



Waco Mammoth Site Special Resource Study

We are pleased to share with you an update on the progress of the National Park Service's (NPS) special resource study of the Waco Mammoth Site. The study team would like to thank all the participants who have previously provided input on their future visions for this very special resource. We are again asking for your assistance and input.

This newsletter outlines the study team's resource evaluation and initial findings of significance, suitability, and feasibility of the Waco Mammoth Site for consideration as a new unit of the national park system. The newsletter also outlines an initial range of preliminary management alternative concepts currently under consideration by the team. We need your help to further refine these alternatives to ensure that a full array of management options will be considered in this process. Your participation is an important component of the special resource study effort, and as such, we would like to hear your thoughts on the future management possibilities for this very special resource. Please consider using the enclosed mail-back response form to share your thoughts with the study team.

What is a Special Resource Study?

On December 16, 2002, Public Law 107-341 was established. It directs the secretary of the interior, in consultation with the state of Texas, the city of Waco, and other appropriate organizations, to conduct a special resource study to determine the national significance, suitability, and feasibility of designating the Waco Mammoth Site as a new unit of the national park system.

Special resource studies are initiated at the direction of Congress. Studies can evaluate a number of things, with specific focus dictated by the language of the legislation. In the case of the Waco Mammoth Site, Congress specifically requested that a study be conducted to evaluate the site's potential for inclusion as a new unit of the national park system.

To receive a favorable recommendation from the National Park Service, a proposed addition to the national park system must (1) possess nationally significant resources, (2) be a suitable addition to the system, (3) be a feasible addition to the system, and (4) require direct management by the National Park Service instead of protection by another public agency or the private sector.

Update on Study Progress

On December 7, 2006, an interim report detailing the resource evaluation and study team's initial findings for the significance, suitability, and feasibility of the Waco Mammoth Site was submitted to NPS leadership for consideration and review. A number of internal meetings and presentations were conducted between the study team and NPS colleagues, which culminated

in an approval from NPS leadership to proceed with the second phase of the study. This phase includes evaluating the fourth criterion and determining whether the resource requires direct NPS management instead of protection by another public agency or the private sector. An abbreviated summary of the study team's findings is presented on the following pages.

Special Resource Study Time Line

Step	Planning Activity	Dates	Public Involvement Opportunities
1	Initiate Project: Identify the project scope and issues. Seek public input on the process.	Winter 2005-2006	Completed
2	Evaluate National Significance, Suitability, and Feasibility: The study team consults with the paleontological community and other subject matter experts to determine the site's level of significance, uniqueness, and manageability to become a part of the national park system.	Winter 2006-2007	Completed
3	Identify Future Management Alternatives: The study team explores a preliminary range of management options for the site. A newsletter outlining the preliminary range is prepared and distributed to the public for its review.	Summer 2007	Review and submit your comments
4	Publish Study Document and Distribute for Public Review: The study document evaluates national significance, suitability, and feasibility; develops management alternatives; and analyses the associated impacts of each alternative. The study is published and distributed for public and agency review and comment.	Fall 2007	Attend public meeting, review study report, and submit your comments.
5	Transmit Study Report and Recommendation to Congress: The study document, summary and analysis of public and agency comment, and NPS recommendation are transmitted to Congress.	Winter 2007-2008	

Preliminary Evaluation of National Significance

For the resources of the Waco Mammoth Site to be considered nationally significant, they must meet four standards: 1) be an outstanding example of a particular resource type; 2) possess exceptional value or quality in illustrating or interpreting the natural or cultural themes of our nation's heritage; 3) offer superlative opportunities for recreation, public use and enjoyment, or scientific study; and 4) retain a high degree of integrity as a true, accurate, and relatively unspoiled example of the resource.

It is important to note that the special resources of the Waco Mammoth Site encompass more than just the "site;" in fact, the special resources of the Waco Mammoth Site include four *fundamental resource components*: 1) the geologic context and discovery site, 2) the *in situ* specimens, 3) the collected specimens, and 4) the archival records.

The study team invited a panel of paleontological and other scientific experts with knowledge in Pleistocene resources, Columbian mammoth fossil records, fossil preservation techniques, public interpretation of paleontological resources, and NPS fossil sites to help document the site's significance. Based on this input, the study team developed the following summary statements

addressing each of the four standards needed for meeting national significance:

1) Outstanding example of a particular resource type

The Waco Mammoth Site contains the first recorded evidence of a **nursery herd** of Pleistocene Columbian mammoths found in the United States. The site is further unique in that the nature of the herd's preservation suggests evidence of **group behavior** and **survival instincts** during a naturally occurring catastrophic event.

2) Exceptional value in illustrating a natural theme

The mammoth herd, as well as the other recorded Pleistocene faunal remains, provides an important opportunity for enhancing the interpretation and public understanding of a snapshot representation of biota existing during the late Pleistocene along the interface of the Great Plains and Gulf Coastal Plains physiographic provinces.

3) Superlative opportunity for public enjoyment or scientific study

The resources of the Waco Mammoth Site currently offer

superlative opportunities for public use and enjoyment and scientific study. On-going and future research of the resource will continue to interpret the site for the benefit of the scientific community and general public.

The resource offers opportunities for scientific comparison with other naturally occurring mammoth sites, Paleo-Indian mammoth kill sites, and modern-day elephant herd behavior and dynamics. The resource also provides opportunities for public enjoyment and enhanced understanding of earth sciences.

4) Retains a high degree of integrity

The resources of the Waco Mammoth Site retain a high degree of integrity, as all four fundamental resource components remain intact. The excavation and curation of the entire resource has been conducted by a single institution (Baylor University), unlike many other paleontological sites where collections are dispersed to a variety of locations.

Preliminary findings of the study: The Waco Mammoth Site meets these four standards and is considered a nationally significant resource.

Preliminary Evaluation of Suitability

For the Waco Mammoth Site to be considered a suitable candidate for inclusion into the national park system, the site must represent a natural resource type that is not already adequately represented in the national park system, or is not comparably represented and protected for public enjoyment by other federal agencies; tribal, state, or local governments; or the private sector.

The study team first examined whether this resource type is already adequately represented at other national park system units. Paleontological resources are found in more than 180 NPS units and span the entire range of geological time from the Precambrian to the Pleistocene. However, only eight parks have been specifically set aside for the purpose of preserving and interpreting their fossil concentrations. Currently, the national park system does not include a unit specifically set aside for preserving and interpreting the paleontological story of the Pleistocene. While 14 NPS units have recorded Pleistocene mammoth remains, they are incidental to the criteria for the parks' creation. Most of these finds represent isolated teeth, tusk, and/or bone fragments. Only two units yielded fully articulated mammoth remains, and only one yielded multiple Columbian mammoth skeletons. Those resources were excavated and shipped to a museum 460 miles away.

Looking at comparable resources found outside the national park system, there are thousands of recorded sites in North America yielding fossil resources related to mammoth species. However, fewer than 25 sites represent natural accumulations of multiple, articulated Columbian mammoth remains.

Many of these sites contain fossils that have accumulated over an extended period of time, in some cases over thousands of years. Many sites have been fully excavated and the specimens removed from their initial location. Few sites still contain *in situ* specimens. The nursery herd of Columbian mammoths preserved at the Waco Mammoth Site is unique in North America and, as such, has high intrinsic scientific and educational values.



Preliminary findings of the study: The Waco Mammoth Site is a suitable candidate for inclusion into the national park system as it would expand and enhance the diversity of paleontological resources represented by other units of the national park system.

Preliminary Evaluation of Feasibility

For the Waco Mammoth Site to be considered a feasible candidate for inclusion into the national park system, the site must be 1) of sufficient size and appropriate configuration to ensure sustainable resource protection and visitor enjoyment (taking into account current and potential impacts from sources beyond proposed park boundaries), and 2) capable of efficient administration by the National Park Service at a reasonable cost. The feasibility evaluation also considers the ability of the National Park Service to undertake new management responsibilities in light of current and projected availability of funding and personnel.

The Waco Mammoth Site is 109 acres. The site appears to be of sufficient size and appropriate configuration to ensure long-term, sustainable resource protection and visitor enjoyment. The site is well-situated for public access and protection. There is an abundance of untapped potential for providing public enjoyment. The scientific community, general public, members of Congress, and existing landowners have expressed unflagging support of the site's consideration for inclusion into the national park system.

Preliminary findings of the study: The Waco Mammoth Site may be a feasible candidate for inclusion into the national park system, depending on the alternative configurations for management that are developed in the next step.

Potential Site Recognition

Based on the initial findings of the special resource study, the Waco Mammoth Site is a potential candidate for two other categories of site recognition. The first category is based on the resource evaluation and initial findings of national significance, which indicate that the Waco Mammoth Site is a potential candidate for **national natural landmark** status. The second category is based on the resource evaluation and initial findings of national significance and suitability, which indicate that the Waco Mammoth Site is potentially eligible for Congressional designation as a **National Park Service affiliated area**. A brief outline of each of these two designations is outlined below:

National Natural Landmarks: National natural landmark designation is a process by which natural areas, in both public and private ownership, are recognized as outstanding examples of our nation's natural heritage. The secretary of the interior, with the landowner's consent, designates national natural landmarks. Nationwide, nearly 600 sites have received this special designation. Two sites were designated national natural landmarks in 2006: Ashfall Fossil Beds National Natural Landmark in Nebraska, and Irvine Ranch National Natural Landmark in California. Prior to 2006, it had been almost 18 years since a site was designated. The National Natural Landmarks Program encourages conservation of these outstanding natural features. The National Park Service administers the National Natural Landmarks Program, and if requested, can assist national natural landmark owners and managers with the conservation of these important sites. These services may include:

- 1) Assisting national natural landmark owners with grant applications to fund site conservation and interpretive projects.
- 2) Providing or brokering technical assistance to national natural landmark owners.
- 3) Building partnerships by 1) coordinating with the NPS Rivers, Trails, and Conservation Assistance Program and the network of Cooperative Ecosystems Study Units; and 2) collaborating with academic institutions in various aspects of achieving the National Natural Landmarks Program's objectives.

National Park Service Affiliated Areas: Affiliated areas include a variety of locations in the United States and Canada that preserve nationally significant properties outside the national park system. Congress designates affiliated status through legislation, which may also authorize the secretary of the interior, through the National Park Service, to provide **technical** and/or **financial assistance**. Technical assistance may include access to training and/or services such as interpretation, historic preservation, and resource protection and preservation. Congress may appropriate financial assistance for one-time studies or preservation projects, or it may appropriate annual funds to help manage the affiliated area. Affiliated areas are permitted to display the NPS arrowhead symbol in tandem with the partner's symbol and may use it in their literature and other interpretive media about the site.



Evaluation of Management Alternatives

The next step in the study process requires an evaluation of whether the site requires direct management by the National Park Service instead of protection by another public agency or the private sector. Unless direct NPS management of a studied area is identified as the clearly superior alternative, the National Park Service will recommend that others assume the lead management role, and that the area not receive national park system status.

The NPS' *Criteria for New National Parklands*, revised in 2005, defines the framework in which "Management Alternatives" should be considered:

"Alternatives to National Park Service management might adequately protect resources even if they are significant, suitable, and feasible additions to the system. Studies of potential new park units evaluate management alternatives that may include continued management by state or local governments, Indian tribes,

the private sector, or other federal agencies, technical or financial assistance from established programs or special project, management by others as a designated national natural landmark, national historic landmark, national wild and scenic river, national trail, biosphere reserve, a state or local park, or some other specially designated and protected area. Alternatives involving other federal agencies include designation of federal lands as wilderness, areas of critical environmental concern, national conservation areas, national recreation areas, marine or estuarine sanctuaries, and national wildlife refuges. Some areas have been recognized by Congress as being affiliated with the national park system and are managed by others under terms of a cooperative agreement with the National Park Service but are not "units" of the system. Additions to the national park system will not usually be recommended if another arrangement can provide adequate protection and opportunity for public enjoyment."

The process of evaluating management alternatives requires developing, analyzing, and comparing a range of management options. The study team is currently in the first phase of this effort, which includes identifying a reasonable range of management options to consider for evaluation. However, we seek the guidance of stakeholders and the general public to help refine the range to ensure that a full array of viable management options will be considered in this process.

Preliminary Range of Management Alternatives

The following concept statements represent the preliminary range of management alternatives currently under consideration by the study team:

Alternative A

Continuation of Current Management Trends

The existing cooperative management arrangement between the city of Waco and Baylor University is continued.

The city of Waco manages the security and maintenance of the 5-acre property containing the core paleontological site. Baylor University manages the surrounding 104 acres and provides preservation of the *in situ* and collected specimens, preservation of the archives, scientific research of the site and collected specimens, and educational expertise supporting the interpretive program for the core paleontological site.

The local community continues to play a key partnership role in supporting preservation and public access initiatives.

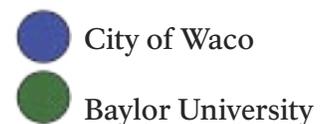


Alternative B

Partnerships Led by the City of Waco

The existing cooperative management arrangement between the city of Waco and Baylor University is expanded with additional partners, with the city taking a lead role. National natural landmark status would be actively pursued, allowing the city to seek technical assistance from the National Park Service for site resource preservation, interpretation, and educational outreach. Additional partnerships, such as local community initiatives, land trusts, foundations, state and local government, and non-governmental organizations, would also be sought to assist with developing and managing the site. This alternative would protect, provide opportunities for research, and interpret core paleontological resources. It also would give the city freedom to pursue possible broader ideas such as providing environmental education and recreational opportunities.

An option under this alternative could include pursuing designation as a “National Park Service affiliated area” to further strengthen National Park Service involvement.



Preliminary Range of Management Alternatives

Note: All alternatives include actively seeking some form of additional partnership support with the local community, foundations, state and local governments, land trusts, and other non-governmental organizations.

Alternative C

Partnerships Led by the National Park Service



Waco Mammoth Site would be a new unit of the national park system, in partnership with the city of Waco, Baylor University, and others. The National Park Service would take lead responsibility for ensuring the protection, scientific study, and visitor enjoyment of paleontological resources, enlisting the help of partners for this mission. Partners would take the lead for initiating additional recreational and educational opportunities. For example, the National Park Service would make sure that *in situ* paleontological resources are protected and would provide opportunities for visitor enjoyment, but would not likely initiate an environmental education center or regional trail connections. These ideas could be pursued by the city and other partners.

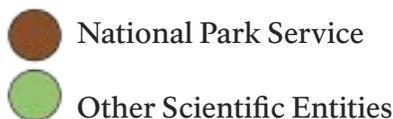
Enabling legislation would allow flexibility for a mixture of land ownership and management between the key entities that would best fulfill the mission. For example, while a National Park Service boundary may be authorized for the entire site, some or all of the land may remain with the city of Waco and Baylor University. Land ownership and management responsibilities would be determined in subsequent planning.

Alternative D

Managed as a Focused National Park



Waco Mammoth Site would be a new unit of the national park system, with the entire paleontological resources (*in situ* fossils and the collection of fossils currently housed at Baylor University) would be owned and managed by the National Park Service. The National Park Service would focus on a core mission of protection, scientific study, and interpretation of paleontological resources. The National Park Service would not likely expand beyond this core focus to initiate other projects such as an environmental education or other recreational opportunities. Partners would still play a role in educational outreach, interpretive programs, and site security to assist the National Park Service with achieving its core mission.



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Next Steps

Review and Analyze Public Comment. The study team will review and analyze comments received from stakeholders and the public regarding this newsletter.

Refine the Range of Management Alternatives. The range of management options will be refined as appropriate based on the concerns expressed by stakeholders and the public. For each alternative, the study team will identify site development and operations and staffing needs, prepare an estimate of implementation and operational costs, and identify partnership and cost-sharing opportunities.

Identify and Analyze Impacts of Each Management Alternative. The study team will conduct an analysis of the effects of each alternative on natural and cultural resources, local communities, and visitor use. The impact analysis will focus on those resources and values that would be affected by one or more of the alternatives.

Prepare and Publish Study Report. The study team will prepare a special resource study report for public review that includes evaluation of significance, suitability, feasibility, management options, environmental impacts, and cost analysis.

A preferred alternative will not be identified in the document. After public review, stakeholders and public comments will be collected, analyzed, summarized, and incorporated as appropriate into the final report, which also will include the preliminary recommendation of the agency's preferred alternative.

Transmit Study Report to Congress. A legislative package that includes the final study report, preliminary recommendation, and summary of public comments will be assembled and transmitted to the director of the National Park Service. The director will use the study and the preliminary recommendation in finalizing an NPS recommendation that will be transmitted to the secretary of the interior. The findings and recommendations of the study will be submitted to the Office of Management and Budget and then the Committee of Energy and Natural Resources of the United States Senate and the Committee on Resources of the United States House of Representatives. After review of the report and recommendation, Congress has the option to pursue legislation establishing a new national park system unit or other designation.

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