

# Purpose of and Need for the Plan





# Chapter One

## INTRODUCTION AND PURPOSE AND NEED FOR A GENERAL MANAGEMENT PLAN



### INTRODUCTION

**T**HIS CHAPTER BEGINS by providing background on the Ice Age Complex at Cross Plains (henceforth, “Ice Age Complex” or “complex”) to explain what and where it is and why the National Park Service (NPS) and the Wisconsin Department of Natural Resources (WDNR) are proposing a plan for preserving and interpreting it. This chapter also explains the process used to develop this general management plan / environmental impact statement (GMP/EIS), as well as the purpose of and need for a general management plan and the actions proposed herein.

### DESCRIPTION OF THE ICE AGE COMPLEX

A mere 20,000 years ago, two-thirds of what is today the state of Wisconsin lay under the grip of colossal ice sheets. The climate warmed and the ice sheets began to melt back. In their wake they left an impressive landscape of fascinating glacial landforms: moraines, drumlins, kames, kettles, eskers, outwash plains, meltwater channels, driftless (unglaciated) topography, glacial lake beds and islands, and more. These Wisconsin Ice Age remnants are considered among the world’s finest examples of how continental glaciation sculpts our planet.

Located just west of Madison near the town of Cross Plains is a 1,500-acre area that contains an outstanding collection of glacial landforms, including a gorge carved by meltwater and expansive views of both driftless and glaciated terrain. These acres comprise a park called, for the purpose of this planning effort, the “Ice Age Complex at Cross Plains” (henceforth “Ice Age Complex” or “complex”) (see figure 1). This site, however, has a rich history of different legal designations.



*Gorge carved by glacial meltwater.*



The lands and landscape of the Ice Age Complex have been deemed nationally significant under two related, but distinct, federal designations. The elements recognized in both designations are parts of the singular concept advanced by Wisconsin citizens in the late 1950s and early 1960s to protect and showcase Wisconsin’s heritage from continental glaciation. Congress authorized the concept in two parts, at two different times, and through two different legislative vehicles.

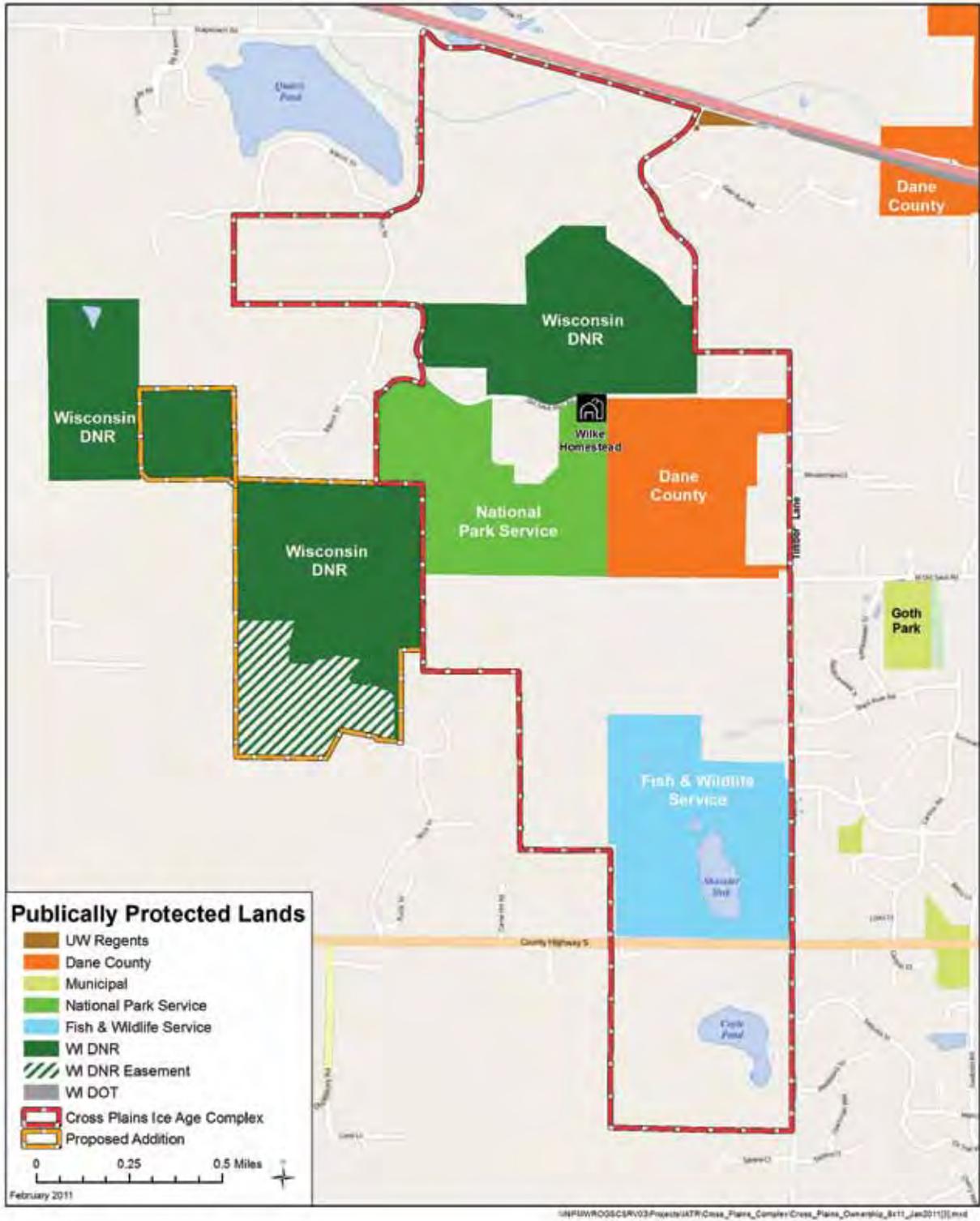
In 1964 Congress enacted legislation (Public Law [PL] 88-655; 78 Stat. 1087; 16 United States Code [USC] 469d, *et seq.*) directing the Secretary of the Interior to cooperate with the governor of Wisconsin in studying and subsequently designating an Ice Age National Scientific Reserve (“Ice Age Reserve” or “reserve”). The purpose of the Ice Age Reserve is “to assure protection, preservation, and interpretation of the nationally significant values of Wisconsin continental glaciation, including moraines, eskers, kames, kettleholes, drumlins, swamps, lakes, and other reminders of the ice age.” The continental glaciers last advanced and retreated over the state some 30,000 to 10,000 years ago.

Congress envisioned the Ice Age Reserve as a network of distinct areas, each exhibiting an outstanding example of one type of landscape or landform resulting from continental glaciation. The legislation’s intention is that the reserve would be owned and managed by the state of Wisconsin, with the assistance and collaboration of the Secretary of the Interior (acting through the National Park Service). Several of the outstanding sites selected were already Wisconsin state parks. The legislation made reference to the Ice Age National Scenic Trail but made no provisions for it.

When the study was completed, nine sites were identified to be protected and managed by the Wisconsin Department of Natural Resources (WDNR) as units of the Ice Age Reserve (see figure 2). On May 29, 1971, the Secretary of the Interior published an order in the *Federal Register* that formally brought the Ice Age Reserve into existence.



FIGURE 1: ICE AGE COMPLEX AT CROSS PLAINS





As noted in Black (1974), “The Cross Plains area was selected for inclusion in the Reserve in part because it contains a typical portion of the Johnstown Moraine on the uplands and a typical proglacial stream in Black Earth Creek Valley, and is close to a center of population. More importantly it is the only place . . . where the terminal moraine rests directly on well exposed, weathered dolomite bedrock and where small marginal proglacial lakes, a marginal drainage way, and a subglacial drainage way may all be seen in a small area. The various glacial features associated with the moraine in the vicinity of Cross Plains are more varied and yet as definitive as one could hope to see, all preserved in a neat little package. The area is one of increasing urbanization, and preservation of parts of the front and its associated phenomena can only be assured in the Reserve.”

The Wisconsin Department of Natural Resources purchased 100 acres of the Cross Plains unit of the Ice Age Reserve in September 1975, and an additional 60 acres were subsequently purchased. The Cross Plains unit is also designated as Cross Plains State Park by Wisconsin Administrative Rule.

Congress again recognized the national significance of Wisconsin’s glacial landscapes when, on October 3, 1980, it amended the *National Trails System Act* to authorize and establish the Ice Age National Scenic Trail as a component of the National Trails System (PL 96-370; 94 Stat. 1360; 16 USC 1244(a)(10)). The Ice Age National Scenic Trail meanders through Wisconsin for approximately 1,200 miles from Potawatomi State Park in Door County to Interstate State Park in Polk County, generally following the terminal moraine and other glacial landscape features and connecting six of the nine units of the Ice Age Reserve. The Secretary of the Interior was assigned administrative responsibility for the Ice Age National Scenic Trail.

The Secretary of the Interior delegated overall administrative responsibility for the Ice Age National Scenic Trail to the National Park Service. The Park Service, in cooperation with the Wisconsin Department of Natural Resources and other parties, completed a *Comprehensive Plan for Management and Use of the Ice Age National Scenic Trail* in September 1983. The National Park Service is responsible at the federal level for carrying out the provisions of the *National Trails System Act* as they relate to the Ice Age National Scenic Trail. The National Park Service carries out or facilitates trail planning, environmental compliance, trail development and management, public and private partner involvement, and land protection activities. The Park Service assists partners by coordinating, guiding, and assisting their efforts to acquire, develop, operate, protect, and maintain the Ice Age National Scenic Trail in accordance with the comprehensive plan and supplemental trail corridor plans and railway protection strategies (land protection plans). The comprehensive plan identifies the Wisconsin Department of Natural Resources and the nonprofit Ice Age Trail Alliance as cooperators in the long-term effort to develop and manage the Ice Age National Scenic Trail. The Park Service serves as the primary liaison with other federal agencies in matters relating to the Ice Age National Scenic Trail. In carrying out this role, the Park Service reviews and comments on federal or federally assisted/permitted projects and activities (such as highway, utility, and other development proposals) that may affect trail segments.

The Wisconsin Department of Natural Resources is the state agency responsible for providing and maintaining outdoor recreation resources of statewide significance, including state parks and trails, in Wisconsin. Thus, the basis for the Wisconsin Department of Natural Resources’ participation in developing and managing the Ice Age Reserve and Ice Age National Scenic Trail is the statewide significance of the reserve and trail and the inclusion of state

parks, forests, trails, and recreation areas in the reserve and along the route of the trail. The state legislature formalized this role in 1987 by passing legislation that designates the Ice Age National Scenic Trail as a State Scenic Trail. The legislation also assigns the responsibility to the Wisconsin Department of Natural Resources for coordinating the involvement of state agencies in the trail project and cooperating with the National Park Service and private interests in planning, acquiring, developing, and maintaining the Ice Age National Scenic Trail. The Wisconsin Department of Natural Resources has been the primary NPS partner in administering federal financial assistance for acquiring lands for the Ice Age National Scenic Trail.

The *National Trails System Act* authorizes the establishment of interpretive sites along national scenic trails. In fiscal year (FY) 2001 Congress appropriated funds for the acquisition of specific lands, owned by James and Jane Wilkie, for an Ice Age National Scenic Trail Interpretive Site. The lands specified for the interpretive site happen to lie within the boundaries of the Cross Plains unit of the Ice Age Reserve. The National Park Service purchased the lands in 2002, subject to a life estate, and took full possession in early 2008.

The Wilkie farmstead includes a stone house, the original two-story portion of which dates back to the 1850s, just a few years after statehood in 1848. The one-story addition, built with stone from the same quarry as the original house, dates to 1952 when the Wilkies purchased the farm. There is also a structurally sound wood barn, modern garage, shed used as a chicken coop, and Quonset for equipment storage. These structures are referred to elsewhere in this document as the “farmstead” or individually as the “stone house,” “barn,” and so forth. The structures were evaluated for eligibility to be listed on the National Register of Historic Places, but it was determined they were not historically significant.

The lands that comprise the Ice Age Complex are managed at both a state and federal level.

That is, the Ice Age Reserve is owned and managed by the state of Wisconsin, and the Ice Age National Scenic Trail Interpretive Site is owned and managed by the National Park Service. Additionally, the Ice Age Complex also includes Shoveler Sink Waterfowl Production Area, which is owned and managed by the U.S. Fish and Wildlife Service (USFWS). The involvement of both federal and state governments, as well as Dane County Parks, makes this plan to preserve and interpret the Ice Age Complex a true partnership effort.

Dane County has been a major partner and contributor toward protecting lands and creating and managing the Ice Age Trail. The Ice Age National Scenic Trail has been included in the *Dane County Parks and Open Space Plan* for more than 20 years. In support of the Ice Age Complex, in 2010, the county purchased 137 acres of land within the proposed project boundaries. This parcel consists of a proglacial lake that is critical to interpreting the story of the site. Dane County also intends to continue partnering on future land acquisition projects as budgets allow.

## OVERVIEW OF THE PLANNING PROCESS

**Q** *Why have the National Park Service and Department of Natural Resources developed this general management plan?*

**A** The *National Parks and Recreation Act of 1978* (Public Law [PL] 95-625) and the Redwood Amendment of 1978 (PL 95-250 Sec. 101(6)(b)) require the preparation and timely revision of general management plans for each unit of the national park system. NPS management policies require each general management plan to “set forth a management concept for the park [and] establish a role for the unit within the context of regional trends and plans for conservation, recreation, transportation, economic development, and other regional issues.” As part of the planning process, Congress specifically directed (at 16 United States Code [USC] 1a-7b) the National Park Service to address

measures for the preservation of the area's resources

indications of types and general intensities of development (including visitor circulation and transportation patterns, systems, and modes) associated with public enjoyment and use of the area, including general locations, timing of implementation, and anticipated costs

identification of an implementation commitment for visitor carrying capacities [now called user capacity] for all areas of the unit

indications of potential modifications to the external boundaries of the unit and the reasons therefore

**Q** What is considered in developing general management plans?

**A** The purpose of the National Park Service, as stated in the *Organic Act of 1916* (which brought the service into existence that year), is “to conserve the scenery and the natural and historic objects and the wild life therein [within the national parks] 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.” These words comprise a mission statement for the entire system of national parks. The laws that established the Ice Age Reserve and the Ice Age National Scenic Trail include purpose statements that build on this mission statement. The Wisconsin Department of Natural Resources’ 1998 feasibility study (supporting expansion of the Cross Plains unit of the reserve) stated that the proposed long-range goal for the expanded reserve unit was “to preserve the geologic, natural, cultural, and scenic qualities of the Cross Plains Reserve unit and provide interpretive, educational, and low-impact recreational opportunities.” This general management plan translates the NPS mission, combined with the more directive purpose statements of the Ice Age Reserve,

Ice Age National Scenic Trail, and the Cross Plains unit of the reserve into guidance for the managers of the Ice Age Complex for the next 15 to 20 years.

**Q** How are requirements of the National Environmental Policy Act integrated into the general management plan?

**A** This general management plan / environmental impact statement was developed according to the process outlined by the *National Environmental Policy Act* (NEPA), a law passed in 1969 to impose analysis and public review requirements on federal decision makers. This plan follows the NEPA process by proposing a range of reasonable alternatives for managing the Ice Age Complex, evaluating the environmental impacts of the alternatives, and inviting public review of the alternatives and impact analysis.

NPS Director’s Order 12: *Conservation Planning, Environmental Impact Analysis, and Decisionmaking* and its accompanying handbook lay the groundwork for how the National Park Services complies with the *National Environmental Policy Act*. Director’s Order 12 and handbook set forth a planning process for incorporating scientific and technical information and establishing a solid administrative record for NPS projects.

**Q** How did public involvement inform this plan?

**A** Public feedback was invited at three specific points in the NEPA process.

1. *Scoping.* A newsletter was sent out, the website was launched, and public meetings were held in summer 2008 to gather general feedback on the scope of this plan. Questions were asked of the public about what they value about the Ice Age Complex and what problems, concerns, or opportunities they see. The responses to these questions were used to formulate preliminary alternatives.

2. *Preliminary Alternatives.* A second newsletter was sent out, and public meetings were held in summer 2009 to invite feedback on four potential ways that the Ice Age Complex could be managed. Public responses during this stage of the plan’s development influenced the results of the value analysis, during which the preferred alternative (alternative 5) was developed.
3. *Draft Plan.* Comments on the draft general management plan / environmental impact statement were accepted. NPS responses to substantive public comments on the draft document were included with this final general management plan / environmental impact statement.

More explanation of public involvement in this plan is included in “Chapter 5: Consultation and Coordination.”

## PURPOSE OF THE PLAN

The final general management plan provides a framework to assist NPS and WDNR managers in making decisions today and in the future. The alternatives proposed in this plan describe general paths that the National Park Service and Department of Natural Resources would follow in managing the Ice Age Complex over the next 15 to 20 years. This general management plan / environmental impact statement

- identifies desired conditions in different parts of the Ice Age Complex

- identifies any necessary developments and support facilities to achieve the vision and desired conditions

- ensures that the foundation for decision making has been developed in consultation with the public and adopted by NPS leadership after sufficient analysis of the benefits, impacts, and economic costs of alternative courses of action

The document addresses the three purposes listed above, but it does not

- describe how particular programs or projects would be implemented or prioritized; these decisions are deferred to detailed implementation planning

- provide specific details and answers to all the issues facing the Ice Age Complex

- provide funding commitments for implementation of the plan

## NEED FOR THE PLAN

A general management plan is needed in order to establish a consistent vision for the Ice Age Complex that is shared by all partners in this project. Those partners are the National Park Service, Wisconsin Department of Natural Resources, U.S. Fish and Wildlife Service, Ice Age Trail Alliance, local government agencies, and the general public. Although the Department of Natural Resources’ 1998 feasibility study (mentioned above) provided a rough outline for how the Ice Age Complex could be managed, this general management plan is the first plan designed to provide comprehensive management guidance for the complex. The Ice Age National Scenic Trail is guided by a 1983 comprehensive management plan, and the Ice Age Reserve is guided by a 1968 comprehensive management plan, but neither of these older overarching plans articulate the shared vision between the National Park Service, Department of Natural Resources, and the public on how to best achieve the specific purpose of the complex and protect its resources for future generations.

Currently, the Ice Age Complex is essentially undeveloped for visitor use. Given its location just outside the fast-growing suburbs of Madison, Wisconsin, and the interest in Ice Age geology in the region, there is potential for significant visitation at the complex. There is also potential for damage to the glacial features at the site without long-term planning for their

protection. Thus, this general management plan is needed because

the management plans for related areas (Ice Age National Scenic Trail and Ice Age National Scientific Reserve) are outdated

there must be a consistent and shared vision for the complex

there is potential for both significant visitation and resource damage

Ice Age National Scenic Trail (because part of the Ice Age Complex is also the interpretive site for the Ice Age National Scenic Trail) (appendix A contains copies of the legislation).

There are three purposes of the Ice Age Complex; those are to

ensure protection, preservation, and interpretation of the nationally significant values of continental glaciation in Wisconsin, including moraines, eskers, kames, kettleholes, drumlins, swamps, lakes, and other reminders of the Wisconsin Ice Age

establish a superlative segment of the Ice Age National Scenic Trail and provide information and interpretation about the trail to the public at a significant site along its route

provide outdoor recreational and educational opportunities in support of and compatible with the conservation and enjoyment of the nationally significant scenic, historic, natural, and cultural resources within the complex

## FOUNDATION STATEMENT

Each park in the national park system must develop a formal core mission statement that provides basic guidance for making decisions about that park. The foundation statement is the formal core mission statement. The core elements of the foundation statement are (1) statements of purpose and significance; (2) descriptions of fundamental and important resources and values; (3) discussion of primary interpretive themes; and (4) summaries of legal and policy requirements and special mandates for the site. The foundation statement helps ensure that park managers and stakeholders understand these important core elements of the park.

### Statements of Park Purpose

Purpose statements are the specific reasons for establishing a park. They are grounded in a thorough analysis of the park's enabling legislation and legislative history, but they go beyond simply restating the law to document shared assumptions about what the law means in terms specific to the park. Legislative mandates, from which the purpose statements for the Ice Age Complex were derived, include the 1964 law establishing the Ice Age National Scientific Reserve (because the Ice Age Complex is also the Cross Plains unit of the reserve, as determined by a 1998 WDNR Feasibility Study) and the *National Trails System Act*, as amended in 1980 to include the

### Statements of Park Significance

Significance statements describe why (within a national, regional, and systemwide context) the park's resources and values are important enough to warrant national park designation. The significance statements are directly linked to the park's purpose, are substantiated by data or consensus, and reflect the most current scientific or scholarly inquiry and cultural perceptions.

These are the three statements of park significance for the Ice Age Complex.

1. Nowhere are the marks of continental glaciation upon the land more impressive than along the Ice Age National Scenic Trail and in the Ice Age National Scientific Reserve units in Wisconsin. The meandering landscape that exhibits the marks of the glacier's

farthest advance is a showplace of moraines, kames, drumlins, erratics, kettle lakes, potholes, eskers, marshes, meltwater channels, gorges, ice-walled lake plains, outwash plains, and glacial lake beds. While many of these marks of the glacier’s advance can be viewed in the Ice Age Complex at Cross Plains, others are present in other units of the reserve.

2. The Ice Age National Scenic Trail’s path of glacial features provides outstanding opportunities for recreation, education, inspiration, solitude, and enjoyment.
3. The Ice Age Complex at Cross Plains unit is the primary site for interpreting the Ice Age National Scenic Trail. Opportunities for the public to experience and understand the marks of the glacier’s farthest advance are highlighted in the areas where the Ice Age National Scenic Trail crosses the reserve units, as it does in Cross Plains.

### Fundamental and Other Important Resources and Values

The preeminent responsibility of park managers is ensuring the conservation and public enjoyment of qualities that are critical to achieving the park’s purpose and maintaining its significance. These qualities are called the park’s “fundamental resources and values.” Parks often have other resources and values that, while not fundamental to the parks purpose or significance, are nevertheless determined to be particularly important considerations for general management planning. These resources and values are called the park’s “other important resources and values.”

The *fundamental resources and values* for the Ice Age Complex include

geological features that tell the glacial story of the site, such as meltwater channels and proglacial lake basins

(including, but not exclusive to, the Cross Plains gorge); the terminal moraine; erratics; bedrock geology; driftless area features; and related natural biological resources, including vegetation created by the microclimate in the gorge

a continuous route for the Ice Age National Scenic Trail through the complex to provide footpath access and interpretive opportunities along its route

the opportunity for people, particularly those in the adjacent urban area, to experience immersion into a large natural landscape, providing outdoor recreation and education both compatible with and supporting conservation of natural resources within the complex

expansive views that provide a visual display of the contrast between the unglaciated driftless area and lands shaped by continental glaciation

The *other important resources and values* for the Ice Age Complex include the

Native American migration route that traverses the site

high concentration of open-grown white and burr oak representative of the oak savanna that has disappeared from more than 99.9% of its former range, presenting opportunities for restoration and management

### Primary Interpretive Themes

Primary interpretive themes describe what needs to be interpreted in order to provide people with opportunities to understand and appreciate the park’s purpose and significance. These themes are primarily derived from and reflect park significance, although they also offer perspectives on fundamental and important resources and values. There are five primary interpretive themes identified for the Ice Age Complex.

**First Primary Interpretive Theme**

*The Landscape* — this landscape and its features uniquely illustrate the contrast between unglaciated and glaciated landscapes, which demonstrates the dramatic earth-shaping power of glaciers.

The subtheme derived from the first primary theme will focus on the process of glaciation and will compare and contrast unglaciated and glaciated landscapes.

**Second Primary Interpretive Theme**

*People and the Land* — the landscapes, both unglaciated and glaciated, have affected human migration, settlement patterns, land use, and values of the land for thousands of years. These landscapes have influenced locations of transportation corridors and agriculture and resource extraction and have inspired land stewardship and contemporary land ethics.

The subtheme derived from the second primary theme will focus on how the landscape affected human interaction with the land throughout time.

**Third Primary Interpretive Theme**

*Ice Age National Scenic Trail* — the trail offers an opportunity to connect with the past while immersed in nature. The Ice Age National Scenic Trail and other long-distance trails provide for extended outdoor experiences of discovery. The third primary theme focuses on the trail itself.

Interpretation derived from this theme would encourage visitors to use the trail to find their own connections with the past and nature and will relate the Ice Age National Scenic Trail to other long-distance trails.

**Fourth Primary Interpretive Theme**

*Environmental Conditions* — our glacial past provides opportunities to better understand changing current environmental conditions that affect the way we live today and might live tomorrow.

The subthemes derived from the fourth primary theme will invite reflection on current environmental conditions in comparison with those of ancient times. While global climate change will be a strong subtheme, this primary theme is expressed more broadly in order to be inclusive of discussions on other environmental conditions for which the site offers learning opportunities. For example, the erosive effect of glacial meltwaters on the land can be compared at the site to the erosive effect of surface water runoff from developed landscapes today.

**Fifth Primary Interpretive Theme**

*Managing the Ecosystem* — while natural ecosystems are dynamic, where communities migrate and change, human intervention can disrupt the natural balance. Reintroduction of natural processes is necessary to restore this balance.

Subthemes derived from the fifth primary theme will focus on the site's plant and animal communities, their current condition, and their need for management — not only to return a sustainable natural balance but also to enable visitors to better view and understand the glacial landscape.



## Legal and Policy Requirements

### Federal Laws, Policies, and Executive Orders.

The development of this general management plan / environmental impact statement has proceeded within a complex legal framework. This section identifies what must be done within the NPS-owned land at the Ice Age Complex to comply with federal laws and policies of the National Park Service. Many management directives are specified in laws and policies and are therefore not subject to alternative approaches. For example, there are federal laws and policies about managing environmental quality (such as the *Clean Air Act*, *Endangered Species Act*, and Executive Order 11990, “Protection of Wetlands”); laws governing the preservation of cultural resource (such as the *National Historic Preservation Act*); and laws about providing public services (such as the *Americans with Disabilities Act*) — to name only a few. In other words, a general management plan is not needed to decide, for instance, that it is appropriate to protect endangered species, control exotic species, protect archeological sites, conserve artifacts, or provide for handicap access. Laws and policies have already decided those and many other things.

**Laws, Policies, and Orders Applicable Solely or Primarily to the National Park Service.** Some laws, policies, and orders are applicable solely or primarily to the National Park Service. Examples include the *Organic Act of 1916*, which created the National Park Service; *General Authorities Act of 1970*; *National Parks and Recreation Act of 1978*; *Redwood Amendment of 1978* (signed March 27, 1978), relating to the management of the national park system; and the *National Parks Omnibus Management Act* (1998).

The NPS *Organic Act of 1916* (16 USC 1) provides the fundamental management direction for all units of the national park system. The act states that the service thus established shall

promote and regulate the use of the Federal areas known as national parks, monuments, and reservations . . . by such means and measure as conform to the fundamental purpose of the 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 Service also has established policies that are identified and explained in a guidance manual entitled *NPS Management Policies 2006*, which can be found at <http://www.nps.gov/policy>.

In addition to determining the environmental consequences of implementing the preferred alternative and other alternatives, *NPS Management Policies 2006* (section 1.4) requires analysis of potential effects to determine whether or not proposed actions would impair a park’s resources and values.

The fundamental purpose of the national park system, established by the *Organic Act* and reaffirmed by the *General Authorities Act*, as amended, begins with a mandate to conserve park resources and values. NPS managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adverse impacts on park resources and values.



To truly understand the implications of an alternative for NPS-owned and managed property at the Ice Age Complex, it is important to combine NPS and other federal laws, mandates, and policies (listed in table 1), with the management actions and zoning described in each alternative (presented in chapter 2).

Table 1 lists some of the most pertinent NPS mandates and policies related to managing the Ice Age Complex, other federal laws and executive orders, and the associated desired conditions needed to comply with those policies, laws, and mandates. The alternatives in this general management plan address the desired future conditions that are not mandated by law and policy and must be determined through a planning process.



TABLE 1: NPS MANDATES AND POLICIES

| CULTURAL RESOURCES MANAGEMENT  |  |
|--|--|
| <b>ARCHEOLOGICAL RESOURCES</b>   |  |
| <b>Desired Conditions</b>  | <b>NPS and Other Federal Sources</b>   |
| <p>Archeological sites are identified and inventoried, and their significance is determined and documented.</p> <p>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 in consultation with the Wisconsin State Historic Preservation Office, and the resulting artifacts, materials, and records are curated and conserved. Some archeological sites that can be adequately protected may be interpreted to the visitor.</p>  | <p>National Park Service</p> <ul style="list-style-type: none"> <li><i>NPS Management Policies 2006</i></li> <li><i>NPS Director's Order 28: Cultural Resource Management Guideline</i></li> <li><i>NPS Director's Order 28A: Archeology</i></li> <li><i>The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation</i></li> </ul> <p>Programmatic Memorandum of Agreement among the National Park Service, Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers (2008)</p> <p>Other Federal</p> <ul style="list-style-type: none"> <li><i>National Historic Preservation Act</i></li> <li><i>Archeological Resources Protection Act</i></li> <li><i>Native American Graves Protection and Repatriation Act</i></li> <li>Executive Order 13007, "Indian Sacred Sites"</li> </ul>                          |
| <b>HISTORIC AND PREHISTORIC STRUCTURES</b>   |  |
| <b>Desired Conditions</b>  | <b>NPS and Other Federal Sources</b>   |
| <p>Historic structures are inventoried, and their significance and integrity are evaluated under the criteria of the National Register of Historic Places. The qualities that contribute to the listing or eligibility for listing of historic structures in the national register are protected in accordance with the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (unless it is determined through a formal process that disturbance or natural deterioration is unavoidable).</p> <p>(Note: the only structures on land currently owned by the National Park Service have been evaluated and determined not eligible for the national register. This statement of desired conditions would apply to any other structures on land acquired by the Park Service.)</p> | <p>National Park Service</p> <ul style="list-style-type: none"> <li><i>NPS Management Policies 2006</i></li> <li><i>NPS Director's Order 28: Cultural Resource Management Guideline</i></li> <li><i>The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings</i></li> <li><i>NPS List of Classified Structures</i></li> </ul> <p>Programmatic Memorandum of Agreement among the National Park Service, Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers (2008)</p> <p>Other Federal</p> <ul style="list-style-type: none"> <li><i>National Historic Preservation Act</i></li> <li><i>Archeological Resources Protection Act</i></li> <li><i>Native American Graves Protection and Repatriation Act</i></li> </ul> |
| <b>CULTURAL LANDSCAPES</b>   |  |
| <b>Desired Conditions</b>  | <b>NPS and Other Federal Sources</b>   |
| <p>Cultural landscape inventories are conducted to identify landscapes potentially eligible for listing on the National Register of Historic Places and to assist in future management decisions for landscapes and associated resources, both cultural and natural. The content of a cultural landscape report provides the basis for making sound decisions about management, treatment, and use. The management of cultural landscapes focuses on preserving the landscape's physical attributes, biotic systems, and use when that use contributes to its historical significance.</p>   | <p>National Park Service</p> <ul style="list-style-type: none"> <li><i>NPS Management Policies 2006</i></li> <li><i>NPS Director's Order 28: Cultural Resource Management Guideline</i></li> <li><i>The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation</i></li> <li><i>NPS List of Classified Structures</i></li> </ul>   |

**TABLE 1: NPS MANDATES AND POLICIES (CONTINUED)**

| CULTURAL RESOURCES MANAGEMENT   |   |
|---|---|
| Desired Conditions  | NPS and Other Federal Sources   |
| (Note: the only identified cultural landscape on land currently owned by the Park Service has been evaluated and determined not eligible for the national register. This statement of desired conditions would apply to any other structures on land acquired by the park service.)   | National Park Service<br>Programmatic Memorandum of Agreement among the National Park Service, Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers (2008)  |
|   | Other Federal<br><i>National Historic Preservation Act</i><br><i>Archeological Resources Protection Act</i><br><i>Native American Graves Protection and Repatriation Act</i><br>Executive Order 13007, "Indian Sacred Sites"  |
| MUSEUM COLLECTIONS  |   |
| Desired Conditions  | NPS and Other Federal Sources   |
| All museum collections (prehistoric and historic objects, artifacts, works of art, archival documents, and natural history specimens) are identified and inventoried, catalogued, documented, preserved, and protected, and a provision is made for their access to and use for exhibits, research, and interpretation, according to NPS standards.<br><br>The qualities that contribute to the significance of collections are protected in accordance with established standards. | National Park Service<br><i>NPS Management Policies 2006</i><br><i>Director's Order 24: Museum Collections Management</i><br><i>The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation</i><br><i>NPS Museum Handbook, Parts I-III</i><br><br>Other Federal<br><i>National Historic Preservation Act</i><br><i>Archeological Resources Protection Act</i> |
| NATURAL RESOURCES MANAGEMENT  |   |
| SOILS   |   |
| Desired Conditions  | NPS and Other Federal Sources   |
| The National Park Service actively seeks to understand and preserve soil resources and to prevent, to the extent possible, the unnatural erosion, physical removal, or contamination of soil or its contamination of other resources.<br><br>Natural soil resources and processes function in as natural a condition as possible, except where special considerations are allowable under policy.   | National Park Service<br><i>NPS Management Policies 2006</i>  |
| When soil excavation is an unavoidable part of an approved facility development project, the National Park Service would minimize soil excavation, erosion, and offsite soil migration during and after the development activity.   | National Park Service<br><i>NPS Management Policies 2006</i>  |

**TABLE 1: NPS MANDATES AND POLICIES (CONTINUED)**

| WATER RESOURCES   |  |
|---|--|
| Desired Conditions  | NPS and Other Federal Sources  |
| Surface water and groundwater are protected, and water quality meets or is better than (exceeds) all applicable water quality standards.  | National Park Service<br>NPS <i>Management Policies 2006</i><br>Other Federal<br><i>Clean Water Act</i><br>Executive Order 11514, "Protection and Enhancement of Environmental Quality"                                  |
| NPS programs and facilities and NPS permitted programs and facilities are maintained and operated to avoid pollution of surface water and groundwater.  | National Park Service<br>NPS <i>Management Policies 2006</i><br>Other Federal<br><i>Clean Water Act</i><br><i>Rivers and Harbors Act</i><br>Executive Order 12088, "Federal Compliance with Pollution Control Standards" |
| NATIVE VEGETATION AND ANIMALS   |  |
| Desired Conditions  | NPS and Other Federal Sources  |
| The National Park Service strives to maintain, as part of the natural ecosystem, native plants and animals in the Ice Age Complex. Populations of native plant and animal species function in as natural condition as possible, except where special considerations are warranted.<br><br>Populations of native species that have been severely reduced or extirpated from the complex are restored, where feasible, and sustainable. | National Park Service<br>NPS <i>Management Policies 2006</i>   |
| The management of exotic plant and animal species, including eradication, is conducted wherever such species threaten resources or public health and when control is prudent and feasible.  | National Park Service<br>NPS <i>Management Policies 2006</i><br>Other Federal<br>Executive Order 13112, "Invasive Species"   |
| THREATENED, ENDANGERED, AND SPECIAL STATUS SPECIES  |  |
| Desired Conditions  | NPS and Other Federal Sources  |
| Federally and state-listed threatened and endangered species and their habitats are protected and sustained.  | National Park Service<br>NPS <i>Management Policies 2006</i><br>Other Federal<br><i>Endangered Species Act</i>   |
| NATURAL SOUNDSCAPES   |  |
| Desired Conditions  | NPS and Other Federal Sources  |
| The natural soundscape of the Ice Age Complex is preserved to the greatest extent possible.   | National Park Service<br>NPS <i>Management Policies 2006</i>   |
| Where soundscapes have been degraded by unnatural sounds (noise), they are restored to a natural condition wherever possible.   | National Park Service<br>NPS <i>Management Policies 2006</i>   |

TABLE 1: NPS MANDATES AND POLICIES (CONTINUED)

| VISITOR USE AND EXPERIENCE   |  |
|--|--|
| VISITOR USE AND EXPERIENCE   |  |
| Desired Conditions   | NPS and Other Federal Sources  |
| <p>Natural and cultural resources are conserved for the enjoyment of future generations. Visitors have opportunities for forms of enjoyment that are uniquely suited and appropriate to the resources found in the Ice Age Complex. No activities occur that would cause derogation of the values and purposes for which the park was established.</p> <p>Visitors have opportunities to understand and appreciate the significance of the complex and its resources and to develop a personal stewardship ethic.</p> <p>For all management areas, units, or other logical management divisions in the complex, the types and levels of visitor use are consistent with the desired resource and visitor experience conditions prescribed for those areas.</p> | <p>National Park Service</p> <p><i>NPS Organic Act of 1916</i></p> <p><i>National Parks and Recreation Act (PL 95-625)</i></p> <p><i>NPS Management Policies 2006</i></p>  |
| <p>To the extent feasible, programs, services, and facilities are accessible to and usable by all people, including those with disabilities.</p>   | <p>National Park Service</p> <p><i>NPS Director's Order 42: Accessibility for Visitors with Disabilities in NPS Programs, Facilities, and Services</i></p> <p>Other Federal</p> <p><i>Americans with Disabilities Act</i></p> <p><i>Architectural Barriers Act</i></p> |

**Laws and Policies of the State of Wisconsin.**

Other laws and policies are part of the Department of Natural Resource’s legal and policy framework. Cross Plains State Park is designated as a state park under Chapter 27, Wisconsin Statutes. This designation allows for a broad range of recreation, education, and vegetative management activities to occur within park boundaries in accordance with the park’s vision and goals. The statutory authority to acquire and manage land within Cross Plains State Park is described in sections 23.09, 23.11, 23.14, and 27.01, Wisconsin Statutes.

Wisconsin state parks are managed to ensure preservation of their scenic value, historical value, and the natural wonders they contain. The mission and goals of the state park system, as outlined in the 2008 Wisconsin State Park System Strategic Plan, are described below.

**Wisconsin State Park System Mission** — Protect and enhance the natural and cultural resources of our Wisconsin State Park System properties while providing high quality recreational and educational opportunities and programs.

**Wisconsin State Park System Goals** — Expand the quality and quantity of sustainable, nature-based outdoor recreation opportunities and facilities available to Wisconsin State Park System visitors to

actively manage, restore, enhance, and protect the natural, cultural, and scenic heritage of the Wisconsin State Park System

provide innovative, interpretive opportunities and programs that foster knowledge, appreciation, and stewardship of the state’s natural and cultural resources and promote participation in nature-based outdoor recreation

strengthen the Wisconsin State Park System facilities development program to better provide for customer comfort and safety

motivate and enable a dedicated and customer-focused workforce

achieve financial strength and stability for the Wisconsin State Park System

attract new Wisconsin State Park System customers through innovative marketing strategies and retain current customers through exceptional service

improve operational effectiveness, planning, and decision making by managing and using accurate and reliable information

a sense of ownership and support management of the complex

an interest in participating in specific activities at the complex, such as hunting, dog walking, horseback riding, snowmobiling, and mountain biking

## SCOPE OF THE GENERAL MANAGEMENT PLAN

### Issues and Concerns Addressed in this Plan

This general management plan / environmental impact statement addresses issues raised internally by the partners developing this plan and externally by the public. The issues deal with how resources should be managed, what types of visitor experiences should be encouraged or accommodated, and how the complex should be managed. Further, the issues expressed

the need to keep the complex area natural and protected from encroaching suburban development, including protecting more land beyond that which is currently publically owned

the need to offer formal educational opportunities to tell the stories of the unique resources

the need to offer varied opportunities (camping, hiking, and other low-impact activities) for the public to access the complex

the need to address the future of the Wilkie structures at the core of the complex

the need to engage local residents and partner with other groups to instill

### Issues and Concerns Not Addressed in this Plan

This document does not address the need to control the deer population. While this is a serious issue that must be addressed, it is beyond the scope of this plan. It will be addressed in a deer management plan to be developed jointly by public land managing agencies within the complex; those agencies are the National Park Service, Wisconsin Department of Natural Resources, and U.S. Fish and Wildlife Service. The deer management plan will propose alternative ways of managing deer in the complex and determine the appropriate means after thorough scientific and public review.

### Impact Topics

An important part of planning is seeking to understand the consequences of making one decision over another. To this end, a general management plan is accompanied by an environmental impact statement. An environmental impact statement identifies the anticipated beneficial and adverse impacts from possible actions on resources, visitors, and neighbors. Impacts are organized by topic, such as “impacts on the visitor experience” or “impacts on vegetation and soils.” Impact topics serve to focus the environmental analysis and ensure the relevance of impact evaluation. The impact topics included for analysis in this document are presented below, and the impact analyses for the topics are contained in “Chapter 4: Environmental Consequences.” The topics were identified based on federal laws and other legal requirements, Council on Environmental Quality (CEQ) guidelines, NPS management policies, staff subject-matter expertise,

and issues and concerns expressed by the public early in the planning process (see previous section).

This section also includes a discussion of impact topics that are commonly addressed but that are not addressed in this plan for the reasons given.

### Impact Topics Considered and Analyzed in Detail.

**Soil resources** — There are prime fertile soils in the Ice Age Complex, ranging from glacial till covered with a silt-loam loess cap to the east and unglaciated silt loams to the west. Development in the complex, as envisioned in the alternatives, would cause immediate soil disturbance during construction and an increase in impervious surfaces, resulting in more runoff and soil erosion. Current agricultural land would also be taken out of production under some of the alternatives. Therefore, this impact topic was retained for consideration.

**Water quality** — The region surrounding the Ice Age Complex contains one of the Midwest's most important trout fishing streams, the Black Earth Creek. Within the complex, the glacier originally impounded four proglacial lakes. Today, the southernmost proglacial lake has been divided in two by County Trunk S (Mineral Point Road) and consists of two water-filled basins (Coyle Pond and Shoveler Sink). The other proglacial lakes are dry and filled with agricultural crops. There are a few intermittent streams that bisect the complex. One follows a deep ravine on the south side of the former Wilkie property before emptying onto the former McNutt property at the western edge of the proposed site. There is at least one spring north of Old Sauk Pass that has been partially developed to include a stock tank. This spring drains northward toward Black Earth Creek. In the center of the Ice Age Complex, south of Old Sauk Pass, water runoff travels north to a depression where it enters and flows through the Cross Plains gorge, eventually reaching

Black Earth Creek. An increase in impervious surfaces from development in the complex, as envisioned in the alternatives, would result in more surface water runoff and impacts on stream and lake water quality. Additionally, an increase in visitor use would mean a need for more well-water supply, as well as a need for waste removal, such as a septic system. All of these changes to the land and land use would result in some level of impacts on water quality. Therefore, this impact topic was retained for consideration.

**Soundscapes** — A soundscape is human perception of the acoustical environment. Acoustic resources include natural sounds (wind, water, wildlife, vegetation, and so forth) and cultural and historic sounds (such as battle reenactments, tribal ceremonies, and quiet reverence). Some of the activities proposed under the alternatives in this plan would change the soundscape at the Ice Age Complex, so this impact topic was retained for consideration.

**Vegetation and wildlife** — The *Organic Act of 1916* and *NPS Management Policies 2006* both require the National Park Service to protect and conserve native plants and vegetative communities that could be affected by visitors, managers, and external sources. There are no federally listed threatened or endangered plant species in the complex, but there is one plant (heart-leaved skullcap) that has been identified as rare by the Wisconsin Department of Natural Resources. Additionally, there are some exotic (nonnative) and invasive species of vegetation that are present in the complex. The potential impacts from actions proposed in the alternatives, especially the difference in how management areas would be applied, would affect both native and exotic invasive vegetation.

There are also no federally listed threatened or endangered wildlife species (or critical habitat for these species) in the Ice Age Complex, but there are four bird species (Henslow's sparrow, hooded warbler, western meadowlark, and yellow-billed cuckoo) that

have been identified as rare by the Wisconsin Department of Natural Resources. Wildlife would be affected by actions proposed in the alternatives, including the difference in levels of development and predicted visitation, as well as how management areas would be applied; therefore, vegetation and wildlife were retained as impact topics for consideration.

**Socioeconomic environment** — The *National Environmental Policy Act* requires an examination of social and economic impacts caused by federal actions as part of a complete analysis of the potential impacts on the “Human Environment.” Dane County is the affected area for this socioeconomic analysis, with a focus on the local municipalities and towns surrounding the complex: Cross Plains, Middleton, Verona, and Madison. Changes in land use, as well as impacts on gateway communities, could result from actions in the alternatives. Therefore, this impact topic was retained for consideration.

**Visitor experience** — One of the fundamental purposes of the National Park Service is providing for visitor enjoyment and understanding. Many actions proposed in this plan could affect patterns of visitor use and the type and quality of visitor experiences. Visitor access, orientation, and interpretation are elements of the visitor experience. Some actions in this plan could impact the visitor experience. Therefore, this topic has been analyzed.

### Impacts Topics Considered but not Analyzed in Detail.

**Geologic resources** — Geologic resources formed by glaciation are fundamental to the purposes of the Ice Age Complex. Because of their importance to this site, these resources are described at length in the affected environment chapter of this plan (chapter 3). However, because the alternatives would result in no foreseeable impacts on geologic resources, they are not described in the environmental consequences chapter of this plan (chapter 4). Geologic resource impacts

typically considered in land use planning (such as impacts on the fossil record, museum quality minerals, and caves) were eliminated for all of the alternatives. Fossils are not an issue for this plan because fossils are poorly preserved in the sandstone and dolomite at the Ice Age Complex.

There are no museum-quality samples of minerals or rock at this site.

Impact on caves is strictly regulated by the federal *Cave Resources Protection Act* and section 4.8.1.2 of the *NPS Management Policies 2006*. Although karst topography exists on the complex, as well as a sinkhole that might be connected to a cave system, there is no actual cave or human access to any cave at the complex. There would be no foreseeable impacts on major geologic features, such as the end moraine, former lakebed surfaces, and the subglacial channel (Cross Plains gorge), from any of the proposed alternatives other than related impacts associated with contamination of surface water (considered separately under water quality).

**Threatened and endangered species** — There are no federally listed threatened or endangered species or critical habitat for these species in the Ice Age Complex; therefore, this impact topic was not analyzed in this document. The potential impacts on other sensitive wildlife and vegetation are discussed in the “*Vegetation and Wildlife*” section of chapter 4.

**Wetlands and floodplains** — There is one small (roughly 100 acres) wetland area in the southeast corner of the Ice Age Complex, in the area around Shoveler Sink and Coyle Pond. There are also two small (together, about 100 acres) floodplains in the southeast portion of the site (again, around Shoveler Sink) and the northwest portion of the site in the area of Black Earth Creek. Construction near wetlands and floodplains might affect how they function. There are two elements proposed in the alternatives that could affect wetlands and floodplains; those elements are building a picnic area near Black Earth

Creek and building a trail in this same area. The extent of these impacts, however, is too speculative to state at this point. Both of these projects would be subject to implementation plans, which would fully analyze their environmental impacts. Otherwise, none of the activities in the proposed alternatives in this plan would impact the functioning of wetlands or floodplains. Therefore, this impact topic was not analyzed in detail.

**Cultural resources** — The *National Environmental Policy Act* requires that any federal undertaking be examined for its potential to affect cultural resources. Cultural resources are aspects of a cultural system that are valued by or significantly representative of a culture or that contain significant information about a culture. A cultural resource may be a tangible entity or a cultural practice. Cultural resources are characterized as archeological resources, cultural landscapes, historic structures, museum collections, and ethnographic resources for NPS management purposes. The following describes the various types of cultural resources:

- **Archeological Resources.** According to NPS Director’s Order 28: Cultural Resource Management Guideline, archeological resources are the physical evidences of past human activity. Archeological resources may represent both prehistoric and historic time periods, and they are found above and below ground and under water. Native American occupation of southern Wisconsin began around the end of the Pleistocene epoch, when groups of hunter gatherers moved into the area after the retreat of the last glacial advance. Archeologists have established a basic broad chronology of cultural traditions in the region as follows:

Paleoindian Tradition, ca. 12,000–8,000 Before Present (B.P.)  
 Archaic Tradition, ca. 8,000–2,500 B.P.  
 Woodland Tradition, ca. 2,500–700 B.P.  
 Mississippian/Oneota Tradition, ca. 800–350 B.P. Early Historic, 350-150 B.P. Late Historic, 150 B.P.- Modern Era.

These traditions are distinguished by differences in settlement and subsistence patterns, changes in styles and design of stone tools, the appearance of ceramic technology, and the construction and design of earthen mounds. Early Paleoindian sites are generally limited to surface finds of fluted points. The general absence of Early Archaic sites may be connected to the Altithermal Climatic episode. During the Late Archaic Tradition seasonal movements from wintering sites within rock shelters and interior valleys to summer encampments along rivers became established as a way of life. The Woodland Tradition is marked by the appearance of ceramics. The Mississippian/Oneota Tradition is characterized by the development of villages that contained increasingly larger populations dependent on agriculture.

Throughout the Historic Period, southern Wisconsin was continually occupied by various Native American nations including the Sauk, Ho-Chunk (formerly Winnebago), Ioway, Illini, and Potawatomi. The first Euro-American settlers reached the Cross Plains area in the 1830s. At that time, the village of White Crow, a Ho-Chunk chief, was located in what is now the town of Cross Plains near Black Earth Creek. The town received its name from two military roads—one from Galena to Fort Winnebago, and the other from Prairie du Chien to Green Bay — crossing on a plain or piece of prairie land, about the middle of the town, and hence the name “Cross Plains.” Subsequently, the Madison-Mineral Point stage road



was important shipping route and contributed to the town's growth along with the Chicago-Milwaukee-St. Paul railroad.

A number of sites have been reported in the vicinity of the Ice Age Complex at Cross Plains. These sites represent a range of cultural traditions including Late Archaic (campsite/village), Woodland (mounds, burial sites), and Euro-American (cabin/homestead, farmstead, cemetery, historic debris scatter). Additional sites of unknown pre-historic affiliation have been recorded including rock shelters, campsites/villages, isolated finds, quarries, workshop sites, and lithic scatter. These sites appear to be located primarily along watercourses, particularly Black Earth Creek, and the bluffs adjacent to them. A significant number of sites, many associated with the Ho-Chunk village of White Crow, are found in Cross Plains along Black Earth Creek approximately 1.75 miles NW of the complex's proposed northern boundary.

Very few archeological investigations have taken place within the Ice Age Complex at Cross Plains to date. During the development of the two parking areas at the US Fish and Wildlife Service's Shoveler's Sink property, archeological surveys were completed and no significant resources were identified. A site described as a 'military well' has been reported in the land owned by the Wisconsin DNR west of the NPS-owned property within the Complex.

Archeological surveys and/or monitoring would precede any ground disturbance of unsurveyed lands. Archeological resources eligible for or listed in the national register would be avoided during construction activities.

If previously unknown archeological resources were discovered during construction, all work in the immediate vicinity of the discovery would be halted until the resources are identified and documented. If the resources cannot be preserved in their original location, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer and, as necessary, American Indian tribes. In the unlikely event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during construction, provisions outlined in the *Native American Graves Protection and Repatriation Act of 1990* (25 USC 3001) would be followed. If non-Indian human remains were discovered, standard reporting procedures to the proper authorities would be followed, as would all applicable federal, state, and local laws. Therefore, archeological resources is dismissed as an impact topic.

- **Cultural Landscapes.** According to NPS Director's Order 28: *Cultural Resource Management Guideline*, a cultural landscape is "a reflection of human adaptation and use of natural resources and is often expressed in the way land is organized and divided, patterns of settlement, land use, systems of circulation, and the types of structures that are built. The character of a cultural landscape is defined both by physical materials, such as roads, buildings, walls, and vegetation, and by use reflecting cultural values and traditions." As noted below under "Historic Structures," the Wisconsin state historic preservation officer has determined that the structures on the Wilkie farmstead, as well as the farmstead's associated landscape, are not eligible for listing in the national register. A Native American

migration route that traverses the complex has not been evaluated as a cultural landscape, but there would be negligible, if any, ground disturbance under the proposed alternatives within the pathway of this route, and the topography and views and vistas of the pathway would be unaffected. Therefore, cultural landscapes was dismissed as an impact topic.

- **Historic Structures.** According to NPS Director's Order 28: *Cultural Resource Management Guideline*, a historic structure is a constructed work, consciously created to serve some human activity that is either listed in or eligible to be listed in the National Register of Historic Places. Historic structures are usually immovable, although some have been relocated, and others are mobile by design. Historic structures include buildings and monuments, dams, millraces and canals, nautical vessels, bridges, tunnels and roads, railroad locomotives, rolling stock and track, stockades and fences, defensive works, temple mounds and kivas, ruins of all structural types, and outdoor sculpture.

The only existing structures on Ice Age Complex lands are on the Wilkie farmstead (residence, bank barn with an attached silo, garage, hog-chicken house, Quonset hut, silage crib, well house, and windmill foundation). The Wisconsin state historic preservation officer has determined that the Wilkie farmstead structures and associated landscape are not eligible for listing in the national register. Therefore, historic structures was dismissed as an impact topic.

- **Museum Collections.** According to NPS Director's Order 28: *Cultural Resource Management Guideline*, museum collections are prehistoric and historic objects, artifacts, works of art, archival material, and natural-history specimens collected according to a rational scheme and maintained so they can be preserved, studied, and interpreted for public benefit. There are currently no museum collections for the complex. The site development plan for the NPS-owned area at the core of the complex would provide for appropriate collections storage, if needed. Any museum collections would be acquired, accessioned and cataloged, preserved, protected, and made available for access and use according to NPS standards and guidelines. Therefore, museum collections was dismissed as an impact topic.
- **Ethnographic Resources.** According to NPS Director's Order 28: *Cultural Resource Management Guideline*, ethnographic resources are any "site, structure, object, landscape, or natural resource feature assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it." Ethnographic resources are associated with cultural practices, beliefs, the sense of purpose, or existence of a living community that is rooted in that community's history or is important in maintaining its cultural identity and development as an ethnically distinctive people.

During scoping the tribes traditionally associated with Ice Age Complex lands were apprised by letter of the GMP planning process; those tribes are

Sac and Fox Nation of Oklahoma

Sac and Fox Nation of Missouri in Kansas and Nebraska

Bad River Band of Lake Superior Tribe of Chippewa

Oneida Tribe of Indians in Wisconsin

Red Cliff Band of Lake Superior Chippewa

St. Croix Chippewa Indians of Wisconsin

Forest County Potawatomi Community of Wisconsin

Sokaogon Chippewa Community, Mole Lake Band

Lac du Flambeau Band of Lake Superior Chippewa

Lac Courte Oreilles Band of Lake Superior Chippewa

Sac and Fox Tribe of the Mississippi in Iowa

Stockbridge Munsee Community of Wisconsin

Ho-Chunk Nation

Menominee Indian Tribe of Wisconsin

The tribes were requested to respond with any issues or concerns and were notified of upcoming public meetings. Each of the planning newsletters were also mailed to the tribes. No concerns were expressed during the scoping process, and no requests for meetings were received.

As noted above under “Cultural Landscapes,” there would be negligible, if any, ground disturbance to the Native America migration route that traverses the complex, and the topography and views and vistas of the pathway would be unaffected; thus, ethnographic resources was dismissed as an impact topic.

A copy of this general management plan / environmental impact statement was sent to each tribe for review and comment. The National Park Service would continue to recognize the past and present existence of peoples in the region and the traces of their use as an important part of the cultural environment, and if subsequent issues or concerns were identified, appropriate consultations would be undertaken.

There would be no impacts on archeological resources, cultural landscapes, historic structures, museum collections, and ethnographic resources from actions under the proposed alternatives; therefore, these impact topics were dismissed from analysis.

**Park operations** — The Ice Age Complex is currently undeveloped for visitor use. Currently, park operations are limited to vegetation management, Ice Age Trail construction as land and/or access are acquired, and minimal signage installation. Each action alternative has been designed with the support infrastructure necessary to implement the vision of the alternative. Thus, each alternative would have adequate park operations support, and this impact topic was not analyzed further.

**Environmental justice** — Executive Order 12898 requires that each federal agency shall 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. None of the proposed alternatives would result in disproportionately high or adverse human health or environmental effects on minority populations and low-income populations; thus, this impact topic was not analyzed in this document.

***Air quality, carbon footprint, natural or depletable resources, energy requirements, and conservation potential*** — Proposed activities in the alternatives that would cause air pollution tend to contribute to carbon loading, energy use, and through the use of fossil fuels, to depletion of natural resources. Therefore, these impact topics were considered together in this analysis.

The city of Madison and Dane County generally meet federal air quality standards, and during most days, outdoor air quality is ranked as “good.” At times, however, levels of fine particulate matter do not meet federal standards. Emissions of the criteria pollutants (measured by the *Clean Air Act*) that could result from actions proposed in the alternatives would come from tailpipe emissions from visitor and staff vehicles and construction equipment. Emissions of carbon dioxide would be associated with vehicle traffic (emissions in the immediate area) and the power needs of onsite buildings (emissions at the site of power generation from carbon-based fuels). Whenever feasible, the National Park Service strives to maximize the use of renewable resources and energy and therefore minimize the use of depletable resources. However, it is not possible with today’s technologies to cost-effectively avoid all use of depletable resources in building and operating facilities. Some of the alternatives proposed in this plan include a varying level of construction and would impact natural or depletable resources and energy to a varying extent. While the alternatives in this plan would contribute to these impacts to some extent, their incremental contributions to air quality (locally) and to carbon footprint and resources and energy depletion (globally) would be extremely small. These impact topics were not analyzed in detail.

## RELATIONSHIP OF OTHER PLANNING EFFORTS TO THIS GENERAL MANAGEMENT PLAN

There are two local planning efforts underway that could affect or be affected by this plan. The managers of the Ice Age Complex are coordinating with the teams developing the plans described below.

### U.S. Highway 14 Access Study

The Wisconsin Department of Transportation (WDOT) is currently studying the best way to improve access to U.S. Highway 14, which forms the northern boundary of the complex. As of this writing, the idea in WDOT’s draft plan is to move one access point east and build a frontage road parallel to U.S. Highway 14 on the south side of the highway. There would need to be further consultation with the Wisconsin Department of Transportation in order to ensure adequate access to the site, while minimizing adverse impacts from highway developments.

### Bike Path Along U.S. Highway 14

There have been local efforts in recent years to build a bike path along the section of U.S. Highway 14 that forms the northern boundary of the Ice Age Complex to provide a connection through the town of Cross Plains from the city of Middleton to the town of Mazomanie. The preferred alternative in this draft document is zoned to accommodate this bike path.

### Town of Cross Plains Comprehensive Plan

The recently completed *Town of Cross Plains Comprehensive Plan* (TCP 2009) could influence the future of the Ice Age Complex. This plan seeks to preserve the productive farmlands in the town for continued agricultural use, protect farm operations from conflict with incompatible uses, protect the natural environment, control development, maintain the rural character, and avoid significant expenditure of public funds for urban development.

### Village of Cross Plains Comprehensive Plan

Another plan that could influence the future of the Ice Age Complex is the recently completed *Village of Cross Plains Comprehensive Plan* (VCP 2008). This plan zoned the land in the Ice Age Complex in three ways: agricultural/rural; woodlands/open space; and on lots that currently have private homes, single family/exurban. This zoning is consistent with the alternatives proposed in this general management plan / environmental impact statement.

### Dane County Parks and Open Space Plan

The *Dane County Parks and Open Space Plan* is updated every five years and seeks to identify significant cultural, historical, and natural resources that should be considered for possible protection, preservation, or restoration. Through these continued planning efforts, Dane County may consider a future transfer of ownership and/or management responsibilities to the most suitable agency.

## NEXT STEPS IN THE PLANNING PROCESS

Following distribution of the draft general management plan / environmental impact statement, a 60-day public review and comment period was conducted, after which the NPS planning team evaluated comments from other federal agencies, organizations, businesses, and individuals regarding this plan. Appropriate changes were incorporated into this final general management plan / environmental impact statement. This final document includes letters from governmental agencies and tribes (if applicable); any substantive comments on the draft document; and NPS responses to those comments. Following distribution of this final plan and a 30-day no-action period, a “record of decision” may be prepared that would document the NPS selection of an alternative for implementation. Once it is signed, the plan would then be implemented as funding and staffing allows.

## IMPLEMENTATION OF THE PLAN

The approval of this plan does not guarantee that the funding and staffing needed to implement the plan would be forthcoming. The implementation of the approved plan would depend on future funding, and it could also be affected by factors such as changes in NPS staffing, visitor use patterns, and unanticipated environmental changes. NPS funding levels and servicewide priorities, partnership funds, time, and effort would also influence the plan’s implementation.

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 park, would tier from the desired conditions and long-term goals set forth in this general management plan / environmental impact statement.

## WISCONSIN STATE PROPERTY DESIGNATION

The general management plan will be for the development and management of Cross Plains State Park and Ice Age National Scientific Reserve. Under the preferred alternative, the state’s acreage goal is 1,701 acres. This is the total acreage inside the proposed boundary for publically protected land. Currently, the following are the public ownership acres within the site:

- State ownership (2011): 294 acres
- NPS ownership (2011): 157 acres
- USFWS ownership (2010): 160 acres
- Dane County ownership (2010): 131 acres

*State Statutory Authority:* The authority to acquire and manage land for the Cross Plains State Park and Ice Age National Scientific Reserve is described in sections 23.09, 23.11, 23.14, and 27.01, Wis. Stats.