B

Alternative B emphasizes opportunities for the national military park to address and resolve issues regarding management of newly acquired lands, protection of park resources, improvements to visitor experience, opportunities to understand the battlefield and access improvements to and within the battlefield site. Improved access and interpretation of newly acquired lands would enable the park to better tell the story of the battles of Lookout Mountain and Missionary Ridge. Key vantage points would be developed as new interpretive sites from which visitors could have a better understanding of those battles.

New public access and interpretation would be provided at Tyndale Hill, Bald Hill, the Confederate Defense site, and the Chattanooga Valley Overlook (site of the former Pan-O-Ram Club). A limited auto tour would be developed for the battlefield offering a succession of sites to visit with associated transportation improvements (e.g., turnoffs, small parking lots, additional road access). Viewsheds would be enhanced from several points: Point Park, Cravens House, Tyndale Hill, and the Chattanooga Valley Overlook. Trees and vegetation would be selectively removed to improve the views of adjacent battlefields.



Cultural landscape Report (CLR) recommendations would be selectively implemented to allow visitors to view a landscape similar to what existed during the Civil War, particularly in the Cravens House area. Encroaching vegetation and nonnative / invasive plants would be controlled via mechanical removal at critical locations to reduce fuel loads, control the spread of nonnative vegetation, and maintain cultural landscapes and viewsheds. The park would pursue partnership opportunities to protect land outside park boundaries where there are key battlefield resources.

### **Point Park / Lookout Mountain Battlefield Visitor Center**

In addition to the actions identified in alternative A, the former restroom building and ranger/ residential quarters in Point Park would be removed. Both buildings were constructed by the Civilian Conservation Corps in the 1930s and are listed in the National Register of Historic Places as locally significant historic properties. The buildings are not presently used for NPS functions or visitor services, and the expenses associated with their continued maintenance are not justified under the park's current and projected budget for operations and resource preservation. Ongoing maintenance of these buildings compounds the parkwide backlog of deferred maintenance projects, hindering the park's ability to fund other higher priority preservation undertakings. The storage shed in the Lookout Mountain Battlefield Visitor Center parking lot would continue to be used to support maintenance operations. Most maintenance storage and staging would be accommodated at the Chickamauga Battlefield maintenance facility.

### **Cravens House**

The visitor experience at Cravens House would be enhanced by rehabilitation of the historic landscape. Visitors would witness a panorama similar to what was present at the

time of the battle in 1863. In conformance with recommended treatments provided in the historic structure report for Cravens House, the exteriors of the house and the kitchen/dairy building would be preserved and restored. Interior features and finishes would be preserved and stabilized, but the house would not be open to public visitation. Interior security and fire alarms would be retained. Furnishings would be removed from the house for storage as part of the park's museum collection, or would be deaccessioned if not identified in the park's scope of collection statement for retention.

Based on treatments recommended in the cultural landscape report, the historic character of the Cravens House grounds and agricultural lands would be partially rehabilitated, and viewsheds contributing to the significance of the site would be enhanced for interpretation. Trees and vegetation invading the lower portions of the site and formerly open areas would be selectively removed to approximate the appearance of the historic landscape.

Structures and constructed elements identified in the cultural landscape report as noncontributing to the Cravens House cultural landscape would be removed, including the caretaker's cabin, the nearby Williams House and its associated outbuildings (garage, storage sheds) and service driveway. The Williams House site would be restored with native plant species. The caretaker's cabin and the Williams House are not presently occupied and receive minimal maintenance. The costs of extensive repairs and ongoing maintenance for these properties are not justified in consideration of the park's overall budget priorities for addressing deferred maintenance.

### **Cummings Bottom / Additional Lands**

The national military park would expand interpretation of the Lookout Mountain Battlefield, incorporating recently acquired lands and associated expansive and

instructive vantage points. Vehicular access to Tyndale Hill, Bald Hill, and the Chattanooga Valley Overlook would be provided. New wayside exhibits would be placed at selected sites including Tyndale Hill (a unique vantage point for telling the story of the Battle of Lookout Mountain) and the Chattanooga Valley Overlook (an important vantage point for interpreting the Battle of Missionary Ridge). The National Park Service would survey and mark boundaries to prevent encroachment of unauthorized development onto the new lands.

Interpretation and access to the Cummings Bottom area (including Tyndale Hill and Bald Hill) would be self-guided. Maintenance of the sites would be scheduled on an as-needed basis. Limited NPS resource patrols would be conducted.

**Tyndale Hill.** A paved road (1,200 feet long) from Parker Lane would be constructed to the top of Tyndale Hill, with a paved 10-space parking area at the top of the hill. Wayside exhibits and a viewing area at the hilltop would allow visitors to gain perspective of the battles. A paved pedestrian trail (400 feet long) would be developed from the parking area to the viewing platform. A vault toilet would be installed.

**Bald Hill.** A pedestrian access trail (about 800 feet long) would be constructed to allow access to Bald Hill and the “Walker painting perspective site.” A gravel turnout area for five vehicles would be developed at the base of the hill, and about 1,000 feet of Parker Lane would be improved in cooperation with local government agencies.

**Smith Hill.** No changes to existing management would be made.

**Chattanooga Valley Overlook.** General site improvements would be made to accommodate parking and wayside exhibits. A small (seven vehicle) paved parking area would be constructed at the site. Vegetation management would include selective tree removal to allow views of Missionary Ridge.

**Confederate Defense Site.** No changes to existing management would be made.

**Geary’s Crossing.** Water trail access to Lookout Creek could be provided under a partnership agreement with the Chattanooga Arboretum and Nature Center, using their existing launch site and support facility. NPS property on the west side of Lookout Creek (Geary’s Crossing) would only be interpreted from the water.

**Jackson Gap Trail.** No changes to existing management would be made.

**Sanders Road Picnic Area.** Two nonfunctioning restroom buildings would be removed and one restroom building retained and repurposed for maintenance use and equipment storage. The buildings have been evaluated as eligible for the national register by the Tennessee state historic preservation officer. It is cost-prohibitive to bring the buildings up to modern code requirements; thus, rehabilitation of the buildings is not supported by current and projected visitor use of the site. The site would remain a picnic area.

**Sunset Rock.** No changes to existing structures, uses, or park management of this area would occur. Rock climbing would continue to be allowed, but park staff would monitor and evaluate the effects of climbing activities on natural resources.

**Eagle’s Nest.** No changes to existing uses or park management of this area would occur. Rock rappelling would continue to be allowed.

## Accessibility

To the greatest extent possible, site improvements and building rehabilitation would accommodate all people and abilities without the need for individual adaptation. The National Park Service would ensure that requirements for public health, safety, and

accessibility are incorporated into subsequent design. For example improvements such as parking, loading zones, fire access, ramps, and other modifications would be made in accordance with the Architectural Barriers Act of 1968, Americans with Disabilities Act, the Rehabilitation Act of 1973, the Fair Housing Act, Final Outdoor Developed Area Guidelines, and appropriate executive orders and director's orders. All character-defining features of historic buildings and landscapes would be preserved to the maximum extent possible.

### **Trails**

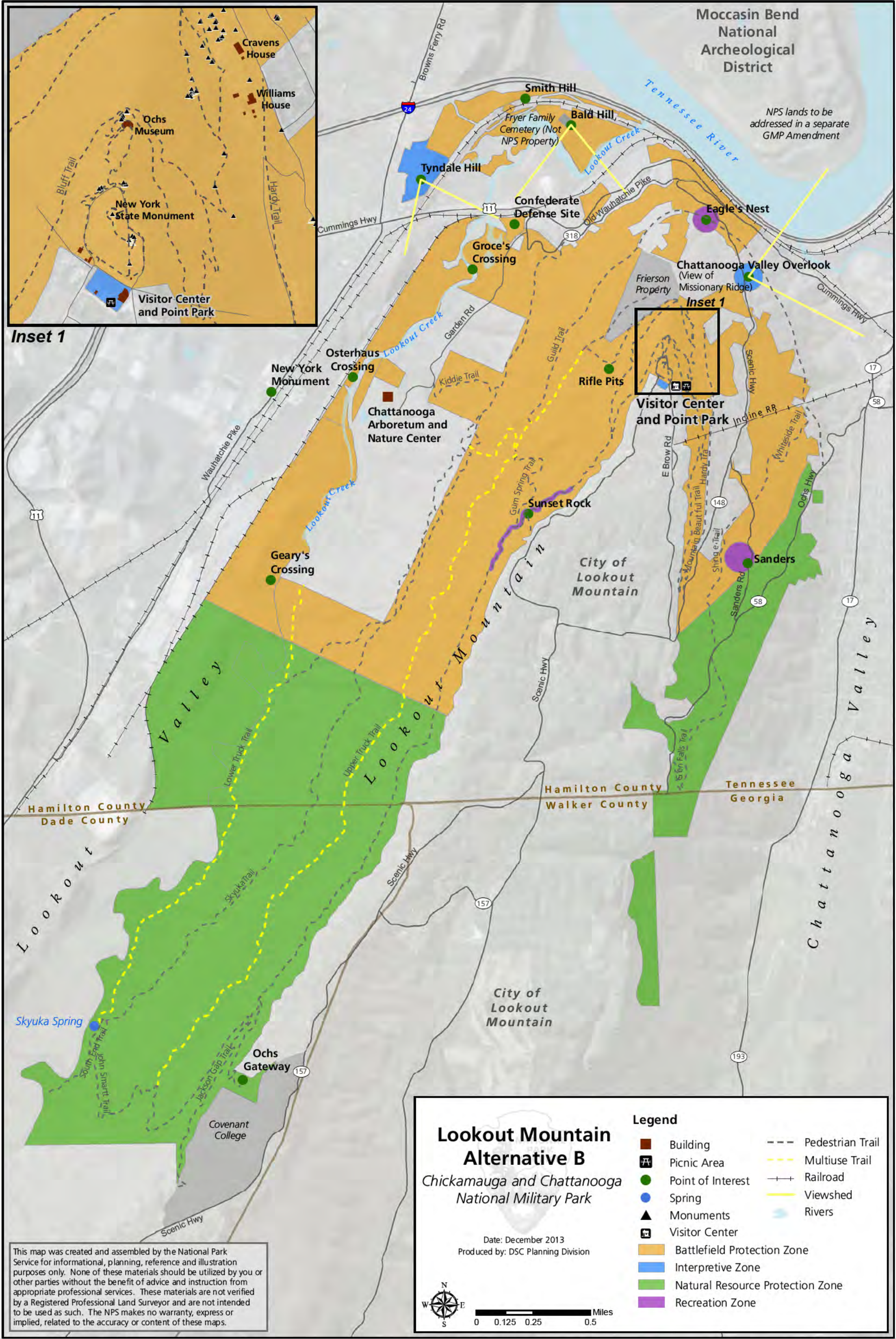
The park would work with partners to expand recreational opportunities outside

the park boundary, connecting existing trails with regional trail systems such as the Tennessee Riverwalk extension to St. Elmo and the Guild-Hardy Trail; trail connections to Lookout Mountain Conservancy property and trail systems; and trail connections to the Great Eastern Trail.

### **Auto Tour**

An auto tour linking sites and vantage points important to the interpretation of the Battle of Lookout Mountain would be developed. The auto tour would provide self-guided vehicle access to selected sites where small interpretive signs would be placed.









## Natural Resources – General

Information is incomplete on vegetation and wildlife in portions of Lookout Mountain Battlefield, particularly the Georgia side of the park unit. Surveys would be conducted in those areas to fill in the data gaps.

Efforts would continue, as staff and funding permit, to inventory, monitor, and control as much as possible the spread of nonnative invasive plants such as kudzu on Lookout Mountain.

## Partnerships Preservation Opportunities

The park would pursue opportunities to acquire or otherwise preserve land (e.g., scenic easements) to protect core battlefield areas. An updated land protection plan would be developed.

An expanded array of partnership agreements with neighboring organizations, such as the Chattanooga Arboretum and Nature Center, the Lookout Mountain Conservancy, the City of Chattanooga, and various conservation organizations, would be sought to assist the park in fulfilling its mission.

## Estimated Costs and Staffing

Identification of these costs does not guarantee future NPS funding. Project funding may not come all at once; it would likely take many years to secure and may be partially obtained through partners, donations, or other non-NPS federal sources. Although the National Park Service hopes to secure this funding, the park may not receive enough funding to achieve all desired conditions within the time frame of this management plan (the next 15–20 years).

Alternative B proposes a range of actions to protect park resources, improve visitor experience, and enhance access to the area.

However, the Lookout Mountain Battlefield unit is in a region where drought, floods, and forest fires are projected to occur. For this reason, the National Park Service would integrate relevant information, including data related to climate change, into future planning and decision-making processes. For example, prior to project approval, proposed facility investments would be evaluated to ensure the long-term sustainability of these investments. These evaluations would include analysis of the best scientific information available. If the evaluations show that the financial investment would be at risk, the National Park Service could either modify the action to increase sustainability of the project or, if no alternatives exist, terminate the action.

Costs of implementing alternative B have been broken down into two categories: annual operations costs and one-time costs. Annual costs for alternative B include the costs associated with ongoing maintenance, utilities, staffing, supplies, and materials. One-time costs for alternative B include projects such as stabilization of buildings, removal of buildings, adaptive re-use of existing buildings, landscape rehabilitation and development of new exhibits, and access.

The cost estimates below (in 2013 dollars) is only intended to indicate a general relative comparison of costs among the alternatives; they are not to be used for budgeting purposes.

**Annual Costs.** Under alternative B, existing annual operating costs for the park would increase slightly. Employee salaries and benefits comprise a large portion of the park's annual operating costs. Under this alternative, the park's annual operating budget is estimated at \$3,269,000.

**One-time Costs.** It is estimated that alternative B would require one-time costs of \$1,907,679. These costs would improve operational efficiency of park management by removing two deteriorated buildings in Point Park and noncontributing elements at

the Cravens House, including removal of the Williams House, outbuildings, garage, and caretaker's cabin. Resources would be protected through preservation and stabilization of the exterior of Cravens House and kitchen/dairy building. Permanent exhibits and access would be developed for Ochs Museum, Tyndale Hill, Bald Hill, and Chattanooga Valley Overlook.

### **NPS Staff – Full-time Equivalents**

One additional law enforcement ranger would be needed to patrol the new lands and prevent illegal uses such as dumping, resource damage, and vandalism. Reduced management of Cravens House would allow for a shift in maintenance responsibilities and interpretation to focus on new lands.

### **ALTERNATIVE C (PREFERRED ALTERNATIVE)**

Alternative C addresses the same opportunities and issues as alternative B, and also incorporates many of the same proposed actions. However, it presents an expanded range of proposals such as pursuing partnership opportunities and connecting to regional greenways. Interpretation and public access would be enhanced to better tell the story of the battles of Lookout Mountain and Missionary Ridge, with an emphasis on slightly less development than alternative B, but similar levels of access to sites.

Expanded public access to park lands would allow visitors to better understand the battles of Lookout Mountain and Missionary Ridge from multiple vantage points. Key elements contributing to this approach include new public access and interpretation north of Lookout Mountain, an extended auto tour of the battlefield (with associated transportation improvements), new parking and turnouts for visitor access, and additional connections to the regional trail system.

Viewsheds would be enhanced from multiple points: Point Park, Cravens House, Bald Hill, Tyndale Hill, the Confederate Defense Site, and the Chattanooga Valley Overlook. Viewshed enhancement would include selected tree removal to allow better views of the adjacent battlefields. Thinning and tree removal would be slightly more extensive than under alternatives A or B.

Cultural landscape report recommendations would be fully implemented to allow visitors to see a landscape similar to what existed during the Civil War, especially in the Cravens House area. The park would pursue partnership opportunities to protect land outside park boundaries where there are key battlefield resources.

Visitors would have increased access by vehicle and trails to new sites within the battlefield, including Tyndale Hill, Bald Hill, Chattanooga Valley Overlook, and the Confederate Defense site.

### **Point Park / Lookout Mountain Battlefield Visitor Center**

As in alternative B, the former restroom building and former ranger/residential quarters in Point Park would be removed. Both buildings were constructed by the Civilian Conservation Corps in the 1930s and are listed in the National Register of Historic Places as locally significant historic properties. The buildings are not presently used for NPS functions or visitor services and the expenses associated with their continued maintenance are not justified under the park's current and projected budget for operations and resource preservation. Ongoing maintenance of these buildings compounds the parkwide backlog of deferred maintenance projects, hindering the ability to fund other higher priority preservation undertakings. The storage shed in the Lookout Mountain Battlefield Visitor Center parking lot would continue to be used to support maintenance operations. Most maintenance storage and staging would be



accommodated at the Chickamauga Battlefield maintenance facility.

## Cravens House

In addition to the actions and preservation treatments proposed under alternative B, the Cravens House would be managed as a seasonally staffed visitor contact station where visitor educational and interpretive opportunities would be provided. NPS staff would lead interpretive tours of the adjoining battlefield and commemorative features of the Cravens House cultural landscape. Volunteers would assist in providing visitor contact services, and visitors would have self-guided opportunities to view interior exhibits.

The interior of the Cravens House would be rehabilitated and the first floor adaptively used as a visitor contact station. Although climate control systems would not be installed, other systems and modifications (e.g., electrical system, wheelchair accessible ramp to the porch and first floor) would be installed or upgraded in a manner that preserves the historic character and features of the house. Existing house furnishings would be removed for storage as part of the park's museum collection, or would be deaccessioned if not identified in the park's scope of collection statement for retention. Interior interpretive exhibits would be developed and installed.

The parking area at Cravens House would be removed and the cultural landscape restored in that area. A 30-vehicle parking area would be developed at the Williams property. The entry and service drives would be reconfigured and expanded as necessary to accommodate vehicle traffic. Public restrooms would be placed near the parking area. All new facilities and parking areas would be sited or screened to minimize intrusion on the historic scene. Utility lines that obscure historic views would be placed underground or relocated.

Particular areas of the Cravens House cultural landscape would be rehabilitated, restored, or partially reconstructed based on CLR recommendations. Included among the recommended site treatments are the removal of nonnative vegetation; limited replanting of the former orchard to approximate its appearance during the 1863 battle period; removal of encroaching wooded areas to enhance viewsheds; removal of noncontributing structures and site elements (e.g., caretaker's cabin; Williams House, garage, and associated features; nonhistoric sidewalks; stone wall along Cravens House drive; the brick sidewalk and associated flagstone plaza). The Williams House site would be restored with native plant species. The caretaker's cabin and the Williams House are not presently occupied and receive minimal maintenance. The costs of extensive repairs and ongoing maintenance for these properties are not justified in consideration of the park's overall budget priorities for addressing deferred maintenance.

## Cummings Bottom and Additional Lands

Self-guided and scheduled interpretation and access to the Cummings Bottom area (including Tyndale Hill, Smith Hill, and Bald Hill) would be provided seasonally during daylight hours. A more developed visitor experience would be provided at Tyndale Hill and Bald Hill. NPS staff would conduct routine patrols and maintenance of the area's sites, including daily opening and closing of gates. The Cummings Bottom area would be included in an interpretive auto tour.

**Tyndale Hill.** A small (four- to five-space) gravel parking area would be developed at the base of the hill from Parker Lane. A new pedestrian trail (about 1,600 feet long) would be constructed to the hilltop where wayside exhibits and a paved viewing area would be developed. Visitors would have opportunities for self-guided tours. Viewsheds would be improved by selective vegetation clearing.

**Bald Hill.** Expanded vehicle access to Bald Hill on Parker Lane would be pursued in coordination with the City of Chattanooga and other entities having legal access. A small (five vehicle) parking area would be constructed below the hill near Frierson's Cemetery. About 1,000 feet of gravel road between Parker Lane and Frierson's Cemetery would be improved. A new pedestrian trail (about 800 feet long) would be constructed to the "Walker painting perspective site" on Bald Hill. All visitation would be as part of an NPS-led tour. Selective vegetation clearing would be conducted to improve viewsheds.

**Smith Hill.** No improvements or additions to the site would be made, although limited NPS guided tours would be provided in conjunction with Bald Hill tours.

**Chattanooga Valley Overlook.** An expanded trailhead parking area (15 vehicles) would be developed at the Chattanooga Valley Overlook site providing connection to the regional trail system. Vegetation management at the site would include selective tree removal to allow views of Missionary Ridge.

**Confederate Defense Site.** Two new wayside exhibits would be installed. Selective vegetation clearing would be conducted to improve the viewshed.

**Geary's Crossing.** Water trail access to Lookout Creek would be provided under a partnership agreement with the Chattanooga Arboretum and Nature Center, utilizing their existing launch site and support facility. NPS

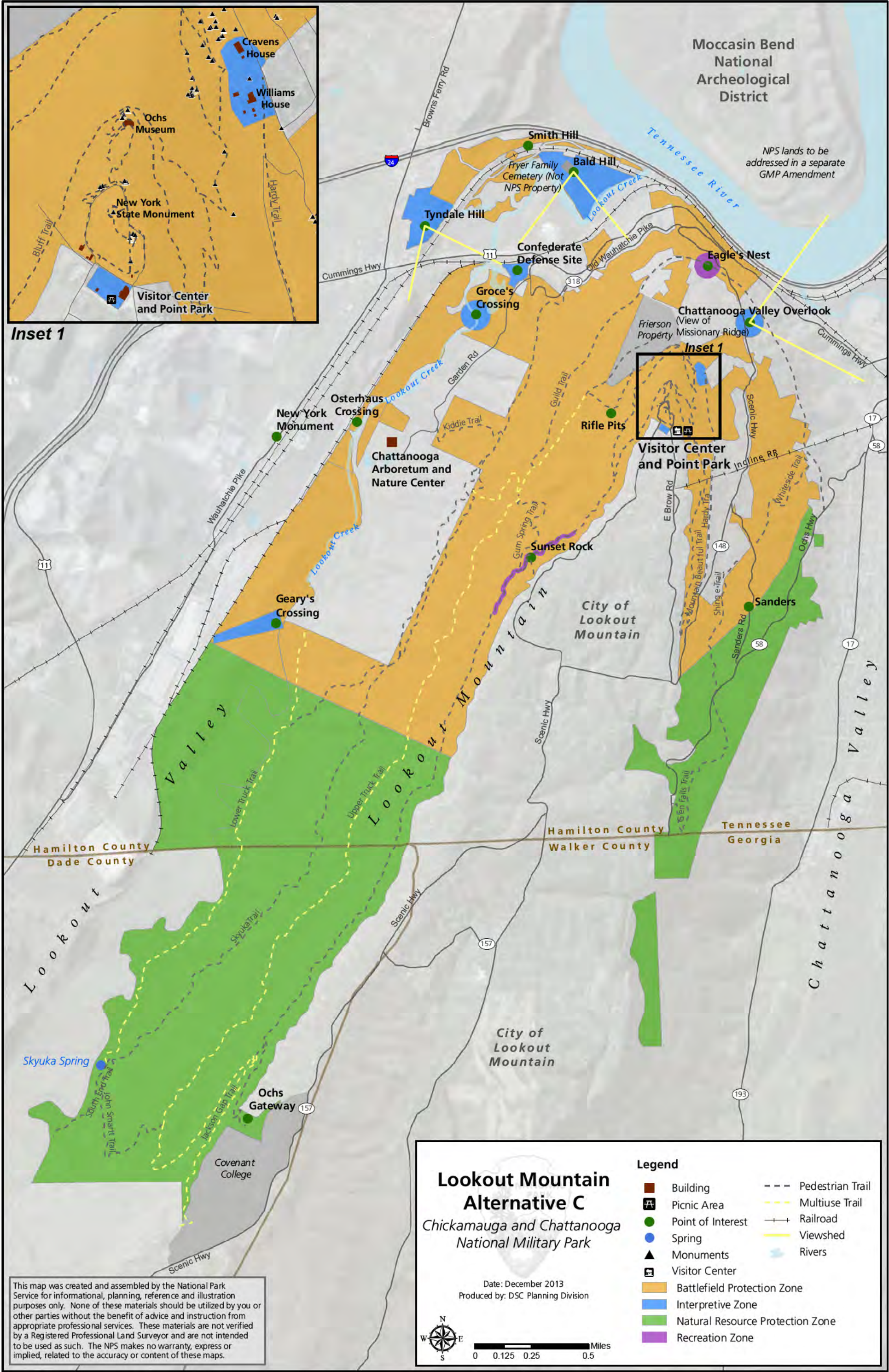
property on the west side of Lookout Creek (Geary's Crossing) would only be interpreted from the water.

**Jackson Gap Trail.** Park managers would open the trail from Jackson Gap Trail (on park land) to Jackson Spring (on private property) to bicycle users once development and maintenance agreements are reached with private property owners (Covenant College) and partner groups. The Ochs gateway would remain a foot trail with no mountain bike access.

Trail improvements would be made to Jackson Gap, Jackson Spring (private property), and John Smartt trails to connect bicycle users to the Upper Truck Trail. To connect with regional multiuse trails, portions of the John Smartt Trail and Jackson Gap trails would be designated as multiuse for hiking and mountain biking. Signage would be placed on park property, and parking would be provided on private property by agreement.

**Sanders Road Picnic Area.** The buildings for all three nonfunctioning restrooms would be removed and the landscape rehabilitated. A vault toilet would be installed. The number of picnic tables would be reduced. The restroom buildings have been evaluated as eligible for the national register by the Tennessee state historic preservation officer. It is cost-prohibitive to bring the buildings up to modern code requirements, and rehabilitation of the buildings is not supported by current and projected visitor use of the site.









**Sunset Rock.** No changes to existing structures, uses, or park management of this area would occur. Rock climbing would continue to be allowed in this area, but park staff would monitor and evaluate the effects of climbing activities on natural resources.

**Eagle's Nest.** No changes to existing uses or park management of this area would occur. Rock rappelling would continue to be allowed in this area.

## Accessibility

To the greatest extent possible, site improvements and building rehabilitation would accommodate all people and abilities without the need for individual adaptation. The National Park Service would ensure that requirements for public health, safety, and accessibility are incorporated into subsequent design. For example, improvements such as parking, loading zones, fire access, ramps, and other modifications would be made in accordance with the Architectural Barriers Act of 1968, Americans with Disabilities Act, the Rehabilitation Act of 1973, the Fair Housing Act, Final Outdoor Developed Area Guidelines, and appropriate executive orders and director's orders. All character-defining features of historic buildings and landscapes would be preserved to the maximum extent possible.

**Trails.** The park would consider providing greater recreational opportunities outside the historic battlefield, including allowing partners to connect existing trails with regional trail systems such as the Tennessee Riverwalk extension to St. Elmo and the Guild Trail; trail connections to Lookout Mountain Conservancy property and trail systems; and trail connections to the Great Eastern Trail.

The park would work with local governments, partners, and adjacent landowners on development of a comprehensive regional trail plan for Lookout Mountain Battlefield that includes existing NPS lands and trails, and proposed trails, trail uses, and trail

connections to other lands outside NPS management.

**Auto Tour.** An auto tour linking sites and vantage points important to the interpretation of the battles of Lookout Mountain would be developed. The auto tour would provide self-guided vehicle access to selected sites where small interpretive signs would be placed. An expanded range of tour stops would be offered under this alternative.

## Natural Resources – General

Information is incomplete on vegetation and wildlife in portions of Lookout Mountain Battlefield, particularly the Georgia side of the park unit. Surveys would be conducted in those areas to fill in data gaps.

Efforts would continue, as staff and funding permit, to inventory, monitor, and control the spread of nonnative invasive plants, such as kudzu, at Lookout Mountain Battlefield as much as possible .

## Partnerships Preservation Opportunities

The park would pursue opportunities to acquire or otherwise preserve land (e.g., scenic easements) to protect core battlefield areas. An updated land protection plan would be developed.

An expanded array of partnership agreements with neighboring organizations such as the Chattanooga Arboretum and Nature Center, Lookout Mountain Conservancy, the City of Chattanooga, and various conservation organizations would be sought to assist the park in fulfilling its mission.

## Estimated Costs and Staffing

Identification of these costs does not guarantee future NPS funding. Project funding may not come all at once; it would likely take many years to secure and may be

partially obtained through partners, donations, or other non-NPS federal sources. Although the National Park Service hopes to secure this funding, the park may not receive enough funding to achieve all desired conditions within the time frame of this management plan (the next 15–20 years).

Alternative C proposes a range of actions to protect park resources, improve visitor experience, and enhance access to the area. However, the Lookout Mountain Battlefield unit is in a region where drought, floods, and forest fires are projected to occur. For this reason, the National Park Service would integrate relevant information, including data related to climate change, into future planning and decision-making processes. For example, prior to project approval, proposed facility investments would be evaluated to ensure the long-term sustainability of these investments. These evaluations would include analysis of the best scientific information available. If the evaluations show that the financial investment would be at risk, the National Park Service could either modify the action to increase sustainability of the project or, if no alternatives exist, terminate the action.

Costs of implementing alternative C have been broken down into two categories: annual operations costs and one-time costs. Annual costs for alternative C include the costs associated with ongoing maintenance, utilities, staffing, supplies, and materials. One-time costs for alternative C include projects such as stabilization of buildings, removal of buildings, adaptive re-use of existing buildings, landscape rehabilitation, development of new exhibits and access, and development of additional regional trail connections.

The cost estimates below (in 2013 dollars) is only intended to indicate a general relative comparison of costs among the alternatives;

they are not to be used for budgeting purposes.

**Annual Costs.** Under alternative C, existing annual operating costs for the park would increase. Employee salaries and benefits comprise a large portion of the park’s annual operating costs. Under this alternative, the park’s annual operating budget is estimated at \$3,399,000.

**One-time Costs.** It is estimated that alternative C would require one-time costs of \$2,224,331. These costs would improve operational efficiency of park management by removing two deteriorated buildings in Point Park and noncontributing elements at the Cravens House, including removal of the Williams House, outbuildings, garage, and caretaker’s cabin. Resources would be protected through preservation and stabilization of the exterior of Cravens House and kitchen/ dairy building. Permanent exhibits and access would be developed for Cravens House, Ochs Museum, Tyndale Hill, Bald Hill, the Confederate Defense Site, and Chattanooga Valley Overlook. Regional trail connections would be improved with new trail sections connecting to Guild Trail and, with a partnership agreement, through Jackson Gap Trail at Ochs Gateway.

## NPS Staff – Full Time Equivalents

Three additional staff would be needed—one law enforcement ranger, one maintenance employee, and one interpretive ranger to fully implement alternative. As with alternative B, the law enforcement ranger would be needed to patrol the new lands and prevent illegal uses such as dumping, resource damage, and vandalism. An additional maintenance employee would be needed to maintain trails and provide ongoing maintenance for newly developed areas on Lookout Mountain. An additional interpretive ranger would be needed to develop interpretive media and provide interpretive tours on the new lands.

## COMPARISON OF ESTIMATED COSTS AND FTE FOR EACH ALTERNATIVE

NPS decision-makers and the public must consider an overall picture of the complete costs and advantages of various alternatives, including the no-action alternative, to make wise planning and management decisions for the national military park.

The presentation of costs within a general management plan is applied to the types and general intensities of development. The following applies to costs presented within this general management plan amendment:

- The costs are presented as estimates and are not appropriate for budgeting purposes.
- Actual costs would be determined at the beginning of each project and will take into consideration the design of

facilities, identification of detailed resource protection needs, and changing visitor expectations.

- Approval of the GMP Amendment does not guarantee funding or staffing for proposed actions.
- Project funding would likely take many years to secure and may be provided in part by nonfederal sources.
- Some proposals may not be funded within the life of this GMP Amendment and full implementation may occur many years into the future.
- Costs were estimated in 2013 and intended for comparison among the alternatives.

**TABLE 3. COST AND FTE COMPARISON OF THE ALTERNATIVES**

	<b>Alternative A (No Action)</b>	<b>Alternative B</b>	<b>Alternative C (NPS Preferred Alternative)</b>
Existing Annual Operational Costs	\$3,179,000	\$3,179,000	\$3,179,000
Additional FTE Costs	-0-	90,000	220,000
Additional FTE		+1	+3
<b>Total Annual Operational Costs</b>	<b>\$3,179,000</b>	<b>\$3,269,000</b>	<b>\$3,399,000</b>
Building Removal	171,046	723,571	753,571
Facility Costs	157,000	919,108	1,145,760
Nonfacility Costs	144,098	265,000	325,000
<b>Total One-Time Costs</b>	<b>\$ 472,144</b>	<b>\$1,907,679</b>	<b>\$2,224,331</b>



## MITIGATION MEASURES COMMON TO ALL ACTION 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 measures 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 visitor experience, a consistent set of mitigating measures would be applied to actions proposed in this GMP Amendment. 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 could be considered to stay within the parameters of NEPA and NHPA compliance documents, and other requirements. The compliance monitoring program would oversee these mitigation measures and would include reporting protocols.

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

### CULTURAL RESOURCES

The National Park Service would preserve and protect, to the greatest extent possible, resources that reflect human occupation and historical events associated with Lookout Mountain Battlefield. Specific mitigating measures include the following:

- Park staff would continue to develop inventories for and oversee research regarding archeological, historic, and ethnographic resources to better understand and manage the resources, including cultural landscapes. The park staff would conduct any needed archeological or other resource-specific surveys, National Register of Historic Places (NRHP) evaluations and identify recommended treatments. The results of these efforts would be incorporated into comprehensive planning and resource assessments, as well as site-specific planning, mitigation, and environmental analysis.
- Museum collections would continue to be acquired, accessioned, and cataloged, preserved, protected, and made available for access and use according to NPS standards and guidelines.
- Known archeological sites would be routinely monitored to assess and document the effects of natural processes and human activities on the resources. Archeological resources would be left undisturbed and preserved in a stable condition to prevent degradation and loss of research values unless intervention could be justified based on

compelling research, interpretation, site protection, or park development needs. Recovered archeological materials and associated records would be treated in accordance with NPS *Management Policies 2006*, NPS Museum Handbook, Director's Order 24: *NPS Museum Collections Management*, and 36 CFR Part 79.

- As appropriate, archeological surveys or monitoring would precede any ground disturbance. Significant archeological resources would be avoided to the greatest extent possible during construction. If such resources could not be avoided, an appropriate mitigation strategy (e.g., the excavation, recordation, and mapping of cultural remains prior to disturbance to ensure that important archeological data is recovered and documented) would be developed in consultation with the Tennessee and Georgia state historic preservation offices (SHPOs) and, as necessary, associated American Indian tribes.
- If, during construction, previously unknown archeological resources were discovered, all work in the immediate vicinity of the discovery would be halted until the resources could be identified and documented. If the resources could not be preserved in situ, an appropriate mitigation strategy would be developed. In the unlikely event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (25 USC 3001) of 1990 would be followed. If non-Indian human remains were discovered, standard reporting procedures to notify appropriate authorities would be

followed, as would all applicable federal, state, and local laws.

- All projects with the potential for ground disturbance would undergo site-specific planning and compliance procedures. For archeological resources, construction projects, and designed facilities would be in previously disturbed or existing developed areas. Adverse impacts to archeological resources would be avoided to the extent possible in accordance with *The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation*.
- To minimize visual and auditory intrusions on cultural resources from modern development, the National Park Service would use screening or sensitive designs that would be compatible with historic resources and cultural landscapes and not intrude on ethnographic resources. If adverse impacts could not be avoided, impacts would be mitigated through a consultation process with all interested parties.
- The National Park Service would consult with associated American Indian tribes to develop and accomplish park programs in a way that respects the beliefs, traditions, and other cultural values of the tribes who have ancestral ties to park lands. The National Park Service recognizes the past and present connections of associated tribes with park lands and that potential resources, places, and traces of tribal use are important parts of the cultural environment to be preserved, protected, and interpreted as appropriate.
- Encourage visitors through the park's interpretive programs to respect and

leave undisturbed any inadvertently encountered archeological and historical resources.

- Cooperate with partners, park neighbors, and other stakeholders to establish and enforce measures to prevent and reduce human impacts, such as vandalism and looting, on cultural resources.

## NATURAL RESOURCES

To avoid or reduce the potential impacts of construction activities, NPS operations, and visitor use on the park unit's natural resources, the following measures would be followed:

### General

- Before any construction activity, construction zones would be clearly delineated with stakes or by other means in order to confine activity to the minimum area required for construction. All protection measures would be clearly stated in the construction specifications, and workers would be instructed to avoid conducting activities beyond the construction zone.
- Best management practices would be used during construction to minimize impact to air quality from increased dust or other particulates. These practices could include keeping disturbed soils moist to control dust dispersal.
- Best management practices would be used during construction to minimize soil disturbance and the potential for erosion in the project area. Erosion control methods could include (but not be limited to) filter cloth and silt fencing.
- To avoid introduction of nonnative plant species, no hay bales or other organic material would be used in erosion control measures. Standard measures that involve only inorganic materials (e.g., silt fences and/or sand bags) would be used.
- If trails are constructed, proper installation of drainage controls would be placed along the trail to control increased surface water runoff from the trail and to reduce subsequent erosion and sedimentation.
- Signs and, where necessary, physical barriers would be used to minimize the potential for users to veer off the trail and damage trailside vegetation and to minimize adverse impacts on vegetation due to maintenance needs.
- Fencing or other means would be used to protect sensitive resources adjacent to construction areas.
- Construction activities would be monitored by resource specialists as needed.
- Construction materials would be kept in work areas, especially if the construction takes place near streams, springs, or natural drainages.

### Air Quality

- Measures to control dust and erosion during construction would be implemented and could include the following: water sprinkling to control dust or otherwise stabilize soils, minimize vegetation clearing, revegetate with native species, cover haul trucks, and employ speed limits on unpaved roads of the park unit.
- NPS vehicle emissions would be minimized by using the best available technology whenever possible.
- Sustainable designs would be employed that reduce energy demands, thus reducing airborne pollutants.

## **Soundscapes and Natural Quiet**

- Noise abatement measures would be implemented for construction and NPS operational activities. These measures could include the following: a schedule to minimize impacts in noise-sensitive areas, use of the best available noise control techniques wherever feasible, use of hydraulically or electrically powered impact tools when feasible, and location of stationary noise sources as far from sensitive uses as possible.
- Facilities would be located and designed to minimize objectionable noise.
- The idling of motors (power tools, equipment, and vehicles) would be minimized.

## **Soils**

- New facilities would be built on soils suitable for development.
- Best management practices would be used during construction to minimize soil disturbance and the potential for erosion in the project area. To minimize soil erosion on new trails best management practices could include installing water bars, check dams and retaining walls; contouring to avoid erosion; and minimizing soil disturbance.
- Soil erosion would be minimized by limiting the time that soil is left exposed and by applying other erosion control measures, such as erosion matting, filter cloth, silt fencing, and sedimentation basins in construction areas, to reduce erosion, surface scouring, and discharge to water bodies.

## **Water Resources**

- Fueling of all machinery would be conducted only in approved equipment staging areas away from water bodies. Any spills of hazardous materials, fuel, etc., would be cleaned up immediately to prevent contamination or discharge into ground or surface waters.
- The National Park Service would comply with applicable state and local regulations to minimize the impacts on water quality associated with wastewater management. Best available technologies would be used.
- Caution would be exercised to protect water resources from activities with the potential to damage water resources, including damage caused by construction equipment, erosion, and siltation. Measures would be taken to keep fill material from escaping work areas, especially near streams, springs, and natural drainages.
- To prevent water pollution during construction, erosion control measures would be used to minimize discharge to water bodies, and construction equipment would be regularly inspected for leaks of fuel, lubricants, and other chemicals.
- Best management practices, such as the use of silt fencing, would be followed to ensure that construction-related effects were minimal and to prevent long-term impacts on water quality, wetlands, and aquatic species.
- Stormwater management measures would be implemented to reduce nonpoint source pollution discharge from parking areas and other impervious surfaces. Such actions could include oil and sediment separators, infiltration beds, use of permeable surfaces, and vegetation or natural filters to trap or filter stormwater runoff.

## Vegetation

- To avoid potential future impacts, areas used by visitors (e.g., trails) would be periodically monitored for signs of native vegetation disturbance and the introduction of invasive plants. To control potential impacts on plants from trail erosion or social trailing, public education, revegetation of disturbed areas with native plants, and the installation of erosion control measures and barriers would be used.
- Any plant materials used for revegetation efforts would be native to the Lookout Mountain Battlefield area.
- Revegetation plans would be prepared for areas that would be disturbed by construction activities. Revegetation plans should specify such features as seed/plant source, seed and plant mixes, soil preparation, fertilizers, and mulching. Salvage vegetation, rather than new planting or seeding, would be used to any extent possible. Use of nonnative species or genetic materials would be considered only where deemed necessary to maintain a cultural landscape or to prevent severe resource damage, and would be approved by a natural resource specialist. Restoration activities would be instituted immediately after construction was completed. Monitoring would occur to ensure that revegetation was successful, plantings were maintained, and unsuccessful plant materials were replaced.
- Where possible, trees removed during construction would be used in trail construction, mulch, or other construction material, or would remain on-site as habitat. Wood would not be removed from the area.

## Nonnative Invasive Plant Species

- Special attention would be devoted to preventing the spread of noxious weeds and other nonnative plants. Standard measures could include the following: ensure that construction-related equipment arrives on-site free of mud or seed-bearing material, certify all seeds and straw material as weed-free, no hay bales or other organic material would be used in erosion control measures, identify areas of noxious weeds before construction, treat noxious weeds or noxious weed topsoil before construction (e.g., topsoil segregation, storage, herbicide treatment), and revegetate with appropriate native species.
- All construction equipment would be pressure washed to ensure that it is clean and weed-free before entering the park.
- All vehicle parking would be limited to road shoulders, parking areas, or previously disturbed areas.
- Fill, rock, or additional topsoil would be obtained from the project area. If this is not possible, weed-free sources would be required to be obtained from NPS-approved sources outside the park.
- Monitoring and follow-up treatment of nonnative vegetation on revegetated areas would occur for several years following construction. Follow-up treatment could include mechanical, biological, chemical, and additional revegetation treatments.

## Wildlife

- To the extent possible, new facilities would be sited to avoid sensitive wildlife habitats, including foraging and resting areas, travel corridors, and nesting areas.

- Techniques would be employed to reduce impacts on wildlife from construction, such as construction scheduling, biological monitoring, erosion and sediment control, the use of fencing or other means to protect sensitive resources adjacent to construction, the removal of all food-related items or rubbish, topsoil salvage, and revegetation. This could include specific construction monitoring by resource specialists as well as treatment and reporting procedures.
- Measures would be taken to reduce the potential for wildlife to scavenge food from humans. Wildlife-proof garbage containers would be required in developed areas (including viewpoints, trails, and interpretive waysides). Signs would educate visitors about the need to refrain from feeding wildlife.

## Threatened and Endangered Species

Mitigation actions would occur during normal park operations as well as before, during, and after construction to minimize immediate and long-term impacts on rare, threatened, and endangered species. These actions would vary by specific project and area of Lookout Mountain Battlefield affected, and additional mitigation would be added depending on the specific action and location. Many of the measures listed above for vegetation and wildlife would also benefit rare, threatened, and endangered species by helping to preserve habitat. Mitigation actions specific to rare, threatened, and endangered species would include the following:

- Surveys would be completed before any proposed ground disturbance to ensure large-flowered skullcap (*Scutellaria montana*) or other state or federally listed species are not present. If the plant was documented

in the area, the activity or facility would be modified so it does not affect the plant or its habitat.

- As much as possible, aggressive invasive nonnative and native species that threaten the presence of the large-flowered skullcap would be controlled through an integrated pest management approach. If chemical controls are used where large-flowered skullcap is present, selective herbicides, selective application techniques, and/or application when large-flowered skullcap is dormant would be followed to prevent harm to the population.
- Fences may be erected if necessary to keep unauthorized foot and vehicle traffic out of large-flowered skullcap habitat.
- For trails passing through large-flowered skullcap populations, trail maintenance would be conducted regularly to prevent trail widening and erosion.
- New trails would be surveyed and designed during the blooming period for large-flowered skullcap to ensure that the trail would not impact the plants.
- Identification and interpretive signs may be used to educate the public about the large-flowered skullcap, although they should be used in a manner that would not draw excessive attention to the rare plant population.
- Clearing, removing, or thinning trees, including snags, would occur in the winter (November 15–March 31), minimizing the potential for eliminating a roost tree and injuring or killing the Indiana bat (*Myotis sodalis*) and northern long-eared bats (*Myotis septentrionalis*)—potential roost trees would not be cut during the period when the bats occupy their summer range.
- If tree or snag cutting must occur in the summer, an emergence count would be undertaken by a trained

biologist to ensure no bats are roosting in the tree or snag. Emergence observations would be conducted between May 15 and August 15 for any tree removal that is not conducted during winter. If bats fly out of the trees during the survey, tree cutting would be delayed until bats are no longer using the roost tree.

- If summer maternity roosts are identified, the surrounding forest and foraging areas within 2.5 miles of the documented maternity roost tree would be maintained in as natural a state as possible. These areas would be monitored to ensure human disturbance is minimized.
- The forests above and around cave hibernacula (hibernation sites) would not be dramatically altered by human activities.

### Visitor Use and Experience

- Visitors would be informed in advance of proposed construction and directed away from construction areas to avoid safety hazards and minimize visitor use conflicts.

### IDENTIFICATION OF THE NATIONAL PARK SERVICE PREFERRED ALTERNATIVE

Identification of the NPS preferred alternative started with collection of public comments in February 2013. Substantive comments were considered during a two-day objective value analysis workshop. Representative staff members from all divisions of the Chickamauga and Chattanooga National Military Park worked together to identify the preferred alternative. Through this process, the planning team compared the relative advantages of each alternative according to a set of factors. These factors were selected based on the

benefits or advantages of each alternative to fulfill the purpose of the plan, while addressing the planning issues identified in chapter 1. These factors include the following:

Factor 1: Preserves cultural resources including building restoration, cultural landscape restoration, and historic views.

Factor 2: Maintains or enhances natural resource protection including vegetation management for vistas and trail management.

Factor 3: Provides an appropriate range of visitor services and recreational opportunities and access to new lands.

Factor 4: Improves operational effectiveness and sustainability including maintenance activities, water efficiency, and partnership advantages.

The value analysis workshop highlighted the benefits that would be gained under each alternative. The relationship between the advantages and costs of each alternative was also established. This information was used to identify the alternative that provides the National Park Service and the public the greatest advantage for the most reasonable cost.

Alternative C was identified as the agency's preferred alternative using the results of internal and external scoping and the value analysis workshop. This alternative provides the best combination of strategies to protect the park's unique natural and cultural resources and visitor experience, while improving the park's operational effectiveness and sustainability. It also provides public access to new lands addressed in the GMP Amendment.



## **THE ENVIRONMENTALLY PREFERABLE ALTERNATIVE**

Section 1505.2(b) of CEQ regulations implementing the National Environmental Policy Act requires identification of the environmentally preferable alternative. The environmentally preferable alternative is defined as “. . .the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources.” The environmentally preferable alternative is determined based on the sum results of the analysis of natural and cultural resource impacts described in chapter 4.

There is no requirement that the environmentally preferred alternative and the NPS preferred alternative be the same.

In analyzing the impacts to natural and cultural resources as described in chapter 4, none of the alternatives would result in more than moderate adverse impacts—more adverse impacts would be minor in intensity or less. Compared to alternative A, both alternatives B and C would have about the same level of adverse impacts. Some localized minor to moderate adverse impacts to soils and minor adverse impacts to vegetation would occur due to construction and the use of new facilities and increased visitor use in the two action alternatives. However, both alternatives B and C would result in beneficial impacts to soils and vegetation due to the removal of structures and vegetation restoration efforts in a few localized areas. Any impacts to the three federal and state listed species on Lookout Mountain Battlefield due to alternatives B and C would be expected to be negligible and may affect but would not likely adversely affect the species.

Alternatives B and C would result in minor adverse impacts to archeological resources

and negligible to minor adverse impacts to the area’s historic structures and cultural landscapes due to the proposed new developments and visitor use. There also would be long-term negligible to minor adverse impacts from actions necessary to repair, replace, or potentially alter historic fabric and architectural features as part of preservation, restoration, and rehabilitation treatments. Both of the action alternatives would result in beneficial impacts due to actions being taken to preserve and interpret battle period events in localized areas and institute long-term preservation treatments for the Cravens House and its cultural landscape.

Overall, from a natural resource perspective, alternative A would result in fewer adverse impacts than the two action alternatives and thus cause the least damage to biological environment of Lookout Mountain Battlefield. But from a cultural resource perspective, the two action alternatives, in the long term, would better preserve cultural resources in the Cravens House area than alternative A. Because the natural resources that would be affected by the two action alternatives would be limited to a few localized areas and have been largely already disturbed, and because of the importance of preserving Lookout Mountain Battlefield’s cultural resources, it is judged that alternatives B and C would better protect the environment than alternative A.

There is little if any differences between alternatives B and C with respect to the adverse and beneficial impacts of the alternatives on natural resources on Lookout Mountain. However, alternative C would provide a more comprehensive preservation treatment for the Cravens House and its cultural landscape than alternative B, and thus would better protect and enhance this area’s cultural resources. For this reason, alternative C is the environmentally preferable alternative.

## **FUTURE STUDIES AND IMPLEMENTATION PLANS NEEDED**

After completion and approval of a GMP Amendment for the Lookout Mountain Battlefield unit, other more detailed studies and plans would be needed before specific actions are implemented. As required, additional environmental compliance (adherence to the National Environmental Policy Act, National Historic Preservation Act, and other relevant laws and policies) and public involvement would be conducted. Park staff would undertake a comprehensive assessment of future planning and study needs. Plans and studies would be prioritized and coordinated to address the park's most pressing needs with consideration of critical resource protection requirements, funding availability, and other management priorities. Those additional studies could include but not be limited to the following:

### **CULTURAL RESOURCE MANAGEMENT PLANS**

A wide array of possible future plans and studies may be undertaken by NPS staff to enhance understanding and treatment of Lookout Mountain's historic properties and cultural resources. Among these are archeological resource overviews and assessments, historic structure reports, historic resource studies, cultural landscape inventories and reports, ethnographic overviews and assessments, oral histories, and museum collections management reports. The recently completed cultural landscape report and historic structure report for Cravens House provides valuable guidance for the rehabilitation and restoration treatments planned for the house and its associated structures and cultural landscape features. Similar reports may be necessary for other Lookout Mountain Battlefield historic properties with needed preservation

treatment. The park has requested funding to complete an ethnographic overview and assessment (a data gap in the information currently available for the park's cultural resources). While intended primarily to support cultural resources management of the Moccasin Bend National Archeological District, the information may also prove useful for understanding the cultural connections that associated tribes and other groups may retain for other units such as Lookout Mountain Battlefield and Chickamauga Battlefield.

### **RESOURCE STEWARDSHIP STRATEGY**

Resource stewardship strategies serve as a bridge between the qualitative statements of desired conditions for resources and resource condition-dependent visitor experience established in the park's general management plan, and the measureable goals and implementation actions determined through park strategic planning. This analytical document focuses on identifying and tracking indicators of desired resource conditions, recommends comprehensive strategies to achieve and maintain desired conditions over time, and assesses and updates these comprehensive strategies periodically based on new information and the results of completed activities. A resource stewardship strategy provides an approach for investing both human and fiscal resources in resource stewardship. It also reports progress in attaining and maintaining desired resource conditions.

## **COMPREHENSIVE REGIONAL TRAIL PLAN**

A comprehensive regional trail plan would enable the park to coordinate trail use and development with other organizations and partners seeking to connect the regional trail network with existing Lookout Mountain Battlefield trails. The plan would enable the park to effectively document and communicate NPS policies and mandates for resource protection and appropriate visitor use, while ensuring that overall regional efficiencies and objectives for trail development and use are achieved in partnership with other organizations (e.g., the Lookout Mountain Conservancy) and government agencies (e.g., the City of Chattanooga, Hamilton County, Tennessee). The Tennessee Riverwalk Southside Extension could serve as a model for regional partnership trail planning.

## **EXOTIC PLANT MANAGEMENT PLAN**

Lookout Mountain has many nonnative species, most of which were likely planted in the area. Although most of these species are not of concern, at least 31 species are considered aggressive invasive species. The biggest threat is kudzu, which has spread throughout the area and is affecting the historic landscape. An exotic plant management plan would address those concerns and examine alternatives for controlling the spread of invasive nonnative plants in the Lookout Mountain Battlefield unit. The plan would provide a comprehensive integrated approach to preventing the establishment of and

removing nonnative plants and thus help maintain the area's historic landscape and native plant communities.

## **ACCESSIBILITY SELF-EVALUATION AND TRANSITION PLAN**

Parks are obligated to ensure that programs, services, and facilities are accessible to all visitors and employees based on section 504 of the Rehabilitation Act of 1973, which prohibits discrimination against individuals based on disability. The accessibility evaluation and transition plan would ensure that sites, facilities, programs, services, and activities that are provided within the Lookout Mountain Battlefield unit are accessible to and usable by park visitors and employees, including those with disabilities. The plan would identify physical, structural, and programmatic changes that are needed to make the facilities, programs, services, and activities in the unit accessible. The plan would evaluate and assess the unit for barriers in accessibility, while also serving as a guide for staff to remove barriers to accessibility and incorporating universal design, accessibility, and sustainability into future projects taking place in they can be used by the widest range of people possible, recognizing there is a wide spectrum of human abilities.) Recognizing that the park staff cannot immediately make all facilities, services, and programs accessible, the following criteria would be used as the basis for identifying needed access improvements: level of use by public, number of activities offered, program uniqueness, and geographic distribution.



TABLE 4. SUMMARY OF LOOKOUT MOUNTAIN BATTLEFIELD ALTERNATIVES

Park Area Resource Management Opportunities	Alternative A (no action)	Alternative B	Alternative C (preferred)
<b>Concept</b>	<p>Under the no-action alternative, the National Park Service would continue to manage Lookout Mountain Battlefield as it currently does. Point Park, the Lookout Mountain Battlefield Visitor Center, Cravens House, Sunset Rock, and several trails and trailheads would remain the primary visitor attractions and access points to the battlefield. The visitor experience would continue to be largely self-guided.</p> <p>The Lookout Mountain Battlefield Visitor Center and Point Park would continue to serve as the primary locations for visitor interpretation. The visitor center would continue to house interpretive exhibits, including the large 1874 James Walker painting, <i>The Battle Above the Clouds</i>, and a cooperating association bookstore. Educational programs would be offered throughout the year, and ranger-led tours at Point Park and Cravens House would be offered seasonally. Interpretive signs are currently in place at Point Park, Cravens House, and Sunset Rock.</p> <p>No visitor access (or very limited access) would be available to many of the recently acquired and preserved areas of the battlefield (e.g., Tyndale Hill, Bald Hill, Geary’s Crossing [formerly Wauhatchie Site 4], Smith Hill [formerly Wauhatchie Site 3], and the New York Monument [formerly Wauhatchie Site 2]). Wauhatchie Site 1 would be incorporated in the Lookout Mountain Battlefield unit and public access to the site would continue.</p> <p>All commemorative features (monuments, markers, tablets) would remain and be preserved. Current vegetation management at selected areas at Point Park and the Cravens House area would continue to protect historic viewsheds. The current level of natural resource management would continue for Lookout Mountain Battlefield and the new lands.</p> <p>Visitors would continue to access the Lookout Mountain Battlefield primarily by vehicle, the Incline Railway, and by foot. The present type and level of recreational visitor activities would continue.</p> <p>The park would review existing right-of-way permits for Lookout Mountain Battlefield and would renew, amend, or convert other documents to right-of-way permits for existing utilities.</p>	<p>Alternative B emphasizes opportunities for the national military park to address and resolve issues regarding management of newly acquired lands, protection of park resources, improvements to visitor experience, and opportunities to access the improvements to and within the battlefield. Improved access and interpretation of newly acquired lands would enable the park to better relate the history of the battles of Lookout Mountain and Missionary Ridge. Key vantage points would be developed as new interpretive sites from which visitors could gain a deeper understanding of those battles.</p> <p>New public access and interpretation would be provided at Tyndale Hill, Bald Hill, the Confederate Defense site, and the Chattanooga Valley Overlook (site of the former Pan-O-Ram Club). A limited auto tour would be developed for the battlefield offering a succession of sites to visit with associated transportation improvements (e.g., turnoffs, small parking lots, additional road access). Viewsheds would be enhanced from several points: Point Park, Cravens House, Tyndale Hill, and the Chattanooga Valley Overlook. Trees and vegetation would be selectively removed to improve the views of adjacent battlefields.</p> <p>Cultural landscape improvements would be completed in specific areas to allow visitors to see the battlefields in a similar condition as they appeared during the Civil War, particularly in the Cravens House area. Cultural landscape report recommendations would be selectively implemented. Encroaching vegetation and nonnative/invasive plants would be controlled via mechanical removal at critical locations to reduce fuel loads, control the spread of nonnative vegetation, and maintain cultural landscapes and viewsheds. The park would pursue partnership opportunities to protect land outside park boundaries containing key battlefield areas.</p>	<p>Alternative C addresses the same opportunities and issues as alternative B and incorporates many of the same proposed actions. However, this alternative presents an expanded range of proposals such as pursuing partnership opportunities and connecting to regional greenways. Interpretation and public access would be enhanced to better relate the history of the battles of Lookout Mountain and Missionary Ridge, with an emphasis on slightly less development, but similar levels of access to sites.</p> <p>Expanded public access to park lands would allow visitors to experience a more comprehensive vision of the battles of Lookout Mountain and Missionary Ridge from multiple vantage points. Key elements contributing to this approach include new public access and interpretation north of Lookout Mountain, an extended auto tour of the battlefield (with associated transportation improvements), new parking areas and turnouts for visitor access and additional connections to the regional trail system.</p> <p>Viewsheds would be enhanced from multiple points: Point Park, Cravens House, Bald Hill, Tyndale Hill, the Confederate Defense Site, and the Chattanooga Valley Overlook. Viewshed enhancement would include selected tree removal to allow better views of the adjacent battlefields. Thinning and tree removal would be slightly more extensive than under alternatives A or B.</p> <p>Cultural landscape improvements would be completed in specific areas to allow visitors to see a landscape similar to what existed during the Civil War, especially in the Cravens House area. Cultural landscape report recommendations would be implemented. The park would pursue partnership opportunities to protect land outside park boundaries where there are key battlefield areas.</p> <p>Visitors would have increased access by vehicle and trails to new sites within the battlefield, including Tyndale Hill, Bald Hill, Chattanooga Valley Overlook, and the Confederate Defense Site.</p>
<b>Point Park / Lookout Mountain Battlefield Visitor Center</b>	<p>Limited free parking would continue to be provided at the Lookout Mountain Battlefield Visitor Center. Town of Lookout Mountain metered street parking would also continue to be provided adjacent to the visitor center, including parking for buses and RVs. Picnic tables would be added to the lawn area on the northwest side of the visitor center.</p> <p>Park staff would continue to clear underbrush and manage vegetation growth at Point Park to maintain selected views. Permanent exhibits for the Ochs Museum would be developed and installed.</p>	<p>In addition to the actions identified in alternative A, the former restroom building and ranger/residential quarters in Point Park would be removed. The storage shed in the Lookout Mountain Battlefield Visitor Center park lot would continue to be used to support maintenance operations. Most maintenance storage staging would be accommodated at the Chickamauga Battlefield maintenance facility.</p>	<p>Same as alternative B.</p>
<b>Cravens House</b>	<p>The Cravens House would continue to be preserved and managed as a historic house museum with limited seasonal hours of operation. The kitchen/dairy building would be preserved and stabilized. Two small parking lots would remain, which currently provide visitor parking at Cravens House.</p> <p>The exteriors of the nearby Williams House and its associated outbuildings would also be preserved but maintained at minimal treatment levels. Two storage sheds adjacent to the Williams House would be retained for grounds maintenance and equipment storage. The driveway behind the Williams House</p>	<p>The visitor experience at Cravens House would be enhanced by rehabilitation of the historic landscape. Visitors would view a scene similar to that which existed at the time of the battle in 1863. In conformance with recommended treatments provided in the historic structure report for Cravens House, the exteriors of the house and the kitchen/dairy building would be preserved and restored. Interior features and finishes would be preserved and stabilized, but the house would not be open for public visitation. Interior security and fire alarms would be retained. Furnishings would be removed from the house for storage as part of the park’s museum collection, or would be deaccessioned if not identified in the park’s scope</p>	<p>In addition to the actions and preservation treatments proposed under alternative B, the Cravens House would be managed as a seasonally staffed visitor contact station where visitor educational and interpretive opportunities would be provided. NPS staff would lead interpretive tours of the adjoining battlefield and commemorative features of the Cravens House cultural landscape.</p> <p>The interior of the Cravens House would be rehabilitated and the first floor adaptively used as a visitor contact station. Although climate control systems</p>

TABLE 4. SUMMARY OF LOOKOUT MOUNTAIN BATTLEFIELD ALTERNATIVES

Park Area Resource Management Opportunities	Alternative A (no action)	Alternative B	Alternative C (preferred)
	garage would remain to provide administrative access.	<p>of collection statement for retention.</p> <p>Based on treatments recommended in the cultural landscape report, the historic character of the Cravens House grounds and agricultural lands would be partially rehabilitated, and viewsheds contributing to the significance of the site would be enhanced for interpretation. Trees and vegetation encroaching on lower portions of the site and formerly open areas would be selectively removed to approximate the appearance of the historic landscape.</p> <p>Noncontributing structures and elements would be removed, including the caretaker’s cabin, the nearby Williams House, and it associated outbuildings (garage, storage sheds), and service driveway. The Williams House site would be restored with native plant species.</p>	<p>would not be installed, other systems and modifications (e.g., electrical system, wheelchair-accessible ramp to the porch and first floor) would be installed or upgraded in a manner that preserves the historic character and features of the house. Existing house furnishings would be removed for storage as part of the park’s museum collection, or would be deaccessioned if not identified in the park’s scope of collection statement for retention. Interior interpretive exhibits would be developed and installed.</p> <p>The parking area at Cravens House would be removed and the cultural landscape restored in that area. A 30-vehicle parking area would be developed at the Williams property. The entry and service drives would be reconfigured and expanded as necessary to accommodate vehicle traffic. Public restrooms would be placed near the parking area. All new facilities and parking areas would be sited and/or screened to minimize intrusion on the historic scene. Utility lines that obscure historic views would be placed underground or relocated.</p> <p>Particular areas of the Cravens House cultural landscape would be rehabilitated, restored, and/or partially reconstructed based on CLR recommendations. Included among the recommended site treatments are the removal of nonnative vegetation; limited replanting of the former orchard to approximate its appearance during the 1863 battle period; removal of encroaching wooded areas to enhance viewsheds; removal of noncontributing structures and site elements (e.g., caretaker’s house; Williams House, garage, and associated features; nonhistoric sidewalks; stone wall along the Cravens House driveway; the brick sidewalk and associated flagstone plaza).</p>
Cummings Bottom and Additional Lands	The Cummings Bottom area (including Tyndale Hill, Smith Hill, and Bald Hill) would remain gated, with no public access provided. There would be no interpretation of site resources and only limited resource patrols. No visitor parking would be available at Tyndale Hill, Bald Hill, Smith Hill, the Chattanooga Valley Overlook site, or at the Confederate Defense Site. No facility improvements are anticipated for the Chattanooga Valley Overlook site, the Confederate Defense Site, Geary’s Crossing, or Jackson Gap.	<p>The park would expand interpretation of the Lookout Mountain Battlefield, incorporating recently acquired lands and associated expansive and instructive vantage points. Vehicle access to Tyndale Hill, Bald Hill, and the Chattanooga Valley Overlook would be provided. New wayside exhibits would be placed at selected sites including Tyndale Hill (a unique vantage point for relating the events of the Battle of Lookout Mountain) and the Chattanooga Valley Overlook (an important vantage point for interpreting the Battle of Missionary Ridge).The National Park Service would survey and mark boundaries to prevent the encroachment of unauthorized development on the new lands.</p> <p>Interpretation and access to the Cummings Bottom area (including Tyndale Hill, Smith Hill, and Bald Hill) would be provided through scheduled tours although the area would be closed and gated during nonvisitation and nighttime hours. Maintenance of the sites would be scheduled on an as-needed basis to accommodate tours. Limited NPS resource patrols would be conducted.</p> <p><b>Tyndale Hill</b> – A paved road (1,200 feet long) would be constructed to the top of Tyndale Hill, with a paved 10-space parking area at the crest of the hill. Wayside exhibits and a viewing area at the top of the hill would allow visitors to gain perspective of the battles. A paved pedestrian trail (400 feet long) would be developed from the parking area to the viewing platform. A vault toilet would be installed.</p> <p><b>Bald Hill</b> – A pedestrian access trail (about 800 feet long) would be constructed to allow access to Bald Hill and the “Walker painting perspective site.” A gravel turnoff area for five vehicles would be developed at the base of the hill, and about</p>	<p>Self-guided and scheduled interpretation and access to the Cummings Bottom area (including Tyndale Hill, Smith Hill, and Bald Hill) would be provided seasonally during daylight hours. A more developed visitor experience would be provided at Tyndale Hill and Bald Hill. NPS staff would conduct routine patrols and maintenance of the area’s sites, including daily opening and closing of gates. The Cummings Bottom area would be included in an interpretive auto tour.</p> <p><b>Tyndale Hill</b> – A small (four to five space) gravel parking area would be developed at the base of the hill. A new pedestrian trail (about 1,600 feet long) would be constructed to the crest of the hill, where wayside exhibits and a paved viewing area would be developed. Visitors would have opportunities for self-guided tours. Viewsheds would be improved by selective vegetation clearing.</p> <p><b>Bald Hill</b> – Expanded vehicle access to Bald Hill on Parker Lane would be pursued in coordination with the City of Chattanooga and other entities having legal access. A small (five vehicle) parking area would be constructed</p>

TABLE 4. SUMMARY OF LOOKOUT MOUNTAIN BATTLEFIELD ALTERNATIVES

Park Area Resource Management Opportunities	Alternative A (no action)	Alternative B	Alternative C (preferred)
		1,000 feet of Parker Lane would be improved in cooperation with local government agencies.  <b>Smith Hill</b> – No changes to existing management would be made.	below the hill near Frierson’s Cemetery. About 1,000 feet of gravel road between Parker Lane and Frierson’s Cemetery would be improved. A new pedestrian trail (about 800 feet long) would be constructed to the “Walker painting perspective site” on Bald Hill. All visitation would be led by NPS interpretive rangers. Selective vegetation clearing would be conducted to improve viewsheds.  <b>Smith Hill</b> – No improvements or additions to the site would be made, although limited NPS guided tours would be provided in conjunction with Bald Hill tours.
<b>Trails</b>	Recreational use of the battlefield trails would continue (hiking, biking, and horseback riding where allowed) with connections to the larger trail network provided by the City of Chattanooga, Hamilton County, Lookout Mountain Conservancy, and the Chattanooga Arboretum and Nature Center. Existing trails would be maintained that connect main visitor attractions and extend to the southeastern and southwestern portions of the park.	The park would work with partners to expand recreational opportunities outside the historic battlefield, connecting existing trails with regional trail systems such as the riverwalk extension to St. Elmo and the Guild Trail, trail connections to Lookout Mountain Conservancy property and trail systems, and trail connections to the Great Eastern Trail.	The park would consider providing greater recreational opportunities outside the historic battlefield, including allowing partners to connect existing trails with regional trail systems such as the riverwalk extension to St. Elmo and the Guild Trail; trail connections to Lookout Mountain Conservancy property and trail systems; and trail connections to the Great Eastern Trail.  The park would work with local governments, partners, and adjacent landowners on development of a comprehensive regional trail plan for Lookout Mountain that includes existing NPS lands and trails and proposed trails, trail uses, and trail connections to other lands outside NPS management.
<b>Sanders Road Picnic Area</b>	The Sanders Road picnic area would continue to be available for public use although three restroom buildings would remain closed.	Two restroom buildings would be removed and one restroom building retained for maintenance use and equipment storage. The site would remain a picnic area.	Three existing restroom buildings would be removed and the landscape rehabilitated. A vault toilet would be installed. The number of picnic tables would be reduced.
<b>Sunset Rock</b>	No changes to existing structures, uses or park management of this area would occur. Rock climbing would continue to be allowed in this area.	No changes to existing structures, uses or park management of this area would occur. Rock climbing would continue to be allowed in this area, but park staff would monitor and evaluate the effects of climbing activities on natural resources.	Same as alternative B.
<b>Eagle’s Nest</b>	No changes to existing structures, uses or park management of this area would occur. Rock rappelling would continue to be allowed in this area.	No changes to existing uses or park management of this area would occur. Rock rappelling would continue to be allowed in this area.	Same as alternative B.
<b>Chattanooga Valley Overlook</b>	No changes.	General site improvements would be made to accommodate parking and wayside exhibits. A small (seven vehicle) paved parking area would be constructed at the site. Vegetation management would include selective tree removal to allow views of Missionary Ridge.	An expanded trailhead parking area (15 vehicles) would be developed at the Chattanooga Valley Overlook site providing connection to the regional trail system. Vegetation management at the site would include selective tree removal to allow views of Missionary Ridge.
<b>Confederate Defense Site</b>	No changes.	Two new wayside exhibits would be installed.	Two new wayside exhibits would be installed. Selective vegetation clearing would be conducted to improve the viewshed.
<b>Geary’s Crossing</b>	No changes.	Water trail access to Lookout Creek could be provided under a partnership agreement with the Chattanooga Arboretum and Nature Center, using the existing launch site and support facility. NPS property on the west side of Lookout Creek (Geary’s Crossing) would only be interpreted from the water.	Same as alternative B.
<b>Jackson Gap</b>	No changes.	Same as alternative A. (No changes to existing management.)	Park managers would open the trail from Jackson Gap (on park land) to Jackson Spring (on private property) to bicycle users once development and maintenance agreements are reached with private property owners (Covenant College) and partner groups. Ochs Gateway would remain a foot trail with no mountain bike access.  Trail improvements would be made to Jackson Gap, Jackson Spring (private property), and John Smartt trails to connect bicycle users to the Upper Truck Trail. To connect with regional multiuse trails, portions of the John Smartt Trail and Jackson Gap Trail would be designated as multiuse for hiking and mountain biking. Signage would be placed on park property, and parking would be provided on private property by agreement.



TABLE 4. SUMMARY OF LOOKOUT MOUNTAIN BATTLEFIELD ALTERNATIVES

Park Area Resource Management Opportunities		Alternative A (no action)	Alternative B	Alternative C (preferred)
Auto Tour		No changes.	An auto tour linking sites and vantage points important to the interpretation of the Battle of Lookout Mountain would be developed. The auto tour would provide self-guided vehicle access to selected sites where small interpretive signs would be placed.	An auto tour linking sites and vantage points important to the interpretation of the Battle of Lookout Mountain would be developed. The auto tour would provide self-guided vehicle access to selected sites where small interpretive signs would be placed. An expanded range of tour stops would be offered under this alternative.
Natural Resources (general)		Efforts would continue, as staff and funding permit, to inventory, monitor, and control as much as possible the spread of nonnative invasive plants, such as kudzu, on Lookout Mountain.	Information is incomplete on vegetation and wildlife in portions of Lookout Mountain, particularly the Georgia side of the unit. Surveys would be conducted in those areas to fill in the data gaps.  Efforts would continue, as staff and funding permit, to inventory, monitor, and control as much as possible the spread of nonnative invasive plants, such as kudzu, on Lookout Mountain.	Same as alternative B.
Partnerships Preservation Opportunities		The park would pursue opportunities to preserve additional portions of Lookout Mountain Battlefield in accordance with the Land Protection Plan (1993). Through Public Law 73-207, the National Park Service has the authority to acquire lands within 1 mile of the authorized 1934 boundary comprising the Lookout Mountain Battlefield unit.  Partnerships would continue with the Friends of Chickamauga and Chattanooga National Military Park, Friends of Moccasin Bend National Park, the Lookout Mountain Conservancy, City of Chattanooga, Hamilton County, and Town of Lookout Mountain. Informal partnerships with trail groups would also continue	The park would pursue opportunities to acquire or otherwise preserve land (e.g., scenic easements) to protect core battlefield areas. An updated land protection plan would be developed.  An expanded array of partnership agreements with neighboring organizations such as the Chattanooga Arboretum and Nature Center, Lookout Mountain Conservancy, the City of Chattanooga, and various conservation organizations would be sought to assist the park in carrying out its mission.	Same as alternative B.
NPS Staffing		The current number of FTE employees is 29.59 permanent and 7.65 seasonal FTE employees. Authorized staff levels would not change from existing levels.	No additional FTE employees are anticipated for interpretation of the Cravens House. There would be a decrease in FTE employee costs for maintenance of the Cravens House interior and curatorial upkeep of historic furnishings. One additional FTE employee (law enforcement officer) would be requested to assist with patrol of new lands.	There would be an increase in FTE employees for maintenance of interior exhibits and support costs for volunteers (VIPs) at the Cravens House. Existing FTE employees for site interpretation and an increased use of volunteers to seasonally operate Cravens House would be required.  One additional FTE employee (law enforcement officer) would be requested to assist with patrol of new lands. Additional FTE employees would be requested to fill the positions of maintenance worker (one position to maintain new lands on Lookout Mountain) and interpretation (one position to develop wayside exhibits and provide interpretive tours of new lands).

**TABLE 5. SUMMARY OF KEY IMPACTS OF THE ALTERNATIVES**

Topic	Alternative A (no action)	Alternative B	Alternative C (preferred)
<b>Archeological Resources</b>	Long-term or permanent, localized, beneficial and minor adverse impacts on archeological resources would occur from ongoing resource management, development activities, visitor use, and other factors. There would also be long-term or permanent, minor to moderate adverse cumulative impacts on archeological resources from implementation of the no-action alternative in conjunction with other past, present, or reasonably foreseeable actions.	Long-term or permanent, localized, beneficial and minor adverse impacts on archeological resources would occur from ongoing resource management, development activities, visitor use, and other factors. There would also be long-term or permanent, minor to moderate adverse cumulative impacts on archeological resources from implementation of alternative B in conjunction with other past, present, or reasonably foreseeable actions.	Long-term or permanent, localized, beneficial and minor adverse impacts on archeological resources would occur from ongoing resource management, development activities, visitor use, and other factors. There would also be long-term or permanent, minor to moderate adverse cumulative impacts on archeological resources from implementation of alternative C in conjunction with other past, present, or reasonably foreseeable actions.
<b>Historic Sites, Structures, and Cultural Landscapes</b>	Long-term localized beneficial and negligible to minor adverse impacts on historic sites, structures, and cultural landscape features would occur from ongoing visitor use, routine park operations and interpretive activities, preservation undertakings, and other factors. There would also be long-term beneficial and minor to moderate adverse cumulative impacts on historic sites, structures, and cultural landscape features from implementation of alternative A in conjunction with other past, present, or reasonably foreseeable actions.	Long-term localized beneficial and negligible to minor adverse impacts on historic sites, structures, and cultural landscape features would occur from ongoing visitor use, routine park operations and interpretive activities, preservation undertakings, and other factors. Adverse impacts would result from the planned removal of two CCC-constructed buildings at Point Park, the Williams House, and other historic buildings. There would also be long-term beneficial and minor to moderate adverse cumulative impacts on historic sites, structures, and cultural landscape features from implementation of alternative B in conjunction with other past, present, or reasonably foreseeable actions.	Long-term localized beneficial and negligible to minor adverse impacts on historic sites, structures, and cultural landscape features would occur from ongoing visitor use, routine park operations and interpretive activities, preservation undertakings, and other factors. Adverse impacts would result from the planned removal of two CCC-constructed buildings at Point Park, the Williams House, and other historic buildings. There would also be long-term beneficial and minor to moderate adverse cumulative impacts on historic sites, structures, and cultural landscape features from implementation of alternative C in conjunction with other past, present, or reasonably foreseeable actions.

**TABLE 5. SUMMARY OF KEY IMPACTS OF THE ALTERNATIVES**

Topic	Alternative A (no action)	Alternative B	Alternative C (preferred)
<b>Soils</b>	Alternative A would have both beneficial and adverse effects on soils in Lookout Mountain Battlefield. The removal of structures in Point Park would have a localized minor beneficial effect on soils in this area. Visitor use would continue to result in a long-term minor adverse impact on soils due to visitors eroding soils on steep trails in localized areas. When these effects are added to past, present, and future likely actions in the region, there would be a long-term moderate cumulative impact on soils—although alternative A would add a very small increment to the overall impact.	Most of the soils in the Lookout Mountain Battlefield unit would not be affected by the actions proposed in alternative B. Alternative B would have some beneficial effects on soils due to the removal of structures in several areas. But overall, there would be a long-term minor to moderate adverse impact on soils in localized areas due to proposed new developments, primarily on Tyndall and Bald hills and due to increased numbers of visitors eroding soils on steep trails in localized areas. When these effects are added to past, present, and future likely actions in the region, there would be a long-term, moderate, cumulative impact on soils—although alternative B would add a very small increment to the overall impact.	Most of the soils in the Lookout Mountain Battlefield unit would not be affected by the actions proposed in alternative C. Alternative C would have some beneficial effects on soils due to the removal of structures in a few areas. Overall, there would be a long-term, moderate, adverse impact on soils in localized areas due to proposed new developments primarily on Tyndall and Bald hills and the Chattanooga Valley Overlook and due to increased numbers of visitors eroding soils on steep trails in localized areas. When these effects are added to past, present, and future likely actions in the region, there would be a long-term, moderate, cumulative impact on soils—although alternative C would add a very small increment to the overall impact.
<b>Vegetation</b>	Most of the native vegetation and vegetation communities in the Lookout Mountain Battlefield unit would not be affected by new NPS actions under alternative A. There would continue to be a long-term, negligible to minor, adverse impact on native vegetation due to ongoing maintenance activities to control vegetation and visitor use, which would trample/crush vegetation in localized areas. When these impacts are added to past, present, and future effects of actions outside the park, there would be a long-term, major, adverse impact on native vegetation in the area. However, alternative A would add a very small increment to the overall adverse cumulative impact.	Most of the native vegetation and vegetation communities in the Lookout Mountain Battlefield unit would not be affected by NPS actions under alternative B. The alternative would have both beneficial and adverse effects on vegetation in the park unit. The alternative would result in a long-term beneficial impact due to the restoration and reseedling of native plants around Cravens House and the Sanders Road picnic area. However, construction of viewing areas, parking areas, trails, and restrooms (primarily on Tyndall Hill and Bald Hill), would result in the loss or alteration of vegetation in several areas, along with clearing and thinning vegetation for viewpoints. Continued visitor use also would trample/crush some	Most of the native vegetation and vegetation communities in the Lookout Mountain Battlefield unit would not be affected by NPS actions under alternative C. The alternative would have both beneficial and adverse effects on vegetation in the park unit. The alternative would result in a long-term beneficial impact due to the restoration and reseedling of native plants in the Cravens House, Williams property, and Sanders Road picnic area. However, the construction of viewing areas, parking areas, trails, and restrooms (primarily on Tyndall Hill, Chattanooga Valley Overlook, and Bald Hill), would result in the loss or alteration of vegetation in several areas, along with clearing and thinning vegetation for viewpoints.

TABLE 5. SUMMARY OF KEY IMPACTS OF THE ALTERNATIVES

Topic	Alternative A (no action)	Alternative B	Alternative C (preferred)
		vegetation in popular use areas. Overall, the actions in alternative B would have a long-term, minor, adverse impact on native vegetation in the Lookout Mountain Battlefield unit. When the adverse and beneficial impacts of alternative B are added to past, present, and future effects of actions outside the park, there would be a long-term, major, adverse cumulative impact on native vegetation in the area. However, alternative B would add a very small increment to the overall adverse cumulative impact.	Continued visitor use would trample/crush some vegetation in popular use areas. Overall, the actions in alternative C would have a long-term, minor, adverse impact on native vegetation on Lookout Mountain Battlefield. When the adverse and beneficial impacts of alternative C are added to past, present, and future effects of actions outside the park, there would be a long-term, major, adverse cumulative impact on native vegetation in the area. However, alternative C would add a very small increment to the overall adverse cumulative impact.
<b>Federal and State Listed Species</b>	Under alternative A there would continue to be the potential for inadvertent loss of individual large-flowered skullcap plants due to hikers going off trail and trampling plants, but with continued monitoring and education and other appropriate mitigation measures adverse impacts to the plant populations in the Lookout Mountain Battlefield unit would be expected to be negligible and long term. Under section 7 of the Endangered Species Act, the overall determination of effect would be may affect, not likely to adversely affect. When the effects of past, present, and future actions are added to the effects of alternative A, there would be a major long-term, adverse, cumulative impact on the large-flowered skullcap, although alternative A would add a very small increment to the overall cumulative impact. Alternative A would have no effects and no cumulative	Under alternative B, continued monitoring, visitor education and other appropriate mitigation measures should largely avoid impacts to the large-flowered skullcap populations in the Lookout Mountain Battlefield unit. There would be the potential for some negligible, long-term, adverse impacts to large-flowered skullcap plants due to the construction of new trails on Bald Hill and Tyndall Hill. Likewise, the removal of trees for new developments and viewing areas under alternative B could affect the Indiana bat and northern long-eared bat, which may use the area. With appropriate monitoring and mitigation measures, adverse impacts to the two bat species should be negligible and short-term. Under section 7 of the Endangered Species Act, the overall determination of effect on the large-flowered skullcap, Indiana bat, and northern long-eared bat would be may affect, not likely to adversely affect. When the effects of past,	Under alternative C, continued monitoring, visitor education, and other appropriate mitigation measures should largely avoid impacts to populations of the large-flowered skullcap in the Lookout Mountain Battlefield unit. There would be the potential for some negligible, long-term, adverse impacts to large-flowered skullcap plants due to the construction of new trails on Bald Hill and Tyndall Hill. Likewise, the removal of trees for new developments and viewing areas under alternative C could affect the Indiana bat and northern long-eared bat, which may use the area. But with appropriate monitoring and mitigation measures, adverse impacts to the two bat species should be negligible and short-term. Under section 7 of the Endangered Species Act, the overall determination of effect on the large-flowered skullcap, Indiana bat, and northern long-eared bat would be may affect, not likely to adversely affect.

**TABLE 5. SUMMARY OF KEY IMPACTS OF THE ALTERNATIVES**

Topic	Alternative A (no action)	Alternative B	Alternative C (preferred)
	impacts on the Indiana bat and northern long-eared bat.	present, and future actions are added to the effects of alternative B, there would be a major, long-term, adverse cumulative impact on the large-flowered skullcap, and a moderate to major, long-term, adverse impact on the Indiana bat and northern long-eared bat, although alternative B would add a very small increment to the overall cumulative impact.	When the effects of past, present, and future actions are added to the effects of alternative C, there would be a major, long-term, adverse cumulative impact on the large-flowered skullcap, and a moderate to major, long-term, adverse impact on the Indiana bat and northern long-eared bat, although alternative C would add a very small increment to the overall cumulative impact.
<b>Visitor Experience and Safety</b>	Long-term, minor, beneficial impacts resulting from existing access to the battlefield, minimal opportunities for accessibility, good opportunities to understand the important stories of the battlefield, good level of recreational opportunities, and a high level of visitor safety. There would also be long-term, minor, beneficial, cumulative impacts on visitor experience from implementation of alternative A in conjunction with other past, present, or reasonably foreseeable actions.	Alternative B would result in long-term, moderate, beneficial impacts to visitor experience and safety due to opening the new park lands to the public; providing new accessible trails, parking areas, and programs; new recreational opportunities, and both additional visitor safety risks and mitigation measures. There would also be long-term, moderate, beneficial, cumulative impacts on visitor experience from implementation of alternative B in conjunction with other past, present, or reasonably foreseeable actions.	Alternative C would result in long-term, moderate, beneficial impacts to visitor experience and safety due to opening new lands to the public and the associated interpretive and accessibility enhancements and expansion of recreational uses. Related visitor safety concerns would largely be mitigated through various means. There would also be long-term, moderate, beneficial, cumulative impacts on visitor experience from implementation of alternative B in conjunction with other past, present, or reasonably foreseeable actions.
<b>Park Operations</b>	Short-term and long-term, localized, negligible to moderate, adverse, and beneficial impacts on park operations would occur from ongoing and proposed park projects, ongoing maintenance, administrative / visitor use activities, and other factors. There would also be long-term, minor, adverse, and beneficial cumulative impacts on park operations from implementation of alternative A in conjunction with other past, present, or reasonably foreseeable actions.	Short-term and long-term, localized, minor to moderate, adverse, and beneficial impacts on park operations would occur from ongoing and proposed park projects, ongoing maintenance, administrative / visitor use activities, and other factors. There would also be long-term, minor, adverse, and beneficial cumulative impacts on park operations from implementation of alternative B in conjunction with other past, present, or reasonably foreseeable actions.	Short-term and long-term, localized, minor to moderate, adverse, and beneficial impacts on park operations would occur from ongoing and proposed park projects, ongoing maintenance, administrative / visitor use activities, and other factors. There would also be long-term, minor, adverse, and beneficial cumulative impacts on park operations from implementation of alternative C in conjunction with other past, present, or reasonably foreseeable actions.

## **ALTERNATIVES AND ACTIONS CONSIDERED BUT DISMISSED FROM DETAILED EVALUATION**

In developing alternatives for this GMP Amendment, a number of actions were considered by the NPS planning team that were eliminated from further detailed evaluation because they did not meet the stated objectives of the general management plan to a large degree, could not be implemented for technical or logistical reasons, were not consistent with the purpose or significance of the park, or were outside the scope of this GMP planning effort. The actions and the reasons why they were dismissed are described below.

### **VISITOR ACCESS TO OSTERHAUS'S, GROCE'S, AND GEARY'S CROSSINGS**

The planning team considered providing visitor access and interpretation at Osterhaus's, Groce's, and Geary's crossings. These ideas were dismissed because providing access would be technically and economically infeasible. The limited space is not adequate to provide parking or interpretive installations. These crossings could be interpreted through water tours, if provided by a partner organization.

### **MAINTENANCE FACILITY DEVELOPED OR LEASED OUTSIDE**

### **PARK BOUNDARIES IN THE VICINITY OF TYNDALE HILL**

The planning team considered moving the maintenance facility outside park boundaries to an area near Tyndale Hill. If this occurred, all maintenance functions would be removed from the Point Park area and Lookout Mountain Battlefield Visitor Center, which includes two small storage sheds. This alternative was dismissed because the park determined that the existing maintenance facilities at Chickamauga Battlefield are adequate for efficient functions. This alternative would duplicate the less expensive alternative of continued maintenance function at only the Chickamauga Battlefield facility.

### **USE THE RANGER RESIDENCE AT CRAVENS HOUSE FOR ADMINISTRATIVE SPACE**

The planning team considered adaptive reuse for the former ranger residence, but determined that the residence is a severe impact on the cultural landscape of Cravens House. Alternative A would keep the residence as it is, and in alternatives B and C, the ranger residence would be removed.





# CHAPTER 3: AFFECTED ENVIRONMENT





## INTRODUCTION

Chapter 3 describes the existing environment of the Lookout Mountain Battlefield unit of Chickamauga and Chattanooga National Military Park and the surrounding region. It is focused on key natural and cultural resources, visitor use and experience, and park operations that have the potential to be affected if any of the alternatives were implemented. Some features, such as threatened and endangered species, are discussed because they provide context or must be considered in an environmental assessment or impact statement. The

conditions described in this chapter establish the baseline for “Chapter Four: Environmental Consequences.”

This chapter discusses the impact topics that are analyzed in detail in this GMP Amendment. Other impact topics that were considered but not retained for analysis are listed and described in chapter 1. The discussion of the dismissed impact topics includes the rationale for why the topics were not retained for detailed analysis.

## CULTURAL RESOURCES

### HISTORIC SITES, STRUCTURES, AND CULTURAL LANDSCAPES

#### Cravens House

The Cravens House site, situated on the northern flank of Lookout Mountain below Point Park, is an important component of the Lookout Mountain Battlefield unit of Chickamauga and Chattanooga National Military Park. Robert Cravens (1805–1886), a prominent Chattanooga industrialist, constructed his family residence at the site about 1856. He named the property “Alta Vista” in recognition of the panoramic views from the site. The relatively level terrace on the mountainside afforded a scenic setting for Cravens’ wood frame house, dairy farm, and orchard. In addition to the main house, other improvements consisted of several outbuildings including a stone kitchen/dairy, roads, a cherry and peach tree orchard, vegetable garden, and row crop field (NPS 2013a).

On November 24, 1863, the Cravens site became the scene of some of the heaviest fighting of the Battle of Lookout Mountain when Union troops overran Confederate defenders who had held the strategic site for the preceding two months during the siege of Chattanooga. Confederate troops under the command of Generals Edward C. Walthall and John Bratton were bivouacked on the level area around the Cravens farm. They constructed breastworks of logs, earth, and stacked rock, and the site was further protected by several large limestone boulders. Other Confederate defenders held positions on the east and west flanks of Lookout Mountain and along the mountain’s base. At the summit, Confederate forces constructed an observation tower and signal station at Point Lookout. Confederate positions faced Union artillery across the Tennessee River at Moccasin Bend under the

command of General Walter C. Whitaker. Since October 5th, both sides had exchanged artillery fire across the river. The effective range of Union artillery was capable of reaching the summit of Lookout Mountain and prevented the easy movement of Confederate troops along roads crossing the northern face of the mountain (NPS 2013a).

The modest white Cravens House (then one story) was highly visible in a clearing below the mountain’s dark sandstone palisades. It became an obvious target for Union artillery and was heavily damaged by shelling and rifle fire on November 24, although Cravens and his family evacuated before destruction of their home. Union troops led by General John W. Geary had earlier crossed Lookout Creek and overtaken Confederate defenses on the west side of Lookout Mountain. They continued their advance and drove the defenders from the Cravens House to a position a short distance to the east along the edge of the terrace. There, the Confederates were able to temporarily check the Union advance, but later that day all Confederate troops were withdrawn from Lookout Mountain under orders from General Bragg. The following day (November 25), the Union assault on Missionary Ridge ensued and the Confederate Army of Tennessee was ultimately forced to retreat south into Georgia (NPS 2013a).

In ruins following the battle, Cravens House was further scavenged by soldiers, war correspondents, and others as a source of fuel and battlefield mementos. The stone kitchen/dairy building largely escaped damage during the battle. Robert Cravens revived his business fortunes after the war. He reconstructed his house about 1866 on the foundation of the earlier structure. A barn and other outbuildings were reestablished, along with the orchard and farm fields. Upon Robert Cravens death in 1886, his children built other homes on the property (no longer

standing) and later subdivided the farm and sold it as residential lots (NPS 2013a).

In 1896, following the establishment of Chickamauga and Chattanooga National Military Park in 1890, park commissioners purchased two tracts totaling 82 acres from Cravens' heir, Mrs. N. J. McMillan. Subsequent NPS land acquisitions increased the size of the site to 91 acres. During the early part of the military park's commemorative period (between approximately the late 1890s and 1920) several granite markers, monuments, interpretive tablets, and gun carriages were placed at the Cravens House and throughout the park marking the sites of various state military units that fought during the battle. The Ohio State Monument (dedicated in 1917) was among the last to be placed at the Cravens site. Following transfer of the park's administration to the National Park Service in 1933, the Civilian Conservation Corps (CCC) undertook various site improvements on Lookout Mountain including the construction of pedestrian and horse trails (e.g., the trail constructed from Cravens House to Point Park), stone retaining walls, and a parking area at Cravens House (NPS 2013a).

The National Park Service used the Cravens House for staff housing after 1934, but discontinued this use following World War II and closed it to the public because of its dilapidated condition. The historical importance of the house was questioned by some NPS officials because it was reconstructed after the battle. NPS proposals to demolish the house met strong resistance from local residents and the Chattanooga preservation community, notably the Chattanooga Chapter of the Association for the Preservation of Tennessee Antiquities (CCAPTA). The association, under a cooperative agreement with the National Park Service, undertook restoration and maintenance of the Cravens House in the mid-1950s with NPS technical assistance. The present appearance and configuration of the house largely reflects the actions of the association in their attempts to restore the

house to its original condition. Substantial portions of the house were removed and other features rearranged to the extent that the present building does not fully resemble the original or post-battle houses. The organization also furnished the house and provided interpretive programs. In the early 1960s, the Garden Club of Lookout Mountain planted trees, shrubs and garden beds, and developed a courtyard at the Cravens House site. Management and interpretation of the property reverted to the National Park Service in the mid-1970s (NPS 2013a; NPS 2012a).

A historic structure report has been prepared for the Cravens House providing detailed documentation of the history of the property, its development and use, and descriptions and condition assessments of the house and other constructed site features. Treatment recommendations provide valuable guidance for planned preservation maintenance, rehabilitation and interpretation of the house and other site structures (NPS 2012a).

### **Cravens House Cultural Landscape**

A cultural landscape report (NPS 2013a) for the Cravens House site identified the cultural landscape as possessing historical integrity associated with two periods of significance: the 1863 Battle of Lookout Mountain and the 1890 to 1942 commemorative period spanning the years between establishment of Chickamauga and Chattanooga National Military Park and the closing of the park's last CCC camp. Buildings and structures contributing to the significance of the landscape include the 1.5 story frame Cravens House (although reconstructed by Robert Cravens after the battle and later altered during the 1950s, the present house is associated with the site's commemorative period of significance). The stone kitchen/dairy building is the only surviving building constructed prior to the battle and it contributes to the Civil War period of significance. The spring house and servant's house, built after the battle, contribute to the

site's commemorative importance despite diminished integrity due to their poor condition. Stone retaining walls built by the War Department and the Civilian Conservation Corps are identified as contributing commemorative landscape features (NPS 2013a).

Other contributing landscape elements include the paths, trails, roads, and parking areas either developed by Robert Cravens or later built and improved by the War Department, Civilian Conservation Corps, and the National Park Service. Among these circulation features, the roadbed of the Chattanooga and Lookout Mountain Railway (in operation from about 1889 to 1899) was later improved by the National Park Service in the 1930s with CCC labor for a portion of the Cravens Terrace and Shingle Road. A CCC-constructed parking area on the west side of the Cravens House, grass pathways, and the Cravens House drive are contributing features. Four trails through the site (the Rifle Pits, Craven House, Mountain Beautiful, and Hardy trails) provide pedestrian access to markers and monuments and are character-defining features of the commemorative landscape. Among the contributing small-scale features are stacked rock Confederate Army rifle pits and memorial monuments (i.e., 35 cast iron markers, 12 granite monuments, and 2 cannon mounted on gun carriages marking artillery positions) (NPS 2013a).

The topography of the Cravens House site remains an important character-defining feature from the battle period, conveying the strategic importance of the terraced site to the Confederate defenses as well as drawing the focused attention of Union forces intent on breaking the siege of Chattanooga. Natural features, such as boulders and rock outcrops used as part of the defenses, contribute to the historic setting at the time of the battle. Although Robert Cravens established an orchard northwest of the house, no Civil War-era vegetation survives at the site. Surviving specimen trees from the 1930s are identified as contributing to the

commemorative period. The composition of the native oak–hickory forest surrounding the site is similar to that existing at the time of the battle, but the forest has encroached on formerly open areas and obscures historic views from the Cravens House. Invasive species (e.g., Chinese privet) have displaced native vegetation in some areas, impacting the visual character of the site and reducing views through understory vegetation. The historic orchard area is presently overgrown with natural forest. Open site areas continue to reflect the general pattern of agricultural land use introduced by Cravens, although these areas have been reduced in size by encroaching forest. The maintenance of open space around the monuments is more in keeping with efforts to maintain the commemorative landscape. Despite the diminished integrity of historic views contributing to the site setting, views and vistas remain character-defining features of the property, particularly those from the Chattanooga Valley toward the Cravens House, the view from Cravens House toward Moccasin Bend, and the view from the Cravens House to the large commemorative New York, Ohio, and Iowa state monuments (NPS 2013a).

Noncontributing site buildings and structures include the caretaker's house (ranger's quarters) built in 1962 northwest of the Cravens House. The Williams House, garage, shed, and other associated features were built between 1928 and 1930 adjacent to and within the viewshed of the Cravens House. Although the Williams House is historic and largely unmodified, it is presently in poor to fair condition and does not contribute to the significance of the Cravens House cultural landscape or that of the larger Chickamauga and Chattanooga National Military Park historic district. The caretaker's house and the Williams House are not presently occupied (NPS 2013a).

The primary landscape treatments recommended in the draft cultural landscape report for the Cravens House include rehabilitation and restoration measures intended to approximate the appearance of

the site during the 1863 and 1890–1942 periods of significance. Among these proposed measures are the eradication of nonnative vegetation and improvements to the existing trail system and military fortifications in the upper and eastern areas of the site; reestablishment of the orchard and removal of encroaching woodland to restore open space in the northwest section of the property; and the removal of various noncontributing structures and site features in the core site area (e.g., the caretaker's cabin / ranger's quarters; the Williams House and outbuildings; and various stone walls and sidewalks placed after the period of significance). Other measures are proposed to rehabilitate the Cravens House, associated outbuildings, and other contributing site features such as trails and retaining walls and to reestablish important views and vistas (NPS 2013a). The primary treatment recommended in the historic structure report for the Cravens House site is preservation in good repair of the exterior and interior of both the Cravens House and the dairy to reflect their current condition (NPS 2012a).

## Point Park

In 1899, the commissioners of the national military park acquired Point Park at the northern summit of Lookout Mountain from private landowners. *New York Times* publisher and former Chattanooga resident Adolph S. Ochs and local attorney Alexander W. Chambliss succeeded in garnering support for transfer of Point Park to the federal government. Interpretive markers and cannon were initially placed at the site. By 1905, the area acquired a more developed appearance with the construction of the existing crenelated stone wall and entrance gate that replicated the form of the USACE insignia. The distinctive arched gateway was flanked by two stone towers. A circular carriage drive with stone-lined ditches was installed along with monuments, additional markers, interpretive guns, and gun carriages. The 95-foot-high New York Peace Memorial, dedicated in 1910, served as Point Park's

central commemorative focus. Additional site improvements were carried out by CCC workers in 1933, including the construction of a visitor comfort station and park ranger / caretaker's quarters. Both national register-listed buildings are identified as contributing to the park's commemorative / development period and are locally significant. The comfort station is a one-story, hipped-roof building with open cornice, exposed rafter ends, weatherboard exterior, and fieldstone foundation. The ranger quarters is a one and one-half story, side-gabled house with weatherboard exterior and fieldstone porch supports, foundation and end chimney (NPS 1986; NPS 1999).

The Adolph Ochs observatory-museum was constructed by the Civilian Conservation Corps at Point Park in 1939 (dedicated in 1940). Funds were generated by a local citizens' group to commemorate Ochs's contributions to the preservation of the battlefield. It was constructed at a promontory overlooking the Tennessee River Valley at the northern end of Lookout Mountain. The two-story, U-shaped building was built of local stone in the NPS rustic style of architecture from the period. A small museum was placed on the second floor with a terrace providing an observation point. The site was linked to the original carriage drive by a circular walkway (NPS 1986).

A cultural landscape inventory of Point Park was completed in 1995. As noted in the report, the designed landscape of Point Park continues to reflect elements of 19th century urban park design with its pattern of circulation, boundary walls, open planting of trees, walls, and the monumental entrance gate. The landscape continues to exhibit integrity associated with the overall spatial organization established by the Chickamauga and Chattanooga National Military Park Commission (NPS 1995b).

The Lookout Mountain Battlefield Visitor Center is in a former souvenir shop across from the formal entrance to Point Park. The visitor center houses the 1874 James Walker



painting (*The Battle Above the Clouds*), a bookstore, and other visitor interpretive exhibits. The visitor center is identified as a noncontributing building lacking historical significance; it was renovated with new and improved exhibits in 2008.

### **Additional Historic Sites**

The following three sites at the northwestern base of Lookout Mountain (Smith Hill, Tyndale Hill, Bald Hill) were included in new lands acquired by Chickamauga and Chattanooga National Military Park in 2008. The sites figured prominently in battle engagements during the October 1863 Battle of Wauhatchie and the November 1863 Battle of Lookout Mountain. The present General Management Plan addresses different interpretive and development options for these sites.

#### **Smith Hill**

Smith Hill is in Lookout Valley between the northwestern end of Lookout Mountain and the Tennessee River. The site was located east of Brown's Ferry Road and is presently bisected by Interstate 24. On the night of October 28–29, 1863, during the Battle of Wauhatchie, Union Army regiments under the command of Colonel Orland Smith (for whom the hill is named) captured the hill from Confederate forces occupying the hill crest. Union troops constructed earthworks and camps along the crest and slopes of Smith Hill following the engagement. During the November 24, 1863, Battle of Lookout Mountain, Union artillery positioned on the hill fired at Confederate troops occupying rifle pits across Lookout Creek. Development has altered the appearance of much of the western face of Smith Hill, although remnants of Civil War trenches and winter hut sites exist on the eastern face. Two commemorative granite monuments were placed on Smith Hill in the 1890s by the state of New York (NPS 1997).

#### **Tyndale Hill**

Tyndale Hill is in Lookout Valley southwest of Smith Hill and west of Brown's Ferry Road. Union troops under the command of General Hector Tyndale (for who the hill is named) captured the hill from Confederate defenders on the night of October 28–29, 1863, and subsequently fortified the crest and slopes. Union artillery positioned at the crest of the hill fired at Confederate positions across Lookout Creek during the November 24th assault on Lookout Mountain. The appearance of Tyndale Hill has been notably altered by excavating operations (NPS 1997).

#### **Bald Hill**

Bald Hill is in Lookout Valley about 0.25 mile southeast of Smith Hill. It was also defended by Confederate forces on the night of October 28–29, 1863, but was taken by Union troops. A Union artillery battery and infantry support were subsequently in position at Bald Hill during the Battle of Lookout Mountain. There is evidence that Union General Joseph Hooker established his headquarters on Bald Hill for at least part of November 24 at the outset of the battle (NPS 1997).

#### **Chattanooga Valley Overlook (former Pan-O-Ram Club)**

This site on the northern slope of Lookout Mountain was originally the site of a hotel and restaurant known as the "Pan-O-Ram Lodge," developed by businessman Leon P. Silberman in 1945. The white stucco hotel had 17 rooms on two levels and a swimming pool. Lodge patrons enjoyed panoramic views of Chattanooga and the Tennessee River valley. A large lighted sign atop the hotel was visible at night from Chattanooga. The Pan-O-Ram was converted from a hotel to a private military officers' club in 1956. Under different owners it alternated between use as a hotel and club into the 1960s. The property later burned, and no standing structures remain. The site was part of the

new lands acquired by Chickamauga and Chattanooga National Military Park (Jolley 2003).

### **Sanders Road Picnic Area**

Three restroom buildings at the Sanders Road picnic area were built between 1953 and 1955. These one-story buildings have slate hipped roofs and fieldstone sides. The park closed all three of these comfort stations between 2010 and 2012 because of waterline failures. The buildings were evaluated as eligible for the national register by the Tennessee Historical Commission (state historic preservation officer).

The anticipated consequences of climate change may have consequences for historic buildings, structures, and cultural landscape features. These resources may be adversely impacted by increased storm-related weathering, high winds, drought, and fire that could result in the loss or damage of historic fabric and other character-defining features. Wide temperature and humidity fluctuations would present preservation challenges as predominantly wood and other historic building materials deteriorate at accelerated rates. The cultural landscapes associated with Lookout Mountain Battlefield's historic sites may be affected by climate-related changes to the distribution and composition of vegetation, land forms, and other features that existed during the periods of historical significance.

### **ARCHEOLOGICAL RESOURCES**

Few systematic NPS archeological surveys and investigations have occurred on Lookout Mountain Battlefield. Limited archeological testing has previously been conducted at various places on the Cravens House property, primarily in response to compliance-related requirements for ground-disturbing projects (e.g., installation of a fire hydrant and water line and grading a portion of the site to improve drainage). A 1975

excavation under the porch of the Cravens House documented use of the property by war correspondents and artists who camped at the site in the immediate aftermath of the battle. Rifle pits placed by Confederate troops of the 29th and 30th Mississippi infantry are discernible on the landscape, extending in a 415-foot-long line along a trail west of the Cravens House. The overall archeological potential of the Cravens House site remains high in consideration of the Union and Confederate troop encampments at the site and the heavy fighting that occurred there during the Battle of Lookout Mountain. Future archeological investigations are also anticipated to provide valuable information regarding the location of fence lines, outbuildings, and orchards that existed on the Cravens farmstead (NPS 2013a; NPS 1986; NPS 1987c).

Several historic sites and features on Lookout Mountain Battlefield have sustained diminished historical integrity and are no longer recognized as contributing to the significance of the battlefield although they may retain limited archeological potential. These include the ruins of the first incline railroad that remain on NPS property near the Shingle Trail. Structural remains of CCC Camp Demaray also exist, consisting of building foundations, walls, stone steps, and other features. Although the site served as the base of operations for some 200 men employed by the Civilian Conservation Corps in the 1930s for work on park development and landscape projects, the site has been severely compromised with little remaining historical integrity. Portions of the historic Lookout Mountain-Whiteside Turnpike and Wauhatchie Pike road traces also exist on park land, but the integrity has been diminished by later road changes that altered their alignments and left some segments abandoned and unmaintained (NPS 1986).

In 1998, Reflection Riding Arboretum and Botanical Garden (now the Chattanooga Arboretum and Nature Center) contracted for archeological services to survey 700 acres of this privately held property as well as a

portion of the national military park along the northwestern flank of Lookout Mountain. Objectives of the three-year survey were to identify portions of the battlefield requiring protection and to recommend strategies for interpretation and preservation. The archeological team conducted historical research and used electromagnetic survey equipment in their investigations, which provided new information on the locations of historical settlements, battlefield, and picket positions, and post-battle Union army encampments. Six archeological sites were recorded and recommended eligible for listing in the National Register of Historic Places (Alexander Archaeological Consultants, Inc. 2006).

The Moccasin Bend Archeological District National Historic Landmark (to the north of Lookout Mountain, across the Tennessee River) contains several component sites with exceptional archeological resources documenting approximately 12,000 years of continuous American Indian use and occupation. The district also includes the locations of Union army gun emplacements and other features on Stringers Ridge. Although no comparable American Indian archeological sites or districts have been identified on Lookout Mountain documenting long-term settlement, it is possible that archeological sites may yet be identified that parallel or have potential associations with the long span of cultural history on Moccasin Bend. Because of its proximity, Lookout Mountain may have served as a strategic observation and signal

point for early American Indian inhabitants. From its heights, the movements of approaching tribal groups, European explorers, and others along the Tennessee River or adjoining valleys could be observed and monitored.

Because of the limited scope of previous NPS archeological investigations on Lookout Mountain, additional surveys and research would be carried out as necessary and as funding allows. Recently acquired lands (e.g., Smith Hill, Tyndale Hill, Bald Hill, Geary's Crossing) would likely receive priority for archeological investigation. All areas proposed for site development would also be archeologically investigated prior to any ground-disturbing construction activities to ensure that if significant archeological resources are identified, that they are avoided or that site impacts are adequately mitigated if avoidance could not be achieved.

Climate change is anticipated to have an overall adverse effect on the park's archeological resources, primarily as a result of the increased intensity and frequency of severe storm activity contributing to damaging erosion. Periodically heavy, prolonged, or frequent rainstorms could result in rising river and stream levels and swifter currents. Increased storm activity, punctuated by periods of drought, could destabilize archeological sites along stream and river terraces or on Lookout Mountain's steeper slopes. Archeological sites and resources exposed by erosion could be at risk of further disturbance by illegal collection or looting.

## NATURAL RESOURCES

### SOILS

The Chickamauga and Chattanooga National Battlefield has 35 different soil series identified as occurring in the park, consisting mainly of older, highly weathered soils (Ultisols), clay rich forest soils (Alfisols), and younger stream terrace soils (Inceptisols). For the Lookout Mountain Battlefield unit, the predominate soil series that are present include the Bouldin, Gilpin, Nella, Fullerton, and Hamblen series. The two largest mapping units are the Bouldin-Gilpin complex (covering 48% of Lookout Mountain) and the Bouldin-Nella complex (covering about 14% of the park unit). These soils are found on 20% to 60% slopes. Bouldin and Nella soils are very deep, while the Gilpin soils are moderately deep to a root restrictive layer. These are well-drained soils with low potential for shrink-swell. However, the soils have a severe to very severe rating for erosion (off-road and off-trail). Both soil mapping units are very limited for construction of small buildings due to the steepness of slope as well as the large percentage of large stones and boulders in the subsoil.

Fullerton cherty silt loam occurs in about 5% of the area, on 25% to 40% slopes. This is a very deep, moderately well-drained soil, with a moderate shrink-swell potential. The soil has a moderate water erosion hazard and is very limited for construction of small buildings due to the steepness of slope as well as the large percentage of large stones and boulders in the subsoil.

Other soil mapping units found on Lookout Mountain Battlefield include Hamblen silt loam (found on 0% to 2% slopes, covering about 5% of the area), Barfield-rock outcrop complex (occurring on 10% to 40% slopes, covering about 4% of the park unit), rock outcrop-Hector complex (occurs on 5% to 60% slopes, and covering about 4% of the

area), and Barfield-rock outcrop-Talbott complex (found on 10% to 60% slopes, covering about 4% of the park unit). All other soils are very limited for construction of small buildings. The Hamblen silt loam has a slight water erosion potential, while the two other soils have a moderate water erosion potential.

Soil erosion caused by water runoff is occurring along many of the trails on Lookout Mountain due to the inherent erosive nature of many of the soils, the steepness of the terrain, and the design and current multiuses of the trails (e.g., hikers, bicyclists) (NPS – SRI 2012).

### VEGETATION

Lookout Mountain is part of the Southern Table Plateaus subsection of the Southwestern Appalachian Ecoregion. The area is largely forested, particularly on the mid to lower slopes. The area generally appears to be covered by oak forest. Species composition varies depending on soil type, elevation, aspect, and geology. The primary hardwood tree species are oaks, hickories, and some red maple. Stands of mostly Virginia pine are scattered throughout the area, although some damage to the pine tracts was caused by a southern pine beetle outbreak during the early 2000s. Other tree species present include yellow poplar (*Liriodendron tulipifera*), basswood (*Tilia Americana*), buckeye (*Aesculus glabra*), birch (*Betula* sp.), and American beech (*Fagus grandifolia*) (NPS 1987b). The slopes above and below the Cravens House compound support classic oak-hickory forest with some large tulip poplars mixed in (Stedman et al. 2006). Bottomlands along Lookout Creek are dominated by sycamore (*Platanus occidentalis*) and willow (*Salix* sp.). Although Lookout Mountain is mostly forested, it has a diversity of plant

communities. Twenty-three different vegetation cover types have been identified in the area (Govus and White 2006). The two largest vegetation communities, covering approximately 64% of Lookout Mountain are Interior Low Plateau Chestnut Oak – Mixed Oak Forest and Cumberland Plateau Dry-Mesic White Oak Forest.<sup>1</sup>

Interior Low Plateau Chestnut Oak – Mixed Oak Forest is the single largest, most widespread vegetation community on Lookout Mountain, covering about 1,559 acres (52% of the park unit). Chestnut oak (*Quercus prinus*) and black oak (*Q. velutina*) dominate this forest, often in association with white oak (*Q. alba*). Northern red oak (*Q. rubra*), red hickory (*Carya ovalis*), pignut hickory (*C. glabra*), and occasionally sand hickory (*C. pallida*) are also prominent canopy species. Subcanopy and understory species frequently present include sourwood (*Oxydendrum arboreum*), red maple (*Acer rubrum*), mockernut hickory (*C. alba*), black gum (*Nyssa sylvatica*), sassafras (*Sassafras albidum*), and flowering dogwood (*Cornus florida*). Shrub and herbaceous layers are generally sparse to patchy, although in more mesic areas the herbaceous vegetation can be moderately well developed and diverse.

Cumberland Plateau Dry-Mesic White Oak Forest covers about 382 acres (13%) of Lookout Mountain. This forest typically occurs on the midslopes, although its distribution is unknown. The canopy is a mixture of white oak and chestnut oak, with lesser amounts of black oak. The subcanopy and understory includes sourwood, black gum, black cherry (*Prunus serotina*), red maple, flowering dogwood, and pignut hickory. The shrub layer is sparse to moderately developed, while the herbaceous layer is moderately well developed and relatively diverse.

It should be noted that current detailed vegetation inventories have not been

completed for parts of Lookout Mountain. In particular, information on vegetation in the Georgia portion of Lookout Mountain is incomplete (T. Patrick, Georgia Dept. of Natural Resources, Nongame Div., pers. comm., 8-28-31).

## Vegetation and People

Much of the vegetation on Lookout Mountain has been altered by people. All of Chickamauga and Chattanooga National Military Battlefield has been occupied and used by people for many hundreds of years. Before the Civil War, the land was used by American Indians who likely used fire to keep habitats open and to drive game (Govus and White 2006). With European settlement, parts of the area were used for pastureland, cropland, orchards, and sites for homes and homesteading. At the time of the battle, Lookout Mountain was lightly forested. The Civil War battle dramatically altered the vegetation cover of the Chickamauga-Chattanooga battlefield, including portions of Lookout Mountain. Large wooded areas were cleared and vegetation altered or destroyed. Portions of the park unit were logged, grazed, and used to raise crops. Since the establishment of the park, efforts have been made to retain all of the park's historic setting, keeping the relationship of woodlands and cleared areas as they were at the time of the battle. In particular, with its monuments and historic sites, the Point Park area was maintained so as to retain its historic setting and viewpoints. Selective clearing occurred and undergrowth was minimized. In the 1930s, there was a CCC camp on Lookout Mountain. Crews worked on building and maintaining roads and trails, landscaping, and planting trees, shrubs, and vines (John Milner Associates, Inc. 2004).

Fire has largely been excluded on Lookout Mountain since the area became a park. Lightning-caused fires occasionally occur, and burn relatively small areas. As a result of the lack of fire and minimal vegetation management (e.g., clearing vegetation), the

<sup>1</sup> All area and percentage calculations were based on GIS using data from <https://irma.nps.gov/App/Reference/Profile/2191810>.

forests are much denser now than at the time of the battle. The forests are so dense that they obscure views of the Lookout Mountain summit at Point Park (NPCA 2009). Areas of heavy fuel buildup are present. Residences above and below the park preclude the use of fire as a management tool. With the increase in fuels, the area is susceptible both to severe wildfires and the spread of insect infestations and disease (NPS 1982). For instance, hemlock wooly adelgid (*Adelges tsugae*), a nonnative insect species, has infested trees in areas near the park and is thought to be present in hemlocks on Lookout Mountain (NPCA 2009). Some natural plants, such as poison ivy (*Toxicodendron radicans*), also have proliferated well beyond their natural occurrence.

Visitor use has affected some native vegetation in the park unit. Off-trail hiking and rock climbing have damaged vegetation. At least two plant species (mountain spleenwort [*Asplenium montanum*] and round-leaf catchfly [*Silene rotundifolia*]) have been trampled and crushed by climbers. Lichens are also absent on popular climbing routes on cliff faces (NPCA 2009).

Climate change would likely affect Lookout Mountain Battlefields' forests. Summer growing season drought limits oak growth. Population declines and increased mortality among oaks, especially red oaks, have been observed from Missouri to South Carolina, related to multi-year and seasonal droughts in the 1980s through the 2000s (Allen et al. 2010 *In* Schramm and Loehman 2011). Warmer temperatures could affect flowering, fruit set, or seed production of many plant species. While an earlier spring and longer growing season can increase plant production, too much heat and a shortened, warmer winter can decrease production and hinder reproduction (Schramm and Loehman 2011). Tennessee forests are also likely to experience indirect impacts from climate change because of changes in disturbances like wildfire, drought, introduced species, insect and pathogen outbreaks, windstorms, and ice storms

(Sustainable Tennessee Organization 2012). Modeling climate change effects on Tennessee forests for 2030 and 2080 show changes in tree diversity and species composition in all of the state's ecological provinces (Dale et al. 2010 *In* Schramm and Loehman 2011).

## Nonnative Species

Many areas in the Chickamauga and Chattanooga National Military Battlefield, including Lookout Mountain, are covered by nonnative plant species. It is estimated that at least 15% of the plant species (135 species) in the park are not native to the area (Govus and White 2006). Most of these species likely were planted in the park, were introduced unknowingly via seed mixes, or spread from the lawns and gardens of homes surrounding the park. Most of the species are not considered invasive, but at least 31 of the nonnative species in the park are considered aggressive invasive species that can outcompete and replace native species. Govus and White noted that the spread of these invasive species is probably the biggest ecological threat to the park. Although some treatment has occurred in the park, such as cutting vines, these species are still common.

On Lookout Mountain, the biggest threat to native plants is kudzu (*Pueraria montana*), which probably was introduced for erosion control and livestock forage. However, this plant has spread throughout the park unit. In 1984, approximately 7% of the entire park unit was covered by this species (NPS 1984). It is estimated that in the last 30 years kudzu has at least doubled in area, covering about 15% to 20% of the park (N. Dagley, NPS Southeast Exotic Plant Management Team, pers. comm., 8-26-2013). Kudzu can spread into the forest canopy and bring down trees. It infringes on the historic landscape; can hinder visitor use of areas; and obstruct monuments, buildings, and land features.

Several other nonnative species of concern are present on Lookout Mountain. In the

interior woods and forests, shrubs and vines such as Japanese honeysuckle (*Lonicera japonica*) and Chinese privet (*Ligustrum sinense*) are present in the understory. On the cliff tops, bush honeysuckles (*Lonicera* spp.) are displacing native shrubs and herbs (Govus and White 2006). Much of the floodplain of the park's drainages, including Lookout Creek, is covered by a variety of nonnative species, including Japanese stilt grass (*Microstegium vimineum*) and Chinese privet. Other invasive nonnative species that are present include tree of heaven (*Ailanthus altissima*), princess tree (*Paulownia tomentosa*), English ivy (*Hedera helix*), and winter creeper (*Euonymus fortunei*). Although not observed by Govus and White in their study, garlic mustard (*Alliaria petiolata*) also has been reported in the park. Species like tree of heaven are of concern because they are fast growing and prolific seeders that can replace native plants, take over sites, and form dense thickets.

## FEDERAL AND STATE LISTED SPECIES

Two federal and state listed species are known to occur on Lookout Mountain, and two are probably present. The two species documented in the park unit are the federally and state threatened large-flowered skullcap (*Scutellaria montana*), a perennial herb, and the federally and state endangered gray bat (*Myotis grisescens*). The two species probably present are the federally and state endangered Indiana bat (*Myotis sodalis*) and the northern long-eared bat (*Myotis septentrionalis*), which is a candidate for listing as an endangered species. (The State of Georgia also lists the Indiana bat as a protected species.) As noted in chapter 1, because no actions are being taken that would affect the gray bat or its habitat, this species is not addressed in this GMP Amendment.

No critical habitat has been established for the large-flowered skullcap or the northern long-eared bat. The Lookout Mountain

Battlefield park unit is not within the critical habitat established for the Indiana bat.

## Large-flowered Skullcap

Large-flowered skullcap typically is found on rocky, dry, slightly acidic slopes, ravines, and on the ridges in the Ridge and Valley and Cumberland Plateau of northwestern Georgia and adjacent southeastern Tennessee (TDEC 2007). It is typically associated with forests dominated by hardwoods or mature oak-pine forests with moderately dense understory. Although it can be found in thick herbaceous cover or in areas with rhizomatous colonial plants, such as poison ivy and wild grape, the plants do not thrive (TDEC 2011). The plant is considered a mid-successional species, growing in areas with trees averaging less than 60 years old and where light penetrates to the forest floor. Light levels are critical for growth and plants are typically dispersed over a large area, but can grow in small clusters. Typically, most populations are relatively small and occur in low densities, although undercounting of the number of plants is also likely because it is dispersed (TDEC 2007). The best populations may have a density of about 40 plants per square meter, while other populations may have a density of only one plant per square meter (Bridges 1984 In TDEC 2007). Very little is known about the details of large-flowered skullcap biology. The species has a low reproductive potential and limited seed dispersal, which contributes to its rarity (TDEC 2007).

In 2009, a total of 30 populations of large-flowered skullcap were known in Tennessee, including the park (TDEC 2011). On Lookout Mountain, large-flowered skullcap occurs on the steep slopes of the plateau escarpment. Two populations occur on the NPS property, one on the west side of Lookout Mountain and one on the east side. There are 13 occurrences of large-flowered skullcap located in the two populations. Four permanent monitoring sites are in the park on the Glenn Falls, Shingle, Kiddie, and



Upper Truck trails. In 2009, all of these populations had flowering and vegetation plants, and all but one site had juvenile plants. Monitoring data from 2004 to 2009 showed an increase in the number of plants at four of the plots (26% to 82% increase) and a decrease at one plot (77% decline) (TDEC 2012). This decline was likely due in part to a large storm that passed through the area and downed many trees in the vicinity of the Lookout Creek population. It also is usual for the number of large-flowered skullcap plants to vary in an area from year to year. Overall, the plant is maintaining its numbers (A. Bishop, recovery biologist, Tennessee Dept. of Environment & Conservation, pers. com., 10-21-13, 10-25-13).

The large-flowered skullcap was listed by the U.S. Fish and Wildlife Service as endangered in 1986, and then reclassified as threatened in 2002 due to improved information on the species status. The States of Tennessee and Georgia also list this species as threatened. Habitat loss and degradation have been the primary reasons for the plant's threatened status. The species is threatened by a variety of human activities, including logging, roads, powerlines, and other developments (including urbanization in the area around Chattanooga), clearing of wooded areas for pastures, quarrying, mining of surface rocks, off-road vehicles, and trampling. The spread of nonnative invasive plants such as kudzu also may be causing habitat loss (TDEC 2007, 2011, n.d.; NatureServe 2013).

In the park, identified potential threats include increased trail hiking use, which leads to widening of trails over time and increased erosion, or hikers cutting switchbacks (Sutter 1993 In TDEC 2007). Due to the scattered distribution of plants, trail maintenance activities (e.g., placement or widening of water bars) can inadvertently impact plants along the trails if park staff are not aware of the species. New trail construction could result in the loss of plants by altering drainage patterns, thinning the subcanopy, and the increased likelihood of trampling and collection (Hogan In TDEC 2007). Thinning

the forest canopy may also pose a threat to the species due to the spread of certain competing species, such as poison ivy, which negatively affect the large-flowered skullcap. (On the other hand, complete canopy closure and understory closure are also threats to the species.)

## Indiana Bat

The Indiana bat is a temperate, insectivorous, migratory bat. During winter, the bats hibernate in caves and mines called hibernacula. In the spring, Indiana bats migrate to their summer habitat in wooded areas where they usually roost under loose tree bark on dead or dying trees. Roost trees are usually within canopy gaps in the forest or along a wooded edge. During summer, males and nonreproductive females roost alone or in small groups. Reproductive females roost in larger colonies of up to 100 or more individuals where they bear and raise their young in wooded areas. Indiana bats also forage in or along the edges of forested areas. They feed on a variety of flying insects. Both males and females return to hibernacula in late summer or early fall to mate and enter hibernation.

Indiana bats are found over most of the eastern half of the United States. Tennessee is just south of the center of the bat's range, and contains numerous caves and forests known to provide habitat for the species (USFWS 2012). While Indiana bats have not been documented on Lookout Mountain, suitable habitat exists for the species and it has been documented nearby. Therefore, it is probably present in the area (S. Thomas, NPS Monitoring Program Leader, Cumberland Piedmont Network, pers. comm., 8-2-2013). However, the park is not within designated critical habitat for the species.

The U.S. Fish and Wildlife Service listed the Indiana bat as endangered in 1967. The bat faces many threats, including destruction and degradation of hibernation caves (including the presence of people in caves, which can

disturb hibernating bats), spread of the fungal disease called white nose syndrome, pesticide use and other environmental contaminants, and the loss and degradation of summer forested habitat (USFWS 2007). The majority of disturbances in Tennessee involve the loss of suitable summer roosting and foraging habitat such as the felling of an occupied roost tree (USFWS 2012).

### **Northern Long-eared Bat**

This bat is widely distributed across forested regions of the eastern United States, although it is patchily distributed and rarely found in large numbers. The species range includes Tennessee and Georgia. The bats generally hibernate alone in caves and mines that are cool and moist during the winter. During the summer, the bat primarily roosts in forest interior habitat, very similar to the Indiana bat. Males typically roost singly. Females may form small maternity colonies under loose tree bark, in tree cavities, and to a lesser degree, in structures. Northern long-eared bats are opportunistic insectivores, feeding on a variety of smaller night-flying insects. The bats forage after sunset over small ponds, forest clearings, and forest edges. The bats

are not a migratory species, but they do move between their summer roosts and winter hibernacula, traveling up to 34 miles.

Northern long-eared bats have been observed in caves in Lookout Mountain, most recently in 2012 (S. Thomas, NPS Monitoring Program Leader, Cumberland Piedmont Network, pers. comm., 8-5-2013). The bats therefore probably occur in trees in the park unit, although there are no records of them being directly observed on Lookout Mountain.

The U.S. Fish and Wildlife Service proposed the northern long-eared bat for listing as an endangered species in October 2013. As of this date, its status is being reviewed to determine if federal endangered listing is warranted. The northern long-eared bat has experienced a sharp decline in numbers primarily due to the spread of white-nose syndrome. Other sources of mortality include the destruction or modification of its habitat from highway and commercial development; logging; oil, gas, wind energy, and mineral development; operation of wind farms; and disturbance of hibernacula and maternity roosts by recreational activities (NARA 2011; Ollendorff 2002; USFWS 2013).

## VISITOR EXPERIENCE AND SAFETY

### VISITOR USE AND CHARACTERISTICS

For the purposes of this document, visitors are defined as anyone who enters the park or uses NPS facilities for any reason. Visitor use data is the information regarding how many people visit the park, when they visit, how often they visit, where they travel from, and how long they stay in the park.

Visitors to Lookout Mountain Battlefield are counted at the entry to Point Park and when entering Cravens House, which is open seasonally. Visitors to the Sanders Road picnic area are also counted.

Visits to the battlefield generally decreased from the early 1990s to the early 2000s, but since 2003, the trend has reversed, with numbers of visits typically increasing each year (see figure 1). The 150-year anniversary of the Civil War is expected to draw additional visitors to Civil War sites during the years 2011–2015 and beyond, with the anniversaries of the battles for Chickamauga and Chattanooga occurring in the fall of 2013.

Over 90% of visits to the battlefield occur March through November (see figure 2), when visitors may take advantage of favorable weather and school breaks. Events commemorating the anniversary of the battles for Chattanooga are held in September and November, and draw visitors during those times.

These figures help to approximate total visitation to the battlefield (as seen in figures 1 and 2), but leave out other visitors,

particularly visitors using trails, climbing areas, and rappelling areas.

The Chattanooga metropolitan area population increased 11% from 2000 to 2010 (U.S. Census). The City of Chattanooga has made efforts to position the region as a center for outdoor recreation, with considerable development of recreational programming, facilities, and greenway and river connections. Higher recreational use of the battlefield trails would seem a likely result of population trends and emphasis on outdoor use and connectivity within the region.

### Visitor Perceptions, Opinions, and Concerns

Based on annual polling of visitor satisfaction, the overall quality of the visitor experience in the park is very high (University of Idaho).

During public scoping for the Chickamauga and Chattanooga National Military Park General Management Plan in 2009, commenters shared ideas for change for the battlefield, as well as specific suggestions and concerns. Many commenters would like to see expanded interpretive opportunities, through interpretation of new topics related to the battlefield, and also through additional mediums for interpretive programming such as living history demonstrations, driving tours, and additional interpretive trails. The vast majority want to see the landscape and viewsheds



FIGURE 1. ANNUAL VISITATION TO POINT PARK, CRAVENS HOUSE, AND SANDERS ROAD PICNIC AREA, 1993–2012

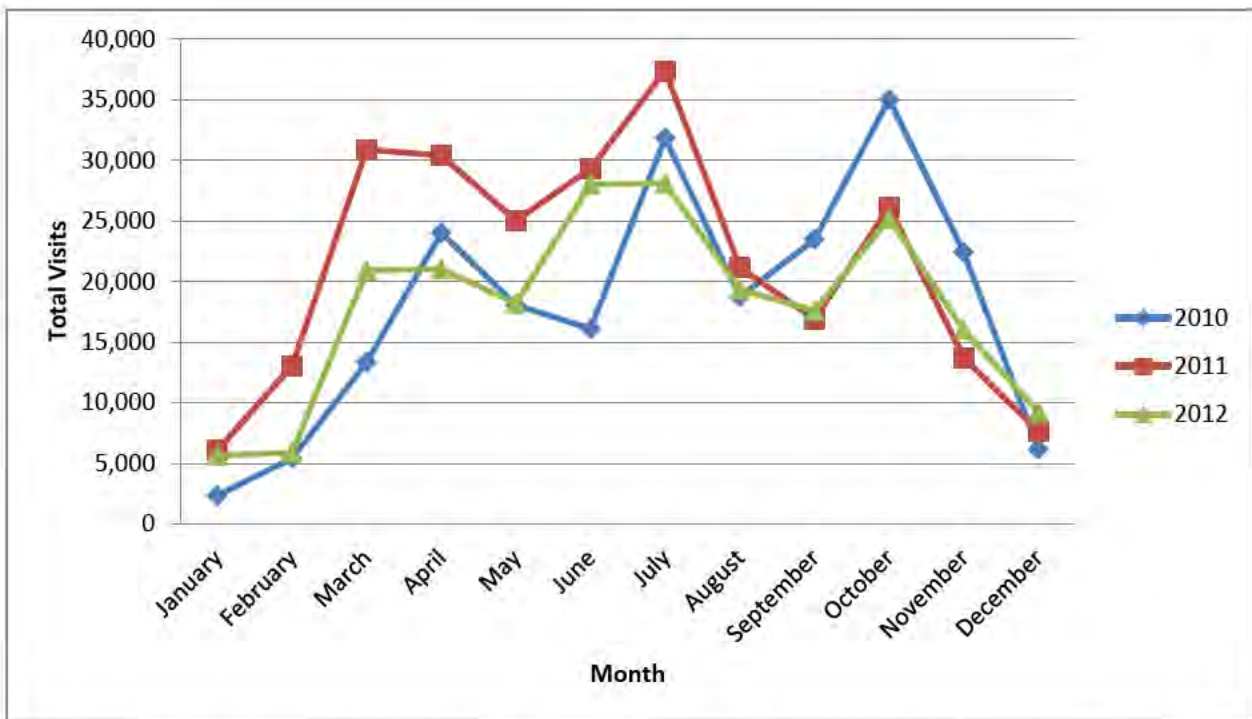


FIGURE 2. MONTHLY VISITATION TO POINT PARK, CRAVENS HOUSE, AND SANDERS ROAD PICNIC AREA, 2010–2012

returned to the character at the time of the battles, with a focus on appropriate landscape maintenance. Many commented on the need for protection and repair of deteriorating and vandalized monuments, markers, and tablets. Some commenters are supportive of some forms of recreation (such as walking, jogging, road biking, and horseback riding) as long as they don't damage the park; others oppose most, if not all, forms of recreation in the park.

Some of the most commonly mentioned concerns of visitors relate to development and commercialization within the park and on adjacent lands. Many also expressed their frustrations with the amount of vandalism, theft by relic hunters and looters, and litter in the park.

In 2013, the public was asked to consider the draft alternatives. Most commenters focused on the proposed multiuse trails that would allow mountain biking on a few trails. Comments were both in support of and against that proposal and some comments suggested alternative routes for mountain biking. Other comments provided suggestions for the alternatives, management actions for the park to consider, and comments on the protection of natural and cultural resources.

### **Ability to Access the Battlefield**

The park may be reached by road, with parking available at various locations. Additionally, some visitors arrive via the incline railway, with city bus connections, which lets passengers off near the visitor center and Point Park. Visitors could also arrive at various park access points by bicycle or on foot.

Point Park is the most frequently used area, serving around 200,000 visitors a year. Other primary use areas are the visitor center, Cravens House, Sunset Rock, Eagle's Nest, Sanders Road picnic area, and the trails around the mountain.

### **Universal Design and Accessibility**

The Lookout Mountain Battlefield unit has several facilities and programs that are accessible to visitors with disabilities, including the visitor center, Point Park, and Cravens House. Interpretive programming also offers accessible experiences including large-print materials, audio and visual exhibits, and guided tours.

Some areas in the unit may still be challenging for visitors with disabilities. There are some locations that are considered accessible, but a more extensive assessment and evaluation would need to be done to evaluate the programs, services, and facilities at Lookout Mountain Battlefield. A more extensive assessment and evaluation would be needed to evaluate the programs, services, and facilities of the Lookout Mountain Battlefield unit.

### **Opportunities to Understand the Important Stories of the Battlefield**

Understanding the events that occurred on the battlefield is of key importance to visitor experience. Participating in personal interpretive services (e.g., staffed visitor centers, ranger-led activities), and making use of nonpersonal interpretive services (e.g., wayside exhibits, visitor center exhibits, publications, media) helps visitors form their own intellectual and emotional connections with the meanings and significance of national military park resources.

Lookout Mountain Battlefield provides a number of interpretive facilities and programs for visitors. The Lookout Mountain Visitor Center is staffed and has exhibits on the history of the battlefield. Cravens House is also staffed on summer weekends and the park offers tours of the house. The Ochs Museum houses exhibits. Ranger-led tours are offered at Point Park and occasionally on Lookout Mountain trails. The park also offers living history

demonstrations. Interpretive waysides also exist at various locations on the battlefield.

### Recreational Opportunities

A number of recreational activities are available at Lookout Mountain Battlefield. These include trail use, both pedestrian and equestrian. Rock climbing and rappelling opportunities exist at Sunset Rock and Eagle's Nest, respectively, and picnicking facilities are provided at Sanders Road picnic area.

### Visitor Safety

The health and safety of park visitors, staff, and neighbors are of great importance to the National Park Service. Park staff is responsible for maintaining conditions that

protect the health and safety of employees and the public in the park. Statutory and regulatory provisions applicable to national park system units require the National Park Service to not only provide safe facilities, utilities, and grounds within the park, but also promote safety in park program and project operations (*NPS Management Policies 2006*, section 8.2.5).

The level of public health and safety is largely reflected in the incidence statistics collected by the park. The following table provides incident details for Lookout Mountain for the years 2009–2013. An incident is defined as an accidental event affecting a non-NPS employee that results in a death or a serious injury or illness requiring medical treatment. Park visitors assume some risks in visiting and using areas of the park.

TABLE 6. INCIDENT TOTALS, 2009–2013

Type of Incident	Number of Incidents 2009–2013
Hiking or walking injury	11
Fall from cliff	2
Fall from climbing or scrambling on rocks	1
Fall from technical climbing	1

## PARK OPERATIONS

The Lookout Mountain Battlefield unit of Chickamauga and Chattanooga National Military Park is the second-largest unit, encompassing about 3,345 acres, in the greater Chattanooga metropolitan area (Hamilton County, Tennessee) with contiguous acreage extending south into Dade and Walker counties, Georgia. The overall 9,036-acre military park comprises 18 separate units and reservations grouped in four distinct management areas: Chickamauga Battlefield (Georgia), Lookout Mountain Battlefield and Point Park (primarily Tennessee), Missionary Ridge and Reservations (primarily Tennessee), and the Moccasin Bend National Archeological District (Tennessee). Park headquarters are in Fort Oglethorpe, Georgia, at the northern end of Chickamauga Battlefield.

The park staff are grouped in six divisions: Park Management, Administration, Interpretation and Education, Visitor and Resource Protection, Facility Management, and Resource Management. The current number of FTE employees is 29.59 permanent and 7.65 seasonal. The park is assisted by 1,135 volunteers. The park's current operating budget is \$3,130,000. Foreseeable funding trends are for flat or reduced budgets related in part to personnel costs and fixed costs such as utilities.

Park operations at Lookout Mountain are primarily directed toward maintenance and the operation of the Lookout Mountain Battlefield Visitor Center, Point Park, and Cravens House. The recently renovated visitor center is open daily from 9:00 a.m. to 5:00 p.m. The principal visitor attractions at the visitor center are the large James Walker painting (*The Battle Above the Clouds*), other interpretive exhibits, and a bookstore operated by the park's cooperating association. The Cravens House is seasonally open to visitors from Memorial Day to Labor Day (Saturday and Sunday only, noon to 5:00

p.m.). The house is managed as a historic house museum. Point Park is open daily from 8:30 a.m. to sunset. Park staff provide public interpretation, primarily at the visitor center, Point Park, Cravens House, and Sunset Rock. Educational programs are offered throughout the year, and ranger-led tours are seasonally provided at Point Park and the Cravens House. Newly acquired lands in the Cummings Bottom area of Lookout Mountain (e.g., Tyndale Hill, Smith Hill, Bald Hill) are presently gated with no or very limited public access or interpretation provided; ranger patrols of those areas are also presently limited.

The Cravens House and its significant associated structures are among the principal historic properties on Lookout Mountain Battlefield that are preserved and maintained in accordance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*. A recently drafted historic structure report and cultural landscape report for the Cravens House provides the necessary guidance for NPS staff to undertake more comprehensive rehabilitation and restoration of the house and its contributing landscape features. The nearby William House (not associated with the historic importance of the site) presently receives minimal maintenance. Although the park's cultural resource manager conducts annual inspections of structures on the park's list of classified structures, the park currently lacks a full-time preservation crew to provide regular or more frequent inspection, maintenance and repair of historic structures, monuments and markers throughout the park. Monuments and markers are cleaned once every five years (or three years for those along tour routes). Ongoing damage and defacement resulting from vandalism of monuments and markers is among the park's maintenance challenges. The need for preservation maintenance of historic



structures contributes to the park's overall backlog of deferred maintenance.

Park rangers perform routine patrols of the Lookout Mountain Battlefield unit—there are no rangers specifically assigned to Lookout Mountain. The protection staff rotate among the park's various units as part of their patrol functions. There are currently four field rangers and a field supervisor for the entire national military park. As funding allows, an additional seasonal protection ranger is occasionally hired for the summer. The number of protection rangers is inadequate to cover both the front country portions of Lookout Mountain and its backcountry and trails. An additional position has been requested to assist in the management and protection of the new lands on Lookout Mountain Battlefield.

Lookout Mountain Battlefield's 28 miles of trails are used (where permitted) by hikers, mountain bikers, and horseback riders. The trails are patrolled through the efforts of volunteer trail rovers and the park's protection staff. Among the trails with heavy visitor use are those connecting visitor attractions (e.g., the trail linking Point Park with Cravens House) and trails extending to the southeastern and southwestern portions of the park. The park does not have a trail crew—trails are maintained as funding permits by volunteer groups and projects specifically funded for large-scale trail repairs. The issues concerning park trails management are increasing public use and demand for new trails, search and rescue for lost or injured hikers or injured climbers, and trail maintenance. Day hiking and rock climbing are popular visitor use activities at Lookout Mountain Battlefield, while mountain biking is currently a limited activity (only two trails are designated for mountain bike use). Rock climbers are drawn to the sandstone cliffs that parallel the Bluff Trail for approximately 2 miles.

In addition to routine interpretive programs at Point Park and Cravens House, park staff

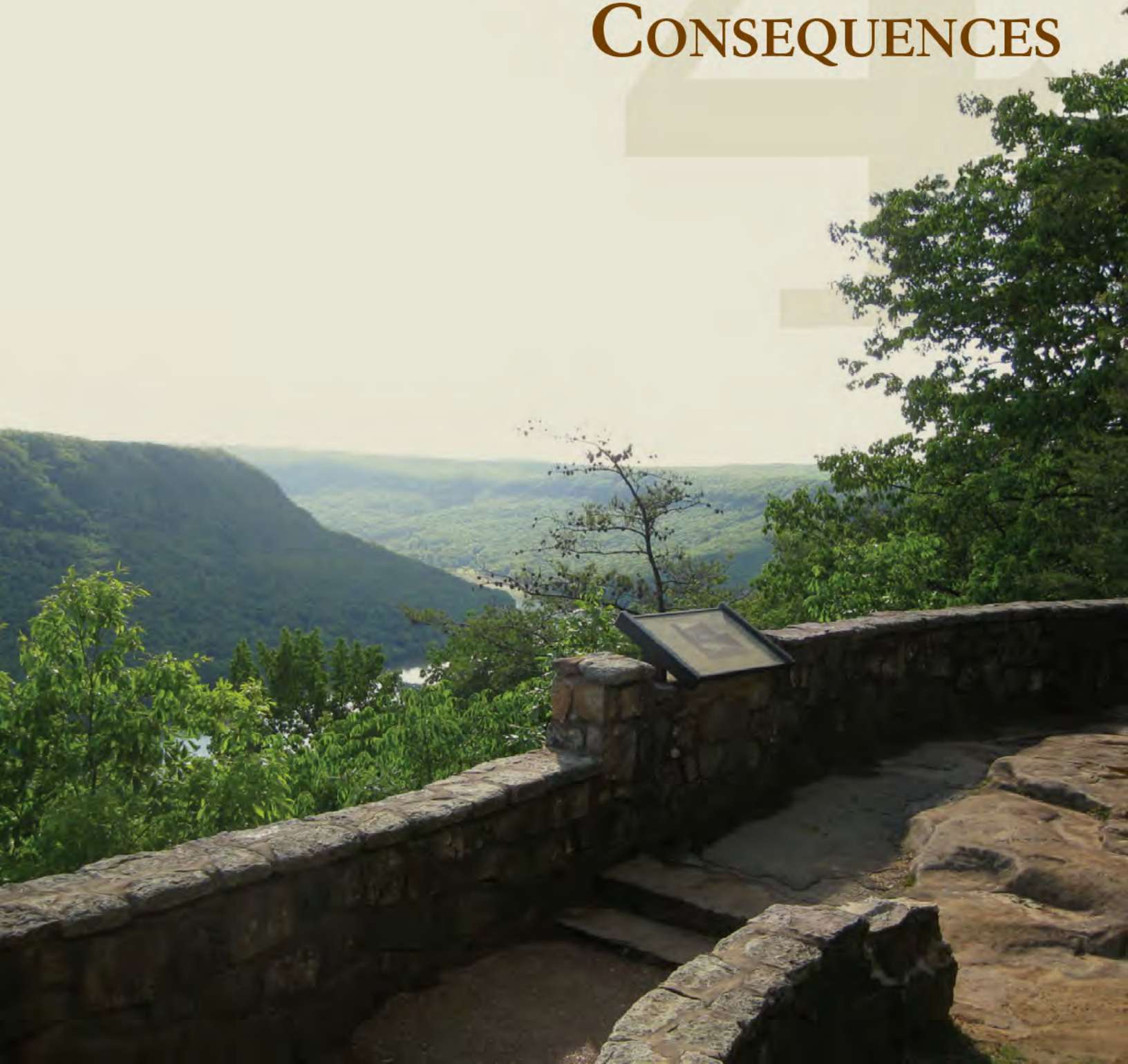
conduct special programs at these locations during the November 24th battle anniversary. Special use permits are also issued for weddings (at Point Park), a trail running event, first amendment activities, and other special programs.

Among the ongoing resource management issues affecting park operations at Lookout Mountain Battlefield is control of the dense stands of encroaching hardwood trees and vegetation. At Point Park and other locations as needed, NPS staff regularly undertake mechanical removal of vegetation to enhance viewsheds for interpretative purposes, to protect cultural landscapes and scenic vistas, and to control invasive nonnative plant species. Herbicide spraying is also used to control the spread of nonnative exotic vegetation. The accumulation of dead trees and other vegetation contribute to fuel loading on the slopes of Lookout Mountain, presenting management concerns regarding the threat of wildfire outbreaks. The park's fire management plan (1985, revised 2004) noted that mechanical removal of trees for fire and viewshed management remains the park's preferred option.

For the Lookout Mountain Battlefield unit, the park currently has formal partnership agreements with the Friends of Chickamauga and Chattanooga National Military Park and the City of Lookout Mountain, Tennessee, with regard to mutual assistance for law enforcement and fire support services. Police officers from the city of Lookout Mountain and the city of Chattanooga provide valuable assistance to park staff in appropriately responding to incidents in the park, and park staff reciprocate as needed. The park recognizes that memorandums of understanding would be beneficial with other Lookout Mountain Battlefield organizations and stakeholders, including the Lookout Mountain Conservancy and the Chattanooga Arboretum and Nature Center because of the mutual interests and concerns shared among the agencies and organizations for resource protection and other issues.

# 4

## CHAPTER 4: ENVIRONMENTAL CONSEQUENCES





## INTRODUCTION

The National Environmental Policy Act requires that environmental documents address the environmental impacts of a proposed federal action, feasible alternatives to that action, and any adverse environmental effects that cannot be avoided if a proposed action is implemented. In this instance, the proposed federal action is the adoption of a general management plan amendment for the Lookout Mountain Battlefield unit. The following portion of this document analyzes the environmental impacts of implementing the three alternatives on natural resources, cultural resources, visitor use and experience, and park 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 assessment should be considered a programmatic analysis. If and when site-specific developments or other actions are proposed for implementation subsequent to this GMP Amendment, appropriate detailed environmental and cultural compliance documentation would be prepared in accordance with NEPA and NHPA requirements. For the purposes of this analysis, it is assumed that all of the specific actions proposed in the alternatives would occur over the life of the plan.

This chapter begins with a description of the methods and assumptions used for each topic, followed by policies related to cumulative impacts and the projects that comprise the cumulative impact scenario. Impact analysis discussions are then analyzed by alternative and then by impact topic under each alternative. The existing conditions for all of the impact topics have been identified in “Chapter 3: Affected Environment.” All impact topics are assessed for each alternative.

The analysis of the no-action alternative (the continuation of current management) identifies the future conditions in the park if no important changes to facilities or NPS management occurred. The two action alternatives are then compared to the no-action alternative to identify the incremental changes in conditions that would occur because of changes in park facilities, uses, and management.

Each alternative discussion also describes cumulative impacts; these are identified when this project is considered in conjunction with other actions occurring within the Lookout Mountain Battlefield unit or region. The discussion of cumulative impacts is followed by a conclusion statement. The impacts of each alternative are briefly summarized in table 5, at the end of chapter 2.

## METHODS AND ASSUMPTIONS FOR ANALYZING IMPACTS

### IMPACT ANALYSIS METHODS

The environmental consequences for each impact topic have been identified and characterized based on impact *type*, *intensity*, *context*, and *duration*.

**Impact type** refers to whether the impact to the resource would be beneficial or adverse.

**Impact duration** refers to how long an impact would last. Impacts can either be short term and temporary in nature, or long term, lasting for several years, perhaps permanently. Although an impact may only occur for a short duration at one time, if it occurs regularly over a longer period of time the impact may be considered to be a long-term impact.

**Impact context** refers to the setting and geographic scope within which an impact may occur, such as the affected region or locality.

**Impact intensity** refers to the degree or magnitude to which a resource would be beneficially or adversely affected. Each impact has been identified as *negligible*, *minor*, *moderate*, or *major*, in conformance with the specific definitions for these classifications provided for each impact topic.

The effects of the management alternatives impact topics of the Lookout Mountain Battlefield unit are analyzed based on impacts resulting from visitor use patterns, levels of development, and other management actions associated with each alternative. The impacts analyses of the action alternatives are described by these measures and are quantified by comparing the effects of each action alternative against the effects of the no-action alternative. 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 in the no-action alternative. The team’s method of analyzing impacts is further explained below under each impact topic.

### CULTURAL RESOURCES

The effects of the planning alternatives on the Lookout Mountain Battlefield unit’s archeological resources, historic sites, buildings and structures, and cultural landscapes are described in this chapter.

#### Section 106 of the National Historic Preservation Act and Impacts to Cultural Resources

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

Under ACHP regulations, a determination of either *adverse effect* or *no adverse effect* must also be made for affected national register-listed or national register-eligible cultural resources. An *adverse effect* occurs whenever an impact alters, directly or indirectly, any characteristic of a cultural resource that qualifies it for inclusion in the National Register of Historic Places, 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, *Assessment of Adverse Effects*). A determination of *no adverse effect* means there is an effect, but the effect would not diminish the characteristics of the cultural resource that qualify it for inclusion in the national register.

CEQ regulations and NPS Director's Order 12: *Conservation Planning, Environmental Impact Analysis, and Decision-making* also call for a discussion of mitigation, as well as an assessment of the effectiveness of mitigation. Cultural resources are nonrenewable resources and adverse effects generally consume, diminish, or destroy the original historic materials or form, resulting in a loss in resource integrity that can never be recovered. Therefore, although actions determined to have an adverse effect under section 106 may be mitigated, the effect remains adverse.

For alternatives B and C, a section 106 summary is included following the impact analysis sections for archeological resources, historic sites, buildings and structures, and cultural landscapes. The section 106 summary is an assessment of the effect of the undertaking (implementation of the alternative), based on the criterion of effect and criteria of adverse effect found in ACHP regulations.

From a National Environmental Policy Act standpoint, the following definitions for type,

duration, and context apply to all of the cultural resources being analyzed:

### Impact Type

**Beneficial Impacts:** Beneficial impacts are defined as those resulting from actions that preserve or protect significant cultural resources and do not diminish the attributes and qualities that contribute to their eligibility for listing in the National Register of Historic Places.

**Adverse Impacts:** Adverse impacts are defined as those resulting from actions that disturb or threaten the loss of character-defining attributes and qualities of significant cultural resources, potentially diminishing their eligibility for listing in the National Register of Historic Places.

### Impact Duration

**Short-term Impacts:** Changes that occur to cultural resources during project implementation.

**Long-term Impacts:** Changes that occur after (and extend beyond) project completion.

### Impact Context

**Localized Impacts:** Effects would occur to specific cultural resources (e.g., archeological sites, historic structures and districts, cultural landscape features) that exist within the boundaries of the Lookout Mountain Battlefield unit of Chickamauga and Chattanooga National Military Park.

**Parkwide or Regional Impacts:** Effects on cultural resources would broadly extend throughout the Lookout Mountain Battlefield unit or in areas of cultural significance beyond the park boundary.

### Impact Intensity

The threshold definitions used to describe the intensity of impacts precede the analysis for each cultural resources topic.

### Historic Sites, Structures, and Cultural Resources

Impacts on these cultural resources were assessed by analyzing the potential to diminish or protect their historical or architectural integrity or character-defining features. The intensity thresholds for historic buildings, structures, and cultural landscapes are defined as follows:

- **Negligible:** Impacts would be at the lowest levels of detection with no perceptible consequences. For purposes of section 106, the determination of effect would be no adverse effect.
- **Minor Adverse:** Impacts would affect character defining features, elements or landscape patterns but would not diminish the overall integrity of the resource. For purposes of section 106, the determination of effect would be no adverse effect.
- **Moderate Adverse:** Impacts would alter character-defining features, elements, or landscape patterns, diminishing the overall integrity of the resource to the extent that its national register eligibility could be jeopardized. For purposes of section 106, the determination of effect would be adverse effect.
- **Major Adverse:** Impacts would alter character-defining features, elements, or landscape patterns, diminishing the integrity of the resource to the extent that it would no longer be eligible to be listed in the national

register. For purposes of section 106, the determination of effect would be adverse effect.

### ARCHEOLOGICAL RESOURCES

The impacts on archeological resources are described in terms of the potential to diminish or protect the ability of archeological resources to yield information important in prehistory or history. The intensities of impacts on archeological resources are defined as follows:

- **Negligible:** Impact(s) would be at the lowest level of detection. Impacts would be measurable but with no perceptible consequences. For purposes of section 106, the determination of effect would be no adverse effect.
- **Minor Adverse:** Disturbance of a site(s) results in little loss of integrity. For purposes of section 106, the determination of effect would be no adverse effect.
- **Moderate Adverse:** Site(s) is disturbed but not destroyed. For purposes of section 106, determination of effect would be adverse effect.
- **Major Adverse:** Sites(s) is destroyed or disturbed to the extent that most or all of its information potential is lost. For purposes of section 106, the determination of effect would be adverse effect.

### NATURAL RESOURCES

The effects of the alternatives on soils, vegetation, and state and federally listed species are analyzed in this section. The analysis was based on knowledge of the area's resources and the best professional judgment



of planners and natural resource specialists who have experience with similar types of projects.

The following duration and context threshold definitions apply to all of the natural resource impact topics.

### Duration

**Short-term Impacts:** Effects that occur would be temporary in nature, lasting one year or less, such as the impacts associated with construction.

**Long-term Impacts:** The impact would last more than one year and could be permanent in nature, such as the loss of soil due to the construction of a new facility. Although an impact may only occur for a short duration at one time, if it occurs regularly over a longer period of time the impact may be considered to be a long-term impact.

### Context

**Localized Impacts:** Effects that occur are site-specific and/or in the immediate vicinity of the project area.

**Regional or Parkwide Impacts:** Effects that occur beyond specific sites and affect much or all of the Lookout Mountain Battlefield unit. The effects could extend to the surrounding habitats and adjacent areas beyond the park boundary.

### Soils

The effects of the alternatives on Lookout Mountain Battlefield soils were analyzed based on impacts resulting from visitor use and levels of development associated with each alternative. Impacts were evaluated by comparing estimated changes resulting from the action alternatives (alternatives B and C)

to those of the no-action alternative (alternative A). The following impact intensity definitions were used:

- **Negligible Impact:** The action would result in a change in soils, but the change would be so small that it would not be detectable based on standard scientific methods. The effects on soil productivity would be slight.
- **Minor Impact:** The action would result in a detectable change, but the change would be slight. There could be changes in topsoil in a relatively small area, but the change would not noticeably change the potential for erosion. Effects on soil productivity would be slight.
- **Moderate Impact:** The action would result in a clearly detectable change in soils. There could be a loss or alteration of the topsoil in a small area, or the potential for erosion to remove small quantities of additional soil would noticeably increase or decrease. The effect on soil productivity would be apparent.
- **Major Impact:** The action would result in the substantial loss or alteration of soils in a relatively large area, or there would be a strong likelihood that erosion would remove large quantities of additional soil. There would be a substantial change in soil productivity.

### Vegetation

The effects of the alternatives on Lookout Mountain Battlefield vegetation were analyzed based on impacts resulting from visitor use and levels of development associated with each alternative. Changes in the presence and abundance of nonnative

invasive plant species were also considered. Impacts were evaluated by comparing estimated changes resulting from the action alternatives (alternatives B and C) to those of the no-action alternative (alternative A). The following impact intensity definitions were used:

- **Negligible Impact:** The action might result in a change in native vegetation, but the change would not be measurable or would be at the lowest level of detection.
- **Minor Impact:** The action might result in a detectable change, but the change would be slight and have a local effect on a population or vegetation community. This could include changes in the abundance or distribution of individuals in a local area, but not changes that would affect the viability of local populations or communities.
- **Moderate Impact:** The action would result in a clearly detectable change in a population or vegetation community, and could have an appreciable effect. This could include changes in the abundance or distribution of local populations or communities, but not changes that would affect the viability of regional populations or communities.
- **Major Impact:** The action would be severely adverse or exceptionally beneficial to a population or vegetation community. The effects would be substantial and highly noticeable, and they could result in widespread change. This could include changes in the abundance or distribution of a local or regional population or community to the extent that the population or community would not be likely to recover (adverse) or return to a sustainable level (beneficial).

## Federal and State Listed Species

The effects of the alternatives on Lookout Mountain's state and federal listed plants and wildlife and their habitats were analyzed based on impacts resulting from visitor use and levels of development associated with each alternative. Impacts were evaluated by comparing estimated changes resulting from the action alternatives (alternatives B and C) to those of the no-action alternative (alternative A). The following impact intensity definitions were used:

- **Negligible Impact:** The action could result in a change to a population or individuals of a listed species or their habitat, but the change would be so small that it would not be of any measurable or perceptible consequence and would be well within natural variability. For federally listed species, this impact intensity equates to a USFWS section *7 may affect, not likely to adversely affect* determination for both beneficial and adverse impacts.
- **Minor Impact:** The action could result in a change to a population or individuals of a species or their habitat. The change would be measurable, but small and localized and not outside the range of natural variability. For federally listed species, this impact intensity equates to a USFWS section *7 may affect, not likely to adversely affect* determination for both beneficial and adverse impacts.
- **Moderate Impact:** The action could result in a detectable change to a population or individuals of a species or their habitat. Changes to the population or habitat might deviate from natural variability, but the changes would not threaten the continued existence of the species in the park. For federally listed species

this impact intensity equates to a USFWS section 7 *may affect, not likely to adversely affect* if beneficial or a *likely to adversely affect* determination if the impact is adverse.

- **Major Impact:** The action would result in a noticeable effect on the viability of a population or individuals of a species or their habitat. Considerable changes may occur during key time periods for a species. Changes to the population or habitat would substantially deviate from natural variability and threaten or help ensure the continued existence of the species in the park. A major adverse impact would equate to a USFWS section 7 *likely to adversely affect* determination. A major beneficial impact would equate to a *may affect, not likely to adversely affect* determination.

## Visitor Use and Experience Impacts

This impact analysis considers various aspects of visitor use and experience at Lookout Mountain Battlefield, including the following:

- ability to access the park
- universal design and accessibility opportunities
- opportunities to value the important history of the battlefield
- recreational opportunities
- visitor safety

The analysis is primarily qualitative rather than quantitative due to the conceptual nature of the alternatives. Impacts on visitor use and experience were determined considering the available information. Information that was considered in the analysis includes the park's annual reporting of visitor use levels, to the National Park Service's Public Use Statistics Office, and census data. This background data was

supplemented by information gathered during the planning process for this GMP Amendment, including opinions from park visitors and neighbors and information from park staff. The following impact intensity definitions were used:

- **Negligible:** Most visitors would likely be unaware of any effects associated with implementation of the alternative.
- **Minor Impact:** Changes in visitor opportunities and/or setting conditions would be slight but detectable, would affect few visitors, and would not appreciably limit or enhance experiences identified as central to the park's purpose and significance.
- **Moderate Impact:** Changes in visitor opportunities and/or setting conditions would be noticeable, would affect many visitors, and would result in some changes to experiences identified as central to the park's purpose and significance.
- **Major Impact:** Changes in visitor opportunities and/or setting conditions would be highly apparent, would affect most visitors, and would result in several changes to experiences identified as central to park purpose and significance.

## Impact Type

Beneficial impacts would improve the visitor experience. Adverse impacts would negatively affect visitor experience. Some impacts could be beneficial for some aspects of visitor experience and adverse or neutral for others.

### Impact Duration

A short-term impact would last less than one year and would affect only one season's use by visitors. A long-term impact would last more than one year and would be more permanent in nature.

### Park Operations Impacts

The following impact intensity definitions were used:

- **Negligible:** NPS 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 NPS operations.
- **Minor:** The effects would be detectable, but would be of a magnitude that would not have an appreciable effect on NPS operations.
- **Moderate:** The effects would be readily apparent and would result in a substantial change in NPS operations in a manner noticeable to staff and the public.

- **Major:** The effect would be readily apparent and would result in a substantial change in NPS operations in a manner noticeable to staff and the public and be markedly different from existing operations.

### Impact Type

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

### Impact Duration

Short-term impacts would be less than one year. Long-term impacts would extend beyond one year and have a permanent effect on operations.

## CUMULATIVE IMPACT SCENARIO

Council on Environmental Quality regulations, which implement the National Environmental Policy Act, require assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts result from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions, regardless of who undertakes such other actions. Cumulative impacts can result from individually minor, but collectively important, actions taking place over a period of time.

Cumulative impacts are considered for both the no-action and the action alternatives. These impacts were determined by combining the impacts of the alternatives proposed in this document with the impacts of other past, present, and reasonably foreseeable future actions. Cumulative actions are categorized as past actions, present actions, and reasonably foreseeable future actions that could contribute to cumulative impacts. Plans that are conceptual, focusing on long-term goals and objectives, rather than on specific projects that have been funded and approved, have not been included in the cumulative scenario.

- In 2009, the Tennessee River Gorge Trust preserved 92 acres on Stringer's Ridge, which protected the viewshed from Lookout Mountain to Stringer's Ridge. The trust is currently developing recreational trails on the property, including mountain bike trails. These additional mountain bike trails may increase visitor use to adjoining park unit trails.
- In 2011, Lookout Mountain Conservancy purchased a key tract of land adjacent to the Old Wauhatchie Pike area of the park to provide a landing area for the Tennessee

Riverwalk as it connects to Lookout Mountain and a vast trail system reaching to Gadsden, Alabama. As a result, there may be increased visitor use of connecting pedestrian and bicycle trails through the park unit.

- Development of picnic area and trail connections from John C. Wilson Memorial Park on Cummings Highway in route to the Lookout Mountain Battlefield unit. The park trails connect to the Old Wauhatchie Pike Greenway and may increase park unit visitation and trail use.
- Trail Projects – Planned extension of the Tennessee Riverwalk from downtown Chattanooga through St. Elmo, Tennessee, to the base of Lookout Mountain to tie in with the Guild and Hardy trails and trail systems on Lookout Mountain. Additional trail connections may increase visitor use on park unit trails.
- Designation of the following trails as part of the Great Eastern Trail on Lookout Mountain: Jackson Gap, Ochs Gateway, Bluff, Mountain Beautiful, Guild, Rifle Pits, Upper Truck, and Gum Springs. The Great Eastern Trail is a long-distance trail from Alabama to New York that links trail networks. New trail designations may increase public awareness and visitor use of park unit trails.

The park plans to complete several projects at or affecting the Lookout Mountain Battlefield unit in the foreseeable future. These include the following:

- The preparation of an ethnographic overview and assessment.

Completion of this project would provide data for park managers and improve consideration of ethnographic resources in decision making.

- An updated fire management plan and associated fire compliance needs. This plan would likely improve visitor safety and natural and cultural resource protection.
- Replacement of the cupola on the Lookout Mountain Battlefield Visitor

Center. This project would reduce maintenance needs at the visitor center.

- Cyclic maintenance of culverts and drainages. These projects would streamline maintenance needs and improve visitor safety.
- Repair and rehabilitation of Ochs Museum. This project would improve the visitor experience at Ochs Museum and assist in preservation of the building.

## IMPACTS TO CULTURAL RESOURCES

### ARCHEOLOGICAL RESOURCES

#### Alternative A (No Action)

**Analysis.** No substantial changes to visitor use activities or proposed construction of new park facilities would occur under the no-action alternative. Consequently, there would be little potential for impacts to known or potential archeological resources as a result of ground-disturbing construction activities. However, because of the previous identification of archeological sites at the Cravens House and other locations, park managers and staff would continue to assess the potential for future undertakings to affect subsurface archeological resources and would undertake necessary survey and mitigation measures as necessary. As funding permits, NPS archeologists would survey and research new lands (e.g., Smith Hill, Tyndale Hill, Bald Hill, Geary's Crossing) and other locations where there is presently limited archeological information available. NPS archeologists would continue to monitor the condition of known archeological sites and would undertake appropriate protection measures as necessary to reduce or avoid adverse impacts to sites possibly occurring from natural erosion, visitor use (e.g., the development of social trails or other inadvertent impacts), the illegal removal of artifacts, and other factors. However, limited resource protection staffing presently limits park effectiveness in implementing comprehensive site protection measures.

Although few archeological surveys and investigations have been conducted for Lookout Mountain Battlefield, additional sites are likely to be identified, recorded, and added to the existing database as a result of future surveys and mitigation carried out in fulfillment of section 106 compliance requirements. Archeological site information would continue to be entered on the

Archeological Site Management Information System (ASMIS) maintained by the NPS Southeast Archeological Center in Tallahassee, Florida. Additional testing may be conducted for selected sites to assist determinations of site eligibility for listing in the National Register of Historic Places. Continuation of archeological resource management actions under existing laws and policies would assist the documentation and protection of the park's archeological resources, resulting in long-term beneficial impacts. Potential disturbance of sites from erosion or other impacts associated with visitor use and other factors would be expected, in most instances, to have long-term or permanent, localized, minor adverse impacts on archeological resources.

**Cumulative Impacts.** Other past, present, and reasonably foreseeable actions have likely adversely impacted, or have the potential to impact, archeological resources at the Lookout Mountain Battlefield unit. Various proposed or routine NPS projects (e.g., trail improvements, demolition of noncontributing structures, thinning of encroaching vegetation) may entail ground-disturbing actions that have the potential to affect subsurface archeological resources. However, these and other park undertakings would continue to be assessed by NPS cultural resources staff to ensure that significant sites, if identified in project areas, are avoided by project redesign and/or are clearly identified for avoidance. In the rare instances that sites could not be avoided, data recovery measures or other mitigation would be carried out in accordance with section 106 consultation requirements to ensure the recovery of significant archeological information. Non-NPS actions outside the park, such as encroaching regional urban and industrial development, road and other construction activities, also pose potential threats to archeological resources because of



ground disturbance. The actions presented above would have long-term or permanent, minor to moderate adverse impacts on archeological resources.

The impacts associated with implementation of the no-action alternative would have long-term or permanent, beneficial and minor adverse impacts on the park's archeological resources. Other past, present, and reasonably foreseeable actions would result in long-term or permanent, minor to moderate adverse impacts. Consequently, the adverse impacts of the other actions described above, in combination with the impacts of the no-action alternative, would cumulatively result in long-term or permanent, minor to moderate adverse impacts on archeological resources. The impacts associated with the no-action alternative would represent a small component of the adverse cumulative impact.

**Conclusion.** Long-term or permanent, localized, beneficial and minor adverse impacts on archeological resources would occur from ongoing resource management, development activities, visitor use, and other factors. There would also be long-term or permanent, minor to moderate adverse cumulative impacts on archeological resources from implementation of the no-action alternative in conjunction with other past, present, or reasonably foreseeable actions.

## Alternative B

**Analysis.** Under alternative B (in common with the no-action alternative) NPS archeologists would continue to monitor the condition of known archeological sites and would undertake appropriate protection measures as necessary to reduce or avoid site impacts occurring from natural erosion, visitor use (e.g., the development of social trails or other inadvertent impacts), the illegal removal of artifacts, and other factors. NPS archeologists would also survey and investigate new lands (e.g., Smith Hill,

Tyndale Hill, Bald Hill, Geary's Crossing) and other sites where there is presently limited archeological information available. Ground-disturbing projects proposed for the new lands such as the development of roads, trails, parking areas, and interpretive viewing platforms for selected sites, would be archeologically surveyed and assessed in accordance with section 106 consultation requirements. Identified sites would be avoided by project redesign or would be adequately mitigated if avoidance could not be achieved. Because of the previous identification of archeological resources at Cravens House and the high probability for additional resources at that property, archeologists would survey and assess the potential for proposed site development and rehabilitation undertakings to affect archeological resources. Identified archeological resources would be avoided to the greatest extent possible. Implementation of archeological resource management actions identified above would assist the documentation and protection of the park's archeological resources, resulting in a long-term beneficial impact. Potential disturbance of sites from erosion or other impacts associated with visitor use, proposed development, and other factors would have, in most instances, long-term or permanent, localized, minor adverse impacts on archeological resources.

**Cumulative Impacts.** Other past, present, and reasonably foreseeable actions have likely adversely impacted, or have the potential to impact, archeological resources at the Lookout Mountain Battlefield unit. Various proposed or routine NPS projects (e.g., trail improvements, demolition of noncontributing structures, thinning of encroaching vegetation) may entail ground-disturbing actions that have the potential to affect subsurface archeological resources. However, these and other park undertakings would continue to be assessed by NPS cultural resources staff to ensure that significant sites, if identified in project areas, are avoided by project redesign and/or are clearly identified for avoidance. In the rare

instances that sites could not be avoided, data recovery measures or other mitigation would be carried out in accordance with section 106 consultation requirements to ensure the recovery of significant archeological information. Non-NPS actions outside the park, such as encroaching regional urban and industrial development, road and other construction activities, also pose potential threats to archeological resources because of ground disturbance. The actions presented above would have long-term or permanent, minor to moderate adverse impacts on archeological resources.

The impacts associated with implementation of alternative B would have long-term or permanent, beneficial and minor adverse impacts on the park's archeological resources. Other past, present, and reasonably foreseeable actions would result in long-term or permanent, minor to moderate adverse impacts. Consequently, the adverse impacts of the other actions described above, in combination with the impacts of alternative B, would cumulatively result in long-term or permanent, minor to moderate, adverse impacts on archeological resources. The impacts associated with alternative B would represent a small component of the adverse cumulative impact.

**Conclusion.** Long-term or permanent, localized, beneficial and minor adverse impacts on archeological resources would occur from ongoing resource management, development activities, visitor use, and other factors. There would also be long-term or permanent, minor to moderate adverse cumulative impacts on archeological resources from implementation of alternative B in conjunction with other past, present, or reasonably foreseeable actions.

**Section 106 Summary.** After applying ACHP criteria of adverse effect (36 CFR Part 800.5, *Assessment of Adverse Effects*), the National Park Service concludes that implementing alternative B would result in *no adverse effect* on archeological resources.

## Alternative C

**Analysis.** Under alternative C (in common with the no-action alternative), NPS archeologists would continue to monitor the condition of known archeological sites and would undertake appropriate protection measures as necessary to reduce or avoid site impacts possibly occurring from natural erosion, visitor use (e.g., the development of social trails or other inadvertent impacts), the illegal removal of artifacts, and other factors. NPS archeologists would also survey and investigate new lands (e.g., Smith Hill, Tyndale Hill, Bald Hill, Geary's Crossing) and other sites where there is presently limited archeological information available. Ground-disturbing projects proposed for the new lands, such as the development/improvement of roads, trails, parking areas, and interpretive viewing platforms for selected sites, would be archeologically surveyed and assessed in accordance with section 106 consultation requirements. Identified sites would be avoided by project redesign or would be adequately mitigated if avoidance could not be achieved. Because of the previous identification of archeological resources at Cravens House and the high probability for additional resources at that property, archeologists would survey and assess the potential for proposed site development and rehabilitation undertakings to affect archeological resources. Identified archeological resources would be avoided to the greatest extent possible. Implementation of the archeological resource management actions identified above would assist documentation and protection of the park's archeological resources, resulting in a long-term beneficial impact. Potential disturbance of sites from erosion or other impacts associated with visitor use, proposed development, and other factors would have, in most instances, long-term or permanent, localized, minor adverse impacts on archeological resources.

**Cumulative Impacts.** Other past, present, and reasonably foreseeable actions have likely adversely impacted, or have the

potential to impact, archeological resources at the Lookout Mountain Battlefield unit. Various proposed or routine NPS projects (e.g., trail improvements, demolition of noncontributing structures, thinning of encroaching vegetation) may entail ground-disturbing actions that have the potential to affect subsurface archeological resources. However, these and other park undertakings would continue to be assessed by NPS cultural resources staff to ensure that significant sites, if identified in project areas, are avoided by project redesign and/or are clearly identified for avoidance. In the rare instances that sites could not be avoided, data recovery measures or other mitigation would be carried out in accordance with section 106 consultation requirements to ensure the recovery of significant archeological information. Non-NPS actions outside the park such as encroaching regional urban and industrial development, road and other construction activities, also pose potential threats to archeological resources because of ground disturbance. The actions presented above would have long-term or permanent, minor to moderate adverse impacts on archeological resources.

The impacts associated with implementation of alternative C would have long-term or permanent, beneficial and minor adverse impacts on the park's archeological resources. Other past, present, and reasonably foreseeable actions would result in long-term or permanent, minor to moderate adverse impacts. Consequently, the adverse impacts of the other actions described above, in combination with the impacts of alternative C, would cumulatively result in long-term or permanent, minor to moderate adverse impacts on archeological resources. The impacts associated with alternative C would represent a small component of the adverse cumulative impact.

**Conclusion.** Long-term or permanent, localized, beneficial and minor adverse impacts on archeological resources would occur from ongoing resource management, development activities, visitor use, and other

factors. There would also be long-term or permanent, minor to moderate adverse cumulative impacts on archeological resources from implementation of alternative C in conjunction with other past, present, or reasonably foreseeable actions.

**Section 106 Summary.** After applying the ACHP criteria of adverse effect (36 CFR Part 800.5, *Assessment of Adverse Effects*), the National Park Service concludes that implementing alternative C would result in *no adverse effect* on archeological resources.

## HISTORIC SITES, STRUCTURES, AND CULTURAL LANDSCAPES

### Alternative A (No Action)

**Analysis.** Under alternative A, NPS staff would continue to preserve and stabilize selected historic buildings, structures, and contributing cultural landscape features primarily at Point Park and the Cravens House. A historic structure report for the Cravens House would guide preservation treatments for the house and other contributing structures. Preservation management actions often entail necessary repairs, minor alterations and/or replacement of deteriorated historic fabric, and contributing landscape elements. The need for these actions is typically the result of natural weathering, wear and tear resulting from park and visitor use, and the adaptive use of selected historic buildings and structures for park operations and interpretation. The park actively maintains the historic buildings and structures on its List of Classified Structures (LCS) and none are considered to be in a state of passive decay. All preservation undertakings would be carried out in accordance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties*. With particular regard to the standards and guidelines for preservation, the existing form, features, and architectural detailing of historic buildings, structures, and landscape features would be retained.

Stabilization measures would be carried out to structurally reinforce, weatherize, and correct unsafe conditions. The Cravens House would remain open to seasonal visitation as a historic house museum, and selected collection items would be exhibited. Implementation of these preservation undertakings would continue to have long-term beneficial impacts on the park's historic buildings and structures, helping ensure their continued contribution to park interpretation, research and preservation of the Lookout Mountain Battlefield's cultural heritage. However, long-term negligible to minor adverse impacts would also result from actions necessary to repair, replace, or potentially alter historic fabric and architectural features as part of preservation treatments.

NPS staff would also continue to preserve the cultural landscape features that are associated with the park's historic structures and sites. These include the designed commemorative landscape at Point Park and the vernacular landscape at the Cravens House. Important viewsheds associated with these properties would be improved by the selective thinning of encroaching vegetation. Cultural landscape information would continue to be updated and included in the park's Cultural Landscape Inventory (CLI) data base. A cultural landscape report has been completed for the Cravens House, and additional cultural landscape inventories and reports would be completed as funding permits for other selected properties with recommendations for appropriate treatment in accordance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*. These reports would document the significance of cultural landscape features and inform preservation management decision-making. Implementation of these preservation and documentation measures would have long-term, localized beneficial impacts on the Lookout Mountain Battlefield's cultural landscapes (NPS 1995d).

**Cumulative Impacts.** Other primarily past actions have affected historic buildings, structures, and cultural landscape features at the Lookout Mountain Battlefield unit. For instance, the present Cravens House (reconstructed by Robert Cravens following the Civil War) underwent subsequent preservation and restoration treatments that altered its historic appearance. The placement of commemorative monuments and other surviving site modifications completed by the Civilian Conservation Corps during the park's commemorative period of development have also changed the appearance of the Cravens House cultural landscape. Apart from the battle era importance of the site, the later memorialization and commemorative features also contribute to the property's historical significance. The setting of the site has been partially diminished by the loss of contributing vegetation such as the Cravens fruit orchard, encroaching vegetation into formerly more open areas, and later development such as the construction of the nearby Williams House.

Long-term negligible to minor adverse impacts would result from future actions necessary to repair, replace, or potentially alter historic fabric, architectural features, and landscape elements. However, long-term beneficial impacts would also result from these and other proposed undertakings carried out in accordance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* and other guidance documentation to ensure the long-term preservation of historic properties in a manner that protects contributing architectural and cultural landscape elements. Non-NPS actions outside the park, such as encroaching urban and industrial development, also pose potential threats to the viewsheds associated with Lookout Mountain Battlefield's historic sites, structures, and cultural landscapes. The actions presented above would have long-term, beneficial and minor to moderate

adverse impacts on historic sites, structures, and cultural landscapes.

The impacts associated with implementation of alternative A would have long-term beneficial and negligible to minor adverse impacts on the park's historic sites, structures, and cultural landscapes. Other past, present, and reasonably foreseeable actions would result in long-term beneficial and minor to moderate adverse impacts. Consequently, the adverse impacts of the other actions described above, in combination with the impacts of alternative A, would cumulatively result in long-term minor to moderate adverse impacts on historic sites, structures, and cultural landscapes. The impacts associated with the no-action alternative would represent a small component of the adverse cumulative impact.

**Conclusion.** Long-term localized beneficial and negligible to minor adverse impacts on historic sites, structures, and cultural landscape features would occur from ongoing visitor use, routine park operations and interpretive activities, preservation undertakings, and other factors. There would also be long-term beneficial and minor to moderate adverse cumulative impacts on historic sites, structures, and cultural landscape features from implementation of alternative A in conjunction with other past, present, or reasonably foreseeable actions.

## Alternative B

**Analysis.** Under alternative B, NPS staff would undertake more substantial efforts to preserve and improve visitor access and interpretation of recently acquired Lookout Mountain Battlefield properties such as Tyndale Hill, Smith Hill, and Bald Hill. Development actions would be sensitively designed to not diminish the character-defining qualities contributing to the significance and potential cultural landscape features associated with these sites. Actions to preserve and interpret the battle period events and views from these sites would be

conducted in accordance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*, and would be expected to result in long-term beneficial impacts on historic sites. Long-term minor adverse impacts would also occur from the introduction of new trails, roads, and other constructed elements.

NPS staff would preserve, restore, and rehabilitate selected historic buildings, structures, and contributing cultural landscape features primarily at Point Park and the Cravens House. The interior of Cravens House would be closed to visitation. A historic structure report for the Cravens House would guide the more substantial exterior restoration and rehabilitation treatments proposed for the house and other contributing structures. Preservation treatments often entail necessary repairs, minor alterations, and/or replacement of deteriorated historic fabric and contributing landscape elements. The need for these actions is typically the result of natural weathering, wear and tear resulting from park and visitor use, and the adaptive use of selected historic buildings and structures for park operations and interpretation. All preservation undertakings would be carried out in accordance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties*. With particular regard to the standards and guidelines for preservation, the existing form, features, and architectural detailing of historic buildings, structures, and cultural landscape features would be retained. Rehabilitation treatments would include measures to protect and maintain historic building materials and character-defining features, although extensively deteriorated, damaged, or missing features would be replaced with traditional or substitute materials. Implementation of these preservation undertakings would continue to have long-term beneficial impacts on the park's historic buildings and structures, helping ensure their continued contribution to park interpretation, research, and preservation of Lookout Mountain

Battlefield's cultural heritage. However, long-term negligible to minor adverse impacts would also result from actions necessary to repair, replace, or potentially alter historic fabric and architectural features as part of preservation, restoration, and rehabilitation treatments.

Two historic buildings at Point Park would be removed under this alternative. These buildings (the comfort station and park ranger quarters) were constructed by the Civilian Conservation Corps in 1933 and are listed in the national register. The buildings are not presently used for NPS functions or visitor services and the expenses associated with their continued maintenance are not fully justified under the park's current and projected budget for operations and resource preservation. Removal of these buildings would help to approximate the appearance of Point Park's earlier period of commemorative landscape development. Two nonfunctioning restroom buildings at the Sanders Road picnic area would also be removed. The Sanders Road picnic area restrooms do not contribute to the significance of the national military park although they were determined eligible for listing in the national register by the Tennessee Historical Commission (SHPO) in May 2014. Removal of the contributing CCC buildings at Point Park and Sanders Road picnic area restrooms would result in adverse effect determinations. NPS staff would therefore consult with the Tennessee state historic preservation officer and other identified consulting parties under requirements of section 106 of the National Historic Preservation Act to determine appropriate mitigation measures (e.g., photographic documentation meeting Historic American Buildings Survey standards, interpretive media, etc.).

NPS staff would also continue to preserve the cultural landscape features that are associated with the park's historic structures and sites. These include the designed commemorative landscape at Point Park and the vernacular landscape at Cravens House. Important viewsheds associated with these properties

would be improved by the selective thinning of encroaching vegetation. Cultural landscape information would continue to be updated and included in the park's Cultural Landscape Inventory database. A cultural landscape report has been completed for the Cravens House, and selected recommendations from that report would be undertaken to rehabilitate the site's cultural landscape. As recommended in the cultural landscape report, the Williams House and its associated outbuildings and features would be removed as part of the rehabilitation treatment of the Cravens site. The Williams House, its garage, and other site buildings (e.g., a former caretaker's cabin) do not contribute to the significance of the national military park or the Cravens House cultural landscape. However, these buildings were determined eligible to be listed in the national register by the Tennessee Historical Commission (SHPO) in May 2014, and the removal of these buildings would result in an adverse effect determination. NPS staff would therefore consult with the Tennessee state historic preservation officer and other identified consulting parties under requirements of section 106 of the National Historic Preservation Act to determine appropriate mitigation measures.

**Cumulative Impacts.** Other primarily past actions have affected historic buildings, structures, and cultural landscape features at the Lookout Mountain Battlefield unit. For instance, the present Cravens House (reconstructed by Robert Cravens following the Civil War) underwent subsequent preservation and restoration treatments that altered its historic appearance. The placement of commemorative monuments and other surviving site modifications completed by the Civilian Conservation Corps during the park's commemorative period of development have also changed the appearance of the Cravens House cultural landscape. Apart from the battle-era importance of the site, the later memorialization and commemorative features also contribute to the property's historical significance. The setting of the site

has been partially diminished by the loss of contributing vegetation such as the Cravens fruit orchard, encroaching vegetation into formerly more open areas, and later development such as the construction of the nearby Williams House.

Long-term, negligible to minor adverse, impacts would result from future actions necessary to repair, replace, or potentially alter historic fabric, architectural features, and landscape elements. However, long-term beneficial impacts would also result from these and other proposed undertakings carried out in accordance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* and other guidance documentation to ensure the long-term preservation of historic properties in a manner that protects contributing architectural and cultural landscape elements. Long-term localized major adverse impacts would result from removal of two historic CCC buildings at Point Park, the Williams House, and its outbuildings, and other historic buildings. Non-NPS actions outside the park such as encroaching urban and industrial development also pose potential threats to the viewsheds associated with Lookout Mountain's historic sites, structures, and cultural landscapes. The actions presented above would have long-term beneficial and minor to major adverse impacts on historic sites, structures, and cultural landscapes.

The impacts associated with implementation of alternative B would have long-term beneficial and minor to major adverse impacts on the park's historic sites, structures, and cultural landscapes. Other past, present, and reasonably foreseeable actions would result in long-term beneficial and minor to moderate adverse impacts. Consequently, the adverse impacts of the other actions described above, in combination with the impacts of alternative B, would cumulatively result in long-term minor to moderate adverse impacts on historic sites, structures, and cultural

landscapes. The impacts associated with alternative B would represent a small component of the adverse cumulative impact.

**Conclusion.** Long-term localized beneficial and negligible to minor adverse impacts on historic sites, structures, and cultural landscape features would occur from ongoing visitor use, routine park operations and interpretive activities, preservation undertakings, and other factors. Long-term localized major adverse impacts would result from removal of two historic CCC buildings at Point Park, the Williams House and its outbuildings near the Cravens House site, and other historic buildings. There would also be long-term beneficial and minor to moderate adverse cumulative impacts on historic sites, structures, and cultural landscape features from implementation of alternative B in conjunction with other past, present, or reasonably foreseeable actions.

**Section 106 Summary.** After applying ACHP criteria of adverse effect (36 CFR Part 800.5, *Assessment of Adverse Effects*), the National Park Service concludes that implementing alternative B would result in *no adverse effect* on historic sites, buildings/structures, and cultural landscapes for which appropriate preservation treatments are recommended. However, an *adverse effect* determination would result from planned removal of two historic CCC buildings at Point Park, the Williams House and its outbuildings near the Cravens House site, and other historic buildings. NPS consultation with the Tennessee Historical Commission would occur along with the implementation of appropriate mitigation measures.

## Alternative C

**Analysis.** Under alternative C, NPS staff would undertake more substantial efforts to preserve and improve visitor access and interpretation of recently acquired Lookout Mountain properties such as Tyndale Hill, Smith Hill, Bald Hill, and Geary's Crossing. Development actions would be sensitively

designed to not adversely affect or diminish the character-defining qualities contributing to the significance and potential cultural landscape features associated with these sites. Actions to preserve and interpret the battle period events and views from these sites would be conducted in accordance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* and would be expected to result in long-term beneficial impacts on historic sites. Long-term minor adverse impacts would also occur from the introduction of new trails and other constructed elements.

NPS staff would preserve, restore, and rehabilitate selected historic buildings, structures, and contributing cultural landscape features primarily at Point Park and Cravens House. The interior of the Cravens House would be rehabilitated and the first floor used as a visitor contact station with interpretive exhibits. A historic structure report for the Cravens House would guide the more substantial exterior restoration and rehabilitation treatments proposed for the house and other contributing structures. Preservation treatments often entail necessary repairs, minor alterations, and/or replacement of deteriorated historic fabric and contributing landscape elements. The need for these actions is typically the result of natural weathering, wear and tear resulting from park and visitor use, and the adaptive use of selected historic buildings and structures for park operations and interpretation. All preservation undertakings would be carried out in accordance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties*. With particular regard to the standards and guidelines for preservation, the existing form, features, and architectural detailing of historic buildings, structures, and cultural landscape features would be retained. Rehabilitation treatments would include measures to protect and maintain historic building materials and character-defining features, although extensively deteriorated, damaged, or missing features would be

replaced with traditional or substitute materials. Implementation of these preservation undertakings would continue to have long-term beneficial impacts on the park's historic buildings and structures, helping ensure their continued contribution to park interpretation, research, and preservation of Lookout Mountain Battlefield's cultural heritage. However, long-term negligible to minor adverse impacts would also result from actions necessary to repair, replace, or potentially alter historic fabric and architectural features as part of preservation, restoration, and rehabilitation treatments.

Two historic buildings at Point Park would be removed under this alternative. These buildings (the comfort station and park ranger quarters) were constructed by the Civilian Conservation Corps in 1933 and are listed in the national register. The buildings are not presently used for NPS functions or visitor services and the expenses associated with their continued maintenance are not fully justified under the park's current and projected budget for operations and resource preservation. Removal of these buildings would help to approximate the appearance of Point Park's earlier period of commemorative landscape development. Three nonfunctioning restroom buildings at the Sanders Road picnic area would also be removed. The Sanders Road picnic area restrooms do not contribute to the significance of the national military park although they were determined eligible for listing in the national register by the Tennessee Historical Commission (SHPO) in May 2014. Removal of the contributing CCC buildings at Point Park and the Sanders Road picnic area restrooms would result in *adverse effect* determinations. NPS staff would therefore consult with the Tennessee state historic preservation officer and other identified consulting parties under requirements of section 106 of the National Historic Preservation Act to determine appropriate mitigation measures (e.g., photographic documentation meeting



Historic American Buildings Survey standards, interpretive media, etc.).

NPS staff would also continue to preserve the cultural landscape features that are associated with the park's historic structures and sites. These include the designed commemorative landscape at Point Park and the vernacular landscape at Cravens House. Important viewsheds associated with these properties would be improved by the selective thinning of encroaching vegetation. Cultural landscape information would continue to be updated and included in the park's Cultural Landscape Inventory database. A cultural landscape report has been completed for the Cravens House, and more comprehensive implementation of the recommendations from that report would be undertaken to rehabilitate the site's cultural landscape. As recommended in the cultural landscape report, the Williams House and its associated outbuildings and features would be removed as part of the rehabilitation treatment of the Cravens House site. The Williams House, its garage, and other site buildings (e.g., former caretaker's cabin) do not contribute to the significance of the national military park or the Cravens House cultural landscape. However, these buildings were determined eligible for listing in the national register by the Tennessee Historical Commission (SHPO) in May 2014, and their removal would result in an *adverse effect* determination. NPS staff would therefore consult with the Tennessee state historic preservation officer and other identified consulting parties under requirements of section 106 of the National Historic Preservation Act to determine appropriate mitigation measures.

Additional cultural landscape inventories and reports would be completed as funding permits for other selected properties with recommendations for appropriate treatment in accordance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*. These reports would document the significance of

cultural landscape features and inform preservation management decision making. Implementation of these preservation, rehabilitation, and documentation measures would have long-term localized beneficial impacts on Lookout Mountain Battlefield's cultural landscapes.

**Cumulative Impacts.** Other primarily past actions have affected historic buildings, structures, and cultural landscape features at the Lookout Mountain Battlefield unit. For instance, the present Cravens House (reconstructed by Robert Cravens following the Civil War) underwent subsequent preservation and restoration treatments that altered its historic appearance. The placement of commemorative monuments and other surviving site modifications completed by the Civilian Conservation Corps during the park's commemorative period of development have also changed the appearance of the Cravens House cultural landscape. Apart from the battle-era importance of the site, the later memorialization and commemorative features also contribute to the property's historical significance. The setting of the site has been partially diminished by the loss of contributing vegetation such as the Cravens fruit orchard, encroaching vegetation into formerly more open areas, and later development such as the construction of the nearby Williams House.

Long-term negligible to minor adverse impacts would result from future actions necessary to repair, replace, or potentially alter historic fabric, architectural features, and landscape elements. However, long-term beneficial impacts would also result from these and other proposed undertakings carried out in accordance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* and other guidance documentation to ensure the long-term preservation of historic properties in a manner that protects contributing architectural and cultural landscape elements. Long-term localized major adverse

impacts would result from removal of two historic buildings at Point Park, the Williams House and its outbuildings near the Cravens House site, and other historic buildings. Non-NPS actions outside the park such as encroaching urban and industrial development also pose potential threats to viewsheds associated with Lookout Mountain Battlefield's historic sites, structures, and cultural landscapes. The actions presented above would have long-term beneficial and minor to major adverse impacts on historic sites, structures, and cultural landscapes.

The impacts associated with implementation of alternative C would have long-term beneficial and minor to major adverse impacts on the park's historic sites, structures, and cultural landscapes. Other past, present, and reasonably foreseeable actions would result in long-term beneficial and minor to moderate adverse impacts. Consequently, the adverse impacts of the other actions described above, in combination with the impacts of alternative C, would cumulatively result in long-term minor to moderate adverse impacts on historic sites, structures, and cultural landscapes. The impacts associated with alternative C would represent a small component of the adverse cumulative impact.

**Conclusion.** Long-term localized beneficial and negligible to minor adverse impacts on

historic sites, structures, and cultural landscape features would occur from ongoing visitor use, routine park operations and interpretive activities, preservation undertakings, and other factors. Long-term localized major adverse impacts would result from removal of two historic CCC buildings at Point Park, the Williams House and its outbuildings near the Cravens House site, and other historic buildings. There would also be long-term beneficial and minor to moderate adverse cumulative impacts on historic sites, structures, and cultural landscape features from implementation of alternative C in conjunction with other past, present, or reasonably foreseeable actions.

**Section 106 Summary.** After applying ACHP criteria of adverse effect (36 CFR Part 800.5, *Assessment of Adverse Effects*), the National Park Service concludes that implementing alternative C would result in *no adverse effect* on historic sites, buildings/structures, and cultural landscapes for which appropriate preservation treatments are recommended. However, an *adverse effect* determination would result from planned removal of two historic CCC buildings at Point Park, the Williams House and its outbuildings near the Cravens House site, and other historic buildings. NPS consultation with the Tennessee Historical Commission would occur along with the implementation of appropriate mitigation measures.

## IMPACTS TO NATURAL RESOURCES

### SOILS

#### Alternative A (No Action)

**Analysis.** Under alternative A, the removal of structures in Point Park and rehabilitation of these areas would restore soils, which would be a localized beneficial impact. No other NPS actions would occur under alternative A that would affect the soils of Lookout Mountain Battlefield. Although trail maintenance activities would periodically occur, some erosion would likely continue on steep trails due to visitor use (primarily hikers). The loss of soil would result in a localized long-term minor adverse impact.

**Cumulative Impacts.** Past and continuing human activities and developments around the Lookout Mountain Battlefield unit, including agriculture, logging, and construction of residences, roads, and commercial buildings would be expected to continue to alter soils in the area. However, these activities would not be expected to affect the battlefield's soils. As noted in the "Cumulative Impact Scenario," additional trail projects, including trail connections and extensions, are likely outside the park unit, which would result in increased pedestrian and bike use of trails and increased potential for the alteration of soils on some popular trails (particularly when the trails are wet). When the effects of removing structures in Point Park and continuing visitor use in alternative A are added to the loss and alteration of soils due to future trail connections in the area, there would be a long-term moderate adverse cumulative impact on area soils.

**Conclusion.** Alternative A would have both beneficial and adverse effects on soils in Lookout Mountain Battlefield. The removal of structures in Point Park would have a localized minor beneficial effect on soils in

this area. Visitor use would continue to result in a long-term minor adverse impact on soils due to visitors eroding soils on steep trails in localized areas. When these effects are added to past, present, and future likely actions in the region, there would be a long-term moderate adverse cumulative impact on soils in the Lookout Mountain Battlefield unit.

#### Alternative B

**Analysis.** Several actions would occur under alternative B that would alter soil properties or result in the loss of soils, including construction of viewing areas, parking areas, trails, and restrooms, primarily on Tyndall Hill and Bald Hill. Of all the actions being proposed, the construction of Tyndall Hill road would have the greatest effect on soils, resulting in the removal of topsoil and alteration of soil properties along the route. Clearing vegetation and removing trees for viewpoints also would alter soil properties in the Tyndall Hill and Cravens House areas. These impacts would all be localized and would affect a total of no more than about 1.5 acres of the 3,345-acre park unit. The loss and alteration of soils would result in a long-term minor to moderate adverse impact in localized areas compared to alternative A.

Like alternative A, alternative B would result in trail erosion in localized areas due to visitors walking on steep trails. With more visitors likely using the trails in this alternative, even with increased trail maintenance, the potential for impacts would increase compared to alternative A. With additional erosion, there likely would be a long-term minor to moderate adverse impact on soils in localized areas.

Alternative B also would result in the restoration of several areas with the removal of structures at the Cravens House and Point Park and the Sanders Road picnic areas. This

would have a beneficial effect on soils in these areas.

**Cumulative Impacts.** As noted in the “Cumulative Impact Scenario,” additional trail projects, including trail connections and extensions, are likely outside the park unit, which would result in increased pedestrian and bicycle use of the park unit’s trails and increased potential for the alteration of soils on popular trails. When the effects of visitor use and proposed developments under alternative B are added to the loss and alteration of soils due to future trail connections in the area, there would be a long-term moderate adverse cumulative impact on area soils.

**Conclusion.** Most of the soils in the Lookout Mountain Battlefield unit would not be affected by the actions proposed in alternative B. Alternative B would have some beneficial effects on soils due to the removal of structures in several areas. But overall, there would be a long-term minor to moderate adverse impact on soils in localized areas due to proposed new developments, primarily on Tyndall and Bald hills and due to increased numbers of visitors eroding soils on steep trails in localized areas. When these effects are added to past, present, and future likely actions in the region, there would be a long-term, moderate, adverse, cumulative impact on soils in the Lookout Mountain Battlefield unit.

### **Alternative C (Preferred Alternative)**

**Analysis.** Several actions would occur in alternative C that would alter soil properties or result in the loss of soils, including the construction of viewing areas, parking areas, trails, and restrooms, primarily on Tyndall Hill, Bald Hill, and the Chattanooga Valley Overlook. Burying utilities underground in the Cravens House area would alter soils in this area. Clearing vegetation and removing trees for viewpoints also would alter soil properties. All of these impacts would be localized and would affect no more than a

total of about 1 acre of the 3,345-acre park unit. The loss and alteration of soils would result in a long-term, minor to moderate, adverse impact in localized areas compared to alternative A.

As in alternative A, alternative B would result in trail erosion in localized areas due to visitors walking on steep trails. With more visitors likely using the trails in this alternative, even with increased trail maintenance, the potential for impacts would increase compared to alternative A. With additional erosion there likely would be a long-term, minor to moderate, adverse impact on soils in localized areas.

In addition, like alternative A, alternative C would continue to result in trail erosion in localized areas due to visitors on steep trails—a long-term, minor, adverse impact. However, work on the Jackson Gap Trail to provide for bikes should improve the trail and decrease soil erosion, which would be a long-term, beneficial impact—assuming the condition of the trail is monitored and the trail is adequately maintained.

Alternative C also would result in the restoration of several areas with the removal of structures in Cravens House and Point Park and the Sanders Road picnic area. This would have a beneficial effect on soils in these areas.

**Cumulative Impacts.** As noted in the “Cumulative Impact Scenario,” additional trail projects, including trail connections and extensions, are likely outside the park unit, which would result in increased pedestrian and bicycle use of park unit trails and the potential for increased alteration of soils, particularly on popular trails. When the effects of visitor use and proposed developments in alternative C are added to the loss and alteration of soils due to future trail connections in the area, there would be a long-term, moderate, adverse cumulative impact on area soils.

**Conclusion.** Most of the soils in the Lookout Mountain Battlefield unit would not be affected by the actions proposed in alternative C. Alternative C would have some beneficial effects on soils due to the removal of structures in a few areas. Overall, there would be a long-term, moderate, adverse impact on soils in localized areas due to proposed new developments primarily on Tyndall and Bald hills and the Chattanooga Valley Overlook and due to increased numbers of visitors eroding soils on steep trails in localized areas. When these effects are added to past, present, and future likely actions in the region, there would be a long-term, moderate, adverse cumulative impact on soils in the Lookout Mountain Battlefield unit.

## VEGETATION

### Alternative A (No Action)

**Analysis.** No new NPS actions would occur under alternative A that would affect the native vegetation and vegetation communities covering the Lookout Mountain Battlefield unit. Although some buildings would be removed in the Point Park area, these areas likely would be reseeded with grass. No new construction or ground-disturbance from new facilities would occur. Much of the area's native vegetation has been substantially altered by past activities, as described in the "Affected Environment" section. Vegetation around historic features, viewpoints, monuments, and commemorative features would continue to be controlled and maintained to prevent vegetation from detracting from the battlefield / cultural landscape, particularly in the Point Park and Cravens House areas. These ongoing maintenance efforts have been occurring for many years and would have a long-term, negligible to minor, adverse effect on the native vegetation. Visitors would continue to have some negligible to minor, localized, adverse impacts on native vegetation in localized areas. Visitors would likely continue to spread nonnative seeds as they walk on

trails in the area, aiding the spread of nonnative plants. Continuing NPS efforts to control the spread of nonnative invasive species, such as kudzu, in localized areas would have a beneficial effect on native vegetation, allowing native plants to grow and reproduce.

**Cumulative Impacts.** As noted in the "Affected Environment" chapter, past human activities have altered the native vegetation and vegetation communities in the Lookout Mountain Battlefield area. Continuing growth around the Lookout Mountain Battlefield unit would be expected to continue to alter native vegetation. Some nonnative vegetation would likely continue to spread into the park unit, although this would not be expected to affect the vegetation of most of the park unit. Also, as noted in the "Cumulative Impact Scenario," additional trail projects, including trail connections and extensions, are likely outside the park unit, which would result in increased trail use and increased potential for the spread of nonnative species in the unit. All of these actions outside the park unit would likely result in continuing loss and alteration of native vegetation in localized areas, resulting in a long-term, minor, adverse impact on park unit vegetation. When the effects of continuing maintenance activities and visitor use in the Lookout Mountain Battlefield unit under alternative A are added to these other external effects, there would be a minor, long-term, adverse cumulative impact.

**Conclusion.** Most of the native vegetation and vegetation communities in the Lookout Mountain Battlefield unit would not be affected by new NPS actions under alternative A. There would continue to be a long-term, negligible to minor, adverse impact on native vegetation due to ongoing maintenance activities to control vegetation and visitor use, which would trample/crush vegetation in localized areas. When these impacts are added to past, present, and future effects of actions outside the park unit, there would be a long-term, minor, adverse

cumulative impact on native vegetation in the Lookout Mountain Battlefield unit.

## **Alternative B**

**Analysis.** Like alternative A, in alternative B vegetation around historic features, viewpoints, monuments, and commemorative features would continue to be controlled and maintained so the vegetation does not detract from the battlefield/cultural landscape, particularly in the Point Park and Cravens House areas. These ongoing maintenance efforts have been occurring for many years, and would have a long-term, negligible to minor, adverse effect on native vegetation in these areas.

Under alternative B, construction of a new road on Tyndale Hill would occur along an existing unimproved dirt road and should have no effect on native vegetation in the area.

Several actions would occur under alternative B that would alter native vegetation and vegetation communities or result in the loss of vegetation. These actions include the construction of parking areas, trails, and restrooms, primarily on Tyndale Hill and Bald Hill. Many of these new developments would likely occur in already disturbed areas with relatively little native vegetation. The impacts from the proposed actions would all be localized and would affect a total of no more than about 1 acre of the 3,345-acre park unit. In addition, clearing vegetation and removing and thinning trees for viewpoints would alter the vegetation in the Tyndale Hill, Chattanooga Valley Overlook, and Cravens House areas, affecting no more than about 0.1 acre. Overall, the loss and alteration of vegetation due to new facilities under alternative B would result in a long-term, minor, adverse impact in localized areas compared to alternative A.

As in alternative A, visitors would continue to have some negligible to minor, localized, adverse impacts on native vegetation in

localized areas due to visitors crushing/trampling vegetation and spreading nonnative seeds as they walk on trails in the area, aiding the spread of nonnative plants.

Alternative B also would result in the restoration of several areas with the removal of structures and reseeded with native plants at Cravens House and the Sanders Road picnic area. This would have a beneficial effect on native vegetation in these areas. (The removal of structures in the Point Park area would likely be replanted with grass seed and would not affect native vegetation in the area.)

**Cumulative Impacts.** Alternative B would have about the same potential for cumulative impacts as alternative A. Additional trail projects, including trail connections and extensions, are likely outside the park unit, which would result in increased trail use and increased potential for the spread of nonnative species in the area. These actions outside the park unit would likely result in continuing loss and alteration of native vegetation in localized areas, resulting in a long-term, minor, adverse impact on park unit vegetation. When the effects of proposed new developments, thinning, or clearing vegetation for viewpoints, and likely increases in visitor use in the Lookout Mountain Battlefield unit under alternative B are added to these other external effects, there would be a minor, long-term, adverse, cumulative impact.

**Conclusion.** Most of the native vegetation and vegetation communities in the Lookout Mountain Battlefield unit would not be affected by NPS actions under alternative B. The alternative would have both beneficial and adverse effects on vegetation in the park unit. The alternative would result in a long-term beneficial impact due to the restoration and reseeded of native plants around Cravens House and the Sanders Road picnic area. However, construction of viewing areas, parking areas, trails, and restrooms (primarily on Tyndall Hill and Bald Hill), would result in the loss or alteration of vegetation in

several areas, along with clearing and thinning vegetation for viewpoints. Continued visitor use also would trample/crush some vegetation in popular use areas. Overall, the actions in alternative B would have a long-term, minor, adverse impact on native vegetation in the Lookout Mountain Battlefield unit. When the adverse and beneficial impacts of alternative B are added to past, present, and future effects of actions outside the park unit, there would be a long-term, minor, adverse cumulative impact on native vegetation in the area.

### Alternative C

**Analysis.** Like the other alternatives, in alternative C, vegetation around historic features, viewpoints, monuments, and commemorative features would continue to be controlled and maintained so it does not detract from the battlefield/cultural landscape, particularly in the Point Park and Cravens House areas. These ongoing maintenance efforts have been occurring for many years and would have a long-term, negligible to minor, adverse effect on native vegetation in these areas.

Several actions would occur under alternative C that would alter native vegetation and vegetation communities or result in the loss of vegetation. These actions include the construction of parking areas, trails, and restrooms, primarily on Tyndale Hill, Chattanooga Valley Overlook, and Bald Hill. Many of these new developments would likely occur in already disturbed areas with relatively little native vegetation, such as adding restrooms on the Williams house property and Sanders Road picnic area. The impacts from the proposed actions would be localized and would affect a total of no more than about 1 acre of the 3,345-acre park unit. In addition, clearing vegetation and removing and thinning trees for viewpoints would alter vegetation in the Tyndall Hill, Bald Hill, Chattanooga Valley Overlook, Confederate Defense Site, and Cravens House areas, affecting no more than about 0.1 acre.

Overall, the loss and alteration of vegetation due to new facilities under alternative B would result in a long-term, minor, adverse impact in localized areas compared to alternative A.

Improving the road between Parker Lane and Frierson's Cemetery on Bald Hill should have a negligible adverse effect on native vegetation as this area's vegetation cover has already been largely altered.

As in the previous alternatives, visitors would continue to have some negligible to minor localized adverse impacts on native vegetation in localized areas due to visitors crushing/trampling vegetation and spreading nonnative seeds as they walk on trails, aiding the spread of nonnative plants.

Alternative C also would result in the restoration of several areas with the removal of structures and reseeded of native plants in the Cravens House, Williams property, and Sanders Road picnic area. This would have a beneficial effect on native vegetation in these areas. (The removal of structures in the Point Park area would likely be replanted with grass and would not affect native vegetation in the area.) In addition, there would be a beneficial impact from the removal of nonnative vegetation in the vicinity of Cravens House.

**Cumulative Impacts.** Alternative C would have about the same potential for cumulative impacts as alternative A. Additional trail projects, including trail connections and extensions, are likely outside the park unit, which would result in increased trail use and increased potential for the spread of nonnative species in the unit. These actions outside the park unit would likely result in continuing loss and alteration of native vegetation in localized areas, resulting in a long-term, minor, adverse impact on park unit vegetation. When the adverse effects of proposed new developments, thinning or clearing vegetation for viewpoints, and likely increases in visitor use on native vegetation in the Lookout Mountain Battlefield unit under

alternative C, plus the beneficial effects of restoring native vegetation in a few areas under the alternative, are added to past, present, and future external effects of other actions occurring outside the Lookout Mountain Battlefield unit, there would be a minor, long-term, adverse cumulative impact.

**Conclusion.** Most of the native vegetation and vegetation communities in the Lookout Mountain Battlefield unit would not be affected by NPS actions under alternative C. The alternative would have both beneficial and adverse effects on vegetation in the park unit. The alternative would result in a long-term beneficial impact due to the restoration and reseeded of native plants in the Cravens House, Williams property, and Sanders Road picnic area. However, the construction of viewing areas, parking areas, trails, and restrooms (primarily on Tyndall Hill, Chattanooga Valley Overlook, and Bald Hill), would result in the loss or alteration of vegetation in several areas, along with clearing and thinning vegetation for viewpoints. Continued visitor use would trample/crush some vegetation in popular use areas. Overall, the actions in alternative C would have a long-term, minor, adverse impact on native vegetation on Lookout Mountain Battlefield. When the adverse and beneficial impacts of alternative C are added to past, present, and future effects of actions outside the park, there would be a long-term, minor, adverse cumulative impact on native vegetation in the area.

## FEDERAL AND STATE LISTED SPECIES

### Alternative A (No Action)

**Analysis.** As noted in the “Affected Environment” section, the threatened large-flowered skullcap is known to occur on several scattered sites in the Lookout Mountain Battlefield unit. Although no actions would occur under alternative A that would directly affect the plant or its habitat, there would continue to be the potential for the inadvertent loss of individual plants due

to periodic trail maintenance activities and hikers walking off trails and trampling plants. However, given the continued monitoring of the plant populations and efforts to keep trail maintenance crews aware of the plant, adverse impacts to the park’s plant populations would be expected to be negligible and long term.

No actions would occur under alternative A that would affect the endangered Indiana bat or the northern long-eared bat that may occur in the Lookout Mountain Battlefield unit or the roost trees the bats may use in the park.

**Cumulative Impacts.** In the past, the large-flowered skullcap declined largely due to habitat loss and degradation caused by logging, residential development, grazing, clearing wooded areas for pasture, off-road vehicle damage, quarrying, surface rock mining, and trampling by hikers, as well as rapid urbanization in the area around Chattanooga (TDEC 2011). These threats would continue, but no ongoing external actions would be expected to affect the remaining populations in the park unit. It is possible, albeit unlikely, that the establishment of new trails outside of the park unit could result in increased use and the loss or damage to a few individual plants due to people walking off trails. As a result, when the continued potential impacts of alternative A are added to the effects of these future actions, there is the potential for a negligible, long-term, adverse cumulative impact on the large-flowered skullcap within the park unit.

No ongoing external actions are expected to affect the Indiana and northern long-eared bats using the park unit. In the future the establishment of new trails outside the Lookout Mountain unit could result in the removal of some snags that are used by the park unit’s bats. Removal of the snags would disturb the bats if they are present, although they likely would be able to find other snags to use. This would result in a short-term negligible adverse effect on the two bat species. However, because no actions would



be taken under alternative A that would affect the bats, there would be no cumulative impacts.

**Conclusion.** Under alternative A there would continue to be the potential for inadvertent loss of individual large-flowered skullcap plants due to hikers going off trail and trampling plants, but with continued monitoring and education and other appropriate mitigation measures, adverse impacts to plant populations in the Lookout Mountain Battlefield unit would be expected to be negligible and long term. Under section 7 of the Endangered Species Act, the overall determination of effect would be *may affect, not likely to adversely affect*. There would be the potential for a negligible, long-term, adverse cumulative impact on the large-flowered skullcap in the Lookout Mountain Battlefield unit when the effects of the establishment of new trails outside the park unit are added to the effects of alternative A. Alternative A would have no effects and no cumulative impacts on the Indiana bat and northern long-eared bat in the park unit.

## Alternative B

**Analysis.** Most of the actions under alternative B would not result in ground disturbance in areas where the large-flowered skullcap would likely occur, including areas in Point Park, Sanders Road picnic area, Cravens House area, and Chattanooga Valley Overlook. It is possible that the plant could occur along the proposed new trails on Bald Hill and Tyndall Hill. As noted in the mitigation measures in chapter 2, a survey would be undertaken before the trails are developed to ensure impacts to the threatened plant are avoided. There would still be the potential for impacts from occasional hikers going off these trails and inadvertently trampling plants, but with proper siting of the trails, continued monitoring, and visitor education alternative B would result in negligible, long-term, adverse impacts to large-flowered skullcap in the Lookout Mountain Battlefield unit.

Under alternative B, there would be vegetation thinning and clearing in several areas in the park unit. Some trees would likely be removed in the construction of the Tyndall Hill trail and viewing area, Bald Hill trail, Chattanooga Valley Overlook, and Cravens House viewing areas. It is not known if any of these trees are used by the Indiana or northern long-eared bat for summer roosting. Thus, before any of these developments are built, either the trees would be removed during the winter when the bats are not present or an emergence count would be undertaken to ensure bats are not occupying the trees that would be cut. If bats are found using the trees, tree cutting would not occur until the bats were not using the roosting tree(s) and it is determined there are additional trees in the vicinity that bats could use in the future. Alternatively, the locations of the developments would be moved to avoid affecting the bats. This should largely avoid impacts to the bats and their habitat and result in a negligible, short-term, adverse impact to the bats and their habitat.

**Cumulative Impacts.** Although the threats to the large-flowered skullcap and its habitat would continue outside the park unit, with increased awareness and continued monitoring, no ongoing external actions would be expected to affect the populations within the park unit. It is possible, albeit unlikely, that the establishment of new trails outside the park unit could result in increased use in the park unit and the loss of or damage to a few individual plants due to people walking off trails. As a result, when the impacts of alternative B are added to the effects of these future actions, there is the potential for a negligible, long-term, adverse cumulative impact on the large-flowered skullcap within the park unit.

No ongoing external actions are expected to affect the Indiana and northern long-eared bats using the park unit. In the future, the establishment of new trails outside the Lookout Mountain unit could result in the removal of some snags that are used by the park unit's bats. Removal of the snags would

disturb the bats if they are present, although they likely would be able to find other snags to use. This would result in a short-term negligible adverse effect on the two bat species. When the negligible, short-term, adverse impacts of alternative B are added to the negligible, short-term, adverse impacts of these other external future actions there would be the potential for a negligible, short-term, adverse cumulative impact on the two bat species using the park unit.

**Conclusion.** Under alternative B, continued monitoring, visitor education, and other appropriate mitigation measures should largely avoid impacts to the large-flowered skullcap populations in the Lookout Mountain Battlefield unit. There would be the potential for some negligible, long-term, adverse impacts to large-flowered skullcap plants due to the construction of new trails on Bald Hill and Tyndall Hill. Likewise, the removal of trees for new developments and viewing areas under alternative B could affect the Indiana bat and northern long-eared bat, which may use the area. With appropriate monitoring and mitigation measures, adverse impacts to the two bat species should be negligible and short-term. Under section 7 of the Endangered Species Act, the overall determination of effect on the large-flowered skullcap, Indiana bat, and northern long-eared bat would be *may affect, not likely to adversely affect*. When the effects of the establishment of new trails outside of the park unit in the future are added to the effects of alternative B, there would be the potential for negligible, long-term, adverse cumulative impacts on the large-flowered skullcap, and a negligible, short-term, adverse cumulative impact on the Indiana bat and northern long-eared bat in the Lookout Mountain Battlefield unit.

## Alternative C

**Analysis.** Most of the actions under alternative C would not result in ground disturbance in areas where the large-flowered skullcap would likely occur, including areas

in Point Park, Sanders Road picnic area, Cravens House area, Williams property, and Chattanooga Valley Overlook. It is possible that the plant could occur along the proposed new trails on Bald Hill and Tyndall Hill. As noted in the mitigation measures in chapter 2, a survey would be undertaken before the trails are developed to ensure impacts to the threatened plant are avoided. There would still be the potential for impacts from occasional hikers going off these trails and inadvertently trampling plants, but with proper siting of the trails, continued monitoring, and visitor education, alternative C would result in negligible, long-term, adverse impacts to large-flowered skullcap in the Lookout Mountain Battlefield unit.

Under alternative C, there would be vegetation thinning and clearing in several areas in the park unit. Some trees would likely be removed in the construction of the Tyndall Hill Trail and viewing area, Bald Hill Trail, Confederate Defense Site, the Chattanooga Valley Overlook, and Cravens House viewing areas. It is not known if any of these trees are used by the Indiana or northern long-eared bat for summer roosting. Thus, before any of these developments are built, either the trees would be removed during the winter when the bats are not present or an emergence count would be taken to ensure bats are not occupying the trees marked for removal. If bats are found using the trees, tree cutting would not occur until the bats had left the roosting tree(s) and it is determined there are additional trees in the vicinity that bats could use in the future. Alternatively, the locations of the developments would be moved to avoid affecting the bats. This should largely avoid impacts to the bats and their habitat and result in a negligible, short-term, adverse impact to the bats and their habitat.

**Cumulative Impacts.** Although threats to the large-flowered skullcap and its habitat would continue outside of the park unit, with increased awareness and continued monitoring no ongoing external actions would be expected to affect the populations

within the park unit. It is possible, albeit unlikely, that the establishment of new trails outside the park unit could result in increased use in the park unit and the loss of or damage to a few individual plants due to people walking off trails. As a result, when the impacts of alternative C are added to the effects of future actions, there is the potential for a negligible, long-term, adverse cumulative impact on the large-flowered skullcap within the park unit.

No ongoing external actions are expected to affect the Indiana and northern long-eared bats using the park unit. In the future, the establishment of new trails outside the Lookout Mountain unit could result in the removal of some snags that are used by the park unit's bats. Removal of the snags would disturb the bats if they are present, although they likely would be able to find other snags to use. This would result in a short-term negligible adverse effect on the two bat species. When the negligible, short-term, adverse impacts of alternative C are added to the negligible, short-term, adverse impacts of these other external future actions there would be the potential for a negligible, short-term adverse cumulative effect on the two bat species using the park unit.

**Conclusion.** Under alternative C, continued monitoring, visitor education, and other appropriate mitigation measures should largely avoid impacts to populations of the large-flowered skullcap in the Lookout Mountain Battlefield unit. There would be the potential for some negligible, long-term, adverse impacts to large-flowered skullcap plants due to the construction of new trails on Bald Hill and Tyndall Hill. Likewise, the removal of trees for new developments and viewing areas under alternative C could affect the Indiana bat and northern long-eared bat, which may use the area. But with appropriate monitoring and mitigation measures, adverse impacts to the two bat species should be negligible and short-term. Under section 7 of the Endangered Species Act, the overall determination of effect on the large-flowered skullcap, Indiana bat, and northern long-eared bat would be *may affect, not likely to adversely affect*. When the effects of the establishment of new trails outside the park unit in the future are added to the effects of alternative C, there would be the potential for negligible long-term, adverse cumulative impacts on the large-flowered skullcap, and a negligible, short-term adverse cumulative impact on the Indiana bat and northern long-eared bat in the Lookout Mountain Battlefield unit.

## IMPACTS TO VISITOR EXPERIENCE AND SAFETY

### ALTERNATIVE A (NO ACTION)

#### Analysis

**Ability to Access the Battlefield.** Under alternative A, the battlefield would continue to have road access, with parking at several places, a few main sites of interpretive interest, and other points for recreational activities. The new park lands would have no public access.

**Universal Design and Accessibility Opportunities.** There would be no change in opportunities for visitors with disabilities to access programs and facilities in battlefield unit under alternative A. The visitor center and Cravens House would continue to provide some opportunities to accommodate all people.

**Opportunities to Understand the Important Stories of the Battlefield.** Under this alternative, the battlefield would continue to provide opportunities for visitors to understand the important stories with existing facilities, programming, and interpretive media. The new park lands that are not currently interpreted would not provide an opportunity to understand the significance of these new lands.

**Recreational Opportunities.** The battlefield would continue to offer the same variety of high quality recreational opportunities.

**Visitor Safety.** The battlefield would continue to offer a high level of visitor safety. Park staff would continue to maintain facilities and trails to minimize safety hazards and would continue to work with local law enforcement agencies in responding to incidents within the battlefield.

**Cumulative Impacts.** Other past, present, and reasonably foreseeable actions are likely

to have an impact on visitor experience. The preservation of land on Stringers Ridge enhances opportunities for visitors to understand the stories of the battlefield. The planned trail and water trail connections would greatly enhance trail connectivity, while enhancing recreational opportunities and access to the battlefield. These and designation of park trails as part of the Great Eastern Trail would likely result in increased recreational use. NPS planned demolition projects and vegetation removal within the park would improve visitor safety and enhance the visitor's ability to envision the battles as they unfolded in 1863.

The impacts associated with implementation of alternative A would have continued long-term, minor, beneficial impacts on visitor experience. Other past, present, and reasonably foreseeable actions would result in long-term, minor, beneficial impacts. Consequently, the impacts of the other actions as described above, in combination with the impacts of alternative A, would cumulatively result in long-term, minor, beneficial impacts on visitor experience.

**Conclusion.** Long-term, minor, beneficial impacts resulting from existing access to the battlefield, minimal opportunities for visitors with disabilities to access facilities and programs, good opportunities to understand the important stories of the battlefield, good level of recreational opportunities, and a high level of visitor safety. There would also be long-term, minor, beneficial, cumulative impacts on visitor experience from implementation of alternative A in conjunction with other past, present, or reasonably foreseeable actions.

## ALTERNATIVE B

### Analysis

**Ability to Access the Battlefield.** Under alternative B, the battlefield would have several additional access points to new park lands. New accessible parking lots and trails are proposed. Universal access for NPS programs would also be enhanced with the auto tour.

**Universal Design and Accessibility.** Alternative B would enhance accessibility opportunities for visitors with disabilities. New accessible parking lots and trails would be proposed. Opportunities for all visitors to access NPS programs would also be enhanced by the auto tour.

**Opportunities to Understand the Important Stories of the Battlefield.** Alternative B contains several proposals that would improve opportunities to understand the stories of the battlefield. These actions include new battlefield access points and additional interpretive signs and tours. Vegetation clearing in important viewsheds would also improve the quality of the visitor experience.

**Recreational Opportunities.** Alternative B would allow for a similar level of recreational activity as alternative A, but with the addition of opportunities for water trail access to Lookout Creek.

**Visitor Safety.** Alternative B would result in some improvements to visitor safety such as removal of the Williams House and outbuildings. The alternative could also result in new safety concerns, including visitor safety at Smith Hill and Tyndale Hill, as vandalism sometimes occurs in those two areas. Risks to visitors at the new lands would be mitigated primarily through the presence of other visitors and park staff. Water trail access would also result in safety concerns for visitors. However, providing guided tours would help mitigate these hazards.

**Cumulative impacts.** Other past, present, and reasonably foreseeable actions are likely to have an impact on visitor experience. The preservation of land on Stringers Ridge enhances opportunities for visitors to understand the stories of the battlefield. The planned trail and water trail connections would greatly enhance trail connectivity, enhancing recreational opportunities and access to the battlefield. These and designation of park trails as part of the Great Eastern Trail would likely result in increased recreational use. NPS planned demolition projects and vegetation removal projects within the park would improve visitor safety and improve the visitor's ability to understand the important stories since the cultural landscape would be improved.

The impacts associated with implementation of alternative B would have long-term, moderate, beneficial impacts on visitor experience. Other past, present, and reasonably foreseeable actions would result in long-term, minor, beneficial impacts. Consequently, impacts of the other actions described above, in combination with the impacts of alternative B, would cumulatively result in long-term, moderate, beneficial impacts on visitor experience.

**Conclusion.** Alternative B would result in long-term, moderate, beneficial impacts to visitor experience and safety due to opening the new park lands to the public; providing new accessible trails, parking areas, and programs; new recreational opportunities, and both additional visitor safety risks and mitigation measures. There would also be long-term, moderate, beneficial, cumulative impacts on visitor experience from implementation of alternative B in conjunction with other past, present, or reasonably foreseeable actions.

## ALTERNATIVE C

### Analysis

**Ability to Access the Battlefield.** Under alternative C, the battlefield would have several additional access points to new park lands.

**Universal Design and Accessibility.** Alternative C would enhance accessibility opportunities for visitors with disabilities. New accessible parking lots and trails would be proposed. Access to Cravens House would be improved. Opportunities for all visitors to access NPS programs would also be enhanced by the auto tour.

**Opportunities to Understand the Important Stories of the Battlefield.** Alternative C contains several proposals that would improve opportunities to understand the stories of the battlefield. These actions include new battlefield access points and additional interpretive signs and tours. Vegetation clearing in important viewsheds would also improve the quality of the visitor experience.

**Recreational Opportunities.** Alternative C would provide enhanced recreational opportunities with trail connections for mountain bikers and hikers, an additional trail for hikers, and opportunities for water trail access to Lookout Creek.

**Visitor Safety.** Alternative C would result in some improvements to visitor safety such as removal of the Williams House and outbuildings. The alternative could also result in new safety concerns, including visitor safety at Smith, Tyndale, and Bald hills since vandalism sometimes occurs in those two areas. Risks to visitors at the new lands would be mitigated primarily through the presence of other visitors and park staff and through guided tours at Bald Hill. Water trail access would also result in safety concerns for visitors. However, having guided tours would

help mitigate the hazards. Mountain biking has its own inherent safety risks and in addition, there could be conflicts between trail users with new mountain biking use.

**Cumulative impacts.** Other past, present, and reasonably foreseeable actions are likely to have an impact on visitor experience. The preservation of land on Stringers Ridge enhances opportunities for visitors to understand the stories of the battlefield. The planned trail and water trail connections would greatly enhance trail connectivity, enhancing recreational opportunities and access to the battlefield. These and designation of park trails as part of the Great Eastern Trail would likely result in increased recreational use. NPS planned demolition projects and vegetation removal projects within the park would improve visitor safety and improve the visitor's ability to understand the important stories as the cultural landscape would be improved.

The impacts associated with implementation of alternative C would have continued long-term, moderate, beneficial impacts on visitor experience. Other past, present, and reasonably foreseeable actions would result in long-term, minor, beneficial impacts. Consequently, the impacts of the other actions as described above, in combination with the impacts of alternative C, would cumulatively result in long-term, moderate, beneficial impacts on visitor experience.

**Conclusion.** Alternative C would result in long-term, moderate, beneficial impacts to visitor experience and safety due to opening new lands to the public and the associated interpretive and accessibility enhancements and expansion of recreational uses. Related visitor safety concerns would largely be mitigated through various means. There would also be long-term, moderate, beneficial, cumulative impacts on visitor experience from implementation of alternative B in conjunction with other past, present, or reasonably foreseeable actions.

## IMPACTS TO PARK OPERATIONS

### ALTERNATIVE A (NO-ACTION)

**Analysis.** Under alternative A, staff of Chickamauga and Chattanooga National Military Park would continue to manage the Lookout Mountain Battlefield unit's cultural and natural resources and visitor use activities in the current manner. No substantial changes to operations or facilities are anticipated, although the park would continue to pursue funding for proposed projects such as the repair and rehabilitation of Cravens House and its associated kitchen/ dairy building, repair and rehabilitation of Ochs Museum at Point Park, and demolition of noncontributing (nonhistoric) structures. The management of Lookout Mountain Battlefield Visitor Center and Point Park would not change from its current level.

The Cravens House would continue to be open to visitation on a seasonal basis and managed as a historic house museum with some furnishings and other collection items on display. The house and associated contributing structures and cultural landscape features would continue to be preserved and stabilized until funding for more comprehensive treatments is available. Completion of these projects would entail short-term construction-related expenses as well as long-term costs associated with ongoing maintenance, resulting in minor adverse impacts on the park's operations budget. However, because the repair and rehabilitation of selected historic properties would help ensure their continued preservation, long-term, minor to moderate, beneficial impacts on the operational expenses associated with preservation would also result. These measures would reduce the expense of more substantial future preservation treatments should only limited action be taken in the short term. The nearby Williams House (a

deteriorating noncontributing property) would continue to be preserved at minimal treatment levels.

Because no park rangers are specifically dedicated to the Lookout Mountain Battlefield unit and because there is currently a limited number of field rangers throughout the park, there would likely continue to be inadequate staff coverage of Lookout Mountain Battlefield for resource protection and incident response. This could remain an issue particularly in consideration of increased visitor use of the trail system and backcountry areas for climbing and other activities. The park would continue to rely on the cooperative assistance of local governmental agencies for police and fire support services, emergency response, and search and rescue operations. The park has requested FTE employee funding for an additional employee to provide management and protection of the new lands on Lookout Mountain Battlefield. Without adequate personnel for Lookout Mountain Battlefield, the park would continue to encounter minor to moderate, adverse impacts on park operations related to staffing requirements.

Although the park does not have a crew specifically dedicated to trail maintenance, park staff would continue to patrol and maintain the trails on Lookout Mountain Battlefield with the assistance of volunteers. Important trail maintenance projects would continue to be prioritized for specific project funding requests. Park staff would also continue to control encroaching trees and vegetation at Point Park and other locations by mechanical thinning methods. Herbicide spraying to control the spread of nonnative vegetation would also continue. These actions, necessary to providing a quality visitor experience at Lookout Mountain

Battlefield, would continue to result in long-term, minor, adverse impacts on park operational expenses and the commitment of park maintenance and resource protection staff.

No improvements or facility development would occur for newly acquired Lookout Mountain Battlefield properties (i.e., Tyndale Hill, Bald Hill, Chattanooga Valley Overlook site, etc.) and consequently the park would not incur the additional expenses associated with construction and maintenance of new trails, parking areas, and interpretive displays. These sites would receive only limited resource protection patrols and interpretation. Although these factors would have a long-term, negligible to minor, beneficial impact on park operations by not contributing to budgetary expenditures, the park would likely encounter ongoing public pressure to more fully develop these properties and provide suitable access.

The staff of the park would continue to cooperate and consult with partnership organizations and local governmental agencies in fulfilling its management actions for Lookout Mountain Battlefield. These measures would strengthen the park's ability to address resource protection and visitor use activities with currently inadequate NPS staffing levels. Informal agreements with trail groups would also continue to ensure the park remains an important link in the regional trail system. These measures would result in long-term, minor, beneficial impacts on park operations.

**Cumulative Impacts.** NPS operations at the Lookout Mountain Battlefield unit have been (or have the potential to be) affected by other past, present, and reasonably foreseeable project or management actions. Several of these projects (funded or planned by local organizations outside the park boundary) would likely affect NPS operations in the park. In 2011, the Lookout Mountain

Conservancy purchased a key tract of land adjacent to the Old Wauhatchie Pike area of the park. The area would serve as the connecting point for the Tennessee Riverwalk as it reaches the base of Lookout Mountain and links to the Guild-Hardy Trail and the long-distance trail system planned to extend to Gadsden, Alabama. The Great Eastern Trail, another long-distance trail extending from Alabama to New York, is being planned to link with several Lookout Mountain Battlefield trails (Jackson Gap, Ochs Gateway, Bluff, Mountain Beautiful, Guild, Rifle Pits, Upper Truck, and Gum Springs trails). These trail connections have the potential to increase the number of hikers entering and crossing the Lookout Mountain Battlefield unit. As a consequence, increased visitor use could lead to greater wear and erosion of park trails requiring more extensive or frequent repair and maintenance in high use areas. There would also be the potential for increased incident response for lost or injured hikers as the number of trail users increases. These factors would result in long-term, minor, adverse impacts on park operations and budget expenditures.

Other projects provide potential benefits to the park by improving viewsheds and managing invasive vegetation. Among these projects, the Lookout Mountain Conservancy is controlling the spread of nonnative vegetation along their property line along the 5 miles of the Guild-Hardy Trail and newly acquired property at the Old Wauhatchie Pike. The preservation of 92 acres on Stringers Ridge (on Moccasin Bend across the Tennessee River from Lookout Mountain) by the Tennessee River Gorge Trust would assist the protection of panoramic views from Lookout Mountain Battlefield from intrusive modern development. The view toward Stringers Ridge is important for the interpretation of the battles for Chattanooga and Lookout Mountain. These actions would have long-term, minor, beneficial impacts on park



operational objectives for resource and viewshed protection.

The impacts associated with implementation of alternative A would have short-term and long-term, negligible to moderate, adverse, and beneficial impacts on park operations. Other primarily foreseeable actions would result in long-term, minor, adverse, and beneficial impacts. Consequently, the beneficial and adverse impacts of the other actions described above, in combination with impacts of alternative A, would cumulatively result in long-term, minor, beneficial, and adverse impacts on park operations. The impacts associated with alternative A would represent a small component of the adverse cumulative impact.

**Conclusion.** Short-term and long-term, localized, negligible to moderate, adverse, and beneficial impacts on park operations would occur from ongoing and proposed park projects, ongoing maintenance, administrative / visitor use activities, and other factors. There would also be long-term, minor, adverse, and beneficial cumulative impacts on park operations from implementation of alternative A in conjunction with other past, present, or reasonably foreseeable actions.

## ALTERNATIVE B

**Analysis.** Under alternative B, the park would undertake measures to improve the site development, visitor access, and interpretation of the Lookout Mountain Battlefield unit, including recently acquired new lands and currently managed historic sites and recreational locations. The Lookout Mountain Battlefield Visitor Center and Point Park would continue to be managed as currently, although the historic comfort station and ranger / residential quarters at Point Park would be removed. Removal of these buildings would represent an adverse impact on these national register-listed properties .

However, because there are no current or proposed NPS functions or uses for the buildings, removal would eliminate the expenses associated with their ongoing maintenance. This would result in a minor beneficial impact on park operations.

At Cravens House, park staff would improve the visitor experience and interpretation of the site by rehabilitating and restoring the historic setting of the property and its contributing structures and cultural landscape features. The house grounds and adjoining agricultural lands would be partially rehabilitated in accordance with cultural landscape report recommendations. The exteriors of the house and kitchen/dairy would be restored in conformance with historic structure report recommendations. The interior of the house would be preserved and stabilized, but would not be open to visitation. Collection items on display would be removed for museum storage or would be deaccessioned if not recommended for retention in the museum collection. Encroaching vegetation would be thinned to improve the viewshed and noncontributing site structures and features such as the Williams House and its outbuildings would be removed. These measures would entail short-term construction-related expenses associated with planned rehabilitation and restoration treatments, demolition of noncontributing structures, as well as the long-term costs associated with ongoing maintenance of preserved site structures and landscape features. These factors would have short-term and long-term, minor, adverse impacts on the park's operational budget for the Cravens House property. However, because the repair and rehabilitation of selected historic structures and features would help ensure their continued preservation, long-term, minor to moderate, beneficial impacts on the park's operational budget for preservation undertakings would also result. These measures would reduce the expense of more substantial future preservation

treatments should only limited action be taken in the short term. Removal of collection objects from the interior of Cravens House would decrease the park's concern for providing adequate security and environmental controls for the exhibit of these items. Removal of the caretaker's cabin and the Williams House and outbuildings and driveway would eliminate ongoing expenses presently incurred for the minimal preservation of these properties, resulting in a long-term, minor, beneficial impact.

Development proposed at several of the more recently acquired sites and other interpretive locations on Lookout Mountain Battlefield variously includes new road construction (e.g., to the top of Tyndale Hill), paved parking areas and gravel turnoffs, new pedestrian access trails, placement of vault toilets, selective vegetation clearing and the development of interpretive wayside exhibits and viewing platforms. These actions would entail short-term expenses for new construction and long-term expenses associated with ongoing maintenance. Park staff would conduct scheduled interpretive tours of selected sites. These measures would have long-term, minor to moderate, adverse impacts on park operations associated with construction costs, ongoing maintenance, and the requirements for park staff to increase regular patrols and interpretive services for these sites.

Under this alternative, an additional NPS employee would be hired to assist with the patrol of new lands at Lookout Mountain Battlefield. Because of anticipated increasing visitor use of the trail system and backcountry areas for climbing and other activities, the park would continue to rely on the cooperative assistance of local governmental agencies for police and fire support services, emergency response, and search and rescue operations. Cooperative agency management and additional NPS staff for Lookout Mountain would have a

long-term minor, beneficial impact on park operations.

Although the park would not specifically dedicate a crew for trail maintenance, park staff would continue to patrol and maintain the trails on Lookout Mountain Battlefield with the assistance of volunteers. Important trail maintenance projects would continue to be prioritized for specific project funding requests. Park staff would also continue to control encroaching trees and vegetation at Point Park and other locations by mechanical thinning methods. Herbicide spraying to control the spread of nonnative vegetation would also continue. These actions, necessary for providing a quality visitor experience at Lookout Mountain Battlefield, would continue to result in long-term, minor, adverse impacts on park operational expenses and the commitment of park maintenance and resource protection staff.

A self-guided visitor auto tour would be developed linking sites and vantage points important to the interpretation of the battle of Lookout Mountain. The tour would augment the park's interpretive programs, resulting in long-term, minor, beneficial impacts on park operations and interpretive services.

The park staff would expand its efforts to cooperate and consult with partnership organizations and local governmental agencies in fulfilling its management actions for Lookout Mountain Battlefield. A partnership agreement would be sought with the Chattanooga Arboretum and Nature Center for use of their existing launch site and support facility for water trail access to Lookout Creek at the site of Geary's Crossing. Informal agreements with trail groups would also continue to ensure the park remains an important link in the regional trail system. The park would continue to pursue opportunities to acquire or otherwise preserve land through scenic easements or other means to protect core battlefield areas. The park would also

prepare an updated land protection plan to guide management actions. All of these measures would strengthen the park's ability to address resource protection and visitor use activities and would result in long-term, minor to moderate, beneficial impacts on park operations.

**Cumulative Impacts.** NPS operations at the Lookout Mountain Battlefield unit have been (or have the potential to be) affected by other past, present, and reasonably foreseeable project or management actions. Several of these projects (funded or planned by local organizations outside the park boundary) would likely affect NPS operations in the park. In 2011, the Lookout Mountain Conservancy purchased a key tract of land adjacent to the Old Wauhatchie Pike area of the park. The area would serve as the connecting point for the Tennessee Riverwalk as it reaches the base of Lookout Mountain and links to the Guild-Hardy Trail and the long-distance trail system planned to extend to Gadsden, Alabama. The Great Eastern Trail, another long-distance trail extending from Alabama to New York, is also planning to link with several Lookout Mountain Battlefield trails (the Jackson Gap, Ochs Gateway, Bluff, Mountain Beautiful, Guild, Rifle Pits, Upper Truck, and Gum Springs trails). These trail connections have the potential to increase the number of hikers entering and crossing the Lookout Mountain Battlefield unit. As a consequence, increased visitor use could lead to greater wear and erosion of park trails requiring more extensive or frequent repair and maintenance in high use areas. There would also be a potential for increased incident response for lost or injured hikers as the number of trail users increases. These factors would result in long-term, minor, adverse impacts on park operations and budget expenditures.

Other projects provide potential benefits to the park by improving viewsheds and managing invasive vegetation. Among these

projects, the Lookout Mountain Conservancy is controlling the spread of nonnative vegetation along their property line along the 5 miles of the Guild-Hardy Trail and newly acquired property at the Old Wauhatchie Pike. The preservation of 92 acres on Stringers Ridge (on Moccasin Bend across the Tennessee River from Lookout Mountain) by the Tennessee River Gorge Trust would assist in protecting the panoramic views from Lookout Mountain from intrusive modern development. The view toward Stringers Ridge is important for the interpretation of the battles for Chattanooga and Lookout Mountain. These actions would have long-term, minor, beneficial impacts on park operational objectives for resource and viewshed protection.

The impacts associated with implementation of alternative B would have short-term and long-term, minor to moderate, adverse, and beneficial impacts on park operations. Other primarily foreseeable actions would result in long-term, minor, adverse, and beneficial impacts. Consequently, the beneficial and adverse impacts of the other actions described above, in combination with impacts of alternative B, would cumulatively result in long-term, minor, beneficial, and adverse impacts on park operations. The impacts associated with alternative B would represent a small component of the adverse cumulative impact.

**Conclusion.** Short-term and long-term, localized, minor to moderate, adverse, and beneficial impacts on park operations would occur from ongoing and proposed park projects, ongoing maintenance, administrative / visitor use activities, and other factors. There would also be long-term, minor, adverse, and beneficial cumulative impacts on park operations from implementation of alternative B in conjunction with other past, present, or reasonably foreseeable actions.

## **ALTERNATIVE C**

**Analysis.** Under alternative C, the park would undertake many of the same actions presented for alternative B to improve site development, visitor access, and interpretation of the Lookout Mountain Battlefield unit, including recently acquired lands and currently managed historic sites and recreational locations. However, alternative C incorporates proposals for slightly more development and increased site access. The Lookout Mountain Battlefield Visitor Center and Point Park would continue to be managed as currently, although the historic comfort station and ranger / residential quarters at Point Park would be removed. Removal of these buildings would represent an adverse impact on these national register-listed properties. However, because there are no current or proposed NPS functions or uses for the buildings, removal would eliminate the expenses associated with their ongoing maintenance. This would result in a minor beneficial impact on park operations.

At Cravens House, park staff would improve the visitor experience and interpretation of the site by conducting more extensive rehabilitation and restoration of the historic setting of the property and its contributing structures and cultural landscape features. The house grounds and adjoining agricultural lands would be rehabilitated in accordance with cultural landscape report recommendations. The former orchard would be partially replanted to approximate the historic appearance and configuration of the site. The exteriors of the house and kitchen/dairy would be restored in conformance with historic structure report recommendations. The interior of the house would be preserved and the first floor adaptively used as a visitor contact station with the assistance of volunteers. Educational opportunities and interpretive exhibits would be improved, along with personal services. Collection items on display would be removed for museum

storage or would be deaccessioned if not recommended for retention in the museum collection. Encroaching vegetation would be thinned to improve the viewshed and noncontributing site structures and features such as the Williams House and its outbuildings would be removed. A new parking area and restrooms would be constructed at the Williams House site and utility lines would be relocated underground as feasible.

The measures identified above for the Cravens House property entail short-term construction-related expenses associated with planned rehabilitation and restoration treatments, demolition of noncontributing structures, as well as the long-term costs associated with ongoing maintenance of preserved site structures and landscape features. These factors would have short-term and long-term, minor to moderate, adverse impacts on the park's operational budget for the Cravens House property. However, because the repair and rehabilitation of selected historic structures and features would help ensure their continued preservation, long-term, minor to moderate, beneficial impacts on the park's operational budget for preservation undertakings would also result. These measures would reduce the expense of more substantial future preservation treatments should only limited action be taken in the short term. Removal of collection objects from the interior of the Cravens House would decrease the park's concern for providing adequate security and environmental controls for the exhibit of these items. Removal of the noncontributing caretaker's cabin and the Williams House and its outbuildings and driveway would eliminate the ongoing expenses presently incurred for minimal preservation of these properties, resulting in a long-term, minor, beneficial impact.

Development proposed at several of the more recently acquired sites and other interpretive locations on Lookout Mountain Battlefield variously includes

road improvements, paved parking areas, and gravel turnoffs, new pedestrian access trails, new restroom facilities, selective vegetation clearing, and development of interpretive wayside exhibits and viewing platforms. These actions would entail short-term expenses for new construction and long-term expenses associated with ongoing maintenance. Park staff would conduct scheduled interpretive tours of selected sites. These measures would have long-term, minor to moderate, adverse impacts on park operations associated with construction costs, ongoing maintenance, and the requirements for staff to conduct routine patrols and interpretive services for these sites.

Under this alternative, additional NPS employees would be hired to assist with the patrol of new lands, maintenance activities, and interpretation on Lookout Mountain Battlefield. Increased reliance on volunteers would also be required primarily at the Cravens House. Because of anticipated increasing visitor use of the trail system and backcountry areas for climbing and other activities, the park would continue to rely on the cooperative assistance of local governmental agencies for police and fire support services, emergency response, and search and rescue operations. Cooperative agency management and additional NPS staff and volunteer services for Lookout Mountain Battlefield would have a long-term, minor, beneficial impact on park operations.

Although the park would not specifically dedicate a crew for trail maintenance, park staff would continue to patrol and maintain the trails at Lookout Mountain Battlefield with the assistance of volunteers. Important trail maintenance projects would continue to be prioritized for specific project funding requests. The park would explore opportunities to expand trail use in the Jackson Gap area. Park staff would also continue to control encroaching trees and vegetation at Point Park and other locations by mechanical

thinning methods. Herbicide spraying to control the spread of nonnative vegetation would also continue. These actions, necessary to provide a quality visitor experience at Lookout Mountain Battlefield, would continue to result in long-term, minor, adverse impacts on park operational expenses and the commitment of park maintenance and resource protection staff.

A self-guided visitor auto tour would be developed linking an expanded range of sites and vantage points important to the interpretation of the battle of Lookout Mountain. The tour would augment the park's interpretive programs resulting in long-term, minor, beneficial impacts on park operations and interpretive services.

The park staff would expand its efforts to cooperate and consult with partnership organizations and local governmental agencies in fulfilling its management actions for Lookout Mountain Battlefield. A partnership agreement would be sought with the Chattanooga Arboretum and Nature Center for use of their existing launch site and support facility for water trail access to Lookout Creek at the site of Geary's Crossing. The park would also work with local governments, partners, and adjacent landowners to develop a comprehensive regional trail plan for Lookout Mountain. The agreement would help to ensure the park remains an important link in the regional trail system. The park would continue to pursue opportunities to acquire or otherwise preserve land through scenic easements or other means to protect core battlefield areas. The park would also prepare an updated land protection plan to guide management actions. All of these measures would strengthen the park's ability to address resource protection and visitor use activities and would result in long-term, minor to moderate, beneficial impacts on park operations.

**Cumulative Impacts.** NPS operations at the Lookout Mountain Battlefield unit have been (or have the potential to be) affected by other past, present, and reasonably foreseeable project or management actions. Several of these projects (funded or planned by local organizations outside the park boundary) would likely affect NPS operations in the park. In 2011, the Lookout Mountain Conservancy purchased a key tract of land adjacent to the Old Wauhatchie Pike area of the park. The area would serve as the connecting point for the Tennessee Riverwalk as it reaches the base of Lookout Mountain and links to the Guild-Hardy Trail and the long-distance trail system planned to extend to Gadsden, Alabama. The Great Eastern Trail, another long-distance trail extending from Alabama to New York, is also planning to link with several Lookout Mountain Battlefield trails (the Jackson Gap, Ochs Gateway, Bluff, Mountain Beautiful, Guild, Rifle Pits, Upper Truck, and Gum Springs trails). These trail connections have the potential to increase the number of hikers entering and crossing the Lookout Mountain Battlefield unit. As a consequence, increased visitor use could lead to greater wear and erosion of park trails requiring more extensive or frequent repair and maintenance in high use areas. There would also be the potential for increased incident response for lost or injured hikers as the number of trail users increases. These factors would result in long-term, minor, adverse impacts on park operations and budget expenditures.

Other projects provide potential benefits to the park by improving viewsheds and managing invasive vegetation. Among these projects, the Lookout Mountain Conservancy is controlling the spread of nonnative vegetation along their property line along the 5 miles of the Guild-Hardy

Trail and newly acquired property at the Old Wauhatchie Pike. The preservation of 92 acres on Stringers Ridge (on Moccasin Bend across the Tennessee River from Lookout Mountain Battlefield) by the Tennessee River Gorge Trust would assist with the protection of panoramic views from Lookout Mountain Battlefield from intrusive modern development. The view toward Stringers Ridge is important for the interpretation of the battles for Chattanooga and Lookout Mountain. These actions would have long-term, minor, beneficial impacts on park operational objectives for resource and viewshed protection.

The impacts associated with implementation of alternative C would have short-term and long-term, minor to moderate, adverse, and beneficial impacts on park operations. Other primarily foreseeable actions would result in long-term, minor, adverse, and beneficial impacts. Consequently, the beneficial and adverse impacts of the other actions described above, in combination with impacts of alternative C, would cumulatively result in long-term, minor, beneficial, and adverse impacts on park operations. The impacts associated with alternative C would represent a small component of the adverse cumulative impact.

**Conclusion.** Short-term and long-term, localized, minor to moderate, adverse, and beneficial impacts on park operations would occur from ongoing and proposed park projects, ongoing maintenance, administrative / visitor use activities, and other factors. There would also be long-term, minor, adverse, and beneficial cumulative impacts on park operations from implementation of alternative C in conjunction with other past, present, or reasonably foreseeable actions.





# CHAPTER 5: CONSULTATION & COORDINATION







## PUBLIC INVOLVEMENT

This GMP Amendment represents the thoughts and input of the National Park Service, other agencies, and the public. Consultation and coordination among the agencies and the public were vitally important throughout the planning process. The public participated in the development of the plan primarily by attending public meetings and discussing the plan with NPS staff and by submitting comments through the NPS planning website and by mail.

Chickamauga and Chattanooga National Military Park began the process of developing a new general management plan for the entire park in the fall of 2008. The previous general management plan (prepared in 1987) was determined out of date and did not provide long-term guidance for several changed conditions that have subsequently occurred, such as the addition of new lands to the Lookout Mountain Battlefield unit, the addition of the new Moccasin Bend National Archeological District to the park, and the rerouting of U.S. Highway 27 outside the core area of the Chickamauga Battlefield.

The public was notified of this parkwide planning effort for Chickamauga and Chattanooga National Military Park via: (1) a *Federal Register* Notice of Intent (dated January 9, 2009) to prepare an environmental impact statement; (2) distribution of the first newsletter in the winter of 2009; and (3) press releases announcing a public comment opportunity, including public open house events for the GMP Amendment.

Newsletter 1 (winter 2009) provided the following information:

- description of the planning effort
- draft purpose and significance statements for the national military park

- a general timetable for developing the general management plan
- invitation to the public to participate in the planning process by providing comments
- a comment form and website links to facilitate public comment
- invitation to the public to attend scoping meetings for the plan

The official public scoping comment period for the GMP Amendment was from January 14, 2009 to April 13, 2009. Open house public scoping meetings were held on March 10, 2009, at the Chickamauga and Chattanooga National Military Park Visitor Center, and on March 12, 2009, at the Walker Pavilion (Coolidge Park) in Chattanooga. The main purpose of the meetings was to introduce the planning process and gather ideas from the public about what the plan should address. Altogether, 522 public comments were received through letters, comment forms, electronic messages, and comments recorded at the two public meetings. A summary of public comments may be found in appendix B.

Following the initial round of public scoping for the general management plan in 2009, NPS managers determined that it would be more productive to focus on specific park units most in need of long-term planning guidance, particularly with regard to resource protection and visitor use. Consequently, it was decided to forego the overall parkwide approach, and instead, direct general management planning attention to the Lookout Mountain Battlefield unit and the Moccasin Bend National Archeological District. The present Lookout Mountain Battlefield GMP Amendment reflects the decision to begin planning for this unit first, with planning for the Moccasin Bend unit scheduled to begin in 2014. The National Park Service also determined that an environmental assessment rather than an environmental

impact statement would be the appropriate level of environmental documentation for the plan, and notice of this change was published in the *Federal Register* (May 12, 2014).

A newsletter announcing the GMP Amendment for the Lookout Mountain Battlefield unit was issued in February 2013. The newsletter announced a public meeting for the GMP Amendment and presented draft management zones and preliminary management alternatives. The open house public meeting was held at the St. Elmo Fire Hall, Chattanooga, on February 28, 2013. Altogether, 144 public comments were received through letters, comment forms,

electronic messages, and comments recorded at the public meeting. A summary of public comments may be found in appendix C.

Using input from the public and considering the probable environmental consequences and costs of the alternatives, the planning team developed a preliminary preferred alternative at a workshop held June 25 and 26, 2013. The GMP Amendment for Lookout Mountain Battlefield was then produced. After this GMP Amendment is distributed, a public comment period will be held to provide an opportunity to review the revised alternatives, the preferred alternative, and to provide comments and suggestions.

## CONSULTATION AND COORDINATION WITH OTHER AGENCIES, OFFICES, AND TRIBES

### FEDERAL AGENCIES

The National Park Service contacted the U.S. Fish and Wildlife Service in a letter dated February 2, 2009. The letter advised of the NPS planning process for this GMP Amendment and requested a current list of federally listed threatened, endangered, and candidate species within the Lookout Mountain Battlefield unit. In a telephone call with the USFWS Region 4 representative, the National Park Service was directed to print out the species lists from the USFWS website. Based on the USFWS Environmental Conservation Online System and informal consultation with the agency's Cookeville, Tennessee, office, three federally listed species and one federally proposed species may be found within the Lookout Mountain Battlefield unit. The U.S. Fish and Wildlife Service will be given a copy of this document for review.

The National Park Service contacted the U.S. Army Corps of Engineers in a letter dated February 9, 2009. The letter advised the Corps about the NPS planning process for this General Management Plan and requested a list of projects being conducted or planned to take place in waterways within or near the Chickamauga and Chattanooga National Military Park.

### STATE AGENCIES

The park notified the Tennessee Historical Commission (SHPO) and the Georgia Historic Preservation Division (SHPO) of the GMP Amendment in letters dated February 2, 2009, and invited the state historic preservation officers to participate in the planning process pursuant to section 106 of the National Historic Preservation Act. The state historic preservation officers have been provided

copies of the newsletters and have been invited to attend public meetings or to meet with park staff regarding the plan. The park will keep them informed as the GMP Amendment progresses and will provide them copies of this document for review and comment.

Park staff initiated section 106 consultation with the Tennessee Historical Commission regarding the national register eligibility of historic structures at Point Park (the CCC-constructed visitor comfort station and the park ranger / caretaker's cabin, both listed in the National Register of Historic Places); the Williams House and garage near the Cravens House site; the ranger residence / caretaker's quarters near the Cravens House site; and three public restroom buildings at the Sanders Road picnic area. In a letter dated May 7, 2014, the Tennessee Historical Commission notified the park that all eight of these buildings would be eligible for listing in the National Register of Historic Places at the state or local levels of significance in consideration of their architecture, associations with Depression-era (Civilian Conservation Corps) building efforts, and/or with tourism during the 1920s to 1960s.

Because of the anticipated adverse effect determinations resulting from proposed removal of the historic buildings identified above, NPS staff would further consult with the Tennessee Historical Commission and the Advisory Council on Historic Preservation in accordance with section 800.5(e) of 36 CFR 800 (regulations of the Advisory Council on Historic Preservation) to seek ways to avoid or adequately mitigate adverse effects. Memoranda of agreement would be prepared specifying the appropriate mitigation (e.g., photo-documentation and other measures) that the National Park Service would

complete prior to proceeding with building removal. The National Park Service would also consult with other potential consulting parties that may have an interest in the proposed undertakings.

## **ASSOCIATED TRIBES**

Several federally recognized American Indian tribes are culturally associated with lands comprising Chickamauga and Chattanooga National Military Park.<sup>2</sup> The park undertook government-to-government consultations with many of these tribes in 2005 and 2006 with regard to the proposed development of a visitor center for the new Moccasin Bend National Archeological District. The tribes retain traditional cultural connections primarily to Moccasin Bend in large part because of the long history of American Indian settlement and use of the Bend and its association with the Trail of Tears. The park intends to further consult with the tribes as part of the future GMP planning effort for that unit.

## **FUTURE CONSULTATION AND COMPLIANCE**

The National Park Service would continue to consult with agencies, tribes, partners, stakeholders, and the public as actions identified in the GMP Amendment advance toward more detailed design development and implementation stages. Separate implementation planning may be required to address the specific requirements for site development and construction. As site designs are refined, the park would complete any additional compliance and permitting requirements, including compliance with section 106 of the National Historic Preservation Act for project specific undertakings.

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<sup>2</sup>The following tribes are culturally associated with Chickamauga and Chattanooga National Military Park: Absentee-Shawnee Tribe of Indians of Oklahoma, Alabama-Coushatta Tribe of Texas, Alabama-Quassarte Tribal Town, Catawba Indian Nation, Cherokee Nation, Chickasaw Nation, Choctaw Nation of Oklahoma, Coushatta Tribe of Louisiana, Eastern Band of Cherokee Indians (Qualla Boundary), Eastern Shawnee Tribe of Oklahoma, Jena Band of Choctaw Indians, Kialegee Tribal Town, Mississippi Band of Choctaw Indians, Muscogee (Creek) Nation, Poarch Band of Creeks, Seminole Nation of Indians, Seminole Tribe of Florida, Shawnee Tribe, Thlopthlocco Tribal Town, and the United Keetoowah Band of Cherokee Indians.

## **PUBLIC OFFICIALS, AGENCIES, AND ORGANIZATIONS RECEIVING A COPY OF THIS DOCUMENT**

The National Park Service is circulating the GMP Amendment to the agencies and organizations listed below. A limited number of copies of the plan are available upon request by interested individuals. Copies of the document are also available for review at the park, and on the park planning website at <http://parkplanning.gov/chch>.

### **Federal Agencies**

Advisory Council on Historic  
Preservation  
American Battlefield Protection  
Program, National Park Service  
Department of the Army, Combat  
Studies Institute  
Nashville District, U.S. Army Corps of  
Engineers  
Tennessee Valley Authority  
United States Naval Academy  
U.S. Army Reserve Command  
U.S. Fish and Wildlife Service

### **Congressional Delegation**

The Honorable Bob Corker, United  
States Senator (TN)  
The Honorable Johnny Isakson,  
United States Senator (GA)  
The Honorable Lamar Alexander,  
United States Senator (TN)  
The Honorable Saxby Chambliss,  
United States Senator (GA)  
The Honorable Tom Graves, US  
House of Representatives, 14th  
District (GA)  
The Honorable Charles Fleishmann,  
US House of Representatives, 3rd  
District (TN)

### **American Indian Tribes and Agencies**

Cedar Creek & Belle Grove National  
Historical Park  
Chickasaw Nation Division of  
Heritage Preservation  
Choctaw Nation of Oklahoma  
Coushatta Indian Tribe  
Coushatta Tribe of Louisiana  
Mississippi Band of Choctaw Indians  
United Keetoowah Band of Cherokee  
Indians

### **State of Georgia Agencies**

Georgia Department of Economic  
Development  
Georgia Department of Natural  
Resources  
Georgia Farm Bureau Insurance  
Georgia Historic Sites Regional Office  
Historic Preservation Division,  
Georgia Division of Natural  
Resources  
State University of West Georgia

### **State of Tennessee Agencies**

Tennessee Department of  
Environment and Conservation  
Tennessee Division of Archaeology  
Tennessee Division of Forestry,  
Department of Agriculture  
Tennessee Historical Commission  
University of Tennessee at  
Chattanooga  
University of Tennessee, School of  
Journalism

### **State and Local Elected Officials**

The Honorable Andy Berke, City of  
Chattanooga Mayor  
The Honorable Bill Haslam, State of  
Tennessee Governor  
The Honorable Bo Watson, State of  
Tennessee Senator  
The Honorable Bob Martineau,  
Commissioner, Tennessee  
Department of Environment and  
Conservation  
The Honorable JoAnne H. Favors  
House of Representatives, State  
of Tennessee Representative  
The Honorable Nathan Deal, State of  
Georgia Governor  
The Honorable Sandy Gothard, City  
of Lookout Mountain, Georgia,  
Mayor

### **Local and Regional Government Agencies**

Chattanooga Area Regional Council of  
Governments, Southeast TN  
Development District  
Chattanooga Area Regional  
Transportation Authority  
(CARTA)  
Chattanooga-Hamilton County  
Regional Planning Agency

### **Organizations and Businesses**

Alexander Archeological Consultants  
Atlanta History Center  
Barge, Waggoner, Sumner & Cannon,  
Inc.  
Benwood Foundation  
Chattanooga Area Chamber of  
Commerce  
Chattanooga Convention & Visitors  
Bureau  
Chattanooga History Center  
Chattanooga-Hamilton  
County Bicentennial Library

Chickamauga Chapter, DAR  
Civil War Preservation Trust  
Civil War Round Table of Chicago  
Department of History, Missouri State  
University  
Frank P. Pierce Foundation, Inc.  
Friends of Gettysburg National  
Military Park  
Friends of Moccasin Bend  
Georgia Battlefield Association  
Georgia Civil War Heritage Trails  
Georgia Historical Society  
Lyndhurst Foundation  
Parris Island Museum  
Prentice Cooper State Forest  
Purdue University  
Signal Mountain Genealogical Society  
Sixth Cavalry Museum  
Tennessee Ancient Sites Conservancy,  
Inc.  
Tennessee State Museum  
Tennessee Civil War National  
Heritage Area  
Trail of Tears Association  
UTK, McClung Museum  
Western Carolina University

### **Libraries**

Lupton Library, UTC

### **Media**

*Blue & Gray Magazine*  
*Chattanooga Times Free Press*  
*Chattanoogan.com*  
*Lookout Mountain Mirror*  
*The Chattanooga Pulse*  
WSMC Radio 90.5  
WTCI-Tennessee Valley PBS

### **Individuals**

The list of individuals is available from  
park headquarters.

A sepia-toned photograph of a large, leafless tree in a field. In the foreground, several cannons are visible, some lying on the ground and others standing. The background is a hazy, open field with more trees in the distance.

# APPENDIX, PREPARERS AND CONSULTANTS, AND SELECTED REFERENCES





## **APPENDIX A: LEGISLATION**



*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That for the purpose of preserving and suitably marking for historical and professional military study the fields of some of the most remarkable maneuvers and most brilliant fighting in the war of the rebellion, and upon the ceding of jurisdiction to the United States by the States of Tennessee and Georgia, respectively, and the report of the Attorney General of the United States that the title to the lands thus ceded is perfect, the following described highways in those States are hereby declared to be approaches to and parts of the Chickamauga and Chattanooga National Military Park as established by the second section of this act, to wit: First, The Missionary Ridge Crest road from Sherman Heights at the north end of Missionary Ridge, in Tennessee, where the said road enters upon the ground occupied by the Army of the Tennessee under Major-General William T. Sherman, in the military operations of November twenty-fourth and twenty-fifth, eighteen hundred and sixty-three; thence along said road through the positions occupied by the army of General Braxton Bragg on November twenty-fifth, eighteen hundred and sixty-three, and which were assaulted by the Army of the Cumberland under Major-General George H. Thomas on that date, to where the said road crosses the southern boundary of the State of Tennessee, near Rossville Gap, Georgia, upon the ground occupied by the troops of Major-General Joseph Hooker, from the Army of the Potomac, and thence in the State of Georgia to the junction of said road with the Chattanooga and Lafayette or State road at Rossville Gap; second, the Lafayette or State road from Rossville, Georgia, to Lee and Gordon's Mills, Georgia; third, the road from Lee and Gordon's Mills, Georgia, to Crawfish Springs, Georgia; fourth, the road from Crawfish Springs, Georgia, to the crossing of the Chickamauga at Glass' Mills, Georgia; fifth, the Dry Valley road from Rossville, Georgia, to the southern limits of McFarland's Gap in Missionary Ridge; sixth, the Dry Valley and Crawfish Springs road from McFarland's Gap to the intersection of the road from

Chickamauga and Chattanooga National Military Park established.  
Purpose.  
Conditions.  
Jurisdiction.

Title.  
Highways declared approaches to and parts of park.

Description of roads.

To remain free public highways.  
Rights of way.

Conditions.  
Jurisdiction.

Title.

Vol. 25, p. 357.

Condemnation of lands and roads.

*Supra.*

Name, etc.

Description of condemned area.

*Post*, p. 978.

Acreeage.

Park and approaches to be under control of Secretary of War.

Proceedings in condemnation.

Vol. 25, p. 357.

Establishment and marking of boundaries.

Agreements with present land owners to remain, etc.

Conditions of occupancy.

Appointment of park commissioners.

Composition, etc., of commission.

Secretary of commission.  
Office.

Crawfish Springs to Lee and Gordon's Mills; seventh, the road from Ringold, Georgia, to Reed's Bridge on the Chickamauga River; eighth, the roads from the crossing of Lookout Creek across the northern slope of Lookout Mountain and thence to the old Summer-town Road and to the valley on the east slope of the said mountain, and thence by the route of General Joseph Hooker's troops to Ross-ville, Georgia, and each and all of these herein described roads shall, after the passage of this act, remain open as free public highways, and all rights of way now existing through the grounds of the said park and its approaches shall be continued.

SEC. 2. That upon the ceding of jurisdiction by the legislature of the State of Georgia, and the report of the Attorney-General of the United States that a perfect title has been secured under the provisions of the act approved August first, eighteen hundred and eighty-eight, entitled "An act to authorize condemnation of land for sites of public buildings, and for other purposes," the lands and roads embraced in the area bounded as herein described, together with the roads described in section one of this act, are hereby declared to be a national park, to be known as the Chickamauga and Chattanooga National Park; that is to say, the area inclosed by a line beginning on the Lafayette or State road, in Georgia, at a point where the bottom of the ravine next north of the house known on the field of Chickamauga as the Cloud House, and being about six hundred yards north of said house, due east to the Chickamauga River and due west to the intersection of the Dry Valley road at McFarland's Gap; thence along the west side of the Dry Valley and Crawfish Springs roads to the south side of the road from Crawfish Springs to Lee and Gordon's Mills; thence along the south side of the last named road to Lee and Gordon's Mills; thence along the channel of the Chickamauga River to the line forming the northern boundary of the park, as hereinbefore described, containing seven thousand six hundred acres, more or less.

SEC. 3. That the said Chickamauga and Chattanooga National Park, and the approaches thereto, shall be under the control of the Secretary of War, and it shall be his duty, immediately after the passage of this act to notify the Attorney General of the purpose of the United States to acquire title to the roads and lands described in the previous sections of this act under the provisions of the act of August first, eighteen hundred and eighty-eight; and the said Secretary, upon receiving notice from the Attorney-General of the United States that perfect titles have been secured to the said lands and roads, shall at once proceed to establish and substantially mark the boundaries of the said park.

SEC. 4. That the Secretary of War is hereby authorized to enter into agreements, upon such nominal terms as he may prescribe, with such present owners of the land as may desire to remain upon it, to occupy and cultivate their present holdings, upon condition that they will preserve the present buildings and roads, and the present outlines of field and forest, and that they will only cut trees or underbrush under such regulations as the Secretary may prescribe, and that they will assist in caring for and protecting all tablets, monuments, or such other artificial works as may from time to time be erected by proper authority.

SEC. 5. That the affairs of the Chickamauga and Chattanooga National Park shall, subject to the supervision and direction of the Secretary of War, be in charge of three commissioners, each of whom shall have actively participated in the battle of Chickamauga or one of the battles about Chattanooga, two to be appointed from civil life by the Secretary of War, and a third, who shall be detailed by the Secretary of War from among those officers of the Army best acquainted with the details of the battles of Chickamauga and Chattanooga, who shall act as Secretary of the Commission. The said commissioners and Secretary shall have an office in the War

Department building, and while on actual duty shall be paid such compensation, out of the appropriation provided in this act, as the Secretary of War shall deem reasonable and just.

SEC. 6. That it shall be the duty of the commissioners named in the preceding section, under the direction of the Secretary of War, to superintend the opening of such roads as may be necessary to the purposes of the park, and the repair of the roads of the same, and to ascertain and definitely mark the lines of battle of all troops engaged in the battles of Chickamauga and Chattanooga, so far as the same shall fall within the lines of the park as defined in the previous sections of this act, and, for the purpose of assisting them in their duties and in ascertaining these lines, the Secretary of War shall have authority to employ, at such compensation as he may deem reasonable and just, to be paid out of the appropriation made by this act, some person recognized as well informed in regard to the details of the battles of Chickamauga and Chattanooga, and who shall have actively participated in one of those battles, and it shall be the duty of the Secretary of War from and after the passage of this act, through the commissioners, and their assistant in historical work, and under the act approved August first, eighteen hundred and eighty-eight, regulating the condemnation of land for public uses, to proceed with the preliminary work of establishing the park and its approaches as the same are defined in this act, and the expenses thus incurred shall be paid out of the appropriation provided by this act.

SEC. 7. That it shall be the duty of the commissioners, acting under the direction of the Secretary of War, to ascertain and substantially mark the locations of the regular troops, both infantry and artillery, within the boundaries of the park, and to erect monuments upon those positions as Congress may provide the necessary appropriations; and the Secretary of War in the same way may ascertain and mark all lines of battle within the boundaries of the park and erect plain and substantial historical tablets at such points in the vicinity of the Park and its approaches as he may deem fitting and necessary to clearly designate positions and movements, which, although without the limits of the Park, were directly connected with the battles of Chickamauga and Chattanooga.

SEC. 8. That it shall be lawful for the authorities of any State having troops engaged either at Chattanooga or Chickamauga, and for the officers and directors of the Chickamauga Memorial Association, a corporation chartered under the laws of Georgia, to enter upon the lands and approaches of the Chickamauga and Chattanooga National Park for the purpose of ascertaining and marking the lines of battle of troops engaged therein: *Provided*, That before any such lines are permanently designated the position of the lines and the proposed methods of marking them by monuments, tablets, or otherwise shall be submitted to the Secretary of War, and shall first receive the written approval of the Secretary, which approval shall be based upon formal written reports, which must be made to him in each case by the commissioners of the park.

SEC. 9. That the Secretary of War, subject to the approval of the President of the United States, shall have the power to make, and shall make, all needed regulations for the care of the park and for the establishment and marking of the lines of battle and other historical features of the park.

SEC. 10. That if any person shall willfully destroy, mutilate, deface, injure, or remove any monument, column, statues, memorial structure, or work of art that shall be erected or placed upon the grounds of the park by lawful authority, or shall willfully destroy or remove any fence, railing, inclosure, or other work for the protection or ornament of said park, or any portion thereof, or shall willfully destroy, cut, hack, bark, break down, or otherwise injure any tree, bush, or shrubbery that may be growing upon said park, or

Commissioners' compensation.

Duties of commission.

Employment of assistant, expert. Compensation.

Vol. 25, p. 357.

Preliminary work of establishing park, etc. Expenses.

Location of regular troops within park.

Monuments, designating.

Lines of battle, within. Erection of historical tablets.

Positions and movements, without.

Certain States, etc., may ascertain and mark lines of battle, etc.

*Proviso.*

Secretary of War to first approve lines, etc.

Written reports.

Care of park, etc.

Regulations, etc.

Punishment for injury, etc., to monuments, etc.

Trees, etc.

Exception.	shall cut down or fell or remove any timber, battle relic, tree or trees growing or being upon such park, except by permission of the Secretary of War, or shall willfully remove or destroy any breast-works, earth-works, walls, or other defenses or shelter, on any part thereof, constructed by the armies formerly engaged in the battles on the lands or approaches to the park, any person so offending and found guilty thereof, before any justice of the peace of the county in which the offense may be committed, shall for each and every such offense forfeit and pay a fine, in the discretion of the justice, according to the aggravation of the offense, of not less than five nor more than fifty dollars, one-half to the use of the park and the other half to the informer, to be enforced and recovered, before such justice, in like manner as debts of like nature are now by law recoverable in the several counties where the offense may be committed.
Breast-works, etc.	
Conviction.	
Fine.	
Distribution of fines, in moieties.	
How recoverable.	
Appropriation for preliminary work and pay, etc., of commission, etc.	SEC. 11. That to enable the Secretary of War to begin to carry out the purposes of this act, including the condemnation and purchase of the necessary land, marking the boundaries of the park, opening or repairing necessary roads, maps and surveys, and the pay and expenses of the commissioners and their assistant, the sum of one hundred and twenty-five thousand dollars, or such portion thereof as may be necessary, is hereby appropriated, out of any moneys in the Treasury not otherwise appropriated, and disbursements under this act shall require the approval of the Secretary of War, and he shall make annual report of the same to Congress.
Approved disbursements.	
Report.	Approved, August 19, 1890.

[CHAPTER 218.]

AN ACT

May 4, 1934.  
[H. R. 7200.]  
[Public, No. 207.]

To provide for the addition of certain lands to the Chickamauga and Chattanooga National Military Park in the States of Tennessee and Georgia.

Chickamauga and  
Chattanooga National  
Military Park, Tenn.-  
Ga.

Addition authorized.

Laws extended.  
U.S.C., p. 415.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That the Secretary of the Interior be, and he is hereby, authorized, in his discretion, to accept in behalf of the United States lands, easements, and buildings as may be donated for an addition to the Chickamauga and Chattanooga National Military Park lying within what is known as the "Chattanooga-Lookout Mountain Park" (a corporation, Adolph S. Ochs, president) and/or any lands within one mile of said Chattanooga-Lookout Mountain Park in the States of Tennessee and Georgia.

SEC. 2. That all laws affecting the Chickamauga and Chattanooga National Military Park shall be extended and apply to any addition or additions which may be added to said park under the authority of this Act.

Approved, May 4, 1934.





## **APPENDIX B: PUBLIC SCOPING SUMMARY REPORT**



# **Chickamauga and Chattanooga National Military Park General Management Plan Public Scoping Summary Report**

**May 12, 2009**

The official public scoping comment period for the Chickamauga & Chattanooga National Military Park General Management Plan (GMP) opened on January 14, 2009, and closed on April 13, 2009. Comments received through May 12 are included in this summary. Comments were received via either (1) hardcopy form from the newsletter mailing, (2) directly input into the Planning, Environment and Public Comment (PEPC) system by the respondent, (3) were received via e-mail, or (4) were recorded during the two public scoping meetings held on March 10 (in Fort Oglethorpe, Georgia) and 12 (in Chattanooga, Tennessee), 2009.

During the official comment period, we received 116 entries to include the two entries for the comments recorded at the two public meetings, overall yielding 522 total comments.

Respondents represented 17 states (Alabama, California, Colorado, Florida, Georgia, Illinois, Indiana, Kansas, Kentucky, Missouri, Mississippi, New York, Ohio, Pennsylvania, Tennessee, Texas, and Virginia) and one from Great Britain.

While most of the respondents were “unaffiliated individuals,” we had at least one respondent from each of the following organizations:

- 17th Ohio Regimental Field Hospital
- Adjutant Scott County Clinch Mountain Rangers
- Central Ohio Civil War Roundtable

- Civil War Preservation Trust
- Filson Historical Society / The Filson Club
- Friends of Chickamauga & Chattanooga National Military Park
- Friends of Moccasin Bend
- Friends of the Park
- Georgia Battlefields Association
- National Park Service – Vicksburg National Military Park
- National Parks Conservation Association
- Office of Army Reserve History
- Patrick Cleburne Society
- Tennessee Civil War National Heritage Area
- U.S. Army Combat Studies Institute

The top three topic areas where the majority of comments fell were:

- Interpretation (108; 21%)
- Threats (55; 11%)
- Cultural Resources – Cultural Landscapes (54; 10%)

Followed by:

- Cultural Resources – Protection/Preservation (39; 8%)
- Other – General (31; 6%)
- Funding (28; 5%)
- Cultural Resources – Moccasin Bend (27; 5%)
- Partnerships (24; 5%)
- Facilities/Infrastructure – Moccasin Bend (19; 4%)
- Conservation, Preservation, and Resource Protection (19; 4%)

- Boundary Expansion – In support of (18; 4%)
- Staffing (17; 3%)
- Recreation and Experiences – In opposition of (17; 3%)

The following is a brief overview of some of the more prominent comments made by respondents, broken down by topic section. During the analysis process, most of these topics were further broken down into several “subtopics.” For a more detailed look at comments in this regard please scroll down to the section titled, “Full Comment Listing Sorted by Assigned Code(s).”

## Interpretation

- While many look forward to interpretation of the Native American culture on Moccasin Bend and of the Trail of Tears, many comments also expressed the desire to keep the interpretation of Moccasin Bend completely separate from that of the Civil War; some expressed concerns about the potential for interpretation at Moccasin Bend to take away from interpretation of the Civil War.
- Several comments mentioned the need for a better, more modern, audio-video presentation at the visitor center and many also expressed the need to make interpretation interesting and interactive, lively and engaging. With this, some also expressed their desire to see a fully interactive website, geodatabase of all the monuments and tablets, and to develop more online resources to study movements of the battle. Some also suggested developing a driving tour of Lookout Mountain as well as an audio tour and map of all the sites – not just a tour of each individual site, but of the park as a whole.
- There were several requests for new historical markers and monuments at Lookout Mountain, Missionary Ridge, and Moccasin Bend. Some also want to see more artifacts and relics displayed and want rotating exhibits.
- Several comments expressed the desire to see more information with regard to the Spanish-American War, the Black regiments, the Women’s Army Corps (WAC), German participants in battles on Lookout Mountain and Missionary Ridge, World War I and II, and the cultural history of Moccasin Bend for the Muscogee-Creek peoples.
- Some suggested to be sure the NPS selects the most appropriate and qualified people to interpret Moccasin Bend and that the full, correct, and appropriate stories of all the sites are told; and fully interpret the newly acquired lands.
- There were several requests for more living history programs and interpretive trails that follow the paths of various regiments which can be either self or ranger-guided.
- A few want to see more interpretation of slavery in the area and its relationship to the Civil War; others do not. Some also want to see more interpretation of the contributions of the Confederacy.
- Some comments expressed the desire to see more personal stories about soldiers and citizens, the everyday soldier.

## Threats

- Most commented on their concerns regarding development and commercialization of/within the park as well as on the encroaching/adjacent land development.
- Many commented on their concerns about the traffic going through the park – the volume, the speeds, and the effect of the traffic on the visitor experience and safety.
- Many also expressed their frustrations with the amount of vandalism, theft by relic hunters and looters, and litter in the park.
- Some commented that they feel the park purpose is being overrun by recreation.
- Others fear that a lack of public and/or political support could lead to further lack of funding for maintenance and improvements as well as a lack of understanding of the park's historical importance by youth and future generations.

## Cultural Resources

- The vast majority want to see the landscape and viewsheds returned to that at the time of 1863. (to include appropriate maintenance of the landscape, implementing agricultural uses, and rehabilitate or reconstruct historical resources – homes, farms).
- Several want to see items recovered from looters/relic hunters and properly identified and displayed.

- Many want more archeological study/research at Moccasin Bend as well as better protection and preservation of the cultural and archeological resources and historic sites.
- Many commented on the need for repair of deteriorating and vandalized monuments, markers, and tablets.
- Some commented on the need for preservation of the Civil War earthworks on Moccasin Bend.

## Recreation

- Many are okay with traditional forms of recreation (such as walking, jogging, road biking, and horseback riding) as long as they don't damage the park; others oppose most, if not all, forms of recreation in the park.
- Several appeared to be more flexible for a greater variety of recreational activities on Moccasin Bend and less in the other areas of the park. They expressed the desire to link running/walking trails on Moccasin Bend with the pedestrian bridge and other parks within the area.
- Most felt that attention should be focused on the historical aspects of the park (as a whole, but mostly in regard to the Chickamauga Battlefield) as it is a place of contemplation and commemoration, not for recreation.

## Facilities

- Many commented on the need for a visitor center at Moccasin Bend.
- Few commented on the need to either add on to or rehabilitate the visitor center at Chickamauga Battlefield (to encompass more exhibit space).
- Most want to see limited development within the park.
- Some commented that if/when facilities are developed or rehabilitated, they should be as sustainable and eco-friendly: LEED certified, have recycling bins, and utilize alternative energy.

## Other

- Many support the possibility of expanding the park boundary in all areas to recognize and identify more areas that are also important,

and to better protect the visitor experiences and park resources to include viewsheds and artifacts not yet discovered.

- Many commented on the need for more staffing for greater interpretation opportunities, especially at Moccasin Bend as they expressed concern that current staff might be stretched too thin to interpret all the sites; and they want to see more staffing for increased natural and cultural resource protection (from vandals, looters, and inappropriate recreational activities).
- Only six comments stated a desire to see Alexander Bridge closed to motorized traffic and instead have it maintained as a pedestrian bridge and interpreted.

## **APPENDIX C: COMMENT ANALYSIS REPORT, DRAFT ALTERNATIVES**





# **CHICKAMAUGA & CHATTANOOGA NATIONAL MILITARY PARK**

## **COMMENT ANALYSIS AND RESPONSE REPORT**

June 2013

### **INTRODUCTION**

On February 8, 2013, Chickamauga & Chattanooga National Military Park (the park) released the Draft General Management Plan Amendment for Lookout Mountain Battlefield/ Environmental Impact Statement (GMP-A/EIS) Alternatives Newsletter for public review and comment. The GMP-A/EIS Alternatives Newsletter was available locally at the park and on the National Park Service (NPS) planning website (<http://parkplanning.nps.gov/chch>). The public was invited to submit comments on the Plan/EIS through April 8, 2013.

During the public comment period, 144 pieces of correspondence were entered into the Planning, Environment, and Public Comment (PEPC) system, either through direct entry by commenter or uploading hard copy letters or electronic correspondence. While private individuals submitted most of the correspondence, multiple members or representatives of conservation organizations, recreational organizations, and historical organizations also submitted correspondence. 55% of commenters were from Tennessee, 28.5% from Georgia, 4.9% from both North Carolina and Alabama, 2.8% from Florida, and the remaining from various states throughout the United States.

Organizations represented by comments:

- US Army Combat Studies Institute (CSA)
- Georgia Battlefields Association
- Friends of the Park
- The Civil War Trust
- 17<sup>th</sup> Ohio Regiment and Field Hospital at Point Park
- Sons of Confederate Veterans
- Central Ohio Civil War Roundtable
- Tennessee Valley Civil War Round Table
- Armory Guards
- Tennessee Civil War National Heritage Area
- Office of Army Reserve History
- The Filson Historical Society
- The Patrick Cleburne Society
- National Park Conservation Association (NPCA)
- Friends of Moccasin Bend National Park
- Lookout Mountain Conservancy
- International Mountain Bicycling Association (IMBA)
- Southern Off-Road Bicycle Association (SORBA)
- Tennessee Mountain Biking Alliance
- Dirt Divas ([www.dirtdivas.net](http://www.dirtdivas.net))
- Birmingham Urban Mountain Pedalers (BUMP)
- Gateway Off-Road Cyclists ([www.gorctrails.com](http://www.gorctrails.com))
- East Carolina Velo Cycling Club
- Tennessee Trails Association

- Appalachian Mountain Bike Club (AMBC)
- Cumberland Trail Conference
- Georgia Pinhoti Trail Association
- North East Alabama Bicycle Association (NEABA)
- Back Country Horsemen (American, Southeast, and Georgia Endurance Ride Conferences)
- University of North Alabama
- Southern Adventist University
- St. Elmo Improvement League
- Big South Fork
- Lookout, GA City Council

## **SUMMARY OF PUBLIC CONCERNS**

A large portion of the comments received were about the designation of multiuse trails in the park. Most commenters represented a number of bicycling organizations and wrote to support Alternative C and the multiuse designations therein. Other commenters did not support the multiuse designations and commented on natural and cultural resource protection, and the likelihood of increased safety and user conflict issues. The public also provided comments on other topics related to the plan. Commenters provided suggestions for and comments on the alternatives, protection of natural and cultural resources, and management actions for the park to consider.

- 1. Multiuse trail designation**
  - a. Supports the multiuse trail designation**

**CONCERN:** A large portion of the comments received voiced their support for the expansion of the multiuse trail designation in the park, as suggested in Alternative C. Commenters suggested that by expanding the multiuse trail system in the park, it would create greater connectivity with the regional trail systems, including between Lula Lake Land Trust and Cloudland Canyon State Park, and from Cloudland Canyon State Park south to Lafayette, Georgia via Pigeon Mountain. Additionally, commenters also mentioned the importance of the park's connectivity between the Chattanooga Riverwalk to the North Chickamauga Creek Greenway ending in Hixson, TN.

**CONCERN:** Commenters suggested that by expanding the multiuse trail system in the park, the park would be able to appeal to a wider demographic to explore the park and connect with nature, accessible previously by foot or car. This would also benefit the community and the public by offering a healthy recreational activity.

**CONCERN:** Commenters suggested that they support the park expanding the multiuse trail designation, while also carefully maintaining the more natural areas of the park as pristine as possible.

**CONCERN:** Commenters mentioned that by expanding the multiuse trail designation, bicyclist safety will be heightened by getting bikers off the roads and away from vehicular traffic, particularly along Lookout Mountain roadways.

**CONCERN:** Some commenters supported the multiuse trail designation, but expressed that the NPS should do a careful evaluation of trail suitability (trail width, trail grade, and soil suitability) for each trail parcel selected, as well as the appropriate trail modifications made so that two types of users can safely pass each other.

**CONCERN:** Commenters expressed that there are a range of partnerships that the national park service could utilize to help maintain multiuse trails.

- i. Suggests that the multiuse trail go through Covenant College via the Jackson Gap and Jackson Springs trail**

**CONCERN:** Commenters suggested that the Jackson Gap and Jackson Spring trails allow the best route to ascend the mountain slopes on bicycle, and by converting this section to multiuse, the these trails would connect many miles of existing multiuse trails, from the Chattanooga Riverwalk, providing a continuous bike path from Chickamauga Dam, or Camp Jordon in East Ridge, to the top of Lookout Mountain near Covenant College.

- ii. Suggests that the trail connect upper and lower Truck trails via the John Smart Trail**

**CONCERN:** Commenters suggest that designating the lower John Smartt trail as multiuse would provide a useful loop between the Upper and Lower Truck trails.

**CONCERN:** Some commenters support the designation of lower John Smartt trail as a connector between the Upper and Lower Truck trails, as long as proper improvements are made for rerouting, safety measures, and to minimize erosion.

### **iii. Suggests that the trail go through Ochs Gateway**

**CONCERN:** Commenters feel that the connectivity of the regional trail system will be greatly increased with the additional access added through the designation of Ochs Gateway as multiuse.

### **iv. Additional suggestions for the multiuse trail system**

**CONCERN:** A commenter suggested that the southern end of the park near Geary's Crossing would be the perfect access point for horses and mountain bikers, offering the long-term possibility to tie the trail system to the Lula Lake Land Trust's corridor to Cloudland Canyon State Park. Adding a gravel lot pull off near Wauhatchie Pike and a place to ford Lookout Creek would be a great improvement.

**CONCERN:** A commenter suggested that the Skyluka Springs trail be given multiuse trail designation, as the trail is relatively wide and has a more gentle grade than other trails in the park that connect with both the Upper and Lower Truck trail.

### **b. Does not support the multiuse trail designation**

**CONCERN:** Commenters suggested that expanding the multiuse trail designation would devalue the historic significance of the park.

**CONCERN:** A commenter suggested that expanding the multiuse trail designation would discourage hikers and walkers in the park.

**CONCERN:** A commenter suggested that expanding the multiuse trail designation is counter to the intent of the donors of the land to the NPS.

### **i. Suggests that the multiuse trail not go through Covenant College via the Jackson Gap and Jackson Springs trails**

**CONCERN:** Commenters suggest that the Jackson Gap, Jackson Spring, John Smartt, and Bluff trails converted to multiuse will be disruptive to the natural settings and to other recreationalists.

**CONCERN:** Commenters suggest that allowing multiuse access on the Jackson Gap, Jackson Spring, and John Smartt trails could allow for the potential abuse of the Bluff trail by mountain

bikers. Commenters are concerned about the park's ability to enforce appropriate use, given current budget and staffing limitations.

**ii. Suggests that the trail not connect upper and lower Truck trails via the John Smart Trail**

**CONCERN:** Commenters suggested that the John Smart Trail was unsuitable for multiuse due to its steepness, narrowness, and potential for user group conflicts and safety issues. The steepness of the trail would also contribute to erosion and potential washouts.

**iii. Suggests that the multiuse trail not go through Ochs Gateway (due to parking issues, etc.)**

**CONCERN:** Commenters suggested that the Ochs Gateway is on a dangerous road that cannot support increased traffic or parking. Widening the road or enlarging the parking area would detract from the scenic and natural beauty of the area, and the impacts would need to be appropriately considered by the NPS.

**CONCERN:** Commenters suggested that classifying Ochs Gateway as multiuse and allowing bike use would negatively affect the scenic and natural qualities of the area.

**CONCERN:** Commenters suggested that there are few public access areas in the park designated primarily for walking, and that the designation of this trail as multiuse would detract from the visitor experience of hikers and walkers.

**CONCERN:** Commenters suggested that designating Ochs Gateway as multiuse would violate the historic importance of the area to the Battle of Chattanooga, since the area along the bluff accessed through Ochs Gateway was used by the Union Army as the entered Chattanooga.

**2. Alternative A**

**a. Supports or supports with modifications Alternative A**

**CONCERN:** Commenters who supported Alternative A most often voiced their support for its preservation of the natural areas, historic buildings, and museums in the park.

**b. Does not support Alternative A**

**CONCERN:** Commenters who do not support Alternative A dislike that it does nothing additional to protect park resources, enhance the visitor experience, or deal with important operational issues.

### **3. Alternative B**

#### **a. Supports or supports with modifications Alternative B**

**CONCERN:** Most commenters supported Alternatives B and C. Commenters who supported Alternative B appreciate that the alternative prioritizes preservation first, and then interpretation and recreation.

**CONCERN:** Commenters supported opening more historical areas to visitors.

#### **b. Does not support Alternative B**

**CONCERN:** Some commenters expressed concern that the “natural resource protective zone” could be interpreted over-aggressively in Alternative B, and restrict visitor use.

**CONCERN:** Some commenters were concerned about the removal of non-essential structures in Alternative B, and felt that many of these structures embodied historical importance.

### **4. Alternative C**

#### **a. Supports or supports with modifications Alternative C**

**CONCERN:** Most commenters supported Alternatives B and C. Some commenters who support Alternative C liked that it protects the core battlefield and natural resources, while allowing increased recreational opportunities and interpretive opportunities in much of the remaining park area, including multiuse trail designations.

**CONCERN:** Some commenters support Alternative C, but worry about the costs of implementation of the alternative.

#### **b. Does not support Alternative C**

**CONCERN:** Some commenters worry that the increased recreational opportunities in Alternative C will degrade the cultural and natural resources of the park.

**CONCERN:** Some commenters expressed concern that the “natural resource protective zone” could be interpreted over-aggressively in Alternative C, and restrict visitor use.

## **5. Cravens House area**

### **a. Cravens House and Dairy building**

**CONCERN:** Some commenters liked the interior of the Cravens House being open to the public and used as a visitor center, and as a place for visitors to get information about the park.

**CONCERN:** Some commenters agree with opening the Cravens House to visitors, but feel that it shouldn't be a full-time visitor center.

**CONCERN:** Some commenters thought that the Cravens House should be modified so that visitors can look inside, though not enter.

**CONCERN:** One commenter suggested replanting the historic orchard at Cravens House.

**CONCERN:** Some commenters feel that the preservation of the Cravens House and memorializing the significance of the site is an essential part of this plan. They feel that opening the Cravens House as a visitor center would be an unnecessary duplication of the visitor center at Point Park and would be inconsistent with the house's historical integrity, as well as harmful to the historic structure.

### **b. Noncontributing structures: Williams House, Garage, Caretaker's Cabin, storage shed**

**CONCERN:** Some commenters support removal of the noncontributing structures because they are not historic.

**CONCERN:** One commenter suggested converting the Williams House to restrooms, while another suggested converting it to an information center.

**CONCERN:** Some commenters do not support the removal of the noncontributing structures. They argue that the Williams House is scenic, architecturally important, and historic. These commenters also suggest that the more appropriate name for the house is the Hardy House. One commenter expressed that the elimination of storage sheds in the park compounds the existing storage problem. Additionally, many of the buildings were constructed with the assistance of the Civilian Conservation Corps (CCC) which may classify them as historic.

### **c. Power lines, viewshed enhancement, and cultural landscape rehabilitation**

**CONCERN:** Most commenters agreed that relocating the power lines or putting them underground would be beneficial. Additionally, most also agreed with the proposed viewshed enhancement and cultural landscape rehabilitation.



#### **d. Parking lot / restrooms**

**CONCERN:** Most commenters feel that having restrooms would be a benefit, and could potentially use the existing septic system.

**CONCERN:** Most commenters supported the proposed actions for a parking lot in the Cravens House area.

**CONCERN:** Some commenters worry about the narrowness of the road to the Cravens House and suggest widening it, as well as adding handicapped parking closer to the Cravens House.

**CONCERN:** Some commenters do not support the enlargement of the parking lot.

### **6. Point Park area**

#### **a. Noncontributing structures: Ranger Residence, nonfunctioning restrooms, storage sheds**

**CONCERN:** Some commenters felt that the Ranger Residence should not be removed, but should be repurposed. They feel that the residence has historical significance. One commenter expressed that the elimination of storage sheds in the park compounds the existing storage problem. Additionally, many of the buildings were constructed with the assistance of the Civilian Conservation Corps (CCC) which may classify them as historic.

**CONCERN:** One commenter felt that removing the structures could potentially destabilize the area which could cause shifting of the historic wall built by the Army Corps of Engineers.

**CONCERN:** Some commenters supported the removing of the noncontributing structures at Point Park.

#### **b. Ochs Museum**

**CONCERN:** Some commenters feel that having the Ochs Museum accessible with permanent exhibits would be an asset to the park.

### **7. Lookout Mountain Battlefield VC area**

No comments.

## **8. Sanders Road Picnic Area**

**CONCERN:** Most commenters regarding the Sanders Road Picnic Area felt that keeping the picnic area with a vault toilet would be preferred. A smaller number of commenters supported the removal of the picnic area due to its state of disrepair.

**CONCERN:** One commenter suggested closing the picnic area, but keeping the buildings for park operations reasons.

## **9. New Lookout Valley Lands area**

**CONCERN:** Most commenters agreed with promoting better public access to Tyndale Hill, Bald Hill and Geary's Crossing.

**CONCERN:** Concern was expressed by several commenters regarding visitor experience at this area, in regards to vandalism, loitering, and illegal dumping. Some suggested more regular NPS patrols of this area, and increased measures to prohibit unauthorized vehicle and ATV use.

**CONCERN:** One commenter suggested adding marker/plaques alongside Lookout Creek on nature Center property, at Groce's Crossing, Confederate Defense Site, and Osterhaus' Crossing to strengthen their interpretive value.

## **10. Wauhatchie Sites 1, 3 area**

**CONCERN:** Most commenters supported the classification of these areas as Battlefield Preservation Zone, and the renaming of these sites as Smith Hill.

**CONCERN:** One commenter suggested replacing the plaque on the vandalized monument near Smith Hill to NY Artillery I.

## **11. Wauhatchie Site 2 area**

**CONCERN:** Most commenters supported the classification of these areas as Battlefield Preservation Zone.

**CONCERN:** One commenter felt that renaming the site as New York monument was too confusing, as there are already several New York Monuments elsewhere at Lookout (e.g., NY Peace Monument, NY Monument at Craven's House, and 2 NY Monuments on Smith Hill). Additional,

troops from other states were also involved in the battle. The commenter suggests instead renaming the site “New York Wauhatchie Monument” or “Wauhatchie Monument”.

## **12. Chattanooga Valley Overlook area**

**CONCERN:** Some commenters felt that this area should see minimal development due to the size of the area and potential impacts to park resources.

**CONCERN:** Commenters both supported and did not support the addition of restrooms in this area. Some commenters felt that restrooms would not be appropriate in this area due to its size, and would be more appropriately located at Cravens House.

**CONCERN:** Some commenters supported the increase in access at this area through the development of the trailhead, while others felt that access to the Guild/Hardy trail is of limited use, since there’s nowhere to go up-mountain from that location.

## **13. Sunset Rock area**

**CONCERN:** Some commenters expressed support for the continuation of rock climbing in this area and the classification of the area as a Recreation Zone.

**CONCERN:** Some commenters felt that climbing should be eliminated in the Sunset Rock area due to negative impacts to natural resources. These commenters felt that the area should be reclassified as an Interpretive Zone or Battlefield Protection Zone.

**CONCERN:** Some commenters suggested more parking areas should be planned for the Sunset Rock area.

## **14. Eagles Nest area**

**CONCERN:** Some commenters expressed support for the continuation of rappelling in this area and the classification of the area as a Recreation Zone.

**CONCERN:** Some commenters felt that rappelling should be eliminated in the Eagles Nest area due to negative impacts to natural resources.

## 15. Ochs Gateway area

**CONCERN:** Some commenters support making no changes to the area, and argue that this would keep the area more pristine and protect natural and scenic resources.

**CONCERN:** One commenter suggests that an analysis of impacts to vegetation through changes made to the area will need to be completed.

**CONCERN:** Many commenters support the changes to the area suggested by Alternative 3 for connecting regional multiuse trails, and designating a portion of the John Smartt Trail as multiuse.

## 16. Other suggestions for the plan

### Trails:

- A trail between Lookout Creek and the railroad, allowing at least foot access to the land, if not multiuse (depending on suitability).
- A trail extended south from the Glen Falls Trail into Georgia.
- Designation of the Skyluka Springs trail as multiuse.
- Closing the loop off of the John Smartt Trail through a use-separation trail, in order to increase visitor experience for all trail users.
- Open the Lookout Valley/ Wauhatchie land to new multiuse trails.

### Other recreational items:

- Expand rock climbing to the bluffs along the Mountain Beautiful Trail. This area does not see as much use as the Bluff Trail, and the area could be managed by partnerships.
- Plan facilities outside the park to improve equestrian access to the park.
- Add a gravel pull-out lot near Wauhatchie Pike and a place to ford Lookout Creek for equestrians.
- Develop a way for qualified cavers to gain access to the park, with appropriate measures taking for prevention of white nose syndrome. Activities such as surveys, explorations, and biological studies would be useful to the NPS and the scientific community.

### Zones:

- Modify the Battlefield Preservation Zone where the Lookout Mountain Turnpike (part of which is the Whiteside Trail today) reaches the crest in the area where TN 148/Scenic Highway does today.
- Modify the Battlefield Preservation Zone to be more inclusive of the overall area of the historic event.
- Clarify the Battlefield Preservation Zone to describe allowable activities and an intent about future trail use or removal.

**Miscellaneous:**

- Designate wildlife sanctuaries.
- Make clear a stated goal of continuing to work to preserve more of the Battle of Lookout Mountain historic area, outside of the boundaries of the park. Commenter does not understand why boundary adjustments are not considered in this effort.
- Keep the old caretaker's house and garage as a place for events, meetings, and fundraisers.
- Open the Orchard Knob Reservation to visitors.

## **APPENDIX D: CONSULTATION LETTERS**



February 2, 2009

Mr. Reid Nelson  
Advisory Council on Historic Preservation  
1100 Pennsylvania Avenue NW, Suite 803  
Old Post Office Building  
Washington, DC 20004

Re: Chickamauga and Chattanooga National Military Park - Draft General Management Plan/  
Environmental Impact Statement; Open House Meetings; Initiation of Section 106 Consultation  
(36 CFR 800.3)

Dear Mr. Nelson:

The National Park Service has initiated the preparation of a new General Management Plan (GMP) for Chickamauga and Chattanooga National Military Park. The GMP will provide National Park Service managers a comprehensive planning framework for managing the park over the next 15 to 20 years. Consistent with the park's purpose, significance, and legislative mandates, the plan will identify strategies for achieving desired resource conditions, visitor experiences, and the appropriate types and locations of potential future development. In compliance with the National Environmental Policy Act and NPS policy, the GMP will be combined with an environmental impact statement (EIS). The GMP/EIS will identify significant issues and concerns, present a reasonable range of management alternatives for addressing these issues, and will analyze the environmental impacts of each alternative.

We wish to invite the participation of the Advisory Council in the GMP planning process as we assess issues and explore alternative visions for long-term management of the military park. You may wish to attend an open house meeting scheduled for March 10, 2009 at the park visitor center (3370 Lafayette Road, Fort Oglethorpe, GA); another meeting will be held on March 12, 2009 at the Walker Pavilion at Coolidge Park (150 River Street, Chattanooga, TN). Both meetings will take place between 4:00 pm and 8:00 pm, and offer opportunities to learn more about the park's resources and issues, and to discuss your ideas and concerns with the NPS planning team. You are also invited to participate in an overview auto tour of Chickamauga and Chattanooga NMP on March 10<sup>th</sup> that will be conducted by park staff. The tour is offered for the park's associated tribal representatives and others wishing to be better oriented to the park and its various units. The tour will begin at (9:30 am) at the park visitor center, and is expected to last until approximately (3:30 pm).

We will continue to keep you informed as the planning effort progresses over the next few years, and welcome at any time your comments and advice on decisions regarding protection and preservation of Chickamauga and Chattanooga National Military Park's significant historic properties.

Sincerely,

Shawn Bengé, Superintendent  
Chickamauga and Chattanooga National Military Park  
(423) 752-5213

cc: Carla McConnell, Project Manager, DSC  
Steve Whissen, DSC





United States Department of the Interior

NATIONAL PARK SERVICE  
Chickamauga and Chattanooga National Military Park  
P.O. BOX 2128  
Fort Oglethorpe, GA 30742

In reply refer to:  
CHCH

February 2, 2009

MEMORANDUM

TO: Project Leader, Atlantic Division, US Army Corps of Engineers

FROM: Superintendent, Chickamauga and Chattanooga National Military Park

SUBJECT: Request for Projects List

The National Park Service is starting development of a General Management Plan for Chickamauga and Chattanooga National Military Park to include the Moccasin Bend National Archeological District in Hamilton and Catoosa counties in Tennessee and Georgia, respectively.

This long-term, comprehensive plan will define overall management goals and objectives, identify resources that need protection and prescribe general management actions for the national military park and archeological district. Specific resources or areas are managed under separate, lower level plans based on the General Management Plan.

We are requesting a list of any Army Corps of Engineers projects that are currently being conducted or planned to take place within the vicinity of Chickamauga and Chattanooga National Military Park and Moccasin Bend National Archeological District.

This letter will serve as a record that the National Park Service is initiating consultation with your agency pursuant to the requirements of the National Environmental Policy Act and National Park Service management policies.

We appreciate your attention to this inquiry and look forward to working with your office throughout this planning effort. Please direct any responses to:

Sincerely,

Shawn Benge, Superintendent  
Chickamauga and Chattanooga National Military Park  
(423) 752-5213

cc: Carla McConnell, Project Manager, DSC  
Christina Miller, Natural Resource Specialist, DSC



United States Department of the Interior

NATIONAL PARK SERVICE  
Chickamauga and Chattanooga National Military Park  
P.O. BOX 2128  
Fort Oglethorpe, GA 30742

In reply refer to:  
CHCH

February 2, 2009

MEMORANDUM

TO: Project Leader, Region 4 (Southeast), USFWS

FROM: Superintendent, Chickamauga and Chattanooga National Military Park

SUBJECT: Request for Species List

The National Park Service is starting development of a General Management Plan for Chickamauga and Chattanooga National Military Park to include the Moccasin Bend National Archeological District in Hamilton and Catoosa counties in Tennessee and Georgia, respectively.

This long-term, comprehensive plan will define overall management goals and objectives, identify resources that need protection and prescribe general management actions for the national military park and archeological district. Specific resources or areas are managed under separate, lower level plans based on the General Management Plan.

We are requesting a current list of federally listed plant and animal species that might occur in the vicinity of Chickamauga and Chattanooga National Military Park and Moccasin Bend National Archeological District, and designated critical habitat, if any, for such species.

This letter will serve as a record that the National Park Service is initiating consultation with your agency pursuant to the requirements of the Endangered Species Act and National Park Service management policies.

We appreciate your attention to this inquiry and look forward to working with your office throughout this planning effort. Please direct any responses to:

Sincerely,

Shawn Benge, Superintendent  
Chickamauga and Chattanooga National Military Park  
(423) 752-5213

cc: Carla McConnell, Project Manager, DSC  
Christina Miller, Natural Resource Specialist, DSC

February 2, 2009

Mr. Patrick McIntyre, Jr., Executive Director, SHPO  
Tennessee Historical Commission  
2941 Lebanon Road  
Nashville, TN 37243-0442

Re: Chickamauga and Chattanooga National Military Park - Draft General Management  
Plan/Environmental Impact Statement; Open House Meetings; Initiation of Section 106  
Consultation (36 CFR 800.3)

Dear Mr. McIntyre:

The National Park Service has initiated the preparation of a new General Management Plan (GMP) for Chickamauga and Chattanooga National Military Park. The GMP will provide National Park Service managers a comprehensive planning framework for managing the park over the next 15 to 20 years. Consistent with the park's purpose, significance, and legislative mandates, the plan will identify strategies for achieving desired resource conditions, visitor experiences, and the appropriate types and locations of potential future development. In compliance with the National Environmental Policy Act and NPS policy, the GMP will be combined with an environmental impact statement (EIS). The GMP/EIS will identify significant issues and concerns, present a reasonable range of management alternatives for addressing these issues, and will analyze the environmental impacts of each alternative.

We wish to invite the participation of the Tennessee Historical Commission in the GMP planning process as we assess issues and explore alternative visions for long-term management of the military park. You may wish to attend an open house meeting scheduled for March 10, 2009, at the park visitor center (3370 Lafayette Road, Fort Oglethorpe, GA); another meeting will be held on March 12, 2009, at the Walker Pavilion at Coolidge Park (150 River Street, Chattanooga, TN). Both meetings will take place between 4:00 pm and 8:00 pm, and offer opportunities to learn more about the park's resources and issues, and to discuss your ideas and concerns with the NPS planning team. You are also invited to participate in an overview auto tour of Chickamauga and Chattanooga NMP on March 10th that will be conducted by park staff. The tour is offered for the park's associated tribal representatives and others wishing to be better oriented to the park and its various units. The tour will begin at (9:30 am) at the park visitor center, and is expected to last until approximately (3:30 pm).

We will continue to keep you informed as the planning effort progresses over the next few years, and welcome at any time your comments and advice on decisions regarding protection and preservation of Chickamauga and Chattanooga National Military Park's significant historic properties.

Sincerely,

Shawn Bengel, Superintendent  
Chickamauga and Chattanooga National Military Park  
(423) 752-5213

cc: Carla McConnell, Project Manager, DSC  
Steve Whissen, DSC

February 2, 2009

Mr. Patrick McIntyre Jr., Executive Director, SHPO  
Tennessee Historical Commission  
2941 Lebanon Road  
Nashville, TN 37243-0442

Re: Chickamauga and Chattanooga National Military Park - Draft General Management Plan/  
Environmental Impact Statement; Open House Meetings; Initiation of Section 106 Consultation  
(36 CFR 800.3)

Dear Mr. McIntyre:

The National Park Service has initiated the preparation of a new General Management Plan (GMP) for Chickamauga and Chattanooga National Military Park. The GMP will provide National Park Service managers a comprehensive planning framework for managing the park over the next 15 to 20 years. Consistent with the park's purpose, significance, and legislative mandates, the plan will identify strategies for achieving desired resource conditions, visitor experiences, and the appropriate types and locations of potential future development. In compliance with the National Environmental Policy Act and NPS policy, the GMP will be combined with an environmental impact statement (EIS). The GMP/EIS will identify significant issues and concerns, present a reasonable range of management alternatives for addressing these issues, and will analyze the environmental impacts of each alternative.

We wish to invite the participation of the Tennessee Historical Commission in the GMP planning process as we assess issues and explore alternative visions for long-term management of the military park. You may wish to attend an open house meeting scheduled for March 10, 2009 at the park visitor center (3370 Lafayette Road, Fort Oglethorpe, GA); another meeting will be held on March 12, 2009 at the Walker Pavilion at Coolidge Park (150 River Street, Chattanooga, TN). Both meetings will take place between 4:00 pm and 8:00 pm, and offer opportunities to learn more about the park's resources and issues, and to discuss your ideas and concerns with the NPS planning team. You are also invited to participate in an overview auto tour of Chickamauga and Chattanooga NMP on March 10<sup>th</sup> that will be conducted by park staff. The tour is offered for the park's associated tribal representatives and others wishing to be better oriented to the park and its various units. The tour will begin at (9:30 am) at the park visitor center, and is expected to last until approximately (3:30 pm).

We will continue to keep you informed as the planning effort progresses over the next few years, and welcome at any time your comments and advice on decisions regarding protection and preservation of Chickamauga and Chattanooga National Military Park's significant historic properties.

Sincerely,

Shawn Benge, Superintendent  
Chickamauga and Chattanooga National Military Park  
(423) 752-5213

cc: Carla McConnell, Project Manager, DSC  
Steve Whissen, DSC

February 2, 2009

Mr. Ray Luce, Director  
Historic Preservation Division/DNR  
34 Peachtree Street NW, Suite 1600  
Atlanta, GA 30303-2316

Re: Chickamauga and Chattanooga National Military Park - Draft General Management Plan / Environmental Impact Statement; Open House Meetings; Initiation of Section 106 Consultation (36 CFR 800.3)

Dear Mr. Luce:

The National Park Service has initiated the preparation of a new General Management Plan (GMP) for Chickamauga and Chattanooga National Military Park. The GMP will provide National Park Service managers a comprehensive planning framework for managing the park over the next 15 to 20 years. Consistent with the park's purpose, significance, and legislative mandates, the plan will identify strategies for achieving desired resource conditions, visitor experiences, and the appropriate types and locations of potential future development. In compliance with the National Environmental Policy Act and NPS policy, the GMP will be combined with an environmental impact statement (EIS). The GMP/EIS will identify significant issues and concerns, present a reasonable range of management alternatives for addressing these issues, and will analyze the environmental impacts of each alternative.

We wish to invite the participation of the Georgia Historic Preservation Division in the GMP planning process as we assess issues and explore alternative visions for long-term management of the military park. You may wish to attend an open house meeting scheduled for March 10, 2009 at the park visitor center (3370 Lafayette Road, Fort Oglethorpe, GA); another meeting will be held on March 12, 2009 at the Walker Pavilion at Coolidge Park (150 River Street, Chattanooga, TN). Both meetings will take place between 4:00 pm and 8:00 pm, and offer opportunities to learn more about the park's resources and issues, and to discuss your ideas and concerns with the NPS planning team. You are also invited to participate in an overview auto tour of Chickamauga and Chattanooga NMP on March 10<sup>th</sup> that will be conducted by park staff. The tour is offered for the park's associated tribal representatives and others wishing to be better oriented to the park and its various units. The tour will begin at (9:30 am) at the park visitor center, and is expected to last until approximately (3:30 pm).

We will continue to keep you informed as the planning effort progresses over the next few years, and welcome at any time your comments and advice on decisions regarding protection and preservation of Chickamauga and Chattanooga National Military Park's significant historic properties.

Sincerely,

Shawn Benge, Superintendent  
Chickamauga and Chattanooga National Military Park  
(423) 752-5213

cc: Carla McConnell, Project Manager, DSC  
Steve Whissen, DSC

## **APPENDIX E: DESIRED CONDITIONS**



The desired conditions to be achieved at Lookout Mountain Battlefield are based on servicewide mandates and policies.

Development of this plan has proceeded within a complex legal frame work. This section identifies what must be done at the Lookout Mountain Battlefield unit to comply with federal laws and policies of the National Park Service. Many 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 and the Architectural Barriers Act)—to name only a few. A general management plan is not needed to decide, for instance, that it is appropriate to protect endangered species, control nonnative species, protect archeological sites, conserve artifacts, or provide access for visitors with disabilities. Laws and NPS policies have already decided those and many other issues.

This appendix discusses some of the most pertinent servicewide laws and policies related to planning and managing the Lookout Mountain Battlefield unit that the National Park Service must comply with regardless of this planning effort. The table in this appendix shows the desired conditions and strategies based on these laws and policies the park staff must strive to meet. It is important to note, regardless of which alternative is chosen to implement from this general management plan amendment / environmental assessment, the Lookout Mountain Battlefield unit must comply with all of these laws and policies. The alternatives in this GMP Amendment address the desired

future conditions that are not mandated by law and policy and must be determined through a planning process.

The table is separated by topic such as air quality, archeological resources, visitor use and experience, etc. Under each topic there is a (1) description of the desired conditions based on laws and policies that park staff strive to achieve for that topic, (2) list of the strategies for achieving the desired conditions, and (3) the pertinent servicewide laws and policies the National Park Service complies with that particular topic.

Desired conditions articulate the ideal conditions the National Park Service is striving to attain. The term “desired conditions” is used interchangeably with goals. Desired conditions provide guidance for fulfilling the park’s purpose and for protecting the park’s fundamental resources and values.

The strategies describe actions that could be used by the National Park Service to achieve the desired conditions. Most of these strategies are already being implemented. Those not already being implemented are consistent with NPS policy, are not believed to be controversial, and require no analysis and documentation under the National Environmental Policy Act of 1969 (NEPA) (or analysis and documentation would be completed separately from this GMP Amendment). This is not an exhaustive list of management strategies. As new ideas, technologies, and opportunities arise, they would be considered if they further support the desired condition.

The desired conditions and management strategies in this appendix, combined with the management actions that are specific to the management alternative ultimately selected for implementation (see chapter 2), would form the complete plan for the Lookout Mountain Battlefield unit.



## CULTURAL RESOURCE MANAGEMENT

Archeological Resources	
Desired Conditions	Pertinent Servicewide Laws and Policies
Prehistoric and historic archeological sites are identified, inventoried, documented, their significance evaluated, and, if appropriate, nominated to the National Register of Historic Places (national register). 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 appropriate State Historic Preservation Office, traditionally-associated American Indian tribes, and other concerned parties. Some archeological sites that can be adequately protected may be interpreted to visitors.	<p>National Historic Preservation Act of 1966, as amended (16 USC 470)</p> <p>Executive Order 11593, "Protection and Enhancement of the Cultural Environment"</p> <p>Archeological and Historic Preservation Act</p> <p>Archeological Resources Protection Act</p> <p>Native American Graves Protection and Repatriation Act</p> <p>36 CFR 79 – Curation of Archaeological Collections</p> <p><i>The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation</i></p> <p>2008 Programmatic Agreement among the National Park Service, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers</p> <p><i>NPS Management Policies 2006</i></p> <p>Director's Order 28: <i>Cultural Resource Management Guideline</i> (1998)</p> <p>Director's Order 28A: <i>Archeology</i> (2004)</p>
Management Strategies	
<p>Archeological surveys would be conducted as needed to identify, inventory, and document archeological sites and assess their eligibility for the National Register of Historic Places. In accordance with section 110 of the National Historic Preservation Act, archeological surveys would continue to be carried out in a systematic fashion so that as much of the national military park as is reasonably possible is surveyed.</p> <p>Areas where park development or visitor use activities are planned would likely receive the highest priority for archeological surveys and investigations. If determined significant, sites would be nominated to the National Register of Historic Places. Management activities would emphasize recording archeological resources and protecting them in situ rather than the collection and curation of recovered artifacts and cultural materials. Significant archeological sites would be added to the NPS Archeological Sites Management Information System (ASMIS) database.</p> <p>Visitors would receive education on regulations governing archeological resources and the penalties for the illegal removal or disturbance of sites and resources.</p> <p>The condition of known archeological sites would be monitored and assessed. Develop and implement stabilization strategies for sites threatened with loss or disturbance.</p> <p>Treat all archeological resources as eligible for listing in the National Register of Historic Places pending formal determinations of eligibility.</p> <p>Protect all archeological resources eligible for listing or listed in the national register. If resource disturbance is unavoidable, conduct formal consultation as necessary with the state historic preservation officer, traditionally associated American Indian tribes, the Advisory Council on Historic Preservation, and other concerned parties in accordance with the National Historic Preservation Act and its implementing regulations.</p> <p>As appropriate, archeological surveys and/or monitoring would precede any ground-disturbing activities. Known archeological resources would be avoided to the greatest extent possible. If national register eligible or listed archeological resources could not be avoided, or if during construction previously unknown archeological resources were discovered and the resources could not be preserved in situ, an appropriate mitigation strategy would be developed as appropriate in consultation with the state historic preservation officer, traditionally associated American Indian tribes, the Advisory Council on Historic Preservation, and other concerned parties.</p>	

Historic Structures	
Desired Conditions	Pertinent Servicewide Laws and Policies
Historic structures are identified, inventoried, documented, their significance evaluated, and, if appropriate, nominated to the National Register of Historic Places (national register). The qualities that contribute to the listing or eligibility for listing of historic structures in the national register are protected in accordance with <i>The 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).	<p>National Historic Preservation Act of 1966, as amended (16 USC 470)</p> <p>Executive Order 11593, "Protection and Enhancement of the Cultural Environment"</p> <p>Archeological and Historic Preservation Act</p> <p><i>The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation</i></p> <p><i>The Secretary of the Interior's Standards for the Treatment of Historic Properties</i></p> <p>2008 Programmatic Agreement among the National Park Service, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers</p> <p>NPS <i>Management Policies 2006</i></p> <p>Director's Order 28: <i>Cultural Resource Management Guideline</i> (1998)</p>
Management Strategies	
<ul style="list-style-type: none"> <li>Update and certify that the park's historic structures are entered in the NPS List of Classified Structures database.</li> <li>Determine, implement, and maintain the appropriate level of preservation for each historic structure formally determined eligible or listed in the National Register of Historic Places (subject to <i>The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation</i>).</li> <li>Ensure that the character-defining features and design elements of historic structures are adequately identified and preserved.</li> <li>Survey, inventory, and evaluate historic structures not already determined eligible for or listed in the National Register of Historic Places. Complete and submit national register nominations for historic structures determined eligible for listing.</li> <li>Relevant studies and reports (e.g., historic structure reports) would be prepared to provide the necessary documentation to support appropriate preservation treatments and management.</li> <li>Monitor and evaluate the condition of historic structures and develop and implement stabilization strategies for buildings and structures threatened with loss or deterioration of historic fabric and character-defining features.</li> <li>NPS staff continue to monitor, evaluate, and implement measures to minimize visitor use impacts on historic structures.</li> </ul> <p>NPS actions affecting or altering the qualities contributing to the significance of historic structures would be reviewed in consultation with the State Historic Preservation Officer, and other concerned parties as appropriate (e.g., traditionally associated American Indian tribes, Advisory Council on Historic Preservation) in accordance with section 106 of the National Historic Preservation Act.</p> <p>If disturbance to historic structures is unavoidable, the NPS would conduct formal consultation with the state historic preservation office, the Advisory Council on Historic Preservation, traditionally associated tribes, and other concerned parties as appropriate in accordance with the National Historic Preservation Act. Appropriate mitigation would be carried out as part of the consultation agreement to address the adverse effects resulting from loss or disturbance of architectural materials and features.</p>	

Museum Collections	
Desired Conditions	Pertinent Servicewide Laws and Policies
<p>All museum collections and archives and their component artifacts, objects, specimens, documents, photographs, maps, plans, and manuscripts are properly inventoried, accessioned, catalogued, curated, documented, protected and preserved. Appropriate provisions are made for the access of the collections by NPS staff and other researchers for their use in scientific and historical research, exhibits, and interpretation. The qualities that contribute to the significance of collections are protected and preserved in accordance with established NPS museum curatorial and storage standards.</p>	<p>National Historic Preservation Act of 1966, as amended (16 USC 470)  Museum Properties Management Act of 1955, as amended  <i>The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation</i>  American Indian Religious Freedom Act  Archeological and Historic Preservation Act  Archeological Resources Protection Act  Native American Graves Protection and Repatriation Act  36 CFR 79 "Curation of Archaeological Collections"  <i>NPS Management Policies 2006</i>  Director's Order 24: <i>NPS Museum Collections Management</i> (2008)  Director's Order 28: <i>Cultural Resource Management Guideline</i> (1998)  NPS Museum Handbook, Parts I, II and III  2008 Programmatic Agreement among the National Park Service, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers  ICMS User Manual</p>
Management Strategies	
<p>Inventory and catalog all park museum collections in accordance with standards in the <i>NPS Museum Handbook</i>.</p> <p>As necessary, and in accordance with NPS standards, update the park's collections management plan to guide the protection, conservation, and research use of museum objects.</p> <p>Collection items may be deaccessioned if determined not to be original or critical to the established purposes of the park's museum collections.</p> <p>NPS curatorial standards and guidelines would be followed regarding the display and care of artifacts planned for exhibits.</p> <p>Collections generated by research (including permitted research and NPS inventory and monitoring research) would be properly catalogued, documented, preserved, and protected following NPS museum collection management guidelines.</p>	

Cultural Landscapes	
Desired Conditions	Pertinent Servicewide Laws and Policies
Character-defining features and attributes contributing to the national register significance of cultural landscapes are appropriately preserved. Surveys and inventories are conducted to identify landscapes potentially eligible for listing in the national register and to assist management decisions regarding the treatment of associated natural and cultural resources. The management of cultural landscapes would focus on preserving the landscape's physical attributes, biotic systems, and uses when those uses contribute to their historical significance.	<p>National Historic Preservation Act of 1966, as amended (16 USC 470)</p> <p><i>Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes</i> (1996)</p> <p>NPS <i>Management Policies</i> 2006</p> <p>Director's Order 28: <i>Cultural Resource Management Guideline</i> (1998)</p> <p>2008 Programmatic Agreement among the National Park Service, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers</p> <p>Executive Order 11593, "Protection and Enhancement of the Cultural Environment"</p> <p><i>The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation</i></p>
Management Strategies	
<p>Complete cultural landscape inventories and cultural landscape reports for all historical and cultural areas of the national military park to provide management guidance for the appropriate preservation treatment of contributing and character-defining features.</p> <p>As appropriate, prepare National Register of Historic Places nominations for eligible cultural landscapes.</p> <p>The preservation, rehabilitation, or restoration of cultural landscapes would be undertaken in accordance with <i>The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes</i>.</p> <p>Identified and evaluated cultural landscapes are monitored and managed to enable the long-term preservation of historic / cultural features, qualities, and materials.</p>	

Ethnographic Resources	
Desired Conditions	Pertinent Servicewide Laws and Policies
<p>Appropriate cultural anthropological research is conducted in cooperation with associated American Indian tribes and other groups traditionally associated with the park.</p> <p>To the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions, the National Park Service accommodates access to and ceremonial use of American Indian sacred sites by American Indian religious practitioners and avoids adversely affecting the physical integrity of these sacred sites.</p> <p>NPS general regulations on access to and use of natural and cultural resources in the park are applied in an informed and balanced manner that is consistent with park purposes and does not unreasonably interfere with American Indian use of traditional areas or sacred resources and does not result in the degradation of park resources.</p> <p>All ethnographic resources determined eligible for listing or listed in the National Register of Historic Places are protected. If disturbance of such resources is unavoidable, formal consultation is conducted with the state historic preservation officer, traditionally associated American Indian tribes, and the Advisory Council on Historic Preservation as appropriate.</p>	<p>National Historic Preservation Act of 1966, as amended (16 USC 470)</p> <p>American Indian Religious Freedom Act</p> <p>Native American Graves Protection and Repatriation Act</p> <p>Archeological Resources Protection Act</p> <p>Executive Order 13007, "Indian Sacred Sites"</p> <p>Presidential Memorandum of April 29, 1994, on Government-to-Government Relations with Tribal Governments</p> <p>NPS <i>Management Policies 2006</i></p> <p>Director's Order 28: <i>Cultural Resource Management Guideline</i> (1998)</p> <p>2008 Programmatic Agreement among the National Park Service, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers</p>
Management Strategies	
<p>Complete an ethnographic overview and assessment of the park.</p> <p>Continue to consult on a government-to-government basis with traditionally associated American Indian tribes about proposed undertakings in the park that may affect ethnographic resources. Assess and incorporate information received from the tribes regarding potential impacts and other concerns.</p> <p>Continue to provide tribal or other traditional access to sacred sites and other places of cultural importance when the use is consistent with park purposes and the protection of resources.</p> <p>Treat all ethnographic resources as eligible for listing in the National Register of Historic Places pending a formal determination of eligibility.</p> <p>Protect all ethnographic resources listed in or determined eligible for listing in the National Register of Historic Places. If disturbance is unavoidable, conduct formal consultation with the associated American Indian tribes, state historic preservation officer, the Advisory Council on Historic Preservation, and other concerned parties as needed in accordance with provisions of the National Historic Preservation Act.</p> <p>Conduct regular consultations with associated American Indian tribes to continue to improve and facilitate communications between the tribes and the park.</p> <p>The identities of community consultants and information about sacred and other culturally sensitive places and practices are kept confidential according to protocols established in consultation with associated tribal governments.</p>	

## NATURAL RESOURCE MANAGEMENT

Ecosystem Management	
Desired Conditions	Pertinent Servicewide Laws and Policies
<p>Lookout Mountain Battlefield is managed holistically as part of a greater ecological, social, economic, and cultural system. Natural resources are managed to preserve fundamental physical and biological processes, as well as individual species, features, and plant and animal communities. The National Park Service demonstrates leadership in resource stewardship and conservation of ecosystem values within and outside the unit. Lookout Mountain Battlefield is managed from an ecosystem perspective, where internal and external factors affecting environmental quality and resource stewardship goals are considered at a scale appropriate to their impact on affected resources. Outside of battlefield commemorative sites, natural processes and population fluctuations occur with as little human intervention as possible. Area resources are managed considering the ecological and social conditions of the Lookout Mountain Battlefield unit and surrounding area. Park managers adapt to changing ecological and social conditions within and external to the unit and continue as partners in regional planning and land and water management. Lookout Mountain Battlefield is managed proactively to resolve external issues and concerns to ensure battlefield values are not compromised.</p>	<p>NPS <i>Management Policies 2006</i> Reference Manual 77: Natural Resource Management</p>
Management Strategies	
<p>Science-based, adaptive, decision making would be followed, with the results of resource monitoring and research incorporated into all aspects of park operations.</p> <p>Park staff would apply ecological principles to ensure that natural resources are maintained and not impaired. Integrated pest management procedures would be used when necessary to control nonnative organisms or other pests.</p> <p>Park staff would continue to participate in the Cumberland Piedmont Inventory and Monitoring Network and work with partners and collaborators to inventory resources and monitor vital components of the ecosystem. Park staff and other scientists would conduct long-term systematic monitoring of resources and processes to discern natural and anthropogenically induced trends, document changes in species or communities, evaluate the effectiveness of management actions taken to protect and restore resources, and to mitigate impacts on resources.</p> <p>Park staff would expand monitoring programs to include geographic areas and resources that are not currently monitored. Partnerships with institutions, agencies, and scientists would be an important component of this endeavor.</p> <p>Inventory and monitoring efforts would emphasize recording the finding(s) and leaving natural and cultural resources in situ rather than collecting and adding them to the park's museum collection.</p> <p>Park staff would work with state agency partners manage for healthy fish and wildlife populations.</p>	

Ecosystem Management
Management Strategies (continued)
<p>Future facilities would be built in previously disturbed areas or in carefully selected sites with as small a construction footprint as possible. Park staff would also apply mitigation techniques to minimize the impacts of construction and other activities on park resources.</p> <p>Scientific research would be encouraged. Cooperative basic and applied research would be encouraged through various partnerships and agreements to increase the understanding of park resources, natural processes, and human interactions with the environment, or to answer specific management questions.</p> <p>A natural resource condition assessment would be prepared to document the current status of natural resource conditions.</p> <p>A resource stewardship strategy for Chickamauga and Chattanooga National Military Park, including Lookout Mountain Battlefield, would be prepared to identify resource management priorities, consider sequencing of projects, and link on-the-ground projects to higher-tier management goals and objectives.</p> <p>The park staff would continue to expand the data management system, including a GIS, a research database, and a literature database, for analyzing, modeling, predicting, and testing trends in resource conditions.</p> <p>Visitors would be educated about the importance and fragility of park resources, threats to them, and mitigation to lessen impact.</p> <p>The National Park Service would seek agreements with the Chattanooga Arboretum and Nature Center, City of Lookout Mountain, Hamilton, Walker, and Dade counties, City of Chattanooga, and other owners of adjacent property to protect and enhance the ecosystem.</p> <p>Park staff would work cooperatively to manage nonnative species in the region.</p> <p>Park staff would continue to partner with the research community to further the knowledge of ecosystem processes that affect the area.</p> <p>Park staff would continue to work with partners to protect species of concern and reintroduce extirpated native species when practical.</p>

Ecosystem Restoration	
Desired Conditions	Pertinent Servicewide Laws and Policies
The Lookout Mountain Battlefield is a model of successful ecological restoration efforts. Where appropriate, altered ecosystems are restored as nearly as possible to conditions they would be in today had natural ecological processes not been disturbed. Vegetation is in a condition reminiscent of the period before Europeans began altering the area. All federally and state threatened and endangered species are no longer in danger of extinction and are at least stable in the area.	NPS <i>Management Policies 2006</i> Reference Manual 77: Natural Resource Management
Management Strategies	
<p>Active restoration efforts would continue in the area, primarily focusing on eradication of nonnative wildlife species, weed control, revegetation of native plants, and restoration of native plants and animals.</p> <p>Efforts would continue, in cooperation with the U.S. Fish and Wildlife Service, Tennessee Department of Environment &amp; Conservation, Georgia Department of Natural Resources, and other public and private institutions, to survey, restore, and recover all listed federal threatened and endangered species. Listed species and their habitats would be inventoried and monitored to determine population status and trends, and to evaluate the effectiveness of efforts being taken to reduce threats and recover the species. Efforts would be undertaken to preserve the genetic diversity of these species.</p> <p>Inventories and monitoring of invasive nonnative plant species would continue in the entire park. Efforts would continue to control or eradicate nonnative plants that are particularly invasive and destructive pests, or have the potential to rapidly spread and dominate plant communities, such as kudzu, provided control is prudent and feasible. Native species would be planted to enhance native plant and wildlife populations and educate park visitors about the value of native plants.</p> <p>Park managers would restore disturbed lands as much as possible and determine on a site-by-site basis whether passive or active restoration is necessary. Active restoration of previously or newly disturbed areas would be done using native genetic materials to regain maximum habitat value. Under some circumstances, primarily in frontcountry developed areas, it may be appropriate and within policy to use nonnative plants in restoration efforts. Only plants that are noninvasive and would remain within developed areas would be used.</p> <p>Extirpated native species would be restored where suitable habitat exists and restoration is compatible with social, political, and ecological conditions.</p>	



Native Vegetation and Animals	
Desired Conditions	Pertinent Servicewide Laws and Policies
Outside of battlefield commemorative sites, the National Park Service strives to maintain, as part of the natural ecosystem, native plants and animals in the Lookout Mountain Battlefield unit. Populations of native plant and animal species function in as natural condition as possible except where special considerations are warranted. Native species populations that have been severely reduced in or extirpated from the area are restored where feasible and sustainable.	NPS <i>Management Policies 2006</i> Reference Manual 77: <i>Natural Resource Management</i>
Management Strategies	
<p>The area's vegetation and wildlife inventory would continue to be monitored and updated.</p> <p>Whenever possible, natural processes would be relied on to maintain native plant and animal species, and to influence natural fluctuations in populations of these species.</p> <p>Educational programs would be developed to inform visitors and the general public about wildlife issues and concerns.</p>	

Special Status Species	
Desired Conditions	Pertinent Servicewide Laws and Policies
Federal and state listed threatened and endangered species and their habitats are protected and sustained. Native threatened and endangered species populations that have been severely reduced in or extirpated from the area are restored where feasible and sustainable. Essential habitats that support these species are all protected.	Endangered Species Act NPS <i>Management Policies 2006</i> Reference Manual 77: <i>Natural Resource Management</i>
Management Strategies	
<p>Park staff would continue to work with the U.S. Fish and Wildlife Service, Tennessee Department of Environment &amp; Conservation, and Georgia Department of Natural Resources to ensure that NPS actions help special status species to recover. If any state or federal listed or proposed threatened or endangered species are found in areas that would be affected by construction, visitor use, or restoration activities proposed under any of the alternatives in this plan, the National Park Service would consult with the above agencies and would then try to avoid or mitigate any potential adverse impacts.</p> <p>Park staff would cooperate with the above agencies to inventory, monitor, protect, and perpetuate the natural distribution and abundance of all special status species and their essential habitats in the Lookout Mountain Battlefield unit. Periodic inventories would be conducted for special status species. These species and their habitats would be specifically considered in ongoing planning and management activities.</p> <p>The National Park Service would support research that contributes to management knowledge of federal and state listed species and their habitat.</p> <p>Special status species would be addressed as part of a parkwide future resource stewardship strategy. Park staff would participate in the recovery planning process when appropriate.</p>	

Fire Management	
Desired Conditions	Pertinent Servicewide Laws and Policies
Fire management programs are designed to meet resource management objectives prescribed for Lookout Mountain Battlefield. All wildland fires are effectively managed, considering resource values to be protected and firefighter and public safety, using the full range of strategic and tactical operations as described in an approved fire management plan.	NPS <i>Management Policies 2006</i> Director's Order 18: <i>Wildland Fire Management</i> and its accompanying Reference Manual 18: <i>Wildland Fire Management</i>
Management Strategies	
<p>The park's fire management plan, which includes Lookout Mountain Battlefield, would be maintained to reflect changes in wildland fire policy, fire use applications, and the body of knowledge on fire effects within the park's vegetation types.</p> <p>The National Park Service would maintain a cooperative agreement for fire suppression with appropriate federal, state, and local agencies and organizations.</p> <p>Where appropriate, fire would be used as a management tool to maintain native plant communities and control nonnative species.</p> <p>Visitors would be provided information so that they can learn the role of fire in the ecosystem.</p>	

Soils	
Desired Conditions	Pertinent Servicewide Laws and Policies
Lookout Mountain Battlefield's soils are preserved and to the extent possible the unnatural erosion, physical removal, or contamination of the soil, or its contamination of other resources, is prevented. Natural soil resources and processes function in as natural a condition as possible, except where special considerations are allowable under policy. When soil excavation is an unavoidable part of an approved facility development project, the National Park Service would minimize soil excavation, erosion, and off-site soil migration during and after any ground-disturbing activity.	NPS <i>Management Policies 2006</i> Reference Manual 77: <i>Natural Resource Management</i>
Management Strategies	
<p>Soil conservation practices would be followed to reduce impacts as appropriate.</p> <p>Effective best management practices would be applied to problem soil erosion and compaction areas in a manner that stops or minimizes erosion, restores soil productivity, and reestablishes or sustains a self-perpetuating vegetation cover.</p> <p>When use of a soil fertilizer or other soil amendment is an unavoidable part of restoring a natural landscape or maintaining an altered plant community, use would be guided by a written prescription. The prescription ensures that such use of soil fertilizer or soil amendment does not unacceptably alter the physical, chemical, or biological characteristics of the soil, biological community, or surface or ground waters.</p> <p>Whenever possible, NPS staff would educate visitors about soils.</p>	

Geologic Resources (including caves)	
Desired Conditions	Pertinent Servicewide Laws and Policies
The Lookout Mountain Battlefield Unit's caves and other geologic resources are preserved and protected as integral components of park natural systems, and allowed to function in as natural a condition as possible. To the extent possible, the unnatural erosion, physical removal or alteration of geologic features and processes are prevented. Geologic features are protected from unacceptable impacts of human activity while allowing natural processes to continue. Natural systems associated with the area's caves are perpetuated.	Federal Cave Resources Protection Act of 1988 NPS <i>Management Policies 2006</i> Reference Manual 77: <i>Natural Resource Management</i>
Management Strategies	
<p>The area's caves would continue to be inventoried to identify their resources with the assistance of the NPS Geological Resources Division and U.S. Geological Survey, and other partners.</p> <p>The caves would be monitored to assess conditions and trends in geologic processes and resources.</p> <p>No developments or uses, including those that allow for general public entry, would be allowed in, above or adjacent to the caves until it can be demonstrated that they would not unacceptably impact natural caves resources and conditions, including subsurface water movements, and that access would not result in unacceptable risks to public safety.</p> <p>NPS staff would identify interpretive themes or other opportunities for interpreting the notable geologic features, events or processes that are preserved, exposed or occur in the Lookout Mountain Battlefield unit.</p>	

Water Resources	
Desired Conditions	Pertinent Servicewide Laws and Policies
Surface water and groundwater are protected and water quality meets or exceeds all applicable water quality standards. Lookout Creek water quality reflects natural conditions and supports native plant and animal communities, and recreational uses. NPS and NPS-permitted programs and facilities are maintained and operated to avoid pollution of surface water and groundwater.	Clean Water Act Executive Order 11514, "Protection and Enhancement of Environmental Quality" NPS <i>Management Policies 2006</i> Reference Manual 77: Natural Resource Management
<b>Management Strategies</b>	
<p>NPS staff would work with state and regional water quality agencies and other appropriate governmental bodies to obtain the highest possible water quality standards available under the Clean Water Act.</p> <p>Park staff would cooperate with other government agencies to maintain and/or restore the quality and quantity of surface and ground water resources in the unit. Park staff would pursue methods to preserve and protect acceptable stream flows and ground water levels to sustain aquatic and terrestrial life and provide recreational opportunities.</p> <p>A water resources information and issues overview report and a water resources stewardship report would be completed for Chickamauga and Chattanooga National Military Park, including Lookout Mountain Battlefield.</p> <p>Water conservation would be promoted by the National Park Service, visitors, and park neighbors.</p>	
<b>Management Strategies</b>	
<p>Best management practices would be applied to all pollution-generating activities and facilities in Lookout Mountain Battlefield, such as NPS maintenance and storage facilities and parking areas.</p> <p>The use of pesticides, fertilizers, and other chemicals would be minimized and managed in keeping with NPS policy and federal regulations.</p> <p>The water quality of Lookout Creek would be monitored. If degraded water quality and/or flows occur, attempts would be made to locate and mitigate the source of the impacts.</p> <p>Visitors would be informed and educated about the area's water resources and their values.</p>	

Wetlands	
Desired Conditions	Pertinent Servicewide Laws and Policies
<p>The natural values of wetlands are maintained and protected. When practicable, natural wetland cultural values are enhanced by using them for educational, recreational, scientific, and similar purposes that do not disrupt natural wetland functions. Natural wetlands that have been degraded due to past human actions, including the introduction of nonnative species, are restored to pre-disturbance conditions whenever feasible. The National Park Service avoids to the extent possible the long- and short-term adverse impacts associated with the destruction or modification of wetlands and avoids direct or indirect support of new construction in wetlands wherever there is a practicable alternative.</p>	<p>Clean Water Act  Rivers and Harbors Act  Executive Order 11514, "Protection and Enhancement of Environmental Quality"  Executive Order 11990, "Protection of Wetlands"  NPS <i>Management Policies 2006</i>  Director's Order 77-1: <i>Wetland Protection</i> and its accompanying <i>Wetland Protection Procedural Manual</i></p>
Management Strategies	
<p>A wetlands inventory, condition assessment, and functional evaluation would be done along Lookout Creek to help ensure proper management and protection of wetland resources. If human activities or developments are proposed that may result in wetland degradation or loss, then more detailed wetland mapping would be done.</p> <p>All facilities would be located to avoid wetlands if feasible. If avoiding wetlands was not feasible, other actions would be taken to comply with Executive Order 11990, "Protection of Wetlands," the Clean Water Act, and Director's Order 77-1: <i>Wetland Protection</i>.</p> <p>A statement of findings for wetlands would be prepared if the NPS actions would result in adverse impacts on wetlands. The statement of findings would include an analysis of the alternatives, delineation of the wetland, a wetland restoration plan to identify mitigation, and a wetland functional analysis of the impact site and restoration site.</p> <p>If natural wetland functions have been degraded or lost due to human action, the National Park Service would work to restore wetlands to pre-disturbance conditions, to the extent practicable.</p>	

Floodplains	
Desired Conditions	Pertinent Servicewide Laws and Policies
Natural floodplain values of Lookout Creek are preserved or restored. Long-term and short-term environmental effects associated with the occupancy and modification of the floodplain is avoided.	Rivers and Harbors Act Executive Order 11988, "Floodplain Management" NPS <i>Management Policies 2006</i> Director's Order 77-2: <i>Floodplain Management</i>
Management Strategies	
<p>Whenever possible, new developments would be located on sites outside of floodplains. If it is not possible to avoid locating a new development on a floodplain or to avoid a management action that would affect a floodplain, the Park Service would:</p> <ul style="list-style-type: none"> <li>▪ Prepare and approve a statement of findings in accordance with Director's Order 77-2.</li> <li>▪ Use nonstructural measures as much as practicable to reduce hazards to human life and property while minimizing impacts on the natural resources of floodplains.</li> <li>▪ Ensure that structures and facilities are designed to be consistent with the intent of the standards and criteria of the National Flood Insurance Program (44 CFR 60).</li> </ul> <p>Mitigation measures would be required as part of construction to avoid any potential indirect effects to floodplains. Before initiating any ground-disturbing projects, further investigation would be conducted to determine if floodplain resources would be affected. Floodplains would be addressed at the project level to ensure that projects are consistent with NPS policy and Executive Order 11988.</p> <p>Visitors would be informed about the values of natural floodplains.</p>	



Air Quality	
Desired Conditions	Pertinent Servicewide Laws and Policies
Good to excellent air quality is maintained. Scenic views, both day and night, are protected and unimpaired for the enjoyment of current and future park visitors. Indoor air quality at NPS facilities also is healthy.	Clean Air Act NPS <i>Management Policies 2006</i> Reference Manual 77: Natural Resource Management
Management Strategies	
<p>Air quality and air quality-related values in the Lookout Mountain Battlefield unit would be monitored to gain baseline information and to measure any considerable changes to the park's airshed. Air pollution impacts would be identified and evaluated.</p> <p>Air quality pollution emissions associated with battlefield operations and visitor use would be reduced when possible (e.g., the use of zero and low emission vehicles would be encouraged). Park operations would be conducted in compliance with appropriate federal, state, and local air quality regulations.</p> <p>Although the National Park Service has very little direct control over air quality in the Lookout Mountain Battlefield's airshed, NPS managers would continue to cooperate with the Tennessee Department of Environment &amp; Conservation (Division of Air Pollution Control), Georgia Department of Natural Resources (Air Protection Branch), and the U.S. Environmental Protection Agency on air quality issues.</p> <p>Park staff would participate in federal, regional, and local air pollution control plans and drafting of regulations and review permit applications for key new air pollution sources.</p> <p>Educational programs would be developed to inform visitors and regional residents about the threats of air pollution.</p>	

Viewshed and Vistas	
Desired Conditions	Pertinent Servicewide Laws and Policies
Natural vistas and cultural landscapes provide visitors with an immediate and lasting sensory experience that strongly conveys the character of the national military battlefield. Key scenic vistas are protected.	NPS <i>Management Policies 2006</i>
Management Strategies	
<p>Key vistas and viewpoints in the Lookout Mountain Battlefield unit would be identified.</p> <p>NPS staff would work with neighboring landowners, communities, conservancy groups, management agencies, and other partners to develop preservation goals for identified viewsheds; identify potential threats; and establish a sense of stewardship by these groups for important visual resources.</p> <p>NPS staff would work with adjacent landowners, partners, and others to preserve the scenic character of Lookout Mountain Battlefield, and complement the area's key viewpoints and vistas.</p>	

Natural Soundscapes	
Desired Conditions	Pertinent Servicewide Laws and Policies
The National Park Service preserves the natural ambient soundscapes, restores degraded soundscapes to the natural ambient condition wherever possible, and protects natural soundscapes from degradation due to human-caused noise. Natural sounds predominate outside of developed areas—the sounds of civilization are generally confined to developed areas. Visitors have opportunities in the Lookout Mountain Battlefield unit to experience natural sounds in an unimpaired condition.	NPS <i>Management Policies 2006</i> Director's Order 47: <i>Sound Preservation and Noise Management</i>
Management Strategies	
<p>Actions would be taken to monitor and minimize or prevent or minimize unnatural sounds that adversely affect Lookout Mountain Battlefield's resources or values or visitor enjoyment of them.</p> <p>Tour bus companies would be required to reduce noise levels (e.g., turning off engines when buses are parked).</p> <p>Noise generated by NPS management activities would be minimized by regulating administrative functions such as the use of motorized equipment where appropriate. Noise would be a consideration in the procurement and use of equipment by the park staff.</p> <p>Visitors would be encouraged to avoid unnecessary noise, particularly in the battlefield commemorative sites.</p> <p>NPS staff would work with adjacent landowners, local governments, and other partners to reduce/avoid noise sources that affect the area's soundscape.</p>	

## VISITOR USE MANAGEMENT

Visitor Use and Experience (general)	
Desired Conditions	Pertinent Servicewide Laws and Policies
<p>Park resources are conserved unimpaired for the enjoyment of future generations. Visitors have opportunities for forms of enjoyment that are uniquely suited and appropriate to the natural and cultural resources found in the park. No activities occur that would cause derogation of the values and purposes for which Chickamauga and Chattanooga National Military Park was established.</p> <p>For all zones within the park, the types and levels of visitor use are consistent with the desired resource and visitor experience conditions prescribed for those areas within the park's purpose.</p> <p>Chickamauga and Chattanooga National Military Park's buildings, facilities, programs, and services are accessible to and useable by all people, including those with disabilities, to the highest level that is reasonable. All new and renovated buildings and facilities are designed and constructed to provide access to people with disabilities. All services and programs, including those offered by volunteers, interpreters, and cultural demonstrators also are designed to be accessible by people with disabilities.</p>	<p>NPS Organic Act  National Park System General Authorities Act  NPS <i>Management Policies 2006</i>  Architectural Barriers Act of 1968  Rehabilitation Act of 1973  Americans with Disabilities Act of 1990  Fair Housing Act  Rehabilitation Act of 1973 (504)  Executive Order 13514, Section 508, "Electronic and Information Technology Accessibility Standards"  Director's Order 16A: <i>Reasonable Accommodation for Applications and Employees with Disabilities</i>  Director's Order 28: <i>Cultural Resource Management</i>  Director's Order 42: <i>Accessibility for Visitors with Disabilities in National Park Service Programs and Services</i>  28 CFR Part 36  43 CFR Part 17 "Nondiscrimination in Federally Assisted Programs of the Department of the Interior. Subpart B: Nondiscrimination on the Basis of Handicap"  Title 36 CFR  Americans with Disabilities Act Accessibility Guidelines  Telecommunications Act Accessibility Guidelines  Final Accessibility Guidelines for Outdoor Developed Areas (2013)</p>
Management Strategies	
<p>Park staff would stay informed of the park's existing and changing visitor demographics and psychographics to better tailor programs and media to meet diverse needs and desires. All media and programs would reflect the parks purpose, mission, resources significance, and desired visitor conditions (including the primary interpretive themes).</p> <p>To meet the requirements of the 1978 National Parks and Recreation Act and NPS management policies, NPS staff would continue to monitor visitor comments on issues such as crowding and availability of parking spaces at busy times of the year, and would monitor for resource impacts caused by visitors. Should any of the trends increase to levels unacceptable to managers, NPS staff would consider what actions to take. Visitors would be provided with the tools and information they need for self-management and how to enjoy the park in a safe, low-impact manner.</p> <p>Park staff would be trained to understand and ensure accessibility of opportunities for visitors to form their own intellectual and emotional connections to resource meaning for as many audiences as practical and possible by providing a variety of both personal and nonpersonal services.</p> <p>Existing facilities, programs, services, and products would be evaluated and assessed to determine the degree to which they are accessible to and useable by people with disabilities, and to identify barriers that limit access. A transition plan would be developed identifying barriers to be removed, associated solutions, and time frames for identified park areas. The plan would then be implemented to follow time lines included in the plan. Revisions to the plan would also take place as barriers are removed.</p> <p>Similarly, existing programs, activities, and services (including interpretation, telecommunications, media, and web pages) would be regularly evaluated to determine the degree to which they are accessible to and useable by people with disabilities, and to identify barriers to access. Action plans would be developed identified how barriers would be removed and then the plan would be implemented.</p>	

Visitor Information, Orientation, Interpretation, and Education	
Desired Conditions	Pertinent Servicewide Laws and Policies
<p>Visitors to Chickamauga and Chattanooga National Military Park have opportunities for a safe and satisfying visit, with opportunities to</p> <ul style="list-style-type: none"> <li>get information about the park (in multiple languages and accessible forms—braille, large print, and audio description) before leaving home</li> <li>get on-site information and an overview of the park (in multiple languages and accessible forms— braille, large print, and audio description)</li> <li>choose from a variety of recreational, interpretive, and educational experiences geared to diverse needs, interests, and abilities</li> <li>easily find park facilities</li> <li>learn about other theme-related sites and programs in the region</li> <li>escape the routines and stresses of the urban environment</li> </ul> <p>Visitors have opportunities to understand and appreciate the significance of the park and its resources, to make connections between park resources and their meanings, and to develop a personal stewardship ethic by directly relating to the resources. This may occur when visitors</p> <ul style="list-style-type: none"> <li>understand elements of each of the primary interpretive themes</li> <li>experience key elements of the park's history</li> <li>appreciate the range of plant and animal species in the park</li> <li>interact with park staff</li> <li>witness resource preservation in action</li> <li>contribute to the support of park programs and preservation efforts</li> <li>create personal and family memories from their park experiences</li> <li>explore and discover the park alone or with others</li> </ul>	<p>NPS Organic Act National Park System General Authorities Act NPS <i>Management Policies 2006</i> Architectural Barriers Act of 1968 Rehabilitation Act of 1963 Americans with Disabilities Act of 1990 Fair Housing Act Rehabilitation Act of 1973 (§504) Executive Order 13514, Section 508: "Electronic and Information Technology Accessibility Standards" Director's Order 6: <i>Interpretation and Education</i> Director's Order 16A: <i>Reasonable Accommodation for Applications and Employees with Disabilities</i> Director's Order 28: <i>Cultural Resource Management Guideline</i> Director's Order 42: <i>Accessibility for Visitors with Disabilities in National Park Service Programs and Services</i> 28 CFR Part 36 43 CFR Part 17 "Nondiscrimination in Federally Assisted Programs of the Department of the Interior. Subpart B: Nondiscrimination on the Basis of Handicap" Title 36 CFR Americans with Disabilities Act Accessibility Guidelines (2004) Telecommunications Act Accessibility Guidelines Final Accessibility Guidelines for Outdoor Developed Areas (2013)</p>
Management Strategies	
<p>The park staff would seek new ways to increase awareness of the park, its resources, and themes. This would include reaching out to segments of the population that do not use the park or know of its significance. Park staff would work with local communities and other theme-related sites to tell aspects of the park's stories in a coordinated and comprehensive fashion. Partnerships with other state, regional, and national parks, educational institutions, American Indian tribes, and other organizations would be sought to enrich interpretation and education opportunities about the park's themes.</p> <p>Appropriate techniques and technologies would be used to make people aware of issues facing the park.</p> <p>Interpretive and educational programs would include key resource issues, management priorities, public safety, and demonstrate standards for interpretive competencies identified and outlined by the NPS Interpretive Development Program.</p> <p>Cooperative efforts and partnerships with local communities, public and private agencies, organizations, stakeholders, and land managers in the region would be enhanced so that visitors can better learn about the abundance, variety, and availability of the region's cultural, recreational, and interpretive opportunities. This would orient visitors about what to do and which attractions to see.</p> <p>Partnerships with state parks, national parks, educational institutions, and other organizations would be enhanced to enrich interpretive and educational opportunities regionally and nationally.</p>	

Public Health and Safety	
Desired Conditions	Pertinent Servicewide Laws and Policies
<p>While recognizing that there are limitations on its capability and constraints imposed by the NPS Organic Act to not impair resources, the National Park Service and its contractors and cooperators would seek to provide a safe and healthful environment for visitors and employees.</p> <p>The park staff strives to identify recognizable threats to safety and health and protect property by applying nationally accepted standards. The park is a safe workplace—no preventable workplace accidents, spills, or lost time injuries occur in the park. The park staff reduces or removes known hazards and/or applies appropriate mitigating measures, such as closures, guarding, gating, education, and other actions.</p>	<p>OSHA 29 CFR  NPS <i>Management Policies 2006</i>  Director's Order 50 and Reference Manual 50: <i>Safety and Health</i>  Director's Order 58 and Reference Manual 58: <i>Structural Fire Management</i>  Director's Order 83 and Reference Manual 83: <i>Public Health</i>  Director's Order 51 and Reference Manual 51: <i>Emergency Medical Services</i>  Director's Order 30 and Reference Manual 30: <i>Hazard and Solid Waste Management</i></p>
Management Strategies	
<p>NPS staff would ensure that all potable water systems and waste water systems in the park meet state and federal requirements.</p> <p>An emergency preparedness program would be developed to maximize visitor and employee safety and protection of resources and property.</p> <p>Emergency operations/safety plans, including a hazardous spill response plan to plan for and respond to spills, would be maintained.</p> <p>Interpretive signs and materials would be provided as appropriate to notify visitors of potential safety concerns/hazards and procedures to help provide for a safe visit to the park and to ensure that visitors are aware of the possible risks of certain activities.</p> <p>Park equipment would be maintained in a safe and environmentally sound condition.</p> <p>Routine safety and environmental checks would be conducted of employees, contractors, and business partner operations.</p> <p>NPS staff would continue to work with local emergency and public health officials to make reasonable efforts to search for lost persons and rescue sick, injured, or stranded persons.</p> <p>NPS staff would make reasonable efforts to provide appropriate emergency medical services for a person who becomes ill or is injured.</p>	

Commercial Visitor Services and Related Authorities	
<p>A commercial activity is defined as any activity for which compensation is exchanged. It includes activities by for-profit and nonprofit operators. Commercial services are more than just concessions. They include concession contracts, commercial use authorizations, leases, cooperative agreements, rights of way, and special use permits. All commercial services must be managed. All commercial services must be necessary and/or appropriate by achieving the resource protection and visitor use goals for the park.</p>	
Desired Conditions	Pertinent Servicewide Laws and Policies
<p>Although commercial services do not currently exist at the park, this plan identifies potentially appropriate commercial services. These services could add to visitor enjoyment of the park, enable many people to see parts of the park they might not otherwise see, and help protect park resources. All commercial services would be safe and sustainable.</p>	<p>NPS <i>Management Policies 2006</i>  NPS Concessions Management Improvement Act of 1998  Same as Visitor Experience and Use  16 USC 3a "Recovery of Costs Associated with Special Use Permits"  16 USC 1-3, 6, 17j-2(e) Relating to Cooperating Associations  36 CFR 1.6 and 5.3: "Permits" and "Business Operations"  36 CFR 5.5 "Commercial Photography"  36 CFR 14 "Rights-of-Way"  36 CFR 18 "Leasing of Properties in Park Areas"  Director's Order 53: <i>Special Park Uses</i>  Director's Order 32: <i>Cooperating Associations</i>  Director's Order 22: <i>Recreation Fees</i>  Director's Order 48 (draft): <i>Concession Management</i>  Same as Visitor Experience and Use</p>
Management Strategies	
<p>Ensure that all necessary and/or appropriate commercial activities in the park are authorized in writing by the superintendent.</p> <p>Establish levels of commercial use that are consistent with resource protection and visitor experience goals for the park.</p> <p>Businesses would continue to be managed through commercial use authorizations or concession contracts as appropriate; commercial filming would continue to be managed through special use permits.</p> <p>Ensure that before commercial use authorizations are renewed or readvertised, the types of authorized uses are still necessary and/or appropriate, the levels of use are consistent with resource protection and a quality visitor experience, and the commercial services can be managed in an effective and efficient manner.</p>	

**RELATIONS WITH LANDOWNERS, AGENCIES, TRIBES, AND OTHER ENTITIES**

<b>Relations with Private and Public Organizations, Adjacent Landowners, Government Agencies, and Volunteers</b>	
<b>Desired Conditions</b>	<b>Pertinent Servicewide Laws and Policies</b>
<p>The Lookout Mountain Battlefield unit is managed as part of a greater ecological, social, economic, and cultural system.</p> <p>Good relations are maintained with adjacent landowners, surrounding communities, and private and public groups that affect, and are affected by, the park. The Lookout Mountain Battlefield unit is managed proactively to resolve external issues and concerns and ensure that park resources are not compromised.</p> <p>Because the Lookout Mountain Battlefield unit is an integral part of larger regional environment, the National Park Service works cooperatively with others to anticipate, avoid, and resolve potential conflicts, protect park resources, and address mutual interests in the quality of life for community residents. Regional cooperation involves federal, state, and local agencies, neighboring landowners, and all other concerned parties.</p>	<p><i>NPS Management Policies 2006</i></p>
<b>Management Strategies</b>	
<p>Park staff would continue to establish and foster partnerships with public and private organizations to achieve the purpose of the national military park. Partnerships would continue to be sought for resource protection, research, education, and visitor enjoyment.</p> <p>NPS staff would keep landowners, land managers, local governments, and the general public informed about park management activities. The National Park Service would work closely with local, state, and federal agencies whose programs affect or are affected by activities on Lookout Mountain. Regular consultations would occur with such groups as Hamilton, Dade, and Walker counties, Tennessee and Georgia state historic preservation officers, Tennessee Department of Environment &amp; Conservation, Georgia Department of Natural Resources, and the cities of Lookout Mountain and Chattanooga.</p> <p>Periodic consultations would occur with landowners and communities who are affected by, or potentially affected by park visitors and management actions. NPS staff would respond promptly to conflicts that arise over their activities, visitor access, and proposed activities and developments on adjacent lands that may affect the Lookout Mountain Battlefield unit. NPS managers would seek agreements with landowners to encourage their lands to be managed in a manner compatible with park purposes. Park staff also would seek ways to provide landowners with technical and management assistance to address issues of mutual interest.</p> <p>NPS staff would continue to work closely with local, state, and federal agencies to foster interagency training, cooperation, and mutual assistance that affords the highest level of protection and security for visitors and Lookout Mountain Battlefield resources.</p> <p>Park managers would pursue cooperative regional planning whenever possible to integrate the Lookout Mountain Battlefield unit into issues of regional concern.</p> <p>NPS staff would continue to support and encourage volunteers who contribute to Lookout Mountain Battlefield programs.</p>	

## OTHER MANAGEMENT TOPICS

Climate Change	
Desired Conditions	Pertinent Servicewide Laws and Policies
For the Lookout Mountain Battlefield unit, Chickamauga and Chattanooga National Military Park is a leader in its efforts to address climate change, reducing its greenhouse gas emissions, increasing its use of renewable energy and other sustainable practices so it is a carbon neutral; and preparing for and mitigating climate change impacts. Park staff proactively monitor, plan, and adapt to the effects of climate change on natural and cultural resources and visitor amenities by using the best information as it becomes available. Park staff promote innovation, best practices, adaptive management, and partnerships to respond to the challenges of climate change and its effects on Lookout Mountain Battlefield's resources. Education and interpretive programs help visitors understand the process of climate change, its threats to the park and the wider environment, and how they can respond to climate change.	<p>NPS Organic Act</p> <p>Executive Order 13423 (includes requirements for energy and water conservation measures)</p> <p>Executive Order 13514 (sets requirements for federal greenhouse gas emissions)</p> <p>Department of the Interior Secretarial Order 3226 (ensures that climate change impacts be taken into account in connection with departmental planning and decision making)</p> <p>NPS <i>Management Policies 2006</i> (including sections on environmental leadership [1.8], sustainable energy design [9.1.1.6], and energy management [9.1.7])</p> <p>NPS <i>Climate Change Response Strategy</i> (2010)</p> <p>NPS Environmental Quality Division's "Draft Interim Guidance: Considering Climate Change in NEPA Analysis"</p>
Management Strategies	
<p>Key natural and cultural resources, processes, park facilities that are most vulnerable from climate change would be identified. Baseline resource conditions would be established, thresholds identified, and conditions monitored. Key resources in various management zones would be identified that may require different management responses to climate change impacts.</p> <p>Chickamauga-Chattanooga National Military Park would become a member of the Climate Friendly Parks program, measuring park-based greenhouse emissions, developing sustainable strategies to mitigate these emissions and adapt to climate change impacts, educating the public about these efforts, and developing future action plans.</p> <p>Stressors on key ecosystem features and process and key cultural resources would continue to be mitigated to increase resiliency to a changing climate. Scientific studies and inventories would be encouraged to identify and document changes caused by climate change, to predict potential changes, and to assist in identifying potential responses to climate change. Key natural and cultural resources and visitor amenities that are at risk from climate change would be identified and monitored.</p> <p>Since emissions from all motorized vehicles contribute to the park's emissions, options to improve transportation efficiencies would be explored, including NPS and visitor activities. Opportunities for alternative transportation options, as well as effective carbon offset strategies, would be explored. Use of low-emission vehicles for NPS operations would be used when possible.</p> <p>Opportunities would be pursued in Lookout Mountain Battlefield's operations and visitor services to use and promote "green" technologies and products and reduce overall energy and resource consumption.</p> <p>Lookout Mountain Battlefield education and interpretive efforts would engage park employees, partners, visitors, and the public on climate change, providing the latest research and monitoring data and trends, informing the public about what responses are being taken in the area, and inspiring visitors to reduce their carbon footprint.</p> <p>NPS staff would work with partners to plan for climate change, and identify actions that can be taken to respond to these changes. Cooperative efforts also would be pursued to maintain regional habitat connectivity and refugia that allow species dependent on Lookout Mountain Battlefield's resources to better adapt to changing conditions. Adaptive strategies would be developed to improve management of park resources and assets based on climate change projections.</p> <p>Commercial operators and other partners would be encouraged to provide or use low-emission vehicles in their activities, both within and outside the area. Anticipated climate change impacts, such as changes in vegetation, would be incorporated into future management plans.</p> <p>(See also the following strategies identified under "Sustainability.")</p>	



Sustainability	
Sustainability can be described as doing things in ways that do not compromise the environment or its capacity to provide for present and future generations. Sustainable practices consider local and global consequences to minimize the short- and long-term environmental impacts of human actions and developments through alternative energy sources, resource conservation, recycling, waste minimization, and the use of energy efficient and ecologically responsible materials and techniques.	
Desired Conditions	Pertinent Servicewide Laws and Policies
Chickamauga and Chattanooga National Military Park is a leader in sustainable practices in the Lookout Mountain Battlefield unit. All decisions regarding area operations, facilities management, and development in the Lookout Mountain Battlefield unit—from the initial concept through design and construction—reflect principles of resource conservation. Thus, all area developments and operations are sustainable to the maximum degree possible and practical. New developments and existing facilities are located, built, and modified according to the <i>Guiding Principles of Sustainable Design</i> (NPS 1993) or other similar guidelines. The unit has state-of-the-art water systems for conserving water, and energy conservation technologies and renewable energy sources whenever possible. Biodegradable, nontoxic, and durable materials are used in the Lookout Mountain Battlefield unit whenever possible. The reduction, use, and recycling of materials is promoted, while materials that are nondurable, environmentally detrimental, or that require transportation from great distances are avoided as much as possible.	<p>Energy Policy and Conservation Act of 2005</p> <p>Energy Independence and Security Act of 2007</p> <p>Executive Order 13423 (strengthens federal environmental, energy and transportation management)</p> <p>Executive Order 13423 (strengthens goals for federal environmental, energy, water conservation, and transportation management)</p> <p>Executive Order 13514 (sets requirements for federal greenhouse gas emissions, water conservation, building performance, and other sustainable practices)</p> <p>NPS <i>Management Policies</i> 2006</p> <p>NPS <i>Guiding Principles of Sustainable Design</i> (1993)</p> <p>Leadership in Energy &amp; Environmental Design (LEED)</p> <p>NPS <i>Green Parks Plan</i></p>
Management Strategies	
<p>The NPS <i>Guiding Principles of Sustainable Design</i> (1993b) directs NPS management philosophy. It provides a basis for achieving sustainability in facility planning and design, emphasizes the importance of biodiversity, and encourages responsible decisions. The guidebook articulates principles to be used in the design and management of tourist facilities that emphasize environmental sensitivity in construction, the use of nontoxic materials, resource conservation, recycling, and integrating visitors with natural and cultural settings. Sustainability principles have been developed and are followed for interpretation, natural resources, cultural resources, site design, building design, energy management, water supply, waste prevention, and facility maintenance and operations. The NPS <i>Green Parks Plan</i> further advances the agency's commitment to reducing environmental impacts and greenhouse gas emissions across all levels of the organization. In addition to following these principles, the following also would be accomplished:</p> <ul style="list-style-type: none"> <li>▪ NPS staff would work with experts both inside and outside agency to make Lookout Mountain Battlefield's facilities and programs sustainable. Partnerships would be sought to implement sustainable practices in the area. NPS staff also would work with stakeholders and business partners to augment NPS environmental leadership and sustainability efforts.</li> <li>▪ Park managers would perform value analysis and value engineering, including life cycle analysis, to examine the energy, environmental, and economic implications of proposed developments.</li> <li>▪ NPS staff would support and encourage the service of suppliers and contractors that follow sustainable practices. Commercial operators would be encouraged to embrace principles of environmental stewardship that enhance the protection, conservation, and preservation of resources.</li> <li>▪ Energy-efficient practices and renewable energy sources such as solar and wind energy and alternative fuel sources would be implemented wherever possible for both operational facilities and visitor facilities and amenities.</li> </ul>	

### Sustainability

- Lookout Mountain Battlefield interpretive programs would address sustainable and unsustainable practices. Visitors would be educated on the principles of environmental leadership, alternative energy, and sustainability through exhibits, media, and printed material.
- Park employees would be educated to have a comprehensive understanding of their relationship to environmental leadership and sustainability.
- Park managers would measure and track environmental compliance and performance. Audits would ensure environmental compliance, emphasize best management practices, and educate employees at all levels about environmental management responsibilities.

### Utility and Communication Facilities

The Telecommunications Act of 1996 directs all federal agencies to assist in the national goal of achieving a seamless telecommunications system throughout the United States by accommodating requests by telecommunication companies for the use of property, rights-of-way, and easements to the extent allowable under each agency's mission. The National Park Service is legally obligated to permit telecommunication infrastructure in the park if such facilities can be structured to avoid interference with park purposes.

Desired Conditions	Pertinent Servicewide Laws and Policies
Lookout Mountain Battlefield resources or public enjoyment of the area are not denigrated by nonconforming uses. Telecommunication structures are permitted in the unit to the extent that they do not jeopardize Lookout Mountain Battlefield's mission and resources. No new nonconforming use or rights-of-way are permitted through the unit without specific statutory authority and approval by the director of the National Park Service or his representative, and are permitted only if there is no practicable alternative to such use of NPS lands.	Telecommunications Act; 16 USC 79; 23 USC 317; 36 CFR 14 NPS <i>Management Policies 2006</i> Director's Order 53 and Reference Manual 53: <i>Special Park Uses</i>

### Management Strategies

NPS staff would work with service companies, local communities, and the public to locate new utility lines so that there is minimal effect on Lookout Mountain Battlefield's resources. If necessary, and there are no other options, new or reconstructed utilities and communications infrastructure would be placed in association with existing structures and along roadways or other established corridors in developed areas. Companies would be urged to place utility lines underground to the maximum extent possible.

Park staff would follow NPS policies (Reference Manual 53) and NEPA guidelines in processing applications for commercial telecommunications applications.



**APPENDIX F: FEDERAL AND STATE LISTED SPECIES IN  
CHICKAMAUGA AND CHATTANOOGA  
NATIONAL MILITARY PARK**



Common Name	Scientific Name	Federal Status	State Status (Georgia)	State Status (Tennessee)	Abundance	Documented or Probably Present on Lookout Mountain
Bald eagle	<i>Haliaeetus leucocephalus</i>		T		Rare	
Golden-winged warbler	<i>Vermivora chrysoptera</i>		E		Rare	
Gray bat	<i>Myotis grisescens</i>	E	E	E	Uncommon	X
Indiana bat	<i>Myotis sodalis</i>	E	E	E	Unknown	X
Northern long-eared bat**	<i>Myotis septentrionalis</i>	C			Unknown	X
White-leaved leather-flower	<i>Clematis glaucophylla</i>			E	Unknown	
Purple prairie clover	<i>Dalea purpurea</i>			E	Unknown	
Goldenseal	<i>Hydrastis canadensis</i>		E		Unknown	
Tennessee glade-creep	<i>Leavenworthia exigua</i> var. <i>exigua</i>		T		Unknown	
Yellow honeysuckle	<i>Lonicera flava</i>			T	Unknown	X (2002 observation)
Western false gromwell	<i>Onosmodium molle</i> ssp. <i>occidentale</i>			T	Unknown	
Heart-leaved plantain	<i>Plantago cordata</i>			E	Unknown	
Large-flowered skullcap	<i>Scutellaria montana</i>	T	T	T	Unknown	X
Compass plant	<i>Silphium laciniatum</i>			T	Unknown	
Prairie-dock	<i>Silphium pinnatifidum</i>			T	Unknown	
Great plains ladies'-tresses	<i>Spiranthes magnicamporum</i>		E		Unknown	
Barrens silky aster	<i>Symphyotrichum pratense</i>			E	Unknown	
Cutleaf meadow-parsnip	<i>Thaspium pinnatifidum</i>		E	E	Unknown	
Lanceleaf wakerobin	<i>Trillium lancifolium</i>			E	Unknown	X (2003 record/voucher)

T=threatened; E=endangered; C=candidate

Source: NPS (IRMA database) July 3, 2013

\* This includes species that occur in all three units of the park. Most of these species have not been documented in the Lookout Mountain Battlefield unit.

\*\* This species has not yet been federally listed, but is proposed to be endangered and is likely to be listed in the near future (P. Shute, USFWS, TN Field Office, pers. comm. 8-2-2013). It is not on the IRMA database, but is believed to be probably present (S. Thomas, NPS Cumberland Piedmont I&M Network, pers. comm. 8-5-2013).

# There may be additional state listed bats on Lookout Mountain, but information on bats in the Georgia side of Lookout Mountain is incomplete (T. Patrick, Georgia Dept. of Natural Resources, Nongame Div., pers. comm., 8-28-31).



## **APPENDIX G: PREPARERS AND CONSULTANTS**





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As the nation's principal conservation agency, the Department of the Interior has 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 historic 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.

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January 2015



NATIONAL PARK SERVICE | U.S. DEPARTMENT OF THE INTERIOR

# LOOKOUT MOUNTAIN BATTLEFIELD UNIT

of Chickamauga and Chattanooga National Military Park