



SKETCH of the Battle of MONOCACY, FREDERICK CO. MD.

Saturday July 9th.

1864.

By Jed. Hotchkiss Top. Eng. U.S.A.



Draft
General Management Plan
Environmental Impact Statement

(blank)

General Management Plan / Environmental Impact Statement
MONOCACY NATIONAL BATTLEFIELD
Frederick County, Maryland
July 2008

This *General Management Plan / Environmental Impact Statement* describes four alternatives for managing Monocacy National Battlefield. The approved plan will establish a direction to guide the management of the battlefield's cultural resources and the visitor experience for the next 15 to 20 years. Some issues to be addressed are saving the rural historic qualities of the landscape, offering visitor services and orientation, preserving historic structures and archeological sites, establishing guidelines for new commemorative monuments, and creating appropriate facilities for administration and maintenance.

Under **Alternative 1, the no-action alternative**, the current management of the national battlefield would continue into the future. (The no-action alternative forms a basis for comparing and evaluating the other alternatives.) Preserving and maintaining cultural and natural resources to NPS standards would be emphasized, and most visitor services would be available at one location, a new visitor center completed in 2007. In all the alternatives, all the historic structures would be preserved and maintained. **Alternative 2** would entail moving the administrative and maintenance staff into local leased space. Visitors would experience the national battlefield on an alternative transportation system. Historic farmlands would be leased to retain their agricultural use. New trails would enable visitors to reach the railroad junction and the sites of the Union entrenchments and the site of Maj. Gen. Lew Wallace's headquarters. The maintenance facility at the Gambrill Mill would be removed and the site re-landscaped. A new entrance to the 14th New Jersey Monument would improve safety, and a commemorative area would be created near the Pennsylvania and Vermont memorials for any new memorials. Exhibits would be available at a stone tenant house at the Thomas Farm, and access to the battlefield would be by trail around the farm. The possibility of a deck spanning Interstate Highway 270 is being evaluated in consultation with the Maryland Department of Transportation. If the deck proved feasible and if an agreement could be worked out, such a deck would be a part of **alternatives 2, 3, and 4**, with a road or walking trail crossing I-270. In **alternative 3**, national battlefield administration would be moved into the Thomas House, and the maintenance facility at Gambrill Mill would be expanded. Visitors would experience the site in their own cars. Historic farmlands would be leased to continue their agricultural use. Exhibits would be

available in the Thomas Farm stone tenant house and the new visitor center. Entrance to the 14th New Jersey Monument would be relocated south along Maryland Highway 355 and the parking area redesigned. The Gambrill Mill trail would be extended to the historic railroad crossing. A commemorative area would be created near the Pennsylvania and Vermont memorials, but no new memorials would be added to the national battlefield. **Alternative 4** is the NPS preferred alternative. National battlefield administration would be moved into the Thomas House, and maintenance would be expanded at its current location. Visitors would navigate the site in their own cars. The entrance to the 14th New Jersey Monument would be moved south to allow better sight distances. An extension to the Gambrill Mill trail would enable visitors to walk to the railroad junction and to the sites of the Union entrenchments and Wallace's headquarters. A landscaped commemorative area would be created near the Pennsylvania and Vermont memorials for any additional memorials. Exhibits would be available in the Thomas Farm's stone tenant house.

The effects of each alternative were analyzed, including the cumulative effects. Visitors' experience of the resources would vary, depending on which structures would be open to the public, the availability of an alternative transportation system, and the development of trail access to features such as the railroad bridge and railroad junction or the Union entrenchments and the site of Wallace's headquarters. **Alternatives 3 and 4** would result in a moderate long-term beneficial effect on the visitor experience. **Alternative 2** would lead to a major long-term beneficial effect on the visitor experience because an alternative transportation system would carry visitors around the battlefield and additional exhibits in historic structures would be open to visitors. **Alternatives 2, 3, and 4** would cause direct and indirect long-term negligible beneficial effects on the socioeconomic environment. **Alternatives 2, 3, and 4**, would have long-term moderate beneficial effects on pedestrian and vehicular access and circulation throughout the battlefield. An alternative transportation system in **alternative 2** could somewhat reduce the number of vehicles using these road systems, but the result would be negligible. The long-term effects on national battlefield operations and facilities from **alternatives 2, 3, and 4** would be major and beneficial.

(blank)

A GUIDE TO THIS DOCUMENT

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

Chapter 1, the Introduction — Purpose of and Need for the Plan, sets the framework for the entire document, describing why the plan is being prepared and what needs it must address. It gives guidance for the alternatives that are being considered, which are based on the national battlefield's legislated mission, its purpose, and the significance of its resources. The alternatives also are based on special mandates and administrative commitments, service-wide mandates and policies, and other planning efforts in the area.

The introduction also details the planning opportunities and issues that were raised during public scoping meetings and initial planning team efforts. ("Scoping" helps the planning team to identify issues and to determine the range of alternatives that will be addressed. During scoping, the NPS staff provides an overview of the proposed project. Members of the public then have the opportunity to make comments and suggestions or to express their concerns).

The issues and concerns are addressed to varying degrees by the alternatives in

the next chapter. The first chapter concludes with a statement of the scope of the environmental impact analysis — specifically what impact topics were or were not analyzed in detail.

Chapter 2, "Alternatives, Including the Preferred Alternative," begins with an explanation of the management prescriptions that will be used to manage the national battlefield in the future. It also includes information about the continuation of current management and trends in the national battlefield (alternative 1, the no-action alternative). The no-action alternative and then alternatives 2 through 4 are presented. Mitigative measures that would be proposed to minimize or eliminate the effects of some proposed actions are then described. The evaluation of the environmentally preferable alternative is followed by tables comparing the alternative actions and the environmental consequences of implementing the actions of each alternative. The chapter ends with a discussion of alternatives or actions that were dismissed from detailed evaluation.

Chapter 3, "The Affected Environment," contains descriptions of the areas and resources that would be affected by carrying out the actions of the various alternatives. Such affected resources are cultural resources, visitor use and experience, and the socioeconomic environment.

In **Chapter 4, "Environmental Consequences"** are analyses showing how implementing each alternative would affect the resources described in

the “Affected Environment” chapter. At the beginning of chapter 4, the methods that were used for assessing the impacts are outlined — including the intensity, type, and duration of the impacts.

Chapter 5, “Consultation and Coordination,” contains descriptions of the history of public and agency coordination during the planning effort

and any future compliance requirements. Agencies and organizations that will receive copies of the document also are listed in this chapter.

The **Appendixes** contain supporting information for the document. Also near the end of the document are references, a glossary, and a list of the planning team and consultants.

SUMMARY

INTRODUCTION

This *General Management Plan / Environmental Impact Statement* is intended to be the basic guidance document that will define a direction for the management of Monocacy National Battlefield. It will be the foundation for making decisions about managing natural and cultural resources and the visitor experience in the national battlefield and for preparing more specific resource plans.

This plan, which represents the results of a planning process that began in 2002, will be the first comprehensive plan that the National Park Service (NPS) has prepared for Monocacy National Battlefield. When completed and approved, the plan will represent an agreement by the National Park Service with the public about how the national battlefield will be used and managed in the next 15 to 20 years. It complies with applicable NPS planning guidance, including *NPS Management Policies 2006* and Director's Order 12 and its handbook, *Conservation Planning, Environmental Impact Analysis, and Decision Making*.

The area covered by this plan comprises 1,647 acres that encompass most of the lands upon which the Battle of Monocacy was fought during the Civil War.

The following key concerns are addressed in this plan:

- preserving the rural historic qualities of the battlefield landscape, which are threatened by surrounding

development, population growth, and regional transportation proposals

- offering appropriate visitor services and orientation now that land acquisition is essentially complete
- preserving historic structures and arranging for appropriate use of those structures and preserving archeological resources.
- developing guidelines for proposed new commemorative monuments in the national battlefield
- installing appropriate facilities for administrative and maintenance functions

As is true of all units of the national park system, the management of the national battlefield is guided by numerous congressional acts, executive orders, and NPS policies. In addition to the actions of the alternatives in this draft plan, the National Park Service will strive to implement all these legislative, executive, and policy requirements in the national battlefield. The “Servicewide Laws and Policies” section in chapter 1 (p. 21) and Appendix C of this document identify the desired conditions that the National Park Service will work to attain regardless of the alternative that is selected and the types of actions that the National Park Service will take to achieve those desired conditions.

THE ALTERNATIVES

The planning team developed a “no-action” alternative and three “action”

alternatives, which represented different approaches to managing the national battlefield. The no-action alternative represents a baseline for comparison with the action alternatives. To design the alternatives, the National Park Service first conducted public scoping and then screened a larger number of alternatives, refining them on the basis of public input. Following the general definitions of the alternatives, the National Park Service identified management prescriptions that could be applicable to implementing each alternative.

The management prescriptions identify how various parts of the national battlefield would be managed. Each prescription is based on the desired visitor experiences and resource conditions and the kinds of activities or facilities that would achieve the desired conditions. The management prescriptions were then mapped (zoned) to specific areas of the national battlefield to define the details of the three action alternatives.

Five management zones / management prescriptions define all the desired visitor experiences and resource conditions that could occur under any of the alternatives. Each alternative describes a combination of several management prescriptions.

The guidelines of the Council on Environmental Quality for preparing environmental impact statements require that the preferred alternative be identified in the draft document unless the decision maker has no preference. The National Park Service has identified alternative 4 as the preferred approach

for the future management of Monocacy National Battlefield. This alternative would represent the best balance of improving resource protection while enhancing visitor opportunities in the national battlefield.

In alternative 1, the no-action alternative, the current management pattern would be continued into the future. Preserving and maintaining the national battlefield's cultural and natural resources to NPS standards would be emphasized, and most visitor services would be available at one location, the new visitor center.

Alternative 2 would involve moving the national battlefield's administrative and maintenance staff into leased space outside the boundary. Visitors would use an alternative transportation system to navigate the battlefield. All historic structures would be preserved and maintained, and the historic farmlands would be leased to retain their agricultural appearance.

The Thomas farmhouse would be leased out under the NPS historic leasing program. New trails would be constructed to enable visitors to reach the railroad junction from the visitor center and to visit the sites of the Union entrenchments and Maj. Gen. Lew Wallace's headquarters from Gambrill Mill. The maintenance facility at the Gambrill Mill would be removed and the site re-landscaped.

To improve sight distances for safe access and egress from the 14th New Jersey Monument, the entrance would be shifted south. A landscaped commemorative area would be created at the site of the Pennsylvania and

Vermont monuments as a location for any new memorials that might be added to the national battlefield in the future.

A new parking area would be constructed closer to the Worthington house to replace a temporary parking area now in use. The stone tenant house at the Thomas Farm would contain exhibits. There would be restrooms and parking at a nonhistoric outbuilding.

In **Alternative 3**, national battlefield administration would be moved into the Thomas House. The existing maintenance facility at Gambrill Mill would be expanded. Visitors would use their own vehicles to drive around the battlefield.

As in alternatives 1 and 2, all historic structures would be preserved and maintained, and the historic farmlands would continue to be leased to keep them agricultural. The first floors of the Best and Worthington farmhouses would contain exhibits supplementing those at the visitor center.

The parking area at the 14th New Jersey Monument would be removed and relocated across Maryland Highway 355. A landscaped commemorative area would be created at the site of the Pennsylvania and Vermont memorials, but no new memorials would be added anywhere in the national battlefield.

Alternative 4 (preferred) was developed through an evaluative process in which the most advantageous features of the other alternatives were incorporated into a new alternative. In alternative 4, as in alternative 3, national battlefield administration would be moved into the Thomas House. National battlefield

maintenance would continue to operate at the present location. Visitors would use their own vehicles to drive around the battlefield.

As in the other alternatives, all historic structures would be preserved and maintained in alternative 4, and the historic farmlands still would be leased to continue their use in agriculture. The outbuildings on the Best Farm would remain open. The Worthington House would be rehabilitated inside and be open with exhibits.

The entrance to the 14th New Jersey Monument would be shifted south to allow better sight distances. National battlefield maintenance would remain at its current location. An extension to the Gambrill Mill trail would enable visitors to walk to the railroad junction and on to the sites of the Union entrenchments and Wallace's headquarters.

A landscaped commemorative area would be created at the site of the Pennsylvania and Vermont monuments as a location for any new memorials that might be added to the national battlefield in the future. A new parking area would be created nearer to the Worthington House to replace the present temporary one.

The stone tenant house on the Thomas farm would contain exhibits and restrooms and parking would be available near a nonhistoric outbuilding on the farm.

The possibility of a deck spanning I-270 (as described on p. 84) is being evaluated in consultation with the Maryland Department of Transportation. If the deck proved feasible and if an agree-

ment could be worked out, such a deck would be a part of alternatives 2 and 4, with a road crossing I-270 in alternative 2 and a trail crossing the deck in alternative 4.

The approval of this plan does not guarantee that the funding and staffing needed to implement the plan will be forthcoming. The implementation of the approved plan will depend on future funding, and could also be affected by factors such as changes in NPS staffing, visitor use patterns, and unanticipated environmental changes. Full implementation could be many years in the future. Once the general management plan has been approved, additional feasibility studies and more detailed planning, environmental documentation, and consultations would be completed, as appropriate, before certain actions in the selected alternative could be carried out.

Future program and implementation plans, describing specific actions that managers intend to undertake and accomplish in the battlefield will tier from the desired conditions and long-term goals set forth in this general management plan.

ENVIRONMENTAL CONSEQUENCES

The affected environment of the national battlefield was described in terms of five impact topics — cultural resources, visitor use and interpretation, the socioeconomic environment, access and circulation, and NPS operations and facilities.

The environmental consequences that would result from each alternative were

determined by first identifying the regulations and policies applicable to each impact topic, then defining the methods that would be used to conduct the analysis. This included defining the terms identifying the intensity of effects for each impact topic (such as *minor* and *major*) and establishing the meaning of “long-term” and “short-term” effects.

Then the effects were analyzed both for the national battlefield and in a more regional context to determine the cumulative effects. Most analyses involved comparing conditions that would occur with changes in the management of the national battlefield (alternatives 2, 3, and 4, the action alternatives) to conditions as they would be if the current management practices continued (alternative 1, the no-action alternative).

Visitors’ use and experience of the resources would vary, depending on which structures contain supplemental exhibits, the availability of an alternative transportation system, and the development of trail access to features such as the railroad bridge and railroad junction or the Union entrenchments and the site of Maj. Gen. Wallace’s headquarters. Of the action alternatives, alternatives 3 and 4 would result in a moderate long-term beneficial effect on the visitor experience.

The analysis revealed that effects on the socioeconomic environment would be similar among the three action alternatives. Alternatives 2, 3, and 4 would result in both direct and indirect long-term negligible beneficial effects on the socioeconomic environment.

The effects on the national battlefield's access and circulation systems also would be similar for the three action alternatives. More visitation would result in a minor adverse impact on Maryland Highway 355 and a moderate adverse impact on Araby Church and Baker Valley roads. Establishing an alternative transportation system in alternative 2 could somewhat reduce the number of vehicles using these road systems, but the result would be negligible.

The long-term effects on national battlefield operations and facilities from the three action alternatives would be major and beneficial.

THE NEXT STEPS

After the distribution of the Draft General Management Plan / Environmental Impact Statement, there will be a 60-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 draft plan; the planning team will then incorporate appropriate changes in the Final General Management Plan / Environmental Impact Statement.

The final plan will include letters from governmental agencies, any substantive comments on the draft document, and NPS responses to those comments. Following distribution of the final plan and a 30-day no-action period, a record of decision approving the final plan will be signed by the NPS regional director. The record of decision documents the selection of an alternative for implementation. Once it is signed, the plan can be implemented.

SUMMARY

CONTENTS

Chapter 1: Introduction—Purpose of and Need for the Plan

<i>Why We Do General Management Planning</i>	3
Background	3
Brief Description of the National Battlefield	5
<i>Background and History of Monocacy National Battlefield</i>	7
Prehistory	7
Initial European Settlement and Early Growth, 1715–1860	7
The Civil War, 1861–1865	9
Postwar Recovery and Modernization, 1865–1951	12
Commemorative Efforts, 1889–Present	13
Access and Circulation	14
<i>Purpose, Need, and Implementation</i>	16
Purpose of the Plan	16
Need for the Plan	16
The Next Steps	17
Implementation of the Plan	17
Guidance for the Planning Effort	17
<i>Mandates, Laws, and Other Planning Efforts</i>	20
Special Mandates and Administrative Commitments	20
Servicewide Laws and Policies	21
Relationships of Other Planning Efforts to This <i>General Management Plan</i>	22
Planning Issues and Concerns	28
Issues and Concerns Not Addressed in This Plan	31

Chapter 2: Alternatives, Including the Preferred Alternative

<i>Introduction and Management Zoning</i>	35
Introduction	35
Management Zoning and Management Prescriptions	35
<i>Formulating Alternatives and Identifying Preferred Alternative</i>	39
Formulating the Alternatives	39
Brief Summary of Alternatives	39
Identifying the Preferred Alternative	40
<i>Actions Common to All Alternatives</i>	41
Introduction	41
Resource Management and Preservation	41
Interpretation and Education	46
Visitor Use and Facilities	47
National Battlefield Operations	48
Development of Cost Estimates	48
Land Acquisition	49
<i>Alternative 1, The No-Action Alternative (Continue Current Management)</i>	51
Introduction	51
Resource Management	51
Visitor Use and Experience	52
National Battlefield Operations	52
Costs	57
<i>Alternative 2</i>	58

CONTENTS

Introduction	58
Visitor Services Zone	59
Battlefield Preservation Zone	59
Commemorative Zone	60
Natural Resources Zone	60
Maintenance and Administration Zone	60
Costs	65
<i>Alternative 3</i>	67
Introduction	67
Visitor Services Zone	67
Battlefield Preservation Zone	68
Commemorative Zone	68
Natural Resources Zone	69
Maintenance and Administration Zone	69
Costs	69
<i>Alternative 4 (the Preferred Alternative)</i>	75
Introduction	75
Visitor Services Zone	75
Battlefield Preservation Zone	76
Commemorative Zone	77
Natural Resources Zone	77
Maintenance and Administration Zone	77
Costs	78
<i>Future Studies and Mitigating Measures</i>	85
Future Studies	85
Mitigating Measures	85
Carrying Capacity	88
<i>The Environmentally Preferable Alternative</i>	92
<i>Alternatives and Actions Considered but Rejected</i>	94
Commemorative Area at New Visitor Center Site	94
Commemorative Monuments In the Field	94
Re-creating Best Grove	94
Restoring Battlefield Structures	94
Continuous Trail Linking Battlefield Sites	94
<i>Comparison of Alternatives and Environmental Consequences</i>	97
<i>Cost Comparison</i>	105
Chapter 3: The Affected Environment	
<i>Introduction and Topics Eliminated from Analysis</i>	109
Introduction	109
Topics Eliminated from Further Analysis	109
<i>Impact Topics — Resources That Could Be Affected</i>	123
Introduction	123
Cultural Resources	124
Visitor Use and Interpretation	128
The Socioeconomic Environment	128
Transportation, Access, and Circulation	130
National Battlefield Operations	134
Chapter 4: Environmental Consequences	

<i>Introduction</i>	139
Environmental Analysis	139
Cumulative Impacts	139
Impairment of Resources	143
Methods and Assumptions for Assessing Effects	143
<i>Effects on Cultural Resources</i>	145
Methods for Assessing Effects — National Register and Section 106	145
Preservation Treatments	145
Effects on Historic Buildings and Other Structures	146
Effects on Cultural Landscapes	150
<i>Effects on Visitor Use and Experience</i>	157
Experiencing the Resources	157
Methods for Assessing Effects on the Visitor Experience	158
Effects from Alternative 1 (No Action)	158
Effects from Alternative 2	160
Effects from Alternative 3	163
Effects from Alternative 4 (Preferred Alternative)	165
<i>Effects on the Socioeconomic Environment</i>	168
Methods for Assessing Effects on the Socioeconomic Environment	168
Effects from Alternative 1 (No Action)	169
Effects from Alternative 2	170
Effects from Alternative 3	171
Effects from Alternative 4 (Preferred Alternative)	172
<i>Effects on Access and Circulation</i>	173
Methods for Assessing Effects on Access and Circulation	173
Effects from Alternative 1 (No Action)	173
Effects from Alternative 2	175
Effects from Alternative 3	176
Effects from Alternative 4 (Preferred Alternative)	178
<i>Effects on NPS Operations and Facilities</i>	180
Methods for Assessing Effects on NPS Operations and Facilities	180
Effects from Alternative 1 (No Action)	181
Effects from Alternative 2	181
Effects from Alternative 3	182
Effects from Alternative 4 (Preferred Alternative)	182
<i>Required Analyses</i>	184
Irreversible and Irretrievable Commitment of Resources	184
Relationships of Short-term Uses of the Environment and Long-term Productivity	184
Energy Requirements and Conservation Potential	184

Chapter 5: Consultation and Coordination

<i>Public and Agency Involvement</i>	189
Introduction	189
Public Meetings and Newsletters	189
Consultation with Organizations and with Other Agencies and Officials	191
Agencies, Organizations, and Individuals that Received a Copy of This Document	192

Appendixes / References / Preparers

<i>Appendix A: Legislation —Monocacy National Battlefield</i>	197
---	-----

CONTENTS

<i>Appendix B: Federal Laws, Regulations, and Policies</i>	203
<i>Appendix C: Servicewide Laws and Policies</i>	210
<i>Appendix D: Completed Studies and Future Studies Needed</i>	230
<i>Appendix E: Requirements for Compliance with Section 106 of the National Historic Preservation Act</i>	237
<i>Appendix F: Information about Threatened or Endangered Species</i>	239
<i>References</i>	246
<i>Preparers and Consultants</i>	251
<i>Index</i>	253

Maps

Current Ownership	53
Alternative 1, No-Action (Continue Current Management)	55
Management Zones, Alternative 2	61
Alternative 2	63
Management Zones, Alternative 3	71
Alternative 3	73
Management Zones, Alternative 4 (Preferred Alternative)	79
Preferred Alternative, Alternative 4	81

Tables

Table 1: Carrying Capacity Indicators and Standards	90
Table 2: Comparison of Alternatives	97
Table 3: Comparison of Environmental Consequences	101
Table 4: Comparison of Estimated Costs for Implementing the Alternatives	105
Table 5: Monocacy National Battlefield Annual Visitation, 1991–2003	173
Table 6: Monocacy National Battlefield Visitation by Month, 2003	174

CHAPTER 1:

**INTRODUCTION-
PURPOSE OF
AND NEED FOR
THE PLAN**

(blank back of divider)

WHY WE DO GENERAL MANAGEMENT PLANNING

BACKGROUND

The National Parks and Recreation Act of 1978 and the NPS *Management Policies 2006* require each unit of the National Park Service (NPS) to develop a general management plan (GMP).

The purpose of a general management plan is to ensure that a park unit (in this case, Monocacy National Battlefield) has a clearly defined direction for resource preservation and visitor use. This enables the unit to achieve the National Park Service's mandate to preserve resources unimpaired for the enjoyment of future generations. In addition, general management planning makes the National Park Service more effective, collaborative, and accountable by

- achieving a balance between continuity and adaptability in decision making — defining the desired conditions to be achieved and maintained in the national battlefield will provide a touchstone that allows managers and staff to constantly adapt their actions to changing situations while staying focused on what is most important about the national battlefield.
- analyzing the national battlefield in relation to its surrounding ecosystem, cultural setting, and community will help managers and staff understand how the national battlefield 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.

- giving everyone who has a stake in decisions affecting the national battlefield an opportunity to be involved in the planning process and to understand the decisions that are made. National parks are often the focus of intense public interest. Public involvement throughout the planning process provides focused opportunities for the managers and staff to interact with the public and learn about public concerns, expectations, and values. Public involvement also provides opportunities for the managers and staff to share information about the national battlefield's purpose and significance, as well as opportunities and constraints for the management of its lands.

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

The national battlefield superintendent and staff are called upon daily to make decisions that affect how visitors view Monocacy National Battlefield. Such things as how resources are interpreted, how the landscape and historic structures are preserved, and how facilities are maintained are critical to the future of the national battlefield.

This Draft General Management Plan / Environmental Impact Statement for

Monocacy National Battlefield includes a description of the national battlefield's vision for preserving the nationally significant battlefield that still evokes the aura of the Civil War period. A plan is outlined for developing visitor facilities and the interpretive messages and stories to be expanded upon are described. The plan would enhance the visitor experience through programs and visitor amenities such as trails. The plan does not provide specific and detailed answers to every issue or question facing the national battlefield. However, the plan does offer a framework for proactive decision making that will guide national battlefield managers in making effective choices.

Monocacy never has had a general management plan or the precursor master plan. Before land acquisition began, an "Assessment of Alternatives" document was assembled to provide some guidance for initial management decision making. Now, with land acquisition essentially completed, this *General Management Plan* will supply the guidance necessary to take the national battlefield well into the next decade. For this relatively new area, many decisions must be made about resource preservation, locating facilities, circulation, and staff needs, most for the first time. A new plan is essential to guide the management of the national battlefield in the 21st century and to ensure the preservation of this nationally significant battlefield while presenting opportunities for visitors to have a high-quality experience.

Although the battlefield is surprisingly intact with structures, fence rows, and

road systems reflecting the Civil War period, the surrounding area is undergoing major change. Housing developments and industrial and commercial development are occurring on all sides. Because this area is a part of the expanding Baltimore–Washington, D.C., metropolitan area, it is not likely that the pace of growth will abate in the future.

The major threat to the integrity of the battlefield comes from traffic growth. This growth affects visitor safety and circulation, increases the pressure to widen roads, and causes noise and air pollution. Another threat comes from development around the boundary, which affects national battlefield viewsheds, increases runoff into the Monocacy River and other streams, and decreases biodiversity. These threats are regionwide concerns that cannot be solved solely within this plan. However, the plan can identify the concerns and suggest ways to decrease the impacts.

In the process of developing this *General Management Plan*, the planning team examined many different approaches to national battlefield use, management, and development. These were narrowed to a "no action" alternative (Alternative 1, continuation of the present management course) and three additional alternatives, each of which would allow the national battlefield to achieve its mission and mission goals. Alternative 4 has been identified as the National Park Service's preferred future direction.

To help the public and the National Park Service understand what would happen if an alternative was adopted, the impacts of each alternative on the

natural and cultural environment are described and compared. These descriptions are contained in the *Environmental Impact Statement* part of the plan, which satisfies the requirements of the National Environmental Policy Act of 1969, as amended (NEPA), and the National Historic Preservation Act of 1966, as amended. After having described a full range of alternatives, the National Park Service, in consultation with the public, will select the alternative or combination of alternatives to be implemented.

General management plans are intended to be long-term documents that establish and articulate a management philosophy and framework for decision making and problem solving in units of the national park system. Such plans usually provide guidance during a 15- to 20-year period.

Actions directed by general management plans or by subsequent implementation plans are accomplished over time. Budget restrictions, the need for more data or regulatory compliance, and competing national park system priorities prevent the immediate execution of many actions. Major or especially costly actions could be completed 10 or more years into the future. Some actions may never be funded.

BRIEF DESCRIPTION OF THE NATIONAL BATTLEFIELD

Monocacy National Battlefield lies in Frederick County, Maryland in the heavily populated Baltimore–Washington metropolitan area. The national battlefield lies in an unincor-

porated area approximately 3 miles south of the center of Frederick, the largest city in Frederick County and the second largest city in Maryland. Although this area of the county is rapidly building up, the national battlefield is remarkably free of intrusive elements. Only the modern Interstate Highway 270 (I-270) intrudes on the historic landscape, essentially bisecting the battlefield.

Within the national battlefield's boundaries are 1,647 acres, encompassing most of the lands upon which the Battle of Monocacy was fought. Six properties or farmsteads that existed during the battle are still extant within the national battlefield and retain essentially their Civil War era landscape appearance. Surrounding agricultural fields retain the feel of the Civil War era landscape, with few changes to field configurations and fence rows. Crops have gradually changed over the years from small grains to hay and corn, but the overall agricultural environment remains remarkably intact. Forested areas include Brooks Hill and lands along the Monocacy River and Bush Creek. These form an exceptional buffer from development outside the boundaries.

Approximately 2 miles of the Monocacy River runs through the national battlefield. The CSX Railroad (Baltimore & Ohio during the Civil War) also extends through the national battlefield, paralleling the Monocacy River and Bush Creek. Historic Urbana Pike (Maryland Highway 355) runs north–south through the eastern part of the national battlefield.

Urbana Pike also is the main access for visitors to the battlefield. This highway, which has four lanes on the north side of the national battlefield, is heavily used by commuters, residents, business vehicles, and trucks. In the national battlefield, the highway is two lanes with paved shoulders on the north side of the Monocacy River, and on the south side of the river it is two lanes with narrow, unpaved shoulders. South of the national battlefield it remains two lanes with narrow, unpaved shoulders. Urbana Pike provides much of the access to important features, and the heavy volumes and high speeds of commuter traffic and commercial

vehicles create a safety problem and encroach upon the visitor experience.

A small visitor contact station was opened on the site in 1991. It has been replaced by a new visitor center completed in 2007. Much of the national battlefield has remained closed to visitors as historic features were rehabilitated or restored. As a result, visitation figures (about 14,700 in 2003) reflect the low level of knowledge in the community and the nation that Monocacy National Battlefield exists or is open. With land acquisition nearly complete, opening of more of the national battlefield to visitation probably will increase visitation considerably.

BACKGROUND AND HISTORY OF MONOCACY NATIONAL BATTLEFIELD

PREHISTORY

Native Americans have been present in the Monocacy National Battlefield area since the earliest human occupation of North America. Although a complete archeological survey of the battlefield has not been undertaken, surveys of Frederick County have shown that the Monocacy Valley experienced intensive Native American settlement, particularly along the Monocacy River (Kavanaugh 1982). It is likely that the prehistoric occupations on the battlefield's component properties reflect this pattern. Native American occupations spanning over 10,000 years and ranging from Early Archaic to late Woodland period short-term base camps and lithic scatters have been documented at the Best, Thomas, and Worthington farms (Beasley 2003, 2004; Little 1994, 61).

INITIAL EUROPEAN SETTLEMENT AND EARLY GROWTH, 1715–1860

European explorers and traders may have arrived in the Maryland Piedmont region as early as 1715 (Scharf 1882, 58). The earliest land surveys in Frederick County were made in the 1720s; they are generally characterized by land speculation ventures that were subdivided and leased or sold to tenants (NPS 2000, 2.3; Paula S. Reed & Assoc., Inc. 1999, 11). Increasing competition for available land and economic opportunities in southern Maryland and the Eastern Shore area facilitated the westward movement of English settlers, many of whom brought enslaved laborers with them into the Monocacy region. Pennsylvania Germans from

Philadelphia and southeastern Pennsylvania also migrated into Frederick County.

Two distinct agricultural systems had developed in the Monocacy region by the mid-18th century, arising out of the predominantly English and German migrations into the area. German settlers generally farmed smaller tracts of land, cultivating corn and wheat and other subsistence crops (Paula S. Reed & Assoc., Inc. 1999, 11; Tracey and Dern 1987, 131). Conversely, British settlers initially sought to replicate the tobacco and slave economy of the tidewater area; however, climate differences and market fluctuations eventually precipitated greater reliance on commercial grain cultivation in the Monocacy area, even among slaveholders (Paula S. Reed & Assoc., Inc. 1999, 11, 14).

The onset of the French and Indian War in 1756 deferred western expansion substantially, although some land speculation and settlement continued to occur in the Monocacy area. In 1759, for example, a Scottish merchant named James Marshall began acquiring large amounts of land along the western bank of the Monocacy River. In 1793, Marshall patented an additional 881 acres on the eastern bank of the Monocacy; in fact, much of the present-day Monocacy National Battlefield encompasses lands that originally were owned by James Marshall. Marshall also is credited with having constructed the large ca. 1780 brick manor house on the Thomas Farm.

Marshall engaged in extensive land speculation and development in the Monocacy area. In 1798 he sold 291 acres of land on the west side of the Monocacy River to Victoire Vincendière, a French planter who came to Frederick County with her family in 1793 from the Caribbean colony of Saint-Domingue. The Vincendière family assembled a 748-acre plantation known as L'Hermitage, and also owned as many as 90 slaves. The Best Farm comprises the southern 274 acres of L'Hermitage plantation, and the Vincendière family built several structures on the property that are still extant, including the main house, a smaller secondary dwelling, and a stone barn.

By the close of the 18th century, Frederick was a bustling agricultural community, and it also exhibited significant industrial development. Increased population fueled agricultural expansion; in fact, by 1790, Frederick County was the largest wheat producer in the United States and also supported the cultivation of flax, corn, orchard fruit, rye, oats, potatoes, and hay. Industry expanded as well. Taking advantage of the abundant water power in Frederick County, a number of flour mills processed grain into more easily transportable and marketable flour or meal. Other important industries developed in the Monocacy area during the 18th and early 19th centuries, including sawmills, iron furnaces, and glass production.

As population, commerce, and agricultural output expanded in Frederick County, the development of trans-

portation systems became increasingly important. For example, in the 18th century a number of river crossings were established at low places on the banks of the Monocacy River. One such ferry, Middle Ford ferry, crossed the Monocacy River within the battlefield boundaries a short distance downstream of the current MD 355 highway bridge (HABS MD-10S 1199 1, 15–16). A ferry operated at this location as early as 1749, and the ferry landing remained a prominent landscape feature well into the 19th and 20th centuries. In fact, its location is still reflected in recent property boundaries (Varle 1808; Paula S. Reed & Assoc., Inc. 1999, 72; Monocacy NB Tract Map 1995).

The need to transport goods between western Maryland and the port towns of Georgetown, Baltimore, and Annapolis, as well as the absence of navigable inland water routes, led to the development of a regional road system, including the Georgetown Pike (present-day MD 355), which was chartered by the state of Maryland in 1805. Known at various times as the Washington Pike or the Urbana Pike, the Georgetown Pike followed the alignment of an earlier road and intersected with the Buckeystown Pike just south of Frederick (Griffith 1794). A wooden bridge carrying the Georgetown Pike over the Monocacy River was constructed sometime in the first half of the 19th century, rendering the Middle Ford ferry obsolete.

More transportation improvements came in 1828, when construction began on America's first railroad, the Baltimore & Ohio (B&O). The B&O

Railroad reached the Monocacy area in 1830, and in 1831 a spur line to Frederick was completed (Scharf 1882, 44; Whitmore 1981, 38). The intersection of the main and spur lines formed a triangular-shaped junction that remains in place today within the national battlefield boundaries. It was known at different times as the Frederick, Araby, or Monocacy Junction. A wooden bridge originally carried the B&O Railroad over the Monocacy River, but it was replaced by a cast-iron bridge in the 1850s (NPS 2000, 2.10). Still an active segment of the CSX Railroad, the current truss bridge rests on the original abutments and stone piers of these earlier bridges (Bearss 1978, 91–92).

Beginning in 1812, Col. John McPherson, Sr., an entrepreneur, bought 415 acres of land on the west side of the Monocacy River from James Marshall's heirs. Over the next two decades, Col. McPherson and his son John began to assemble the various land tracts that composed a 1,111-acre property known as Araby. These land parcels were tied to the crossroads created by the passage of the Georgetown Pike over the Monocacy River and encompassed land that was eventually subdivided to form the Thomas, Lewis, Worthington, and Baker farms, as well as the Gambrill Mill property.

On the east side of the Monocacy River, Victoire Vincendière sold L'Hermitage in 1827. The property eventually was acquired by the Trail family and subdivided into northern and southern parcels. The South Hermitage parcel encompassed the property that eventually became known as the Best

Farm, after the tenant family that was living there at the time of the Battle of Monocacy. Thus, by 1860, as a result of the sale and subdivision of James Marshall's and Victoire Vincendière's lands, the properties that would one day make up Monocacy National Battlefield were essentially in the form that remains recognizable today.

THE CIVIL WAR, 1861–1865

By the mid-19th century, Frederick, Maryland, was a prosperous community. Major highways leading to Washington and Baltimore converged there, and the B&O Railroad passed nearby. This transportation corridor not only contributed to the development of the area, but it also became a target for Union and Confederate armies throughout the Civil War because it facilitated movement of troops and supplies. The six farms that compose Monocacy National Battlefield were directly affected by these actions.

In 1862, Union and Confederate armies used the Georgetown Pike as a major route for troop movement. To protect the junction, the B&O Railroad authorized the construction of two blockhouses: one south of the railroad tracks near the turnpike bridge and one north of the railroad, just east of the river. Soldiers from the 14th New Jersey Regiment established an encampment nearby on the north side of the railroad tracks. Camp Hooker, as it became known, housed between 800 and 1,000 soldiers. It consisted of quarters for field and line officers, tents for enlisted men, ten cookhouses, two guardhouses, a commissary, and a stable. A sketch map

of the camp also indicates the locations of a hospital, a bakery, and a storehouse.

Although no aboveground evidence remains, the footprint of Camp Hooker has been identified archeologically. Soldiers from that encampment also constructed earthworks on the high ground north and east of the railroad, above the junction. These consisted of a gun battery, rifle pits, and a powder magazine, the remains of which are still extant in the national battlefield's Civil War defenses area.

During the September 1862 Maryland Campaign, which culminated in the Battle of Antietam, Confederate Gen. Robert E. Lee and his forces camped on the Best Farm. It was there that Lee wrote Special Order 191, which detailed his plans to divide his army and capture Harpers Ferry. A few days later, Union troops set up camp in the area previously occupied by their counterparts and discovered a lost copy of the special order. The plans were soon revealed to Union Gen. George B. McClellan, who hastened his pace to encounter the Confederates at nearby South Mountain and Antietam.

As Union troops moved through the area in late June 1863, before the Battle of Gettysburg, Gen. Winfield Scott Hancock made the Thomas House his headquarters for three days. Once again, the Best Farm was a site for soldier encampments.

In 1864, the farms surrounding Monocacy Junction became the focal point in a delaying action that would later become known as “the battle that saved Washington.” When judged by its consequences, rather than its size, the

Battle of Monocacy ranks among the important battles of the Civil War. On July 9, 15,000 Confederate forces under the command of Lt. Gen. Jubal Early clashed with 5,800 Union forces under Maj. Gen. Lew Wallace.

Jubal Early's invasion in the summer of 1864 was the third and final time the South tried to bring the war into the North. The opportunity arose when Lt. Gen. Ulysses S. Grant moved most of the Union troops defending the nation's capital to Petersburg, Virginia. Seizing the opportunity, General Lee devised a bold and daring invasion with four objectives: first, to clear the lower Shenandoah Valley of Union Forces; second, to divert Union forces away from Lee's army at Petersburg, Virginia; third, to threaten Washington, D.C., or possibly to capture it in an attempt to deal a death blow to the sagging Union support; and fourth, to reduce the chances of reelection for President Abraham Lincoln.

On June 13, Jubal Early moved west from Petersburg. Union Gen. David Hunter retreated into West Virginia after he was defeated in battle at both Lynchburg and Lexington, Virginia. The path through the Shenandoah Valley to Washington was virtually undefended. After reorganizing his army at Staunton, Virginia, and preparing it for a fast march, Early proceeded north, arriving at Harper's Ferry on the Fourth of July.

Agents along the B&O Railroad had been tracking Early's army and reporting to the railroad president, John Garrett, in Baltimore. Garrett notified Secretary of War Edwin Stanton, in Washington, many times of the

developing emergency. Grant responded that Early was in front of him at Petersburg, Virginia, and that no large force was moving in the valley.

By July 3 Garrett, frustrated by the slow response from the administration in Washington and from Grant, turned to Lew Wallace, Commander of the 8th Army Corps and the Middle Military Department. Acting on his own accord, Wallace gathered all available forces, approximately 2,800 mostly new recruits and 100-days men. They proceeded west to Monocacy Junction to prepare for a possible engagement with Confederate forces.

Part of Wallace's force, under the command of Gen. Erastus Tyler, was sent north to Jug Bridge along the National Pike. Tyler's orders were to hold the approach across the Monocacy River. The rest of the command was concentrated at Monocacy Junction.

Late on July 5, after several Confederate deserters reported that Early was on the move, Grant realized something was wrong. Although he was not convinced of the severity of the situation, he ordered the 3rd Division of the 6th Army Corps under the command of Brig. Gen. James Ricketts to move north.

On July 7 and 8, in the mountain passes and on the outskirts of Frederick, Wallace's troops skirmished heavily with the advancing Confederate forces. Wallace had three objectives: first, to make the Confederates disclose their strength; second, to make them disclose their objective (Washington, D.C., or Baltimore); and third, if they were going to Washington, as he suspected, to delay them long enough to enable reinforce-

ments to reach the defenses of the nation's capital.

Wallace received welcome assistance when Ricketts's veteran division arrived by train on July 8. Upon learning of the impending situation Ricketts put himself and his troops at Wallace's disposal. The veterans were placed along the road to Washington, where it was suspected that the main attack would come.

On the morning of July 9, Confederate Gen. Stephen Ramseur's division encountered Union forces on the Georgetown Pike at Monocacy Junction. Realizing that a direct frontal assault across the Monocacy River at the junction would be too costly, Early sent Gen. John McCausland and his cavalry to find an alternate crossing so that they could outflank the Union line.

McCausland's troops crossed the river at the Worthington-McKinney Ford, a mile downstream from Monocacy Junction, and encountered Ricketts's veteran division, which had repositioned to the left to meet the new assault. When they clashed at a fence separating the Worthington and Thomas farms, the Confederate cavalry was driven back. The Confederates regrouped, and around 2:30 p.m. they attempted to flank the left of the Union line. This time they succeeded in pushing the Union soldiers from the Thomas House. However, Union forces counterattacked and drove the Confederates from the field of battle.

As the Confederate second attack was taking place, Maj. Gen. John Gordon was ordered to cross the river with his infantry division and form up. He initiated a three-pronged attack along

the entire Union line with Brigadier Generals Terry, York, and Evans. Some of the heaviest fighting of the day occurred in this part of the battle. At roughly 4:30 p.m., Wallace's troops were pushed back and forced to retreat toward Baltimore, leaving behind roughly 1,300 men killed, wounded, and missing. Although beaten militarily, they had succeeded in holding their position all day against superior numbers. The Confederates spent the night on the field of battle before resuming their march to Washington. The battle cost the Confederates a day in time and about 900 men killed, wounded, and missing.

By the time Jubal Early's forces reached Washington on July 11, reinforcements from Petersburg had begun to arrive in the capital. However, they were exhausted from their long march and could not make a concerted attack until the following day. Although sporadic fighting took place in the Fort Stevens area throughout July 12, Early realized the futility of his plan and turned away from Washington.

One month after the Confederate victory at Monocacy, Grant designed a Union campaign to bring total destruction upon the Shenandoah Valley, end the war by any means necessary, and gradually force the Confederates back to Petersburg. The plan was revealed at a "council of war" between Union Generals Grant, Sheridan, Hunter, Crook, Ricketts, and others in one of the upper rooms of the Thomas House. The resulting Shenandoah Valley Campaign was devastating to Lee's Army and

would contribute to his decision to surrender in April 1865.

POSTWAR RECOVERY AND MODERNIZATION, 1865–1951

In the years that followed the Civil War, Frederick County quickly regained its agricultural prosperity. This resulted from its transportation arteries and high-quality farmland (Whitmore 1981, 62). Corn and wheat production remained high, and the production of dairy goods, fruit, and vegetables increased. In fact, the income from dairying significantly outdistanced the income from wheat production by the third decade of the 20th century (Grisby and Hoffsommer 1949, 12; Paula S. Reed & Assoc., Inc. 1999, 30, 38; Wesler et al. 1981, 144).

Agricultural production thrived, but industrial expansion did not increase as quickly after the Civil War, although existing industries continued to operate and prosper. James Gambrill's Araby Mill operation, for example, expanded in the 1870s. The expansion made it one of Frederick County's top three flour producers. Eventually, however, as large-scale milling operations began in the midwestern United States, production decreased at Araby Mills, and Gambrill was forced to sell the mill property in 1897 (Paula S. Reed & Assoc., Inc. 1999, 31).

Mechanization increased at the beginning of the 20th century, leading to a reduction in the need for manual labor. Rural populations began to decline as county residents moved to nearby cities in search of work (Whitmore 1981, 63). The closure of foreign markets during

World War I and the rising cost of agricultural mechanization forced many area farmers out of business, but the county's agricultural output remained high even during the Depression (Wesler et al. 1981, 144). Nevertheless, Frederick County's lack of industry led to a slow recovery from the Great Depression (Whitmore 1981, 100).

The transportation system that influenced development of the Monocacy area in the 19th century continued to be important in the 20th century. Although the railroad remained essential for delivering goods to markets, the introduction and increased use of automobiles led to significant improvements in public roads. In the 1920s the county realigned the Georgetown Pike to eliminate a sharp turn near the entrance to Araby Mills. This created a new, more streamlined segment that ran north-south across the west corner of the Gambrill property. The original segment of the Pike was renamed Araby Church Road.

A significant change in the Monocacy landscape occurred in 1951 with the construction of Highway 240, now known as Interstate 270. The four-lane highway bisected the heart of the battlefield, causing significant alterations to the landscape. Property boundaries were reconfigured, new access roads were built to replace blocked historic lanes, and all connection between the Worthington and Thomas farms was lost. In sum, the highway cut the battlefield landscape virtually in two, destroying the integrity of the setting of the final phase of the battle. The completion of the interstate highway

also encouraged additional suburban growth in the region, as it became the primary north-south commuting route between Washington and Frederick. The Georgetown Pike, which had been renamed Maryland Route 355 by 1937, ceased to serve as the primary road between Washington, D.C., and Frederick.

COMMEMORATIVE EFFORTS, 1889-PRESENT

Organized commemoration of the Battle of Monocacy began in 1889, when veterans formed a national association to coincide with the 25th anniversary of the battle. In 1897 an advertisement placed by James Gambrill for the sale of the Gambrill House emphasized the "magnificent view of the historic field of the Battle of Monocacy," suggesting that by the end of the century the local community perceived a distinct landscape called the "Monocacy Battlefield" (HABS MD-IOS 1 1991, 13).

More reunions of veterans took place over the years, but the first monument was not erected until 1907, when the state of New Jersey put up a statue on the Best Farm to honor the 14th New Jersey Regiment (Cooling 1997, 236). By 1915, three more monuments had been placed, including the State of Pennsylvania Monument (1908) on the east side of the original Georgetown Pike near the Thomas Farm entry lane; the Confederate Monument (1914), erected by the United Daughters of the Confederacy on the west side of the Georgetown Pike at the northern end of the Best Farm; and the State of Vermont Monument (1915) at the corner of the old Georgetown Pike (now Araby

Church Road) and Baker Valley Road, at the southeast corner of the Thomas Farm (NPS 2000, 2.31–32).

Interest in creating a national battlefield at the site began with the formation of the Monocacy Battle Field Memorial Association by a group of prominent Frederick County citizens. In 1928, the association lobbied Congress for legislation to make the Monocacy Battlefield a national battlefield. The proposed plan for the development of Monocacy Battlefield called for roads that would allow access to important areas of the battlefield. Two more monuments were included in the proposal; one on the Thomas Farm and a Confederate monument to be placed on the Worthington Farm. Establishing a national battlefield was proposed not only to preserve it as a historic site, but also to serve as a picturesque riverside public park.

Congress passed legislation on June 21, 1934, creating Monocacy National Military Park. However, no funds were set aside for the purchase of land, and anticipated land donations did not materialize. In the years immediately after the establishment of Monocacy National Military Park, the National Park Service conducted several field investigations of the area (Thompson 1937). These investigations resulted in the creation of a land acquisition plan, which included a proposal to construct a road that would allow visitors to tour the battlefield site. However, the proposal never was accomplished because Congress again did not appropriate any funds.

In 1964 the Maryland Civil War Centennial Commission placed a marker popularly known as the Maryland Monument on the Best Farm to commemorate the 100th anniversary of the Battle of Monocacy. As development and urbanization continued to increase, a group of concerned citizens met with local politicians and NPS representatives in 1971 to discuss concerns about preserving the battlefield site. They initiated a campaign to give the National Park Service the authority to establish the boundary of the national battlefield and initiate land acquisitions.

Soon thereafter, the National Park Service and local elected officials began working to designate Monocacy Battlefield as a national historic landmark. It received this designation in late 1973, and on February 4, 1975, Monocacy National Battlefield was officially placed on the National Register of Historic Places (National Register nomination 1975; Antietam Administrative History 1979, 1).

By the 1980s, the National Park Service began acquiring and protecting Monocacy National Battlefield lands through fee simple purchases and scenic easements. A small visitor contact station was opened in 1991, and now the National Park Service owns all six of the Battlefield's component properties. A superintendency for the battlefield was established in 2003.

ACCESS AND CIRCULATION

Monocacy National Battlefield can be reached from Interstates 70 and 270, from U.S. Highway 15/340, and from Maryland Highways 85 and 355. From I-

70, visitors can exit onto southbound MD 355 and drive about 2 miles to the northern boundary of the national battlefield. Visitors approaching from I-270 must exit onto eastbound I-70 and then onto southbound MD 355. From eastbound U.S. 15/340, one must exit onto eastbound I-70, going south onto Maryland 355. A person coming from MD 85 can drive north to the intersection with MD 355, and then turn right onto MD 355 southbound. The national battlefield is approximately 1 1/2 miles south of the interchange of I-70 and MD 355. The visitor center lies just inside the north national battlefield boundary.

Visitors to Monocacy National Battlefield can begin at the new visitor center,

where they receive directions to each feature of the battlefield. The tour road follows the existing MD 355, Araby Church Road, and Baker Valley Road, all paved two-lane roads.

There are two trails in the national battlefield. A trail about 0.5 mile long runs from the Gambrill Mill along the Monocacy River, where one can see key battlefield features. A second trail system on the Worthington farm gives access to the battlefield and natural areas. It consists of two loops, one up Brooks Hill and one along the Monocacy River.

PURPOSE, NEED, AND IMPLEMENTATION

PURPOSE OF THE PLAN

The purpose of this *Draft General Management Plan / Environmental Impact Statement* is to guide the decision making and problem solving related to resource protection and the visitor experience at Monocacy National Battlefield. The plan, which will set forth strong direction concerning the desired future conditions to be achieved at Monocacy National Battlefield, will be the primary document for managing the national battlefield for the next 15 to 20 years. The approved plan will provide a framework for proactive decision-making, including decisions about visitor use and the management of natural and cultural resources and development. That framework will allow managers to address future opportunities and problems effectively.

This plan will prescribe the resource conditions and visitor experiences that are to be achieved and maintained in the national battlefield over time.

Management decisions must be made when laws, policies, and regulations do not provide clear guidance or when limitations must be based on the national battlefield's purpose, public input and desires, resource analysis, and the evaluation of environmental consequences and costs.

NEED FOR THE PLAN

This plan for Monocacy National Battlefield is needed because the last comprehensive planning effort for the national battlefield was completed in the late 1970s, before land acquisition. That

effort was largely designed to plan for the opening of the national battlefield and the purchase of property, as well as to identify staff needs and to develop an interim visitor facility. Since then, the national battlefield has acquired an interest, either in fee or scenic easement, in nearly all the properties within the boundary. Thus, this is an appropriate time to determine how the battlefield should be managed and to what degree it should be opened to the public. There are major implications for how visitors can access the national battlefield and circulate within it, the facilities needed to support those uses, the way resources are managed, and how the National Park Service manages its operations.

Since the 1970s the population of Frederick County has grown significantly. This has led to the development of commercial property along the north and northwest boundary and extensive residential development to the south, in Urbana. This growth outside the national battlefield has resulted in visual impacts as modern development has intruded on the historic views of the battlefield. Increased commuter and commercial traffic through the battlefield, with its attendant noise and safety concerns, has affected the battlefield's ambiance. There has been pressure to allow more utility and road corridors through battlefield lands; vegetation has been affected by the introduction of exotic species; and open space, habitats, and corridors for wildlife have been lost. All these influences have placed more pressure on existing battlefield resources.

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

THE NEXT STEPS

After this *Draft General Management Plan / Environmental Impact Statement* is distributed, there will be a 60-day public review and comment period. Then the NPS planning team will evaluate the comments it has received from organizations, businesses, individuals, and other federal agencies. Appropriate changes will be incorporated into a *Final General Management Plan / Environmental Impact Statement*. The final plan will include letters from governmental agencies, any substantive comments on the draft document, and the responses of the National Park Service to those comments. The distribution of the final plan will be followed by a 30-day no-action period. Then a record of decision approving a final plan will be signed by the NPS regional director. The record of decision documents the NPS selection of an alternative for implementation. With the signing of the record of decision, the plan can then be implemented.

IMPLEMENTATION OF THE PLAN

As was described previously, the purpose of a general management plan is to provide an overall vision for decision-making. Implementing the approved plan for Monocacy National Battlefield will depend on future funding. The approval of a plan does not guarantee

that the funding and staffing needed to implement the plan will be forthcoming. Full implementation of the approved plan could be many years in the future.

A general management plan does not describe how particular programs or projects should be prioritized or carried out. Those decisions will be addressed during the more detailed planning associated with program plans (e.g., resource stewardship plans), strategic plans, and implementation plans. Carrying out the approved plan also will depend on the completion of additional feasibility studies and more detailed planning and environmental documentation related to the major actions proposed.

GUIDANCE FOR THE PLANNING EFFORT

Purpose

The *purpose* for a unit of the National Park Service is the reason for which it was set aside and preserved by Congress. The purpose statement, which is based on interpretation of the unit's authorizing legislation, supplies the fundamental criteria against which the appropriateness of all planning recommendations, operational decisions, and actions are evaluated. (The authorizing legislation for the national battlefield is reproduced in appendix A.) The purpose of Monocacy National Battlefield is as follows:

- to preserve the breastworks, earthworks, walls, and other defenses and shelters used by the Confederate and Union armies on July 9, 1864, as well as the buildings, roads and outlines of the battlefield

- to commemorate the Battle of Monocacy
- to provide opportunities for visitors to understand and appreciate the significance of the Battle of Monocacy within the full context of the Civil War and American history

Significance

Significance statements define what makes the national battlefield important enough to our cultural heritage to warrant designation as a unit of the national park system. Statements of significance are a tool for setting resource protection priorities and for identifying interpretive themes and appropriate visitor experiences. They help focus efforts and funding on the resources and experiences that matter most. Monocacy National Battlefield is nationally significant as the site of the following:

- The July 9, 1864, battle where a small Union army successfully delayed a larger Confederate army’s advance on Washington, D.C., thereby providing sufficient time for Gen. Ulysses S. Grant to send federal reinforcements to the U.S. capital and prevent its capture. This Confederate campaign, its third and final attempt to bring the war to the North, also was designed to divert pressure from Gen. Robert E. Lee’s besieged army at Petersburg, Virginia, and to lessen President Abraham Lincoln’s chances for reelection.
- Other important events associated with the Civil War, including the 1862 Maryland Campaign and

finding of Gen. Robert E. Lee’s Special Order 191 outlining his plan of attack, the 1863 Gettysburg Campaign, and the August 1864 meeting of Generals Grant and Sheridan at the Thomas House to plan the Shenandoah Valley Campaign.

- A national battlefield where visitors can experience a historic landscape, structures, and transportation corridors that have changed little since the Battle of Monocacy. As a result, it offers many opportunities for understanding the evolution of settlement in the region and the Civil War within the broader context of American history.

Primary Interpretive Themes

Interpretive themes define the primary interpretive messages or stories that will be emphasized at Monocacy National Battlefield through exhibits, interpretive talks, brochures, and publications. The themes will help visitors to understand the battle of July 9, 1864. The national battlefield will use the following seven themes as the foundation of its interpretive program:

- The defeat of federal forces at the Battle of Monocacy prevented a successful attack on the U.S. capital by the Army of Northern Virginia during its third and last offensive in the North.
- By virtue of its crossroads location, Monocacy Junction was the site of many important events during the Civil War.
- The Monocacy battlefield landscape is rich with historical and geographic

- elements relative to the events and issues of the Civil War in Maryland.
- The Battle of Monocacy, fought in a border state, revealed the divided loyalties of Maryland citizens during the Civil War.
 - Confederate Gen. Jubal Early's tactical success at Monocacy ironically resulted in a strategic loss by failing to capture the U.S. capital and by enhancing President Lincoln's popularity, which had been declining, shortly before the presidential election.
 - After the Confederate victory at Monocacy, a Union campaign was initiated to bring total destruction upon the Shenandoah Valley, end the war by any means necessary, and gradually force the Confederates back to Petersburg.
 - Monocacy National Battlefield, initially commemorated by Civil War veterans in the early 1900s, serves as a focal point for memorializing those who fought in the battle of July 9, 1864.

MANDATES, LAWS, AND OTHER PLANNING EFFORTS

SPECIAL MANDATES AND ADMINISTRATIVE COMMITMENTS

Special mandates and administrative commitments refer to park-specific requirements or those that affect several park units. These formal agreements often are established concurrently with the creation of a unit of the national park system or as a result of Congressional action. Monocacy National Battlefield has entered into several administrative commitments, as described in the following paragraphs.

Memorandum of Understanding with the Historic Preservation Training Center

The National Park Service completed a study in December 1994 titled *Development Concept Plan / Environmental Assessment: Relocation of Historic Preservation Training Center, Bush Creek Tract, Monocacy National Battlefield*. This report contained analyses of alternatives for relocating the Historic Preservation Training Center (HPTC), a NPS organization dedicated to teaching preservation and project management skills, from C&O Canal National Historical Park property in Williamsport, Maryland, to Monocacy National Battlefield.

The analysis determined that the Gambrill House would be a suitable site for administrative offices and classrooms, but that a different location would be needed for an associated workshop facility and storage area that would need to occupy approximately

20,000 square feet. It also found that the only suitable area on the property to develop such a facility was the top of the hill behind, or generally south of, the Gambrill House. As a result, the three alternatives focused on access to this proposed facility. The preferred alternative recommended a two-lane access road from Ball Road and a paved pathway between the shop facility and the house.

After that *Development Concept Plan* was completed, Monocacy National Battlefield signed a memorandum of understanding with the Historic Preservation Training Center to locate the training center's administrative headquarters in the historic Gambrill House. Under the terms of the agreement, the training center rehabilitated the structure and continues to maintain it. In return, the national battlefield maintains the grounds around the house. For a variety of reasons, the new shop facility was not constructed, and the training center located its workshop in leased space in the city of Frederick. The memorandum of understanding was renewed in autumn 2003 for ten more years.

Lease and Agreement with the State of New Jersey

The National Park Service entered into a lease and agreement with the state of New Jersey in 1997 for protecting, interpreting, and maintaining the 14th New Jersey Monument, which remains under the ownership of that state. Under the terms of this lease, the state of New Jersey provides funding yearly, based on availability, for performing

routine grounds and statue maintenance. Every third year, the state generally provides additional funding to clean and repair the monument.

Memorandum of Understanding with the State of Vermont

The National Park Service entered into a memorandum of understanding with the state of Vermont in 1996 for the preservation and protection of the 10th Vermont Monument, which remains under the state's ownership. Under this agreement, the battlefield provides all maintenance for the monument and surrounding grounds and can conduct law enforcement activities.

Memorandum of Understanding with the Catoctin Center for Regional Studies

In 1998 Monocacy National Battlefield and other surrounding NPS units signed a memorandum of understanding with the Catoctin Center for Regional Studies, housed at Frederick Community College. The Catoctin Center is a collaborative educational project of the National Park Service and Frederick Community College to foster research and study of the history and culture of mid-Maryland and the surrounding region. Under this agreement, the national battlefield works jointly with the Catoctin Center to help the latter achieve its mission; in fact, an employee of the battlefield serves as the NPS liaison with the Center.

SERVICEWIDE LAWS AND POLICIES

In this section, actions are identified that must be taken at Monocacy National Battlefield to comply with federal laws and with the 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 (EO) 11990 "Protection of Wetlands"); laws governing the preservation of cultural resources (such as the National Historic Preservation Act and the Native American Graves Protection and Repatriation Act); and laws about providing public services (such as the Americans with Disabilities Act) — to name only a few.

In other words, a general management plan is not needed to decide, for instance, that it is appropriate to protect endangered species, control exotic species, protect archeological sites, conserve artifacts, or provide access for visitors with disabilities. Laws and policies already exist to regulate those and many other things (see appendix B, "Federal Laws, Regulations, and Policies.")

Although attaining some of the conditions set forth in the laws and policies may have been temporarily deferred in the national battlefield because of funding or staffing limitations, the National Park Service will continue to strive to achieve these requirements

with or without a new general management plan.

Some laws and executive orders are applicable solely or primarily to units of the national park system; for example, the 1916 Organic Act, which 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 EO 11990, which addresses the protection of wetlands.

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

[P]romote and regulate the use of the Federal areas known as national parks, monuments, and reservations. . . by such means and measures 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 interrelated purposes and

resources into one national park system as cumulative expressions of a single national heritage.” The act makes it clear that the NPS Organic Act and other protective mandates apply equally to all units of the system. Further, amendments state that NPS management of park 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 the NPS guidance manual called *Management Policies 2006*. The alternatives considered in this plan incorporate and comply with the provisions of these mandates and policies.

To truly understand the implications of an alternative, it is important to combine the servicewide mandates and policies with the management actions described in an alternative. The actions and conditions prescribed by laws, regulations, and policies most pertinent to the planning and management of the national battlefield are detailed in appendix C.

RELATIONSHIPS OF OTHER PLANNING EFFORTS TO THIS GENERAL MANAGEMENT PLAN

Monocacy National Battlefield is in Frederick County, Maryland. Several plans prepared by or under preparation by the county, the state, or other public entities have influenced or will be influenced by this plan, as will some other NPS plans. This section includes brief descriptions of these related plans and their relationship to the battlefield’s *General Management Plan*.

Environmental Assessment: Relocating the Visitor Center

The National Park Service completed an environmental assessment in August 2002 for relocating the existing visitor contact station from the Gambrill Mill. When it opened in 1991, the Gambrill Mill facility was meant to be temporary. The building did not meet many life safety codes, nor did it contain adequate facilities to support safe and efficient national battlefield operations. In addition, the structure is in the 100-year floodplain and has been flooded several times.

The environmental assessment evaluated two action alternatives for relocating Monocacy National Battlefield's visitor contact station and upgrading it to a visitor center. One alternative placed the visitor center in a mid-20th century dairy barn on the Best Farm (identified in the 1996 *Interpretive Prospectus* but demolished in 2005); the preferred alternative placed it in a new building on the north end of the Best Farm on the east side of Route 355. The preferred alternative was selected because it was determined that placing the visitor center in a new building on the north end of the Best Farm would result in fewer impacts on the battlefield landscape and would provide better access to road and utility infrastructure.

Construction of the new visitor center, now complete, and the relocation of some battlefield offices allows consideration of new uses for the Gambrill Mill.

I-270 / U.S. 15 Multi-Modal Corridor Study (Section 4(f) Evaluation)

Approximately 2 miles of Interstate 270 pass through Monocacy National Battlefield, bisecting the battlefield. Section 4(f) of the Department of Transportation Act of 1966, as amended, (Public Law [PL] 89-670), 49 USC 303) says that the secretary of transportation

may approve a transportation program or project requiring the use of publicly owned land of a public park, recreation area, . . . or . . . historic site only if (1) there is no prudent and feasible alternative to using that land; and (2) the program or project includes all possible planning to minimize harm to the park, recreation area, . . . or historic site resulting from the use.

In 2002, the Federal Highway Administration, U.S. Department of Transportation, and the Maryland State Highway Administration, Maryland Department of Transportation, released the *I-270 / U.S. 15 Multi-Modal Corridor Study, Frederick and Montgomery Counties, Maryland: Draft Environmental Impact Statement and Section 4(f) Evaluation*. The study included several alternatives for widening I-270 through the national battlefield. The alternatives range from constructing one more lane in each direction — for a total of six lanes — (alternatives 3 and 4) to adding two lanes in each direction — for a total of eight lanes (alternative 5). The national battlefield acreage required for the new lanes was initially calculated at 11.74 for alternatives 3 and 4, and up to 22.52 acres for alternative 5.

The document included consideration of three measures for minimizing impacts on the battlefield: steeper slopes, retaining walls, and reduced width of the inside shoulders. These measures would reduce the battlefield acreage required for road construction to a little more than 5 acres under alternatives 3 and 4, and from 0.07 to 2.92 acres for alternative 5. However, reducing the acreage under alternative 5 would require the use of substantial retaining walls averaging 7 feet in height. Other mitigating measures considered since the release of the draft document are shifting the interstate toward the west (away from the most sensitive battlefield areas on the Best and Thomas farms) and constructing a deck or bridge over I-270 to reconnect the two halves of the battlefield. Shifting the interstate also would reduce the acreage required from the national battlefield (also see page 84).

In summer 2004, the Maryland State Highway Administration proposed constructing express toll lanes on I-270. Since these lanes would lie within the footprint involved in alternative 5, additional environmental review was deemed unnecessary. The study has yet to be finalized.

The planning teams for the I-270 project and the general management plan for Monocacy National Battlefield have coordinated their efforts to ensure that the actions proposed in this plan will be coordinated with potential mitigating measures that may be proposed under section 4(f).

Frederick County Comprehensive Plan

The Frederick County Planning Commission revised the county's comprehensive plan in 1998. This plan affords long-range guidance for growth, land use, and development decisions in the county. In the plan, Monocacy National Battlefield's importance as a significant historic resource is acknowledged, but the county's plan does not contain specific mechanisms for preserving it.

The *Frederick County Comprehensive Plan* divides the county into eight planning regions, with boundaries primarily following waterways. As a result, Monocacy National Battlefield falls within three separate regions —

New Market, Frederick, and Urbana. The New Market Region encompasses the small portion of the national battlefield that lies north of Bush Creek on the east side of the Monocacy River. The Best Farm, on the west side of the river, lies within the Frederick Region. Most of the national battlefield lies in the Urbana Region, on the south side of Bush Creek and the Monocacy River.

A plan has been prepared for each of the eight regions. These plans give more details about land use, zoning, community facility needs, and transportation improvements. Of these plans, the recently updated *Urbana Region Plan*, approved in June 2004, has the most direct effect on the national battlefield. It focuses on the development of Urbana, 3 miles south of the battlefield, as a regional community with a 20-year build-out population of approximately 31,200 people. It identifies a future growth area for this community that

may be considered beyond the present 20-year growth area, which would consist of 1,300 acres on the north side of the present growth area. This would place new development adjacent to the rural community of Araby Church and within 1 mile of the battlefield.

With the exception of the Araby Church community, the land surrounding the battlefield is zoned “agricultural.” The Urbana Region Plan supports the preservation of agricultural land between Monocacy National Battlefield and Urbana to protect the national battlefield’s integrity and to provide an open space buffer between Urbana and Frederick. As part of this, the county has initiated the acquisition of easements along the Baker Valley Road corridor.

In conjunction with the county’s comprehensive plan, the *Urbana Region Plan* identifies a transitway alignment along the east side of Interstate Highway 270. This alignment is depicted as traversing the Lewis, Thomas, and Best farms, but the plan recommends further study of the I-270 transitway alignment to determine its feasibility, in part because of its potential impact on the battlefield. In recognition of the national battlefield’s significance, it also indicates that MD 355 should be maintained as a two-lane roadway through Monocacy National Battlefield.

Frederick County Water and Wastewater Infrastructure Plan

In November 2001, Frederick County completed a comprehensive proposal for long-term water and wastewater infrastructure based on growth projections in its 1998 countywide compre-

hensive plan. The first stage of the Frederick County Water and Wastewater Infrastructure Plan (McKinney Wastewater Treatment Plant) includes the construction of a 42-inch water transmission main through the Best Farm on Monocacy National Battlefield, roughly within a preexisting sewer line right-of-way, primarily to serve areas east of the city of Frederick. Construction of this line began in summer 2005.

The plan also contains a long-term (2020–2040) proposal to construct a 36-inch water transmission main along Baker Valley and Araby Church roads, through portions of the Baker and Thomas farms. It would cross the Monocacy River and connect with the 42-inch water line on the Best Farm, adjacent to Monocacy Junction.

Chesapeake Bay Program

The Chesapeake Bay Agreement was signed in 1983 by the governors of Pennsylvania, Maryland, and Virginia; the Mayor of the District of Columbia; and the U.S. Environmental Protection Agency, representing the federal government. This landmark agreement formalized a regional partnership dedicated to improving the living resources of the Chesapeake Bay — the largest estuary in the United States. Through subsequent agreements, the Chesapeake Bay Program has defined goals and objectives for the future, including improving vital aquatic habitat and water quality for the Bay and its watershed.

The National Park Service became a formal partner in the Chesapeake Bay Program (CBP) in 1993 through a memorandum of understanding with

the U.S. Environmental Protection Agency. Through this agreement, the National Park Service committed to furthering the restoration and conservation of the bay both within national battlefield boundaries and in concert with other communities and partners. As an agency whose primary mission is the preservation and conservation of resources, the National Park Service has a leadership role that includes continuing current resource stewardship in support of existing policies and mandates, as well as educating the public and partnering with local groups to meet established CBP goals.

To help meet these watershed objectives and fulfill NPS obligations under these agreements, the national battlefield is dedicated to reducing environmental impacts on its water resources and partnering with local entities. The national battlefield's active agricultural lease program requires permittees to obtain and follow conservation plans and nutrient management plans set out by the Maryland Department of Agriculture's local Soil Conservation District. These plans help to reduce soil erosion and the impacts of fertilizer and pesticide use.

The national battlefield also partners with the Maryland Department of Agriculture in establishing best management practices to reduce agricultural runoff into NPS water resources. Agricultural permittees also follow a strict integrated pest management approach to dealing with pest plants and animals.

National battlefield managers have contributed to a local watershed

advocacy group's publication on the environmental story of the Monocacy River watershed. This periodical is designed to educate the public about the ecological and historical importance of the region's significant water resources. These and other future activities will help demonstrate the national battlefield's continued support in meeting CBP conservation goals.

Monocacy Scenic River Study and Management Plan

The Monocacy River was designated a state scenic river in 1974 upon meeting conditions set out in the Maryland Scenic and Wild Rivers Act of 1968. This designation helps to protect waterways through natural resource inventory and monitoring and by sound land use planning. The National Park Service, through the National Rivers Inventory, identified 52 miles of the river as eligible for designation as a national scenic river, citing significant natural, cultural, and archaeological resources.

The *Monocacy Scenic River Study and Management Plan* (Monocacy Scenic River Local Advisory Board, 1990) contains an evaluation of the river's resources and value, along with recommendations for effective conservation and management of the river and its tributaries. While it is not a binding regulatory document, it serves as a reference for state and local governments to use in protecting these resources. The main objectives for the plan generally involve improving water quality, conserving sensitive riparian habitats, encouraging appropriate land and recreational uses in these areas, providing resource information for local

entities to use in planning, and promoting public awareness of the important values of these water resources.

Some general recommendations in the plan are improving the compatibility between land use and natural areas, increasing the enforcement of environmental laws and regulations regarding waste disposal, and establishing best management practices for agricultural uses. Also recommended are the encouragement of the maintenance and protection of existing forested buffers, the conservation of sensitive habitats and species, and the institution of public awareness programs and resources to further the public's understanding of important water resource issues.

To meet these and other broad recommendations, the national battlefield engages in sound management practices to reduce impacts on water resources. All agricultural permittees are required to obtain conservation plans and nutrient management plans through the Maryland Department of Agriculture's local Soil Conservation District. These plans mandate environmentally safe farming practices to reduce soil erosion, pesticide use, and nutrient use and runoff. Best management practices (in the form of stream fencing and buffers) are used to reduce impacts.

The resource management staff of the national battlefield uses an integrated pest management approach when dealing with pest plant and animal populations. This involves combining chemical, mechanical, and manual methods to control pest populations. Pesticide use is also controlled and

reviewed through the NPS integrated pest management (IPM) system. To ensure correct application method, timing, and appropriate use, the regional IPM coordinator reviews and pre-approves all pesticides before their use is allowed.

Frederick County Bikeways and Trails Plan

Frederick County funded a Monocacy River Greenway study in 1994 to develop a vision for a recreational trail system for the corridor from Walkersville south to the Potomac River. The trail would extend along the Monocacy River, connecting existing county parks, Monocacy National Battlefield, and the C&O Canal National Historical Park. The possibility of connecting to other county parks and the state-owned Monocacy Natural Resource Area also was proposed. Planning for the greenway has not progressed beyond one segment completed in the City of Frederick.

Also proposed in the *Frederick County Bikeways and Trails Plan* (Frederick County Dept. of Planning and Zoning 1999) is a Monocacy River Greenway for bicycle and pedestrian use on the south side of the river through the battlefield. Among other issues, the plan includes "protecting the riparian buffer along the river," and "assembling the right-of-way through easement or fee simple purchase."

A second trail proposed in the bikeways and trails plan would follow the Bush Creek corridor and the CSX railroad tracks for most of its length. Presumably the trail would connect with the pro-

posed Monocacy River Greenway in Monocacy National Battlefield. It would be for recreational use only, but it would accommodate hikers/walkers and equestrians. As with the Monocacy River Greenway, consultation with Frederick County to determine the desirability and impacts of such a greenway trail would be necessary before any development could take place.

Before the greenway concept could be accomplished, actions would have to be taken to comply with EO 11990 (“Protection of Wetlands”), NPS guidelines for wetlands and floodplains, state and federal laws related to endangered species, the Chesapeake Bay Program, and the Maryland Scenic Rivers Act (described under “Consultation and Coordination, Compliance with Specific Laws and Policies”). In addition, actions listed in a section about mitigating measures (p. 85) would have to be carried out to ameliorate the effects of the actions of any alternative of this plan. The Monocacy River Greenway could not be implemented in the national battlefield unless all these requirements were met and continued during the construction and use of the greenway.

Interstate 270 Overlook/ Demonstration Project

The Maryland Highway Administration developed an interpretive overlook on I-270 south of, and abutting, Monocacy National Battlefield. Interpretive panels at a parking area describe the area’s history, and there is a scenic vista of farmlands to the west and the church towers of Frederick to the north. No water or restroom facilities are available.

Planning is underway to construct an interpretive center and restrooms at the overlook. The interpretive center would take advantage of new technologies to make the site self-sustaining and an example of “green” site design. A variety of technologies would provide electricity, heating and cooling, and wastewater cleanup. The superintendent of Monocacy National Battlefield is participating in the planning and design of site facilities to ensure that they will be compatible and complementary with national battlefield values.

PLANNING ISSUES AND CONCERNS

A planning issue is defined here as an opportunity, conflict, or problem regarding the use or management of Monocacy National Battlefield. Members of the general public, NPS staff, and representatives from other agencies and organizations identified a number of planning-related issues through scoping meetings, newsletter responses, and discussions with representatives of other agencies and organizations.

Monocacy has been open to the public only since 1991, with few areas accessible to visitors. Therefore, these issues involved appropriate levels and methods of allowing visitor access to the battlefield while maintaining desired resource conditions, managing the battlefield landscape and associated historic structures, and the level and location of visitor and operational facilities. The alternatives of this plan include strategies for addressing the issues within the context of the national

battlefield's purpose and significance and NPS laws and policies.

Preserving the Battlefield Landscape

The landscape of Monocacy National Battlefield is composed of diverse natural and cultural elements. Its rolling agricultural fields and forests retain many of their 19th century characteristics, but the landscape is threatened by incompatible adjacent development, increased population growth, and the pressures that such growth creates (such as heavy traffic and the need for road widening and additional utilities). A shrinking agricultural base is likely to make farming on the battlefield less economically practicable. Developments can affect the visitor experience at the battlefield by introducing modern visual and auditory intrusions. At issue is finding ways to preserve the landscape and enhance the qualities that make it significant while at the same time minimizing effects on resources from surrounding development.

Another issue is determining how the historic battlefield landscape should be managed. This landscape is the key to understanding how the events of July 9, 1864, unfolded. Little documentation is available regarding the battlefield's 1864 appearance, but existing evidence suggests that most of its major features — the farmsteads, property and fence lines, field configurations, building settings, and circulation patterns — remain relatively intact. Parts of the battlefield landscape have been degraded, however, primarily by the construction of I-270. The highway bisected the battlefield in the mid-20th century, obscuring key viewsheds and property

lines, creating deep borrow pits, and obliterating parts of fields. During scoping for this plan, some people suggested that the National Park Service consider restoring the lost features of the battlefield to help facilitate interpretation. At issue is to what degree the National Park Service should rehabilitate or restore lost features of the battlefield landscape, and for what purposes.

The diverse natural and cultural resources of the national battlefield are in jeopardy from degradation caused by human-constructed features such as I-270, and some natural resource issues are at work that compromise the historic battlefield landscape and disrupt the ecological balance. Overbrowsing by white-tailed deer can alter the historic appearance by forcing farmers to change agricultural practices to those less favorable to the deer. Browsing also can alter regrowth in forested areas, further changing the prominent historic patterns and suppressing the regeneration of native trees.

The proliferation of invasive non-native plant species has introduced monocultures of species that are not congruent with the historic scene and threaten to take over areas that once supported only native plants. In addition, the national battlefield's water quality and aquatic resources are at risk from sedimentation and stream erosion, caused in part by poor agricultural practices and surrounding development. Riparian stream buffers are an effective solution to reduce these impacts, but they must be established in keeping with the historic landscape. There is a need to evaluate ways to improve environmental

conditions in the national battlefield while preserving the historic landscape. In sum, an underlying philosophy is needed to guide the management of these resources and landscapes.

Protecting Important Natural Resource Areas

Monocacy National Battlefield contains significant natural resource areas that require special management efforts. These areas possess considerable resource value aside from their important role in the cultural landscape. The primary management direction for the national battlefield is to protect and preserve the historical values; however, the natural resource areas also require considerable attention because they are important to the region's ecology.

Among the natural resources are forested areas on and around Brooks Hill and Bush Creek and the south end of the Lewis farm. These areas, the largest forested tracts in the national battlefield, offer resource benefits in the form of carbon cycling, locally significant plant communities, and interior forest and wildlife habitat. The presence of forest interior areas and their importance to sensitive forest interior dwelling species has been suggested in national battlefield research conducted by the Maryland Department of Natural Resources (MDNR). The populations of these area-sensitive species have been documented as declining on a regional and national scale. One of these large tracts, a limestone woods area, was identified by the MDNR as containing state-listed rare plants. The Maryland Department of Natural Resources also

identified this site as a conservation priority in the Frederick County area.

Orientation and Visitor Services

Although the national battlefield was opened to the public in 1991, most of the battlefield has remained inaccessible to visitors, and visitor facilities have remained minimal. In addition, substantial physical barriers — such as the Monocacy River, I-270, and CSX Railroad — hinder efficient circulation through the national battlefield and present a challenge for interpreting the battle effectively. A major issue concerns how more of the battlefield can be opened to visitors while preserving its significant resource values.

A final visitor services issue revolves around the appropriate level and kinds of visitor facilities on the national battlefield. Although the cramped, inadequate visitor contact station in the Gambrill Mill has been replaced with a new visitor center, questions remain concerning whether more visitor facilities should be placed in the national battlefield, and if so, where they might be located.

Commemorative Monuments

Five commemorative monuments are in Monocacy National Battlefield at present, three erected by Civil War veterans and two that were established on the battlefield during major anniversaries (50th and 100th). The congressional legislation for the national battlefield allows the placement of monuments on the battlefield by states whose troops fought in the battle. Some interest in erecting new monuments on

the battlefield has been expressed by outside groups. At issue is whether or not more monuments should be placed on the battlefield, and if so, at what locations.

Inadequate Administrative Facilities

As a relatively new area in the national park system, Monocacy National Battlefield has had to work with temporary and inadequate facilities for administrative offices, maintenance appurtenances, and storage. The permanent staff has grown from three people when the national battlefield opened in 1991 to fourteen. National battlefield operations clearly have outgrown their existing facilities, but questions remain about where new ones should be placed.

Historic Structures

Monocacy National Battlefield contains several historically significant houses, most particularly the Gambrill, Best,

Thomas, and Worthington houses. Of these four, the Thomas House has, until 2007, been occupied under a life estate, and the Gambrill House is used by the Historic Preservation Training Center under a long-term agreement with the national battlefield. The Best and Worthington houses, which are empty, require significant interior rehabilitation before they can be occupied. During scoping for this plan, members of the public expressed interest in providing public access into the national battlefield's historic structures. At issue is what should be done with these structures — preserve them as they are or rehabilitate all or parts of them for administrative or public use.

ISSUES AND CONCERNS NOT ADDRESSED IN THIS PLAN

All issues or concerns raised by the public have been addressed in this *General Management Plan*.

(blank)

CHAPTER 2:

**ALTERNATIVES,
INCLUDING
THE PREFERRED
ALTERNATIVE**

(blank back of divider)

INTRODUCTION AND MANAGEMENT ZONING

INTRODUCTION

Many aspects of the desired future condition of Monocacy National Battlefield are defined in the establishing legislation, the national battlefield's purpose and significance statements, and the servicewide policies and mandates. Within these parameters, the National Park Service solicited input from the public, NPS staff, government agencies, and other organizations regarding issues and desired conditions for Monocacy National Battlefield. The first newsletter describing the planning effort was issued in December 2002. The National Park Service received written responses to the first newsletter.

Using the information mentioned above, the planning team developed a set of management directions, management prescriptions, and four alternatives to guide the future management of the national battlefield management. These alternatives reflect the range of ideas proposed by the national battlefield staff and the public.

In this chapter, the proposed management prescriptions and alternatives are described. Included are tables that summarize the key differences between the alternatives and the key differences in the impacts that would be expected from implementing each alternative. Also included are mitigating measures that would be employed to reduce or avoid adverse impacts.

MANAGEMENT ZONING AND MANAGEMENT PRESCRIPTIONS

As a part of the planning process, the national battlefield was divided into different management zones, each with a specific management prescription. Management prescriptions define a range of desired visitor experiences, cultural and natural resource conditions, and the appropriate facilities and functions necessary to achieve those goals. Management prescriptions are generally focused on the future; they are not a description of the status quo. For this reason, management prescriptions are not applied to alternative 1, the no-action alternative.

Essentially, a management prescription articulates the desired future vision for the national battlefield that managers will strive to achieve incrementally as funding becomes available to implement the specific actions outlined in this *General Management Plan*.

The management zones may differ somewhat between alternatives according to the overall intent (concept) of each alternative. That is, each alternative represents a different way of applying the management prescriptions to the national battlefield.

A draft version of the management prescriptions was presented to the public in the second newsletter (June 2003). Thereafter, the management prescriptions were modified in response to public comments. A revised version is presented below.

Five different management prescriptions were developed for Monocacy National Battlefield: battlefield preservation, visitor services, commemoration, natural resources, and maintenance/administration. For each management prescription, a corresponding zone was designed to help guide the preservation of resources, their interpretation to the public, and the types of facilities that might be appropriate within the zone. Under each alternative, natural and cultural resources would continue to be managed in accordance with laws, regulations, and policies. Each zone is described briefly below.

Battlefield Preservation Zone

The battlefield preservation zone would encompass most of the national battlefield's cultural landscape and historic structures. In this zone, preserving the battlefield resources would receive the most attention. This zone essentially would be the battlefield's primary resource that would be presented to the visiting public.

Desired Visitor Experience. The primary visitor experience in the battlefield preservation zone would be immersion into the battlefield setting. Visitors could experience firsthand the challenges of the terrain where troop movements occurred and opposing forces encountered each other. Visitors would have access to several battlefield areas of high interpretive value via trails and roads.

In this zone, preference would be given to using historic road and trail corridors rather than developing new means of

access. Use levels could be expected to be moderate to high, and appropriate activities could include sightseeing, photography, walking, and interpretive programs if they would not be disruptive to the setting. Self-guiding or ranger-led walking tours would be important to the visitor experience.

Desired Resource Conditions. The battlefield preservation zone would be managed to preserve an agrarian setting reminiscent of the battle era. Through continued agricultural practices, farm fields and hedgerows would be maintained, as would the relationship of open to wooded sections of the battlefield. Natural resources would be managed to reinforce the cultural landscape and agricultural character. Cultural resource management would emphasize the preservation of cultural landscape values, focusing on the setting, feeling, and physical features that would convey the historic character of the landscape.

Appropriate Facilities and Functions. Appropriate facilities in the battlefield preservation zone could be interpretive trails, wayside exhibits, and new agricultural buildings in keeping with historic viewsheds and interpretive values.

Visitor Services Zone

The visitor services zone would focus on orienting visitors to the battlefield and offering a concentrated, in-depth presentation of battlefield resources and visitor use opportunities.

Desired Visitor Experience. Visitor concentration would be high in the visitor services zone, and services would be convenient and accessible. There

would be frequent interaction between visitors and NPS staff.

Desired Resource Conditions. Any existing cultural and natural resources in the visitor services zone would be managed according to NPS policies with moderate tolerance for disturbance.

Appropriate Facilities and Functions. Appropriate facilities in the visitor services zone would include those that would shelter programs and exhibits to promote a greater understanding of the major interpretive themes of Monocacy National Battlefield. Also appropriate would be educational sales, contact with NPS personnel, and services that would give comfort and relief for visitors. A visitor center, exhibits, waysides, accessible trails, picnic areas, restrooms, access roads, and parking areas are examples of appropriate types of facilities.

Visitor service functions would be sensitively integrated into historic structures, or they could be housed in new structures of contemporary design, compatible in scale and materials to existing historic battlefield structures. A high degree of design would be required to integrate the facilities into the agrarian setting successfully. Where new construction was needed, preference would be given to locating the new facilities in previously disturbed sites.

Commemorative Zone

The commemorative zone would be those areas of the national battlefield that are set aside for the placement of monuments commemorating the efforts of the soldiers who fought in the battle of Monocacy. These areas would consist

of more formal landscapes maintained to create a peaceful, contemplative experience.

Desired Visitor Experience. Visitors in the commemorative zone would be moderately likely to encounter other visitors, and there would be a low likelihood of encountering national battlefield staff. The visitor experience would be primarily a peaceful, contemplative one, with interpretation available from brochures or wayside exhibits.

Desired Resource Conditions. Monuments and formal landscapes would be maintained in keeping with NPS policies. The immediate landscape would be highly managed to form an appropriate setting for the monuments. Any existing natural resources in this zone would be managed according to NPS policies, with moderate tolerance for disturbance.

Appropriate Facilities and Functions. Appropriate facilities and functions in the commemorative zone would be those necessary to allow visitor access and to promote an understanding of each monument's context and placement. These could include such amenities as wayside exhibits, sidewalks, formal landscape design, access roads, and parking areas.

Natural Resources Zone

The natural resources zone would comprise areas of the national battlefield that contain significant natural resources requiring special management actions. Such areas include the Monocacy River and Bush Creek, other riparian areas, forested areas, and areas

with significant resources requiring special protection measures.

Desired Visitor Experience. Visitor use in the natural resources zone would be low to moderate, especially in comparison to the other zones. Visitors would experience natural areas via designated trail corridors. Areas of special resource concern would be closed to visitors. Interpretation would be available from wayside exhibits and brochures.

Desired Resource Conditions. Natural resources would be maintained in as natural a state as possible, given cultural resource preservation needs. This would include maintaining riparian buffers for water quality, reestablishing native species, and controlling exotic vegetation. Any existing cultural and natural resources in this zone would be managed according to NPS policies, with minimal tolerance for disturbance.

Appropriate Facilities and Functions. Facilities appropriate for the natural resources zone would be unpaved trails in keeping with the natural character reminiscent of the Civil War era, limited interpretive or directional signs, and wayside exhibits. Erecting temporary fencing or barriers might be necessary to identify areas needing special resource protection.

Maintenance and Administration Zone

The maintenance and administration zone would consist of areas set aside to

accommodate the facilities and functions needed to manage the national battlefield. To the extent possible, these facilities would be in areas not frequented by the public, although some administrative activities could be housed in adaptively rehabilitated historic structures.

Desired Visitor Experience. Maintenance and administrative areas generally are not intended for visitor use; rather, they are needed for staff to attend to operational duties. Visitors might enter areas if administrative functions were housed in historic structures, but visitor access into such areas could be restricted for security reasons. In such cases interpretation would be available through brochures or exterior wayside exhibits.

Desired Resource Conditions. Any existing cultural and natural resources in the maintenance and administration zone would be managed according to NPS policies, with moderate tolerance for disturbance. Adaptive reuse of historic structures would be appropriate. Any effects on historic landscapes would be minimal.

Appropriate Facilities and Functions. Facilities and functions appropriate to the maintenance and administration zone would be office space, workshops, storage, garages, walks, roads, and parking.

FORMULATING ALTERNATIVES AND IDENTIFYING PREFERRED ALTERNATIVE

FORMULATING THE ALTERNATIVES

The alternatives of this *Draft General Management Plan / Environmental Impact Statement* focus on what resource conditions, visitor uses, and experiences or opportunities should be at the national battlefield rather than on details of how these conditions and uses and experiences should be achieved. Thus, the alternatives do not include many details on managing resources or visitor use.

More detailed plans or studies will be needed before most conditions proposed in the alternatives can be achieved. Implementing any alternative also would depend on future funding and environmental compliance. This plan does not guarantee that the funds to carry out the selected plan will be forthcoming. The plan is intended to establish a vision of the future that will guide the day-to-day and year-to-year management of the national battlefield, but the full execution of the plan could take many years.

BRIEF SUMMARY OF ALTERNATIVES

This *Draft General Management Plan / Environmental Impact Statement* presents four alternatives, including the alternative preferred by the National Park Service. Alternative 1, the no-action alternative, represents a continuation of the existing management direction. It is included as a baseline for comparing the consequences of putting

each alternative into action. The “action” alternatives — 2, 3, and 4 (the agency’s preferred alternative) — entail different ways of managing resources and visitor use and improving the facilities and infrastructure at the Monocacy National Battlefield.

After public meetings and public review of a newsletter describing the preliminary alternatives, and as the alternatives became more concrete, it was clear that the public was confused about the interpretive distinctions between the different alternatives, which were not as clear as the team had originally thought. Although the interpretive concepts had helped the planning team to organize the potential actions into coherent alternatives, their usefulness had become questionable. Using the “Choosing by Advantages” process, (briefly described under “Identifying the Preferred Alternative” below), the team developed a new alternative 4, which became the agency’s preferred alternative.

The three action alternatives embody a range of what the public and the National Park Service want to see accomplished with regard to natural resource conditions, cultural resource conditions, and visitor use and experience at Monocacy National Battlefield. The actual configurations for each alternative were developed by overlaying the management prescriptions (previously described) on a map of the national battlefield.

Alternative 2 would focus relatively narrowly on the story of the Battle of

Monocacy, explaining troop movements, how the landscape affected the battle, and an understanding of the players. Alternative 3 would extend the story of the Battle of Monocacy to include its effects on Frederick and the surrounding countryside. In addition to interpreting the battle, Alternative 4 (the preferred alternative) would emphasize the national battlefield's role as a military and transportation crossroads throughout the Civil War. Even more broadly, it would focus attention on Monocacy's position as an important crossroads from prehistory to the present.

Each alternative would include a different approach to explaining the national battlefield. As an example, in alternative 3, more emphasis would be placed on the civilian story; therefore, it would involve a greater need to allow access to historic structures than in alternative 2, where the battle landscape would be of primary importance to the story.

As was mentioned under "Mandates, Laws, and Other Planning Efforts" (p. 20), the National Park Service would continue to follow existing agreements and servicewide mandates, laws, and policies regardless of the alternatives considered in this plan. These mandates and policies are not repeated in this chapter.

IDENTIFYING THE PREFERRED ALTERNATIVE

Developing a preferred alternative involves evaluating the alternatives through an objective analysis process called "choosing by advantages," or CBA. Using this process, the planning team identified and compared the relative advantages of each alternative according to a set of factors. The benefits or advantages of each alternative were compared for each of the following CBA factors:

- preserving the battlefield
- removing modern intrusions
- using historic structures
- improving safety
- considering circulation (automobiles and trails)
- increasing opportunities for visitor enjoyment
- offering opportunities for alternative transportation

The relationships between the advantages and costs of each alternative were established. This information was then used to combine the best attributes of the four initial alternatives into the preferred alternative. This alternative gives the National Park Service the greatest overall benefits for each point listed above for the most reasonable cost. Alternative 4 was selected as the preferred alternative.

ACTIONS COMMON TO ALL ALTERNATIVES

INTRODUCTION

The management directions that are common to all alternatives are described in this section. In a sense, these management directions form the philosophical foundation, or vision, for managing the national battlefield, and they serve as the baseline from which the “action” alternatives were developed. These management directions follow and build upon the laws, servicewide policies, and mandates delineated in appendixes B and C.

Some actions are occurring now and will continue regardless of which alternative is selected. Other actions have been approved but have not yet been accomplished. Still others are actions required by law or policy that would occur regardless of alternative.

The order in which these management directions and actions are listed does not indicate priority or likelihood for funding. The possible actions that are listed represent actions that could be taken to support each management direction; however, it should be kept in mind that the desired condition could be achieved in variety of ways.

RESOURCE MANAGEMENT AND PRESERVATION

Cultural Resources

Cultural resources, including historic structures, landscapes, archeological sites, and monuments that contribute to the significance of the national battlefield, would be stabilized, preserved, and maintained in good condition. Monocacy National Battle-

field has more than 51 historic structures —buildings, monuments, transportation corridors, and earthworks — on its List of Classified Structures. It also has extensive museum collections and archival materials and a variety of historic and prehistoric archeological sites. All these structures, objects, and features come together in the six component properties that compose the battlefield’s cultural landscape. Most of the daily work of the national battlefield’s maintenance and professional staff and a significant portion of the national battlefield’s annual budget are devoted to protecting, preserving, and maintaining the battlefield’s historic resources.

Archeological sites, historic structures, fence lines, viewsheds, and field boundaries are among the features that contribute to the national battlefield’s cultural landscape and are important to our understanding of the broader historical context in which the Battle of Monocacy was fought. Management decisions must be made with the preservation of these resources in mind.

The following actions would support this management direction:

- Protect historic buildings from fire
- Manage plant species to retain desirable cultural landscape characteristics such as field patterns and the composition of wooded and agricultural areas
- Stabilize and preserve historically significant buildings and maintain them in good condition

- Continue the memorandum of understanding with the Historic Preservation Training Center for administrative use of the Gambrill House
- Conduct regular routine maintenance to prevent conditions that could lead to the destruction of historic fabric
- Protect significant topographic and natural features of the battlefield from erosion
- Understand and pursue the management of the white-tailed deer population to retain desirable cultural landscape characteristics such as field patterns, the composition of wooded and agricultural areas and ornamental farmstead plantings
- Protect known archeological sites from deterioration
- Protect cultural resources from damage resulting from vandalism
- Implement a prescribed fire plan to help retain desirable cultural landscape characteristics, manage invasive exotic plants, and manage vistas

Landscape Features

Landscape features that are significant for understanding the Battle of Monocacy and that have been degraded by modern intrusions such as I-270 would be reestablished. The establishing legislation for the national battlefield calls for the preservation of features associated with the Battle of Monocacy. In addition to the

constructed features such as breastworks and earthworks specifically listed in the legislation, such features are construed to include the land on which the battle was fought. Associated components include agricultural fields and their historic boundaries, forested areas, and road traces.

Like many Civil War battlefields, however, the level of knowledge concerning the battlefield's wartime appearance is limited, consisting mainly of rough sketch maps and general written accounts, with no known photographs or detailed surveys. However, research conducted to date suggests that the broader battlefield landscape changed relatively little from the time of the battle until well into the opening decades of the 20th century.

The major changes to the battlefield landscape have resulted from modern intrusions such as roads (Interstate Highway 270) or agricultural practices such as the construction of trench silos. The national battlefield staff would remove modern landscape features such as agricultural trench silos but rehabilitate or preserve historic battlefield landscape features such as hedge rows and tree lines. To the extent possible, the national battlefield staff would reestablish significant battle-related features that have been degraded by the construction of 20th century intrusions.

The following actions would support this management direction:

- Remove the borrow pit from the Worthington Farm side of I-270 and re-establish the agricultural field

- Remove noncontributing structures unless a structure would be required for an operational purpose such as restrooms or office space
- Reestablish significant vistas between the Worthington and Thomas farms
- To the extent possible, reestablish the fence line between the Worthington and Thomas Farms

Landscape Protection

Landscape protection strategies would ensure the integrity of the battlefield's nationally significant qualities. The following actions would support this management direction:

- Review the status of lands within the legislative boundary in an effort to determine the most appropriate protection measure to assure the desired future; this may include acquiring private lands and upgrading easements to fee ownership
- Continually patrol and mark the boundary to preserve and protect national battlefield resources by preventing encroachments
- Preserve the battlefield viewshed by working with the state and county to obtain preservation easements on farmlands adjacent to the legislative boundary

Agriculture

Agricultural activities would maintain the historic agrarian character of the national battlefield's landscape while protecting natural and cultural

resources. The agricultural program is a key component of national battlefield management. The fields reflect the historic agrarian character of the landscape and are an important cultural resource. The agricultural fields are one element that makes up the historic field patterns, along with fences, forested areas, and similar features. The current program, which has four permittees, is a "partnering" approach to maintaining approximately 850 acres of the battlefield. Without the agricultural program, maintaining these areas would have to become a federal function and would require additional equipment, expertise, time, and resources. Moreover, the agricultural leasing program helps to retain the national battlefield's link to the neighboring community and encourages local residents to feel that they have a stake in preserving the battlefield landscape.

The following actions would support this management direction:

- Continue to establish best management practices and conservation plans to protect significant natural resources such as soil and water. This would include erosion control, crop rotation, nutrient management, soil conservation, and integrated pest management
- Maintain a special use permit program to manage agricultural activities
- Establish strategies to maintain the economic viability of agriculture, which is critical to retaining and attracting farmers

- Understand and pursue the management of the white-tailed deer population to retain desirable landscape characteristics such as field patterns and the composition of agricultural areas
- Manage and adjust agricultural activities to protect significant archeological resources
- Schedule management activities such as mowing, seeding, fertilizing, and harvesting to protect wildlife, limit runoff, and protect water quality in streams

Modern Intrusions

Intrusions from modern utilities, transportation systems, and rights-of-way would be minimized to protect the integrity of the battlefield's nationally significant qualities. Monocacy National Battlefield is crossed by a number of rights-of-way, including the CSX Railroad (the old B&O Railroad line), I-270, MD 355, and several utility lines, including water, sewer, and gas.

Burgeoning development and population growth have increased pressure to expand the existing infrastructure and install new infrastructure in the national battlefield. Such proposals include widening I-270, building a light rail line through the Thomas and Best farms, and running additional water and sewer lines through various areas of the battlefield.

Although much of the area surrounding the national battlefield has been developed extensively, the battlefield landscape itself retains remarkable

integrity. However, the concept of expanding utility and transportation corridors through Monocacy National Battlefield poses a major threat to this primary resource and to visitors' experience.

The following actions would support this management direction:

- Work with local utility companies to bury telephone, cable, and power lines along MD 355 in the Best Farm area to enhance views from the new visitor center
- Work with the Maryland State Highway Administration to minimize the impacts from any widening of I-270 and to reconnect and enhance the battlefield landscape
- Continue to work with the Maryland Department of Transportation to reduce noise and visual impacts from I-270 and MD 355
- Work with CSX to ensure that railroad operations will not negatively affect national battlefield resources
- Collaborate with Frederick County to ensure that the potential effects on the national battlefield are considered in any utility and transportation planning
- Establish agreements to control invasive vegetation on right-of-way corridors through the national battlefield
- Enforce existing agreements

Natural Resources

Natural Resources would be managed and monitored to encourage biological diversity and to avoid adverse impacts on the regional ecology while protecting the quality and character of the national battlefield's cultural resources. At Monocacy National Battlefield, natural resources such as vegetation, wildlife, water resources, and soils would be managed to protect the character and quality of the national battlefield's significant cultural resources and to preserve important interpretive views. These goals would be balanced by a desire to encourage biological diversity by establishing and executing strategies to protect significant natural resources such as native plant and animal species (including state-listed and federally listed threatened and endangered species), local springs, streams, and watersheds, and plant communities of local importance (such as Brooks Hill).

Existing trails could be modified somewhat to protect wildlife and plants or to improve access, but generally the trails would be maintained in their current state. Visitors would be encouraged to stay on the trails because these important ecological areas are the most environmentally fragile areas of the national battlefield. Activities such as fishing that require off-trail access would be monitored for any damage, and areas would be closed periodically to allow vegetation to recover.

The following actions would support this management direction:

- Continue servicewide inventories of plants and animals
- Prepare Resource Stewardship Plan to identify resource management goals and implementation strategies
- Continue to cooperate with other agencies in efforts to restore water quality including the continuation of current water quality monitoring efforts and park management practices that support regional and watershed water quality objectives
- Establish monitoring programs based on the findings from completed inventories and the ongoing servicewide initiative to identify "vital signs" (attributes identified as key indicators for monitoring of ecosystem health) for each national park unit
- With the ongoing cooperation of local universities and research centers, continue to monitor the white-tailed deer population and its impacts
- Pursue the management of the white-tailed deer population to retain desirable landscape characteristics such as field patterns and the composition of wooded areas (sustainable forest regeneration)
- Establish vegetation strategies to manage invasive exotic plant species and to protect and improve native plant species populations
- Develop and continue conservation partnerships with local, state, and other federal agencies so as to protect and monitor resources (for example, the Chesapeake Bay Program and the Natural Resources Conservation Service)

- Develop a geographic information system to document the existing conditions of natural and cultural resources
- Develop thresholds for action for wildlife populations and pests, including groundhogs, Canada geese, and structural pests
- Develop strategies to preserve and restore (if appropriate) riparian buffers and nonagricultural open space by establishing native grass meadows and corridors

INTERPRETATION AND EDUCATION

New Visitor Center

A new visitor center and museum exhibits provide orientation and opportunities for learning about the Battle of Monocacy within the full context of the Civil War. A new visitor center for Monocacy National Battlefield was completed in 2007. The building is the primary facility for preparing visitors to understand and appreciate Monocacy National Battlefield. The center offers orientation, interpretation, exhibits, sales, restrooms, and other visitor services. Museum exhibits offer opportunities to learn about the Battle of Monocacy within the full context of the Civil War. (The following actions would support this management direction:

- Develop interpretive information, exhibits, and materials to orient visitors to national battlefield interpretive themes

- Provide materials, assistance, and services designed to help visitors plan their time at the national battlefield and select ways to experience the resources that match their interests and time constraints

Visitors' Understanding

Visitors' movement through and experience of the national battlefield's cultural landscape would be the foundation for their understanding of the national battlefield's interpretive themes. Terrain is important in comprehending military strategy and maneuvers. However, looking at a cultural landscape in a broader context reveals "untold stories" of those who lived and traveled there earlier. This can increase the depth of the human experience and give meaning to a place. By offering opportunities for people to encounter the many stories associated with this landscape in logical and meaningful ways, visitors could gain a deeper appreciation of the national battlefield.

Personal and nonpersonal services would be expanded to meet visitors' needs and would be updated to reflect current scholarly research. Outreach programs would continue to be available to diverse audiences.

The following actions would support this management direction:

- Present programs that express and illustrate the national battlefield's seven interpretive themes on ranger tours, through living history, and a variety of other interpretive strategies

- Update non-personal services to reflect new conditions on the battlefield and the areas that can be understood by observation

Partnerships

Partnerships with local school districts, universities, and organizations (for example, the Catoctin Center, Frederick County Public Schools) would be expanded to afford opportunities for learning about the Battle of Monocacy. Each year Monocacy National Battlefield receives an increasing number of requests for ranger programs to be given to educational groups and civic organizations. Curriculum-based field trip opportunities are requested, as are internship programs. The concept of “park as classroom” has great potential for development at the national battlefield with its proximity to numerous educational institutions and the interest by people of all age groups in lifelong learning experiences.

Partnering with local institutions and organizations would help to examine ways that the national battlefield and schools can work together, combining needs and resources to create new opportunities to accomplish these goals.

The following actions would support this management direction:

- Create educational programs for students of all ages to experience lifelong learning
- Arrange special events that will expand on interpretive themes, attracting diverse audiences to the national battlefield through living

history encampments and demonstrations, thematic tours, guest lectures, and a variety of other creative programs

- Continue to offer community outreach programs to expand knowledge about the national battlefield and its significance
- Initiate scholarship and public education partnerships with local entities to expand the information available to the public

VISITOR USE AND FACILITIES

Special Uses

All proposed public activities would be systematically evaluated for appropriateness before they would be permitted. Monocacy National Battlefield regularly receives requests for the use of the battlefield for activities such as weddings, parties, ceremonies, concerts, races, and filming. The National Park Service makes every effort to cooperate with local organizations and the public while ensuring that events and public activities that take place in the national battlefield are appropriate to its purposes and do not harm its resources.

The following actions would support this management direction:

- Use NPS criteria to determine if and when the use would be compatible
- Cooperate with local groups to find alternative locations for events
- Prohibit uses that would damage national battlefield resources and would not contribute to under-

standing of the national battlefield's values and resources

Visitor Safety

Interpretive opportunities would be designed to offer a safe and enjoyable experience for all visitors to Monocacy National Battlefield. All interpretive experiences would continue to be developed with safety factors in mind. Visitors' movement through the national battlefield uses public highways and includes an area near an active railroad. Special programs such as living history or demonstrations of historic weapons require special training to ensure safety. Public safety would continue to be a major concern, and coordinating efforts between national battlefield staff and other agencies would remain essential to ensure a safe visit for everyone.

The following actions would support this management direction:

- Cooperate with state and local law enforcement, emergency medical service, and firefighting agencies to achieve effective visitor protection
- Use NPS criteria to ensure maximum safety in living history programs involving the use of historic weapons
- Maintain all equipment used by or near the public to ensure that it is in proper working order
- Ensure proper lighting in all public use areas
- Ensure that fire exits in public facilities are properly accessible and that all fire codes are met

- Maintain fire extinguishers and fire suppression systems in all public buildings
- Schedule patrols and protection operations to deter illegal activities, assist visitors, and enforce penalties for violations.

NATIONAL BATTLEFIELD OPERATIONS

Monocacy National Battlefield shares some administrative functions with Antietam National Battlefield, but is an independent unit of the national park system.

The national battlefield staff would continue to protect battlefield resources and to investigate theft or damage to the resources —wildlife, plants, and archeological materials.

The national battlefield staff also would continue to carry out visitor safety patrols. This would include patrolling roads, trails, parking areas, fields, and woods areas. Law enforcement actions and investigations would be performed as appropriate.

National battlefield rangers would continue to investigate the dumping of solid wastes, motor vehicle accidents, and environmental issues associated with transportation and utility corridors throughout the national battlefield.

DEVELOPMENT OF COST ESTIMATES

To make wise planning and management decisions for the national battlefield, NPS decision makers and the public must consider an overall picture of the advantages, disadvantages, and

general costs of the alternatives, including the no-action alternative (alternative 1). By including the no-action alternative, a comparison can be made between the action alternatives and current national battlefield management practices.

It is important that the cost estimates contain the same elements and that they be developed with the same general assumptions so that there can be consistency and comparability among alternatives. The presentation of costs within this general management plan is applied to the types and general intensities of development by alternative and in a comparative format. The following caveats apply:

- The costs are presented as estimates and allow for flexibility in application of components.
- These costs are not appropriate for budgeting purposes.
- The costs presented have been developed using industry standards to the extent available.
- Actual costs will be determined at a later date, considering the design of facilities, identification of detailed resource protection needs, and changing visitor expectations.
- Approval of the general management plan does not guarantee that funding or staffing for proposed actions will be available.
- Full implementation of the general management plan may be many years in the future.

Annual Operating Costs

- annual national battlefield operating costs such as staff salary and benefits, equipment, maintenance, utilities, monitoring, contract services, and space rental

Deferred Maintenance

- deferred maintenance is the cost of bringing existing assets up to NPS standards; it can vary by alternative based on the treatment of existing facilities

One-Time Costs

- major rehabilitation or replacement of existing facilities and infrastructure
- new development (including NPS transportation infrastructure costs)
- interpretive media (audiovisual programs, exhibits, wayside exhibits, publications)
- resource management and visitor services (inventories of resources and visitors, implementation planning, compliance)
- other significant one-time costs, such as removing buildings, buying transportation equipment, restoring resources, or acting on specific implementation
- reports, studies, archeological excavations, and other research with substantial costs

LAND ACQUISITION

This plan does not propose acquisition of any lands outside the already authorized boundary (see alternative

maps in chapter 2 for locations of properties within the boundary that have not yet been acquired). Thus no land acquisition costs are provided in this plan.

Lands within the boundary but not currently in fee ownership would receive the following consideration:

Tract #101-34 is bottomland along the Monocacy River owned by Frederick County. The national battlefield has a scenic easement on the property. No acquisition would be necessary unless the county decided to sell the property and development was imminent.

Tract #101-42 is a triangle of land on the northwest side of the national battlefield. It is on the opposite side of I-270 from the national battlefield with difficult access. A scenic easement with height restriction only is in place, and no acquisition would be necessary in the foreseeable future.

The Ladson Tract, #101-28, on the east side of the Monocacy River and

north of the CSX Railroad, is an important location within the national battlefield associated with the events surrounding the battle of Monocacy. The property will be purchased in fee on a willing-seller basis only.

Two tracts along Baker Valley Road, #101-23 and #101-31 across from the Thomas Farm, are within the battlefield sensitive viewshed and would be purchased on a willing-seller basis should they become available.

The national battlefield will seek to acquire a scenic easement on a tract adjacent to the Lewis Farm, tract #101-25. Acquisition in fee does not appear to be necessary.

The acquisition of lands may be through donation, or purchase from a willing seller only. In either case, merely adding lands to the national battlefield does not immediately make funds available for maintenance, restoration, and operation.

ALTERNATIVE 1, THE NO-ACTION ALTERNATIVE (CONTINUE CURRENT MANAGEMENT)

INTRODUCTION

The actions described in this section are those that would be carried out in addition to the actions that would be common to all alternatives (described beginning on p. 41). The no action alternative forms a baseline to which the action alternatives can be compared. Readers can compare the different alternatives and evaluate the effects described for each alternative. It is possible that the no-action alternative could be selected for implementation, but this is unlikely.

Each alternative is explained in relation to the management prescription / management zoning categories also described earlier. Along with the descriptions are maps illustrating the zones and actions. Table 2, at the end of this chapter, compares the alternatives (p. 97).

In the past 20 years, Monocacy National Battlefield has acquired significant new areas of the battlefield, yet little or no guidance has been in place for managing this relatively new NPS area. In addition, the national battlefield has many unmet needs as to infrastructure, staffing, and interpretation. Those needs would become more pressing over the next 20 years without a plan to address them. The actions of alternative 1 are described below.

RESOURCE MANAGEMENT

A number of historic structures, such as the Gambrill House, the Thomas House, and many farm buildings, are in good

condition. However, many other historic structures on the battlefield require stabilization or rehabilitation to ensure their preservation and raise their condition to good. In the no-action alternative, efforts would continue to stabilize and preserve all historic structures on the national battlefield. Such action would ensure their continued existence on the battlefield landscape as markers for interpreting the battle (see the Alternative 1 map).

Agricultural leases would continue unchanged under this alternative.

Although the National Park Service has general policies regarding the placement of new commemorative monuments in national park system units, no battlefield-specific formal policy exists concerning the placement of monuments in Monocacy. Theoretically, monuments could be placed anywhere within the boundaries. There are no restrictions on size, materials, or message, nor are there provisions for the continued maintenance of new monuments. The establishing legislation allows any state that participated in the battle to erect monuments to its soldiers. In the no-action alternative, the National Park Service would work with state-sponsored organizations individually to negotiate agreements that would conform to NPS policies about the placement of new commemorative monuments in national park system units.

Most of the national battlefield's museum and archeological collections are at the NPS National Capital Region's

curatorial storage facility at Lanham, Maryland. However, some museum items are exhibited in the new visitor center well out of the Monocacy River floodplain.

VISITOR USE AND EXPERIENCE

In alternative 1, visitors would continue to arrive at the national battlefield in their personal vehicles. A series of stops off MD 355, Araby Church Road, and Baker Valley Road would enable visitors to go to the sites that were open.

Orientation of visitors will take place at the visitor center. Visitors arriving on scheduled bus tours also would be oriented at the visitor center unless special arrangements were made for a staff person to accompany the tour.

The new visitor center contains educational maps and exhibits. Its location at the north end of the national battlefield allows visitors to orient themselves north to south, roughly the direction in which the battle took place.

The Gambrill Mill would become space available for group programs. Brochures would continue to be available at parking areas and trailheads. Some formal orientation would be offered outside the visitor center.

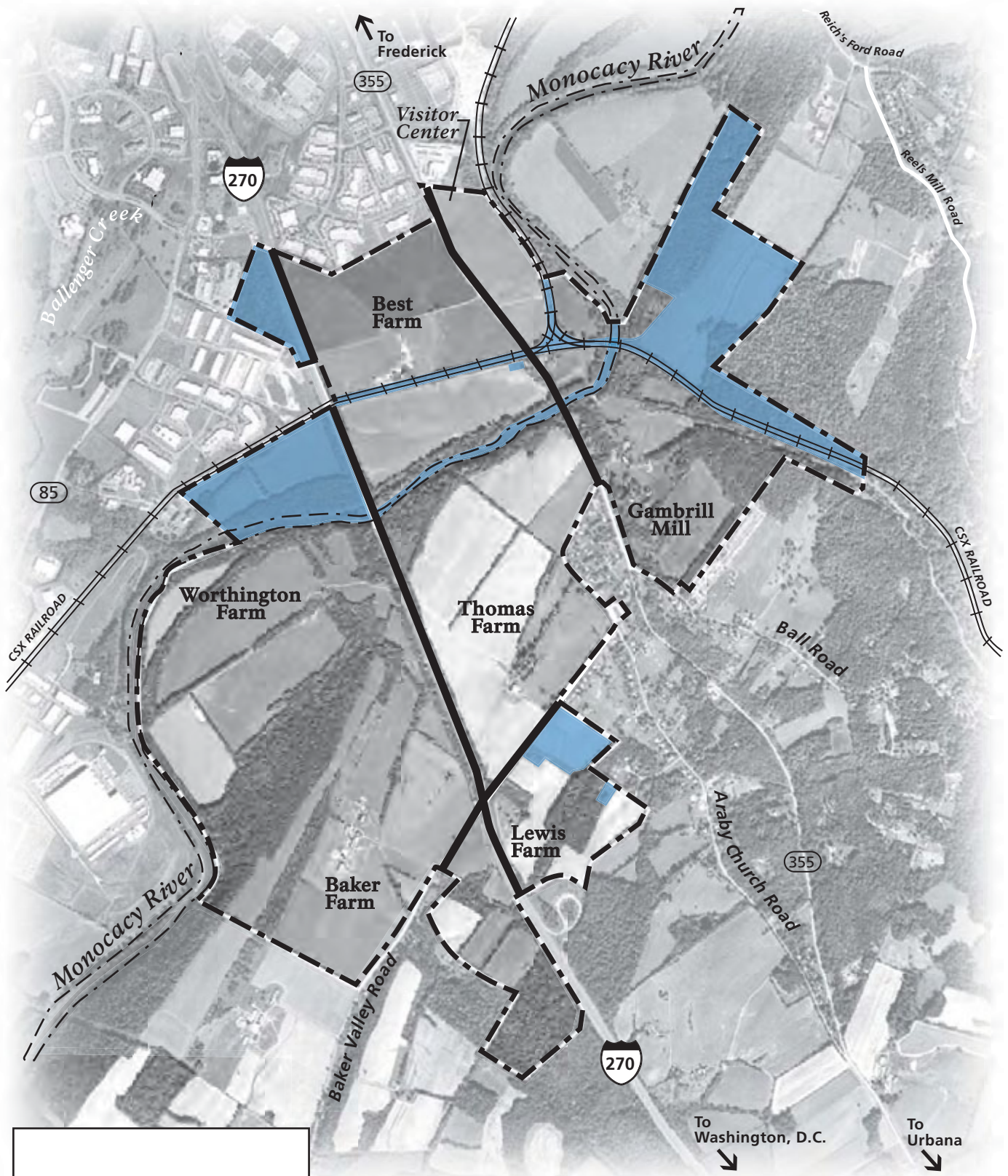
The Lewis Farm, the railroad junction, and the Baker Farm would remain closed to visitation. Access and egress for the 14th New Jersey Monument and the Gambrill Mill to and from the busy Maryland Highway 355 would continue to be difficult and unsafe. The railroad junction would remain inaccessible, and no vantage point to see it would be available.

The Worthington and Thomas farms would continue to be physically and visually separated from each other by I-270, which would make it difficult for visitors to orient themselves to the landscape and understand the battle. Parking areas and trail segments at the Worthington and Thomas farms would be open on a limited basis to provide access to the battlefield. Neither the Worthington House nor the Thomas House and outbuildings would be open to visitors.




NATIONAL BATTLEFIELD OPERATIONS

Administrative offices and functions, with the exception of Visitor Services, would remain in their current location on the second floor of the Gambrill Mill, where facilities are crowded and storage is inadequate. The maintenance functions would remain cramped on the Gambrill Mill property. Vehicle and equipment storage would remain inadequate, as would project work space and offices.

Administrative records still would be stored in the 100-year floodplain. Evacuation would be required each time flooding was forecast. During flood sequences, administrative functions would be disrupted until files, equipment, and other furnishings could be removed to safety. Once flooding subsided, the process would be reversed. The productivity of the administrative staff would be greatly reduced whenever such an event was underway.



OWNERSHIP TRACTS

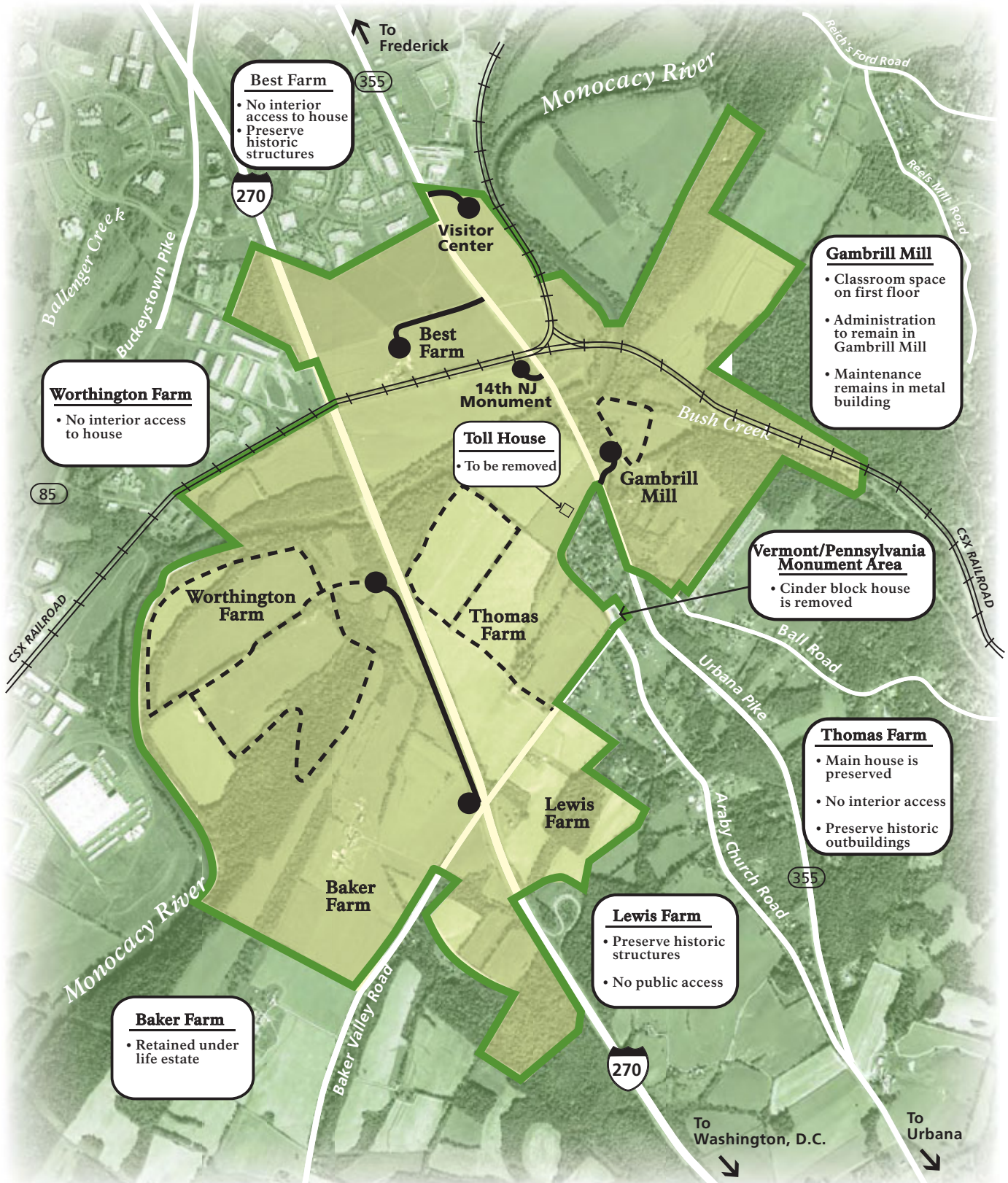
-  NON-FEDERAL
-  PUBLIC ROW
-  NATIONAL BATTLEFIELD BOUNDARY






Current Ownership

Monocacy National Battlefield
 United States Department of the Interior
 National Park Service
 DSC / 894 / 20019 / FEB. 2008

Blank page



-  Park Boundary
-  Pedestrian Trail
-  Vehicular Access
-  Parking Node



Alternative 1
No-Action
 (Continue Current Management)

Monocacy National Battlefield
 United States Department of the Interior
 National Park Service
 DSC / 894 / 20015 / FEB. 2008

Blank page

COSTS

The following applies to costs throughout this management plan:

- The costs are presented as estimates and allow for flexibility in application of components.
- These costs are not appropriate for budgeting purposes.
- The costs presented have been developed using industry standards to the extent available.
- Actual costs will be determined at a later date, considering the design of facilities, identification of detailed resource protection needs, and changing visitor expectations.
- Approval of the general management plan does not guarantee that funding or staffing for proposed actions will be available.
- Full implementation of the general management plan may be many years in the future. Costs have been broken down into annual operating costs and one-time costs. All estimates are presented in 2007 dollars.

Annual costs include the costs associated with ongoing maintenance, utilities, staffing, supplies and materials, and any leasing costs. This alternative would continue the current staffing level of 16 FTE (full time equivalent) employees. Deferred maintenance costs are those costs necessary to bring current infrastructure up to NPS standards. One-time costs are low in this alternative, due to the small number of projects that have been approved at the NPS program level and assigned to a funding source.

Annual operating costs:	\$1,600,000
Includes 16 FTE positions	
Deferred maintenance:	\$5,700,000
One-time costs:	\$105,000
Facility and non-facility costs:	\$30,000
Removal of buildings (2):	\$75,000

ALTERNATIVE 2

INTRODUCTION

As was mentioned previously (see page 39), alternatives 2, 3, and 4 are called the “action” alternatives. This is because each includes actions that would be carried out if that alternative was selected for implementation. Each alternative must be considered along with the actions described as common to all alternatives (beginning on p. 41).

Each alternative is described in relation to the management prescription / management zoning categories that were described earlier. Along with the descriptions are maps illustrating the zones and actions. Table 2, at the end of this chapter, compares the alternatives (p. 97).

Alternative 2 would focus relatively narrowly on the story of the Battle of Monocacy, explaining troop movements, how the landscape affected the battle, and conveying an understanding of the players. It would depend highly on visitors getting out onto the battlefield to understand the course of the battle and the strategies used. The historic farmsteads would act as reference points for interpretation, not as interpretive focal points. None of the historic houses would be open to visitors (see the Alternative 2 map).

An alternative transportation system consisting of small buslike vehicles would carry visitors around the national battlefield. Such a system could be provided through a commercial services

contract, if market conditions allow and a willing vendor could be found.

Because Monocacy National Battlefield would not have a fully internal road system, this transportation system would allow visitors to concentrate on the story of the Battle of Monocacy rather than on the logistics of getting around the battlefield — the busy traffic on MD 355, directional signs, or brochure map. Visitors’ use of this transportation system would be mandatory when the system was operating; at other times, they could use their personal vehicles in the national battlefield.

The system would begin at the new visitor center and link the interpretive locations in the national battlefield. The transportation vehicles would stop at the Best Farm, the 14th New Jersey Monument, the Worthington and Thomas farms, the Pennsylvania/Vermont commemorative area, and the Gambrill Mill, and then return to the visitor center. Information and orientation would be offered between stops by a staff person riding on the system or by an automated recording. Visitors could get off the bus at any stop and continue on a later bus.

Brochures and new wayside signs and exhibits would provide guidance and information along existing and new trails. During the primary visitor season and for special events, interpretive rangers would be stationed at key locations throughout the national battlefield to offer additional interpretation.

Although the trails would not be designed primarily for recreational use, under alternative 2 visitors could walk the trails to fish in the river or to observe wildlife. Other recreational activities such as horseback riding and bicycling would not be allowed.

VISITOR SERVICES ZONE

Three areas in Monocacy National Battlefield have been zoned for visitor services: the new visitor center near the north entrance, the parking area and interior first floor of the Gambrill Mill, and part of the Thomas farm that would include parking, restrooms, and interpretive exhibits in the stone tenant house.

The new visitor offers adequate orientation through educational maps, exhibits, and interpretive programs. All visitors are expected to begin their visits here, at a location that would allow north to south orientation, roughly the direction in which the battle took place.

On the Thomas farm, a historic stone tenant house would contain additional exhibits focusing on the Battle of Monocacy. A parking area accessible for visitors with disabilities would be constructed along Baker Valley Road at the end of the farm lane, south of the existing barn, where a nonhistoric cinder block house now sits. (The cinder block house would either be removed and replaced by a small restroom facility or adaptively reused for restrooms.) A trail would lead from the parking area along a historic road trace to the Thomas Farm structures.

The first floor of the Gambrill Mill would be used as classroom space for

school groups, a lecture hall for speakers, a place for staff meetings, and public restrooms.

BATTLEFIELD PRESERVATION ZONE

A trail would be built from the visitor center south to an overlook above the railroad junction and the Monocacy River bridges, where the battle opened.

The Best farmhouse would undergo exterior rehabilitation. The National Park Service would also preserve the secondary house, stone barn, and corn crib. The farm would be the first stop on the transportation system. From MD 355, the historic farm would appear much as it did during the 19th century. Special guided tours of the site for groups could be offered occasionally.

The gravel entry road from Baker Valley Road to the Worthington House would be restricted to one-way traffic.

The Worthington House interior would not be open to the public, but the porch and grounds and the Brooks Hill Trail would be accessible. Waysides, brochures, and interpretive rangers would offer information about the site's history and the house's inhabitants.

A deck would be constructed over I-270 (described on p. 84) to connect the Worthington Farm to the Thomas Farm. The deck, when completed, would reconnect the two halves of the battlefield and reestablish the historic fence line that once separated the two farms. A historic lane through the Thomas Farm would be improved to facilitate visitor flow through the national battlefield.

The Thomas House would be leased out under the NPS historic leasing program. Public access would be restricted. The National Park Service would preserve all other historic outbuildings, including a stone tenant house where exhibits would be provided.

Visitors would have access to the grounds around the Thomas farmstead and to a new trail over the battlefield. Exhibits, brochures, and other media explaining the importance of the Thomas Farm to the Battle of Monocacy would supplement information available in the stone tenant house.

COMMEMORATIVE ZONE

Under alternative 2, no actions would be proposed for the Maryland and United Daughters of the Confederacy monuments, which are on the west side of MD 355 just inside the boundary of the national battlefield. The maintenance of these monuments would be continued. No additional monuments would be added at this location, and no changes would be made to the surrounding landscape.

To make access to the 14th New Jersey Monument safer, the entrance would be shifted south, allowing better sight distances for vehicles on MD 355. The national battlefield staff would consult with the state of New Jersey (which owns the monument) and with the Maryland State Highway Administration to develop a plan to improve parking, access, and egress at the monument.

A designed commemorative area would be developed along Araby Church Road near the existing Pennsylvania and Vermont monuments. Any new monu-

ments would be located here under guidelines to be developed regarding their size, design, color, placement, and maintenance. A cinder block house now on the site would be removed, to be replaced by a designed landscaped area with parking.

NATURAL RESOURCES ZONE

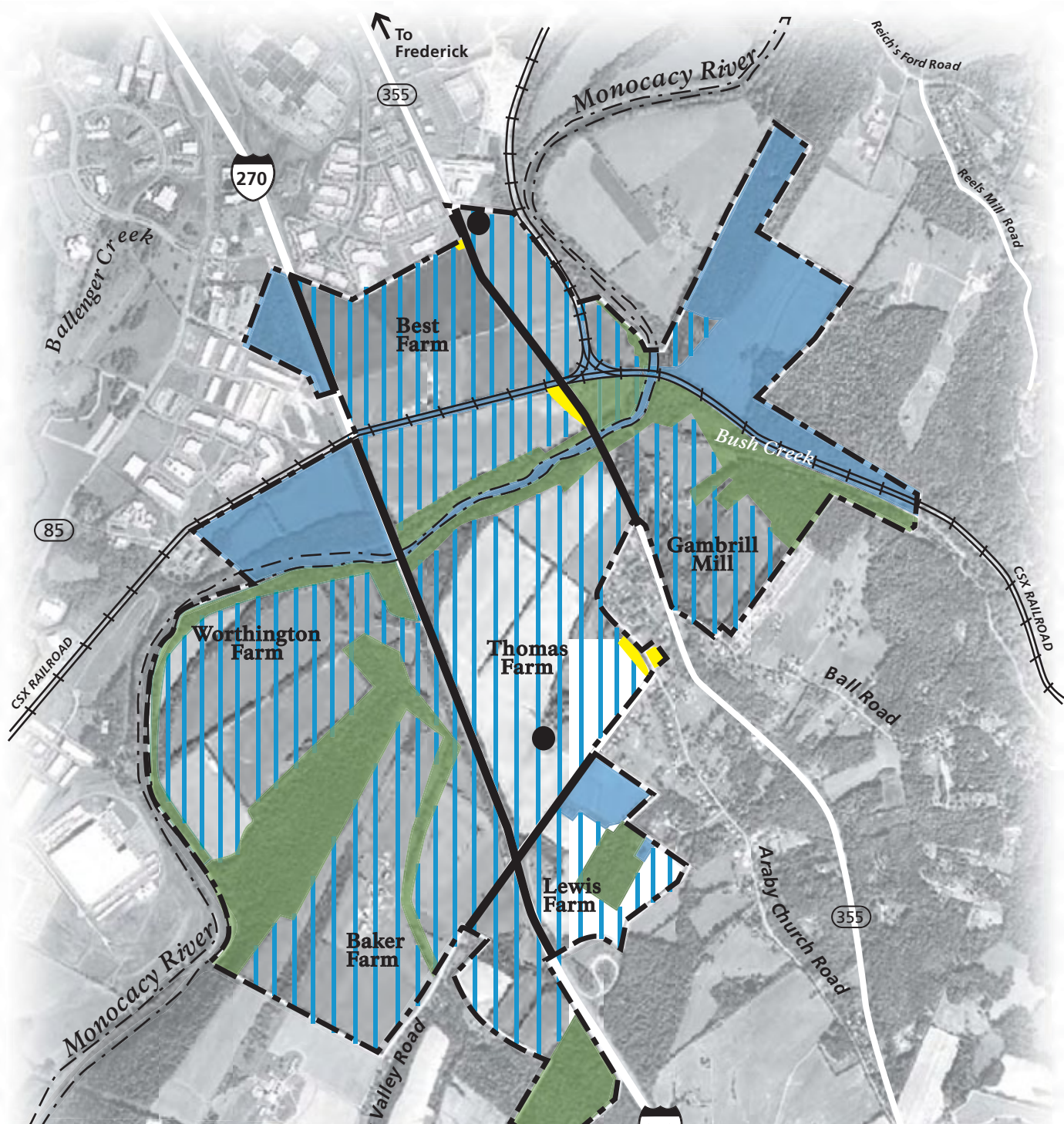
The existing short circular trail from the Gambrill Mill parking area would be extended through the natural resources zone to the Wallace's headquarters site and the Union entrenchments. The trail would cross over Bush Creek via a new bridge and under the heavily used CSX railroad line by way of a walkway under the Monocacy River trestle. A barrier fence would be constructed along the rail line to keep visitors off of the active tracks.

Upgraded interpretation along trails would include wayside exhibits and possibly brochures designed to help people observing wildlife and to give historical information or information on trees and plant species.






MAINTENANCE AND ADMINISTRATION ZONE

In alternative 2, the national battlefield's administrative functions would be consolidated into one location and moved into leased space outside the boundary.





The maintenance function would be moved into leased space from its current location near Gambrill Mill. The metal building that now houses maintenance would be removed and the site re-landscaped as a part of the battlefield preservation zone.



MANAGEMENT ZONES

-  COMMEMORATIVE
-  MAINT./ADMIN.
-  NATURAL RESOURCE
-  BATTLEFIELD PRESERVATION
-  VISITOR SERVICES

OWNERSHIP TRACTS

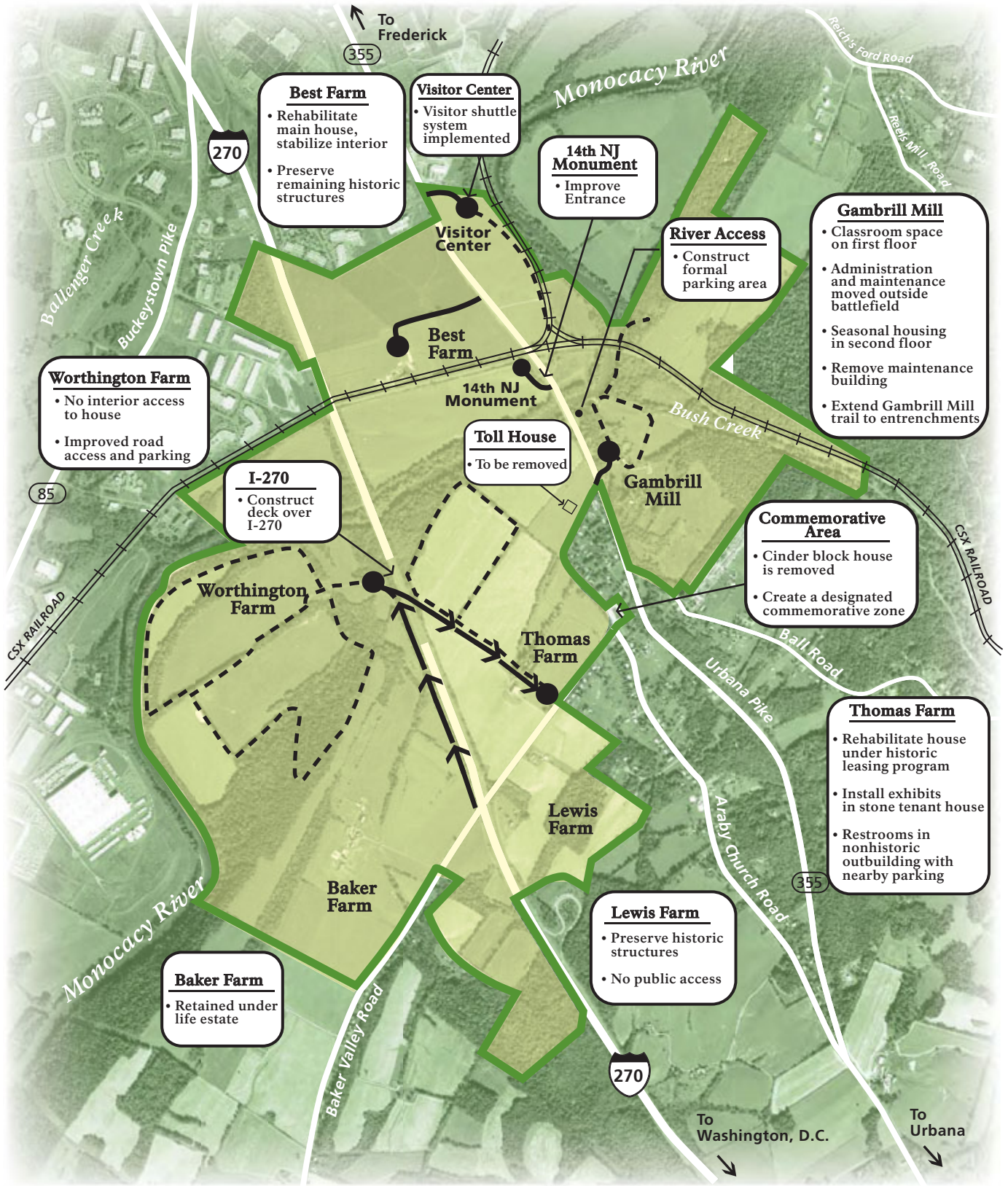
-  NON-FEDERAL
-  PUBLIC ROW
-  BOUNDARY
-  MONOCACY RIVER



**Management Zones
Alternative 2**

Monocacy National Battlefield
 United States Department of the Interior
 National Park Service
 DSC / 894 / 20020 / FEB. 2008

blank



Best Farm

- Rehabilitate main house, stabilize interior
- Preserve remaining historic structures

Visitor Center

- Visitor shuttle system implemented

14th NJ Monument

- Improve Entrance

Gambrill Mill

- Classroom space on first floor
- Administration and maintenance moved outside battlefield
- Seasonal housing in second floor
- Remove maintenance building
- Extend Gambrill Mill trail to entrenchments

Worthington Farm

- No interior access to house
- Improved road access and parking

I-270

- Construct deck over I-270

Toll House

- To be removed

Commemorative Area

- Cinder block house is removed
- Create a designated commemorative zone

Thomas Farm





- Rehabilitate house under historic leasing program
- Install exhibits in stone tenant house
- Restrooms in nonhistoric outbuilding with nearby parking

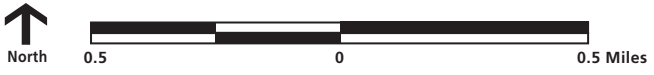
Lewis Farm

- Preserve historic structures
- No public access

Baker Farm

- Retained under life estate

-  Park Boundary
-  Pedestrian Trail
-  Vehicular Access
-  Parking Node



Alternative 2
Monocacy National Battlefield
 United States Department of the Interior
 National Park Service
 DSC / 894 / 20016 / FEB. 2008

blank

The second floor of the Gambrill Mill would be used for temporary housing for seasonal employees, who have a difficult time finding affordable short-term housing in the Frederick area. The Gambrill Mill and parking area would be the only area in alternative 2 in the maintenance and administration zone.

COSTS

The following applies to costs throughout this management plan:

- The costs are presented as estimates and allow for flexibility in application of components.
- These costs are not appropriate for budgeting purposes.
- The costs presented have been developed using industry standards to the extent available.
- Actual costs will be determined at a later date, considering the design of facilities, identification of detailed resource protection needs, and changing visitor expectations.
- Approval of the general management plan does not guarantee that funding or staffing for proposed actions will be available.
- Full implementation of the general management plan may be many years in the future.

Costs have been broken down into annual operating costs and one-time costs. All estimates are presented in 2007 dollars.

Annual costs include the costs associated with ongoing maintenance,

utilities, staffing, supplies and materials, and leasing costs associated with the off-site maintenance facility.

Staffing levels needed to fully implement the alternative are proposed at 20 full-time equivalent positions (FTEs), four more than alternative 1. The complexity of the operation at the national battlefield now requires an administrative function to work on budget and personnel issues. A law enforcement ranger was recommended in the “Law Enforcement Needs Assessment” completed for the national battlefield. An already funded, but unfilled, biological technician position is needed to assist the growing workload of natural resource projects and the Youth Conservation Corps program. Opening up of the Thomas farm to visitation along with new exhibits will require an additional ranger presence at the farm.

Deferred maintenance costs are those costs necessary to bring current infrastructure up to NPS standards.

Among the projects included in the one-time costs are new trails, a new vehicular entrance at the 14th New Jersey Monument, visitor use enhancements at the Thomas Farm, removal of a non-historic house and development of a Civil War commemorative area, road improvements, and rehabilitation of the exterior of the Best farmhouse. The removal of the maintenance building and treatment of the site after demolition are also included in one-time costs. These projects constitute the majority of capital investments proposed in alternative 2 (for a complete list of actions, see table 2 at the end of chapter 2). The “Other” category

includes research projects, studies, and documentation.

Annual operating costs:	\$2,000,000
Includes 20 FTE positions	
Deferred maintenance:	\$5,400,000
One-time costs:	\$2,025,000
Facility and	
non-facility costs:	\$1,700,000
Removal of buildings (3)	\$125,000
Other	\$200,000

Note: The proposal for the I-270 deck (automobile use) at a cost of \$11,400,000 would be funded only if it can be accomplished as part of the I-270 impact mitigation. It does not represent a cost to the National Park Service.

ALTERNATIVE 3

INTRODUCTION

Alternative 3 would expand the story of the Battle of Monocacy, not only explaining the troop movements but describing the impact of the battle and the Civil War on Frederick and the surrounding countryside. More emphasis would be placed on the human story in alternative 3 than in alternative 2 (in which the landscape would be of primary importance). Exhibits in the Best and Worthington houses would focus attention on the lives of the local people who were caught up in the maelstrom of battle. To fully comprehend the course and impact of the battle, visitors would need to go to the visitor center and the historic houses and walk the trails of the battlefield.

Each alternative must be considered along with the actions described as common to all alternatives (beginning on p. 41). Each alternative is explained in relation to the management prescription / management zoning categories also described earlier. Along with the descriptions are maps illustrating the zones and actions. Table 2, at the end of this chapter, compares the alternatives (p. 97).

Visitors would traverse the national battlefield at their own pace, using their own vehicles. Much of their knowledge of the site would be gained at the visitor center. Beginning at the visitor center inside the north boundary, visitors would proceed to the 14th New Jersey Monument, Worthington Farm, and on to the Thomas Farm. Then they would return along Baker Valley and Araby

Church roads to the Pennsylvania and Vermont monuments commemorative area and finally to the Gambrill Mill area. This circulation pattern would enable visitors to view the battlefield in the chronological sequence of the battle.

Brochures and new wayside signs and exhibits would provide guidance and information along existing and new trails. During the primary visitor season and for special events, interpretive rangers would be stationed at key locations throughout the national battlefield to offer further interpretation.

Although the trails would not be designed primarily for recreational use, under alternative 3 visitors could walk the trails to fish in the river or to observe wildlife. Other recreational uses such as horseback riding and bicycling would not be allowed.

VISITOR SERVICES ZONE

Areas of the national battlefield that would be zoned for visitor services under alternative 3 are the new visitor center near the north entrance, the interior first floor of the Best Farmhouse, the first floor of the Gambrill Mill, part of the Thomas farm (including the interior of the stone tenant house), and the first floor of the Worthington Farmhouse.

The new visitor center offers exhibits and orientation to the battlefield, and serves as the staging point for each visitor's tour. At this location at the north end of the national battlefield, visitors will orient themselves north to south, roughly the direction in which

the battle took place. Visitors arriving on scheduled bus tours also would be oriented at the visitor center.

The interior first floor of the farmhouse on the Best Farm would be used for exhibits focusing on the role of the farm in the battle and the history of the Vincendière family that lived there. This would supplement the more general information available at the visitor center.

Exhibits on the first floor of the Worthington Farmhouse would highlight the effects of the battle on the Worthington family. Other exhibits there would help visitors to understand the Confederate troop movements on this side of the battlefield.

A historic stone tenant house on the Thomas Farm would contain exhibits focused on the role of the farm in the battle and the history of the battlefield's cultural landscape. A nonhistoric cinder block house along Baker Valley Road would be rehabilitated for restrooms or replaced by a similar facility. Parking also would be available at this site.

The Gambrill Mill space would become classroom space for school groups, a lecture hall for speakers, a place for staff meetings, and public restrooms.

BATTLEFIELD PRESERVATION ZONE

At the Best Farm, the secondary house, the barn, and other outbuildings would be preserved, and their interiors would be either open to visitors or visible through windows. Interpretive signs would help visitors understand the

importance of the structures and the farm as a whole.

There would be no trail to the railroad junction from the visitor center in alternative 3, but a new parking area for the 14th New Jersey Monument on the east side of MD 355 would enable visitors to see the junction.

The Lewis Farm would be accessible by footpath from the Worthington parking area along Baker Valley Road. The house, barn, and corncrib would be rehabilitated but no structure would be open for visitation. Wayside exhibits would provide interpretation.

The gravel-surfaced entry lane from Baker Valley Road to the Worthington House would be widened to two lanes, and a small parking area accessible for people with disabilities would be developed so that vehicles could be parked closer to the Worthington House. The parking area would be created on ground reclaimed from a 20th century borrow pit. It probably would be adjacent to I-270 and about 300 yards east of the house, but it would not be visible from the Worthington House.

No deck would be constructed in alternative 3 over I-270 (described on p. 84) to connect the Worthington Farm to the Thomas Farm.

A recently designated trail around the Thomas Farm, would allow visitors to tour the battlefield on the Thomas Farm.

COMMEMORATIVE ZONE

In alternative 3, no actions would be proposed for the Maryland and United Daughters of the Confederacy

monuments, which are on the west side of MD 355 just inside the boundary of the national battlefield. The monuments would continue to be maintained. No monuments would be added, and no changes would be made to the surrounding landscape.

The entrance to the 14th New Jersey Monument would be moved to the east side of MD 355, and a new parking area would be added. A trail under the MD 355 railroad overpass would lead to the monument. The old parking area would be removed and the land rehabilitated. These improvements would increase the safety of access from MD 355.

A designed commemorative area would be developed along Araby Church Road near the existing Pennsylvania and Vermont monuments. A cinder block house now on the site would be removed, to be replaced by a landscaped area with parking. No new monuments would be allowed in the national battlefield.

NATURAL RESOURCES ZONE

An existing informal parking area on the east side of MD 355 used by fishermen would be closed and the area re-landscaped. Fishermen would be allowed to park at the 14th New Jersey Monument parking area and take a trail down to the river.

The Gambrill Mill Trail would be extended to the railroad crossing. Interpretive waysides and selective vista clearing would allow visitors to see the junction where fighting began.

MAINTENANCE AND ADMINISTRATION ZONE

The interior of the Thomas House would be adaptively used for administrative offices. Visitors generally would not have access to it, but they could get some understanding of the house and the events that occurred there through waysides and exhibits in the stone tenant house.

Maintenance would remain in the metal building on the Gambrill property. The structure would be expanded to meet the needs for offices, vehicle storage, and work space for a fully developed national battlefield.

When administrative offices are moved from the Gambrill Mill to the Thomas House, the first floor of the Gambrill Mill would serve as classrooms, employee meeting space, and public restrooms. The second floor would be used for office space.

COSTS

The following applies to costs throughout this management plan:

- The costs are presented as estimates and allow for flexibility in application of components.
- These costs are not appropriate for budgeting purposes.
- The costs presented have been developed using industry standards to the extent available.
- Actual costs will be determined at a later date, considering the design of facilities, identification of detailed resource protection needs, and changing visitor expectations.

- Approval of the general management plan does not guarantee that funding or staffing for proposed actions will be available.
- Full implementation of the general management plan may be many years in the future.

Costs have been broken down into annual operating costs and one-time costs. All estimates are presented in 2007 dollars.

Annual costs include the costs associated with ongoing maintenance, utilities, staffing, supplies and materials, and leasing costs. Staffing levels needed to carry out the alternative are proposed at 22 full-time equivalent positions (FTEs). The complexity of the operation at the national battlefield now requires an administrative function to work on budget and personnel issues. A law enforcement ranger was recommended in the “Law Enforcement Needs Assessment” completed for the national battlefield. An already funded biological technician position is needed to assist the growing workload of natural resource projects and the Youth Conservation Corps program. The opening up of the Thomas farm to visitation along with new exhibits will require an additional ranger presence at the farm. A museum technician will be needed to care for exhibits at the Worthington and Thomas farms and to free up an interpretive position. An additional maintenance mechanic will

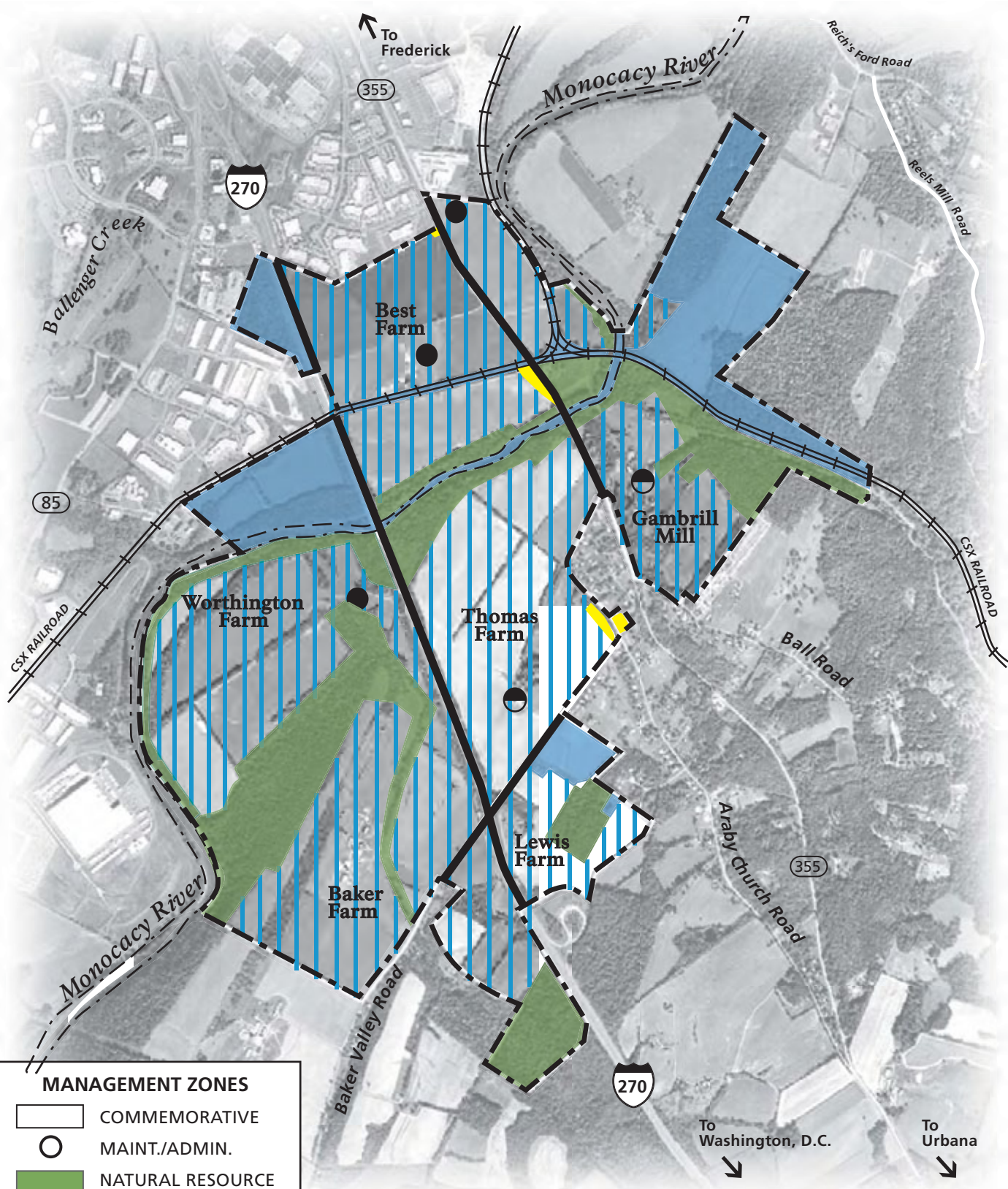
allow better maintenance of structures that will be opened to the public.

Deferred maintenance costs are those costs necessary to bring current infrastructure up to NPS standards.






Among the major one-time cost items in alternative 3 are a new vehicular entrance, parking area, and site treatment at the 14th New Jersey Monument; visitor use enhancements at the Worthington House, including exhibits on the lives of local residents at the time of the Civil War, entry lane widening, and development of an accessible parking area; the adaptive use of the Thomas House for administration; and expansion of the maintenance facility. These capital investments would constitute the major portion of the NPS development in the national battlefield during the next 20 years. For a complete list of actions see table 2 at the end of chapter 2.

The “Other” category includes research projects, studies, and documentation.





Annual operating costs:	\$2,200,000
Includes 22 FTE positions	
Deferred maintenance:	\$2,000,000
One-time costs:	\$5,975,000
Facility and	
non-facility cost:	\$5,700,000
Removal of buildings (2):	\$75,000
Other:	\$200,000

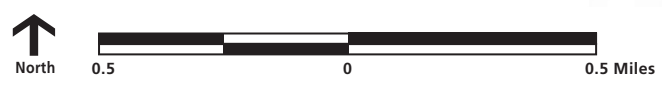


MANAGEMENT ZONES

-  COMMEMORATIVE
-  MAINT./ADMIN.
-  NATURAL RESOURCE
-  BATTLEFIELD PRESERVATION
-  VISITOR SERVICES

OWNERSHIP TRACTS

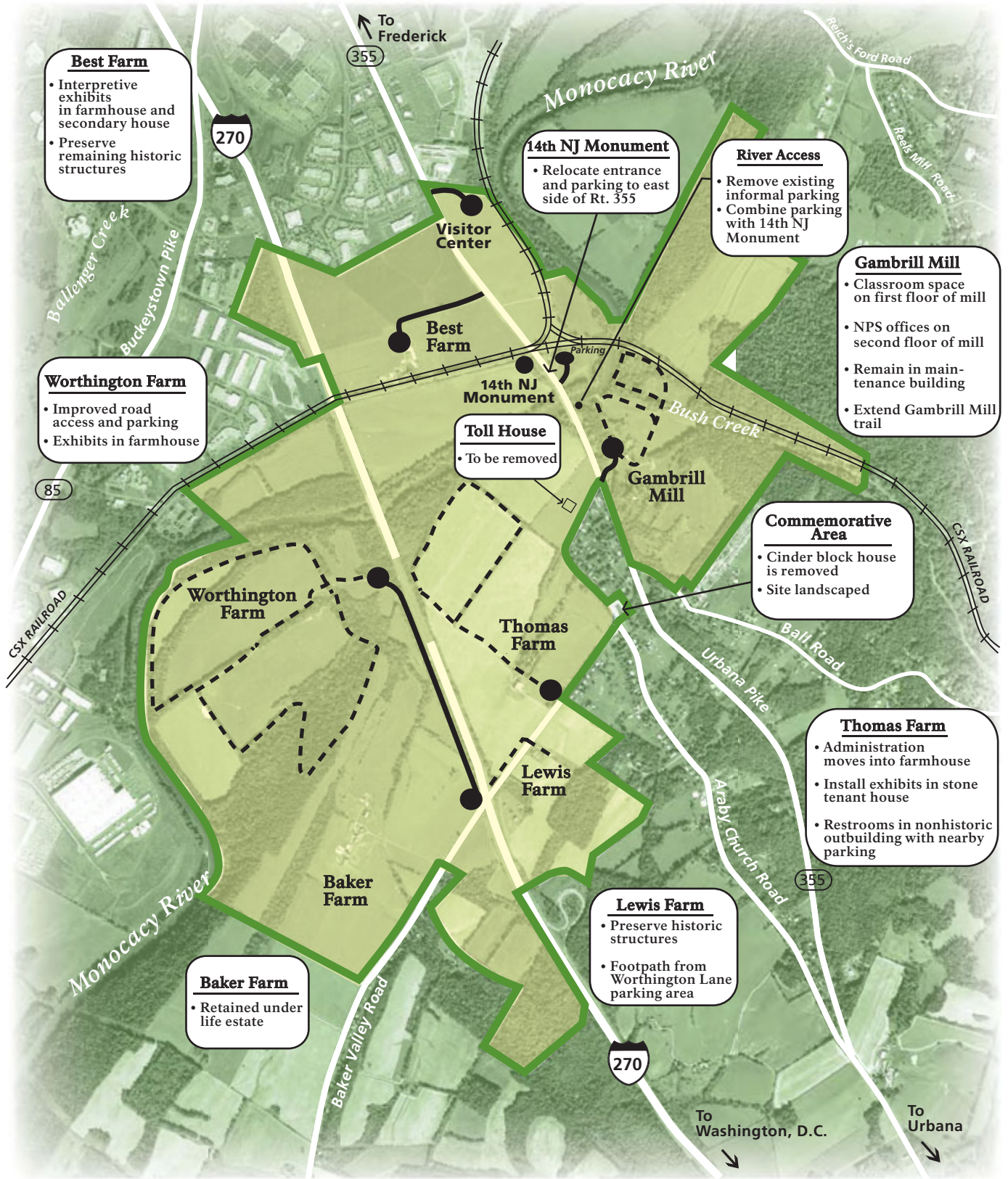
-  NON-FEDERAL
-  PUBLIC ROW
-  BOUNDARY
-  MONOCACY RIVER



**Management Zones
Alternative 3**

Monocacy National Battlefield
 United States Department of the Interior
 National Park Service
 DSC / 894 / 20021 / FEB. 2008

blank



Best Farm

- Interpretive exhibits in farmhouse and secondary house
- Preserve remaining historic structures

Worthington Farm

- Improved road access and parking
- Exhibits in farmhouse

Baker Farm

- Retained under life estate

14th NJ Monument

- Relocate entrance and parking to east side of Rt. 355

Toll House

- To be removed

Lewis Farm

- Preserve historic structures
- Footpath from Worthington Lane parking area

River Access

- Remove existing informal parking
- Combine parking with 14th NJ Monument

Gambrill Mill





- Classroom space on first floor of mill
- NPS offices on second floor of mill
- Remain in maintenance building
- Extend Gambrill Mill trail

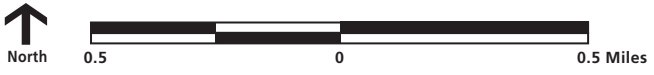
Commemorative Area

- Cinder block house is removed
- Site landscaped

Thomas Farm

- Administration moves into farmhouse
- Install exhibits in stone tenant house
- Restrooms in nonhistoric outbuilding with nearby parking

-  Park Boundary
-  Pedestrian Trail
-  Vehicular Access
-  Parking Node



Alternative 3
Monocacy National Battlefield
 United States Department of the Interior
 National Park Service
 DSC / 894 / 20017 / FEB. 2008

blank

ALTERNATIVE 4 (THE PREFERRED ALTERNATIVE)

INTRODUCTION

Alternative 4 has been identified as the future direction preferred by the National Park Service. It is a combination of features and actions from the other alternatives. The benefits of the alternatives were evaluated with the use of an objective analytical process called “choosing by advantages,” or CBA, which is discussed on page 40. The features that appeared to impart the most benefit (considering cost, staffing constraints, and management concerns) were selected.

Each alternative must be considered along with the actions described as common to all alternatives (beginning on p. 41). Each alternative is explained in relation to the management prescription / management zoning categories also described earlier. Along with the descriptions are maps illustrating the zones and actions. Table 2, at the end of this chapter, compares the alternatives (p. 97).

In a manner similar to that of alternative 3, alternative 4 would involve expanding the story of Monocacy beyond the battle of July 9, 1864. In addition to interpretation of the battle, in this alternative emphasis would be placed on the national battlefield’s role as a military and transportation crossroads throughout the Civil War. Even more broadly, this alternative would focus attention on Monocacy’s position as an important crossroads from prehistory to the present.

Visitors would traverse the national battlefield at their own pace, using their

own vehicles. Much of their knowledge of the site would be gained at the visitor center. Beginning at the visitor center inside the north boundary, visitors would walk to the 14th New Jersey Monument, the Worthington Farm, and across the deck bridging I-270 to the Thomas Farm. Then they would return along Baker Valley and Araby Church roads to the Pennsylvania and Vermont monuments commemorative area and finally to the Gambrill Mill area. This circulation pattern would enable visitors to view the battlefield in the chronological sequence of the battle.

Brochures and new wayside signs and exhibits would provide guidance and information along existing and new trails. During the primary visitor season and for special events, interpretive rangers would be stationed at key locations throughout the national battlefield to offer additional interpretation.

Although the trails would not be designed primarily for recreational use, under alternative 4 visitors could walk the trails to fish in the river or to observe wildlife. Other recreational uses such as horseback riding and bicycling would not be allowed.

VISITOR SERVICES ZONE

Four areas in the national battlefield would be zoned for visitor services under alternative 4: the new visitor center near the north entrance, the Worthington House, part of the Thomas Farm (which would include parking, restrooms, and interpretive exhibits in the stone tenant house), and the parking

area and the first floor of the Gambrill Mill.

The new visitor center provides adequate space for orientation of national battlefield visitors. The new center also contains educational maps and exhibits. Its location at the north end of the national battlefield allows visitors to orient themselves north to south, roughly the direction in which the battle took place.

As with alternative 3, in alternative 4 all visitors would be expected to begin their visits at the new visitor center. Visitors arriving on scheduled bus tours would be oriented at the new visitor center or on the bus by accompanying staff.

The first floor of the Worthington House would be open to visitors. It would contain exhibits explaining the history of the site and its role in the battle.

A historic stone tenant house on the Thomas Farm would contain additional exhibits focusing on the cultural history of the battlefield landscape and the concept of Monocacy as a crossroads through time.

A nonhistoric cinder block house along Baker Valley Road, also on the Thomas Farm, would be rehabilitated for use as restrooms, or it would be replaced by a similar facility. Parking also would be available at this site.

The first floor of the Gambrill Mill would be used for classrooms. The second floor would continue to house NPS offices.

BATTLEFIELD PRESERVATION ZONE

The Best farmhouse exterior would be rehabilitated but visitors would have no access inside. The secondary house, the barn, and other outbuildings would be preserved, and their interiors would be either open to visitors or visible through windows. Interpretive signs would help visitors understand the importance of the structures and the farm as a whole.

The gravel-surfaced entry lane from the Baker Valley Road to the Worthington House would be widened for two-way access, and a small parking area accessible for visitors with disabilities would be developed so that vehicles could be parked closer to the Worthington House. The parking area would be added on ground reclaimed from a 20th century borrow pit. It probably would be adjacent to I-270 and about 300 yards east of the house, but it would not be visible from the Worthington House.

A pedestrian deck would be constructed over I-270 (described on p. 84) to connect the Worthington Farm to the Thomas Farm and to reestablish an important historic fence line. In conjunction with improvements to a historic lane through the Thomas Farm, the deck trail would be a means for visitors to tour the site without backtracking down the Worthington Lane and Baker Valley Road. The wedge-shaped deck would be planted with crops and fence rows to help visitors visualize the area's historic appearance without the interstate highway.

The circle trail around the Thomas Farm would connect over the deck to the Worthington Farm. Visitors could then

walk out on the most significant areas of the battlefield. Wayside exhibits and brochures explaining the importance of the Thomas Farm to the Battle of Monocacy would supplement information available in the stone tenant house.

COMMEMORATIVE ZONE

No actions would be proposed for the northernmost commemorative zone on the west side of MD 355 just inside the boundary of the national battlefield. This area, which encompasses the Maryland and United Daughters of the Confederacy monuments, would continue to be maintained. No monuments would be added, and no changes would be made to the surrounding landscape.

To improve visitor safety, the entrance to the 14th New Jersey Monument would be shifted south. The National Park Service would consult with the state of New Jersey (which owns the monument) and with the Maryland State Highway Administration to improve the safety of access and egress to MD 355, as well as to improve the appearance of the parking area.

To accommodate any new monuments, a commemorative area would be developed along Araby Church Road near the existing Pennsylvania and Vermont monuments. A cinder block house now on the site would be removed, to be replaced by a landscaped area with parking. All new monuments would be placed in this area, and guidelines would be developed regarding their size, design, color, placement, and maintenance.

NATURAL RESOURCES ZONE

An existing informal parking area on the east side of MD 355 used by fishermen would be closed and the area re-landscaped. Fishermen would be allowed to park at the 14th New Jersey Monument parking area and take a trail down to the river.

The existing short circular trail from the Gambrill Mill parking area would be extended through the natural resources zone to the Wallace's headquarters site and the Union entrenchments. The trail would cross over Bush Creek via a new bridge and under the heavily used CSX railroad line by way of a walkway under the Monocacy River trestle. A barrier fence would be constructed along the rail line to keep visitors off of the active tracks.

Upgraded interpretation along trails would include wayside exhibits and possibly brochures designed to help people observing wildlife and to give historical information or information on trees and plant species.

MAINTENANCE AND ADMINISTRATION ZONE

As in alternative 3, the interior of the Thomas House would be adaptively used for administrative offices. Visitors generally would not have access to it, but they could gain some understanding of the house and the events that occurred there through waysides and exhibits in the stone tenant house.

Maintenance would remain in the metal building on the Gambrill property. The structure would be redesigned to meet

the needs for offices, vehicle storage, and work space for a fully developed national battlefield.

COSTS

The following applies to costs throughout this management plan:

- The costs are presented as estimates and allow for flexibility in application of components.
- These costs are not appropriate for budgeting purposes.
- The costs presented have been developed using industry standards to the extent available.
- Actual costs will be determined at a later date, considering the design of facilities, identification of detailed resource protection needs, and changing visitor expectations.
- Approval of the general management plan does not guarantee that funding or staffing for proposed actions will be available.
- Full implementation of the general management plan may be many years in the future.

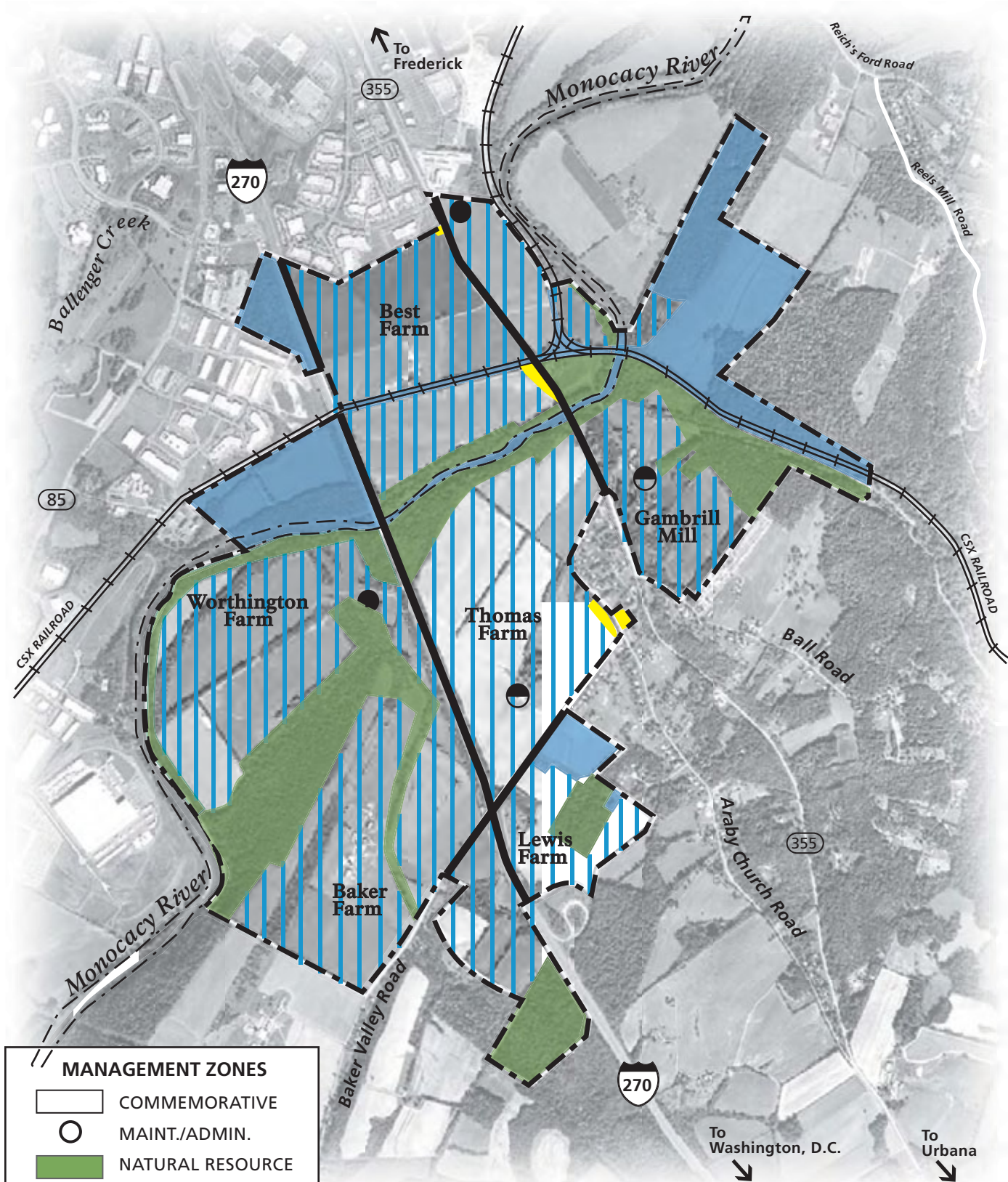
Costs have been broken down into annual operating costs and one-time costs. All estimates are presented in 2007 dollars.

Annual costs include the costs associated with ongoing maintenance, utilities, staffing, supplies and materials, and any leasing costs. Staffing levels needed to carry out the alternative are proposed at 22 full-time equivalent positions (FTEs). The complexity of the





operation at the national battlefield now requires an administrative function to work on budget and personnel issues. A law enforcement ranger was recommended in the “Law Enforcement Needs Assessment” completed for the national battlefield. An already funded biological technician position is needed to assist the growing workload of natural resource projects and the Youth Conservation Corps program. The opening up of the Thomas farm to visitation along with new exhibits will require a presence at the farm. A museum technician will be needed to care for exhibits at the Worthington and Thomas farms and to free up an interpretive position. An additional maintenance mechanic will allow better maintenance of structures that will be opened to the public.

Deferred maintenance costs are those costs necessary to bring current infrastructure up to NPS standards.





A new vehicular entrance at the 14th New Jersey Monument; exhibits at the Thomas Farm; visitor use enhancements at the Worthington House, including exhibits, entry lane widening, and accessible parking area; the adaptive use of the Thomas House for administration; removal of cinder block house and site treatment in the new commemorative area; and redesign of the maintenance facility to meet national battlefield needs constitute the majority of capital investments in alternative 4. These one-time costs would constitute the major portion of development of the national battlefield during the next 20 years. For a complete list of actions see table 2 at the end of chapter 2.



MANAGEMENT ZONES

-  COMMEMORATIVE
-  MAINT./ADMIN.
-  NATURAL RESOURCE
-  BATTLEFIELD PRESERVATION
-  VISITOR SERVICES

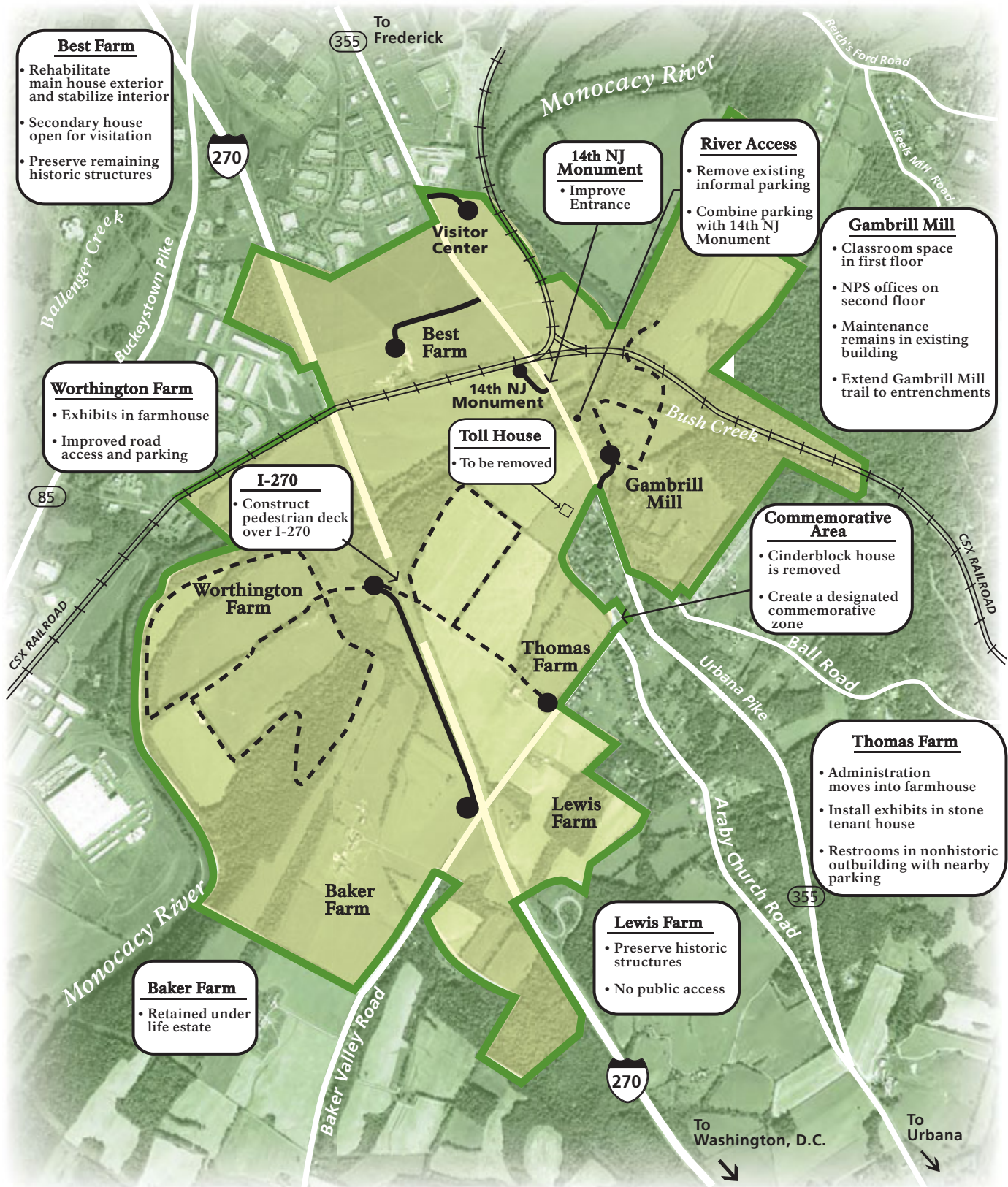
OWNERSHIP TRACTS





-  NON-FEDERAL
-  PUBLIC ROW
-  BOUNDARY
-  MONOCACY RIVER

**Management Zones
Alternative 4
(Preferred Alternative)**

Monocacy National Battlefield
 United States Department of the Interior
 National Park Service
 DSC / 894 / 20022 / FEB. 2008

blank



-  Park Boundary
-  Pedestrian Trail
-  Vehicular Access
-  Parking Node



**Preferred Alternative
Alternative 4**

Monocacy National Battlefield

United States Department of the Interior
National Park Service

DSC / 894 / 20018 / FEB. 2008

blank

The “Other” category includes research projects, studies, and documentation.

Annual operating costs:	\$2,200,000
Includes 22 FTE positions	
Deferred maintenance:	\$3,100,000
One-time costs:	\$4,575,000
Facility and	
non-facility cost:	\$4,300,000
Removal of buildings (2):	\$75,000
Other:	\$200,000

Note: The proposal for the I-270 deck (pedestrian use only) at a cost of between \$4,600,000 and \$6,800,000 depending upon deck width, would be funded only if it can be accomplished as part of the I-270 impact mitigation. It does not represent a cost to the National Park Service.

PROPOSAL FOR DECK ON INTERSTATE HIGHWAY 270

In 2002, the Federal Highway Administration and the Maryland State Highway Administration released a *Draft Environmental Impact Statement and Section 4(f) Evaluation*, which included several alternatives for widening Interstate 270 through the national battlefield. The alternatives range from constructing one more lane in each direction — for a total of six lanes — (alternatives 3 and 4) to adding two lanes in each direction — for a total of eight lanes (alternative 5).

Widening the interstate would cause the loss of battlefield acreage. The national battlefield acreage required for the new lanes was calculated initially at 11.74 for alternatives 3 and 4 of the FHWA/Maryland draft document, and up to 22.52 acres under alternative 5. The draft document included consideration of three measures for minimizing impacts on the battlefield: steeper slopes, retaining walls, and reduced width of the inside shoulders. These measures would reduce the battlefield acreage required for road construction to a little more than 5 acres under alternatives 3 and 4, and from 0.07 to 2.92 acres for alternative 5. However, reducing the acreage under alternative 5 would require the use of substantial retaining walls averaging 7 feet in height.

Although reducing the amount of national battlefield land needed for the widening is important, none of the mitigative measures would resolve the visual or auditory impacts on the national battlefield from I-270, nor would it solve the ongoing access problems caused by I-270 bisecting the battlefield. None of the suggested mitigative measures would diminish the interpretive difficulty of “painting” the battlefield landscape for visitors with such a massive intrusion separating resources. Added traffic would only make these problems worse.

One proposed mitigating measure is to construct a deck or bridge over the interstate highway between the Worthington and Thomas farms. This would reconnect the two halves of the battlefield. This likely would be a wedge-shaped structure covering a depressed part of the roadway. The wedge — or trapezoidal shape — would minimize the amount of roadway covered, reducing costs and negating the need for a safety air-handling system. To achieve a sense of the original surface of the land between the two farms, the deck would be covered over with soil and crops, fence rows, and trees. It also would serve as a bridge between the two farms, resulting in an interpretive connection that is difficult to convey at present. While hiding vehicles from view, such a deck also could mask some of the dull highway roar that has become part of the visitor experience everywhere on the national battlefield.

The estimated cost of the deck (\$20 million–\$30 million) could be wholly or partly covered as mitigation for impacts on Monocacy National Battlefield under section 4(f) of the Department of Transportation Act of 1966, as amended (PL 89-670).

FUTURE STUDIES AND MITIGATING MEASURES

FUTURE STUDIES

After a *Final General Management Plan* for managing Monocacy National Battlefield is completed and approved, other, more detailed studies and plans will be needed for implementing specific actions. As required, the National Park Service will carry out additional compliance with the National Environmental Policy Act, the National Historic Preservation Act, and other relevant laws and policies. Consultation and public involvement will be carried out as necessary. The additional studies that may be needed are listed in appendix D.

MITIGATING MEASURES

Background

Congress has 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 applies mitigative measures whenever conditions could adversely affect the sustainability of national park system resources.

The National Park Service would conduct appropriate environmental review as required by the National Environmental Policy Act, the National Historic Preservation Act, and other relevant legislation for any future actions. As part of the environmental review, the National Park Service would avoid, minimize, and mitigate adverse impacts when possible.

The following mitigating measures and best management practices would be used to avoid or minimize potential impacts on natural and cultural resources from construction activities, use by visitors, and NPS operations. These measures would apply to all alternatives.

Cultural Resources

To the greatest extent possible, the National Park Service would preserve and protect resources that reflect human occupation of Monocacy National Battlefield. Specific mitigative measures would be as follows:

- Continue to inventory and research archeological, historical, and ethnographic resources to better understand and manage the resources. Continue to follow federal regulations and NPS guidelines in managing cultural resources and collections
- Apply site-specific planning and compliance to projects. Avoid adverse impacts by applying *The Secretary of the Interior’s Standards for Archeology and Historic Preservation* and by using screening or sensitive design that would be compatible with historic resources. If adverse impacts are unavoidable, mitigate them through consultation with all interested parties
- Document structures to be adaptively reused according to the standards of the Historic American Buildings Survey / Historic American Engineering Record as defined in the

Re-engineering Proposal (October 1, 1997)

- Wherever possible, place trails, parking areas, and other facilities in previously disturbed areas or in existing developed areas. Design facilities to avoid known or suspected archeological resources
- As appropriate, use vegetative screening to minimize impacts on views to and from the cultural landscape
- Complete project-specific archeological inventories prior to final decisions on project location and prior to finalizing construction designs
- Conduct archeological site monitoring during construction. If protection or site avoidance during design and construction is infeasible, conduct data recovery excavations at archeological sites threatened with destruction. Should archeological resources be discovered, stop work in that location until the resources can be properly recorded and evaluated under the eligibility criteria of the National Register of Historic Places
- Complete or update cultural landscape plans for all areas of the national battlefield

Natural Resources

The National Park Service would protect natural resources or mitigate effects on natural resources through the following measures:

- Practice a dust abatement program during construction. Standard dust

abatement measures could include watering or otherwise stabilizing soils, covering haul trucks, establishing speed limits on unpaved roads, minimizing vegetation clearing, and revegetating areas with native plants after construction.

- Build new facilities on soils suitable for development. Minimize soil erosion by limiting the time that soil is left exposed and by applying other erosion control measures such as erosion matting, silt fencing, and sedimentation basins in construction areas. Such measures would reduce erosion, surface scouring, and discharge to water bodies. After work is finished, revegetate construction areas in a timely manner with native plants where appropriate.
- Build stormwater management systems to minimize water pollution from large parking areas.
- Site trails to minimize impacts on steep slopes, highly erodible soils, hydric soils, wetlands, and floodplains. Where possible, plan trails to avoid high quality wildlife habitat.
- In trail construction, use switchbacks in areas where steep slope crossings are unavoidable.
- Conduct surveys for rare, threatened, and endangered species as warranted. In riparian areas and Brooks Hill, conduct surveys before initiating any actions or changes in visitor activity levels. If sensitive species are found, before designing trails, consult with the U.S. Fish and Wildlife Service (for federally listed species) or with the Maryland

Department of Natural Resources (for state-listed species) to determine the most appropriate routes, construction methods, and mitigating measures.

- During construction, put into practice a program for spill prevention and pollution control for hazardous materials. Standard measures might include procedures for storing and handling hazardous materials, spill containment, cleanup, and reporting procedures, as well as limiting refueling and other hazardous activities to upland or nonsensitive sites.
- Delineate wetlands and perform protection measures during construction. Qualified NPS staff or certified wetlands specialists should use the Cowardin system used by NPS to delineate wetlands, and the wetlands should be clearly marked before construction work can begin.
- Put into operation a noxious weed abatement program for construction activity. This could include ensuring that construction equipment arrives on the site free of mud or seed-bearing material, certifying that all seeds and straw material are weed-free, identifying areas of noxious weeds before construction, treating noxious weeds or noxious weed topsoil (by segregating topsoil or treating with herbicides) before construction, and revegetating with appropriate native species.

Visitor Experience and Visitor Safety

Measures that would be carried out to protect the visitor experience and visitor safety are as follows:

- Establish a traffic control plan as warranted. Standard measures could include strategies to maintain safe and efficient traffic flow during construction.
- Perform measures to reduce the adverse effects on visitor safety and experience from construction.

Socioeconomic Environment

In implementing the approved *General Management Plan* for Monocacy National Battlefield, the National Park Service would work with local communities and county governments to further identify the potential impacts of the plan and the mitigative measures that would best serve the interests and concerns of the National Park Service and the local communities. Partnerships would be pursued to improve the quality and diversity of community amenities and services.

Sustainable Design and Aesthetics

The National Park Service would attempt to avert or minimize adverse effects caused by projects on natural or cultural resources through the following measures:

- Design, locate, and construct facilities to avert or minimize adverse effects on natural and cultural resources and visual intrusion into the landscape.
- Design development projects (such as buildings, facilities, utilities, roads,

bridges, and trails) or reconstruction projects (such as road reconstruction, building rehabilitation, or utility upgrades) to work in harmony with the surrounding areas.

- Plan projects so as to reduce, minimize, or eliminate air and water nonpoint source pollution.
- Cause projects to be sustainable whenever practicable by minimizing the materials used, recycling and reusing materials, minimizing energy consumption during the project and throughout the life of the project.
- Carry out standard noise abatement measures during battlefield construction by using the best available noise control techniques whenever feasible, using hydraulically or electrically powered impact tools when feasible, and locating stationary noise sources as far from sensitive areas as possible.
- Place and design new facilities in ways that will minimize objectionable noise.
- Work with the Federal Highway Administration to find ways to minimize the noise from Interstate Highway 270.

CARRYING CAPACITY

The 1978 Parks and Recreation Act requires units of the national park system to address carrying capacity, and addressing carrying capacity is essential to protect resources and provide a high quality visitor.

There are three principal components that relate to determining the carrying capacity for a national park unit, as follows:

- Ecological or physical capacity, which includes the capabilities of the natural and cultural resources to sustain levels of visitor use without unacceptable damage.
- Sociological carrying capacity, which includes the ability of visitors to enjoy and appreciate these resources without undue interference by other visitors.
- NPS management, which includes the efforts that have been or can be applied to the national battlefield to mitigate unwanted impacts. This component relates to the management of things such as roads, parking lots, buildings, trails, and visitor information.

Table 1 summarizes the desired conditions, indicators, and standards that Monocacy National Battlefield would use to ensure that it stays within its carrying capacity. The national battlefield does not currently have a quantitative system for measuring carrying capacity, and relies instead on qualitative observations about the use and crowding of various national battlefield resources.

Maryland Highway 355 bisects the national battlefield. It is the route visitors take to get to the national battlefield from north and south. It also serves as an integral part of the internal tour route used by visitors to navigate the national battlefield. Although visitor counts have, until the opening of the

visitor center, been taken at the Gambrill Mill, the overall number of commercial and commuter trips on this highway makes it difficult to obtain accurate visitation information for the national battlefield as a whole.

The difficulties posed by commercial and commuter traffic and limited staff availability make it difficult for the national battlefield to maintain a system of quantitative indicators and standards. Thus, many of the indicators and standards in table 1 are constructed in a way that enables qualitative measurement by staff as part of their ongoing duties.

Monocacy National Battlefield does not currently approach its carrying capacity. This observation reflects the experience of national battlefield staff. As a relatively new national park system area, the site has undergone a period of rehabilitation and restoration of historic structures and natural and cultural resources research. Most of the structures and much of the battlefield landscape has been closed to visitation.

For much of the time the national battlefield has been open, only the Gambrill Mill visitor contact station has been open to the public. Several trails were developed to provide visitors with some ability to see the battlefield landscape. Special events have not been frequent because staffing has not been equal to that needed to manage such events. School groups visit the national battlefield, resulting in some temporary crowding at the visitor contact station, but these are short-lived occurrences that result in no appreciable damage to natural or cultural resources.

The national battlefield will continually update the indicators and standards described in the table 1 below to reflect any changed conditions within the national battlefield. For example, should visitation increase sharply, or if staff notice undue wear and tear on cultural or natural resources or on trails and facilities, NPS staff may choose to implement more specific indicators and standards.

TABLE 1: CARRYING CAPACITY INDICATORS AND STANDARDS

<p>Visitor Experience and Services</p>	<p>Desired Condition</p>	<p>Visitors will be able to obtain park information, orientation, and services and will be able to access cultural resources and interpretive materials, exhibits, and sites without experiencing frequent delays. Museum space will be adequate to accomplish the national battlefield’s interpretive goals.</p>
	<p>Indicator</p>	<p>The number of times per year that the visitor center and major interpretive sites and parking areas (Best Farm, 14th New Jersey Monument, Commemorative area, Gambrill Mill, Thomas Farm, Worthington Farm) experience crowding</p> <p>The magnitude of the crowding.</p> <p>The amount of space available for museum activities, including laboratory space and storage of records and files</p>
	<p>Standard</p>	<p>Visitors will experience crowded conditions a few times per year occurring during special events and the fall leaf season</p> <p>Visitors will always be able to find uncrowded conditions elsewhere in the national battlefield</p> <p>Museum space will be adequate to accomplish interpretive goals</p>
<p>Circulation and Parking</p>	<p>Desired Condition</p>	<p>Visitors should be able to follow the tour route through the national battlefield by car and use the existing parking areas while experiencing no more than moderate traffic congestion and rare parking difficulties</p>
	<p>Indicator</p>	<p>The number of times per year that the tour route and other park roads experience delays due to excess visitor traffic</p> <p>The number of times per year that parking lots are full for an extended period of time</p> <p>(It should be noted that Maryland Highway 355 is a major state highway and that the national battlefield has little ability to measure congestion on it—it can however measure internal park roads and parking areas)</p>

	Standard	<p>Visitors will experience crowded conditions (heavy traffic congestion and a lack of parking) rarely—possibly once or twice a year</p> <p>Congestion would occur primarily during special events or during the fall leaf season</p> <p>Visitors would be able to find uncrowded parking areas elsewhere in the national battlefield</p>
Recreation	Desired Condition	<p>Visitors participating in approved recreational activities such as trail walking, bird watching, and fishing, will be able to enjoy natural and cultural resources without causing damage to those resources</p>
	Indicator	<p>Damage to natural habitats, stream banks, cultural resources, interpretive waysides and exhibits, or landscape features due to unsanctioned activities or inappropriate use</p>
	Standard	<p>“Social trails”— undesignated trails created by repeated use — will not occur</p> <p>Damage to fields, meadows, forests, rivers and streams does not occur due to unsanctioned or inappropriate recreational uses</p>
Operations and Maintenance	Desired Condition	<p>The national battlefield will have adequate staff and resources to perform needed maintenance and management activities, and will do so without causing undue distraction to visitors</p>
	Indicator	<p>The ability of staffing levels, maintenance facilities, resources, and supplies to meet park needs;</p> <p>The number and severity of visitor concerns and comments about the operations and maintenance activities</p>
	Standard	<p>Staffing and resources will not delay or prevent normal operation and maintenance activities</p> <p>Visitor concerns and comments about operations and maintenance activities will not increase in frequency or severity</p>

THE ENVIRONMENTALLY PREFERABLE ALTERNATIVE

Environmentally preferable is defined as “the alternative that will promote the national environmental policy as expressed in section 101 of the National Environmental Policy Act of 1969.” Section 101 states that

It is the continuing responsibility of the Federal Government to

1. fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
2. assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
3. attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
4. preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity, and variety of individual choices;
5. achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life’s amenities; and
6. enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

The environmentally preferable alternative for Monocacy National Park is the National Park Service’s preferred alternative in this plan. This alternative satisfies the following national environmental goals:

- Hold resources in trust for future generations.
- Ensure safe, healthful, productive, aesthetically pleasing surroundings.
- Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable consequences.
- Provide a high level of protection for natural and cultural resources while maintaining an environment that supports diversity and a variety of individual choices.
- Decrease the use of depletable resources by NPS staff and visitors.

Each of the four alternatives would hold natural and cultural resources in trust for future generations.

Alternative 2 meets the second criteria best because it is the safest alternative, including an alternative transportation system that transports visitors, worry-free, around the national battlefield. It also includes a vehicular deck that allows visitors to pass from the Worthington to the Thomas farms by bus or car without having to backtrack onto busy Baker Valley Road. All of the alternatives meet the healthful, productive, and aesthetically pleasing criteria but alternative 2 provides an opportunity to use the deck to mask the

visual and audible impacts of I-270 while restoring the views between the Worthington and Thomas farms (placement of crops and hedgerows on the deck, masking the visual impact of the roadway and helping to re-create the pastoral scene).

Criteria 3 is best met by alternative 2 as it provides the most new trails into previously inaccessible areas and because the proposed deck provides a way to turn a visual disadvantage (I-270) into an advantage. Construction of the deck would cause the most environmental disruption of all alternatives with tree removal and some access road construction. These would be in already disturbed areas along the I-270 right-of-way.

Criteria 4 is met by all alternatives as they all preserve natural and cultural resources of significance for future generations and provide a variety of individual visitor choices for the use of national battlefield resources, both cultural and natural.

Alternatives 2 and 4 utilize depletable resources in the construction of either a vehicle or pedestrian deck across I-270. Alternative 2 uses nonrenewable fuel in the alternative transportation system but could actually save fuel if enough visitors use it rather than personal

vehicles. All alternatives will utilize depletable resources in the preservation of historic structures. Alternatives 3 and 4 both make use of existing structures for office and maintenance space. However, alternative 3 utilizes the Best House interior for exhibit space while alternative 4 stabilizes the interior but does not make it useable space. The Best House is in the most critical condition of any of the battlefield structures and any work required to make it usable would result in the loss of deteriorated original fabric. Therefore, any differences between alternatives 3 and 4 would be minuscule.

Alternative 2 is the environmentally preferable alternative. It preserves all cultural resources, provides an additional level of visitor safety, and improves access and circulation. Although it causes a relatively minor environmental disturbance by removing trees and other vegetation along I-270 that area is already greatly disturbed by the construction of I-270.

Alternatives 3 and 4 do not present the same high level of benefit to the visitor experience that alternative 2 does. Access and circulation is not as safe as alternative 2. The benefit to the cultural landscape is not as high as with alternative 2.

ALTERNATIVES AND ACTIONS CONSIDERED BUT REJECTED

During the planning process for Monocacy National Battlefield, several alternatives and actions were analyzed for inclusion in this document but later eliminated from further study. These alternatives and actions are listed below, along with the reasons they were not analyzed further.

COMMEMORATIVE AREA AT NEW VISITOR CENTER SITE

Creating a commemorative area at the new visitor center site was discussed. This concept involved placing all new monuments at the site, where visitors would have had easy access. The landscape could have been appropriately developed for the contemplation of the people and events associated with the Battle of Monocacy. The proposal was ultimately dismissed from consideration because the number of new monuments likely at Monocacy is small, and existing space near the Vermont and Pennsylvania monuments is available if any new commemorative monuments should be added.

COMMEMORATIVE MONUMENTS IN THE FIELD

At public meetings, several people expressed interest in placing monuments on the battlefield in the locations where the units fought, as has been done at other national battlefields. In considering this possibility, the planning team concluded that this action would have seriously affected the national battlefield's ability to retain the historic appearance of the landscape and would have required a more extensive trail

system to allow access to each monument. It also would have made leasing under the agricultural leasing program more difficult. Therefore, this concept was rejected.

RE-CREATING BEST GROVE

Some people attending public meetings suggested replanting the grove or wood lot that grew on the north side of the Best farm before the Civil War. The suggestion was ultimately rejected because the area is archeologically sensitive, and a general decision had been made not to re-create missing elements of the historic landscape of the national battlefield.

RESTORING BATTLEFIELD STRUCTURES

The National Park Service received many requests that planners consider restoring and refurbishing historic structures, particularly houses, to the Civil War period. However, the planners concluded that preserving the structures, rather than restoring them to a particular period, would be in keeping with NPS historic preservation policy, and that this would allow the focus of interpretation to remain on the battlefield, rather than on the buildings and their furnishings.

CONTINUOUS TRAIL LINKING BATTLEFIELD SITES

In developing this plan, NPS planners considered creating a continuous trail that would have connected all the important sites and features of Monocacy National Battlefield. However, such a

trail would have had several shortcomings: the number of physical barriers — roads, railroad, and watercourses — would have made safe design difficult, and the trail itself could have become an attraction, luring people into the national battlefield for a

recreational amenity far removed from the mandate of Congress to preserve, commemorate, and interpret the Battle of Monocacy. The continuous trail was rejected in favor of several short trails and a loop trail around the Thomas farm.

Blank page

COMPARISON OF ALTERNATIVES AND ENVIRONMENTAL CONSEQUENCES

The actions of the alternatives are compared in table 2; the environmental consequences that would result from each alternative are compared in table 3.

TABLE 2: COMPARISON OF ALTERNATIVES

Alternative 1 (No Action)	Alternative 2	Alternative 3	Alternative 4 (Preferred)
INTERSTATE 270 DECK			
No deck constructed	Deck constructed over I-270 to connect Thomas and Worthington farms visually and physically with continuous farmscape	No crossing of I-270	Pedestrian deck over I-270
INTERNAL CIRCULATION			
Visitors' personal vehicles would use existing roads	Alternative transportation system mandatory for visitors when operating, personal vehicles used when not operating One-way lane over I-270 deck between Worthington and Thomas farms Interpretation provided on ATS	Personal vehicles used for access to sites Self-guiding interpretation	Same as alternative 3
NEW VISITOR CENTER			
New visitor center completed Spring 2007 Primary facility for helping visitors to understand and appreciate battlefield. Offers orientation, interpretation, exhibits, sales, restrooms, and museum exhibit of Battle of Monocacy			
NATIONAL BATTLEFIELD ADMINISTRATION			
Remains in Gambrill Mill and in metal building on Gambrill tract	In rental space outside national battlefield boundaries	In Thomas House	Same as alternative 3
MAINTENANCE			
Remains in metal building on Gambrill tract	Moved to location outside national battlefield boundaries	Remains in metal building on Gambrill tract	Same as alternative 3

TABLE 2: COMPARISON OF ALTERNATIVES

Alternative 1 (No Action)	Alternative 2	Alternative 3	Alternative 4 (Preferred)
BEST FARM			
Historic structures preserved Brochure will interpret the site Open to the public with no new trails	First stop on transportation system Main house exterior rehabilitated and the interior stabilized Secondary house, stone barn, and corn crib preserved Main house and secondary house closed to visitors Interpretation by waysides	Main house first floor interior rehabilitated for exhibits Secondary house preserved and visitors allowed access to interior Stone barn and corncrib preserved Interpretation by waysides and exhibits	Main house exterior rehabilitated and the interior stabilized Secondary house preserved and visitors allowed access to interior Stone barn and corn crib preserved Interpretation by waysides
RAILROAD JUNCTION			
Not accessible to visitors Interpreted at visitor center	Visible from trail from visitor center (north of junction) and from accessible trail from Gambrill Mill with access over Bush Creek and railroad (south of junction) Railroad fenced to protect visitors Interpretation primarily by waysides	No access from visitor center Visible from Gambrill Mill trail, which would be extended to railroad crossing Vista cleared so visitors can see junction Interpretation at visitor center and by waysides	Same as alternative 3
14TH NEW JERSEY MONUMENT			
Monument and access would be unchanged	Entrance shifted south to improve sight distances NPS would work with Maryland State Highway Administration to reduce speed limit on MD 355 NPS and New Jersey would evaluate parking	Parking area and lane to monument west of MD 355 would be closed Access to monument would be available by trail under MD 355 railroad overpass NPS would work with Maryland to reduce speed limit on MD 355	Same as alternative 2
Rt. 355 River Access			
Unrestricted access No defined parking area	Construct formal parking area with gates Fix drainage issues	Remove existing informal parking area and landscape Parking at the Junction with a trail to the river for recreational access (fishing, canoeing)	Same as alternative 3

Table 2: Comparison of Alternatives

Alternative 1 (No Action)	Alternative 2	Alternative 3	Alternative 4 (Preferred)
GAMBRILL MILL TRACT			
Mill preserved, with classroom space on first floor, administrative offices on second floor Entrance road unchanged Interpretation mainly at visitor center	Mill preserved, with classroom space on first floor, seasonal housing on second floor Trail from mill extended to overlook railroad junction and Wallace's headquarters Interpretation mainly by waysides and exhibits	Mill preserved, with classroom space on first floor, NPS offices on second floor Interpretation mainly by waysides and exhibits	Mill preserved, with classroom space on first floor and NPS offices on second floor Trail from mill extended to overlook railroad junction and Wallace's headquarters Interpretation mainly at visitor center but some waysides
TOLL HOUSE			
Structure was moved to its current site from elsewhere and has no relationship to its current location. Structure would be made available to a historic preservation group that would agree to move it out of the national battlefield. Otherwise it would be razed No interpretation.			
THOMAS FARM			
Main house mothballed - Existing parking south of house unchanged Agricultural use unchanged Interpretation at visitor center	Main house leased out under NPS historic leasing program (with no public access) Exhibits would occupy stone tenant house Public restrooms in a nonhistoric structure Parking near Baker Valley Road Historic lane through farm improved for vehicle traffic Interpretation mainly in stone tenant house and through waysides	Main house used for administrative offices Exhibits would occupy stone tenant house Public restrooms in a nonhistoric structure Parking near Baker Valley Road Interpretation mainly in stone tenant house and through waysides	-Same as alternative 3
COMMEMORATIVE AREA ALONG ARABY CHURCH ROAD			
When tenant vacates in 2007, cinder block house removed and site landscaped No established policy on placement of monuments	When tenant vacates in 2007, cinder block house removed and site landscaped New monuments placed in designated zone along Araby Church Road Design guidelines for new monuments developed	When tenant vacates in 2007, cinder block house removed and site re-landscaped No new monuments placed anywhere in national battlefield	Same as alternative 2

TABLE 2: COMPARISON OF ALTERNATIVES

Alternative 1 (No Action)	Alternative 2	Alternative 3	Alternative 4 (Preferred)
LEWIS FARM			
House, barn, and corn crib preserved as part of cultural landscape No public access <i>Interpretation at visitor center</i>	Same as alternative 1	Footpath from Worthington parking lot House, barn, and corn crib preserved as part of cultural landscape <i>Interpretation mainly by wayside exhibits</i>	Same as alternative 1
WORTHINGTON FARM			
Parking at Baker Valley Road and near house No visitor access into house Interpretation at visitor center and by waysides	Entry lane from Baker Valley Road will be a one-way access No visitor access into house Interpretation at visitor center and by waysides	Entry lane from Baker Valley Road widened for two-way access First floor of house rehabilitated for exhibits Exhibits in house, and via wayside exhibits	Same as alternative 3
BAKER FARM			
Farm would remain in life estate	Same as alternative 1	Same as alternative 1	Same as alternative 1

TABLE 3: COMPARISON OF ENVIRONMENTAL CONSEQUENCES

Alternative 1 (No Action)	Alternative 2	Alternative 3	Alternative 4 (Preferred)
CULTURAL RESOURCES			
<i>Historic Buildings and Other Structures</i>			
<p>Stabilizing and preserving historic buildings would reduce loss of historic fabric over time — long-term beneficial effect No adverse effect on historic structures Resources and values not impaired</p>	<p>Stabilizing and preserving historic structures would reduce loss of historic fabric No adverse effect from rehabilitating structures for adaptive use — effects generally beneficial No adverse effect on historic structures Maintaining commemorative monuments would not be adverse Resources and values not impaired</p>	<p>Stabilizing and preserving historic structures would reduce deterioration — no adverse effect Modifying historic buildings for visitor access would retain integrity — no adverse effect Adaptively reusing Thomas House for administrative offices would necessitate work on utility systems, but no adverse effects on building Adaptively reusing Best and Worthington houses for interpretation might cause adverse effects, depending on level of intervention Retaining commemorative monuments would not be adverse Resources and values not impaired</p>	<p>Stabilizing and preserving historic structures would reduce deterioration — no adverse effects Removing nonhistoric buildings would not affect historic properties Adaptively reusing Thomas House for administrative offices would necessitate work on utility systems, but no adverse effects on building Adaptively reusing Best and Worthington houses and Gambrill Mill for interpretation or battlefield operations might cause adverse effects, depending on level of intervention Effects from alternative 4 generally beneficial Resources and values not impaired</p>

TABLE 3: COMPARISON OF ENVIRONMENTAL CONSEQUENCES

Alternative 1 (No Action)	Alternative 2	Alternative 3	Alternative 4 (Preferred)
<u><i>Cultural Landscapes</i></u>			
<p>Stabilizing buildings, maintaining roads, trails, and agricultural features generally beneficial</p> <p>Along with past, present, and reasonably foreseeable future actions, no adverse effect on cultural landscape</p> <p>Resources and values not impaired</p>	<p>Stabilizing and preserving buildings would ensure long-term presence on historic landscape</p> <p>Removing noncontributing structures would cause no adverse effect on cultural landscape</p> <p>Adding nonhistoric deck across I-270 would restore vegetative patterns and disguise modern highway, reestablishing viewshed — no adverse effect on cultural landscape, but deck would be a modern intrusion</p> <p>Adding trails and roads on existing alignments could visually affect cultural landscape</p> <p>Removing exotic plant species and revegetating historically vegetated areas would benefit overall cultural landscape — no adverse effect on vegetation patterns</p> <p>Along with past, present, and reasonably foreseeable future actions, no adverse effect on cultural landscape</p> <p>Resources and values not impaired</p>	<p>Stabilizing and preserving buildings would ensure long-term presence on historic landscape</p> <p>Removing noncontributing structures would cause no adverse effect on cultural landscape</p> <p>Removing exotic plant species and revegetating historically vegetated areas would benefit overall cultural landscape — no adverse effect on vegetation patterns</p> <p>Along with past, present, and reasonably foreseeable future actions, no adverse effect on cultural landscape</p> <p>Resources and values not impaired</p>	<p>Stabilizing and preserving buildings would ensure long-term presence on historic landscape</p> <p>Removing noncontributing structures would bring historic landscape closer to historic appearance — no adverse effect on cultural landscape</p> <p>Adding nonhistoric pedestrian deck over I-270 would be a modern intrusion, but no more so than I-270</p> <p>Removing exotic plant species and revegetating historically vegetated areas would benefit overall cultural landscape — no adverse effect on vegetation patterns</p> <p>Along with past, present, and reasonably foreseeable future actions, no adverse effect on cultural landscape</p> <p>Resources and values not impaired</p>

Table 3: Comparison of Environmental Consequences

Alternative 1 (No Action)	Alternative 2	Alternative 3	Alternative 4 (Preferred)
VISITOR USE AND EXPERIENCE			
<p>Moderate long-term beneficial effect on orientation from new visitor center</p> <p>No change in visitor circulation and access</p> <p>Negligible long-term beneficial effect on visitor safety</p> <p>Major long-term beneficial effect on interpretive opportunities and visitor experience resulting from new visitor center</p>	<p>Major long-term beneficial effect on interpretive opportunities and visitor experience from new visitor center</p> <p>Long-term minor beneficial effect on orientation from opening stone tenant house at Thomas Farm</p> <p>Major long-term beneficial effects on circulation from deck across I-270 and improved entrance to 14th New Jersey Monument</p> <p>Moderate long-term beneficial effects on safety from improved entrance to 14th New Jersey Monument, deck across I-270, and new trail crossing under railroad to see railroad junction</p> <p>Long-term major beneficial effect on interpretive opportunities from new trail to Wallace’s headquarters, deck over I-270 (unobstructed view of battlefield between Worthington and Thomas farms), and exhibits in Thomas Farm stone tenant house</p> <p>Long-term major beneficial effect on visitors’ ability to experience resources from new trails</p> <p>Transportation system would give long-term major beneficial effects on access and circulation from not worrying about driving</p> <p>Moderate overall long-term beneficial effect on visitor experience from new trails, more exhibits in stone house, and visitor access to battlefield</p>	<p>Moderate long-term beneficial effect on orientation from new visitor center</p> <p>Unchanged circulation and access</p> <p>Long-term minor beneficial effect on orientation from opening stone tenant house at Thomas Farm</p> <p>Major long-term beneficial effect on interpretation and visitor experience from new visitor center</p> <p>Negligible long-term beneficial effect on visitor safety</p> <p>Major long-term beneficial effect on interpretive opportunities from opening historic structures to visitors at Best and Worthington farms</p>	<p>Moderate long-term beneficial effect on orientation from new visitor center</p> <p>Long-term minor beneficial effect on orientation from opening stone tenant house at Thomas Farm</p> <p>Major long-term beneficial effect on interpretation and visitor experience from new visitor center</p> <p>Long-term moderate beneficial effect on visitor access and circulation resulting from pedestrian deck over I-270</p> <p>Interpretive opportunities somewhat less than in alternative 3 because only Worthington House and several Best Farm outbuildings open to visitors</p> <p>Moderate long-term beneficial effect from more interpretive opportunities available from added trails on Thomas Farm and to Wallace’s headquarters, and Union entrenchments</p>

TABLE 3: COMPARISON OF ENVIRONMENTAL CONSEQUENCES

Alternative 1 (No Action)	Alternative 2	Alternative 3	Alternative 4 (Preferred)
SOCIOECONOMIC ENVIRONMENT			
Direct and indirect long-term negligible beneficial effects on socioeconomic environment.	Direct and indirect long-term negligible beneficial effects on socioeconomic environment	Direct and indirect long-term negligible beneficial effects on socioeconomic environment	Direct and indirect long-term negligible beneficial effects on socioeconomic environment
ACCESS AND CIRCULATION			
Long-term minor adverse effects on MD 355 and long-term moderate adverse effect on Araby Church and Baker Valley road networks from more traffic Resources and values not impaired	Long-term minor adverse effects on MD 355 Long-term moderate adverse effects on Araby Church and Baker Valley road networks from more traffic caused by more visitors Moderate long-term beneficial effects on pedestrian and car access from circulation improvements in battlefield Resources and values not impaired	Same as alternative 2	Same as alternative 2
OPERATIONS AND FACILITIES			
The no-action alternative would result in a long-term minor beneficial effect on national battlefield operations.	Long-term major beneficial effect on national battlefield operations compared with effects of no-action alternative	Long-term major beneficial effect on national battlefield's operations compared with effects of no-action alternative	Long-term major beneficial effect on national battlefield's operations compared with effects of no-action alternative

COST COMPARISON

The following applies to costs presented throughout this general management plan:

- The costs are presented as estimates and allow for flexibility in application of components.
- These costs are not appropriate for budgeting purposes.
- The costs presented have been developed using industry standards to the extent available.
- Actual costs will be determined at a later date, considering the design of facilities, identification of detailed resource protection needs and changing visitor expectations.
- Approval of the general management plan does not guarantee that funding or staffing for proposed actions will be available.
- Full implementation of the general management plan may be many years in the future.
- All estimates are in 2007 dollars and are rounded to the nearest \$100,000.

TABLE 4: COMPARISON OF ESTIMATED COSTS FOR IMPLEMENTING THE ALTERNATIVES

	Alternative 1	Alternative 2	Alternative 3	Alternative 4 (Preferred Alternative)
Annual Operating Costs (ONPS)⁽¹⁾	\$1,600,000	\$2,000,000	\$2,200,000	\$2,200,000
Staffing - FTE⁽²⁾	16	20	22	22
Deferred Maintenance⁽³⁾	\$5,700,000	\$5,400,000	\$2,000,000	\$3,100,000
Total One Time Costs	\$100,000	\$2,000,000	\$6,000,000	\$4,600,000
Facility and non-facility cost	\$0	\$1,700,000	\$5,700,000	\$4,300,000
Removal of buildings	\$100,000	\$100,000	\$100,000	\$100,000
Other ⁽⁴⁾	0	\$200,000	\$200,000	\$200,000
I-270 Deck	none	\$11,400,000 ⁽⁵⁾	none	\$4,600,000– \$6,800,000 ⁽⁵⁾

(1) Annual operating costs are the total annual costs for maintenance and operations associated with each alternative, including: maintenance, utilities, supplies, staff salaries and benefits, leasing, and other materials.

(2) Total full-time equivalents (FTEs) are the number of staff required to maintain the assets of the national battlefield at a good level and provide acceptable visitor services, protection of resources, and other operational support. Managers would explore opportunities to work with partners, volunteers, and other federal agencies to effectively and efficiently manage the national battlefield. FTE salaries and benefits are included in the annual operating costs. The staffing numbers include the conversion of subject to furlough employees and temporary employees to full time equivalents, to facilitate comparison among the alternatives.

(3) Deferred maintenance costs are those needed to improve park assets to a "good" condition based on NPS standards and calculating tools. Deferred maintenance costs vary by alternative because specific building treatments proposed may exceed a "good" condition or may no longer qualify as maintenance. These, then, are represented in the one-time cost category.

(4) Other costs include resource studies or inventories and archeological research.

(5) Construction of a deck over I-270 for automobile use (alternative 2) or pedestrian-only use (alternative 4) would occur only if it could be accomplished as part of the impact mitigation resulting from the widening of I-270, currently being proposed under a *Draft Environmental Impact Statement* by the Maryland State Highway Administration and the Federal Highway Administration. No cost would accrue to the National Park Service.

Both bridges would be approximately 200 feet in length. The highway bridge would be wedge-shaped: 200 feet wide on the Worthington side, and 400 feet wide on the Thomas Farm side. The pedestrian bridge would be either 100 feet wide or wedge shaped: 100 feet wide on the Worthington side, 200 feet wide on the Thomas side.

Estimates were developed by the NPS Denver Service Center Design Branch based on similar highway construction projects.

CHAPTER 3:

THE AFFECTED ENVIRONMENT

(blank back of divider)

INTRODUCTION AND TOPICS ELIMINATED FROM ANALYSIS

INTRODUCTION

In this chapter the existing environment of Monocacy National Battlefield is described, as is the surrounding region. The guidelines of the Council on Environmental Quality (CEQ) for implementing the National Environmental Policy Act require that the description of the affected environment focus on describing the resources and people that might be affected by implementing the alternatives. Impact topics (resources to be affected) were developed to focus the environmental analysis and to ensure that the impacts of each alternative on relevant resources would be appropriately evaluated.

The identification of impact topics was based on federal laws and other legal requirements, the CEQ guidelines, NPS management policies, NPS expertise and knowledge of limited or easily affected resources, and issues and concerns expressed by other agencies or the public during the project scoping. A brief rationale for eliminating or including each impact topic is given in this chapter.

TOPICS ELIMINATED FROM FURTHER ANALYSIS

Some impact topics that usually are considered during the planning process are not relevant to the development of this plan because (a) they would not be affected by implementing the alternatives or the effects on a particular resource would be negligible or minor, or (b) the resource is not found in Monocacy National Battlefield. The

topics that have been eliminated from further analysis are discussed in this section.

Archeological Resources

Archeological resources — the physical evidence of past human activity — represent both prehistoric and historic occupations at Monocacy National Battlefield. A complete assessment and documentation of the battlefield's archeological resources has not yet been undertaken; however, varying degrees of archeological resource information exist for most of the component properties, including the Best, Thomas, and Worthington farms and the Gambrill tract.

Archeological resources are those associated with both temporary and permanent settlements (both historic and prehistoric) and with long-term and short-term military uses of the land. As previously noted, there were intensive prehistoric occupations of the Monocacy River Valley, particularly in association with the river itself. Prehistoric occupations of Monocacy National Battlefield have been documented archeologically at the Best, Thomas, and Worthington farms, and there probably is evidence of such occupations at other component properties.

At the Best and Thomas farms, 18th century historic occupations have been documented in the form of previously unrecorded structures, features, and activity areas. Archeological research at these properties has yielded important information about 18th and early 19th

century occupations of these sites. At the Thomas Farm, for example, archeologists uncovered the site of a mid 18th century tavern associated with the Middle Ford ferry, and at the Best Farm they have found an archeological footprint of the slave village associated with the Vincendière family's L'Hermitage plantation. Such discoveries have yielded crucial information about events and individuals that often appear only incidentally in the historic record.

A number of Civil War-era archeological resources also have been discovered at the Monocacy Battlefield. There are outbuildings and other features associated with 19th century component properties such as the Lewis, Worthington, and Baker farms and the Gambrill tract. For example, the farmhouses at the Worthington and Lewis farms survive, but most of the associated historic outbuildings and dependencies have disappeared; they exist only in the archeological record. At the Gambrill tract, little aboveground evidence remains of the associated milling complex. It is likely that archeological investigations at the Gambrill Mill and in the Wallace's headquarters site will reveal more about the composition and chronology of these sites.

It is believed that the main house at the Baker Farm (ca. 1914) was built on the foundations of an earlier structure. A number of more modern farm outbuildings are extant; however, archeological investigations may reveal evidence of earlier building composition and arrangement. In addition, archeological research at the Best Farm has uncovered

a number of Civil War era features, including a cistern and an associated midden, or refuse deposit.

Long-term and short-term military use also has left its archeological imprint. As was mentioned earlier, during the Maryland and Gettysburg campaigns, troops from the Union and Confederate armies camped in the junction area. A long-term encampment, known historically as Camp Hooker, exists within the battlefield's congressional boundary and has been identified archeologically. Archeological evidence of short-term campsites also has been documented on the Best Farm, and sub-surface remains of the battle itself (dropped and fired small arms projectiles, artillery shell fragments, weapons, personal items) also have been documented on the Best Farm. However, because the military use in July 1864 extended to all the component properties, the potential exists for the presence of military artifacts almost anywhere within the national battlefield's boundaries.

There was post-Civil War occupation of all the component properties of Monocacy National Battlefield; this may be represented in the archeological record. This is most probable on the Gambrill tract, where the Edgewood estate was established in the late 19th century. Dependencies associated with the Gambrill House (ca. 1872) have been documented in the historical record, and they probably exist archeologically. In addition, occupations in the Wallace's Headquarters area, along the B&O Railroad, continued into the early

20th century; they also probably are represented in the archeological record.

Monocacy National Battlefield has not been systematically surveyed or inventoried archeologically except for surveys of limited areas conducted in compliance with section 106 of the National Historic Preservation Act of 1966, as amended. However, the National Park Service is required by law and policy to evaluate archeologically any site proposed for development. Because this plan would not entail actions that would affect specific known archeological resources, this topic has been dismissed from further consideration.

Should any such resources be present, ground disturbance would be stopped until evaluation against the criteria for listing on the National Register of Historic Places could be undertaken. Such evaluation would be undertaken in consultation with the Maryland state historic preservation officer (SHPO). Actions that would require further consultation with the state historic preservation officer are listed in appendix E. If a determination of eligibility was made, the proposed development would be moved, or archeological mitigation would be undertaken.

Ethnographic Resources

No actions are proposed in the alternatives of this plan that would affect specific known ethnographic resources; therefore, the topic has been dismissed. Should any ethnographic resources be identified after the plan has been published, they would be treated according to the requirements of the laws and

policies identified in appendixes B and C.

Museum Objects

Weapons, accoutrements, and spent ammunition used and left behind by soldiers before and during the Battle of Monocacy are some of the objects in Monocacy National Battlefield's museum collection. A number of these objects have been donated or otherwise acquired. Many more were recovered during recent research- and compliance-driven archeological excavations at the battlefield.

Curated items at Monocacy National Battlefield are stored in museum quality curatorial cabinets that meet NPS storage standards. Although a few objects rate as poor, most are in good to very good condition. Because storage space in the national battlefield is insufficient, most of the archeologically recovered objects are stored at the Museum Resource Center, a state-of-the-art facility in Landover, Maryland.

The national battlefield's collection can be expected to grow with continuing archeological investigations and treatment of selected structures. Moreover, archival collections can be expected to expand as historical research continues.

NPS policy requires that no museum objects be allowed within the 500-year floodplain without an evacuation plan. Under all the alternatives, all museum objects would be stored or exhibited outside the floodplain. In addition, museum objects kept in the national battlefield would be stored or exhibited in compliance with all applicable NPS regulations and policies. Therefore,

museum objects would not be affected under any of the alternatives, and this topic has been dismissed.

Air Quality

The guidelines of the Council on Environmental Quality for preparing environmental impact statements require the lead agency to analyze the effects on air quality from the proposed action and the alternatives. Under each of the alternatives of this document, similar levels of air pollutant emissions would be generated by motor vehicles and motorized equipment. Some dust and fumes would be generated during the maintenance, improvement, construction, or removal of roads, trails, and other facilities. Whenever possible, the National Park Service would follow established policies requiring the use of energy-efficient and environmentally friendly products and processes. Although public visitation and motor vehicle use are expected to increase during the next 20 years, the levels of vehicle exhaust are not expected to increase dramatically or to contribute substantially to regional air pollutant loads.

None of the identified air pollutant sources would generate quantities that would require a permit under the regulations of the U.S. Environmental Protection Agency and the Maryland Department of the Environment. The effects these emissions would cause on the local environment and regional air quality are considered negligible for all alternatives. Therefore, air quality is excluded from further analysis.

Water Resources and Water Quality

Monocacy National Battlefield straddles the Monocacy River, a tributary of the Potomac River and part of the Chesapeake Bay watershed and a designated Maryland state scenic river. The river begins a short distance north of the Maryland-Pennsylvania border and flows through central Maryland to the Potomac. It flows directly through and along the boundary of Monocacy National Battlefield for approximately 2.5 miles. The river's course takes it through a primarily agricultural landscape. Years of soil erosion, livestock and fertilizer use, and increasing urbanization have resulted in heavy sediment deposits. The section of the river that flows through the national battlefield is shallow and silted, with several small reaches of riffles.

Several streams, both perennial and intermittent, pass through the boundary of Monocacy National Battlefield and empty into the Monocacy River. All these streams exhibit some degree of channel structure degradation, primarily from increased water volume and speed from upstream runoff. Construction and development in the surrounding area have increased the amount of impervious surface and contributed to this harmful change. Approximately 0.8 mile of Bush Creek, the largest of these streams, passes through the north central part of the battlefield. Bush Creek is characterized by stretches of pools and riffles, with a primarily stone and sand bottom. As it nears its confluence with the river, the stream channel becomes incised and much of the stream bank is undercut.

Harding's Run is the only other named tributary in the national battlefield. It passes through the south central portion of the national battlefield for roughly 1.75 miles. The stream is primarily intermittent; it usually can sustain flowing water for about 8 months of the year. Its upper reaches are heavily wooded, contain a stone substrate, and have some good quality riparian wildflower areas. As the creek passes under Baker Valley Road and through the national battlefield and its volume increases, it becomes more incised. Near the mouth of the stream, the banks are 8 feet high and extremely undercut. Other intermittent streams that run through the national battlefield usually contain flowing water about 6–8 months of the year. They typically have sand and stone bottoms and display similarly degraded channel structures.

There are several springs and seeps in the battlefield. These do not produce large volumes of water, but their conservation is a priority because of their ability to supply the streams and river with fresh, cold water. They also can serve as critical habitat for aquatic invertebrates.

The national battlefield has developed a water quality monitoring program and is collecting water chemistry data at 13 sites around the national battlefield. The battlefield's streams are surveyed for dissolved oxygen, pH, conductivity, temperature, nitrates, and phosphates to determine what, if any, impact on surface water resources would be caused by the national battlefield's activities. In addition, three sites have been established where data are col-

lected according to the Riparian Channel Environmental Inventory protocol to document the physical and biological condition of the streams. The national battlefield's data will be used in conjunction with additional sampling by regional NPS water resources staff.

The NPS Water Resources Division and Inventory and Monitoring Program collected previously sampled water quality data in 2000 to establish baseline water chemistry levels for Monocacy National Battlefield. This report consisted of data from by the United States Geological Survey (USGS), the United States Environmental Protection Agency (EPA), and the Maryland Department of Natural Resources, mostly from sampling stations along the Monocacy River.

The Lower Monocacy River watershed is included in Maryland's 303(d) listed waters as failing to meet the designated uses defined within Maryland water quality standards. The reasons for this nonattainment are listed as nutrients and suspended sediments. Enduring threats to the water quality of the Monocacy River watershed are sedimentation, nutrient enrichment from nonpoint sources (such as agriculture), point sources (sewage plants), and contamination.

The national battlefield has agreements with agricultural lessees to regulate the use of pesticides and herbicides. Best management practices have been established to limit soil erosion and runoff into streams. The alternatives of this plan would be most likely to affect water quality through construction activities. Following the mitigating measures described earlier (p. 85) and

the policies described in the “Consultation and Coordination” chapter would reduce these potential impacts so that the impacts would be negligible. Therefore, water quality has been excluded from further analysis.

Water Quantity

Water used for national battlefield facilities is obtained from wells near the facilities. The quality of water for personal consumption meets all standards, and water is abundant. None of the alternatives being considered would be expected to cause substantial changes in surface water or groundwater flows in the national battlefield or to affect the national battlefield’s water supply. The effects from the alternatives of this plan on water quantity would be negligible; therefore, this topic has been dismissed from further consideration.

Wild and Scenic Rivers

The Monocacy River in Monocacy National Battlefield is listed on the Nationwide Rivers Inventory prepared by the National Park Service. This inventory is a register of rivers that may be eligible for inclusion in the national wild and scenic river system. The inclusion of a river in this inventory was based on the degree to which it is free-flowing, the degree to which the river and its corridor are undeveloped, and the outstanding natural and cultural characteristics of the river and its immediate environment. Section 5 (d) of the National Wild and Scenic Rivers Act (PL 90-542) requires that “In all planning for the use and development of water and related land resources, consideration shall be given by all

federal agencies involved to potential national wild, scenic, and recreational river areas.”

In partial fulfillment of the section 5 (d) requirements, the National Park Service has complied and maintains the National Rivers Inventory. The intent of the inventory is to provide information that will help managers to make balanced decisions about the use of the nation’s river resources. A presidential directive and subsequent instructions issued by the Council on Environmental Quality and codified in agency manuals requires that each federal agency, as part of its normal planning and environmental review process, take care to avoid or mitigate adverse effects on rivers identified in the inventory. No actions of the alternatives of this plan would affect the outstandingly remarkable values for which the rivers were included on the National Rivers Inventory, nor would any of the actions effectively foreclose the rivers from future designation as wild or scenic.

The Monocacy River has been designated a Maryland state scenic river protected for recreation and wildlife. The objectives of the plan for the scenic river, *Monocacy Scenic River Study and Management Plan* (Monocacy Scenic River Local Advisory Board, 1990), are listed under the “Relationships of Other Planning Efforts to This *General Management Plan*” section.

The effects on the Monocacy River that would result from NPS actions would be relatively minor and would not compromise the values for which the scenic river was designated. Therefore,

the topic of wild and scenic rivers has been dismissed.

Wetlands

Wetlands are the transition areas between water and land that permanently or occasionally contain water. Wetlands can play an important role in the environment by filtering runoff, collecting sediment, and offering wet habitats for a variety of flora and fauna. These areas include marshes, bogs, swamps, and palustrine woodlands. The U.S. Fish and Wildlife Service's National Wetlands Inventory (NWI) map has identified about 80 acres of primarily palustrine forested and riverine forested wetlands in the national battlefield. Most habitat included in this delineation consists of the Monocacy River itself and the forested riparian areas along the river, Bush Creek, and Harding's Run.

There are riparian areas along both sides of the Monocacy River, Bush Creek, and other streams in the national battlefield. These areas could be affected by the actions of the alternatives if the actions included allowing access to the river and streams through the riparian areas, building trails through them, or removing vegetation from them. All the listed actions would be mitigated by carrying out the mitigating measures described earlier and by following the wetlands executive order, NPS management policies, and Director's Order (DO) 77-1 (described in the "Consultation and Coordination" chapter). The National Park Service would follow these guidelines to ensure that there would be no net loss of wetlands and would strive to reach the longer-term goal of net gain

of wetlands by restoring destroyed or degraded wetlands.

All the forested riparian buffers in the battlefield are 35 feet wide or wider; thus, they meet the requirement of the NPS Northeast and National Capital Region buffer plan and comply with the requirements of the Chesapeake Bay Program (A water resources management plan now underway will widen the riparian buffer to 50 feet). The effects caused by the actions of the alternatives, when mitigated by following the measures and guidance described above, would be negligible. Therefore, wetlands are dismissed as an impact topic.

Floodplain Values and Flooding

Floodplains exist in Monocacy National Battlefield where there are perennial and intermittent streams. Floodplains in national park system units are protected and managed in accordance with EO 11988, *Floodplain Management*, NPS DO 77-2 (*Floodplain Management*), and NPS *Management Policies 2006* (4.6.4). This guidance requires that the National Park Service protect, preserve, and restore floodplain values, minimize risk to life or property by the design or modification of actions in floodplains, and examine the effects on floodplains.

It is NPS policy to avoid affecting floodplains and to minimize impacts when they are unavoidable. Under all the alternatives of this plan, new developments, including trails, would be sited in consultation with the NPS Water Resources Division and in concert with guidelines and policies to avoid impacts on floodplains. Therefore, the impacts on floodplains would be negligible.

The Gambrill Mill is in the 100-year floodplain of the Monocacy River and Bush Creek. However, historic structures whose locations are integral to their significance are exempt from compliance with NPS Procedural Manual 77-2, "Floodplain Management." The national battlefield staff would continue to carry out the actions described in appendix C, ("Servicewide Laws and Policies") under the headings "Floodplains," and "Wetlands." The staff also would follow the mitigating measures described beginning on page 85 to ensure that activities in the national battlefield would not compromise natural or beneficial floodplain values or the safety of employees and visitors.

Vegetation and Plant Communities

The vegetation composition and patterns at Monocacy National Battlefield are indicative of the open natural and agricultural landscape in the Piedmont region of Maryland. About 40% of the national battlefield is forested; the rest is primarily agricultural. The patchwork of these upland and riparian forested areas interspersed with agricultural and open fields offers a number of vegetation and habitat types. Some areas are undergoing old-field succession; others are second or third growth forests with mature hardwoods.

Even though the national battlefield's elevation range is relatively insignificant, upland areas contain associated dry site species such as oak (*Quercus* spp.), hickory (*Carya* spp.), and American beech (*Fagus grandifolia*). The lowland riparian forests in the floodplain of the river and along the national battlefield's

streams are dominated by maple (*Acer* spp.), sycamore (*Platanus occidentalis*), hackberry (*Celtis occidentalis*), and ash (*Fraxinus* spp.). Recently disturbed areas are characterized by generalist tree species such as tulip poplar (*Liriodendron tulipifera*), black cherry (*Prunus serotina*), black locust (*Robinia pseudoacacia*), box elder (*Acer negundo*), and the invasive and exotic tree-of-heaven (*Ailanthus altissima*).

Several national battlefield vegetation studies have been or are being conducted. Their findings record more than 375 different plant species, of which more than 100 are exotic. Recent surveys have shown that exotic plants infest most of the nonagricultural land in Monocacy National Battlefield. Some high priority invasive weeds in those areas are multi-flora rose (*Rosa multiflora*), tree-of-heaven (*Ailanthus altissima*), Japanese honeysuckle (*Lonicera japonica*), garlic mustard (*Allaria petiolata*), and Japanese stiltgrass (*Microstegium vimineum*). High priority invasive weeds in the agricultural areas are Johnson grass (*Sorghum halepense*), Canada thistle (*Cirsium arvense*), and Bull thistle (*Cirsium vulgare*).

Implementing the actions of the alternatives of this plan would result in negligible changes in vegetation or plant communities in the national battlefield. Some actions might require clearing, but such clearing would be small scale and local. Because there would be little change, if any, in vegetation and plant communities in the battlefield, this topic will not be analyzed further.

Wildlife

The diverse mix of woods, fields, streams, and the river in the national battlefield provide abundant habitat for many species of wildlife. Common mammal species seen at the national battlefield are white-tailed deer (*Odocoileus virginianus*), gray squirrel (*Sciurus carolinensis*), red fox (*Vulpes vulpes*), and groundhog (*Marmota monax*). Bird species also abound in the mix of open fields and woods: red-tailed hawk (*Buteo jamaicensis*), northern cardinal (*Cardinalis cardinalis*), bluebird (*Sialis sialis*), wild turkey (*Meleagris gallopavo*), great blue heron (*Ardea herodias*), and red-winged blackbird (*Agelaius phoeniceus*). Bald eagles (*Haliaeetus leucocephalus*) are known to nest in the area and can be seen flying over the national battlefield.

Past wildlife inventories have concerned small mammals, aquatic macroinvertebrates, and birds. Current scientific research is concentrating on reptiles and amphibians, white-tailed deer, fish, and bats. These studies, along with personal observations and records, have documented more than 175 species of fauna in the national battlefield.

The principal wildlife issue at the national battlefield is the deer population. Since the mid-1990s several research studies and projects have focused on the national battlefield's most abundant wildlife resource, white-tailed deer. Frederick Community College has performed fecal pellet cluster counts and deer drives to estimate the deer densities in the Brooks Hill / Worthington Farm areas since spring 1997.

The Southeastern Cooperative Wildlife Disease Study at the University of Georgia's College of Veterinary Medicine performed a comprehensive evaluation of herd health for the national battlefield's deer population in 2002. Necropsies were done on sampled deer to obtain health parameters — overall condition, kidney fat indices, and parasite counts — to establish a relative carrying capacity for the population. The conclusion of this study was that the deer herd at the national battlefield is approximately at carrying capacity.

The Smithsonian National Zoological Park's Conservation Research Center is conducting a study on the effect of deer foraging on agricultural crops and forests. Using fenced exclosures, the study is trying to measure corn yield and tree regeneration inside and outside the exclosures when compared against established control plots.

Since 2001, the national battlefield has been cooperating with Antietam National Battlefield's resource management staff to measure deer population density through a method called distance sampling. The staff of Monocacy National Battlefield conducts night counts by spotlight twice a year and enters the number of deer, number of groups, and sex ratio into the "Distance" software program to calculate the population density. To allow for successful tree regeneration in forested areas, scientific research by Tilghman (1989) suggests an upper range for deer density at 40 deer per square mile. The results from the Distance software show an average spring deer density of approximately 100 deer per square mile

and an average fall density of about 145 deer per square mile in the national battlefield. This density survey represents a work in progress, and semiannual spotlight counts are scheduled for every spring and autumn.

Other scientific research covering such topics as vegetation, birds, and rare, threatened, and endangered species has included white-tailed deer population monitoring as a management recommendation based on the impacts that deer can cause on those resources.

Increased disturbance and the loss of some wildlife habitat could result from the construction activities and potential increases in visitor numbers that could result from the alternatives of this plan. However, the proposed construction in all the action alternatives would take place in areas that already have been disturbed by agriculture or the presence of MD 355 or I-270. Wildlife inhabiting the battlefield already are adapted to high levels of disturbance. None of the alternatives would cause measurable changes in the abundance or distribution of any wildlife species. Therefore, wildlife will not be discussed as an impact topic.

Threatened or Endangered Species

The U.S. Fish and Wildlife Service has recently removed the bald eagle (*Haliaeetus leucocephalus*) from the federal list of threatened species. However, the battlefield staff reports that it has been determined that eagles nest on land adjacent to Monocacy National Battlefield. Their habitat would not be affected by the actions of the

alternatives except perhaps indirectly by the restoration of riparian areas nearby.

The letter from The U.S. Fish and Wildlife Service is reproduced in appendix F. The Maryland Department of Natural Resources has “no records for Federal or State rare, threatened, or endangered plants or animals” in the national battlefield. That letter also appears in appendix F.

Before an approved plan is implemented, endangered, threatened, and special status species will be addressed at the project level through consultations with the U.S. Fish and Wildlife Service and the Maryland Department of Natural Resources to ensure the protection of the bald eagle and any species that might be found in the area. On the basis of these consultations, mitigating measures will be incorporated into project proposals if necessary to address any concerns about these species. Thus, no federally listed or state-listed threatened, endangered species would be affected by alternatives of this plan; therefore, this topic will not be addressed further.

Geologic Resources

Monocacy National Battlefield lies in the Lowland section of the Piedmont Plateau Province in the Frederick Valley. Two primary rock types underlie the area — the Frederick Limestone formation is present in the lower elevations and bottomland, and sandstone and siltstone of the Antietam Formation are present in the upper elevations.

According to *NPS Management Policies 2006*, the agency is required to analyze

the effects on geologic resources that would be caused by the proposed action and the alternatives. The effects on soils, intermittent drainage systems, and hydrogeology are assessed separately in the “Environmental Consequences” chapter of this document.

NPS national policy prohibits the surface mining of soil, gravel, cinder, or rock materials for any operations purposes, including the construction of roads or facilities. Under any of the alternatives in this document, most modifications to access roads and facilities in Monocacy National Battlefield would be limited to existing disturbed areas, and they would not be likely to require blasting or other modifications of bedrock geology.

There are no known paleontological resources in Monocacy National Battlefield. The potential impacts on surface geologic outcrops from road or facility construction, visitor activities, or NPS operations would be negligible. Thus, the effect on the geologic resources of the national battlefield from any of the alternatives would be negligible; therefore, geologic resources are excluded from further environmental analysis.

Soils

Most soils in the lowland areas of the national battlefield are of the Codorus and Linside series. Soils in the upland areas are of the Cardiff and Whiteford series. On the basis of the 2001 soil survey, the Maryland Geological Survey has designated some areas of the national battlefield as highly erodible land, taking into account the soils present and

the slope. Farming practices in these areas are dictated by a conservation plan set out by the local Maryland Department of Agriculture Soil Conservation District. These plans outline conservation practices that must be followed to reduce erosion and nutrient runoff.

The soil survey has also documented 14 soils in the national battlefield that the U.S. Department of Agriculture has classified as prime farmland. Prime farmland includes soils that contain the best combination of characteristics to produce high crop yields but still maintain low erosion potential. The conservation of these farmlands prevents the use of poorer soils that may be more erodible or less productive.

Under the alternatives of this plan, the construction of roads or improvements and development could cause short-term disturbance of soils, but the disturbance would be confined to specific sites of limited area, or along narrow corridors associated with roads. Road improvements would reduce the erosion potential and dust associated with bare soil as a road base. The erosion potential generally is low because the topography is relatively level and there is a large amount of vegetative cover. Applying appropriate best management practices (silt fencing, prompt revegetation) and slope consideration would control and mitigate construction impacts, so that the resultant impacts would be negligible. The total developed area of the national battlefield would be small, so that permeability and runoff would not be noticeably affected. Therefore, the long-term effects on soils would be

negligible, and this topic has been dismissed from further consideration.

Prime or Unique Farmland

The 1981 Farmland Protection Policy Act (PL 97-98) was passed to minimize the extent to which federal programs would contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses and to ensure that federal programs would be administered in a manner that, to the extent practicable, would be compatible with state, unit of local government, and private programs and policies to protect farmland.

Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops with minimum inputs of fuel, fertilizer, pesticides, and labor and without intolerable soil erosion.

Unique farmland is land other than prime farmland that is used for the production of specific high-value food and fiber crops. It has the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality or high yields of specific crops when treated and managed according to acceptable farming methods. Examples of such crops are citrus, tree nuts, fruits, olives, cranberries, and vegetables

Farmland other than prime and unique that is of statewide or local importance for the production of food, feed fiber, forage, or oilseed crops, as determined by the state or local government, is also

considered farmland for purposes of the act.

The National Park Service consulted the soils maps for Frederick County issued by the Natural Resource Conservation Service (NRCS), U.S. Department of Agriculture. This is the agency responsible for implementing the policy. The maps identified several areas of prime farmland in the battlefield. The largest area is the southern third of the Best Farm. Prime farmland also can be found in most of the area at the north end of the national battlefield east of MD 355, a small part of the Baker Farm along I-270, a small part of the Thomas Farm along I-270, several areas at the Worthington Farm, an area of the Thomas Farm near the battlefield's eastern boundary, and some land along Bush Creek in the Gambrill Mill tract.

The areas that would be affected by the alternatives of this plan are portions of the Best Farm near MD 355, the area at the northern end of the national battlefield east of MD 355, a small part of the Baker Farm along I-270, and some land along Bush Creek in the Gambrill Mill tract. These areas could be affected by paving existing roads, removing nonhistoric structures, rehabilitating historic structures, and creating foot trails and small parking areas. The National Park Service consulted with the NRCS Frederick Field Service Center (Mark Siebert, February 23, 2004). The lands that would be affected are not in agricultural use at present. Therefore, these actions would not constitute conversion of farmland to another use, and no additional compliance with the Farmland Protection Policy Act

would be required. Therefore, this topic has been dismissed from further consideration.

Soundscape

In accordance with NPS *Management Policies 2006* and DO 47, *Sound Preservation and Noise Management*, an important part of the NPS mission is to preserve, to the greatest extent possible, natural soundscapes associated with units of the national park system. Natural soundscapes exist in the absence of human-caused sound.

Visitors who come to Monocacy National Battlefield expect to find rural quiet similar to that of other national battlefields. Unfortunately, I-270 and MD 355 cross the national battlefield, creating constant background noise inconsistent with this expected quiet. These external sounds will not be decreased by any proposed NPS action. Any dissonant sounds associated with construction in any of the alternatives of this plan would last only as long as the construction. Because the opportunity for visitors to experience a natural sound environment is beyond NPS control, soundscape management has been dismissed as an impact topic.

Lightscape

In accordance with its *Management Policies 2006*, the National Park Service strives, to the greatest extent possible, to preserve natural ambient lightscaapes, which are natural resources and values that exist in the absence of human-caused light. Monocacy National Battlefield endeavors to limit the use of artificial outdoor lighting to that

necessary for basic safety requirements, to ensure that all outdoor lighting is shielded to the maximum extent possible, and to keep light on the intended subject and out of the night sky. Therefore, lightscape management was dismissed as an impact topic.

Topics Not Applicable to Monocacy National Battlefield

A number of issues were not mentioned in scoping, or the national battlefield has no resources in these categories. The following things will not be impact topics in this document

- caves
- coastal processes
- coral reefs
- fisheries and aquatic life
- geologic processes
- geothermal and hydrothermal resources
- marine/estuarine resources and habitat
- paleontological resources
- research natural areas
- water rights
- wilderness

Public Health and Safety

None of the actions in any of the alternatives would result in any identifiable adverse impacts on human health or safety. The alternatives were designed with consideration for these factors. Some alternatives would change the transportation system in and outside of the national battlefield; those changes would greatly reduce the possibility of vehicle-pedestrian accidents.

Environmental Justice

Federal agencies are required by EO 12898 to identify and address disproportionately high and adverse human health or environmental effects on minority and low income populations. None of the alternatives of this plan would result in a disproportionately high or adverse effect on any minority or low-income population or community. The reasons for this conclusion are as follows:

- The developments and actions of the alternatives would not result in any identifiable adverse effects on human health. Therefore, there would be no direct, indirect, or cumulative adverse effects on any minority or low-income population or community.
- The effects on the natural and physical environment caused by the actions of any alternative would not significantly and adversely affect any minority or low-income population or community.
- The alternatives would not result in any identified effects that would be specific to any minority or low-income community.
- The planning team actively solicited public comments when developing this plan and gave equal consideration to all input, regardless of the commenter's age, race, income status, or other socioeconomic or demographic factors.
- The effects on the socioeconomic environment from the alternatives of this plan would be minor or positive and would occur mostly within the local and regional geographic area. These effects would not occur all at one time; they would be spread over a number of years, which would reduce their magnitude. The effects on the socioeconomic environment would not substantially alter the physical and social structure of the nearby communities.

For these reasons, environmental justice will not be analyzed further in this document.

IMPACT TOPICS — RESOURCES THAT COULD BE AFFECTED

INTRODUCTION

Impact topics, simply defined, are the resources that could be affected by the actions of the alternatives of the plan. The impact topics discussed below were derived from the issues identified during scoping.

Cultural Landscapes — The cultural landscape of the national battlefield is integral to an understanding of the events of July 9, 1864. This plan outlines a course of action for the maintenance, development, and visitor use of the landscape.

Historic Buildings and Structures — Although not all historic buildings are included, the List of Classified Structures for Monocacy National Battlefield contains 51 listed historic buildings and structures. The alternatives of this plan propose both uses and treatments for these resources.

Visitor Use and Experience — The planning team identified “visitor use and experience” as an important issue that could be appreciably affected by the alternatives of this plan. The Organic Act and NPS *Management Policies 2006* direct the National Park Service to provide enjoyment opportunities for visitors that are uniquely suited and appropriate to the superlative resources found in the national battlefield. Within this impact topic are such things as: visitor orientation; circulation and access; visitor safety; interpretive opportunities; and visitors’ experiences of the national battlefield’s resources.

The Socioeconomic Environment — The National Environmental Policy Act requires an examination of the effects on social and economic conditions that are caused by federal actions. Monocacy National Battlefield affects the socioeconomy of nearby communities. Accordingly, residents and regional businesses may have concerns about changes in the management of the national battlefield that might affect their lives, the socioeconomic environment, and opportunities.

Transportation, Access, and Circulation — “Transportation, access, and circulation” was identified as a potential impact topic. The discussion of transportation in this document covers the effect on local and regional transportation networks surrounding Monocacy National Battlefield, as well as the battlefield’s existing transportation network of trails, roads, and parking areas. The principal effects would be changes in traffic flow and traffic safety conditions.

Providing safe access and circulation for visitors throughout the national battlefield relates specifically to the existing regional and local transportation networks crisscrossing the battlefield. Existing road networks give access to each farmstead in the battlefield, but improved access to primary landscape features within each farmstead is limited. In addition, some existing transportation corridors create a physical barrier to effective visitor circulation between important battlefield features. To address this deficiency, each alternative would entail a variety of

enhancements to the battlefield's existing internal circulation systems.

National Battlefield Operations — All the action alternatives of this plan would affect operations and facilities in the national battlefield. Within this topic are such things as staffing, maintenance, facilities, emergency response time, ability to enforce regulations and protect national battlefield values, the health and safety of employees and visitors, distance to work, managing collections and other resources, and administrative access.

CULTURAL RESOURCES

Background

The National Park Service is charged with the stewardship of many of the nation's most important natural and cultural resources and is responsible for preserving these resources for the enjoyment of present and future generations. The cultural resources of Monocacy National Battlefield are defined as the material evidence of past human activities. Among these are cultural landscapes, historic structures, museum objects and collections, and archeological sites.

By their nature, cultural resources are finite and *nonrenewable*; as a result, national battlefield management activities and policies must reflect awareness of their *irreplaceable* character. Therefore, NPS cultural resource management involves research, evaluation, documentation, and registration of national battlefield resources, along with the establishment of priorities to ensure that these

resources are appropriately preserved, protected, and interpreted to the public.

Formal Designation of Resources

The National Register of Historic Places is the nation's official list of cultural properties worthy of preservation. Monocacy National Battlefield was listed in the national register in 1966, and its nomination was updated recently to include new properties (Paula S. Reed & Assoc., Inc. 2004).

In 1973 the secretary of the interior designated the national battlefield a national historic landmark, recognizing it as a site of exceptional importance possessing national significance. A cultural resource study for the national battlefield was undertaken in 1999 and has been updated several times to reflect new research and property acquisitions (Paula S. Reed & Assoc. 1999 and 2004).

The National Park Service completed a cultural landscape inventory of the entire national battlefield in 2000 (NPS 2000). And a number of recent architectural, archeological, and historic research projects have contributed greatly to understanding the national battlefield's cultural landscape (GWWO Architects Inc. 2003; Beasley 2004). Such studies also have helped to establish the historic context of the national battlefield's many cultural resources.

Except for the Gambrill House, which was individually listed on the national register in 1984, the other historic structures in the national battlefield are listed as contributing resources to the battlefield's national register nomination.

Period of Significance

The period of significance for Monocacy National Battlefield extends from ca. 1750 to 1934 (1964 for monuments), spanning more than 180 years of settlement, agricultural improvement, and industrial expansion. Between the mid 18th and mid 19th centuries, the national battlefield's circulation and transportation corridors were established and the battlefield farmsteads were settled. The key transportation routes that converge within the boundaries of the battlefield facilitated the clash between Union and Confederate forces during the Battle of Monocacy, and the same circulation corridors helped facilitate post-Civil War recovery in the region.

Finally, beginning in the late 19th and early 20th century, the veterans' community, civic leaders, and government officials worked together to memorialize and commemorate the Battle of Monocacy. This culminated in the establishment of Monocacy National Military Park in 1934.

Cultural Landscapes

A cultural landscape is a reflection of human adaptation and use of natural resources. It is often expressed in the ways that land is organized and divided, and also through such factors as settlement patterning, land use, circulation, and the built environment. The character of a cultural landscape is defined by physical attributes such as roads, structures, and vegetation patterns and by cultural attributes such as values and traditions.

Cultural landscapes are shaped by a variety of factors, including land use and land management, political and legal systems, technology, and economics. As such, they constitute a living record of an area's past, a visual chronicle of its history. Cultural landscapes are not static, however; modern and natural forces are continually reshaping them, posing a significant preservation challenge.

Before the Civil War, the area now occupied by the battlefield was a productive agricultural and milling community surrounding Monocacy Junction and other important transportation features in the vicinity. The rolling hills of the Monocacy River Valley were fertile lands on which a variety of crops were produced, ranging from corn, wheat, and other small grains to vegetables and dairy products.

A number of 18th and 19th century dwelling houses and agricultural out-buildings were clustered on the battlefield's five component farmsteads, along with mills, warehouses, and other structures associated with the Gambrill milling complex. Many of these structures are still extant on the battlefield landscape.

The properties that make up Monocacy National Battlefield reflect nearly three centuries of historic occupation and development around the Monocacy River crossroads. The battlefield's cultural landscape possesses a distinct character that no longer can be found readily in and around Frederick County. The buildings, structures, circulation systems, materials, organization, and open space all contribute to the historic

agricultural, milling, and early 20th century commemorative landscape qualities of the battle site. Indeed, Monocacy National Battlefield's many remaining historic structures combine with the railroad, highways, and farm fields to form a remarkably intact 18th and 19th century agrarian landscape.

Layered upon this landscape is an early 20th century Civil War commemorative component, along with other features associated with NPS management functions. In spite of the modern intrusions created by Interstate Highway 270 and contemporary suburban sprawl on adjacent lands, Monocacy National Battlefield preserves a unique "cross-roads community" whose diverse history spans more than 250 years. These landscape layers combine to result in a high level of integrity, character, and feeling.

Historic Structures

Monocacy National Battlefield contains a number of historic structures, buildings, and other features that reflect the history of the site and contribute to the battlefield's national significance.

Among the buildings are a variety of historic farmhouses, barns, and outbuildings, as well as nonhistoric buildings that are used for administrative or maintenance functions. Other structures are monuments, fences, earthworks, bridges, road traces, and other constructed elements.

Buildings are among the most prominent constructed features on the battlefield landscape. A number of these buildings were present during the 1864 battle, although most have been altered

since that time. Additional post-Civil War buildings augment these earlier buildings and contribute to the rural, agrarian character of the battlefield. Two of the battlefield's component properties, the Best and Thomas farms, contain 18th century structures, and all six properties have extant structures that date to the 19th century.

The Best Farm contains structures from the late 18th and early 19th centuries. Late 18th century buildings attributed to the Vincendière family's tenure on the property are the large main house, a secondary stone and log dwelling, and a stone barn. Two more historic structures, a wagon shed/corn crib and a log outbuilding, were built in the mid to late 19th century. The Best Farm also contains a 20th century well or pump house.

The Gambrill tract contains two historic buildings, a house and a stone mill now in use as a visitor center. The mill building dates to 1830, and although it has been greatly altered from its original appearance, it is the primary surviving element of a substantial milling complex. Additional structures associated with the mill include remnants of a dam on Bush Creek, raceway and tailrace. The ca. 1872 house is a large, Second Empire style brick mansion that retains a high level of integrity. It does not date to the Civil War period, but it is nonetheless an important historic feature.

The Thomas Farm contains several 18th and 19th century buildings. The Thomas House is a large brick dwelling constructed ca. 1780 with subsequent renovations and alterations during the 19th and 20th centuries. A smaller stone secondary house also exists that may

date to the 18th or 19th century. It has been significantly altered over time, but its use as a servant or tenant dwelling during the 19th century is well documented.

Other domestic outbuildings are a brick building of indeterminate age and frame shed that probably dates to the 19th century. The farm also contains several post-Civil War 19th century agricultural buildings, including a Pennsylvania style timber frame bank barn with an associated brick silo and a timber frame corn crib.

Two mid-20th century concrete block houses also stand on the Thomas Farm, one along Araby Church Road in front of the property and one on Baker Valley Road along the lane to the barn. At the intersection of Araby Church Road and MD 355 sits a two-story frame dwelling popularly known as the Toll House. Although it may date to the late 19th or early 20th century, this structure has been significantly altered and lacks historical integrity. In addition, it is likely that it was moved to its current location from another site.

The Lewis Farm contains four historic buildings — a ca. 1850 log house with a late 19th/early 20th century frame addition, a barn, a wagon shed, and a springhouse that probably date to the late 19th century. Although the Lewis Farm has been significantly affected by the construction of Interstate 270, its surviving buildings maintain the site's agrarian character.

The Worthington House (ca. 1851) is the only extant historic building that remains at the Worthington Farm. Exterior restoration of the house was

completed in 2004. The unrestored interior retains a number of important architectural features, most notably decorative trompe l'oeil decorative painting in the entrance hall and parlor.

The Baker Farm contains several late 19th and early 20th century structures, as well as several modern buildings. The main house dates to 1914, but it probably was built on the foundations of an earlier dwelling. Near the main house stand a smokehouse, a milk house, and a dairy barn, all built of rusticated concrete block and dating from the first half of the 20th century. A frame bank barn and a brick silo also are extant; they date to the mid or late 19th century. Several modern buildings, including concrete stave silos, an equipment shed, and a breeding barn also are present.

Associated with these farmsteads are the railroad, the railroad junction, roads, road traces, farm lanes, bridges, and other transportation features that crisscross the battlefield. Many of these features, particularly the railroad, the railroad junction, and the bridges and highways played a significant role in the events leading up to and including the Battle of Monocacy. Although the alignment and materials of some of these transportation features have been altered over time, their settings and association remain essentially intact.

Other structures are the surviving earthworks in the battlefield's Civil War defenses area. Such features — the only structural artifacts left from the Battle of Monocacy — are important interpretive resources. Other battlefield features are the five commemorative monuments erected between 1907 and 1964, which

reflect efforts by both individuals and organizations to commemorate the events of 1864 battle.

VISITOR USE AND INTERPRETATION

Background

Monocacy National Battlefield was first opened to visitors in 1991. A new full service visitor center for the national battlefield opened in 2007. An information desk, an electric map program, a cooperating association sales outlet, two floors of exhibits, restrooms, meeting space and offices can accommodate several busloads of visitors. Visitation has risen from approximately 8,000 the first year to more than 21,000 visitors in 2007.

A brochure available at the visitor center directs visitors to a chronological, self-guiding auto tour of the battlefield. It first leads them to the Best Farm, where the initial Confederate assault along the Georgetown Pike was halted when the covered bridge over the Monocacy River was burned.

At the next stop, Monocacy Junction, visitors learn about the physical relationship between the railroad, the river, and the Georgetown Pike and see how those physical features affected the military actions throughout the day of the battle. Then they drive to the Worthington Farm, where the Confederate “flanking movement” is interpreted. At the final stop, the Thomas Farm, visitors could learn how the Confederates engaged in some of what many soldiers said was the heaviest infantry fighting they encountered in the entire war. Finally, the Union line was broken and

the Federal forces retreated past Gambrill’s Mill.

Wayside exhibits complement the visitor experience at each stop on the auto tour and at nearby locations. Additional opportunities exist in the form of walking trails at the Thomas Farm, the Gambrill Mill, and the Worthington Farm.

Special interpretive events are offered, usually in summer, to attract more visitors to the national battlefield and to reach out to new audiences. These events often focus on specific themes or activities and sometimes complement a Civil War event that relates to Monocacy as well as a nearby site (for example, Lee’s lost order and the Battle of Antietam).

Visitor Facilities and Safety

To ensure that national battlefield resources are protected and not endangered, public activities are evaluated for appropriateness before they are permitted. All activities and experiences are planned with the safety of visitors and employees in mind. This includes training, proper care and maintenance of equipment, and attention to safety codes.

THE SOCIOECONOMIC ENVIRONMENT

Study Area

The study area for this plan has been defined as Frederick County, Maryland. Monocacy National Battlefield, which is in the southern third of the county, is served by several major north-south and east-west roadways: U. S. Interstates 70 and 270; U.S. Highways 15, 40, and 340;

and Maryland Highways, 85, 144, 180, and 355. The CSX Railroad runs through Monocacy National Battlefield, with a spur line into Frederick. Scheduled commuter rail is available from Washington, D.C. No scheduled airlines use Frederick Municipal Airport.

Frederick, the only incorporated community in the county with more than 10,000 people (52,767), lies 44 miles north of Washington, D.C. and 51 miles west of Baltimore.

The national battlefield is at the southern edge of a heavily developed commercial area south of the city of Frederick. On the north boundary is an office complex and a lumber yard. Across the Monocacy River on the west boundary are industrial development and warehouses. The land on the east boundary is a mix of heavily forested land, agricultural fields, and single-family homes. Land on the south is still mostly agricultural, with some residential development mainly along MD 355 in the Araby Church rural village. Residential development is encroaching from the south as the planned community of Urbana expands north.

Frederick County

Frederick County lies within the Washington, D.C.–Maryland–Virginia–West Virginia metropolitan area. The 2000 population for Frederick County was 195,277. Its racial composition was 89.3% white (compared to 64% for the entire state of Maryland and 75.1% for the United States as a whole), 6.4% black (or African American) (27.9% for Maryland, 12.3% for the nation), 1.7%

Asian descent (4% for Maryland, 3.6% for the nation), and 2.4% Hispanic or Latino descent (4.3% for Maryland, 12.5% for the nation). County public school enrollment was 43,418, with an additional 10,587 in college or graduate school. The median household income was \$60,276 (U.S. Bureau of the Census 1999). The 1999 per capita income was \$25,404, which was 99.2% of the state and 118% of the U.S. average. From 1989 to 2000, the average annual growth rate in per capita income was about 5.7% (by comparison, the statewide growth rate for per capita income was 4.4%). In 1999, 4.5% of Frederick County residents lived below the poverty line (compared to 8.5% for the state of Maryland and 12.4% for the United States).

There were approximately 107,151 people aged 16 or more in the labor force in 2000. The unemployment rate was 2.2%, or 3,289 individuals. The largest employers were in the census categories of educational, health and social services (18.4%), professional, scientific, management, administrative, and waste management services (12.7%), retail (11.6%), construction (10.1%), manufacturing (8.5%), finance, insurance, real estate, and rental and leasing (8.2%), and public administration (7.9%).

Frederick County had a total of 73,017 housing units in 2000, of which 75.9% were owner-occupied.

Frederick, with 52,767 people, is the largest city in Frederick County. It was incorporated as a municipal corporation in which the chief executive officer is the mayor and the legislative body is the

board of aldermen. The city provides police and fire protection.

Although Monocacy National Battlefield facilities are served by individual septic systems, Frederick County has sewer and water lines that run across the national battlefield. Water and sewer lines run parallel east-west along the river through the national battlefield, with branch lines that cross the Monocacy River running south along Bush Creek to Urbana.

Electrical power is provided by Allegheny Power, which has lines along MD 355, Araby, and Baker roads through the national battlefield.

Nearby communities are Bartonsville (population 800) and the unincorporated Urbana, Buckeystown, and Ijamsville.

TRANSPORTATION, ACCESS, AND CIRCULATION

Background

The discussion of transportation in this document covers the effect on regional and local transportation networks surrounding and traveling through the national battlefield. It also includes the battlefield's existing transportation network of trails, roads, and parking areas. Access and circulation is a critical component of this topic.

Regional Transportation Networks

The great population and employment growth occurring in the region has placed ever greater demands on the region's highway and transit networks. The several regional transportation networks that surround and cross

Monocacy National Battlefield are described below.

Interstate Highway 270. Built during the 1950s, I-270 is a multilane expressway and a vital link between I-70 in Frederick County and the I-495 Beltway that surrounds Washington, D.C. The 1998 average daily traffic (ADT) volumes in the Frederick area were recorded at 71,250 ADT. Traffic volume projections for 2025 show a 76% growth rate, or 125,600 ADT (per *Draft I-270/US 15 Multi Modal Corridor Study Environmental Impact Statement*, U.S. Dept. of Transp. and Maryland Dept. of Transp. 2002). Unfortunately, this road corridor passes through the heart of the national battlefield, bisecting areas of major engagement between the Confederate and Union forces on the Worthington and Thomas farm fields.

The view of and noise from I-270 dominates the landscape and detracts from the contemplative atmosphere of the national battlefield, making it difficult for visitors to visualize troop movements and major points of engagement. The highway also creates a major physical barrier to effective circulation between farmsteads.

The Maryland State Highway Administration has commissioned an environmental impact study (currently underway) to develop alternatives and assess the impacts of plans to relieve congestion and improve safety along this corridor. Some alternatives would involve widening the expressway to create high occupancy lanes (HOV) or more general purpose lanes. This could result in the addition of four more lanes to the expressway, which would entail

acquiring more right-of-way. Such an action would take valuable battlefield real estate, exacerbating the existing visual and audible intrusion of the highway.

Maryland Highway 355 (Urbana Pike). Maryland Highway 355 (the Urbana Pike), a two-lane rural major collector road, is one of the most heavily traveled roads in the region. The highway, which parallels I-270, serves as an alternate north-south commuter route (especially when I-270 is unusually congested). Steep grades, rolling terrain, poor sight distance, and many private entrances restrict its traffic-carrying capacity. In addition to the through commuter traffic, Urbana Pike also serves local traffic traveling between Urbana and Frederick.

In 2003 the National Park Service contracted for a transportation study and requested that the contractor examine the existing traffic circulation and develop alternatives for improving circulation in the battlefield. The “Monocacy National Battlefield Transportation Plan” prepared by HNTB Corporation involved traffic counts on MD 355 in September 2003, which recorded an average daily traffic volume northbound of approximately 5,500 ADT. Southbound traffic was almost 36% higher, at 7,500 ADT, for a total volume of 13,000 ADT (HNTB Corporation 2003). This compares with the volumes published in the 2001 Frederick County volume map prepared by the Maryland Highway Administration. The map shows Urbana Pike (MD 355) with an annual average daily traffic volume of 17,875 to the north of the

battlefield and 8,675 to the south of the battlefield.

Speed studies indicate that 30%–42% of the traffic volume exceeds the posted speed of 50 miles per hour. The accident rate for the stretch of MD 355 that travels through the national battlefield is comparable to the statewide rate but higher than the county rate.

Urbana Pike gives access to a number of major battlefield features — the visitor center, Best Farm, Gambrill Mill, Monocacy River, Araby Church Road, and the 14th New Jersey, Daughters of the Confederacy, and Maryland monuments.

CSX Railroad. The CSX Railroad, known as the B&O Railroad at the time of the battle, maintains its mainline operation along the original railroad alignment, which parallels Bush Creek in a southeast-northwest alignment until it crosses the Monocacy River, then it approaches Frederick Junction, where it angles into more of a west-southwest alignment paralleling the Monocacy River. This once vital link for conveying Union troops to Frederick Junction just ahead of the Confederate advance on Washington is now a vital link for modern freight transportation on the largest rail network in the eastern United States.

CSX Transportation, a subsidiary of the CSX Corporation, which maintains operation of the CSX railroad, is headquartered in Jacksonville, Florida. The romantic notion of witnessing rail traffic along this historic alignment enhances the visitor experience, but it poses a physical barrier and safety hazard for visitors seeking access to

some battlefield features north of the railroad. The railroad bridge over the Monocacy River is an attractive means of reaching the area, but this way is hazardous and illegal.

The railroad, in its commitment to employee and public safety, is firmly opposed to establishing any at-grade crossing. Both federal and state government policies discourage the creation of new at-grade crossings. In the alternatives of this plan, if crossing the railroad right-of-way was necessary to reach battlefield features, at-grade crossings would be avoided, and bridge alternatives would be pursued. This could include either a bridge over the CSX right-of-way or a bridge under the CSX right-of-way adjacent to the CSX bridge abutment on the south bank of the Monocacy River.

Maryland Rail Commuter Service.

The Maryland Rail Commuter (MARC) Brunswick Line, a commuter rail service operated by Maryland Transit Administration (MTA), has been extended into Frederick, with passenger service beginning in December 2001. It provides train service from Frederick to Union Station in Washington, D.C. Three morning departures from Frederick at leave at 5:17, 6:10, and 7:15; three afternoon return trips from Washington depart at 3:55, 5:10, and 6:25. The approximate running time is 1 hour and 25 minutes, with one-way fares costing \$6.50. There are two stations in Frederick, one in downtown Frederick and one at Monocacy Station, which was recently developed just north of the national battlefield. Monocacy Station has a parking capacity of 800 spaces.

Local Transportation Networks

The two county roads described below are on the south side of the national battlefield; they provide access and circulation for battlefield visitors and local residents.

Araby Church Road. Araby Church Road, formerly part of the original Old Georgetown Pike alignment during the time of battle, is a low volume, two-lane paved county road. It accesses MD 355 opposite the entrance to the Gambrill Mill and runs 2.5 miles to the south, where it ends at a second intersection with MD 355. During a 2003 transportation study conducted by HNTB, the recorded average daily traffic volumes northbound were approximately 200 ADT; the southbound traffic was 243 ADT, for a total traffic volume of 443 ADT. This road principally is used for access to the Thomas Farm, the Pennsylvania Monument, Baker Valley Road, and a number of single family homes.

Baker Valley Road. Baker Valley Road is a low volume, two-lane paved county road that parallels the Monocacy River and travels under the I-270 corridor between Araby Church Road and MD 80. During the 2003 transportation study, the recorded average daily traffic volumes eastbound were approximately 454 ADT; westbound traffic was 562 ADT, for a total volume of 1,016 ADT. A number of battlefield features can be reached from this road, including the 10th Vermont Monument, the Thomas, Worthington, Lewis, and Baker farms, and a number of single family homes.

Battlefield Transportation Networks

Few access roads are available in the national battlefield, and there is little parking. Most of the principal access ways are existing county and state roads. For farmsteads, existing historic access routes such as farm lanes or driveways have been used to reach NPS properties. Unfortunately, the transportation networks such as I-270, MD 355, and the CSX railroad act as physical barriers to effective circulation in the national battlefield, making it difficult to connect various features of the battlefield.

Access Roads and Parking. Each of the five farmsteads in the national battlefield has gravel farm lane access from existing county roads or a state highway. The Worthington, Thomas, Lewis, and Baker farms use Baker Valley Road; the Best Farm is reached via Urbana Pike (MD 355). The Thomas farm also has a formal paved driveway giving access to Araby Church Road. Gambrill Mill has a paved access road to Urbana Pike (MD 355).

Gambrill Mill is reached by a paved driveway that leads to a small parking area near the mill. The drive continues on to the Gambrill House at the top of the hill. The battlefield maintenance structure also can be reached by a gravel road from this drive, just north of the Gambrill Mill. The parking area near the mill has space for 12 cars plus 2 spaces for “handicapped” parking. There are no spaces for oversized vehicles; buses or recreational vehicles must be parked along the road shoulder and go up to the Gambrill House to turn around. More parking areas are available for administrative or operational purposes, one near the east side of the mill; a gravel lot

near the maintenance building; and two parking areas near the house, one paved and the other gravel surfaced.

No formal parking areas are available for the battlefield’s five monuments, although there is an access road to the 14th New Jersey Monument. All others can be reached by pulling the cars off onto the shoulder of adjacent roadways.

Trails. There are three interpretive hiking trails in the battlefield. The Worthington Farm trail starts at a small five-vehicle parking area off Baker Valley road. There are no spaces for oversized vehicles; bus tours are escorted up to the Worthington house. The trail follows the gravel farm lane for 0.8 mile to the Worthington farmhouse, where there are two loop trails. The Worthington-McKinney Ford loop, which is 1.6 miles long, takes visitors down to and along the Monocacy River, where the Confederates forded the river and staged their troops for the upcoming assault on the Union flank. The trail ends back at the Worthington Farmhouse. The Brooks Hill Loop, 1.9 miles long, takes visitors up to and along Brooks Hill before returning to the house.

The second interpretive hiking trail starts at the parking area of the Gambrill Mill. This 0.5 mile loop trail parallels the Monocacy River and offers views of the B&O railroad bridge before turning east to parallel Bush Creek. The trail turns back to the Gambrill Mill at an old wagon road that once crossed Bush Creek to connect Georgetown Pike with Reels Mill Road to the northeast, which gave the Union Troops an avenue of retreat from the Confederate advance.

The third trail, the Thomas Farm Trail, is a loop trail that begins and ends on the Thomas Farm. It crosses an open field following an old road trace between the Thomas and Worthington farms. Where the trace has been truncated by I-270, the trail turns northeast following the tree line, then southeast and southwest along the fenceline, reconnecting to the trace and returning to the farmstead.

NATIONAL BATTLEFIELD OPERATIONS

The Staff

Monocacy National Battlefield is a relatively new National Park Service area. Visitation began in 1991 with the opening of the Gambrill Mill visitor contact station. It was replaced in 2007 by a full-service visitor center.

The national battlefield is administered by a superintendent, with a support staff of 14 employees. The permanent support staff consists of a chief of resource education and visitor services, three interpretive park rangers, two law enforcement rangers, one natural resource manager, one cultural resource manager, one facility manager, three maintenance workers, and one historian / NPS liaison with the Catoctin Center. This permanent staff is augmented by additional seasonal staff and a corps of volunteers.

Resource Education and Visitor Services

The Division of Resource Education and Visitor Services is responsible for interpreting identified national battlefield themes, offering education services

for diverse audiences, and giving visitors information and orientation through personal and nonpersonal services such as the national battlefield's Web site, publications, exhibits, and the Volunteers-in-Parks program.

The Monocacy National Battlefield interpreters operate out of offices in the new visitor center. During operating hours the information desk is staffed by an interpretive ranger or a volunteer. The person at the information desk serves as the center of interpretive activities, greeting visitors, operating the book sales outlet, and answering questions about the national battlefield and its history.

School groups generally pre-schedule their visits to the battlefield. Typically a school group will be assigned an interpretive ranger, who will explain the site's history and its importance to American history. In favorable weather these groups are accommodated outside, but during inclement weather such groups can be accommodated in the new visitor center.

Resource and Visitor Protection

The state of Maryland and the National Park Service share concurrent jurisdiction over lands within the legislative boundary of Monocacy National Battlefield. NPS rangers enforce federal and state laws within the boundaries. The Maryland State Police, the Maryland Department of Natural Resource Police, the Frederick County Sheriff's Department, and the Frederick City Police Department help the rangers with incidents when necessary.

Roads that run through the national battlefield are MD 355, I-270, the Baker Valley Road, and Araby Church Road. Motor vehicle accidents, which are frequent, are investigated primarily by the Maryland State Police and the Frederick County Sheriff's Department. Several small NPS lanes within the boundary are open to vehicle traffic, and any accidents that occur on those roads or that damage NPS resources or property are investigated by NPS rangers. Rangers also assist state and local authorities with traffic control and patient care associated with traffic accidents that occur on state or county roads.

Crimes that can harm NPS resources in the national battlefield are vandalism to historic structures, illegal relic hunting, trash dumping, and wildlife poaching. NPS rangers monitor these activities and apprehend violators. Most parking areas that are adjacent to state and county roadways are closed in the evening to deter vandalism and crimes. The Monocacy Junction and river access lots are not easily gated because of rights-of-way held by CSX and their proximity to MD 355; those areas become attractive spots for after-hours illegal activities.

Recreational use of the Monocacy River, which runs through the national battlefield, is common. Popular activities are fishing, tubing, and canoeing. Rangers patrol the river on foot and by vehicle. The most common violations observed are fishing violations, littering, possession of alcohol in a closed area, pets off leash, and closure violations (the battlefield is closed after dark). Other violations include illegal camping and

possession or use of controlled dangerous substances. The river accounts for a large percentage of case incident reports completed by NPS rangers.

Monocacy National Battlefield's operating hours generally follow daylight patterns, so that the battlefield is open for more hours in summer. The gates are locked after hours to secure areas. The primary law enforcement concerns are resource violations such as hunting, metal detection, and closure violations. The increasing urbanization and development has led to increasing crime; this is a concern from the perspective of resource management and visitor protection.

Resource Management

The resource management divisions are primarily concerned with identifying, protecting, and interpreting the battlefield's cultural and natural resources. The national battlefield's resource management team at present consists of one natural resource manager and one cultural resource manager.

Although the natural and cultural resource divisions sometimes have different priorities with regard to resource management, they share three central goals — (a) to discover the significance or meaning of each resource, (b) to slow the rate at which the essential qualities of a resource are lost or altered, (c) to support the use and enjoyment of cultural and natural resources while minimizing negative effects on them. Although the corresponding activities are emphasized differently within the divisions, the

foundation of natural and cultural resource management can be summarized as three broad functions: research, planning, and stewardship.

Research begins by locating and evaluating cultural and natural resources through historical analysis and detailed physical examination. It can include establishing baseline information about natural or cultural resources, determining the significance or integrity of a resource, or documenting existing conditions.

Planning addresses the basic question of how to best care for natural and cultural resources while allowing the public to enjoy them.

Stewardship consists of executing systematic, responsible actions that will directly affect cultural or natural resources, and it is the result of sound research and planning efforts. Stewardship, which seeks to limit the loss of the character-defining attributes of the battlefield's cultural or natural resources, results in the perpetuation and appreciation of these resources.

Facility Management

The maintenance division is responsible for the preservation and maintenance of a variety of national battlefield structures and cultural resources. The division faces the challenging task of

slowing or preventing decay in the 51 historic structures listed on the national battlefield's list of classified structures. The division also must also operate and maintain all the other more modern national battlefield facilities and equipment — utilities (water, wastewater, power, and solid waste), structures, grounds, fences, monuments, visitor use areas, trail systems, picnic areas, roads, signs, vehicles, and other features of the battlefield. This also includes managing projects and contracts, along with janitorial services.

Current asset condition of park facilities as reported 7/2005 through the NPS Facility Management Software System (FMSS) indicates the battlefield has a total deferred maintenance backlog of over \$6 million. (This does not include the deferred maintenance needs for the Gambrill House as this structure is maintained by the NPS Historic Preservation Training Center). Over 73% of this backlog represents the estimated need to rehabilitate the battlefield's historic structures, many of which have been recently acquired. Every fiscal year, park staff have requested and received funding to systematically reduce this backlog. It is expected that this trend will continue until the deferred maintenance backlog has been eliminated.

CHAPTER 4:
ENVIRONMENTAL
CONSEQUENCES

(blank back of divider)

INTRODUCTION

ENVIRONMENTAL ANALYSIS

The National Environmental Policy Act requires that environmental documents include discussion of the environmental impacts of a proposed federal action, feasible alternatives to that action, and any adverse environmental effects that could not be avoided if a proposed action should be implemented. The proposed federal action in this case would be the adoption of a general management plan for Monocacy National Battlefield. This chapter contains the analysis of the environmental effects on cultural resources, the visitor experience, the socioeconomic environment, and national battlefield operations that would result from the actions of each of the four alternatives. The analysis is the basis for comparing the beneficial and adverse effects that would be caused by each alternative.

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

For each topic in this chapter, first, the methods and assumptions are described,

then the effects on the topic that would occur from each alternative are analyzed. Each alternative discussion also includes a description of the cumulative effects, followed by a conclusion. At the end of the impact section there is a brief discussion of the unavoidable adverse impacts, irreversible and irretrievable commitments of resources, the relationship of short-term uses of the environment and the maintenance and enhancement of long-term productivity, and the energy requirements and conservation potential. The impacts of each alternative are briefly summarized in table 3.

CUMULATIVE IMPACTS

A cumulative impact is described in the regulations of the Council on Environmental Quality (1508.7) as follows:

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

To determine potential cumulative impacts, projects in and around Monocacy National Battlefield were identified. The area included Frederick

County, Maryland. Projects were determined by meetings and telephone calls with county and town governments and state land managers. Potential projects identified as cumulative actions were any planning or development activity in progress or that would be implemented in the reasonably foreseeable future. The effects of past actions also were considered in the analysis.

The projects discussed above were evaluated in conjunction with the effects of each alternative to determine if they would result in any cumulative effects on a particular natural, cultural, or socioeconomic resource or visitor use. Because most of these cumulative actions are in the early planning stages, the qualitative evaluation of cumulative impacts was based on a general description of the project.

Past Actions

A significant change to Monocacy's cultural landscape occurred in 1951 with the construction of Route 240, now known as Interstate Highway 270. Approximately 2 miles of the road were built through what is now the national battlefield. The four-lane highway bisected the heart of the battlefield, causing significant alterations of the landscape. Property boundaries were reconfigured, new access roads were built to replace blocked historic lanes, and all connection between the Worthington and Thomas Farms was lost.

The view of this road and the noise it produces dominate the landscape and detract from the contemplative atmosphere of the battlefield. Visitors have trouble visualizing troop

movements and the major points of engagement; thus, the visitor experience is degraded. In sum, the highway cuts the battlefield landscape virtually in two, destroying the integrity of the setting of the final battle phase.

With the completion of the interstate highway, the Georgetown Pike (or Urbana Pike), which by 1937 had been renamed Maryland Highway 355, no longer was the primary road between Washington, D.C., and Frederick. The addition of I-270 encouraged more suburban growth in the region when the highway became the primary north-south commuting route between Washington and Frederick. Sprawling low-density development grew within the boundaries of the towns and villages or along rural roads surrounding the battlefield.

When the National Park Service bought the Gambrill House, it was in a state of disrepair. Rehabilitation undertaken by the Historic Preservation Training Center preserved the structural integrity and many of its historic architectural elements. These activities, which were generally beneficial, resulted in no adverse effect.

In the first half of the 20th century the Gambrill Mill was heavily affected by the removal of its third story and the milling machinery and water features associated with its original mill function. After the National Park Service acquired the mill, the interior of the structure was rehabilitated for use as administrative offices for the national battlefield. The building's interior and exterior retain little resemblance to the period of its historic use.

Frederick County is one of the fastest growing counties in the Washington metropolitan area. Over the past 20 years significant development has encroached on the north and west boundaries of the national battlefield, altering many of the visual, circulatory, and auditory elements of the agricultural landscape between the city of Frederick and the battlefield, an adverse effect on the landscape.

Water and sewer lines have been constructed through Monocacy National Battlefield with easements that allow for added or enlarged lines within the right-of-way. Frederick County will construct a water transmission main across the Best Farm in 2005, parallel to an existing sewer line and in that easement.

Several utility easements were in place in the battlefield before the National Park Service acquired the properties. As a result of this infrastructure, the National Park Service will be pressured to keep expanding water and sewer lines through the national battlefield as population continues to grow and more water resources are needed, particularly because of the potential of the Urbana Planned Utility District to double in size from 4,000 housing units to 8,000. A parallel 36-inch line is proposed along Baker Valley Road for the future. This would cause great impacts on the Baker and Thomas farms.

Current Actions

A new visitor center for the national battlefield opened during the spring of 2007. The center houses interpretive exhibits and office space for the interpretive staff. It is on the east side of

MD 355 at the extreme northern end of the national battlefield. With the opening of the new visitor center, the previous visitor contact station in the Gambrill Mill is now available for hosting school groups or for classrooms.

The building and parking area for the new visitor center cover some agricultural land, increasing development and the intensity of visitor use there, but adds major enhancements of the information and interpretation available to visitors.

Future Actions

With the addition of facilities and the execution of actions described in this plan, and as Monocacy National Battlefield becomes better known, visitation to the national battlefield probably would increase. The effect on the community probably would be substantial. Traffic would increase in and around the battlefield both because of more visitation and because communities around the national battlefield would grow. This would add congestion to the roadways.

The sale of goods and services to national battlefield visitors by local businesses could be substantial for nearby businesses but small in comparison to the Frederick business community as a whole.

The proposed widening of the I-270 corridor through the national battlefield (as part of the Multi-Modal Corridor Study discussed on page 23) would result in a major adverse impact on the battlefield's cultural landscape. A wider swath of land through the national battlefield could be necessary; this

would make the road — an already intrusive visual feature — more visible. As a possible mitigative action for this intrusion, the National Park Service would consider constructing a deck over a small part of I-270 (as described on page 84) to allow for a symbolic and actual reconnection between two of the national battlefield's most significant resources, the Worthington and Thomas farmsteads. The deck, with crops and hedgerows, would mask a small section of highway. The effect of adding the deck would not be adverse.

In preparing this plan, the National Park Service considered the effects of development outside the boundary of the national battlefield. Essentially, there is development on all but the southwest boundary. To the north are offices, large retail structures, and an enclosed shopping mall; on the east are parcels of subdivided land containing homes and home sites. The unincorporated community of Araby is adjacent to the south boundary, and a bit farther south is the rapidly developing town of Urbana. With more development comes traffic congestion on MD 355 and on Araby Church and Baker Valley roads. Pressure could be placed on the National Park Service to allow the widening of MD 355 through the national battlefield. Existing water and wastewater transmission lines through the national battlefield might need to be enlarged.

With development increasing around the national battlefield, animal habitat would be lost and corridors into and out of the battlefield could become choked. Continued development would make

farming in the area less viable, and retaining the area's vanishing agrarian landscape would become more difficult. All these events would result in adverse effects on the landscape of the national battlefield.

The creation of a state-of-the-art, environmentally friendly visitor facility has been proposed. Such a feature would be placed at the existing I-270 overlook south of the national battlefield. This would be a separate project from the I-270 / U.S. 15 Multi-Modal Corridor Study.

The effect on the national battlefield from the I-270 Overlook/ Demonstration project (described on p. 28) probably would be negligible. Visitors stopping at the site might receive information about the national battlefield and decide to visit there. The location of the proposed overlook is not visible from historic areas of the national battlefield, so there would be no effect on cultural resources.

The effect of possibly removing administrative or maintenance facilities into rental space outside the national battlefield would not be adverse from a cultural resource perspective, and the long-term effect on the economy of Frederick would be negligible.

Adding an alternative transportation system could result in moderate to major beneficial effects on local traffic, depending on the hours of its operation and whether the use of the system was mandatory or optional.

IMPAIRMENT OF RESOURCES

In addition to determining the environmental consequences of the alternatives, NPS policy requires that the potential effects be analyzed to determine whether or not proposed actions would impair the resources or values of the park system unit (in this case, Monocacy National Battlefield). The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve resources and values. NPS managers must always seek ways to avoid or to minimize, to the greatest degree practicable, any adverse impacts on the resources and values.

However, the laws do give the National Park Service the management discretion to allow impacts on the resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the National Park Service this management discretion to allow certain impacts, that discretion is limited by the statutory requirement that the National Park Service must leave the resources and values unimpaired unless a particular law directly and specifically provides otherwise.

The prohibited impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of the resources and values, including the opportunities that otherwise would be present for the enjoyment of those resources or values

(NPS *Management Policies 2006*, 1.4.5). An impact on any resource or value may constitute impairment. An impact would be most likely to constitute an impairment if it affected a resource or value whose conservation would be (a) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the national park system unit, (b) key to its natural or cultural integrity or to opportunities to enjoy it, or (c) identified as a goal in its general management plan or other relevant NPS planning documents.

Impairment might result from NPS management activities, visitor activities, or activities undertaken by concessioners, contractors, and others operating in the national battlefield. In this document, a determination about impairment is made in the conclusion section for each impact topic in the “Environmental Consequences” chapter, except that impairment findings are unnecessary for visitor use and experience (unless the impact would be resource based), for NPS operations, and for the socioeconomic environment. When it has been determined that an action or actions would result in moderate to major adverse effects, a justification for nonimpairment must be made. Effects of only negligible or minor intensity by definition would not result in impairment.

METHODS AND ASSUMPTIONS FOR ASSESSING EFFECTS

The planning team based the impact analysis and the conclusions in this chapter largely on the review of existing literature and studies, on information provided by experts in the National

Park Service and other agencies, and on the insights and professional judgment of the battlefield staff. The team's method of analyzing impacts is further explained below. It is important to remember that all the impacts have been assessed with the assumption that mitigating measures would be implemented to minimize or avoid impacts. If the mitigating measures as described beginning on page 85 were not applied, the potential for resource impacts and the magnitude of those impacts would increase.

NPS Director's Order (DO) 12, *Conservation Planning, Environmental Impact Analysis, and Decision-making*, presents an approach to identifying the duration (short term or long term), type (adverse or beneficial), and intensity or magnitude (negligible, minor, moderate, or major) of the impact(s), and that approach has been used in this document. When duration is not noted in the impact analysis, it is considered long term. Direct and indirect effects caused by an action were considered in the analysis. Direct effects are caused by an action and occur at the same time and place as the action. Indirect effects are caused by the action and occur later in time or farther removed from the place but are still reasonably foreseeable.

The effects described for the action alternatives include a description of the *difference between* implementing the no-action alternative and implementing each action alternative. To comprehend a "full picture" of the effects of implementing any of the action alternatives, readers also must consider the effects that would result from the no-action alternative.

CEQ regulations and NPS DO 12, *Conservation Planning, Environmental Impact Analysis, and Decision-making*, also call for a discussion of the appropriateness of mitigation, as well as an analysis of how effective the mitigation would be in reducing the intensity of a potential impact. For example, would the intensity of an impact be reduced from major to moderate or minor? Any resultant reduction in the intensity of an impact by mitigation, however, is an estimate of the effectiveness of mitigation under the National Environmental Policy Act only. It does not suggest that the level of effect as defined by section 106 of the National Historic Preservation Act of 1966, as amended, would be similarly reduced. Although adverse effects under section 106 may be mitigated, the effect would remain adverse.

EFFECTS ON CULTURAL RESOURCES

METHODS FOR ASSESSING EFFECTS — NATIONAL REGISTER AND SECTION 106

In accordance with the regulations of the Advisory Council on Historic Preservation on implementing section 106 (36 CFR 800, “Protection of Historic Properties”), the potential impacts on cultural resources (historic structures and cultural landscapes) were identified and evaluated by (a) determining the area of potential effects; (b) identifying cultural resources present in the area of potential effects that either are listed in or are eligible to be listed on the National Register of Historic Places; (c) applying the criteria of adverse effect to affected cultural resources; and (d) considering ways to avoid, minimize, or mitigate adverse effects.

Under the regulations of the Advisory Council on Historic Preservation, a determination of *no effect*, *adverse effect*, or *no adverse effect* also must be made for affected cultural resources either listed on the National Register of Historic Places or eligible to be listed on the national register. A determination of *no historic properties affected* means either that no historic properties are present or that historic properties are present but the undertaking would not affect them. (36 CFR 800.4 (d)(1)).

An *adverse effect* occurs whenever an action would alter, directly or indirectly, any characteristic of a cultural resource qualifying it for inclusion in the National Register of Historic Places in a manner that would diminish the integrity of the resource’s location, design, setting,

materials, workmanship, feeling, or association. Adverse effects also can include reasonably foreseeable effects caused by the possible actions of an alternative that would occur later in time, be farther removed in distance, or be cumulative (36 CFR 800.5 (a) (1)). A determination of *no adverse effect* could mean that there would be an effect, but that the effect would not diminish in any way the characteristics of the cultural resource that qualify it for inclusion in the National Register of Historic Places (36 CFR 800.5 (b)).

Thus, the criteria for characterizing the severity or intensity of effects on archeological resources, historic structures, and cultural landscapes listed in or eligible for listing in the national register are the section 106 determinations of effect: *no historic properties affected*, *adverse effect*, or *no adverse effect*. A determination of effect is mentioned in the conclusion sections for historic structures and cultural landscapes.

PRESERVATION TREATMENTS

Special preservation treatments are required for many historic structures in the national battlefield. The terms used to describe these treatments have specific definitions as delineated in the *Secretary of the Interior’s Standards for the Treatment of Historic Properties, with Guidelines for the Treatment of Cultural Landscapes*. That document defines the principles that federal agencies must follow when they stabilize or alter historic buildings, landscapes, or sites. Of the four levels of treatment, only two

are proposed in this document — preservation and rehabilitation.

Preservation is the process of applying measures necessary to sustain the existing form, integrity, and materials of a historic property. The work includes stabilizing the property and focuses on the ongoing maintenance and repair of historic materials and features. Preservation maintains the existing character of the resource. Most of the activity that takes place in Monocacy National Battlefield today is preservation — buildings, monuments, and landscapes are stabilized and repaired to maintain their existing character.

Rehabilitation makes possible compatible uses for properties through their repair, alteration, and addition while preserving significant historic features that convey historical values. Rehabilitation identifies, protects, retains, and preserves historic features. Changes that have acquired significance in their own right generally are retained and preserved. Historic features that have been changed or have deteriorated may be repaired. Rehabilitation could also allow for the replacement of missing historic features like fences. Finally, rehabilitation permits alterations and additions for new use as long as the historic appearance and character are retained.

EFFECTS ON HISTORIC BUILDINGS AND OTHER STRUCTURES

Historic Structures Defined

A historic building or structure is a constructed work consciously created to serve some human activity. Historic structures usually are immovable,

although some have been relocated and others are mobile by design. They include buildings, monuments, dams, millraces, canals; bridges, roads, railroad tracks, and rolling stock. In some cases they comprise standing ruins of all structural types.

The form nominating the Monocacy National Battlefield to the National Register of Historic Places has been revised recently. The revised form lists 44 structures, monuments, and sites as contributing to the battlefield's significance — houses, barns, outbuildings, and Civil War monuments. One of the structures, the Gambrill House, has been individually listed in the National Register of Historic Places.

The National Park Service maintains a List of Classified Structures for all sites in the national park system. This list is the primary reference of building types, significance, condition, and recommended treatments. The current list of classified structures for Monocacy National Battlefield identifies 51 structures.

NPS DO 28, *Cultural Resource Management Guideline* prohibits the demolition or neglect of resources listed in or considered eligible for inclusion in the National Register of Historic Places or of structures for which the eligibility has not yet been determined, unless all other options have been found to be infeasible. Management policies prohibit the demolition of those structures unless it is necessary to eliminate an unacceptable intrusion or for public safety.

Effects from Alternative 1 (No Action)

Analysis. There would be no adverse effects from stabilizing historic structures not used for interpretation or national battlefield operations to preserve and protect them from further deterioration. Stabilizing and preserving the main houses and outbuildings on the Best, Thomas, Lewis, and Worthington farms would result in no adverse effects on these structures.

Continuing the existing agreement with the Historic Preservation Training Center for the use of the Gambrill House would result in no changes, and no historic properties would be affected.

The ongoing maintenance of monuments would result in a determination of no effect.

Keeping administrative offices and functions on the second floor of the Gambrill Mill would result in continued crowding and inadequate storage. Since this structure contains little historic fabric, it would not be adversely affected.

Cumulative Effects. No cumulative effects on historic buildings and other structures (as defined earlier in this chapter, p. 139) have been identified.

Conclusion. Continuing to stabilize and preserve historic buildings would considerably reduce the loss of historic fabric over time. The resulting effects would be generally beneficial, with a determination of no adverse effect.

Because there would be no major adverse effects on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the

establishing legislation of Monocacy National Battlefield, (2) key to its natural or cultural integrity or opportunities for its enjoyment, or (3) identified as a goal in its general management plan or other relevant NPS planning documents, the national battlefield's resources or values would not be impaired.

Effects from Alternative 2

Analysis. Stabilizing historic structures not used for interpretation or national battlefield operations to preserve and protect them from further deterioration would not result in any adverse effects on these structures. Stabilizing and preserving the main houses on the Lewis and Worthington farms and the outbuildings on the Best, Thomas, and Lewis farms would cause no adverse effects on these structures.

Rehabilitating the Best House and leasing the Thomas House under the historic leasing program to allow adaptive use could result in a determination varying from no effect to no adverse effect on these structures, depending on the nature of the changes. Such changes could involve repair or stabilization of the original fabric and in-kind replacement.

Rehabilitating the stone tenant house at the Thomas Farm for interpretive exhibits and displays would result in a determination of no adverse effect because the interior retains little integrity. Alterations could involve repair or stabilization of the original fabric and in-kind replacement.

The ongoing access to and maintenance of commemorative monuments would have no effect on historic properties.

The internal spaces of the Gambrill Mill already have been altered from their historic shape, and little historic fabric remains. Using the first floor of the mill for classrooms or interpretive talks and the second floor for temporary housing would simply represent a change from one nonhistoric use to another. Therefore, this alternative would result in no effect on this structure.

Cumulative Effects. No cumulative effects on historic buildings and other structures (as defined earlier in this chapter, p. 139) have been identified.

Conclusion. Implementing alternative 2 would result in a mixture of actions — unused buildings would be stabilized and preserved, which would slow the loss of historic fabric. Rehabilitating structures for adaptive use by the national battlefield or by others under the historic leasing program would likely result in no adverse effect on those historic structures, depending on the nature of the changes.

Because there would be no major adverse effects on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Monocacy National Battlefield, (2) key to its natural or cultural integrity or opportunities for its enjoyment, or (3) identified as a goal in its general management plan or other relevant NPS planning documents, the national battlefield's resources or values would not be impaired.

Effects from Alternative 3

Analysis. Stabilizing historic structures not used for interpretation or national battlefield operations to preserve them

and protect them from further deterioration would result in no adverse effects on the structures.

Opening the Worthington House to the public for interpretive services could involve adding floor bracing to increase its weight-bearing capacity and adding electrical systems and heating, ventilation, and air conditioning (HVAC) systems. The structure also would need to be made accessible for visitors with disabilities. The Secretary of the Interior's *Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* would be followed to insure that no adverse effects on the structure's historic fabric occur.

Rehabilitating the exterior of the Best House would benefit preservation of the structure and would result in no adverse effect. Rehabilitating the first floor of the interior for interpretive exhibits would involve assessing its condition and weight-bearing capacity. Should that assessment indicate that more interior bracing is needed to support visitation, structural supports would be integrated into the existing historic fabric to the greatest extent possible. Electrical and HVAC systems also would be needed, as would changes to make the structure accessible for visitors with disabilities. All rehabilitation would be undertaken in keeping with the Secretary of the Interior's *Standards and Guidelines* to insure against any adverse effect.

Adaptive reuse of the interior of the Thomas House for administrative offices would retain all significant interior features and would not alter its internal configuration. Rehabilitating

the existing utility systems would be necessary, but this should cause no adverse effects on the structure.

The stone tenant house on the Thomas Farm has been significantly altered inside. Rehabilitating it for exhibits would not result in an adverse effect.

The ongoing access to and maintenance of commemorative monuments would have no effect on historic properties.

The internal spaces of the Gambrill Mill already have been altered from their historic condition, and little historic fabric remains. Using the basement of the mill for classrooms or programs and the second floor for offices would represent a change from one nonhistoric use to another. Therefore, this alternative would result in no effect on this structure.

Cumulative Effects. No cumulative effects on historic buildings and other structures (as defined earlier in this chapter, p. 139) have been identified.

Conclusion. In alternative 3, stabilizing presently unused historic buildings would slow the natural deterioration processes significantly, resulting in no adverse effects. Modifying some buildings to allow for visitor access would be accomplished in a manner designed to retain the integrity of historic structures.

Because there would be no major adverse effects on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Monocacy National Battlefield, (2) key to its natural or cultural integrity or opportunities for its enjoyment, or (3) identified as a goal

in its general management plan or other relevant NPS planning documents, the national battlefield's resources or values would not be impaired.

Effects from Alternative 4 (Preferred Alternative)

Analysis. Stabilizing historic structures not used for interpretation or national battlefield operations would result in no adverse effects on the structures.

Opening the Worthington House to the public for interpretive services could involve adding floor bracing to increase its weight-bearing capacity and adding electrical systems and heating, ventilation, and air conditioning (HVAC) systems. The structure also would need to be made accessible for visitors with disabilities. All work would be undertaken in such a manner as to retain the structures' integrity, resulting in no adverse effect.

Adaptive reuse of the interior of the Thomas House for administrative offices would retain all significant interior features and would not alter its internal configuration. Rehabilitating the existing utility systems would be necessary, but this should cause no adverse effects on the building.

The stone tenant house on the Thomas Farm has been substantially altered inside. Rehabilitating it for exhibits would not result in an adverse effect.

Rehabilitating the exterior of the Best House would result in no adverse effect on the structure. Preserving the interior of the secondary house on the Best Farm for limited visitor access to the ground

floor would result in no adverse effects on that structure.

The internal spaces of the Gambrill Mill already have been altered and little historic fabric remains. Using the first floor of the mill for classrooms and the second floor for offices would simply represent a change from one nonhistoric use to another. Therefore, alternative 4 would result in no adverse effect on the interior of this structure.

Cumulative Effects. No cumulative effects on historic buildings and other structures (as defined earlier in this chapter, p.139) have been identified.

Conclusion. In alternative 4, stabilizing and preserving unused buildings would slow the natural deterioration processes significantly, resulting in no adverse effects.

Adaptively reusing the Thomas and Worthington houses, the Thomas stone tenant house, and the Gambrill Mill for interpretation or for national battlefield operations would not result in adverse effects.

Because there would be no major adverse effects on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Monocacy National Battlefield, (2) key to its natural or cultural integrity or opportunities for its enjoyment, or (3) identified as a goal in its general management plan or other relevant NPS planning documents, the national battlefield's resources or values would not be impaired.

EFFECTS ON CULTURAL LANDSCAPES

Cultural Landscapes Defined

A cultural landscape is a reflection of human adaptation to the environment and the use of its natural resources. Such a landscape develops from the interrelationships of human-derived and natural component features such as general land use patterns, natural topography, scale, spatial organization, boundaries, vegetation, and the arrangement of circulation features such as roads.

Cultural landscapes reflect a community's values and traditions, and through time they constitute a visual chronicle of changes. The dynamic nature of cultural landscapes results from forces such as politics, property laws, technology, and economic conditions. Cultural landscapes are an unparalleled source of information about the times of their development, and they can offer a dynamic view back through time that is nonetheless intimately connected to the present.

Effects from Alternative 1 (No Action)

Analysis. The cultural landscape's circulation patterns, topographic features, watercourses, and land use would not be altered under this alternative. However, historic structures would be stabilized and preserved, resulting in no adverse effect on the viewshed and the integrity of landscapes.

The continuing maintenance of agricultural fields through special use

permits would benefit the historic landscape, resulting in no adverse effect.

Continuing the approaches and parking for the 14th New Jersey Monument and the commemorative area along Araby Church Road unchanged would not result in any adverse effect on these landscapes. The possibility of placing any new monuments in the national battlefield would be addressed individually, and NPS policies would be followed. However, the effect on the landscape from any new monuments could range from no adverse effect to adverse effect, depending on the design and placement of the monument.

Cumulative Effects. Interstate Highway 270 was constructed in the early 1950s, before a boundary for Monocacy National Battlefield was established. The highway bisected the battlefield, effectively separating the eastern and western halves physically and visually. This separation continues to represent a major adverse effect on the cultural landscape.

The proposed widening of I-270 would adversely affect the cultural landscape of Monocacy National Battlefield if national battlefield lands were needed for widening. Visual impacts probably would be increased by this action; the setting of several historic structures already is diminished by the highway.

Conclusion. The no-action alternative would continue a generally beneficial program of stabilizing unused historic buildings, maintaining historic roads and trails, and maintaining agricultural or other rural features. Implementing alternative 1 would result in no adverse effect on the cultural landscape.

Because there would be no major adverse effects on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Monocacy National Battlefield, (2) key to its natural or cultural integrity or opportunities for its enjoyment, or (3) identified as a goal in its general management plan or other relevant NPS planning documents, the national battlefield's resources or values would not be impaired.

Effects from Alternative 2

Analysis. The topographic features and watercourses of the cultural landscape would not be altered under alternative 2, nor would land use. Stabilizing and preserving farm structures in their current condition on the Best, Thomas, and Lewis farmsteads would help to preserve the historic landscape and contribute to its long-term maintenance. These actions would benefit the cultural landscapes and would result in no adverse effect.

Improving the historic lane to include a deck over I270 connecting the Worthington and Thomas farms would re-establish part of the historic circulation pattern on the battlefield, a beneficial effect. However, improving the road to meet current standards would make it more visible on the landscape. Coupled with the occasional presence of automobiles using the lane, there could be a visual effect on the landscape. That effect would likely not be adverse.

Adding a parking area would not adversely affect the historic view because this feature would be situated

adjacent to the already intrusive modern interstate.

Extending a pedestrian trail from the visitor center to Monocacy Junction and Wallace's Headquarters would require construction of a bridge over Bush Creek and a trail or boardwalk under the railroad bridge. It would be designed to fit into the landscape and not be visible or intrusive from the main visitor areas. It would not result in an adverse effect on the cultural landscape.

Locating a visitor parking area for the Thomas Farm would result in no adverse effect on the cultural landscape as it would be next to Baker Valley Road and on the edge of the historic landscape. Building new restroom facilities inside the nonhistoric cinderblock structure would have no effect on the cultural landscape.

Removing the nonhistoric cinder block house on Araby Church Road and rehabilitating the site would enlarge the commemorative area around the Pennsylvania and Vermont memorials. The effect would not be adverse. Placing any future monuments at this location would retain the commemorative character of the battlefield and follow the historic pattern of erecting memorials along the old turnpike. The effect would not be adverse.

Adopting guidelines for the placement of any future monuments within the national battlefield would ensure that they would complement the design, scale, and materials of existing monuments. The possibility of placing any new monuments in the national battlefield would be addressed individually, and NPS policies would be

followed. The effect would not be expected to be adverse.

Shifting the entrance to the 14th New Jersey Monument south and upgrading the parking lot from its current condition would greatly improve its appearance and result in no adverse effect on this landscape.

Cumulative Effects. Interstate Highway 270 was constructed in the early 1950s, before a boundary for Monocacy National Battlefield was established. The highway bisected the battlefield, effectively separating the eastern and western halves physically and visually. This separation continues to represent a major adverse effect on the cultural landscape.

The proposed widening of I-270 would adversely affect the cultural landscape of Monocacy National Battlefield if national battlefield lands were needed for the widening. Overall, the widening probably would increase the visual impacts that already diminish the setting of several historic structures.

Constructing a deck across I-270 could reduce the adverse visual impacts on the important viewshed between the Worthington and Thomas houses from added highway lanes. The deck would not be visible from elsewhere in the historic landscape, or it would be visible only from the nonhistoric landscape along the Worthington lane. The overall effect would not be adverse.

The actions of alternative 2 (stabilizing buildings, continuing to maintain roads, trails, and historic fence lines, and maintaining agricultural or other rural features that constitute much of the

historic viewshed), along with the known past, current and reasonably foreseeable future actions inside and outside of the national battlefield, would be beneficial and would result in no adverse effect on the cultural landscape.

Conclusion. Stabilizing and preserving historic buildings under alternative 2 would ensure their long-term presence on the historic landscape and would result in no adverse effect on the cultural landscape.

Introducing a nonhistoric deck to cross Interstate Highway 270 would reestablish the viewshed by restoring historic vegetative patterns on the deck and by disguising the modern disruption of the interstate highway below. These changes would result in no adverse effect on the cultural landscape, but the deck would be a modern intrusion.

Developing trails and improving roads in the battlefield would not cause an adverse impact on the overall cultural landscape because the trails and roads would be placed on existing alignments.

Because there would be no major adverse effects on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Monocacy National Battlefield, (2) key to its natural or cultural integrity or opportunities for its enjoyment, or (3) identified as a goal in its general management plan or other relevant NPS planning documents, the national battlefield's resources or values would not be impaired.

Effects from Alternative 3

Analysis. The circulation patterns, topographic features, and watercourses of the cultural landscape would not be altered under alternative 3, nor would land use. Stabilizing and preserving farm structures in their current condition would help preserve the historic landscape and contribute to its long-term maintenance. These actions would benefit the cultural landscapes and would result in no adverse effect.

Widening the nonhistoric entry lane to the Worthington farm from Baker Valley Road and adding a new parking area would have no adverse effect on this historic landscape because these improvements would be situated adjacent to the modern interstate on already disturbed land.

More automobile traffic and parking at the Thomas House (after its adaptation for administrative offices) would not adversely affect the cultural landscape. The entry road would follow the historic route. The parking area would be at a considerable distance from the historic structures in an area already disturbed.

Continued use of the Gambrill Mill and the maintenance facility would not affect the cultural landscape.

Removing the nonhistoric cinder block house along Araby Church Road and relandscaping would remove an intrusive element from the landscape and enhance the commemorative nature of the area. The impact would not be adverse.

Reconfiguring the access to the 14th New Jersey Monument, closing the present parking area, and adding a trail

under MD 355 from a new parking area on the east side would result in no adverse effects on the historic landscape. The new site is hidden from view below the MD 355 bridge and by vegetation.

Adopting guidelines that prohibit placement of any future monuments within the national monument would have no effect on the existing cultural landscape.

Cumulative Effects. Interstate Highway 270 was constructed in the early 1950s, before Monocacy National Battlefield was established. The highway bisected the battlefield, effectively separating the eastern and western halves physically and visually. This separation continues to represent a major adverse effect on the cultural landscape.

The proposed widening of I-270 could adversely affect the cultural landscape of Monocacy National Battlefield if national battlefield lands were needed for the widening. Overall, the widening probably would increase the visual impacts that already diminish the setting of several historic structures.

The actions of alternative 3 (stabilizing buildings, continuing to maintain roads, trails, and historic fence lines, and maintaining agricultural or other rural features that constitute much of the historic viewshed), along with the known past, current, and reasonably foreseeable future actions inside and outside of the national battlefield, would be beneficial and would result in no adverse effect on the cultural landscape.

Conclusion. Stabilizing and preserving historic structures would ensure their long-term presence on the historic

landscape. Combined with past, present, and reasonably foreseeable future actions, implementing alternative 3 would result in no adverse effect on the cultural landscape.

Because there would be no major adverse effects on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Monocacy National Battlefield, (2) key to its natural or cultural integrity or opportunities for its enjoyment, or (3) identified as a goal in its general management plan or other relevant NPS planning documents, the national battlefield's resources or values would not be impaired.

Effects from Alternative 4 (Preferred Alternative)

Analysis. The circulation patterns, topographic features, and watercourses of the cultural landscape would not be altered under alternative 4, nor would land use. Stabilizing and preserving farm structures in their current condition on the Best, Thomas, and Lewis farmsteads would help preserve the historic landscape and contribute to its long-term maintenance. These actions would benefit the cultural landscape and would result in no adverse effect.

Widening the modern entry lane to the Worthington farm from Baker Valley Road and adding a new parking lot would result in no adverse effect on this historic landscape because these improvements would be situated adjacent to the modern interstate on already disturbed lands.

Constructing a pedestrian deck across I-270 between the Worthington and

Thomas farms would not adversely affect the cultural landscape because it would not be visible from either the Worthington House or the Thomas farmstead and would take advantage of vegetation on either side of I-270.

Shifting the entrance to the 14th New Jersey Monument south and upgrading the parking lot from its current condition would greatly improve its appearance and result in no adverse effect on this landscape.

Removing the nonhistoric cinder block house on Araby Church Road and rehabilitating the site would enlarge the commemorative area around the Pennsylvania and Vermont memorials. The effect would not be adverse. Placing any future monuments at this location would retain the commemorative character of the battlefield and follow the historic pattern of erecting memorials along the old turnpike. The effect would not be adverse.

Cumulative Effects. Interstate Highway 270 was constructed in the early 1950s, before Monocacy National Battlefield was established. The highway bisected the battlefield, effectively separating the eastern and western halves physically and visually. This separation continues to represent a major adverse effect on the cultural landscape.

The proposed widening of I-270 could adversely affect the cultural landscape of Monocacy National Battlefield if national battlefield lands were needed for the widening or if the trees that buffer its appearance and noise were to be removed. Overall, the widening probably would increase the visual

impacts that already diminish the setting of several historic structures.

Constructing a pedestrian deck across I-270 would likely not be visible from either the Worthington or Thomas farmsteads and therefore would not have an adverse effect.

The actions of alternative 4 (stabilizing buildings, continuing to maintain roads, trails, and historic fence lines, and maintaining agricultural or other rural features that constitute much of the historic viewshed), along with the known past, current, and reasonably foreseeable future actions inside and outside of the national battlefield, would be beneficial and would result in no adverse effect on the cultural landscape.

Conclusion. Stabilizing and preserving unused historic buildings under alternative 4 would ensure their long-term presence on the historic landscape. Removing nonhistoric structures would also restore the historic landscape to its historic condition. These actions would result in no adverse effect.

Adding a pedestrian deck across I-270 would allow visitors to walk between the Worthington and Thomas farms, reconnecting them along the historic lane that once connected them. It would likely not be visible from either farmstead and would not have an adverse effect.

Because there would be no major adverse effects on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Monocacy National Battlefield, (2) key to its natural or cultural integrity or opportunities for its enjoyment, or (3) identified as a goal

in its general management plan or other relevant NPS planning documents, the national battlefield's resources or values would not be impaired.

EFFECTS ON VISITOR USE AND EXPERIENCE

EXPERIENCING THE RESOURCES

Monocacy National Battlefield opened in 1991 with a staff of three housed in a visitor contact station on the ground floor of the Gambrill Mill. There were approximately 8,000 visitors the first year. The visitor experience consisted of exhibits in the contact station, one-to-one discussions with an interpreter and three automobile stops along MD 355 and Araby Church Road, where monuments had been erected to commemorate the battle. As time permitted, an interpretive ranger would offer programs for school groups and local organizations.

An interpretive loop trail was opened at the Gambrill Mill in 1994. From that trail, visitors could see the MD 355 and railroad bridges. The national battlefield staff constructed a trail system on the Worthington Farm in 1997, as well as a small parking lot at the beginning of the Worthington Lane, along Baker Valley Road. Wayside exhibits were added to selected areas of the battlefield in 2002.

Today, with acquisition of the battlefield nearly complete, most Monocacy National Battlefield visitors come to the new visitor center (completed 2007). They may walk on the Gambrill Mill trail, drive to the three areas of Civil War monuments, or to the Worthington Farm parking area. Along the way they may look out over the battlefield landscape. Not all properties are open, and no historic structures are open to visitors.

The new visitor center (described in detail on page 46) offers orientation and

educational exhibits that have not been available at the national battlefield. At present visitors may need extensive individual interaction with a ranger to understand the background and course of the battle. The new visitor center contains appropriate exhibits that explain why the battle occurred here, how it unfolded, its effect on the soldiers and the local community, and its impact on the Civil War. Although interaction with national battlefield staff will remain important, visitors are able to leave the new visitor center with enough information to have made their visit educational and enjoyable.

For daytime use, Monocacy National Battlefield appeals primarily to visitors interested in history. Some fishermen visit along the Monocacy River, and many local visitors walk on the existing trails at the Gambrill Mill and the Worthington Farm for exercise. Few bicyclists come to the national battlefield because it is difficult to negotiate the busy MD 355 and because there is no trail system connecting areas of the battlefield that would appeal to cyclists. No designated picnic areas have been established, and there are no campgrounds in the national battlefield.

As Monocacy National Battlefield has become known, visitation has increased — in 2003 there were 14,781 visitors. It is anticipated that visitation will grow substantially with the new visitor center.

METHODS FOR ASSESSING EFFECTS ON THE VISITOR EXPERIENCE

In this impact analysis, various aspects of visitor use and experience at Monocacy National Battlefield have been considered, including the effects on orientation, circulation and access, safety, opportunities for interpretation, and visitors' experience of the resources. The analysis is based on how visitor use and experiences would change with the ways in which management prescription would be applied in the alternatives. The analysis is primarily qualitative rather than quantitative because the alternatives are conceptual.

Duration

In this analysis, a short-term effect is one that would last less than one year, in only one season's use by visitors. A long-term effect would be more likely to be permanent, lasting more than one year.

Intensity

The effects were evaluated comparatively between alternatives, with the no-action alternative serving as a baseline for comparison with each action alternative

Negligible — Visitors probably would be unaware of any effects caused by implementing the alternative.

Minor — The changes in visitor use or the visitor experience would be slight but detectable, few visitors would be affected, and the action would not appreciably limit or enhance experiences identified as fundamental to the

national battlefield's purpose or significance.

Moderate — Some characteristics of visitor use or the visitor experience would be changed by the action, and many visitors would be aware of the effects associated with implementing the action; some changes to experiences identified as fundamental to the national battlefield's purpose or significance would be apparent.

Major — Multiple characteristics of the visitor experience would be changed by the action, including experiences identified as fundamental to the national battlefield's purpose or significance; most visitors would be aware of the effects associated with implementing the action.

Type of Effect

Adverse effects are those that most visitors would perceive as undesirable. *Beneficial* effects are those that most visitors would perceive as desirable.

EFFECTS FROM ALTERNATIVE 1 (NO ACTION)

Analysis

Orientation. Visitors would be oriented to the national battlefield by uniformed park staff at the new visitor center, by maps, brochures and signs. Some visitors arriving by scheduled bus tour may receive their orientation on the bus by an NPS staff interpreter.

Implementation of this alternative would have a negligible long-term beneficial effect on visitor orientation.

Safety. Traffic and posted vehicle speeds of 50 mph on MD 355 would continue to make negotiating the local road system difficult and dangerous for park visitors. Housing and commercial development south of the national battlefield has led to more vehicles using the highway exacerbating the future situation.

This alternative would have the National Park Service work with the Maryland State Highway Administration to implement appropriate measures to lessen the dangers inherent when slow-moving NPS visitors and swift-moving local traffic use the same roads. The alternative would do nothing to improve access or egress to major interpretive features such as Gambrill Mill or the 14th New Jersey Monument.

Implementation of this alternative would have a major long-term adverse impact on visitor safety.

Interpretation. Interpretation of the national battlefield would rely heavily on the visitor center. Roving interpreters, brochures, and several wayside exhibits would supplement interpretive stories told at the visitor center. None of the major historic structures on the landscape would be open to visitation.

Implementation of this alternative would have a minor, long-term, beneficial effect on interpretation of the resources.

Visitors' Experience of the Resources. Visitors would be able to walk the grounds and trails at the Best, Worthington, and Thomas farmsteads and the Gambrill Mill. Alternative 1 would not permit visitor access to the Lewis, or

Baker farms, to the interiors of the Gambrill Mill, the Best, Worthington, or Thomas houses, or to the railroad junction and Wallace's headquarters. These sites would continue to undergo preservation so that they would remain important landscape features.

Implementation of this alternative would have a minor, long-term beneficial effect on the visitor's experience of the resources.

Cumulative Effects

As has been mentioned previously (p. 46), the new visitor center is considered a part of the existing conditions in the national battlefield, and its presence is part of the actions common to all alternatives.

Previously, visiting Monocacy National Battlefield consisted of stopping along MD 355 and Araby Church Road at monuments dedicated to the soldiers who fought in the battle and looking out over the farm fields where the battle occurred. When the National Park Service opened the visitor contact station in 1991, this gave some context to the story of the battle. Over the years, several trails have been opened and rangers have led group tours, but many of the battle sites have remained inaccessible, and the historic structures have not been open to most visitors.

With the new visitor center, NPS interpreters have a major focus for interpreting the battlefield. This improves the visitors' understanding of the battle, even without the ability to enter any of the historic farmhouses that are so prominent on the landscape. In combination with other historic

properties in the vicinity (Antietam National Battlefield, Harper's Ferry National Historical Park, South Mountain Battlefield State Park, the National Museum of Civil War Medicine, and others) visitors could get a good understanding of the Civil War and its impact on Maryland.

Implementation of this alternative in combination with actions of entities outside the national battlefield would result in long-term minor to moderate cumulative beneficial effect on public understanding and appreciation of the meaning and significance of the region's history.

Ongoing historical and archeological research would continue to improve the quality of the presentations and exhibits available to visitors. In addition to the research conducted by the national battlefield, opportunities for research and education are available through regional universities, local schools, and other organizations. All these activities would result in long-term minor beneficial cumulative effects on regional opportunities for interpretation and education.

Commercial and residential development outside the national battlefield when combined with traffic generated by visitors to the national battlefield would cause an increase in congestion and traffic related accidents on roads within and around Monocacy National Battlefield. Together development and visitor related traffic would have a long-term, moderate to major cumulative adverse impact on circulation and access within the national battlefield.

It has been proposed that a state-of-the-art, environmentally friendly State of Maryland visitor facility be created at the existing I-270 overlook south of the national battlefield. This could encourage visitors to stop at the national battlefield, either as a part of their current trip or at a later date. The long-term effect caused by such a facility would be negligible to minor and beneficial.

Conclusion

Implementation of this alternative would have a negligible long-term beneficial effect on visitor orientation, a major long-term adverse impact on visitor safety, a minor, long-term, beneficial effect on interpretation of the resources, and a minor, long-term beneficial effect on the visitor's experience of the resources.

EFFECTS FROM ALTERNATIVE 2

Analysis

Orientation. Visitors would be oriented to the national battlefield by uniformed park staff at the new visitor center, by maps, brochures and signs. Some visitors arriving by scheduled bus tour may receive their orientation on the bus by an NPS interpreter.

An alternative transportation system would be employed to move visitors around the national battlefield. When operating, it would provide an additional level of orientation through an automated system of messages. At times a uniformed ranger would also be available on the system to answer questions.

Implementation of this alternative would have a long-term, moderate beneficial effect on visitor orientation.

Safety. Adding a deck over I-270 would improve the safety of national battlefield visitors, eliminating the need for them to backtrack down Worthington Lane onto Baker Valley Road when going from one farm to the other.

Shifting the entrance for the 14th New Jersey Monument south to allow better sight lines north and south would greatly improve the safety of visitors entering and leaving the busy MD 355.

To improve the safety of access to the Union entrenchments and Wallace's headquarters on the north side of the CSX railroad, an underpass would be constructed along the edge of the Monocacy River.

The alternative transportation system would provide an additional level of visitor safety as visitors would no longer be expected to navigate the site through heavy local traffic.

The impact of the implementation of this alternative would be a long-term, major beneficial effect on visitor safety.

Interpretation. The most impressive opportunity for interpretation under alternative 2 would be the deck that would be added over I-270 between the Worthington and Thomas farms, visually reconnecting the two farms with agricultural land, fence rows, and a farm lane. Because much of the battle occurred between these two farms, returning the area to an agricultural appearance would return it to its historic condition without the intrusion of an interstate highway and speeding

vehicles. Visitors could drive directly from one farm to the other, following the route many Confederate soldiers took as they overran the site.

Under alternative 2 visitors could go to the railroad junction, the site of Wallace's headquarters, and the Union entrenchments — three important locations for understanding why the battle occurred here. Exhibits would be available at the stone tenant house on the Thomas Farm, supplementing those at the visitor center.

The impact of the implementation of this alternative would be a long-term, major, beneficial effect on visitor interpretation.

Visitors' Experience of the Resources.

In alternative 2, national battlefield visitors wanting to understand the Battle of Monocacy could see a wide range of landscape features, supplemented by exhibits at the visitor center and the stone tenant house on the Thomas Farm. Waysides along existing and new trails would interpret the unfolding battle and other points of interest. Visitors interested in the history of the site beyond the Civil War could receive that information primarily at the visitor center and the stone tenant house. None of the historic houses would be open for visitation.

The impact of the implementation of this alternative on the overall visitor experience would be long-term, major and beneficial.

Cumulative Effects

As has been mentioned previously (p. 46), the new visitor center is considered

a part of the existing conditions in the national battlefield, and its presence is part of the actions common to all alternatives.

Efforts to interpret the heritage of western Maryland on the part of federal, state, and private entities (Antietam National Battlefield, Harpers Ferry National Historical Park, the C&O Canal National Historical Park; South Mountain Battlefield State Park, Maryland Civil War Trails; National Museum of Civil War Medicine), along with the national battlefield staff, would result in long-term minor to moderate beneficial cumulative effects on public understanding and appreciation of the region's history. The contribution of the National Park Service to this result would be long term, moderate, and beneficial.

In addition to the beneficial effects of research, education, interpretation, and preservation efforts ongoing and proposed at the national battlefield, a number of other government and nonprofit sites in the area engage in similar activities. Regional universities, local schools, and other organizations offer opportunities for research and education. All these activities would result in long-term minor to moderate beneficial cumulative effects on regional opportunities for interpretation and education.

Traffic in and around the battlefield would increase, both from greater visitation and from the growth of surrounding communities. This would add to the roadway congestion. When the visitor transportation system was not operating, local drivers would have to be

more vigilant, watching for slower-moving visitors, who would be less familiar with the road system. Visitors would need to watch for faster-moving local drivers using the same road system. The cumulative long-term effect on the visitor experience and on local roadway users would be moderate to major and beneficial, depending on the local rush hour characteristics and weather conditions.

Constructing a deck over I-270 as partial mitigation for the widening of I-270 would improve the flow of visitors in the national battlefield. It also would make the egress back onto Baker Valley Road at the Thomas Farm safer and more visible than from Worthington Lane. The cumulative long-term effect on the visitor experience would be moderate and beneficial. For local users of Baker Valley Road, the cumulative long-term effect would be minor and beneficial.

It has been proposed that a state-of-the-art, environmentally friendly State of Maryland visitor facility be created at the existing I-270 overlook south of the national battlefield. This could encourage visitors to stop at the national battlefield, either as a part of their current trip or at a later date. The long-term effect caused by such a facility would be negligible to minor and beneficial.

Conclusion

Implementation of this alternative would have a moderate long-term beneficial effect on visitor orientation, a major long-term beneficial impact on visitor safety, a major, long-term, beneficial effect on interpretation of the

resources, and a major, long-term beneficial effect on the visitor's experience of the resources.

EFFECTS FROM ALTERNATIVE 3

Analysis

Orientation. Visitors would be oriented to the national battlefield by uniformed park staff at the new visitor center, maps, brochures, and signs. Some visitors arriving by scheduled bus tour may receive their orientation on the bus by a park staff interpreter.

Implementation of this alternative would have a negligible long-term beneficial effect on visitor orientation.

Safety. With no deck over I-270 visitors would need to backtrack down Worthington Lane onto Baker Valley Road when traveling from one farm to the other.

With no alternative transportation system visitors would have to concentrate on the logistics of getting around the national battlefield. This is especially important for the part of the route that follows the busy MD 355. The speed limit on that road is 50 mph, and it is heavily used by commuters and local residents. Ongoing commercial and residential development south of the national battlefield would make conflicts between slow-moving visitors and fast-moving through traffic more likely at several locations with sharp turns, where slow-moving visitors and heavy traffic combine.

Shifting the entrance to the 14th New Jersey Monument to the east side of MD 355 and adding a new parking area, with a short trail under the MD 355 bridge

leading to the monument, would improve visitor safety.

Implementation of this alternative would have a long-term, moderate adverse effect on visitor safety.

Interpretation. Visitors would receive most of their interpretation at the visitor center. Additional interpretive exhibits would be available at the Best House, the Thomas Stone Tenant House, and at the Worthington House. Waysides would also provide some interpretation along trails.

There would be no deck over I-270 in Alternative 3. Trees along both sides of I-270 would block the view from the Worthington to the Thomas farms. This would make interpreting the connection between the two farms during the battle more difficult. Because much of the battle took place between the two farms, returning the area to an agricultural appearance would return it to its historic condition with less of the noise intrusion of an interstate highway and speeding vehicles.

Only alternative 3 would offer an opportunity for visitors to see the interior of the Best farmhouse or the landscape of the Lewis farm. Exhibits would be complementary to those in the visitor center. Several outbuildings also would be open to visitors, or they could see them through windows.

The stone tenant house on the Thomas farm would have exhibits supplementing those at the visitor center. The Worthington House first floor would contain exhibits about the war and the family that occupied the house during the battle.

The effect of implementation of this alternative on resource interpretation would be long-term, moderate, and beneficial.

Visitors' Experience of the Resources.

In alternative 3, national battlefield visitors wanting to understand the Battle of Monocacy could see a wide range of landscape features, supplemented by exhibits at the visitor center, Best Farm, Worthington House, and the stone tenant house on the Thomas Farm. Wayside exhibits along existing and new trails would interpret the unfolding battle and other points of interest.

Although the trails would not be designed primarily for recreational use, under alternative 3 visitors could walk the trails to fish in the river or to observe wildlife. Other recreational uses such as horseback riding and bicycling would not be allowed.

The effect of implementation of this alternative on visitor's experience of the resources would be long-term, moderate, and beneficial.

Cumulative Effects

As has been mentioned previously (p. 46), the new visitor center is considered a part of the existing conditions in the national battlefield, and its presence is part of the actions common to all alternatives.

Efforts to interpret the heritage of western Maryland on the part of federal, state, and private entities (Antietam National Battlefield, Harpers Ferry National Historical Park, the C&O Canal National Historical Park; South Mountain Battlefield State Park,

Maryland Civil War Trails; National Museum of Civil War Medicine), along with the national battlefield staff, would result in long-term minor to moderate beneficial cumulative effects on public understanding and appreciation of the region's history. The contribution of the National Park Service to this result would be long term, moderate, and beneficial.

In addition to the beneficial effects of research, education, interpretation, and preservation efforts ongoing and proposed at the national battlefield, a number of other government and nonprofit sites in the area engage in similar activities. Regional universities, local schools, and other organizations offer opportunities for research and education. All these activities would result in long-term minor to moderate beneficial cumulative effects on regional opportunities for interpretation and education.

Commercial and residential development outside the national battlefield when combined with traffic generated by visitors to the national battlefield would cause an increase in congestion and traffic related accidents on roads within and around Monocacy National Battlefield. Together development and visitor related traffic would have a long-term, moderate to major cumulative adverse impact on circulation and access within the national battlefield.

The creation of a state-of-the-art, environmentally friendly State of Maryland visitor facility has been proposed outside the national battlefield. Such a feature would be placed at the existing I-270 overlook south of the

national battlefield. This could encourage visitors to stop at the national battlefield either as a part of their current trip or at a later date. The long-term effect caused by such a facility would be negligible to minor and beneficial.

Conclusion

The effect of implementation of this alternative on orientation would be negligible long-term and beneficial. On visitor safety the effect would be moderate long-term and adverse. On interpretation the effect would be moderate long-term and beneficial. On the visitor experience of the resource the effect would be moderate long-term and beneficial.

EFFECTS FROM ALTERNATIVE 4 (PREFERRED ALTERNATIVE)

Analysis

Orientation. Visitors would be oriented to the national battlefield by uniformed park staff at the new visitor center, by maps, brochures, and signs. Some visitors arriving by scheduled bus tour may receive their orientation on the bus by a park staff interpreter.

Implementation of this alternative would have a negligible long-term beneficial effect on visitor orientation.

Safety

With no alternative transportation system visitors would have to concentrate on the logistics of getting around the national battlefield. This is especially important for the part of the route that follows the busy MD 355. The speed limit on that road is 50 mph, and it is

heavily used by commuters and local residents. Ongoing commercial and residential development south of the national battlefield would make conflicts between slow-moving visitors and fast-moving through traffic more likely at several locations with sharp turns, where slow-moving visitors and heavy traffic combine.

Shifting the entrance to the 14th New Jersey Monument farther south would provide a safer place for vehicles to enter and leave the site.

The effect of implementation of this alternative on visitor safety would be a minor long-term, adverse effect.

Interpretation. Visitors would receive most of their interpretation at the visitor center. Additional interpretive exhibits would be available at the Thomas Stone Tenant House, and at the Worthington House. Waysides would also provide some interpretation along trails.

There would be a pedestrian deck over I-270 in Alternative 4, much smaller and less visible from either the Worthington or Thomas sides. Trees along both sides of I-270 would continue block the view from the Worthington to the Thomas farms. This would make interpreting the connection between the two farms during the battle more difficult. Because much of the battle took place between the two farms, returning the area to an agricultural appearance would return it to its historic condition with less of the noise intrusion of an interstate highway and speeding vehicles.

The stone tenant house on the Thomas farm would have exhibits supplementing those at the visitor center. The

Worthington House first floor would be rehabilitated to offer interpretive services and exhibits for visitors.

The effect of implementation of this alternative on interpretation would be long-term, moderate, and beneficial.

Visitors' Experience of the Resources.

In alternative 4, national battlefield visitors wanting to understand the Battle of Monocacy could see a wide range of landscape features, supplemented by exhibits at the visitor center and the stone tenant house on the Thomas Farm. The battlefield would appear remarkably similar to the way it looked during the Civil War.

Wayside exhibits along existing and new trails would interpret the unfolding battle and other points of interest.

Visitors interested in the history of the site beyond the Civil War could explore those stories through exhibits at the Worthington farmhouse and the Thomas stone tenant house.

Although the trails would not be designed primarily for recreational use, under alternative 4 visitors could walk the trails to fish in the river or to observe wildlife. Other recreational uses such as horseback riding and bicycling would not be allowed.

The effect of the implementation of this alternative on visitor experience of the resources would be long-term, moderate, and beneficial.

Cumulative Effects

As has been mentioned previously (p. 46) the new visitor center is considered a part of the existing conditions in the national battlefield, and its presence is

part of the actions common to all alternatives.

Efforts to interpret the heritage of western Maryland on the part of federal, state, and private entities (Antietam National Battlefield, Harpers Ferry National Historical Park, the C&O Canal National Historical Park; South Mountain Battlefield State Park, Maryland Civil War Trails; National Museum of Civil War Medicine), along with the national battlefield staff, would result in long-term minor to moderate beneficial cumulative effects on public understanding and appreciation of the region's history. The contribution of the National Park Service to this result would be long term, moderate, and beneficial.

In addition to the beneficial effects of research, education, interpretation, and preservation efforts ongoing and proposed at the national battlefield, a number of other government and nonprofit sites in the area engage in similar activities. Regional universities, local schools, and other organizations offer opportunities for research and education. All these activities would result in long-term minor to moderate beneficial cumulative effects on regional opportunities for interpretation and education.

Commercial and residential development outside the national battlefield when combined with traffic generated by visitors to the national battlefield would cause an increase in congestion and traffic related accidents on roads within and around Monocacy National Battlefield. Together development and visitor related traffic would have a long-

term, moderate to major cumulative adverse impact on circulation and access within the national battlefield.

The creation of a state-of-the-art, environmentally friendly State of Maryland visitor facility has been proposed outside the national battlefield. Such a feature would be placed at the existing I-270 overlook south of the national battlefield. This could encourage visitors to stop at the national battlefield either as a part of their current trip or at a later date. The long-term effect caused by such a facility

would be negligible to minor and beneficial.

Conclusion

The effect of implementation of this alternative on orientation would be negligible long-term and beneficial. On visitor safety the effect would be moderate long-term and adverse. On interpretation the effect would be moderate long-term and beneficial. On the visitor experience of the resource the effect would be moderate long-term and beneficial.

EFFECTS ON THE SOCIOECONOMIC ENVIRONMENT

METHODS FOR ASSESSING EFFECTS ON THE SOCIOECONOMIC ENVIRONMENT

The National Park Service applied logic, experience, expertise, and professional judgment to analyze the effects on the social and economic situation that would result from each alternative. Economic data, the history of visitor use, expected future visitor use, and future developments in the national battlefield were all considered in identifying, discussing, and evaluating the expected impacts.

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

Duration

In evaluating the effects, planners also considered the duration of each effect. Distinguishing between short-term and long-term duration was necessary to understand the extent of the identified effects. In general, short-term effects would be temporary —typically they are transitional effects associated with the implementation of an action (for example, effects related to construction activities). Such effects would last less than one year. In contrast, long-term effects would be those that would last more than a year, and they could be permanent (such as effects caused by operational activities).

Intensity

The effects were evaluated comparatively between alternatives, with the no-action alternative serving as a baseline for comparison with each action alternative

Negligible — The effect would be below or at the level of detection. The action would result in no noticeable change in any defined socioeconomic indicators.

Minor — The effect on socioeconomic conditions would be slight but detectable.

Moderate — The effects on socioeconomic conditions would be readily apparent, and the action would result in changes in socioeconomic conditions on a local scale.

Major — The effects on socioeconomic conditions would be readily apparent, and the action would result in demonstrable changes in socioeconomic conditions in the region.

Type of Effect

NPS policy calls for the effects of the alternatives to be characterized as being beneficial, adverse, or indeterminate. With respect to economic and social effects, few standards or clear definitions exist as to what constitutes a beneficial or positive change, what change should be considered adverse or negative.

For example, rising unemployment generally is perceived as adverse;

increases in job opportunities and average per capita personal income are regarded as beneficial. However, in many instances changes that some members of a community regard as favorable are seen as unfavorable by others. For example, the effect of growth on housing markets and values may be seen as favorable by construction contractors and many homeowners, but as adverse by renters, by local government officials, and by community groups concerned with affordability. Consequently, some social and economic effects may be described in such a manner as to allow an individual reviewer to determine whether they would be beneficial or adverse (the impact is indeterminate with respect to “type”).

EFFECTS FROM ALTERNATIVE 1 (NO ACTION)

Analysis

Monocacy National Battlefield is in a heavily developed part of the Baltimore–Washington metropolitan area. It has a small staff of less than 30 fulltime and seasonal employees. It is not a major travel and tourist destination in the region — it attracted fewer than 15,000 visitors in 2003. Visitation is expected to grow considerably now that the new visitor center is completed.

In 2001, when visitation was nearly 18,000 people, the National Park Service estimates that local daytime visitors made up 20% of total, day visitors from other regions made up 55%, and overnight visitors staying in hotels and campsites were 20% and 5%, respectively. On average, those visitors

spent \$114 per party per day, for an estimated \$1.03 million in 2001.

The \$1.03 million spent by Monocacy visitors had a direct economic effect of \$0.86 million in direct sales, \$0.32 million in personal income (wages and salaries), \$0.49 million in value added, and 20 jobs. Among all direct sales, \$0.29 million was from lodging sales, \$0.24 million from food and drinking places, \$0.11 million from admission fee and \$0.12 million from retail trade. As visitor spending circulated through the local economy, secondary effects created additional \$0.18 million in personal income and 7 jobs in the community.

In sum, visitors spent \$1.03 million dollars in 2001, which supported a total of \$1.34 million in sales, \$0.50 million in personal income, 26 jobs, and \$0.78 million in value added.

Under the no-action alternative the historic structures in the national battlefield would remain closed so that more staff would not be needed to interpret them. The maintenance staff could be increased slightly.

The time spent in the national battlefield by visitors is expected to increase by as much as one to two hours with the opening of the new visitor center.

The overall effect of the no-action alternative on socioeconomic conditions would be long-term, negligible, and beneficial when compared with the socioeconomics of Frederick County.

Cumulative Effects

The county economy is expected to benefit from development such as

expanded housing, industrial development, and retail expansion. The national battlefield contributes a negligible amount to the overall economic well-being of Frederick County when compared with the county as a whole. The workforce of the national battlefield is small compared to that of the county.

The direct and indirect economic impact from the national battlefield would be minor in comparison to the county as a whole. The new visitor center is likely to add somewhat to the number of dollars contributed into the local economy; however, the overall beneficial effect would continue to be negligible and long term.

Conclusion

Alternative 1 would result in both direct and indirect long-term negligible beneficial effects on the socioeconomic environment.

EFFECTS FROM ALTERNATIVE 2

Analysis

Adding new trails, upgrading roadways and parking areas, and adding new visitor facilities at the Thomas farm would result in one-time expenditures of funds in the local community.

The alternative transportation system (using existing roadways) and requiring visitors to use the system when it was operating would result in an ongoing economic benefit because operating and maintaining the system would result in several jobs. However, adding the transportation system would reduce visitors' flexibility to negotiate the national battlefield as they wished.

Leasing space in the community for national battlefield administration and maintenance would place federal dollars directly into the commercial real estate market. Placing the Best and Thomas houses into the historic leasing program would result in direct government competition in the commercial real estate market.

Visitation would increase as the battlefield facilities were developed under alternative 2. Visitors would stay longer at the battlefield and possibly also longer in the community, with a larger corresponding economic impact compared to the no-action alternative.

After the addition of visitor facilities at the stone tenant house on the Thomas Farm, and the development of new trails under this alternative, visitors probably would spend more time in the national battlefield. School groups and other large groups would be expected to increase after the first floor at the Gambrill Mill was converted into meeting space, and the groups also would be expected to stay longer.

Trail construction and use by visitors could result in a slight detrimental impact on agricultural leasing as agricultural land was removed for trails and as visitors and farmers came into contact during the planting and harvesting seasons.

Improving the highway near the 14th New Jersey Monument and reducing visitor traffic into the Gambrill Mill area probably would decrease the likelihood of accidents at those two locations.

Alternative 2 would result in more visitation than the no-action alternative,

along with more visitor spending in the community. NPS direct spending in the community would increase with more funds spent for construction services and materials and for leasing of space.

The staff of the national battlefield would be increased somewhat, with maintenance workers and interpreters needed to operate and maintain new facilities.

Overall, alternative 2 would result in direct and indirect long-term negligible beneficial effects when compared with the socioeconomic conditions of the entire Frederick County.

Cumulative Effects

The cumulative effects on the socio-economic environment from land uses and activities in the national battlefield and surrounding lands would be similar to those described for the no-action alternative. The overall cumulative effects would be long term, moderate, and beneficial. The contribution of alternative 2 to the cumulative effects would be long-term, negligible, and beneficial.

Conclusion

Alternative 2 would result in direct and indirect long-term negligible beneficial effects on the socioeconomic environment.

EFFECTS FROM ALTERNATIVE 3

Analysis

Several one-time expenditures of funds in the local community would result from implementing alternative 3 — parking upgrades, new visitor facilities,

moving the administrative headquarters to the Thomas Farm, and developing the first floors of the Worthington and Best houses to accommodate visitor access and exhibits.

School groups and other large groups would be expected to increase after the first floor at the Gambrill Mill was converted into meeting space, and the groups also would be expected to stay longer.

Visitation would increase as the battlefield facilities were developed under alternative 3. Visitors would stay longer at the battlefield and possibly also longer in the community, with a larger corresponding economic impact compared to the no-action alternative.

Improving the highway near the 14th New Jersey Monument and reducing visitor traffic into the Gambrill Mill area probably would decrease the likelihood of accidents in those areas.

Alternative 3 would result in more visitation than the no-action alternative, along with more visitor spending in the community. NPS direct spending in the community would increase with more funds spent for construction and demolition materials.

The staff of the national battlefield would be increased somewhat, with maintenance workers and interpreters needed to operate and maintain new facilities.

Overall, alternative 3 would result in direct and indirect long-term negligible beneficial effects when compared with the socioeconomic conditions of the entire Frederick County.

Cumulative Effects

The cumulative effects on the socio-economic environment from land uses and activities in the national battlefield and surrounding lands would be similar to those described for the no-action alternative. The overall cumulative effects would be long term, moderate, and beneficial. The contribution of alternative 3 to the cumulative effects would be long-term, negligible, and beneficial.

Conclusion

Alternative 3 would result in direct and indirect long-term negligible beneficial effects on the socioeconomic environment.

EFFECTS FROM ALTERNATIVE 4 (PREFERRED ALTERNATIVE)

Analysis

Alternative 4 would result in several one-time expenditures of funds in the local community — new roads, parking improvements, new visitor facilities at the Thomas and Worthington farms.

Visitation would increase under alternative 4 as battlefield facilities were developed at the Thomas and Worthington farms. Visitors would stay longer at the battlefield and possibly also longer in the community, with a larger corresponding economic impact compared to the no-action alternative. NPS direct spending in the community would increase, with more funds spent for construction and demolition materials.

Building a new entrance off of MD 355 for the 14th New Jersey Monument and reducing traffic into the Gambrill Mill

area probably would decrease the number of accidents in these locations.

The staff of the national battlefield would be increased somewhat, with maintenance workers and interpreters needed to operate and maintain new facilities.

Overall, alternative 4 would result in a long-term negligible beneficial effect when compared with the socioeconomic conditions of the entire Frederick County.

Cumulative Effects

The cumulative effects on the socioeconomic environment from land uses and activities in the national battlefield and surrounding lands would be similar to those described for the no-action alternative. The overall cumulative effects would be long term, moderate, and beneficial. The contribution of alternative 4 to the cumulative effects would be long term, negligible, and beneficial.

Conclusion

Alternative 4 would result in direct and indirect long-term negligible beneficial effects on the socioeconomic environment.

EFFECTS ON ACCESS AND CIRCULATION

METHODS FOR ASSESSING EFFECTS ON ACCESS AND CIRCULATION

Analyses of the potential effects on access and circulation were derived from the available information at Monocacy National Battlefield and the 2003 “Monocacy National Battlefield Transportation Plan” prepared by HNTB Corporation. The intensities of effects were defined as follows:

Negligible — The effect would be barely detectable, and there would be no discernible effect on local, regional, or battlefield transportation networks.

Minor — The action would cause a slightly detectable benefit or detriment to local, regional, or battlefield transportation networks.

Moderate — The action would result in a clearly detectable benefit or detriment to local, regional, or battlefield transportation networks.

Major — The action would result in a substantial, highly noticeable benefit or detriment to local, regional, or battlefield transportation networks.

EFFECTS FROM ALTERNATIVE 1 (NO ACTION)

Analysis

The no-action alternative would involve no proposed changes in local, regional, or battlefield transportation systems; however, urban sprawl and growth in Frederick County would continue to add traffic.

Cumulative Effects

The environmental assessment for the proposed relocation of the battlefield’s visitor center forecasted an increase in the battlefield’s visitation rate. It was projected that an increase of up to 40,000 visits per year would result from the area’s continued growth, the proposed visitor center, and the potential for partnership opportunities. This forecast is almost triple the visitation rate recorded in 2003.

Table 5 (copied from the NPS “Public Use Statistics” Web site) shows the annual visitation for Monocacy National Battlefield between 1991 and 2003.

TABLE 5: MONOCACY NATIONAL BATTLEFIELD ANNUAL VISITATION, 1991–2003

1991	0
1992	9,560
1993	8,251
1994	11,661
1995	21,165
1996	11,312
1997	11,804
1998	15,563
1999	14,834
2000	18,198
2001	18,095
2002	15,592
2003	14,566

Table 6 shows visitation to the battlefield by month during 2003.

**TABLE 6: MONOCACY NATIONAL
BATTLEFIELD VISITATION
BY MONTH, 2003**

Month	Visits
January	363
February	187
March	600
April	1,716
May	1,555
June	2,059
July	2,743
August	1,789
September	1,020
October	1,173
November	969
December	392
Total	14,566

To project changes in traffic volumes following the construction of the new visitor center, the following rationale has been developed:

The staff of Monocacy National Battlefield has observed that roughly 70% of visitation occurs during weekends. Using the total visits from the highest month in 2003 — July, 2,743 visits — take 70% of 2,743 = 1,920 visits; divide by 8 weekend days per month, this equals 240 people per day on an average weekend day during the peak use month of July. Assume an increase in visitation of 3, so $240 \times 3 = 720$. Assume 2.5 people per vehicle equals 288 cars per peak weekend day. Assume there will be 2 vehicle trips per visit, $2 \times 288 = 576$ (one to and from the battlefield). This equates to a future average daily traffic volume of 576 vehicle trips per day. Using the same method for establishing the current volume of traffic resulting from battlefield visitors, there

are 192 vehicle trips per day during the peak weekend day. Therefore, the resulting change in traffic volume is expected to be 384 vehicle trips per peak weekend day.

Urbana Pike (MD 355) is an already heavily traveled road (13,000 average daily traffic [ADT]). Even if visitation were to triple following the opening of the new visitor center, the percentage of daily traffic due to increased visitation is only projected to be 3%, compared to the current volume of traffic accommodated on MD 355. This would result in a minor long-term cumulative adverse impact on MD 355.

However, if visitation tripled, visitors traveling on Araby and Baker Valley roads, which are now low volume local roads (less than 1,100 ADT) potentially could increase the ADT of those roads by 35%. This would result in a cumulative moderate long-term adverse effect on Araby and Baker Valley roads.

Conclusion

Increased traffic resulting from more visitation to the national battlefield would cause minor long-term adverse impacts on MD 355. Increased visitor traffic would result in moderate long-term adverse impacts on the Araby Church and Baker Valley road networks.

Because there would be no major adverse effects on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Monocacy National Battlefield, (2) key to its natural or cultural integrity or opportunities for its enjoyment, or (3) identified as a goal

in its general management plan or other relevant NPS planning documents, the national battlefield's resources or values would not be impaired.

EFFECTS FROM ALTERNATIVE 2

Analysis

Visitors to Monocacy National Battlefield traveling on foot or by vehicle to battlefield features would benefit from alternative 2, a moderate long-term beneficial effect on access and circulation, as summarized below.

With the opening of the new visitor center, the flow of visitor travel to battlefield resources has been simplified. Left turn movements from MD 355 into the visitor center will be shifted north to an area where sight distance is better and the highway is wider. The visitor center would be the first stop for visitors; its location will allow visitors to reach the 14th New Jersey Monument and Araby Church Road by turning right off MD 355. This would make access to the battlefield features safer and help to eliminate confusion.

Moving national battlefield administration and maintenance to leased space outside the boundaries in alternative 2 would reduce the number of turns NPS vehicles would make from the Gambrill Mill drive from and onto MD 355. The access and circulation improvements that would be made to areas of the battlefield under alternative 2 would allow visitors to reach the Thomas Farm, Frederick Junction, Wallace's headquarters, and the earth-works north of the CSX railroad — areas that have been unavailable.

If market conditions allow and a willing vendor could be found, alternative 2 would include an alternative transportation system consisting of small bus-like vehicles that would carry visitors around the battlefield. The "Monocacy National Battlefield Transportation Plan" prepared by HNTB Corporation indicates that a small shuttle van service could be economically viable during the heaviest use periods. Using the system would be mandatory for visitors when the system was in operation; at other times, they could use their personal vehicles.

Adding a deck across I-270 would restore a vital connection between the Worthington and Thomas farms that was lost when the interstate highway was built, making it possible to drive along a one-way pattern between the farms, about where Union and Confederate troops engaged in some of the heaviest fighting. This would benefit access and circulation.

Upgrading a parking area on the Thomas Farm, along Baker Valley Road at the end of the lane would benefit access and circulation, as would improving parking near the 14th New Jersey Monument and shifting the entrance to the monument south to improve sight distances.

Adding trails in several areas — across the I-270 deck to let pedestrians go between the Thomas and Worthington farms, and from the visitor center to the railroad junction — as well as extending the Gambrill Mill trail across Bush Creek to where one can see the railroad junction would benefit visitors.

Alternative 2 would result in no appreciable change in visitation beyond that projected for the new visitor center. The greatest effect on visitation would result from the completion of the visitor center, but the enhanced interpretive opportunities from improved access to battlefield features under alternative 2 would increase each visitor's length of stay. This would not affect traffic volumes beyond those projected for the no-action alternative.

Cumulative Effects

The cumulative effects from alternative 2 would be the same as those described for the no-action alternative. There would be long-term minor adverse impacts on MD 355 and moderate long-term adverse impacts on the Araby Church and Baker Valley road networks from increased traffic resulting from greater visitation. However, the access and circulation improvements throughout the battlefield under alternative 2 also would result in moderate long-term beneficial effects on pedestrian and vehicular access and circulation to features throughout the battlefield.

Conclusion

Alternative 2 would result in long-term minor adverse impacts on MD 355 and moderate long-term adverse impacts on the Araby Church and Baker Valley road networks from increased traffic caused by greater numbers of visitors. However, the access and circulation improvements throughout the battlefield under alternative 2 also would result in moderate long-term beneficial effects on pedestrian and vehicular access and circulation to features throughout the battlefield.

Because there would be no major adverse effects on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Monocacy National Battlefield, (2) key to its natural or cultural integrity or opportunities for its enjoyment, or (3) identified as a goal in its general management plan or other relevant NPS planning documents, the national battlefield's resources or values would not be impaired.

EFFECTS FROM ALTERNATIVE 3

Analysis

Visitors to Monocacy National Battlefield traveling on foot or by vehicle to battlefield features would benefit from alternative 3, a moderate long-term beneficial effect on access and circulation.

With the opening of the new visitor center, the flow of visitor travel to battlefield resources has been simplified. Left turn movements from MD 355 into the visitor center will be shifted north to an area where sight distance is better and the highway is wider. The location of the visitor center also will allow visitors to reach the 14th New Jersey Monument and Araby Church Road by turning right off MD 355. This will make access to the battlefield features safer and help to eliminate confusion.

Widening the gravel-surfaced entry lane from Baker Valley Road to the Worthington House for two-way access and adding a small parking area would enable visitors to park vehicles closer to the Worthington House, a beneficial effect.

Visitors would benefit from the up-grading of a small parking area near the intersection of the Thomas Farm land with the Baker Valley road to improve access to the Thomas farmstead. Displaying interpretive exhibits in the stone tenant house at the Thomas Farm also would benefit visitors.

Moving the entrance to the 14th New Jersey Monument to the east side of MD 355 and adding a new parking area would benefit access and circulation. A trail under the MD 355 railroad over-pass would lead to the monument. The old parking area would be removed and the land rehabilitated. The national battlefield staff would work with New Jersey and CSX to coordinate these changes.

Relocating national battlefield headquarters to the Thomas House and leaving the maintenance facility in the metal building on the Gambrill property would offset any changes in the number of turning movements by NPS vehicles on MD 355 and the Gambrill Mill access drive.

Alternative 3 would result in no appreciable change in visitation beyond that projected for the new visitor center. The greatest effect on visitation would result from the completion of the visitor center, but the enhanced interpretive opportunities from improved access to battlefield features under alternative 3 would increase each visitor's length of stay. This would not affect traffic volumes beyond those projected for the no-action alternative.

Cumulative Effects

The cumulative effects from alternative 3 would be the same as those described for the no-action alternative. There would be long-term minor adverse impacts on MD 355 and moderate long-term adverse impacts on the Araby Church and Baker Valley road networks from increased traffic resulting from greater visitation. However, the access and circulation improvements throughout the battlefield under alternative 3 also would result in moderate long-term beneficial effects on pedestrian and vehicular access and circulation to features throughout the battlefield.

Conclusion

Alternative 3 would result in long-term minor adverse impacts on MD 355 and moderate long-term adverse impacts on the Araby Church and Baker Valley road networks from increased traffic caused by greater numbers of visitors. However, the access and circulation improvements throughout the battlefield under alternative 3 also would result in moderate long-term beneficial effects on pedestrian and vehicular access and circulation to features throughout the battlefield.

Because there would be no major adverse effects on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Monocacy National Battlefield, (2) key to its natural or cultural integrity or opportunities for its enjoyment, or (3) identified as a goal in its general management plan or other relevant NPS planning documents, the

national battlefield's resources or values would not be impaired.

EFFECTS FROM ALTERNATIVE 4 (PREFERRED ALTERNATIVE)

Analysis

Visitors to Monocacy National Battlefield traveling on foot or by vehicle to battlefield features would benefit from alternative 4, a moderate long-term beneficial effect on access and circulation.

With the opening of the new visitor center, the flow of visitor travel to battlefield resources has been simplified. Left turn movements from MD 355 into the visitor center will be shifted north to an area where sight distance is better and the highway is wider. The location of the visitor center also will allow visitors to reach the 14th New Jersey Monument and Araby Church Road by turning right off MD 355. This will make access to the battlefield features safer and help to eliminate confusion.

A number of access and circulation improvements would be made to areas of the battlefield under alternative 4 that would give visitors access to areas that have been inaccessible. Access would be improved to the Best and Thomas farms, to the Wallace's headquarters site, and to existing features.

Adding a pedestrian deck across I-270 would restore a vital connection between the Worthington and Thomas farms that was lost when the interstate highway was built, making it possible to walk between the farms, about where Union and Confederate troops engaged

in some of the heaviest fighting. This would benefit access and circulation.

Shifting the entrance to the 14th New Jersey Monument south to improve sight distances would improve safety. The national battlefield staff would work with the state of New Jersey to develop a plan to improve parking near the monument.

Relocating national battlefield headquarters to the Thomas House and leaving the maintenance facility in the metal building on the Gambrill property would offset any changes in the number of turning movements by NPS vehicles on MD 355 and the Gambrill Mill access drive.

Adding trails to the Wallace's headquarters site, and the Union entrenchment area, would result in a moderate long-term beneficial effect on access and circulation.

Alternative 4 would result in no appreciable change in visitation beyond that projected for the new visitor center. The greatest effect on visitation would result from the completion of the visitor center, but the enhanced interpretive opportunities from improved access to battlefield features under alternative 4 would increase each visitor's length of stay. This would not affect traffic volumes beyond those projected for the no-action alternative.

Cumulative Effects

The cumulative effects from alternative 4 would be the same as those described for the no-action alternative. There would be long-term minor adverse impacts on MD 355 and moderate long-

term adverse impacts on the Araby Church and Baker Valley road networks from increased traffic resulting from greater visitation. However, the access and circulation improvements throughout the battlefield under alternative 4 also would result in moderate long-term beneficial effects on pedestrian and vehicular access and circulation to features throughout the battlefield.

Conclusion

Alternative 4 would result in long-term minor adverse impacts on MD 355 and moderate long-term adverse impacts on the Araby Church and Baker Valley road networks from increased traffic caused by greater numbers of visitors. However,

the access and circulation improvements throughout the battlefield under alternative 4 also would result in moderate long-term beneficial effects on pedestrian and vehicular access and circulation to features throughout the battlefield.

Because there would be no major adverse effects on a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of Monocacy National Battlefield, (2) key to its natural or cultural integrity or opportunities for its enjoyment, or (3) identified as a goal in its general management plan or other relevant NPS planning documents, the national battlefield's resources or values would not be impaired.

EFFECTS ON NPS OPERATIONS AND FACILITIES

METHODS FOR ASSESSING EFFECTS ON NPS OPERATIONS AND FACILITIES

Analyses of the potential effects on NPS operations and facilities were evaluated for the following categories:

- infrastructure, visitor facilities, and services
- the operations of other federal agencies such as the Forest Service, U.S. Department of Agriculture, and the Bureau of Land Management, U.S. Department of the Interior
- the operations of non-NPS entities such as the Western Maryland Interpretive Association, agricultural lessees, partners, and volunteers

Effects were analyzed on the basis of how national battlefield operations and facilities might vary under the different alternatives. The analysis is qualitative rather than quantitative because the alternatives are conceptual. Professional judgment was used to reach reasonable conclusions about the intensity, duration, and type of each potential effect.

Duration

Short-term effects would last less than one year, because construction generally is finished within a year, and any effect would last only until all construction-related actions were completed. Long-term effects would extend beyond one year, and such effects on operations could be permanent.

Intensity

The intensities of effects are defined as follows:

Negligible — National battlefield operations would not be affected, or the effect would be at or below the lower levels of detection, and the action would not have an appreciable effect on national battlefield operations.

Minor — The effect would be detectable but would not be of a magnitude that would have an appreciable effect on national battlefield operations.

Moderate — The effects would be readily apparent, and the action would result in a substantial change in national battlefield operations that would be noticeable to the staff and the public.

Major — The effects would be readily apparent, and the action would result in a substantial change in national battlefield operations that would be noticeable to the staff and the public, so that operations would be markedly different from existing operations.

Type of Effect

Beneficial effects would improve NPS operations or facilities. Adverse effects would negatively affect NPS operations or facilities and could hinder the ability of the National Park Service to provide adequate services and facilities to visitors and staff. Some effects could be beneficial for some operations or

facilities and adverse or neutral for others.

EFFECTS FROM ALTERNATIVE 1 (NO ACTION)

Analysis

Visitors' interest in seeing the battlefield's historic structures could be piqued by information available in the new visitor center. However, in alternative 1 visitors could not enter any historic structure; therefore, it is unlikely that any visitor would stay long at each location.

The on-going preservation and stabilization of historic structures continues to reduce the battlefield's deferred maintenance backlog, thereby allowing maintenance personnel to transition into a preventive maintenance program that would avoid future costly rehabilitation efforts.

The no action alternative would result in a long-term minor beneficial effect on national battlefield operations.

Cumulative Effects

Past facility development has resulted in a moderate long-term beneficial effect on the national battlefield's operations. The addition of the new visitor center built on the north side of the national battlefield will cause a moderate long-term beneficial effect on national battlefield operations.

Conclusion

The no-action alternative would result in a long-term minor beneficial effect on national battlefield operations.

EFFECTS FROM ALTERNATIVE 2

Analysis

Adding exhibits and other new visitor facilities in the stone tenant house on the Thomas Farm, would improve visitor services, resulting in a more comprehensive visitor experience and a greater staff presence in the heart of the battlefield.

The national battlefield's administrative staff would be farther removed from some resources under alternative 2, which could result in higher fuel consumption and longer travel times.

Leasing maintenance space outside the national battlefield would result in a larger, more efficient facility and in the removal of a nonhistoric structure from the battlefield landscape.

The on-going stabilization and preservation efforts on historic structures continues to reduce the battlefield's deferred maintenance backlog, thereby allowing maintenance personnel to transition into a preventive maintenance program that would avoid future costly rehabilitation efforts.

Utilizing the historic leasing program for the Thomas farmhouse would reduce the battlefield's deferred maintenance backlog by considerably. This would also free up maintenance staff to concentrate on preventive maintenance efforts for the battlefield's remaining assets.

Alternative 2 would result in a long-term major beneficial effect on Monocacy National Battlefield.

Cumulative Effects

The efficiency of national battlefield operations would be improved by removing administrative and maintenance operations from the battlefield and opening the new visitor center. A major long-term beneficial effect on national battlefield operations would result from the new visitor center and from the actions of alternative 2. Together, these present and proposed actions would result in a major long-term beneficial effect on national battlefield operations.

Conclusion

Alternative 2 would result in a long-term major beneficial effect on the national battlefield's operations, compared with the effects of the no-action alternative.

EFFECTS FROM ALTERNATIVE 3

Analysis

Adding exhibits and other new visitor facilities in the stone tenant house on the Thomas Farm, the Worthington, and Best Houses, would improve visitor services. These actions would result in a more comprehensive visitor experience and a greater staff presence in the heart of the battlefield.

With the interior of the Thomas House being adaptively reused for administrative offices, all administrative and headquarters staff could occupy the same building.

The on-going stabilization and preservation efforts of historic structures continues to reduce the battlefield's deferred maintenance backlog, thereby allowing maintenance personnel to

transition into a preventive maintenance program that would avoid future costly rehabilitation efforts.

Overall, alternative 3 would result in long-term major beneficial effects on national battlefield operations.

Cumulative Effects

The new visitor center will result in a major long-term beneficial effect on national battlefield operations, as would the actions of alternative 3. Together, these present and proposed actions would result in a major long-term beneficial effect on national battlefield operations.

Conclusion

Alternative 3 would result in a long-term major beneficial effect on the national battlefield's operations, compared with the effects of the no-action alternative.

EFFECTS FROM ALTERNATIVE 4 (PREFERRED ALTERNATIVE)

Analysis

Adding a new visitor facility at the stone tenant house on the Thomas Farm, along with exhibits at the Worthington House, would improve visitor services. These actions would result in a more comprehensive visitor experience and a greater staff presence in the heart of the battlefield.

The on-going stabilization and preservation efforts of historic structures continues to reduce the battlefield's deferred maintenance backlog, thereby allowing maintenance personnel to transition into a preventive maintenance

program that would avoid future costly rehabilitation efforts.

Overall, alternative 4 would result in long-term major beneficial effects on national battlefield operations.

Cumulative Effects

The new visitor center will result in a major long-term beneficial effect on national battlefield operations, as would the actions of alternative 4. Together,

these present and proposed actions would result in a major long-term beneficial effect on national battlefield operations.

Conclusion

Alternative 4 would result in a long-term major beneficial effect on the national battlefield's operations, compared with the effects of the no-action alternative.

REQUIRED ANALYSES

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Other than some losses of construction materials and energy, there would be no irreversible or irretrievable commitments of resources under any of the alternatives.

RELATIONSHIPS OF SHORT-TERM USES OF THE ENVIRONMENT AND LONG-TERM PRODUCTIVITY

Alternative 1 (No Action)

Continuing use and visitor activities, along with planned facility improvements under the no-action alternative, would continue to improve the long-term productivity of the socioeconomic environment over both the short term and the long term.

Alternative 2

Rehabilitating the Thomas house under the historic leasing program would make it possible to achieve ongoing maintenance through a non-NPS source of income.

Alternative 3

Rehabilitating the Thomas, Best, and Worthington houses for use as offices and exhibit space would alter them from their original purposes.

Alternative 4 (Preferred Alternative)

Rehabilitating the Thomas and Worthington houses for use as offices and exhibit space would alter them from their original purposes.

ENERGY REQUIREMENTS AND CONSERVATION POTENTIAL

Alternative 1 (No Action)

Energy requirements would be unchanged under alternative 1 because no new structures would be built and the way in which visitors reach the national battlefield would not change. Gradually improving the energy efficiency of existing structures could mitigate energy requirements. Alternative 1 would result in the least use of energy of all the alternatives because fewer structures would be used by visitors and by national battlefield administration.

Alternative 2

Alternative 2 would consume more energy than alternative 1. The Thomas house, now unused, would be placed under the historic leasing program. The Thomas stone tenant house, also unused, would become exhibit space. Although national battlefield administration would be moved from Gambrill Mill into rented space outside the national battlefield, the mill would continue to be used.

Several actions of alternative 2 would result in more energy consumption than alternative 1. Creating a new entrance to the 14th New Jersey Monument would use energy, as would removing the maintenance facility and constructing a deck across I-270. A visitor transportation system, if fully utilized, could save energy compared to the use of private vehicles, depending on the type of system used and the energy source.

Alternative 3

More energy would be consumed in alternative 3 than in alternative 2. Energy would be needed for the use of the Best, Thomas, and Worthington Houses and the stone tenant house on the Thomas farm, all of which are now unused. Even with the administrative function removed, about the same amount of energy would be needed for the Gambrill Mill.

Creating a new entrance and parking area for the 14th New Jersey Monument, and widening Worthington Lane would consume additional energy.

Alternative 4 (Preferred Alternative)

Alternative 4 would result in the consumption of about the same amount of energy as alternative 3. As in alternative 3, more energy would be needed for the use of the Thomas and Worthington houses and the stone tenant house on the Thomas farm, all of which are now unused. Similarly, even with the administrative function removed, about the same amount of energy would be needed for the Gambrill Mill.

Creating a new entrance to the 14th New Jersey Monument, and widening Worthington Lane would consume additional energy, as would adding a pedestrian deck across I-270.

(blank)

CHAPTER 5:
**CONSULTATION
AND
COORDINATION**

(blank back of divider)

PUBLIC AND AGENCY INVOLVEMENT

INTRODUCTION

This *Draft General Management Plan / Environmental Impact Statement* for Monocacy National Battlefield represents the thoughts of the National Park Service — including the national battlefield staff and the National Capitol Regional Office, the Maryland State Highway Administration, and the public. Consultation and coordination among the agencies and the public were vitally important throughout the planning process. The public participated through three primary avenues during the development of the plan: public meetings, responses to newsletters, and comments submitted to the national battlefield's Web site.

PUBLIC MEETINGS AND NEWSLETTERS

A notice of intent to prepare an environmental impact statement was published in the *Federal Register* on September 23, 2002 (FR vol. 67, no. 184, p. 59539).

Public meetings and newsletters kept the public informed and involved in the planning process for Monocacy National Battlefield. The National Park Service compiled a mailing list that consisted of interested citizens, legislators, businesses, local governments, members of organizations, and various government agencies. The first newsletter, issued in December 2002, described the planning effort. The National Park Service received written responses to the first newsletter.

The National Park Service conducted public scoping meetings on July 29 and

31, 2002, in the Gambrill House, Monocacy National Battlefield. A total of 16 people attended the two meetings. Only 6 people attended another scoping meeting at the same location in December 2002 (inclement weather).

The National Park Service met with the Maryland State Highway Administration and the Frederick County Commissioners on July 31, 2002, and with a representative of the Maryland historic preservation officer on August 1, 2002.

The National Park Service received written responses to the newsletter and comments at all the meetings. The comments received are summarized earlier in this document, under "Planning Issues and Concerns" (p. 28). All the comments received were considered and incorporated into the issues for the plan.

A second newsletter distributed in April 2003 described the draft alternative concepts for managing the national battlefield. A total of 36 electronic and mailed comments were received in response to that newsletter. The comments gave positive feedback on the planning process and the alternatives presented. Many commenters expressed appreciation for the opportunity to comment and take part in the planning process.

Most people who commented expressed preference for alternative 2. Many commenters mentioned that the Battle of Monocacy is the primary purpose for the establishment of Monocacy National Battlefield and said that the

battle should be the main focus of the plan.

About a fifth of the commenters said they preferred a blend of themes, with priority given to the battle, using the local and “crossroads” themes to provide context. Still fewer expressed preference for alternative 3. Only a few people supported selecting alternative 1, the no-action alternative, and the original alternative 4 (since eliminated).

Some people expressed concern about how the actions for each alternative were selected, saying that the National Park Service should identify the best treatment for each area and bundle those actions under one “action” alternative, so that there would be only two alternatives, no change (the no-action alternative) and “full theme development.”

One person said that almost the entire battlefield should be a preservation zone because natural resources are a part of the cultural landscape.

Many commenters questioned why the National Park Service proposed to remove the toll house.

Some people expressed concern about the cost of the deck over I-270. One commenter expressed a liking for the deck connection over I-270, and another said that more information should be available about the I-270 connection.

Several people suggested reordering the interpretive themes, and one suggested a rewording of one theme.

Some commenters said the National Park Service should not let cost be a

limiting factor because significant support can be raised through nonappropriated funding avenues.

The following ideas also were suggested:

- Improve traffic safety.
- Improve access to the national battlefield.
- Improve signs at the national battlefield.
- If new monuments are added, do not confine them all into one “alley.”
- Include the alternative transportation system in all alternatives, and identify what the threshold would be for implementing the transportation system.
- Fully furnish at least one battlefield structure in period style, and make that house accessible to the public.
- Seek private funding sources.
- Define the boundary of the battlefield without the filter of integrity. Pursue the acquisition of these lands whenever possible. Expand the boundary.
- Consider planting a buffer of trees to screen urban sprawl.
- Provide access to Union or Confederate positions.
- Offer first-person soldier accounts of the battle (“living history”).
- Minimize development to help ensure maximum preservation of the battlefield.
- Market the national battlefield.

- Make and sell a DVD of the national battlefield that would include all necessary interpretation.
- Make available a library archive that the public can access to learn more about the battle.
- Restore the 1864 battlefield landscape.
- Encourage groups to raise funds for new monuments to be added on the battlefield and to direct their efforts to additional land acquisition.
- Guard against the cumulative impacts of recreational use.

CONSULTATION WITH ORGANIZATIONS AND WITH OTHER AGENCIES AND OFFICIALS

Section 7 Consultation

U.S. Fish and Wildlife Service. As required by section 7 of the Endangered Species Act, the National Park Service has coordinated informally with the Chesapeake Bay Field Office of the U.S. Fish and Wildlife Service during the preparation of this document. The list of threatened and endangered species in appendix F was compiled with the use of lists and information received from the U.S. Fish and Wildlife Service.

In accordance with the Endangered Species Act and relevant regulations in 50 CFR 402, the National Park Service has determined that the actions of the alternatives of this plan would not be likely to affect any federally listed threatened or endangered species. A copy of this draft plan has been sent to the U.S. Fish and Wildlife Service with a request for written concurrence with

that determination. In addition, the National Park Service has committed to consult with the U.S. Fish and Wildlife Service about future actions conducted under the framework described in this plan to ensure that such actions would not be likely to result in adverse effects on threatened or endangered species.

Maryland Department of Natural Resources. The National Park Service consulted with the Maryland Department of Natural Resources to get a list of state listed species that may be present in the national battlefield. On September 11, 2003, the department responded that it has “no records for Federal or State rare, threatened, or endangered plants or animals within this project site.” The full text of the letter is reproduced in appendix F. However, a study done at the national battlefield by the Maryland Department of Natural Resources in 1998 listed some state species. That list is the one used in this document

Natural Resources Conservation Service. The National Park Service consulted with the Natural Resources Conservation Service, U.S. Department of Agriculture (NRCS), in February 2004 about prime and unique farmlands. The conclusion of the NRCS representative was that there are no prime and unique farmlands in the battlefield.

Section 106 Consultation

Section 106 of the National Historic Preservation Act of 1966, as amended (16 USC 470, et seq.) requires that agencies with direct or indirect jurisdiction over historic properties consider the effect of any undertaking on properties eligible for listing in the

National Register of Historic Places. To meet the requirements of 36 CFR 800, the National Park Service sent letters to the Maryland historic preservation office and the Advisory Council on Historic Preservation on April 11, 2002, inviting them to participate in the planning process. All the newsletters from this planning process were sent to both offices with a request for comments.

Stipulation VI.E of the 1995 programmatic agreement among the National Park Service, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers requires the following of the National Park Service:

During the planning process, the park superintendent, in consultation with the SHPO, will make a determination about which undertakings are programmatic exclusions under IV.A and B, and for all other undertakings, whether there is sufficient information about resources and potential effects on those resources to seek review and comment under 36 CFR 800.4-6 during the plan review process . . . documentation of this consultation will be included in the GMP [plan].

The superintendent of Monocacy National Battlefield and the job captain / project manager met with a representative of the Maryland state historic preservation office on August 1, 2002, at the national battlefield and again in June 2003 at the SHPO office in Crownsville, Maryland, to discuss the progress of the alternatives of the *General Management*

Plan and the strategy for dealing with the proposal to widen I-270.

AGENCIES, ORGANIZATIONS, AND INDIVIDUALS THAT RECEIVED

A COPY OF THIS DOCUMENT

Federal Agencies and Officials

Advisory Council on Historic
Preservation
Chesapeake Bay Program Office
U.S. Department of Agriculture
Natural Resource Conservation
Service
U.S. Forest Service
U.S. Department of the Interior
U.S. Fish and Wildlife Service
U.S. Geological Survey
National Park Service
Andersonville National Historic
Site
Antietam National Battlefield
Appomattox Court House
National Historical Park
Arkansas Post National Memorial
Catoctin Mountain Park
Chesapeake and Ohio Canal
National Historical Park
Chickamauga and Chattanooga
National Military Park
Colonial National Historical Park
Fort Donelson National Battlefield
Fort McHenry National
Monument and Historic Shrine
Fort Sumter National Monument
Fredericksburg/Spotsylvania
National Military Park
Gettysburg National Military Park
Harpers Ferry National Historical
Park
Kennesaw Mountain National
Battlefield Park
Manassas National Battlefield Park
Pea Ridge National Military Park

Pecos National Historical Park
Petersburg National Battlefield
Richmond National Battlefield
Park
Shiloh National Military Park
Stones River National Battlefield
Ulysses S. Grant National Historic
Site
Vicksburg National Military Park
Wilson's Creek National
Battlefield

U.S. Environmental Protection Agency

Senator Barbara A. Mikulski
Senator Paul S. Sarbanes
Roscoe G. Bartlett, Representative to
Congress

State Agencies and Officials

Chesapeake Bay Commission
Maryland Department of the
Environment
Maryland Department of Housing and
Community Development
Director, Historical and Cultural
Programs
Maryland Department of Natural
Resources
Maryland Department of Planning
Deputy Director, Office of Planning
and Preliminary Engineering
Maryland Department of
Transportation
Maryland State Historic Preservation
Office
Monocacy Scenic River Local Advisory
Board
Governor Robert L. Erlich, Jr.
State Representative Richard B.
Wheldon, Jr., District 3B
State Senator Alex X. Mooney,
District 3

Local Agencies and Officials

Frederick County

Commissioner Michael Cady
Commissioner Jan Gardner
Commissioner John L. Thompson Jr.
Commissioner John Lowell
Commissioner Bruce Reeder

City of Frederick

Principal Planner

Organizations and Businesses

Associated Press
Ben Hur Museum
Baltimore Civil War Round Table
Capitol Hill Civil War Round Table
Central Delaware Civil War Round
Table
Civil War Medical Museum
Civil War Preservation Trust
Civil War Round Table of Alexandria,
Virginia
Civil War Round Table of the District of
Columbia
The Civil War Times
Community Commons
Franklin County Civil War Round Table
Frederick Chamber of Commerce
Frederick Community College
Historical Society of Carroll County,
Maryland, Inc.
Historic Sites Consortium
Jefferson County Civil War Round
Table
Kent Civil War Society
The Kiplinger Washington Editors, Inc.
Loudoun County Civil War Round
Table
Maj. Gen. Isaac Trimble Camp 1836,
Maryland Division, Sons of
Confederate Veterans
Maryland Historical Society
National Parks Conservation
Association

National Parks Foundation
New Jersey Civil War History
Association
Northeast Kingdom Civil War Round
Table
Northern Virginia Relic Hunters
Association
Northwestern University

Pipe Creek Civil War Round Table
RK&K, LLP
The Rectory School
Shoemaker, Horman & Clapp, PA
The Skedaddlers Civil War Round Table
South Mountain Relic and Coin
Tourism Council of Frederick County,
Inc.

**APPENDIXES/
REFERENCES/
PREPARERS**

(blank back of divider)

APPENDIX A: LEGISLATION — MONOCACY NATIONAL BATTLEFIELD

IV. NATIONAL MILITARY PARKS

1. Monocacy

An Act to provide for increases in appropriation ceilings and boundary changes in certain units of the National Park System, and for other purposes. (90 Stat. 2732) (P.L. 94-578)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

TITLE III—MISCELLANEOUS PROVISIONS

* * * * *

MONOCACY NATIONAL MILITARY PARK

SEC. 319. The Act of June 21, 1934 (48 Stat. 1198; 16 U.S.C. 430j) is amended as follows:

(1) In section 1:

(a) change "national military park" to "national battlefield" and

(b) change "Monocacy National Military Park" to "Monocacy National Battlefield" (hereinafter referred to as "the battlefield"). The battlefield shall comprise the area generally depicted on the drawing entitled "Boundary, Monocacy National Battlefield", numbered 894-40,000 and dated May 1976, and delete the remainder of the sentence.

(2) In section 2, change "Monocacy National Military Park" to "battlefield" wherever it occurs.

(3) In section 3, delete "enter into leases with the owners of such of the lands, works, defenses, and buildings thereon within the Monocacy National Military Park, as in his discretion it is unnecessary to forthwith acquire title to, and such leases shall be on such terms and conditions as the Secretary of the Interior may prescribe, and may contain options to purchase, subject to later acceptance, if, in the judgment of the Secretary of the Interior, it is as economical to purchase as condemn title to property: *Provided*, That the Secretary of the Interior may enter into agreements upon such nominal terms as he may prescribe, permitting the present owners or their tenants to occupy or cultivate their present holdings, upon condition", and insert in lieu thereof, "lease to the immediately preceding owner or owners any lands acquired pursuant to an agreement that such lessee or lessees will occupy such lands in a manner consistent with the purposes of this Act and".

299

300

NATIONAL PARK SERVICE LAWS

(4) Change section 4 to read:

"Sec. 4. The administration, development, preservation, and maintenance of the battlefield shall be exercised by the Secretary of the Interior in accordance with the Act of August 25, 1916 (39 Stat. 535; 16 U.S.C. 1 et seq.), as amended and supplemented, and the Act of August 21, 1935 (49 Stat. 666)."

(5) Repeal all of section 5.

(6) In section 6:

(a) delete "said Office of National Parks, Buildings, and Reservations, acting through the", and

(b) change "Monocacy National Military Park:" to "battlefield", delete the remainder of the sentence and insert in lieu thereof "for carrying out the provisions of this Act."

(7) In section 7:

(a) change "Monocacy National Military Park" to "battlefield", and

(b) delete the comma and "which approval shall be based on formal written reports made to him in each case by the Office of National Parks, Buildings, and Reservations; *Provided*," and insert in lieu thereof "*Provided further*,".

(8) In section 8, change the comma to a period and delete "of not less than \$5 nor more than \$500."

(9) Change section 10 to read:

"Sec. 10. There are hereby authorized to be appropriated such sums as may be necessary, but not more than \$3,525,000 for the acquisition of lands and interests in lands, and not to exceed \$500,000 for the development of essential public facilities. Within three years from the date of the enactment of this section, the Secretary shall develop and transmit to the Committees on Interior and Insular Affairs of the United States Congress a final master plan for the full development of the battlefield consistent with the preservation objectives of this Act, indicating:

"(1) the facilities needed to accommodate the health, safety, and interpretive needs of the visiting public;

"(2) the location and estimated cost of all facilities; and

"(3) the projected need for any additional facilities within the battlefield.

No funds authorized to be appropriated pursuant to this section shall be available prior to October 1, 1977."

* * * * *

Approved October 21, 1976.

Appx A
(legisl.) p. 3

10. Monocacy National Military Park Project

Land acquisition and erection of marker for commemoration of Battle of Monocacy authorized.....	Act of March 1, 1929	Page 275
---	----------------------	----------

An Act To provide for the commemoration of the Battle of Monocacy, Maryland, approved March 1, 1929 (45 Stat. 1444)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That for the purpose of commemorating the Battle of Monocacy, Maryland, the Secretary of War is authorized and directed to (1) acquire not to exceed one acre of land, free of cost to the United States, at the above-named battle field, (2) fence the parcel of land so acquired, (3) build an approach to such parcel of land, and (4) erect a suitable marker on such parcel of land.

Sec. 2. There is authorized to be appropriated the sum of \$5,000, or so much thereof as may be necessary, to carry out the provisions of section 1 of this Act.

Sec. 3 The parcel of land acquired under section 1 of this Act shall be under the jurisdiction and control of the Secretary of War, and there is authorized to be appropriated for the maintenance of such parcel of land, fence, approach, and marker a sum not to exceed \$250 per annum.

Battle of Monocacy, Maryland.
Acquiring land, etc. authorized to commemorate.

Sum authorized.

Under control of Secretary of War.

Maintenance.

4. Monocacy National Military Park project

	Page
Establishment of park authorized.....	Act of June 21, 1934 118

An Act To establish a national military park at the battlefield of Monocacy, Maryland, approved June 21, 1934 (48 Stat. 1198)

Monocacy National Military Park, Md.

Establishment, when title to land, etc. acquired.

Condemnation proceedings to acquire lands.

Purchase from owners.

Acceptance of donations.

Title.

Leases with owners for lands unnecessary to purchase.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in order to commemorate the Battle of Monocacy, Maryland, and to preserve for historical purposes the breastworks, earthworks, walls, or other defenses or shelters used by the armies therein, the battlefield at Monocacy, in the State of Maryland, is hereby declared a national military park to be known as the "Monocacy National Military Park", whenever the title to the lands deemed necessary by the Secretary of the Interior shall have been acquired by the United States and the usual jurisdiction over the lands and roads of the same shall have been granted to the United States by the State of Maryland. (16 U.S.C. sec. 430j.)

SEC. 2. The Secretary of the Interior is hereby authorized to cause condemnation proceedings to be instituted in the name of the United States under the provisions of the Act of August 1, 1888, entitled "An Act to authorize condemnation of lands for sites for public buildings and for other purposes" (25 Stat.L. 357), to acquire title to the lands, interests therein, or rights pertaining thereto within the said Monocacy National Military Park, and the United States shall be entitled to immediate possession upon the filing of the petition in condemnation in the United States District Court for the District of Maryland: *Provided*, That when the owner of such lands, interests therein, or rights pertaining thereto shall fix a price for the same, which in the opinion of the Secretary of the Interior shall be reasonable, the Secretary may purchase the same without further delay: *Provided further*, That the Secretary of the Interior is authorized to accept, on behalf of the United States, donations of lands, interests therein, or rights pertaining thereto required for the Monocacy National Military Park: *And provided further*, That title and evidence of title to lands and interests therein acquired for said park shall be satisfactory to the Secretary of the Interior. (16 U.S.C. sec. 430k.)

SEC. 3. The Secretary of the Interior is hereby authorized to enter into leases with the owners of such of the lands, works, defenses, and buildings thereon within the Monocacy National Military Park, as in his discretion it is unnecessary to forthwith acquire title to, and such leases shall be on such terms and conditions as the Secretary of the Interior may prescribe, and may contain options to purchase, subject to later acceptance, if, in the judgment of the Secretary of the

Appx A (legisl.) p. 5

IV. NATIONAL MILITARY PARKS - MONOCACY

119

Interior, it is as economical to purchase as condemn title to the property: *Provided*, That the Secretary of the Interior may enter into agreements upon such nominal terms as he may prescribe, permitting the present owners or their tenants to occupy or cultivate their present holdings, upon condition that they will preserve the present breastworks, earthworks, walls, defenses, shelters, buildings and roads, and the present outlines of the battlefields, and that they will only cut trees or underbrush or disturb or remove the soil, under such regulations as the Secretary of the Interior may prescribe, and that they will assist in protecting all tablets, monuments, or such other artificial works as may from time to time be erected by proper authority. (16 U.S.C. sec. 430l.)

Cultivation of holdings.

Condition.

SEC. 4. The affairs of the Monocacy National Military Park shall, subject to the supervision and direction of the Office of National Parks, Buildings, and Reservations of the Interior Department, be in charge of a superintendent, to be appointed by the Secretary of the Interior. (16 U.S.C. sec. 430m.)

Supervision of National Parks, etc., office.

SEC. 5. It shall be the duty of the superintendent, under the direction of the Office of National Parks, Buildings, and Reservations of the Interior Department, to superintend the opening or repair of such roads as may be necessary to the purposes of the park, and to ascertain and mark with historical tablets or otherwise, as the Secretary of the Interior may determine, all breastworks, earthworks, walls, or other defenses or shelters, lines of battle, location of troops, buildings, and other historical points of interest within the parks or in its vicinity. (16 U.S.C. sec. 430n.)

Duties prescribed.

SEC. 6. The said Office of National Parks, Buildings, and Reservations, acting through the Secretary of the Interior, is authorized to receive gifts and contributions from States, Territories, societies, organizations, and individuals for the Monocacy National Military Park: *Provided*, That all contributions of money received shall be deposited in the Treasury of the United States and credited to a fund to be designated "Monocacy National Military Park fund", which fund shall be applied to and expended under the direction of the Secretary of the Interior, for carrying out the provisions of this Act. (16 U.S.C. sec. 430o.)

Acceptance of gifts, etc. authorized.

Contributions to be deposited to credit of special fund.

SEC. 7. It shall be lawful for the authorities of any State having had troops at the Battle of Monocacy to enter upon the lands and approaches of the Monocacy National Military Park for the purpose of ascertaining and marking the line 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, including the design and inscription for the same, shall be submitted to the Secretary of the Interior and shall first receive written approval of the Secretary, which approval shall be based upon formal written reports to be made to him in each case by the Office

States may mark lines of battle of their troops.

Approval of marking, etc.

Appx A
(legisl.) p. 6

120

IV. NATIONAL MILITARY PARKS - MONOCACY

No discrimina-
tion in designat-
ing lines.

of National Parks, Buildings, and Reservations: *Provided*, That no discrimination shall be made against any State as to the manner of designating lines, but any grant made to any State by the Secretary of the Interior may be used by any other State. (16 U.S.C. sec. 430p.)

Penalty for
destroying, in-
juring, etc.,
property.

SEC. 8. If any person shall, except by permission of the Secretary of the Interior, destroy, mutilate, deface, injure, or remove any monument, column, statue, memorial structure, or work of art that shall be erected or placed upon the grounds of the park by lawful authority, or shall destroy or remove any fence, railing, enclosure, or other work for the protection or ornament of said park, or any portion thereof, or shall destroy, cut, hack, bark, break down, or otherwise injure any tree, bush, or shrubbery that may be growing upon said park, or shall cut down or fell or remove any timber, battle relic, tree or trees growing or being upon said park, or hunt within the limits of the park, or shall remove or destroy any breastworks, earthworks, walls, or other defenses or shelter or 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 United States commissioner or court, of the jurisdiction in which the offense may be committed, shall for each and every such offense forfeit and pay a fine, in the discretion of the United States commissioner or court, according to the aggravation of the offense, of not less than \$5 nor more than \$500. (16 U.S.C. sec. 430q.)

Rules, etc., to
be prescribed.

SEC. 9. The Secretary of the Interior shall have the power to make all needful rules and regulations for the care of the park, and for the establishment and marking of lines of battle and other historical features of the park. (16 U.S.C. sec. 430r.)

Appropriation
authorized.

SEC. 10. For the purposes of carrying out the provisions of this Act, the sum of \$50,000 is hereby authorized to be appropriated out of any moneys in the Treasury not otherwise appropriated. (16 U.S.C. sec. 430s note.)

APPENDIX B: FEDERAL LAWS, REGULATIONS, AND POLICIES

In developing the *General Management Plan / Environmental Impact Statement* for Monocacy National Battlefield, the National Park Service will follow all applicable regulations, laws, policies, and executive orders. A list of those relevant to this planning effort follows.

LEGISLATION

National Environmental Policy Act of 1969 (NEPA). This act is the basic national charter for the protection of the environment. It establishes policy, sets goals, and provides means for carrying out the policy. Section 102(2) contains “action-forcing” provisions to make sure that federal agencies act according to the letter and spirit of the act. NEPA procedures must ensure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA. Most important, NEPA documents must concentrate on the issues that are truly significant to the action in question. NEPA’s goal is better decisions.

Federal Water Pollution Control Act, as amended, Clean Water Act of 1972 (PL 92-500, PL 100-433, 86 Stat 816, USC 9 sec. 1251 et seq., 1251-1376, and 1987 Federal Water Quality Act). This act establishes federal regulation of the nation’s waters and contains provisions designed to “restore and maintain the chemical, physical, and biological integrity of the nation’s waters.” The act requires that the states set and enforce water quality standards

to meet EPA minimum guidelines. It establishes effluent limitations for point sources of pollution, and requires a permit for point source discharge of pollutants and a permit for the discharge of dredged or fill material. It also authorizes a “National Wetlands Inventory.”

Estuaries and Clean Water Act of 2000, Title II. The purpose of this act is to promote the restoration of estuary habitat, develop a national estuary restoration strategy for creating and maintaining effective estuary habitat restoration partnerships among public agencies at all levels of government, establish new partnerships between the public and private sectors, provide federal assistance for estuary habitat restoration projects, promote efficient financing of such projects, and develop and enhance monitoring and research capabilities.

Rivers and Harbors Appropriation Act of 1988 (33 USC 401-403, as amended, 1982). This act established the regulatory authority of the Army Corps of Engineers over U.S. navigable waters. It established permit requirements for the construction of bridges, causeways, dams, or dikes within or over navigable waters of the United States. The construction of bridges and causeways is regulated by the secretary of transportation. Dam and dike permits are reviewed by the Corps of Engineers. Section 10 of the act requires a Corps permit for construction of any “obstruction of navigable waters” of the United States and for any excavation, fill, or other modification of various

types of navigable waters. Section 13 requires a Corps permit for discharge of refuse of any kind (except liquid from sewers or urban runoff) from land or vessel into the navigable waters of the United States or into their tributaries. Similarly, the discharge of refuse is prohibited on the banks of navigable waters or their tributaries where the refuse could be washed into the water.

Endangered Species Act of 1973, as amended (PL 93-205; 87 Stat. 884). The Congress found and declared that “various species of fish, wildlife, and plants in the United States have been rendered extinct as a consequence of economic growth and development untempered by adequate concern and conservation; other species of fish, wildlife, and plants have been so depleted in numbers that they are in danger of or threatened with extinction; these species of fish, wildlife and plants are of aesthetic, ecological, educational, historical, recreational, and scientific value to the nation and its people; the United States has pledged itself to conserve to the extent practicable the various species of fish or wildlife or plants facing extinction . . . “

Fish and Wildlife Coordination Act, as amended (PL 85-624; 72 Stat 563; 16 USC 661 et seq.) This act requires federal agencies to consult with the U.S. Fish and Wildlife Service or with the National Marine Fisheries Service and with parallel state agencies, whenever water resources development plans result in the alteration of a body of water. The secretary of the interior is authorized to assist and cooperate with federal agencies to “provide that wildlife

conservation shall receive equal consideration and be coordinated with other features of water resource development programs.”

Clean Air Act, as amended (PL 360; 69 Stat 322; 42 USC 7401 et seq.). The main purpose of this act is to protect and enhance the nation’s air quality to promote the public health and welfare. The act establishes specific programs that provide special protection of air resources and air quality related values (AQRVs) associated with NPS units. For example sections 160–169 of the act establish a program to prevent significant deterioration of air quality in clean air regions of the country.

Wild and Scenic Rivers Act (PL 90-542; 82 Stat 906; 16 USC 1271, as amended, 16 USC 1271–1287). This act established the national wild and scenic rivers system and outlined criteria and procedures whereby free-flowing streams, or portions thereof, could be added to the system. The system includes wild, scenic, and recreational rivers. Where designated rivers are administered by the National Park Service and there is a conflict between this act and NPS legislation, the more restrictive provisions apply. The act prohibits the Federal Energy Regulatory Commission from licensing water resource projects that would have a direct and adverse effect on the values for which the river was designated. The act also directs the appropriate federal parties to cooperate with state pollution control agencies to eliminate or diminish pollution in designated rivers.

Federal Insecticide , Fungicide, and Rodenticide Act (PL 92-516; 86 Stat 973; 7 USC 136 et seq.). This act requires that all pesticides be registered and that pesticides be used in accordance with the registration. The act restricts the use of certain pesticides. Some pesticides are regulated as toxic pollutants under the Clean Water Act and the Safe Drinking Water Act.

American Indian Religious Freedom Act (PL 95-341; 92 Stat. 469; 42 USC §1996). This act declares policy to protect and preserve the inherent and constitutional right of the American Indian / Eskimo / Aleut / Native Hawaiian people to believe, express, and exercise their traditional religions. It also calls for a now-completed evaluation of federal procedures, programmatic objectives, and policies. Statute imposes no specific procedural duties on federal agencies. Religious concerns should be accommodated or addressed under the National Environmental Protection Act or other appropriate statutes.

Antiquities Act of 1906 (PL 59-209; 34 Stat. 225; 16 USC §432 and 43 CFR 3). This act provides for the protection of historic or prehistoric remains, “or any antiquity” on federal lands, establishes criminal sanctions for the unauthorized destruction or taking of antiquities, authorizes the president to declare national monuments by proclamation, and authorizes the scientific investigation of antiquities on federal lands, subject to permit and regulations. The law also protects historic monuments and ruins on public lands. The National Park Service does not have to seek permits for activities carried out on NPS land by

authorized personnel. The Archeological Resources Protection Act (1979) superseded the Antiquities Act as an alternative federal tool for prosecuting antiquities violations in NPS areas.

Reservoir Salvage Act of 1960 (PL 86-523; 70 Stat. 220; 16 USC sections 469–469c). This act provides for the recovery and preservation of “historical and archeological data (including relics and specimens)” that might be lost or destroyed in the construction of dams and reservoirs.

Archaeological and Historic Preservation Act of 1974 (PL 93-291; 88 Stat. 174; 16 USC §469). This act amends and updates the Reservoir Salvage Act of 1960 to broaden legislation beyond dam construction. Provides for the preservation of significant scientific, prehistoric, historic, or archeological data (including relics and specimens) that might be lost or destroyed as a result of (1) the construction of dams, reservoirs, and attendant facilities, or (2) any alteration of the terrain caused as a result of any federal construction project or federally licensed project, activity, or program. It also provides for the recovery of data from areas to be affected by federal actions.

Archaeological Resources Protection Act of 1979 (PL 96-95, 93 Stat. 712, 16 USC §470aa et seq., and 43 CFR 7, subparts A and B, 36 CFR 79). This act secures the protection of archeological resources on public or Indian lands and fosters increased cooperation and the exchange of information between the private, governmental, and professional community to facilitate the enjoyment and education of present and future

generations. The law regulates excavation and collection on public and Indian lands. It also defines archeological resources to be any material remains of past human life or activities that are of archeological interest and are at least 100 years old. The law requires that Indian tribes that may consider a site of religious or cultural importance be notified before a permit is issued. It was amended in 1988 to require the development of plans for surveying public lands for archeological resources and systems for reporting incidents of suspected violations.

Historic Sites Act of 1935 (PL 49; Stat. 666, 16 USC sections 461–467, and 36 CFR 65). This act establishes “. . . national policy to preserve for public use historic sites, buildings and objects of significance for the inspiration and benefit of the people of the United States.” It directs the secretary of the interior to carry out wide-ranging programs in the field of history and places with the secretary the responsibility for national leadership in the field of historic preservation. It authorizes Historic American Buildings Survey, Historic American Engineering Record, and National Survey of Historic Sites and Buildings (national historic landmarks).

Management of Museum Properties Act of 1955 (PL 84-127, 69 Stat. 242, 16 USC §18f). This act authorizes the National Park Service to accept donations or bequests of museum properties, purchase them from donated funds, exchange them, and receive and grant museum loans.

National Historic Preservation Act of 1966 (NHPA), as amended (PL 89-665, 80 Stat. 915, 16 USC §470, et seq. and 36 CFR 18, 60, 61, 63, 68, 79, 800). This act declared a national policy of historic preservation, including the encouragement of preservation on the state and private levels. It authorized the secretary of the interior to expand and maintain a National Register of Historic Places, including properties of state and local as well as national significance, authorized matching federal grants to the states and the National Trust for Historic Preservation for surveys and planning and for acquiring and developing national register properties, established the Advisory Council on Historic Preservation (ACHP), required federal agencies to consider the effects of their undertakings on national register properties and to give the ACHP opportunities to comment (§106). Amended in 1976 (PL 94-422) to expand §106 to properties eligible for or listed in the national register. Amended in 1980 (PL 96-515) to incorporate EO 11593 requirements, to give national historic landmarks extra protection in federal project planning, and to permit federal agencies to lease historic properties and apply the proceeds to any national register properties under their administration. Amended in 1992 to, among other things, redefine federal undertakings, address “anticipatory demolition,” and emphasize the interests and involvement of Native Americans and Native Hawaiians.

Native American Grave Protection and Repatriation Act (PL 101-601, 104 Stat. 3049, 25 USC sections 3001–3013). This act assigns ownership or control of Native American human remains,

funerary objects, sacred objects, and objects of cultural patrimony that are excavated or discovered on federal lands or tribal lands after the passage of the act to lineal descendants or culturally affiliated Native American groups. It also establishes criminal penalties for trafficking in remains or objects obtained in violation of the act and provides that federal agencies and museums that receive federal funding shall inventory Native American human remains and associated funerary objects in their possession or control, identify their cultural and geographical affiliations within five years, and prepare summaries of information about Native American unassociated funerary objects, sacred objects, or objects of cultural patrimony. This is to provide for the repatriation of such items when lineal descendants or Native American groups request it.

Architectural Barriers Act of 1968, Rehabilitation Act of 1973, and Americans with Disabilities Act of 1990. In keeping with the intent of these laws, all NPS structures must be accessible to all Americans to the greatest degree possible.

Chesapeake Bay Agreement, as amended, Federal Agencies' Chesapeake Ecosystem Unified Plan, Estuaries and Clean Water Act of 2000, Chesapeake Bay Riparian Buffer Plan. As the largest estuary in the United States and one of the most productive in the world, the Chesapeake Bay was this nation's first estuary targeted for restoration and protection. The Chesapeake Bay Program is the unique regional partnership among the states of Virginia, Maryland, and

Pennsylvania; the District of Columbia; the Chesapeake Bay Commission; and the Environmental Protection Agency (lead agency for the federal government). The latter has been directing and conducting the restoration effort since the signing of the historic *Chesapeake Bay Agreement of 1983*. The Executive Council, composed of the chief executives of the signatory partners, meets annually to establish the policy direction for the Bay Program.

Executive Order 11998, "Floodplain Management," Special Directive 93-4, "Floodplain Management, Revised Guidelines for National Park Service Floodplain Compliance" (1993). Natural floodplain values will be preserved or restored. Long-term and short-term environmental effects associated with the occupancy and modification of floodplains will be avoided. When it is not practicable to locate or relocate development or inappropriate human activities to a site outside the floodplain, or where the floodplain will not be affected, the National Park Service will prepare a statement of findings according to Director's Order 77-2.

Executive Order 11990, "Wetland Protection," Director's Order 77-1, "Wetland Protection," and Procedural Manual 77-1. The National Park Service is required to protect and enhance the natural and beneficial values of wetlands. It has implemented a "no net loss of wetlands" policy and strives to achieve the longer-term goal of net gain of wetlands through the restoration of previously degraded or destroyed wetlands.

Executive Order 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations.” Each federal agency will make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions.

REGULATIONS

43 CFR 3 (Antiquities Act) establishes procedures to be followed for permitting the excavation or collection of prehistoric and historic objects on federal lands.

43 CFR 7, Subparts A and B (Archaeological Resources Protection Act, as amended), “Protection of Archeological Resources, Uniform Regulations” and “Department of the Interior Supplemental Regulations,” provide definitions, standards, and procedures for federal land managers to protect archeological resources and guidance for Department of the Interior bureaus on definitions, permitting procedures, and civil penalty hearings.

36 CFR 2.5 (NPS Act of 1916) states conditions under which park superintendents may permit the collection of plants, fish, wildlife, rocks, and minerals, including museum catalog requirements.

36 CFR 60 (NHPA and EO 11593), “National Register of Historic Places,” addresses concurrent state and federal nominations, nominations by federal agencies, the revision of nominations,

and the removal of properties from the National Register.

36 CFR 61 (NHPA and EO 11593), “Procedures for Approved State and Local Government Historic Preservation Programs,” establishes standards for the approval of state historic preservation programs and requires state historic preservation officers to conduct state-wide surveys of cultural properties, prepare and implement state preservation plans, and cooperate with federal agencies in §106 compliance. It also sets qualification standards for preservation professionals.

36 CFR 63 (NHPA and EO 11593), “Determinations of Eligibility for inclusion in the National Register of Historic Places,” establishes a process for federal agencies to obtain determinations of eligibility on properties.

36 CFR 65 (Historic Sites Act of 1935), “National Historic Landmarks Program,” establishes criteria and procedures for identifying properties of national significance, designating them as national historic landmarks, revising landmark boundaries, and removing landmark designations.

36 CFR 68 (NHPA) contains the “Secretary of the Interior’s Standards for Historic Preservation Projects,” including acquisition, protection, stabilization, preservation, rehabilitation, restoration, and reconstruction.

36 CFR Part 79 (NHPA and ARPA), “Curation of Federally Owned and Administered Archeological Collections,” provides standards, procedures, and guidelines to be followed by federal agencies in preserving and providing

adequate long-term curatorial services for archeological collections of pre-historic and historic artifacts and associated records that are recovered under §110 of the NHPA, the Reservoir Salvage Act, ARPA, and the Antiquities Act.

36 CFR Part 800 (NHPA), “Protection of Historic Properties” contains the regulations of the Advisory Council on Historic Preservation that implement §106 of the National Historic Preservation Act, as amended, and presidential directives issued pursuant thereto.

DIRECTIVES

The following directives pertaining to cultural resource management remain in effect.

Special Directive 80-1, “Guidance for Meeting NPS Preservation and Protection Standards for Museum Collections,” requires that all parks and centers conduct a self-assessment every three years to record their progress in correcting identified deficiencies in storage, environmental, security, fire protection, housekeeping, and planning.

Special Directive 87-3, “Conservation of Archeological Resources,” requires that archeological activities directly support NPS missions and that initial curation costs be included in the costs of projects generating collections.

Special Directive 91-4, “Ensuring that Natural Resource Projects Fund the

Curation of Collections,” outlines actions to be taken by parks on all research projects that could result in the permanent retention of natural resource specimens and associated project documentation.

NPS MANUALS

Cultural Resources Management Guideline (DO-28), Release No. 5. National Park Service 1997.

SECRETARY OF THE INTERIOR’S STANDARDS

Archeology and Historic Preservation: Secretary of the Interior’s Standards and Guidelines, 48 Federal Register 44716, September 29, 1983.

Interpreting the Secretary of the Interior’s Standards for Rehabilitation, Vols. I, II, and III. National Park Service.

The Secretary of the Interior’s Standards for the Treatment of Historic Properties, 1992. Pamphlet. National Park Service, Cultural Resources, Preservation Assistance, 1992.

The Secretary of the Interior’s Standards for the Treatment of Historic Properties, with Guidelines for the Treatment of Cultural Landscapes, National Park Service, Cultural Resource Stewardship and Partnerships, Heritage Preservation Services, 1996. Shows specific examples of appropriate treatments, as well as consequences of inappropriate treatments.

APPENDIX C: SERVICEWIDE LAWS AND POLICIES

CULTURAL RESOURCE MANDATES AND POLICIES

The alternatives considered in this document incorporate and comply with the provisions of the following mandates and policies as funding and staffing allow. Conditions prescribed by service wide mandates and policies that are particularly important to this document are summarized below. These mandates and policies illustrate that a general management plan is not needed to decide, for instance, that it is appropriate to protect endangered species, control exotics species, protect archeological sites, conserve artifacts, or provide for handicapped access. Those and other things are already laws, mandates, or policies.

HISTORIC STRUCTURES	
Current laws and policies require the following desired conditions for the resources:	
Desired Condition	Source
<p>Historic structures are inventoried and evaluated under National Register of Historic Places criteria.</p> <p>The qualities that contribute to the listing or eligibility for listing of historic structures on the national register are protected in accordance with the <i>Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation</i></p>	<ul style="list-style-type: none"> • National Historic Preservation Act • Archeological and Historic Preservation Act • The Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation; • Secretary of the Interior’s Standards for the Treatment of Historic Properties, with Guidelines for the Treatment of Cultural Landscapes • Programmatic memorandum of agreement among the National Park Service, the Advisory Council on Historic Preservation, and the National Council of State Historic Preservation Officers (1995) • NPS <i>Management Policies 2006</i>; DO 28 “Cultural Resource Management Guideline” (2001)
Actions	
Current laws and policies require that the National Park Service will need to take the following actions to meet its legal and policy requirements.	
<ul style="list-style-type: none"> • Regularly update/certify the list of classified structures. • Update the National Register of Historic Places nomination for the Monocacy National Battlefield as necessary. • Treat all structures as eligible for listing on the National Register of Historic Places pending a formal determination by the National Park Service, and Maryland SHPO as appropriate as to their eligibility. • Determine, implement, and maintain the appropriate level of preservation for each historic structure formally determined or considered eligible for inclusion in the <i>National Register of Historic Places</i> (subject to the Secretary of the Interior’s Standards). • Before modifying any historic structure found eligible for the National Register of Historic Places, the National Park Service will consult with the appropriate SHPO and the Advisory Council for Historic Preservation, as required. 	

CULTURAL LANDSCAPES	
Current laws and policies require the following desired conditions for these resources:	
Desired Condition	Source
<p>The management of cultural landscapes focuses on preserving the landscape’s physical attributes, biotic systems, and uses, when those uses contribute to its historical significance.</p> <p>Treatments are based on sound preservation practices for the preservation, rehabilitation, restoration, or reconstruction of cultural landscapes undertaken in accordance with the <i>Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes</i>.</p>	<ul style="list-style-type: none"> • National Historic Preservation Act of 1966 as amended (16 USC 470) • Advisory Council on Historic Preservation’s implementing regulations regarding the “Protection of Historic Properties” (36 CFR 800) • <i>Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes</i> (1996) • National Park Service’s <i>Management Policies 2006</i> • National Park Service’s <i>Cultural Resources Management Guideline</i> (DO-28, 1996)
Actions	
To accomplish the above goals, the National Park Service will do the following actions to meet its legal and policy requirements:	
<ul style="list-style-type: none"> • Complete a survey, inventory, and evaluation of cultural landscapes. • Submit the inventory and evaluation results to the appropriate SHPO for review and comment. • Prepare nominations for those areas believed to be eligible for inclusion in the NRHP for review by SHPO or a formal determination by the Keeper of the National Register of Historic Places as to their eligibility. • Treat potential Cultural Landscapes as eligible for inclusion in the NRHP pending agreement of eligibility with the appropriate SHPO or a formal determination by the Keeper of the National Register. • Determine and maintain the appropriate level of preservation for each landscape formally determined to be eligible for listing or actually listed on the national register, subject to the <i>Secretary of the Interior’s Standards</i>. 	

ARCHEOLOGICAL RESOURCES	
<p>Archeological resources are the physical evidences of past human activity representing both historic and prehistoric time periods. Current laws and policies require the following desired conditions for these resources:</p>	
Desired Condition	Source
<p>Archeological sites are identified and inventoried, and their significance is determined and documented. Archeological sites are protected in an undisturbed condition unless it is determined through formal processes that disturbance or natural deterioration is unavoidable. When disturbance or deterioration is unavoidable, the site is professionally documented and excavated and the resulting artifacts, materials, and records are curated and conserved in consultation with the Maryland SHPO. Some archeological sites that can be adequately protected may be interpreted to the visitor.</p>	<ul style="list-style-type: none"> • National Historic Preservation Act • Archeological and Historic Preservation Act • The Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation • Secretary of the Interior’s Standards for the Treatment of Historic Properties, with Guidelines for the Treatment of Cultural Landscapes • Programmatic memorandum of agreement among the National Park Service, the Advisory Council on Historic Preservation, and the National Council of State Historic Preservation Officers (1995) • NPS <i>Management Policies 2006</i>; DO 28 “Cultural Resource Management Guideline” (2001)
Actions (Archeological Resources cont.)	
<p>The National Park Service will take the following kinds of actions to meet current laws and policies related to archeological sites:</p>	
<ul style="list-style-type: none"> • Develop and initiate a program of survey, identification, evaluation of archeological resources. Initiate a consensus determination of eligibility with the SHPO for those resources. • Nominate eligible archeological sites to the National Register of Historic Places. • Treat all archeological resources as eligible for listing on the National Register of Historic Places pending a formal determination by the National Park Service, the Maryland SHPO. • Monitor and assess condition of known archeological sites and develop and implement stabilization strategies for threatened sites. • Protect all archeological resources eligible for inclusion in or are listed on the National Register of Historic Places. Design facilities to avoid known or suspected archeological resources. If disturbance to such resources is unavoidable, conduct formal consultation with the Maryland State Historic Preservation Office, and the Advisory Council on Historic Preservation as appropriate. • Conduct data recovery excavations at archeological sites only where protection or site avoidance during design and construction is unfeasible. Should archeological resources be discovered, stop work in that location until consultation with the Maryland SHPO, under 36 CFR Part 800 has been completed. • Educate visitors on regulations governing archeological resources encouraging them through the national battlefield’s interpretive programs to respect, and leave undisturbed, archeological resources 	

MUSEUM OBJECTS	
<p>Museum objects, specimens, and archival and manuscript collections, along with all resource management records that are directly associated with museum objects, are managed as museum property.</p> <p>Current laws and policies require the following desired conditions be met for these resources:</p>	
Desired Condition	Source
<p>All museum collections (objects, specimens, and manuscript collections) are identified and inventoried, catalogued, documented, preserved, and protected, and provision is made for their access to and use of these items for exhibits, research, and interpretation, in consultation with traditionally associated groups.</p> <p>The qualities that contribute to the significance of collections are protected in accordance with established standards.</p>	<ul style="list-style-type: none"> • National Historic Preservation Act • Archeological and Historic Preservation Act • Archeological Resources Protection Act • Native American Graves Protection and Repatriation Act • NPS <i>Management Policies 2006</i>, DO 28 “Cultural Resource Management Guideline” • 36 CFR Part 79 • NPS Museum Handbook, Parts I & II
Actions	
<p>The National Park Service will take the following kinds of actions to meet current laws and policies:</p> <ul style="list-style-type: none"> • Inventory and catalog all national battlefield museum collections in accordance with standards in the NPS <i>Museum Handbook</i>. • Develop and implement a collection management program according to NPS standards to guide the protection, conservation, and use of museum objects. • Create storage and exhibit area facilities sufficient to meet current curation standards consistent with 36 CFR 79. • Remove collections from structures located in floodplains or protect them against flooding as required by NPS policy. 	

NATURAL RESOURCE MANAGEMENT REQUIREMENTS

AIR QUALITY	
<p>The national battlefield is a class II air quality area. Current laws and policies require that the following conditions be achieved in the national battlefield.</p>	
Desired Condition	Source
<p>Monitor and document the condition of air quality and related values.</p> <p>Minimize air quality pollution emissions associated with national battlefield operations, including the use of prescribed fire and visitor use activities.</p> <p>Ensure healthful indoor air quality at NPS facilities.</p>	<p>NPS Organic Act, Clean Air Act, NPS <i>Management Policies 2006</i></p>
Compliance Actions	
<p>The National Park Service will take the following kinds of actions (listed in priority order) to meet legal and policy requirements related to air quality.</p>	
<p>Although the National Park Service has little direct control over air quality in the airshed encompassing the battlefield, battlefield managers will cooperate with the Maryland Department of the Environment and the U.S. Environmental Protection Agency to monitor air quality and ensure that air quality is not impaired by battlefield actions.</p> <ul style="list-style-type: none"> • Conduct operations in compliance with federal, state, and local air quality regulations. • Participate with the Air Resources Division, National Park Service on air quality issues at the battlefield. • Monitor indoor air quality at NPS facilities. 	

EXOTIC SPECIES	
Current laws and policies require that the following desired conditions be met in the battlefield :	
Desired Condition	Source
The management of populations of exotic plant and animal species, up to and including eradication, are undertaken wherever such species threaten national battlefield resources or public health and when control is prudent and feasible.	NPS <i>Management Policies 2006</i> ; EO 13112, “Invasive Species”; NPS-77, “Natural Resources Management Guidelines”
Actions	
The National Park Service will take the following kinds of actions to meet legal and policy requirements related to exotic species.	
<ul style="list-style-type: none"> • Complete an inventory of plants and animals in the battlefield and regularly monitor the distribution and condition (e.g., health, disease) of selected species that are (a) invasive exotics or (b) native species capable of creating resource problems (e.g., habitat decline due to overpopulation). • Develop a long-term program for reversing the destructive effects of exotic species. • Study the environmental and ecological effects of exotic species invasion to assess threats and prioritize management actions. • Manage for native plant species in non-agricultural areas of the battlefield. Limit planting of nonnative species to noninvasive plants that are justified by the historic scene or operational needs. • Control or eliminate exotic plants and animals, exotic diseases, and pest species where there is a reasonable expectation of success and sustainability. • Provide interpretive and educational outreach for the preservation of native species for visitors and for residents neighboring the battlefield. 	

FLOODPLAINS	
Current laws and policies require that the conditions delineated below be achieved in the national battlefield:	
Desired Condition	Source
Natural floodplain values are preserved or restored.	EO 11988; Rivers and Harbors Act; NPS <i>Management Policies 2006</i> ; Special Directive 93-4
Long-term and short-term environmental effects associated with the occupancy and modification of floodplains will be avoided.	DO 77-2, "Floodplain Management"; National Flood Insurance Program (44 CFR 60)
When it is not practicable to locate or relocate development to a site outside the floodplain, the National Park Service will use nonstructural measures as much as practicable to reduce hazards to human life and property while minimizing impacts on the natural resources of floodplains.	NPS <i>Management Policies 2006</i>
Compliance Actions	
The National Park Service will take the following kinds of actions to meet legal and policy requirements related to floodplains:	
<ul style="list-style-type: none"> • Remove from the 500-year floodplain or protect from the 500-year flood any diesel, gasoline, or propane storage tanks or other hazardous chemicals. • Establish a flood awareness, preparedness and warning system to evacuate the Gambrill Mill during flooding. 	

INTEGRATED PEST MANAGEMENT	
Current laws and policies require that the following conditions be achieved in the national battlefield:	
Desired Condition	Source
<ul style="list-style-type: none"> • Reduce the risks to the public, national battlefield resources, and the environment from pests and pest-related management strategies. • Coordinate the knowledge of pest biology, the environment, and available technology to prevent unacceptable levels of pest damage, by cost-effective means, while posing the least possible risk to people, resources, and the environment. 	NPS <i>Management Policies 2006</i>
Compliance Actions	
The National Park Service will take the following kinds of actions (listed in priority order) to meet legal and policy requirements related to integrated pest management:	
<ul style="list-style-type: none"> • Develop an integrated pest management plan to manage pesticide use according to NPS policy. • Coordinate with the CSX Railroad on pesticide use. • Ensure that lessees use pesticides in a manner that protects streams, the river, and riparian areas. 	

LAND PROTECTION	
The National Park Service will manage to protect the national battlefield lands.	
Desired Condition	Source
Land protection plans are prepared to determine and publicly document what lands or interests in land need to be in public ownership, and what means of protection are available to achieve the purposes for which the unit was created.	NPS <i>Management Policies 2006</i>
Compliance Actions	
The National Park Service will take the following kinds of actions to comply with the policies mentioned above.	
<ul style="list-style-type: none"> • Update the land protection plan for the national battlefield. 	

NATURAL SOUNDS	
An important part of the NPS mission is to preserve or restore the natural soundscapes associated with national park areas. The sounds of nature are among the intrinsic elements that combine to form the environment of our national parks. Current laws and policies require that the following conditions be achieved in the battlefield:	
Desired Condition	Source
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. Disruptions from recreational uses will be managed to provide a high-quality visitor experience in an effort to preserve or restore the natural quiet and natural sounds.	NPS <i>Management Policies 2006</i> , DO 47, "Sound Preservation and Noise Management"
Noise sources are managed to preserve or restore the natural soundscape.	Executive memorandum signed by President Clinton on April 22, 1996
Compliance Actions	
The National Park Service will take the following kinds of actions (listed in priority order) to comply with the policies mentioned above.	
<ul style="list-style-type: none"> • Actions will be taken to prevent or minimize unnatural sounds that adversely affect national battlefield resources or values or visitors' enjoyment of them. • The national battlefield staff will continue to require tour bus companies to comply with regulations designed to reduce noise levels (e.g., turning off engines when buses are parked). • Noise will be a consideration in the procurement and use of equipment by the national battlefield staff. 	

SOILS	
Current laws and policies require that the following conditions be achieved in the national battlefield:	
Desired Condition	Source
The national battlefield actively seeks to understand and preserve the soil resources of the battlefield, and to prevent, to the extent possible, the unnatural erosion, physical removal, or contamination of the soil, or its contamination of other resources.	NPS <i>Management Policies 2006</i>
When soil excavation is an unavoidable part of an approved facility development project, the Park Service will minimize soil excavation, erosion, and offsite soil migration during and after the development activity.	NPS <i>Management Policies 2006</i>
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, the use will be guided by a written prescription. The prescription will be designed to ensure 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.	NPS <i>Management Policies 2006</i>
Compliance Actions	
The National Park Service will take the following kinds of actions to meet legal and policy requirements related to soils:	
<ul style="list-style-type: none"> • Update soils map of the national battlefield in digital format that can be used in the national battlefield’s geographic information system (GIS). • Complete soil conservation plans for agricultural lessees. • Prepare nutrient management plans for agricultural lessees. 	

THREATENED AND ENDANGERED SPECIES	
Current laws and policies require that the following conditions be achieved in the national battlefield:	
Desired Condition	Source
Federally listed and state-listed threatened and endangered species and their habitats will be sustained.	Endangered Species Act; NPS <i>Management Policies 2006</i>
Native threatened and endangered species populations that have been severely reduced in or extirpated from the battlefield will be restored where feasible and sustainable.	
Compliance Actions	
The National Park Service will take the following kinds of actions (listed in priority order) to meet legal and policy requirements related to species of special concern:	
<ul style="list-style-type: none"> • Maintain and enhance sensitive habitat areas to promote establishment of populations of threatened and endangered species. • Support research that contributes to management knowledge of rare and protected species and their habitat. • To protect rare or protected species and their habitat, complete an inventory of rare or protected plants and animals in the battlefield and regularly monitor the distribution and condition (e.g. health, disease). Modify management plans to be more effective based on the results of monitoring. • Cooperate with the U.S. Fish and Wildlife Service, as appropriate, to ensure that NPS actions comply with the Endangered Species Act. • To the greatest extent possible, inventory, monitor, and manage state and locally listed species in a manner similar to federally listed species. 	

WATER RESOURCES	
Current laws and policies require that the conditions delineated below be achieved in the national battlefield:	
Desired Condition	Source
Surface water and groundwater are protected and water quality meets or exceeds all applicable water quality standards.	Clean Water Act; Executive Order (EO) 11514; NPS <i>Management Policies 2006</i> ; Estuaries and Clean Water Act of 2000, Title II; Chesapeake 2000 Agreement; Federal Agencies Chesapeake Ecosystem Unified Plan
NPS and NPS-permitted programs and facilities are maintained and operated to avoid polluting surface water and groundwater.	Clean Water Act; EO 12088; Rivers and Harbors Act; NPS <i>Management Policies 2006</i> ; Estuaries and Clean Water Act of 2000, Title II; Chesapeake 2000 Agreement; Federal Agencies Chesapeake Ecosystem Unified Plan
Federal agencies that own or operate facilities within the Chesapeake Bay watershed shall (1) participate in regional and sub watershed planning and restoration programs, and (2) ensure that the property and actions taken by the agency with respect to the property comply with the Chesapeake Bay Agreement, the Federal Agencies Chesapeake Ecosystem Unified Plan, and any subsequent agreements and plans.	<i>Estuaries and Clean Waters Act of 2000</i>
Compliance Actions	
The National Park Service will take the following kinds of actions to meet legal and policy requirements related to water resources:	
<ul style="list-style-type: none"> • Apply best management practices to all pollution-generating activities and facilities in the national battlefield, such as NPS maintenance and storage facilities and parking areas and lessees farming and grazing methods; minimize the use of pesticides, fertilizers, and other chemicals and manage them in keeping with NPS policy and federal regulations. • Continue water quality monitoring to reveal water quality problems and monitor the effects of NPS actions on water resources in the battlefield. • Encourage attention to environmentally sensitive areas to maximize conservation of riparian resources. • Work with other bay program partners to manage the Chesapeake Bay watershed as a cohesive ecosystem. Contribute to the restoration, conservation, and interpretation of the Bay's many valuable resources within and beyond the national battlefield. • Work with appropriate government bodies to obtain the highest possible water quality standards available under the Clean Water Act. 	

WETLANDS	
Current laws and policies require the conditions delineated below be met:	
Desired Condition	Source
The natural and beneficial values of wetlands are preserved and enhanced.	Clean Water Act; EO 11990; NPS <i>Management Policies 2006</i> ; DO 77-1, "Wetland Protection"; Rivers and Harbors Act
The National Park Service implements a "no net loss of wetlands" policy and strives to achieve a longer-term goal of net gain of wetlands across the national park system through the restoration of previously degraded or destroyed wetlands.	DO 77-1, "Wetland Protection;" EO 11514, NPS <i>Management Policies 2006</i>
Compliance Actions	
The National Park Service will take the following kinds of actions to meet legal and policy requirements related to wetland resources:	
<ul style="list-style-type: none"> • Conduct or obtain a battlefield wide wetland inventory employing the Cowardin wetland classification system used by the National Park Service to ensure proper planning, management and protection of wetlands. • All facilities, including trails, will be located to avoid wetlands if feasible. • Establish vegetated riparian buffers of sufficient width to reduce sediment loads entering the Monocacy River and its tributaries. • Stabilize river banks and restore degraded sections of streams. • Plant native vegetation to provide a buffer between upland runoff and sensitive water resources. • Where natural wetland functions have been degraded or lost due to human action, the National Park Service will work to restore wetlands to predisturbance conditions, to the extent practicable. 	

WILD AND SCENIC RIVERS	
Current laws and policies require that the conditions delineated below be achieved in the national battlefield:	
Desired Condition	Source
The values that qualify the river for designation under the act will be preserved.	Wild and Scenic Rivers Act; NPS <i>Management Policies 2006</i>
Compliance Actions	
The National Park Service will take the following kinds of actions to meet legal and policy requirements related to wild and scenic rivers:	
<ul style="list-style-type: none"> • The national battlefield will ensure that no management actions are undertaken that could adversely affect the values that qualify the Monocacy River for inclusion in the national wild and scenic rivers system. 	

WILDLAND FIRE	
Current laws and policies require that the following conditions be achieved in the national battlefield:	
Desired Condition	Source
Battlefield fire management programs are designed to meet resource management objectives prescribed for the various areas of the national battlefield and to ensure that the safety of firefighters and the public are not compromised.	NPS <i>Management Policies 2006</i> ; DO 18, "Wildland Fire Management"
All wild land fires are to be 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>
Compliance Actions	
The National Park Service will take the following kinds of actions to meet legal and policy requirements related to management of wild land fire:	
<ul style="list-style-type: none"> • Maintain a current fire management plan to reflect changes in wild land fire policy, fire use applications, and the body of knowledge on fire effects within the battlefield's vegetation types. • Maintain a cooperative agreement for fire suppression with appropriate federal, state, and local agencies and organizations. • Institute monitoring programs for prescribed fires to record fire behavior, smoke behavior, fire decisions, and fire effects to provide information on whether specific resource objectives for prescribed fires are met. • Use fire as a management tool to maintain native plant communities and control exotic species. 	

OTHER MANAGEMENT REQUIREMENTS

RELATIONS WITH PRIVATE AND PUBLIC ORGANIZATIONS, OWNERS OF ADJACENT LAND, AND GOVERNMENT AGENCIES	
Current laws and policies require that the following conditions be achieved in the national battlefield:	
Desired Condition	Source
<p>The national battlefield 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 national battlefield. The national battlefield is managed proactively to resolve external issues and concerns and ensure that park values are not compromised.</p> <p>Because the national battlefield is an integral part of a larger regional environment, the National Park Service works cooperatively with others to anticipate, avoid, and resolve potential conflicts, protect national battlefield 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>	NPS <i>Management Policies 2006</i>
Compliance Actions	
The National Park Service will take the following kinds of actions to meet legal and policy requirements related to national battlefield neighbors and other agencies:	
<ul style="list-style-type: none"> • Continue to establish and foster partnerships with public and private organizations to achieve the mission and purposes of the national battlefield. Partnerships will be sought for resource protection, research, education, and visitor enjoyment. • To foster a spirit of cooperation with neighbors and encourage compatible adjacent land uses, national battlefield staff will keep landowners, land managers, local governments, and the public informed about national battlefield management activities. Periodic consultations will occur with landowners and communities who are affected by, or potentially affected by visitors and management actions. National battlefield staff will respond promptly to conflicts that arise over their activities, visitor access, and proposed activities and developments on adjacent lands that may affect the national battlefield. 	

COMMERCIAL SERVICES	
<p>Commercial services are another way of providing for visitor use and experience and for national battlefield use requirements already described. Commercial operators are “partners” with the National Park Service to provide goods and services to visitors that are necessary and appropriate but not provided by NPS personnel. The National Park Service manages commercial service levels and types to achieve the same resource protection and visitor experience conditions required by the NPS Organic Act, the General Authorities Act, management policies, and other regulations and policies. In addition, commercial services must comply with the provisions of the NPS Concessions Management Improvement Act of 1998. By law all commercial activities in national park system units must be authorized in writing by the superintendent. 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 for achieving the resource protection and visitor use goals for the national battlefield.</p>	
Desired Condition	Source
Same as visitor use and experience and park use requirements (above)	Same as visitor use and experience and park use requirements
All commercial services must be authorized, must be necessary and/or appropriate, and must be economically feasible. Appropriate planning must be done to support commercial services authorization.	NPS Concessions Management Improvement Act of 1998, NPS <i>Management Policies 2006</i>
Compliance Actions	
<p>The National Park Service will take the following kinds of actions to meet legal and policy requirements related to commercial services:</p>	
<ul style="list-style-type: none"> • Establish and document that all commercial services in the national battlefield are necessary and/or appropriate before they are proposed or reauthorized. • Ensure that all necessary and/or appropriate commercial activities in the national battlefield are authorized in writing by the superintendent. • Use the most appropriate authorization tool (concession contracts, commercial use authorizations, leases, cooperative agreements, rights of way, and special use permits) to manage the commercial services program effectively and efficiently. 	

SUSTAINABLE DESIGN AND DEVELOPMENT	
<p>Sustainability can be described as the result achieved by managing units of the national park system in ways that do not compromise the environment or its capacity to provide for present and future generations. Sustainable practices minimize the short-term and long-term environmental impacts of developments and other activities through resource conservation, recycling, waste minimization, and the use of energy-efficient and ecologically responsible materials and techniques.</p>	
Desired Condition	Source
NPS and concessioner visitor management facilities are harmonious with national battlefield resources, compatible with natural processes, aesthetically pleasing, functional, as accessible as possible to all segments of the population, energy-efficient, and cost effective.	NPS <i>Management Policies 2006</i> ; EO 13123, “Greening the Government through Efficient Energy Management”; EO 13101, “Greening the Government through Waste Prevention, Recycling, and Federal Acquisition”; NPS <i>Guiding Principles of Sustainable Design</i> ; DO 13, “Environmental Leadership”; DO 90, “Value Analysis.”
All decisions regarding national battlefield operations, facilities management, and development reflect principles of resource conservation. Thus, all national battlefield developments and operations are sustainable to the maximum degree possible and practicable. 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.	“Greening Federal Facilities: An Energy Environmental, and Economic Resource Guide for Federal Facility Managers and Designers,” 2nd ed.
Management decision-making and activities throughout the national park system should use value analysis, which is mandatory for all Department of the Interior bureaus, to help achieve this goal. Value planning, which may be used interchangeably with value analysis/value engineering/value management, is most often used when value methods are applied on general management or similar planning activities.	DO 90, “Value Analysis”
<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 National Park Service also reduces energy costs, eliminates waste, and conserves energy resources by using energy-efficient and cost-effective technology. Energy efficiency is incorporated into the decision-making process during the design and acquisition of buildings, facilities, and transportation systems emphasizing the use of renewable energy sources.</p>	

Compliance Actions (Sustainable Design and Development, cont.)

In addition to following the above principles, the National Park Service will take the following kinds of actions:

- Have NPS staff work with appropriate experts to make facilities and programs sustainable. Perform value analysis and value engineering, including life cycle cost analysis, to examine the energy, environmental, and economic implications of proposed developments.
- Support and encourage suppliers, permittees, and contractors to follow sustainable practices.
- Promote the reduction, reuse, and recycling of materials; support the rehabilitation (recycling) of existing buildings and facilities over new construction; require new developments or modifications of existing facilities to be built using NPS sustainability guidelines.

TRANSPORTATION TO AND WITHIN THE NATIONAL BATTLEFIELD	
Current laws and policies require that the following conditions be achieved in the national battlefield:	
Desired Condition	Source
Visitors have reasonable access to the national battlefield, and there are connections from there to regional transportation systems as appropriate. Transportation facilities in the national battlefield provide for the protection, use, and enjoyment of national battlefield resources. The integrity of the surroundings is preserved, ecological processes are respected, resources are protected, and visitors can enjoy the highest visual quality and a rewarding experience.	NPS Transportation Planning Guidebook,” p. 1.
The National Park Service participates in all transportation planning forums that may result in links to NPS areas or affect national battlefield resources. Working with federal, state, and local agencies on transportation issues, the National Park Service seeks reasonable access to parks and connections to external and alternative transportation systems.	<i>NPS Management Policies 2006</i>
Compliance Actions	
The National Park Service will take the following kinds of actions to meet legal and policy requirements related to transportation to and in the national battlefield:	
<ul style="list-style-type: none"> • Participate with the U.S. Department of Transportation, the Federal Highway Administration, the Maryland Department of Transportation, and other sources to encourage effective regional transportation planning and enhancements. • Encourage, where appropriate, alternative transportation systems that contribute to maximum visitor enjoyment of and minimum adverse impacts on national battlefield resources and values. • Advocate for corridor crossings for terrestrial and aquatic wildlife, and other accommodations to promote biodiversity. 	

UTILITIES AND COMMUNICATION FACILITIES	
Current laws and policies require that the following conditions be achieved in the national battlefield:	
Desired Condition	Source
National battlefield resources or public enjoyment of the national battlefield are not denigrated by nonconforming uses. No new nonconforming use or rights-of-way are permitted through the national battlefield without specific statutory authority and approval by the director of the National Park Service or his/her representative; they 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> ; DO 53A, “Wireless Telecommunications;” Reference Manual 53, “Special Park Uses.”
Compliance Actions	
<p>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 its units if such facilities can be structured to avoid interference with national battlefield purposes.</p> <ul style="list-style-type: none"> • Place utility lines underground to the maximum extent possible. • Work with service companies, local communities, and the public to locate new utility lines so that there is minimal effect on national battlefield resources. • Follow NPS policies in processing applications for commercial telecommunications applications. 	

APPENDIX D: COMPLETED STUDIES AND FUTURE STUDIES NEEDED

INTRODUCTION

As part of the natural changes resulting from continuing use and occupation of the farmsteads, many of the structures and landscapes of each of the component properties have been altered in varying degrees from the time of the Civil War. As a result, it is necessary to identify to the greatest extent possible the changes that have occurred to individual structures and to broader farmstead landscapes.

Baseline research reports provide background and basis for making management decisions. These reports provide specific information regarding presence and absence, history, condition, and appropriateness, among other data sets necessary to provide informed management decisions. These reports would be completed before more specialized studies would be undertaken. Monocacy National Battlefield has completed several of these studies, as described below.

COMPLETED STUDIES, SOME OF WHICH NEED UPDATING

Ethnographic Overview and Assessment

An ethnographic overview and assessment is a basic report emphasizing the review and analysis of accessible archival and documentary data on ethnographic resources and the groups that traditionally define such cultural and natural features as significant to their ethnic heritage and cultural viability. The removal of Native Ameri-

can populations in the region in the 18th century did not allow the original inhabitants to continue their associations with their traditional lands. An ethnographic overview is not necessary for Monocacy National Battlefield.

Historic Resource Study

A historic resource study provides a historical overview of a park area and identifies and evaluates its cultural resources within historic contexts. Such a study for the national battlefield was completed in April 2004. It identifies needs for special history studies, cultural landscape reports, and other detailed studies and may make recommendations for resource management and interpretation.

Archeological Identification and Evaluation Studies (Completed)

Archeological identification and evaluation studies identify the locations and some of the characteristics of all or a sample of the archeological resources in a particular area. These studies are linked with archeological overviews and assessments to resolve management and interpretive concerns. Studies for areas of the national battlefield that are completed or are now being prepared are those for the Best Farm (May 2004) and the Thomas Farm (May 2005). Areas of the national battlefield for which studies are still needed are the Gambrill Tract, the Bush Creek Tract, the Lewis Farmstead, the Baker Farm, and the Worthington Farm.

Archeological Overview and Assessment

An archeological overview and assessment, describes and assesses the known and potential archeological resources in a park area. Such a study of Monocacy National Battlefield was completed in September 1993. The overview, which reviews, summarizes, and evaluates existing archeological data, should to be updated.

Fire Management Plan

Director's Order (DO) 18 requires that all national park system units with vegetation capable of sustaining fire must have a fire management plan. The national battlefield's large composition of farmland, open meadows, and mixed hardwood forests meets that criterion, and the national battlefield has prepared a fire management plan. The plan outlines activities related to wildland fire and the use of fire for meeting resource objectives; provides for safety for visitors, employees, and facilities; and incorporates input from local communities and resources to ensure successful collaboration outside the battlefield's boundaries.

Monocacy National Battlefield's fire management plan addresses the suppression of unintentionally ignited wildland fires. The national battlefield will annually review the fire management plan to keep it current with new regulations, policies, and strategies. In the future the use of prescribed fire to meet resource objectives may be implemented; however, this would require a revision of the fire management plan and the inclusion of

supporting documents such as prescribed burn plans and additional environmental compliance. Public review and comment also would be necessary for any planning in the use of prescribed fire.

STUDIES THAT NEED TO BE COMPLETED

Cultural Affiliation Study

Using anthropological, archeological, ethnohistoric, historic, and other evidence, a completed cultural affiliation study would satisfy the need to identify cultural ties among past and present groups that used and may still use or relate to the national battlefield's resources and its natural and cultural resources, including museum objects. Such a study needs to be completed for the national battlefield.

Cultural Resources Base Map

A base map (or maps) depicts all known historic sites and structures, cultural landscapes, long-distance trails and roads, and archeological and ethnographic resources. Documented troop movements may also be included.

Rapid Ethnographic Assessment Project

A rapid ethnographic assessment project is a field study done before or as part of the scoping for general management or other plans. It provides information about basic planning and program evaluation.

Archeological Identification and Evaluation Study — Worthington Farm. Like the archeological

identification and evaluation studies already completed, the one for Worthington Farm would locate archeological resources and describe their characteristics, potential scientific value, and threats to their integrity and condition, as well as addressing the national register eligibility of archeological resources.

The alternatives of this plan would involve significant long-term development at the Worthington Farm; however, very little archeological research and excavation have been undertaken there. To ensure that all future development activities at the Worthington Farm would not adversely affect its archeological resources, an archeological identification and evaluation study of the property should be undertaken. Such a study would give administrators adequate baseline information before any development planning or construction design would be undertaken at the farmstead.

National Battlefield Administrative History

An administrative history, of particular value to managers, planners, and interpreters, describes how an NPS unit was conceived and established and how it has been managed to the present day. The unit's legislative history and important issues in planning, land acquisition, development, public relations, and other topics of ongoing management concern are emphasized.

Cultural Landscape Reports

A cultural landscape report is the primary guide for the treatment and use

of a cultural landscape. Such reports generally use information gathered from existing historical, architectural, archeological, ethnographic, horticultural, architectural landscape, engineering, and ecological research materials to document the characteristics, features, materials, and qualities that make a landscape eligible for listing on the National Register of Historic Places. By analyzing the landscape's development and evolution, modifications, materials, construction techniques, geographical context, and use throughout its history, planners can evaluate the significance of individual landscape characteristics and features within the context of the landscape as a whole. Drawing on a wealth of diverse resources, a cultural landscape report makes recommendations for treatment consistent with the landscape's significance, condition, and use.

Monocacy National Battlefield. A primary goal of Monocacy National Battlefield is to preserve its 1864 battlefield landscape. A battlefield-wide cultural landscape report is necessary to identify the structures, fence lines, field boundaries, transportation corridors, and other character-defining features of the battlefield's cultural landscape. Such information is needed to ensure that all future management and development will retain the significant character and features of the battlefield landscape.

Although existing documents such as the recently updated cultural resource study are sufficient for general management planning purposes, more information about the national battlefield's significance, integrity, and condition is

necessary to guide the implementation of future treatment options.

Worthington Farm. The alternatives of this plan would involve significant development for the Worthington Farm; however, the farm's character-defining building arrangement, fence lines, field boundaries, and other landscape features have not been adequately identified. To avoid adversely affecting the landscape of the Worthington Farm, a cultural landscape report should be prepared. The preparation should be coordinated by a historical landscape architect to ensure that all future development of the property would retain the farm's significant character and cultural landscape features.

Thomas Farm (with a development concept plan). Since a cultural landscape report is the primary guide for the treatment and use of a cultural landscape, the development of such a plan for the Thomas Farm is important. Most of the alternatives of this plan would entail significant development for the Thomas Farm, which is the geographical heart of the battlefield. The national battlefield recently has undertaken extensive architectural, historical, and archeological studies at this site. As a result, the Thomas Farm's history and existing conditions are well documented. However, to avert adverse impacts on its landscape, a cultural landscape report / development concept plan should be prepared. This effort should be coordinated by a historical landscape architect to ensure that all future development of the property would retain the significant character

and features of the farm's cultural landscape.

Collections Management Plan

A collections management plan is a primary planning document for museum collections. Such a plan created by a professional museum team is designed to assess the museum collection management program and to identify problems and make recommendations on the management and care of the collections. A prioritized planning document, the collections management plan identifies responsibilities, projects long-range needs and serves to build a framework for organizing tasks for which a curator is responsible.

A scope of collections statement also should be developed for the national battlefield. Such a document is the basic curatorial planning document required for all units of the national park system. It defines the purpose and significance of the unit's museum and archival collections and guides its acquisition and preservation of those museum objects.

A collections management plan will address such issues as the following:

- history of the national battlefield and its museum collection
- scope of collection statement (SOCS)
- museum records and documentation
- management and care of historical, archeological, archival, and manuscript collections (this also would be the document on which to rely as it relates to possible natural history collections in the future)

- collections accessibility and use
- preventive care issues, including environmental conditions, storage, pest management, housekeeping, and cyclic maintenance
- security
- staffing
- planning, programming and funding

For Monocacy National Battlefield, the collection management plan, as required by DO-28, used together with other planning documents, would serve as a principal tool in the overall management and care of the national battlefield's museum collections to NPS standards.

White-Tailed Deer Management Plan

This *General Management Plan* for Monocacy National Battlefield, supported by the national battlefield's enabling legislation, has identified cultural landscapes, natural resources, and the historic agrarian character as critical features of the battlefield landscape. Characteristics such as field patterns and the composition of wooded and agricultural areas support the protection and perpetuation of these resources and features. Sustaining forest regeneration with native species and maintaining agricultural areas with harvestable crops and productive pastures are key processes in achieving these characteristics. In addition, the agricultural program must remain productive and economically beneficial to attract and retain farmers as permittees at the battlefield.

On the basis of staff observations of resource changes over the past decade,

ongoing monitoring programs, and the probable determination that landscape goals and objectives are not being achieved, a white-tailed deer management plan probably will be necessary in the near future. Evaluations and recommendations by the Maryland Natural Heritage Program, the Maryland Department of Natural Resources, Frederick Community College, and other entities, along with the knowledge gained from similar protected settings — such as other battlefields — also support the expectation that a deer management plan will be necessary for Monocacy National Battlefield.

A deer impact analysis and management plan would include the following: (a) a review of the interaction of deer with critical park resources and state natural resources, (b) a discussion of the relationship between deer populations and the ability to achieve landscape objectives as identified in the general management plan and other plans, (c) a report on the various monitoring programs and population surveys involving deer, (d) an evaluation of state and private efforts related to white-tailed deer, and (e) a review and environmental analysis of deer management alternatives that would reduce any documented impacts and protect desirable landscape goals and objectives. Item “e” could include an alternative to manage the national battlefield's white-tailed deer population.

Monocacy National Battlefield is a protected federal property where hunting is prohibited by law. The battlefield is adjacent to an urban area (Frederick, Maryland) to the north and

is also being pressured by residential development to the south (Urbana). Hunting does occur on private lands adjacent to the battlefield. Preliminary population data collected since the autumn of 2001 estimates an average deer density in the spring of 100 deer per square mile and an autumn density of 145 deer per square mile on the battlefield. Again, these population surveys are the result of several years of data only and will require continued study and further analysis to establish a reliable population estimate.

It is important to note that deer density itself does not necessarily identify a “deer problem” that conflicts with achieving the battlefield’s resource objectives. However, in conjunction with state planning agencies, white-tailed deer population densities can be evaluated and may be an important concern for achieving other NPS and state natural resource goals for the diversity of flora and fauna, the protection of state-listed and/or federally listed rare, threatened, or endangered species, and wildlife health.

At Monocacy National Battlefield, shifts in agricultural program management have taken place over the past decade in response to damage caused by deer foraging. Fields that once grew corn have been converted to pasture or other crops in an effort to retain an open, agrarian character. Such a transition can introduce modern fences and buildings into a historic scene, or patterns that are not ideal for interpreting and understanding the battlefield and its key resources. National battlefield managers are faced with balancing those changes,

however, or they risk losing agricultural permittees. As a result, agricultural crop fields either will go fallow or will be maintained as a mowed area, neither of which is desirable from a landscape or workload perspective.

To achieve the desired historic agrarian character, the ability to grow crops such as corn, small grains, and various hays is critical. The forced need to transition away from crop production in some areas, complaints by agricultural permittees about yield reductions, and noticeable browse in wooded areas prompted the national battlefield to begin in 2003 to cooperate with two other national park system units and the Smithsonian Institution’s Conservation and Research Center in studying forest regeneration and corn yields over a sustained period.

Comprehensive Interpretive Plan

The national battlefield needs to complete a long-range interpretive plan as part of the comprehensive interpretive planning process. The plan should describe the future interpretive program, including both nonpersonal media and personal services programs, and it should address visitor experience goals and visitor issues and influences. The long-range interpretive plan also should contain an implementation strategy that is achievable over five to seven years. Managers then should pursue funding for implementation plans such as historic furnishings plans and an education plan.

Resource Stewardship Strategy

A resource stewardship strategy (*Management Policies 2006*) for

Monocacy National Battlefield will be developed by an interdisciplinary team. The written strategy document will provide the guidance necessary for achieving the desired conditions identified in the general management

plan for natural and cultural resources. It will also identify ways to lessen impacts from actions flowing out of the general management plan.

**APPENDIX E: REQUIREMENTS FOR COMPLIANCE WITH SECTION 106 OF
THE NATIONAL HISTORIC PRESERVATION ACT**

The specific undertakings of the preferred alternative are listed in Table E-1 below. The list shows the NPS determinations of how those individual undertakings relate to the 1995 programmatic agreement in relation to cultural resources.

**Table E-1: Future Cultural Resource Compliance Required
for Implementation of Specific Actions—Preferred Alternative**

Action	Compliance Requirement
<i>Best Farm</i>	
Stabilize and preserve exterior of the smokehouse, secondary dwelling, stone barn, and frame wagon shed.	Consultation completed.
<i>Gambrill Tract</i>	
Continue to preserve and use Gambrill House office space for the Historic Preservation Training Center.	No further SHPO consultation needed.
Continue to use lower level of mill for some visitor services such as a lecture hall, classroom, and display area; rehabilitate second floor now housing administrative offices to serve as temporary housing for seasonal national battlefield employees.	Further SHPO consultation needed.
Extend existing short circular trail from Gambrill Mill parking area to sites of Wallace’s headquarters and the Union entrenchments.	Further SHPO consultation needed.
<i>Lewis Farm</i>	
Stabilize and preserve Lewis farmhouse, barn, springhouse, and corn crib in their current condition.	Consultation completed.
<i>Thomas Farm</i>	
Rehabilitate main house for use as national battlefield administrative offices.	Further SHPO consultation needed.
Rehabilitate stone tenant house for museum use.	Further SHPO consultation needed.
Construct a parking area and restrooms along Baker Valley Road at end of Thomas Farm lane.	Further SHPO consultation needed.
Develop a new circle trail around Thomas Farm to connect over deck to the Worthington Farm so visitors could walk on significant battlefield areas.	Further SHPO consultation needed.
Remove pool, pond, tennis court, cinder block house, and cinder block milking barn.	Further SHPO consultation needed.
Stabilize and preserve barn, corn crib, and other outbuildings.	No further SHPO consultation needed.

<i>Worthington Farm</i>	
Rehabilitate first floor of house for visitor access.	Further SHPO consultation needed.
Widen entry lane from Baker Valley road to Worthington farmhouse to two lanes	Further SHPO consultation needed.
Develop a small parking area near Worthington House.	Further SHPO consultation needed.
<i>Commemorative Area</i>	
Remove cinder block house along Araby Church Road and relandscape for commemorative area.	Further SHPO consultation needed.
<i>Toll House</i>	
Remove Toll House.	Further SHPO consultation needed.
<i>Deck over Interstate 270</i>	
Construct a pedestrian deck across Interstate 270.	Further SHPO consultation needed.
<i>14th New Jersey Monument</i>	
Redesign parking at 14th New Jersey Monument.	Further SHPO consultation needed.
Move entrance to 14th New Jersey Monument to improve access.	Further SHPO consultation needed.

APPENDIX F: INFORMATION ABOUT THREATENED OR ENDANGERED SPECIES

D50-19 (DSC-PSD)
MONO-B033

MAR 03 2003

Memorandum

To: Field Supervisor

From: Natural Resource Specialist, Denver Service Center, Planning and Site Design

Reference: Monocacy National Battlefield, General Management Plan/ Environmental Impact Statement

Subject: Request for list of species

The National Park Service is initiating a general management plan/ environmental impact statement to prescribe resource conditions and visitor experiences to be achieved and maintained at the battlefield. Once issues are identified, a range of alternatives will be developed and analyzed. Alternatives will be presented for public review in an environmental impact statement. The park is located in Frederick County, Maryland. We have attached a map of the study area for your information.

This memorandum is to inform you of the initiation of the study and to request a current list of Federal candidate, proposed, or listed threatened and endangered species and any other special status species that might occur in the locality mentioned. Please also send designated critical habitats and mapped locations of known populations, if any, for these species.

We appreciate your response to this inquiry. If you have questions please call Mary Magee, natural resource specialist, at 303 969-2276.

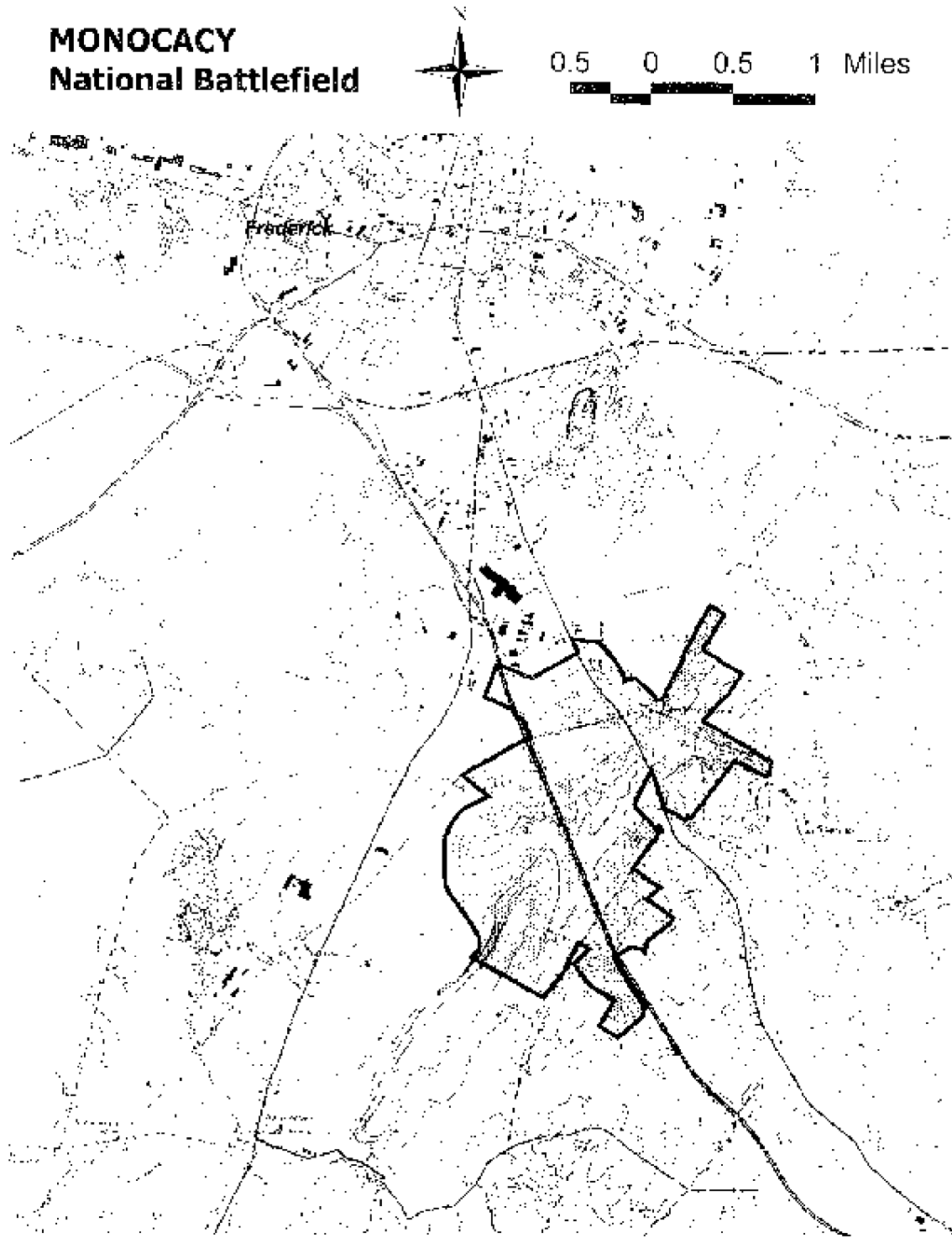
Please send your response to:
Mary Magee (DSC-PSD)
National Park Service, Denver Service Center
Box 25287
Denver, CO 80225



Mary Magee
Natural Resource Specialist

Attachment

cc:
MONO Superintendent, Susan Trail, wo/enc.





United States Department of the Interior

FISH AND WILDLIFE SERVICE

Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401



May 20, 2003

Ms. Mary Magee (DSC-PSD)
National Park Service, Denver Service Center
12795 W. Alameda Parkway
Box 25287
Denver, CO 80225-0287

RE: Monocacy National Battlefield, General Management Plan/ Environmental Impact Statement, Frederick County, MD

Dear Ms. Magee:

This responds to your letter, received April 14, 2003, requesting information on the presence of species which are federally listed or proposed for listing as endangered or threatened within the above referenced project area. We have reviewed the information you enclosed and are providing comments in accordance with Section 7 of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

The federally threatened bald eagle (*Haliaeetus leucocephalus*) nests within the project area or within the vicinity of the project. For further information regarding activity at this nest, Glenn Therres of the Maryland Wildlife and Heritage Division should be contacted at (410) 260-8572.

Except for occasional transient individuals, no other federally proposed or listed endangered or threatened species are known to exist within the area. Should additional information on the distribution of listed or proposed species become available, this determination may be reconsidered.

This response relates only to federally protected threatened or endangered species under our jurisdiction. For information on the presence of other rare species, you should contact Lori Byrne of the Maryland Wildlife and Heritage Division at (410) 260-8573.

An additional concern of the Service is wetlands protection. Federal and state partners of the Chesapeake Bay Program have adopted an interim goal of no overall net loss of the basin's remaining wetlands, and the long term of increasing the quality and quantity of the basin's wetlands resource base. Because of this policy and the functions and values wetlands perform,

the Service recommends avoiding wetland impacts. All wetlands within the project area should be identified, and if construction in wetlands proposed, the U.S. Army Corps of Engineers, Baltimore District should be contacted for permit requirements. They can be reached at (410) 962-3670.

We appreciate the opportunity to provide information relative to fish and wildlife issues and thank you for your interest in these resources. If you have any questions or need further assistance, please contact Craig Koppie (410) 573-4534.

Sincerely,



Mary J. Ramaswamy, Ph.D.
Program Supervisor, Threatened and Endangered Species

cc: Glenn Thomas, Maryland Wildlife and Heritage Division, Annapolis, MD

AUG 05 2003

D50-19 (DSC-PSD)
MONO-B037-409

Maryland Department of Natural Resources
Wildlife and Heritage Service
Attn: Lori Byme, E-1
580 Taylor Ave
Annapolis, Maryland 21401

Reference: Monocacy National Battlefield, General Management Plan/ Environmental Impact Statement

Subject: Request for list of species, Monocacy National Battlefield, Frederick County, Maryland

The National Park Service is initiating a general management plan/ environmental impact statement to prescribe resource conditions and visitor experiences to be achieved and maintained at the battlefield. Once issues are identified, a range of alternatives will be developed and analyzed. Alternatives will be presented for public review in an environmental impact statement. The park is located in Frederick, Maryland. We have enclosed a map of the study area for your information.

This memorandum is to inform you of the initiation of the study and to request a current list of state candidate, proposed, or listed threatened and endangered species and any other special status species that might occur in the locality mentioned. Please also send designated critical habitats and mapped locations of known populations, if any, for these species.

We appreciate your response to this inquiry. If you have questions please call Mary Magee, natural resource specialist, at 303 969-2276.

Please send your response to:
Mary Magee (DSC-PSD)
National Park Service, Denver Service Center
Box 25287
Denver, CO 80225

Sincerely,

SIGNED

Mary Magee
Natural Resource Specialist

Enclosure

cc:
Superintendent, MONO, w/enc.



Received

SEP 18 2003

DSC-PSD

Robert L. Ehrlich, Jr.
Governor

Michael S. Steele
Lt. Governor

Maryland Department of Natural Resources

Taves State Office Building
580 Taylor Avenue
Annapolis, Maryland 21401

C. Ronald Franks
Secretary

W. P. Jensen
Deputy Secretary

September 11, 2003

Ms. Mary Magee
USDOI-NPS
Denver Service Center
P.O. Box 25287
Denver, CO 80225-0287

RE: Environmental Review for Monocacy National Battlefield, General Management Plan, Frederick County, Maryland.

Dear Ms. Magee:

The Wildlife and Heritage Service has no records for Federal or State rare, threatened or endangered plants or animals within this project site. This statement should not be interpreted as meaning that no rare, threatened or endangered species are present. Such species could be present but have not been documented because an adequate survey has not been conducted or because survey results have not been reported to us.

However, the Monocacy River and its tributaries have been identified as having high potential to support RT&E freshwater mussel species. Freshwater mussels require fish hosts for part of their life cycle and are filter feeders, therefore maintaining water quality is crucial to their existence.

Also, our analysis of the information provided suggests that the forested area on the project site contains Forest Interior Dwelling Bird habitat. Populations of many Forest Interior Dwelling Bird species (FIDS) are declining in Maryland and throughout the eastern United States. The conservation of FIDS habitat is strongly encouraged by the Department of Natural Resources.

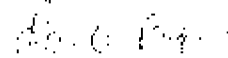
In addition, if the site consists of abandoned fields or is currently being pastured, it may contain habitat for grassland breeding birds. Such birds include Upland Sandpiper, Eastern Meadowlark, Grasshopper Sparrow, Vesper Sparrow, Savannah Sparrow, and American Kestrel. As such, it is an important parcel because of the declining status of this group of species. Birds that require grasslands for breeding are rapidly disappearing from the state as well as the region.

TTY via Maryland Relay: 711 (within MD) (800) 735-2258 (Out of State)
Toll Free to MDR: 1-877-620-8058 ext. _____

Page 2
September 11, 2003

Thank you for providing us the opportunity to review this project. If you should have any further questions or need further technical assistance regarding conservation of these species, please contact me at (410) 260-8873 or at the above address.

Sincerely,



Lori A. Byrne,
Environmental Review Coordinator
Wildlife and Heritage Service
Maryland Dept. of Natural Resources

ER# 2003.1398.fr
Cc: E.L. Thompson, DNR
R. Wiegand, DNR

REFERENCES

Bearss, Edwin

- 1978 "Documentation Troop Movements: Battle of Monocacy, Monocacy National Battlefield, Frederick County, Maryland." Transcript on file, Technical Information Center, Denver Service Center, National Park Service, Lakewood, CO.

Beasley, Joy

- 2003 "Limited Archeological Investigation at the Worthington Farm (18FR791), Monocacy National Battlefield, Frederick, Maryland." Report submitted to the National Park Service, National Capital Region, under an existing agreement between the NCR Regional Archeological Program and the Center for Historic Preservation Studies, University of Maryland, Department of Anthropology.

Beasley, Joy, Editor

- 2004 *Archeological Overview and Assessment: Identification and Evaluation Study of the Best Farm, Monocacy National Battlefield, Frederick, Maryland.* Occasional Report No. XXX, Regional Archeology Program, National Capital Region, National Park Service, U.S. Department of the Interior, Washington, D.C.

Caplinger, Michael W.

- 1997 *Bridges over Time: A Technological Context for the B&O Main Stem at Harpers Ferry, West Virginia.* Institute for History of Technology and Industrial Archaeology.

Cooling, Benjamin Franklin.

- 2000 *Monocacy: The Battle That Saved Washington.* Shippensburg, PA: White Mane Publishing Company.

Dilts, James D.

- 1993 *The Great Road.* Library of Congress.

EDAW, Inc., Land and Community Association, and John Milner Associates

- 1993 "Cultural Landscape Evaluation and Archeological Evaluation." Final report.

Frederick County, Maryland

- 2002 *Draft Urbana Region Plan.* Frederick County Department of Planning and Zoning.

Goldsborough, Edward Y.

- 1989 *The Battle of Monocacy*. Frederick, Maryland: Historical Society of Frederick County.

Griffith, Dennis

- 1794 *Map of the State of Maryland, Laid Down from an Actual Survey*. National Archives.

GWWO Architects, Inc.

- 2003 "L'Hermitage, the Best House." Historic structure report prepared for the National Park Service.

HNTB Corporation

- 2003 *Monocacy National Battlefield Transportation Plan*. Prepared for the National Park Service by HNTB Corporation. On file at Denver Service Center, Lakewood, CO.

Hernigle, Jacqueline L.

- 1991 "Monocacy Battlefield: Archeological Clearance of Proposed Septic Field and Parking Lot Areas." Antietam National Battlefield, National Park Service, U.S. Department of the Interior.

Kavanaugh, Maureen

- 1982 *Archeological Resources of the Monocacy River Region, Frederick and Carroll Counties, Maryland*. Division of Archeology file report 164. Prepared by Maryland Genealogical Survey, Department of Natural Resources.

- 1983 "Prehistoric Occupation of the Monocacy River Region Maryland." In *Piedmont Archaeology: Recent Research and Results*, J. Mark Wittkofski and Lyle E. Browning, eds. Archeological Society of Virginia. Special publication 10, 1983.

Little, Barbara

- 1994 "National Capital Area Archeological Overview and Survey Plan." NPS occasional report 13. National Park Service, U.S. Department of the Interior.

REFERENCES

Maryland Department of Natural Resources, Maryland Natural Heritage Program
1995 *Vegetation and Aquatic Survey of the Bush Creek Tract with Emphasis on Rare, Threatened, and Endangered Species of Plants and Freshwater Mussels: Monocacy National Battlefield, Bush Creek Tract, Frederick County, Maryland*, by Karene Motivans. Final report.

1998 *Monocacy National Battlefield, Natural Areas Inventory for Rare, Threatened, and Endangered Plants and Selected Animals with Management Recommendations*, by Karene Motivans.

Monocacy Scenic River Local Advisory Board

1990 *Monocacy Scenic River Study and Management Plan*. (Technical assistance provided by Maryland Department of Natural Resources and approved in May 1990 by the Carroll County Commissioners and the Frederick County Commissioners).

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

1979 *Monocacy National Battlefield General Management Plan, Assessment of Alternatives*. Denver Service Center, Lakewood, CO.

2000a *Cultural Landscape Inventory, Monocacy National Battlefield*. Prepared by National Capital Region.

2000b *Environmental Assessment, Relocation of the Visitor Center at Monocacy National Battlefield*.

Paula S. Reed & Associates, Inc.

1999 "Cultural Resources Study, Monocacy Battlefield." Hagerstown MD.

2005 Prepared under contract for the National Park Service, updated and printed in 2005.

2004 National Register of Historic Places form, updated under contract for the National Park Service.

Pendelton, Phillip E.

1991a HABS No. MD1051, Gambrill House.

1991b HABS No. MD1052, Clifton Farm.

Reed, Paula. See *Paula S. Reed & Associates*.

Robb, Frances C.

- 1991 "Industry in the Potomac River Valley: 1760–1860." Ph.D. dissertation, West Virginia University.

Scharf, J. Thomas

- 1882 *History of Western Maryland*. 2 vols. Baltimore: Regional Publishing Company, 1968. Originally published in Philadelphia, PA.

Seidel, Ellen, M.

- 1984 "Evaluation of Archeological Resources on the Bush Creek Tract, Monocacy National Battlefield Site." National Park Service, Denver Service Center.

Thompson, Harry T.

- 1937 "A Report on the Monocacy Battlefield." CRBIB no. 012158.

Tilghman, N. G.

- 1989 "Impacts of White-tailed Deer on Forest Regeneration in Northwestern Pennsylvania." *Journal of Wildlife Management* 53 (3):524–532.

Tracey, Grace L., and John P. Dern

- 1997 *Pioneers of Old Monocacy*. Baltimore: Genealogical Publishing Company.

U.S. Department of Transportation, Federal Highway Administration, and Maryland Department of Transportation, Maryland State Highway Administration

- 2002 *I-270 / U.S. 15 Multi-Modal Corridor Study, Frederick and Montgomery Counties, Maryland: Draft Environmental Impact Statement and Section 4(f) Evaluation*. Vols. 1 and 2.

U.S. Fish and Wildlife Service, U.S. Department of the Interior

- 1979 *Classification of Wetlands and Deepwater Habitats of the United States*. Prepared for the U.S. Fish and Wildlife Service by Lewis M. Cowardin (USFWS), Virginia Carter (USGS), Francis C. Golet (Univ. of Rhode Island), and Edward T. LaRoe (NOAA). Reprint 1992. Washington, D.C.

REFERENCES

Varle, Charles

- 1808 *A Map of Frederick and Washington Counties, State of Maryland.*
Engraved By Francis Shallus, Philadelphia. Frederick, MD: Historical
Society of Frederick County, Maryland.

Wesler, Kit. W., Dennis J. Pogue, Aileen F. Button, Gordon J. Fine, Patricia A.
Sternheimer, and E. Glyn Furguson

- 1981 *The M/Dot Archeological Resources Survey. Vol. 3: Piedmont.* Annapolis,
MD: Maryland Historical Trust. Maryland Historical Trust Series, no.
7.

Whitmore, Nancy F.

- 1981 *Frederick, a Pictorial History.* Norfolk, VA: Donning Co.

Writers Program: Maryland

- 1940 *Maryland: A Guide to the Old Line State.* Library of Congress.

PREPARERS AND CONSULTANTS

NATIONAL PARK SERVICE

Denver Service Center

Craig Cellar, Project Manager.
Overall project coordination.
B.A., History; B.A., Anthropology.
35 years with the National Park Service.

Michele D'Arcy, Landscape Architect.
Cost development, transportation, and
assistance to job captain on various
components of plan preparation.
B.S., Landscape Architecture.
27 years with the National Park Service.

Eric Petersen, Cultural Resource
Specialist.
Cultural Resources.
B.A., Philosophy; M.A., Anthropology.
7years with the National Park Service.

Harpers Ferry Interpretive Design Center

Jack Spinnler, Interpretive Planner.
Sections on visitor experience and
interpretation.

Monocacy National Battlefield

Susan Trail, Superintendent.
B.A., Anthropology; M.A.,
Anthropology; Ph.D., American
Studies.
20 years with the National Park Service.

Cathy Beeler, Chief, Resource
Education and Visitor Services.
B.A., Elementary Education.
21 years with the National Park Service.

Dean Herrin, NPS Liaison with Catoclin
Center for Regional Studies.
Ph.D., History.

Andrew Banasik, Natural Resource
Program Manager.
B.A., History; M.S., Environmental
Science and Public Policy 2006
10 years with the National Park Service.

Joy Beasley, Cultural Resource Program
Manager.
B.A., Anthropology; M.A.A.,
Anthropology
5year with the National Park Service.

National Capital Region

Patrick Gregerson, Chief of Planning
and Geographic Information
Systems.
Regional coordination and oversight.
25 years with the National Park Service.

CONTRIBUTORS AND CONSULTANTS

Tina Cartwright, Facility Manager,
Monocacy National Battlefield.

Todd Stanton, Park Ranger (Law
Enforcement), Monocacy National
Battlefield.
B.S., History.

Gloria Swift, Park Ranger
(Interpretation), Monocacy National
Battlefield.
B.S., History.

Ed Wenschhof, Chief, Natural
Resources and Protection, Antietam
National Battlefield.

PREPARERS AND CONSULTANTS

B.S., Agriculture Education; M.S.,
Environmental Science.

Dwight Pitcaithley, Chief Historian,
National Park Service.
Ph.D., History.

PUBLICATION SERVICES

Ruth Eitel, Visual Information Specialist
Lou Layman, Writer-Editor
Linda Ray, Visual Information Specialist
Sandy Schuster, Writer-Editor

INDEX

access, 6, 13, 14, 15, 16, 20, 21, 23, 28, 31, 36, 37, 38, 40, 45, 50, 52, 58, 65, 71, 72, 77, 83, 86, 87, 89, 90, 91, 92, 93, 95, 96, 107, 111, 115, 116, 123, 124, 125, 127, 132, 139, 141, 145, 150, 151, 152, 153, 156, 159, 163, 165, 167, 168, 169, 170, 171, 182, 183, 202, 207, 220, 224, 234

Advisory Council on Historic Preservation, 137, 184, 198, 201, 203, 204, 205, 206

agriculture, 43, 105, 110

air quality, 104, 196, 208

Araby Church Road, 13, 14, 15, 25, 52, 58, 63, 65, 72, 91, 119, 123, 124, 125, 127, 143, 144, 145, 147, 149, 151, 167, 168, 170, 234

archeological resources, 44, 79, 101, 102, 103, 137, 197, 198, 200, 205, 206, 226, 227, 228

Baker Farm, 9, 52, 92, 102, 112, 119, 124, 125, 151, 226

Baker Valley Road, 14, 15, 25, 50, 52, 57, 64, 71, 85, 91, 92, 96, 105, 119, 124, 125, 127, 133, 134, 144, 145, 146, 149, 153, 154, 155, 166, 167, 168, 169, 171, 233, 234

Best Farm, 8, 9, 10, 13, 14, 23, 24, 25, 44, 56, 57, 61, 63, 64, 71, 83, 87, 90, 102, 112, 118, 120, 123, 125, 133, 155, 156, 226, 233

Best House, 86, 139, 140, 141, 155, 174, 242

boundaries, 5, 8, 9, 13, 24, 26, 41, 42, 51, 89, 102, 117, 126, 132, 133, 142, 167, 200, 227, 228, 229

boundary, 4, 14, 15, 16, 43, 49, 50, 58, 63, 65, 70, 72, 102, 104, 112, 121, 126, 127, 134, 143, 144, 182

Bush Creek, 5, 20, 24, 27, 30, 37, 58, 72, 90, 104, 107, 108, 112, 118, 122, 123, 125, 144, 167, 226, 243, 244

carrying capacity, 81, 82, 109, 123

Confederate Monument, 13

construction, 8, 9, 13, 24, 25, 28, 29, 37, 42, 77, 78, 79, 80, 81, 86, 98, 104, 105, 110, 111, 113, 119, 121, 132, 144, 160, 161, 162, 163, 164, 166, 172, 176, 195, 197, 206, 223, 228

CSX Railroad, 5, 9, 30, 44, 50, 121, 123, 211

cultural landscapes, 116, 137, 142, 143, 145, 204, 227, 230

cultural resources, 16, 21, 29, 36, 42, 43, 44, 45, 78, 80, 81, 82, 83, 84, 85, 86, 116, 128, 131, 134, 137, 223, 226, 227, 232, 233

cumulative impacts, 131, 132, 183

endangered species, 21, 28, 45, 79, 110, 183, 202, 214, 231

Endangered Species Act, 21, 22, 183, 196, 214

erosion, 26, 27, 29, 42, 43, 79, 104, 105, 111, 112, 213

ethnographic resources, 78, 103, 226, 227

exotic species, 16, 21, 209, 219

fish, 57, 63, 70, 109, 156, 158, 196, 200

flooding, 52, 207, 210

INDEX

floodplain, 23, 52, 103, 107, 108, 199, 210

Gambrill House, 13, 20, 31, 42, 51, 102, 116, 125, 128, 132, 138, 139, 181, 233, 243

Gambrill Mill, 9, 15, 23, 30, 52, 56, 57, 58, 61, 63, 64, 65, 70, 71, 72, 81, 82, 83, 89, 90, 91, 93, 102, 108, 112, 120, 123, 124, 125, 126, 132, 133, 139, 140, 141, 142, 145, 149, 151, 162, 163, 164, 167, 169, 170, 176, 177, 210, 233

geologic resources, 111

impairment, 135

interpretation, 17, 29, 36, 37, 38, 46, 51, 56, 58, 63, 64, 70, 72, 77, 86, 87, 89, 91, 93, 94, 95, 97, 98, 110, 112, 113, 122, 123, 124, 125, 126, 127, 132, 133, 134, 139, 140, 141, 142, 143, 144, 146, 147, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 167, 170, 176, 177, 182, 183, 184, 207, 216, 223, 226, 244, 246

Interstate 270/ I-270, 5, 13, 15, 23, 24, 25, 28, 29, 30, 42, 44, 50, 52, 57, 62, 64, 70, 71, 76, 77, 89, 119, 234

Lewis Farm, 30, 50, 52, 64, 92, 102, 119, 139, 143, 146, 155, 226, 233

lightscape, 113

Maryland Highway 355, 5, 52, 81, 83, 123, 132

mitigation, 62, 76, 77, 98, 103, 136, 154

mitigative measures, 77, 78, 80

Monocacy River, 4, 5, 6, 7, 8, 9, 11, 15, 24, 25, 26, 27, 28, 30, 37, 50, 52, 57, 58, 72, 101, 104, 105, 106, 107, 108, 117, 120, 121, 122, 123, 124, 125, 127, 149, 153, 217, 218, 242

museum collection/objects, 41, 103, 116, 207, 229, 230

natural sounds, 113, 212

Pennsylvania Monument, 13, 124

pollution, 4, 79, 80, 81, 195, 196, 208, 216

soil, 26, 27, 43, 77, 79, 104, 105, 111, 112, 213

soundscape, 113

Thomas Farm, 7, 11, 13, 14, 24, 25, 43, 50, 52, 56, 57, 58, 61, 63, 64, 68, 70, 71, 75, 77, 83, 85, 88, 89, 91, 95, 98, 101, 102, 112, 118, 119, 120, 122, 124, 125, 126, 132, 133, 134, 139, 141, 143, 144, 147, 151, 153, 154, 155, 156, 157, 158, 162, 163, 167, 169, 173, 174, 177, 226, 229, 233

Thomas House, 10, 11, 12, 18, 31, 51, 52, 58, 65, 68, 72, 75, 89, 93, 118, 139, 140, 141, 145, 169, 170, 174

trails, 15, 27, 36, 38, 45, 52, 57, 58, 64, 65, 71, 72, 79, 84, 87, 90, 95, 125, 126, 128, 144, 145, 149, 155, 167, 169, 233

transportation, 8, 9, 12, 13, 18, 23, 24, 40, 41, 44, 48, 49, 56, 57, 70, 85, 86, 89, 90, 113, 115, 117, 119, 122, 123, 124, 125, 134, 152, 153, 154, 155, 157, 162, 165, 167, 176, 182, 195, 223, 224, 228, 246

Vermont Monument, 13, 21, 58, 63, 65, 124

views, 16, 44, 45, 79, 86, 125

viewshed, 43, 50, 94, 142, 144, 145, 146, 147

Vincendière, 8, 64, 102, 118

visitor center, 6, 15, 23, 30, 37, 44, 46, 52, 56, 57, 63, 64, 70, 71, 81, 83, 87, 89, 90, 91, 92, 95, 118, 120, 123, 126, 133, 144, 149, 150, 151, 152, 153, 155, 156, 157, 158, 161, 162, 165, 166, 167, 168, 169, 170, 173, 174, 175

visitor experience, 3, 4, 6, 16, 18, 29, 35, 36, 37, 77, 80, 86, 95, 120, 123, 131, 132, 149, 150, 153, 154, 157, 158, 159, 173, 174, 212, 221, 231, 246

visitor safety, 4, 48, 72, 80, 86, 95, 115, 151, 152, 153, 154, 155, 157, 159

water, 8, 25, 26, 27, 28, 29, 38, 43, 44, 45, 79, 81, 104, 105, 106, 107, 113, 122, 128, 132, 133, 134, 195, 196, 215, 216, 217, 223

wetlands, 22, 28, 79, 80, 107, 199, 217

Worthington Farm, 7, 14, 15, 42, 57, 63, 64, 70, 71, 83, 89, 92, 101, 109, 112, 119, 120, 125, 139, 145, 149, 158, 164, 167, 226, 227, 228, 229, 233, 234, 241

Worthington House, 52, 57, 64, 68, 70, 71, 75, 95, 119, 140, 141, 147, 155, 156, 157, 158, 168, 174, 177, 234



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 historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

Publication services were provided by Planning and Design Services, Denver Service Center. NPS
D-73, July 2008