

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



**Effigy Mounds National Monument
Iowa**

**Final General Management Plan Amendment /
Environmental Impact Statement**

Record of Decision

**UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE**

RECORD OF DECISION

**FINAL GENERAL MANAGEMENT PLAN
ENVIRONMENTAL IMPACT STATEMENT**

Effigy Mounds National Monument

Iowa

INTRODUCTION

The Department of the Interior, National Park Service (NPS) has prepared this Record of Decision (ROD) on the *Final General Management Plan/Environmental Impact Statement* for Effigy Mounds National Monument in accordance with the requirements of the National Environmental Policy Act of 1969, as amended (NEPA), its implementing regulations (40 CFR 1500-1508), and NPS Director's Order 12: *Conservation Planning, Environmental Impact Analysis and Decision-making* and accompanying *DO-12 Handbook*. This Record of Decision includes a description of the background of the project, a statement of the decision made, a listing of measures to minimize environmental harm, synopses of other alternatives considered, the basis for the decision, a description of the environmentally preferable alternative, an overview of public and agency involvement in the decision-making process, and findings on impairment of park resources and values.

BACKGROUND OF THE PROJECT

General management plans are intended to be long-term documents that establish and articulate a management philosophy and framework for decision making and problem solving in the parks. This general management plan is intended to provide guidance for the next 15 to 20 years.

Actions directed by general management plans or in subsequent implementation plans are accomplished over time. Budget restrictions, requirements for additional data or regulatory compliance, and competing national park system priorities prevent immediate implementation of many actions.

The purposes of this general management plan are as follows:

- Confirm the purpose, significance, and fundamental resources and values of Effigy Mounds National Monument.
- Clearly define the resource conditions and visitor uses and experiences to be achieved in the national monument. Provide a framework for managers to use when making decisions about how to best protect resources, how to provide quality visitor uses and experiences, how to manage visitor use, and what kinds of facilities are needed and appropriate in or near the monument.

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

During the development of this general management plan, the National Park Service closely examined past construction activities and practices in the park, particularly those with the potential to harm the archeological resources the park was created to protect. To ensure the protection of the resources, the National Park Service has spent a significant amount of time reassessing the proper role, function, and form of development in a landscape dominated by the mounds. As a result, a *Revised Draft General Management Plan* was released to the public that reduced development.

DECISION (SELECTED ACTION)

The National Park Service has selected alternative B, the preferred alternative, as described in the *Final General Management Plan / Environmental Impact Statement* issued in March 2013. The complete description of the selected alternative can be found on pages 66–69 in the *Final General Management Plan / Environmental Impact Statement*. Elements common to all of the alternatives can be found on pages 55–56. Elements common to both action alternatives can be found on pages 63–65. A summary of the key points of the selected alternative is provided below.

Alternative B will provide enhanced natural and cultural resource protection, opportunities for increased understanding of the monument, and expanded opportunities for visitors to experience relative quiet and solitude. Due to the sensitivity and irreplaceable nature of the mounds and cultural landscape, the National Park Service will accomplish these goals with the minimum amount of development.

The landscape and visitor facilities will support a contemplative atmosphere with opportunities for visitors to spend time reflecting on the lives and legacy of the moundbuilders and the sacred nature of the site today. Education and interpretation of the natural resources of the park will be expanded.

The natural setting created by preserving or restoring landscapes will provide a connection between the moundbuilding cultures and the environment that shaped their lives and beliefs. This will be especially enhanced through the extensive backcountry zone under this alternative. Visitor experiences throughout the monument will be primarily self-guided on a variety of trails in a quiet, contemplative setting to maintain an atmosphere of respect toward the sacred nature of the monument.

Under this alternative, the diversity of visitor trail experiences will be expanded from that currently offered at the monument.

Consistent with the resource conditions and visitor experiences defined in the backcountry zone, visitors to some areas of the monument will be able to experience a walk on marked trails through natural, undeveloped landscapes and view some mounds in a more natural state (with only some woody materials removed for preservation purposes).

Providing access to mounds that are in different conditions will allow an expansion of existing interpretive opportunities and an increased understanding of the monument's fundamental resources. A trail connecting the Yellow River Bridge and North Unit trails to the South Unit trails will be developed in consultation with the Iowa state historic preservation officer, Office of the State Archaeologist, and traditionally associated American Indian tribes.

Those portions of the monument's museum collections and archives that are in long-term storage and not on display in the visitor center are inaccessible to the public, including to researchers; these will either be (1) moved out of the basement of the visitor center to a more secure location outside of the monument where they will receive better care while remaining accessible to legitimate researchers; or (2) the current facility will be improved and staffing will be increased to more closely meet NPS museum collections standards.

In this alternative, the majority of the monument will be in the backcountry zone. The area around the visitor center will be zoned as development, and the most heavily visited trails and mound groups will be located in the discovery zone.

While the Riverfront Tract will be included within the monument's authorized boundary upon acquisition, it is not currently owned by the National Park Service. If this tract were acquired, it would be managed in the backcountry zone.

In the backcountry zone, the emphasis will be on the protection of resources in a natural setting. There will be minimal development and the visitor experience will be one of quiet and solitude. The emphasis of the development zone will be to provide the facilities and amenities necessary for visitor services and monument operations. In the discovery zone, the emphasis will be on enhancing visitor access and understanding of the mounds, while still maintaining a natural setting.

Boundary Adjustments

Four boundary adjustments are recommended to carry out the purposes of the national monument. The National Park Service could best protect some of the lands described here through ownership; other land could better be protected through the purchase of interests in the land, such as easements, or through other agreements. The best mechanism of protection will be determined in conversation with willing sellers and is not discussed here. Some adjustments of the monument's boundary will require legislative authorization from Congress. Figure 4 on page 48 of the general management plan shows the location of the property tracts described below.

Tract 1 is adjacent to the part of the South Unit, which preserves the Marching Bear Mound Group. It is an approximately 20-acre parcel of agricultural land currently in row crops and hay rotation. Inclusion of this tract in the monument's boundary is necessary in order to protect significant resources and values and to enhance opportunities for public enjoyment related to monument purpose. Tract 1 lies within approximately 20 feet of the Marching Bear Mound Group. Development of this tract could threaten this fundamental park resource.

Tract 2 is an approximately 120-acre parcel mostly on the sides and top of a bluff over the Yellow River. The tract consists of a mixture of open pasture, fields, and steep wooded slopes and has been used for farming and logging. In a narrow area between wetlands and bluffs on the west side of Founders Pond, a county road weaves in and out of the current park boundary and tract 2. Inclusion of this tract in the monument's boundary is necessary in order to protect significant resources and values and to enhance opportunities for public enjoyment related to monument purpose. The adjacent part of the monument is included in the backcountry zone in the selected action where cultural resources are preserved in place in good condition and natural resources are managed to be preserved or be restored to an approximate appearance of the landscape associated with the moundbuilding era.

Tract 3 includes approximately 120 acres of land south and west of the monument. The tract consists mostly of steep wooded slopes punctuated by the valley formed by Dousman Creek and is mostly used for production forestry (logging). A county road weaves in and out of the current park boundary and this tract. Inclusion of this tract in the monument's boundary is necessary in order to

protect significant resources and values and to enhance opportunities for public enjoyment related to monument purpose. The part of the monument adjacent to this tract is zoned to protect the natural setting of the mounds and the ability of visitors to experience them in this setting. If tract 3 continues to be used for commercial forestry and/or is developed, it will be difficult for the park to achieve desired conditions in the adjacent part of the monument.

Tract 4 is an approximately 30-acre tract just west of the railroad corridor between the western border of the Sny Magill Unit and Clayton County Road X56. This field is used for agricultural purposes, but most of it is seasonally flooded, which results in reduced crop yields. Adjusting the boundary to include this property will address operational and management issues. The selected alternative envisions this property to house a small visitor contact station and possibly parking for visitors in high-profile vehicles that cannot currently access the Sny Magill Unit given the low overhead railroad underpass. Because trail access from this visitor station to the mounds at Sny Magill will be provided, including this tract in the boundary will also enhance opportunities for public enjoyment related to park purpose.

Mitigating Measures/Monitoring

A variety of mitigation measures will be employed as part of the implementation of the selected alternative to avoid or minimize harm to park natural and cultural resources, wilderness, and visitor experiences. These measures include best management practices for construction, conservation measures, and other known techniques from past and present work in and around the park. The mitigative measures cover cultural resources, air quality, soils, threatened and endangered species and species of concern, vegetation, water resources, wildlife, wetlands, natural soundscapes, and scenic resources. The implementation of a compliance-monitoring program will include reporting protocols to ensure activities stay within the parameters of NEPA and National Historic Preservation Act compliance documents, U.S. Army Corps of Engineers section 404 permits, and other applicable law, policy, and regulation. The compliance-monitoring program will oversee these mitigative measures and will include reporting protocols.

Specific mitigative measures for cultural resources include but are not limited to: continuing to develop inventories and oversee research on cultural resources; subjecting projects to site-specific planning and compliance; inventorying all unsurveyed areas of the park; documenting and identifying treatments for cultural and ethnographic landscapes; conducting archeological site monitoring and routine protections; and continuing ongoing consultations with traditionally associated American Indian tribes. Specific mitigative measures for natural resources include, but are not limited to: implementing a dust abatement program; building new facilities on soils suitable for development; conducting surveys for rare, threatened and endangered species; locating and designing facilities to avoid adverse effects on rare, threatened, and endangered species; monitoring areas used by visitors for signs of native vegetation disturbance; preventing water pollution during construction by using best management practices such as erosion control measures; minimizing noise impacts from construction by using quieter technology; and providing vegetative screening where appropriate to hide intrusions into the natural scene. A full description of measures to avoid or minimize environmental harm is listed in the *Final General Management Plan / Environmental Impact Statement* (pages 84-87).

OTHER ALTERNATIVES CONSIDERED

Two other alternatives for managing Effigy Mounds National Monument were evaluated in the draft and final environmental impact statements.

Alternative A, the no-action alternative, describes a continuation of existing management at the park and provides a baseline for evaluating the changes and impacts of the other alternatives—the National Park Service would continue to manage Effigy Mounds National Monument as it has been managed since the 1990 general management plan and 1999 amendment were approved. There would be no major changes to monument operations or visitor services. All cultural sites would continue to be maintained and preserved using current practices. The mounds would continue to be protected and preserved. Management treatments would vary according to the cover and condition of individual mounds. Historic sites would be protected from degradation but not otherwise managed. The museum collections and archives would continue to be stored in the visitor center basement, which does not meet NPS museum collections standards. The Heritage Addition would not have a long-term plan in place. The North, South, and Sny Magill units would continue to be managed as they are currently.

Alternative A would not provide as much resource protection and beneficial management as the other alternatives. This alternative lacks the range of diversity and individual choices found in the other alternatives. More resource impacts would be expected with increasing visitor use levels in this alternative.

Alternative C would provide enhanced and expanded opportunities for visitors to experience the monument and increase their understanding of the moundbuilders while protecting and preserving natural and cultural resources. A major component of this alternative would be the establishment of a mound research center in leased space near the monument to collect and share scholarly information, maintenance methods, and preservation techniques. Those portions of the monument's museum collections and archives that are in long-term storage and not on display in the visitor center are inaccessible to the public, including to researchers; therefore, they would be moved out of the basement of the visitor center to a more secure location within the research center. The collections would remain accessible to legitimate researchers. As a means of enhancing the visitor experience, public access to various units of the monument would be improved in this alternative. More of the monument would be in the discovery zone, allowing for more visitor amenities. The landscape and visitor facilities would provide opportunities for the public to learn about the lives and legacy of the moundbuilders and the sacred nature of the site today. Visitor experiences throughout the monument would be on developed trails that would allow visitors to learn about the mounds and their makers. Because more of the monument would be in the discovery zone in this alternative, visitors would be likely to encounter other visitors or park staff during their visit.

Alternative C would provide many of the same advantages as does the selected alternative. However, the zoning designations in alternative C would not allow for the same level of resource protection that the selected alternative provides.

BASIS FOR DECISION

In reaching its decision to select the preferred alternative, the National Park Service considered the purposes for which Effigy Mounds National Monument was established and other laws and policies that apply to the management of the park monument. The National Park Service also gave considerable deliberation to the level of development appropriate for Effigy Mounds National Monument, given the dense abundance of cultural resources and servicewide interest in reducing

noncritical infrastructure. Public and tribal comments were carefully considered during the planning process.

Alternative B is the alternative that best preserves the outstanding representative examples of significant phases of prehistoric Indian moundbuilding cultures in the American Midwest and the wildlife and natural values within the monument, two of the three purposes for which the monument was established. Alternative B achieves this higher level of protection through the management zoning and more limited trail development. The alternative also provides broader access to mound research and digitized portions of the collections through the development of the virtual research center, thereby better fulfilling the third purpose (scientific study and appreciation) for which the monument was established.

The National Park Service believes that alternative B best supports the park's purposes and provides the greatest advantages of all the alternatives considered. Based on the environmental impact analysis, this alternative provides a high degree of natural and cultural resource protection while also providing improved opportunities for visitors.

ENVIRONMENTALLY PREFERABLE ALTERNATIVE

The environmentally preferable alternative is defined as "the alternative that will promote national environmental policy as expressed in section 101 of the National Environmental Policy Act." 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 a variety of individual choices
5. achieve a balance between population and resource use which would permit high standards of living and a wide sharing of life's amenities
6. enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources

The environmentally preferable alternative is the same as the NPS preferred alternative (alternative B). This alternative will more fully satisfy all the national environmental criteria than would alternatives A or C.

Alternative B will expand visitor use opportunities and improve research and management of mounds through the new virtual research center, new trails, and the Sny Magill visitor contact station, thus providing for a wide range of negligible and beneficial uses of the environment (meeting criteria 3 and 5). This alternative will also meet criteria 2 and 4 through its continued protection of the undeveloped areas of the national monument and the emphasis on preserving entire landscapes.

Alternatives B and C are similar; however, in alternative B, the monument is primarily zoned for a more backcountry experience with less development (trails and signs). Thus, alternative B will

provide a high level of protection of natural and cultural resources. The alternative will also maintain an environment that supports a diversity and variety of individual choices and will integrate resource protection with an appropriate range of visitor use.

PUBLIC AND AGENCY INVOLVEMENT

Public Involvement and Response to Comments

Public meetings and newsletters were used to keep the public informed and involved in the planning process for Effigy Mounds National Monument. A mailing list was compiled that consisted of members of governmental agencies, organizations, businesses, legislators, local governments, and interested citizens.

The notice of intent to prepare an environmental impact statement was published in the *Federal Register* on June 6, 2005. This was followed by the first newsletter that introduced the planning effort and invited the public to participate in scoping (information gathering). Public meetings held during November 2005 in McGregor, Iowa, and Prairie du Chien, Wisconsin, were attended by 25 people. In addition, 31 written comments were received by the planning team.

A second newsletter summarizing the results of the public scoping effort was sent in early 2006.

The preliminary alternative concepts for managing the monument were delivered in a third newsletter that was distributed in November 2006. Public meetings on the preliminary alternatives were held in Prairie du Chien, Wisconsin, and McGregor, Iowa. A total of 12 people attended the two meetings and 24 written comments were received. There was some discussion on the details of the alternatives in the written and oral comments received at the meetings.

NPS representatives also met with representatives of city and county governments, and state agencies several times throughout the process.

The *Draft General Management Plan* for Effigy Mounds National Monument was made available for public review and comment in April 2009 for 60 days. A public meeting to receive comments on the draft plan was held at the Effigy Mounds visitor center on the evening of May 19, 2009. Eight members of the public attended that meeting and provided comments that were mostly focused on protection of resources and boundary issues.

The *Revised Draft General Management Plan* was made available for public review and comment in August 2011 for 60 days. The planning team arranged and conducted four public open houses on the *Revised Draft General Management Plan / Environmental Impact Statement* from September 20 through September 21, 2011. These meetings were held in Prairie du Chien, Wisconsin; McGregor, Iowa; and at the Effigy Mounds National Monument visitor center. The meetings were attended by approximately 14 members of the public.

Eleven separate written comments were received during the comment period, including letters and email comments. Additionally, one comment was provided verbally at the public meeting. They are reproduced on the following pages along with NPS responses to substantive comments. Those correspondences came from five different states (Illinois, Iowa, Kansas, Wisconsin, and Wyoming). State, federal, nongovernmental organizations or firms, and tribes that shared their comments include the U.S. Environmental Protection Agency, Iowa State Historic Preservation Office, Iowa Tribe of Kansas and Nebraska, White Pine Group of the Sierra Club, Mississippi Valley Archaeology Center, and Logan Museum of Anthropology. All of the written comments on the general management plan are reproduced in table 12 (pages 195–217), and responses are provided to

substantive comments. Many nonsubstantive comments are also addressed in this section if the comment addressed controversial or sensitive topic matter.

Where appropriate, the text in the *Final General Management Plan / Environmental Impact Statement* has been revised to address the comments. These changes are identified in the NPS responses. The *Final General Management Plan / Environmental Impact Statement* was printed in February 2015.

Consultation with Other Agencies/Officials and Organizations

U.S. Fish and Wildlife Service, Section 7 Consultation. During preparation of this document, NPS staff coordinated informally with the U.S. Fish and Wildlife Service (USFWS) field office for this area in Rock Island, Illinois. The list of threatened and endangered species was compiled using information received from the U.S. Fish and Wildlife Service and rechecked March 19, 2012.

In accordance with section 7 of the Endangered Species Act and relevant regulations at 50 CFR part 402, the National Park Service determined that implementing the preferred alternative in this general management plan is not likely to result in adverse effects to listed species and so would not require formal consultation. A copy of this management plan was sent to the USFWS field office and the Iowa Department of Natural Resources. In a letter dated April 23, 2012, the USFWS concurred with our determination that the GMP would not likely adversely affect threatened and/or endangered species.

Correspondence with the U.S. Fish and Wildlife Service is included in appendix B of the *Final General Management Plan / Environmental Impact Statement*.

Iowa State Historic Preservation Officer, Section 106 Consultation. Agencies that have direct or indirect jurisdiction over historic properties are required by section 106 of the National Historic Preservation Act to take into account 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 Iowa state historic preservation officer, and the Advisory Council on Historic Preservation in January 2005, inviting their participation in the planning process.

A copy of the *Revised Draft General Management Plan* was sent to the Iowa state historic preservation officer. Comments from the Iowa state historic preservation officer were received and addressed. A copy of the internal draft of the *Final General Management Plan / Environmental Impact Statement* was sent to the Office of the State Archaeologist and the Iowa state historic preservation officer.

American Indian Tribes. The National Park Service recognizes that indigenous peoples have traditional interests and rights in lands now under NPS management. Related American Indian concerns are sought through consultations. The need for government-to-government American Indian consultations stems from the historic power of Congress to make treaties with American Indian tribes as sovereign nations. Consultations with American Indians are required by various federal laws, executive orders, regulations, and policies. They are needed, for example, to comply with section 106 of the National Historic Preservation Act. Implementing regulations of the Council on Environmental Quality for National Environmental Policy Act also call for American Indian consultations.

Letters were sent to the following American Indian groups to invite their participation in several steps of the planning process:

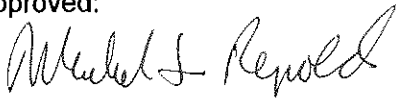
- Flandreau Santee Sioux Tribe of South Dakota
- Ho-Chunk Nation of Wisconsin (formerly the Wisconsin Winnebago Tribe)
- Iowa Tribe of Kansas and Nebraska
- Iowa Tribe of Oklahoma
- Lower Sioux Indian Community in the State of Minnesota
- Otoe-Missouria Tribe of Indians, Oklahoma
- Prairie Island Indian Community in the State of Minnesota
- Sac & Fox Nation of Missouri in Kansas and Nebraska
- Sac & Fox Nation, Oklahoma
- Sac & Fox Tribe of the Mississippi in Iowa
- Santee Sioux Nation, Nebraska (formerly the Santee Sioux Tribe of the Santee Reservation of Nebraska)
- Shakopee Mdewakanton Sioux Community of Minnesota
- Sisseton-Wahpeton Oyate of the Lake Traverse Reservation, South Dakota (formerly the Sisseton-Wahpeton Sioux Tribe of the Lake Traverse Reservation)
- Spirit Lake Tribe, North Dakota
- Upper Sioux Community, Minnesota
- Winnebago Tribe of Nebraska

The tribes were briefed on the scope of the planning project and the preliminary alternatives by newsletter and follow-up telephone calls soliciting comments. Conversations have been ongoing throughout the planning process to inform the tribes about the progress of the plan and identify how and to what extent they would like to be involved. The traditionally associated American Indian tribes were given an opportunity to review and comment on the *Revised Draft General Management Plan* prior to the public release, and a consultation meeting to solicit input was held on June 30, 2011. Similarly, tribes were given an opportunity to comment on the *Final General Management Plan* prior to public release, and a consultation meeting to solicit input was held on June 13, 2012. Tribes were primarily concerned about the potential to move museum collections off-site and the possibility of increased development and access to traditional cultural properties. These concerns were taken into consideration in the selection of the preferred alternative that limits trail development, utilizes management zoning to protect cultural resources, and prioritizes retaining museum collections on-site or nearby.

CONCLUSION

The National Park Service has selected the preferred alternative (alternative B) as its general management plan for Effigy Mounds National Monument. Among the alternatives considered, this alternative best protects the park's cultural and natural resources while also providing a range of quality visitor experiences, meets NPS goals for managing the park, and meets national environmental policy goals. As described in the "Mitigation" section of the plan, all practical means to avoid or minimize environmental harm from the selected alternative have been adopted. As noted in the accompanying attachment, there will be no impairment of the park's resources or values. After a review of these effects, the alternative selected for implementation will not impair park resources or values and will not violate the NPS Organic Act. The official responsible for this decision is the NPS Regional Director, Midwest Region.

Approved:



Date: 5.29.2013

Michael T. Reynolds
Regional Director
Midwest Region, National Park Service

APPENDIX: FINDINGS ON IMPAIRMENT OF PARK RESOURCES AND VALUES

BACKGROUND

National Park Service *Management Policies 2006* requires analysis of potential effects to determine whether or not actions would impair park resources. 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, adversely impacting park resources and values.

However, the laws do give the National Park Service the management discretion to allow impacts to park 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 the management discretion to allow certain impacts within park, that discretion is limited by the statutory requirement that the National Park Service must leave park 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 park resources or values, including the opportunities that otherwise would be present for the enjoyment of these resources or values. An impact is more likely to constitute an impairment if it falls within the following criteria, but these criteria do not exclude the possibility of an action resulting in impairment even if the resource is not identified under the three criteria. An impact would be more likely to constitute an impairment when there is a major or severe adverse effect upon a resource or value whose conservation is

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park
- key to the natural or cultural integrity of the park
- identified as a goal in the park's general management plan or other relevant NPS planning documents

An impact would be less likely to constitute an impairment if it is an unavoidable result of an action necessary to pursue or restore the integrity of park resources or values and it cannot be further mitigated.

The park resources and values that are subject to the no-impairment standard include:

- the park's scenery, natural and historic objects, and wildlife, and the processes and conditions that sustain them, including, to the extent present in the park: the ecological, biological, and physical processes that created the park and continue to act upon it; scenic features; natural visibility, both in daytime and at night; natural landscapes; natural soundscapes and smells; water and air resources; soils; geological resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structures, and objects; museum collections; and native plants and animals
- appropriate opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing them

- the park's role in contributing to the national dignity, the high public value and integrity, and the superlative environmental quality of the national park system, and the benefit and inspiration provided to the American people by the national park system
- any additional attributes encompassed by the specific values and purposes for which the park was established

Impairment may result from NPS activities in managing the park, visitor activities, or activities undertaken by concessioners, contractors, and others operating in the park. The NPS threshold for considering whether there could be an impairment is based on whether an action would have major (or significant) effects.

IMPAIRMENT FINDINGS

A determination of impairment is made for each of the resource impact topics carried forward and analyzed in the environmental impact statement for the preferred alternative. The description of monument significance in chapter 1 of the *Final General Management Plan / Environmental Impact Statement* was used as a basis for determining if a resource is

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the monument
- key to the natural or cultural integrity of the monument or to opportunities for enjoyment of the monument
- identified in the monument's general management plan or other relevant NPS planning documents as being of significance

Impairment findings are not necessary for visitor experience, socioeconomics, environmental justice, land use, and monument operations, etc., because impairment findings relate to monument resources and values. These impact topics are not generally considered monument resources or values according to the Organic Act, and cannot be impaired the same way that an action could impair monument resources and values. Impact topics identified as meeting any of these three criteria include archeological resources; cultural landscapes; museum collections; ethnographic resources; wild and scenic rivers; and vegetation, fish, and wildlife.

CULTURAL RESOURCE IMPAIRMENT ANALYSIS

Archeological Resources

The monument was established expressly for preserving archeological resources relating to mound-building activities. Therefore, archeological resources are critical to fulfill the purposes for which the monument was established and are key to the cultural integrity of the monument. Although some resources may have been damaged during the early development of the monument, currently most of these resources remain intact.

Trail development, roadwork, construction, and mound maintenance proposed under the preferred alternative could have adverse impacts to these resources; however, these impacts will be reduced to negligible to minor through avoidance, mitigation, and site design. In addition, the impacts will be limited to localized areas within the monument. Several of the impacts, such as mound maintenance and trail construction, will have beneficial effects on resources because they will stabilize the mounds and reduce foot traffic on the mounds. The actions proposed under the preferred alternative will not result in impairment because adverse impacts will be avoided or reduced through avoidance, mitigation, and site design.

Cultural Landscapes

The two known cultural landscapes (Yellow River Cultural Landscape and Sny Magill Cultural Landscape) are fundamental resources that directly support the monument's purpose and significance. Their integrity has been slightly compromised by construction in the monument. However, the actions to restore the landscapes to their mound-building-era appearance proposed in the selected alternative will restore much of this lost integrity. The National Park Service will implement resource management policies that preserve the natural resource values and culturally significant character-defining patterns and features of landscapes that are listed in or determined eligible for listing in the National Register of Historic Places.

Trail and roadwork, construction, and mound maintenance proposed under the selected alternative could have minor adverse impacts to the cultural landscapes. However, this will not result in impairment because the National Park Service will follow all appropriate standards and guidelines for the treatment of cultural landscapes and the intensities of potential impacts will be eliminated or greatly reduced through mitigation and site design.

Museum Collections

The monument's collections include original documents, photographs, and artifact collections that document the important contributions of early investigations and support ongoing studies in paleontology, natural history, geology, history, and ethnography. The monument's archives and museum collections are necessary to fulfill the purposes for which the monument was established and are a fundamental, or key, resource.

Under the selected action, the monument will improve the existing museum collections storage to meet NPS museum collections standards through an investment in the facility and an increase in staffing. If the monument is unable to meet NPS museum collections standards, the monument will consider moving the museum collections to a facility outside of the monument. There would be no impairment because the monument's museum collections will be acquired, accessioned and cataloged, preserved, protected, and made available for access and use according to NPS standards and guidelines.

Ethnographic Resources

The monument contains ethnographic resources (mounds, land, trees, landscapes, etc.) that continue to have traditional importance to tribes traditionally associated with the monument. Ethnographic resources are necessary to fulfill the purposes for which the monument was established and are key to the cultural integrity of the monument.

The activities defined in the selected action will not affect tribal access to the monument or limit their ability to conduct traditional practices. Most actions proposed under the preferred alternative—restoration of the ecosystem, maintenance of viewsheds and soundscapes, sensitive interpretation of the mounds, etc.—will result in beneficial effects to ethnographic resources. Some resource management activities will result in minor, short-term, adverse impacts that will be reversible. The NPS will continue to consult with associated American Indian tribes to develop and accomplish the programs of the monument in a way that respects the beliefs, traditions, and other cultural values of the American Indian tribes who have ancestral ties to the monument lands. Therefore, there will be no impairment of ethnographic resources as a result of implementation of the preferred alternative.

NATURAL RESOURCE IMPAIRMENT ANALYSIS

Soils

Under the selected alternative, a portion of the trail at Sny Magill will be improved, trails will be constructed in the Heritage Addition and South Unit, some logging roads will be converted to trails, and a visitor contact station will be built on disturbed ground on acquired land. These actions could result in removal or displacement of topsoil during construction and changes to erosion. Potential long-term compaction and erosion from implementing the selected alternative are not significant, so there is no impairment of this resource.

Wild and Scenic Rivers

The study that placed the Yellow River in the *Nationwide Rivers Inventory* found it to be free flowing and to possess the following outstandingly remarkable values: scenery, recreation, geology, wildlife, history, and culture. As part of this general management plan, the 3.5-mile segment of the Yellow River within the boundaries of the national monument was determined to be eligible and suitable for inclusion in national wild and scenic rivers system. The Yellow River is also an important resource for the purposes of the general management plan.

The selected alternative will not result in any changes to current situations affecting the wild and scenic rivers suitability characteristics of the Yellow River. Existing conditions and influences on the outstandingly remarkable values identified for the river will continue as they are now. Because the selected alternative contains no actions that will affect the values that make the Yellow River suitable for designation, there will be no impairment of this resource.

Vegetation, Fish, and Wildlife

The native plant and animal communities associated with the moundbuilding era were a result of the topography and climate found in the geologically rare Driftless Area of the Upper Midwest. This environment produced habitats and microhabitats created by north-facing slopes and the influence of the river valley that support extensive flora and fauna diversity. The monument contains an assemblage of plants found nowhere else in Iowa as well as diverse wildlife and fish populations. Native biotic communities are fundamental resources that directly support the monument's purpose and significance.

The selected alternative will result in a small change in the level of development at the monument that could affect vegetation, fish, and wildlife as follows. A small parking area and trailhead will be constructed off the highway in the north of the Heritage Addition. This will result in the loss of vegetation and potential wildlife habitat of about one acre, resulting in long-term, minor, adverse impacts. An improved trail will be constructed at the Sny Magill Unit and other trails will be constructed in the South Unit. Construction of the trails could result in the loss of vegetation and habitat, but because this will involve a small area (about one-half acre each), the adverse impacts will be both short-term and long-term, but negligible. A small visitor contact station will be built on disturbed ground on acquired land and will have no new effect on the monument's vegetation, fish, or wildlife.

The impacts of implementing the preferred alternative will not be at the level that would constitute impairment of the monument's vegetation, fish, or wildlife.

Special Status Species

Consultation with the U.S. Fish and Wildlife Service identified a number of federal threatened, endangered, or species of concern that warrants the inclusion of this topic in this *Final General Management Plan / Environmental Impact Statement*. Some species on this list were dismissed from detailed analysis because they do not exist in the monument or will not be affected by any proposed actions. The monument does provide habitat for several state and federally listed species including red-shouldered hawks, bald eagles, peregrine falcons, Higgins-eye pearly mussels, purple fringed orchids, and jeweled shooting stars. Viable populations of special status species are key to the natural integrity of the monument.

Construction and other actions proposed under the selected alternative will not occur in known habitat for any of the listed animal species. Areas proposed for construction will be cleared by a qualified biologist to mitigate potential impacts to listed plant species. The selected alternative will have only beneficial impacts on aquatic species because of additional protective measures and possible Wild and Scenic River designation. Therefore, the selected alternative will not result in impairment of special status species.

Visual Resources / Viewsheds

Impacts to viewsheds will occur primarily during the construction of visitor trails under the selected alternative. These impacts will be greatest during and immediately after construction of these trails as changes occur to the line, form, and texture of the natural landscape. Once vegetation regrows around the trails, these impacts will become less noticeable. There is no impairment to the Effigy Mounds National Monument visual resources/viewsheds.

SUMMARY

As described above and in the environmental impact statement, adverse impacts anticipated as a result of implementing the selected alternative will not rise to levels that would constitute impairment of a resource or value whose conservation is necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the monument, key to the natural or cultural integrity of the monument or to opportunities for enjoyment of the monument, or identified as significant in the monument's general management plan or other relevant NPS planning documents.

