

Site Plan
Research Center and Museum
Hagerman Fossil Beds
National Monument • Idaho

Site Plan

August 1995

Research Center and Museum

Hagerman Fossil Beds

National Monument • Idaho

United States Department of the Interior • National Park Service

The concept of a combined research center and museum is extraordinary. It is envisioned as a learning center where scientific investigations are integrated with interpretation — designed to accommodate and stimulate — where visitors and scientists interact and participate in the process of scientific discovery. Teachers, students, scientists, and visitors will have uncommon opportunities to explore scientific processes and to connect with original activities that require interaction and creative reflection.

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INTRODUCTION

As a 4,280-acre unit of the national park system, Hagerman Fossil Beds National Monument is a classic example of a national monument. The primary resource is fossils that have world-class scientific significance and when properly interpreted are of intense interest to the general public. These fossil beds of the Hagerman Valley, Idaho, are known to paleontologists throughout the world for the quantity, quality, and diversity of their Pliocene age fossils, which are approximately 3.5 million years old. The monument is situated on the west side of the Snake River along a spectacular bluff 550 feet high and 6 miles long immediately west of the small community of Hagerman, which is 90 miles southeast of Boise.

Although there are other established paleontological areas in the United States within the national and state park systems, Hagerman is unique. The Hagerman Valley paleontological sites, first excavated by the Smithsonian Institution around the 1930s, are world renowned. Their scientific and educational significance is best expressed by the more than 200 published scientific papers; an extremely diverse ancient flora and fauna, represented by over 110 individual species; and the more than 500 sites that allow scientific study of populations and ancient ecosystems.

Perhaps the true importance of the Hagerman fossils is yet to be defined. Recently a log was discovered that is estimated to be 3 million years old. *The log has not been fossilized; it retains the original organic cell structure and DNA. This is the*

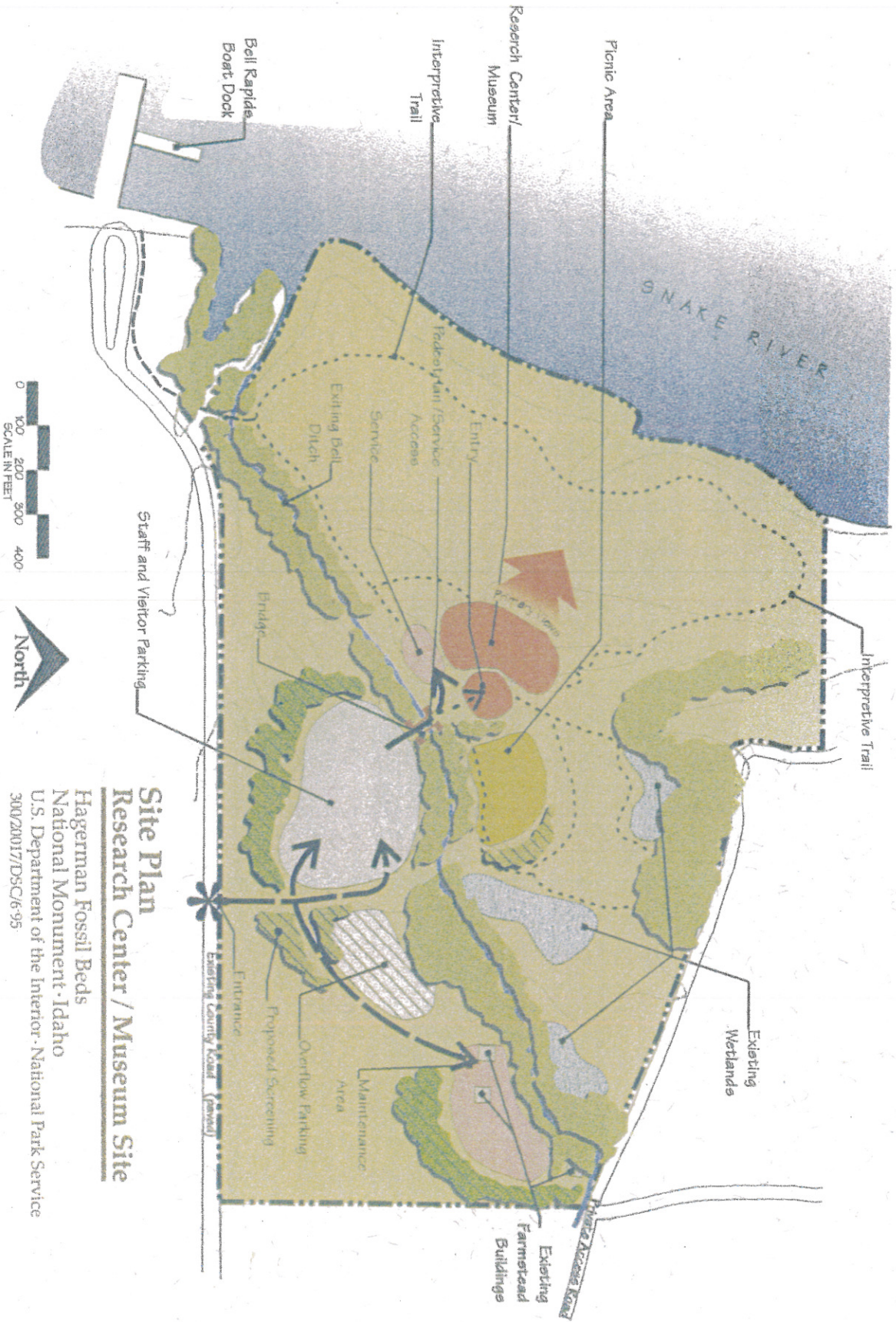
only known recovery of original wood in the United States dating from the Tertiary period. Through the use of modern technology to study this specimen, an opportunity exists to actually examine the ecological organization of that ancient ecosystem. This is more than rare, it is unique!

In 1974 the National Park Service conducted a suitability/feasibility study to determine the area's significance for inclusion into the national park system. The study concluded with a recommendation for national monument status. Hagerman Fossil Beds National Monument was established in November 1988 by passage of Public Law 100-696 (appendix A).

The National Park Service (NPS) began scoping for a general management plan in 1990. Progress on this plan was suspended during 1991-1993 until more funding became available.

In 1991 a site selection study and environmental assessment for a proposed research center/museum was begun. This study examined 12 sites in and near the national monument and detailed two of these sites. A draft of this study was released to the public in March 1993, and public meetings were held in May 1993. The proposed concept from that study is summarized in this document.

A finding of no significant impact was signed in June 1995 (see appendix B).



Site Plan
Research Center / Museum Site
 Hagerman Fossil Beds
 National Monument - Idaho
 U.S. Department of the Interior - National Park Service
 300/21017/DSC/6-95

SITE PLAN

LOCATION AND CONCEPT

The site for the research center/museum is southwest of the town of Hagerman, Idaho. This location was chosen because of the unobstructed views directly west/northwest toward the monument and the Fossil Horse Quarry, the easy road access, and its location near the water for boat access to the monument. The site is naturally screened from potential viewshed intrusions in nearly all directions. Landscape scars from developed monument roadways, pipelines, and pumping stations are not visible from this location.

There is good access potential to this site from the town of Hagerman and from U.S. Highway 30. Primary access is from Gooding County Road 2830-S, which is adjacent to the site's southern boundary.

Much of the facility development will be on the north side of the Bell irrigation ditch, in a previously disturbed area. The research center/museum will be placed along the top of a slope overlooking the Snake River and be oriented to maximize views to the monument.

One major parking lot and an overflow parking area south of the Bell ditch will be made available to private vehicles, buses, and recreational vehicles. Visitors will reach the entry to the research center/museum from the parking areas by crossing a pedestrian bridge over the Bell ditch. Access for visitors with disabilities will be available through a vehicle dropoff. Landscaping will screen the parking area from both the research center/museum and the adjacent county road.

The maintenance function will be separate from the research center/museum, at an old farmstead site in the northeast corner of the parcel. Existing trees screen the area between

the research center/museum and the adjacent farm. Additional landscaping will be added to screen the maintenance area from the county road.

Along the Bell ditch north of the parking area will be a group picnic area with tables, grills, and shelter. Informal picnic areas also will be available along the interpretive trail near the research center/museum.

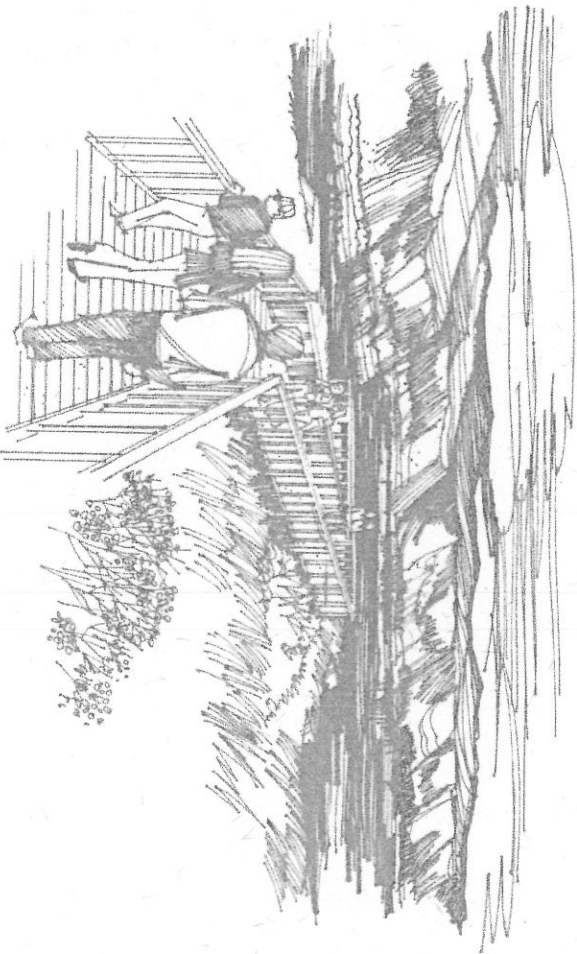
Trails will be planned to allow visitors to experience the environment and view the monument.

CONCEPTUAL RESEARCH AND EDUCATION PROGRAM

Research and educational themes were developed during the general management planning process. To establish a basic program for research and education at the monument, members of the planning team consulted with professional paleontologists, museum administrators, and educators through a workshop and a series of questionnaires. Team members also visited similar facilities in the United States. The workshop discussions and questionnaire results provided the basis for a research and educational program, which is to be detailed in the monument's general management plan.

The research center/museum will provide a hands-on look at the paleontological research process, opportunities to select from a variety of educational media and activities, educational classrooms for student groups, and a multipurpose auditorium. The following activities will be included in the research and education program.

- Research functions at the center will include the study of paleontology, evolutionary change, climatic change, and paleobiology. Research support will consist of field collection, preparation, and curation of Hagerman specimens; paleontological resource management support; collections management; and support for visiting scientists and other research endeavors. Activities will include fossil locality inventory and clarification and documentation of the sediment layers.
- The major components of the research center will be a fossil preparation workspace, curatorial storage, field specimen and equipment storage, a casting room, a paleo-library, a collections management area, a computer, and geographic information system (GIS) facilities. In addition, there will be spaces for staff members such as a paleontologist/curator, a collections manager, a preparator, and independent researchers.
- Specimen collections from the monument will be housed in the research center/museum and will be available for loan to accredited researchers. A database of all Hagerman specimens in existing collections will be compiled at the research center.
- Research endeavors conducted by professional paleontologists, both visiting scientists and NPS personnel, will be managed by a paleontologist on the monument staff.



- Educational functions will consist of activities conducted for grades kindergarten through 12, undergraduate courses, and the use of classrooms in conjunction with research and preparation lab activities. Field trips to the research center/museum and monument will be conducted as part of the local school science curriculum and in support of Hagerman "Fossil Days" activities. Also offered will be college credit workshops and seminars for continuing education and graduate level research projects and programs.
- Major components of the educational function will consist of paleontology exhibits, an audiovisual auditorium, a preparation lab viewing area, and environmental education classrooms.
- The National Park Service will expand its working relationships with universities and other museums and educational/research institutions for the purpose of establishing cooperative research and educational programs and projects.



INTERPRETIVE PROGRAM

Interpretive themes and goals for the visitor experience were drafted during the general management planning process. These established the direction for the research center/museum's interpretive program. Members of the planning team then visited other paleontology areas, met with paleontologists and educators, and held workshops in Idaho and at the NPS Interpretive Design Center in Harpers Ferry, West Virginia. These discussions will be formulated into an interpretive prospectus for the research center/museum, which will be summarized in the general management plan for the national monument.

The research center/museum will provide orientation to the monument, an in-depth view of the paleontological interpretive story, and basic visitor services. Area history will also be covered: paleontological history, Native Americans in the area, and the passage of the Oregon Trail through this part of Idaho. The interpretive story, detailed in the interpretive themes, will include Hagerman fossil flora/fauna and paleontology, the science of paleontology, and the importance of preserving fossil resources and information. Interpretation will help visitors to understand the interrelationships in science by showing how paleontology is a melding of geology, biology, chemistry, and other sciences. The relevance of paleontology to current issues such as global warming and biodiversity will be important interpretive themes.

The interpretive experience will be designed to motivate visitors to stay and learn about Hagerman Fossil Beds National Monument. Views across the Snake River of the monument's layered sediments will be prominent. To preserve resources, specific fossil sites will not be identified

(with one exception being the Fossil Horse Quarry, to which access will be controlled).

The museum will play a relatively large role in visitors' experiences of the monument and paleontology. Interpretive media might include exhibits, audiovisual programs, publications, and outdoor wayside exhibits. Interpretive talks and scientific symposia may be held in the auditorium. Exhibits might include original and cast fossils, a replica paleontologic site that can be "excavated" by visitors, and methods to help visitors visualize the life history of prehistoric animals from skeletal remains. There also may be depictions of the Pliocene environment at Hagerman to give visitors a sense of "being there" and to emphasize an ecological perspective of paleontology. Other topics might include geology and the history of Hagerman excavations and other fossil sites.

Outside the museum, trails with wayside exhibits and/or brochures will provide controlled access to the wetlands along the river and within the site. There also may be guided tours of selected areas in the monument itself. A geological timeline could be designed into the walkway from the parking area to the center to "move" visitors into the Pliocene era as they approach the facility.

Visitor services at the museum will include information and orientation, restrooms, emergency assistance, and a staffed information area. Information services will let visitors know of other parks and tourist attractions in the area, as well as other fossil sites open to the public. Orientation services will describe the resources and facilities in the park and how to get there. Interpretive publications and other theme-related materials will be available for purchase.

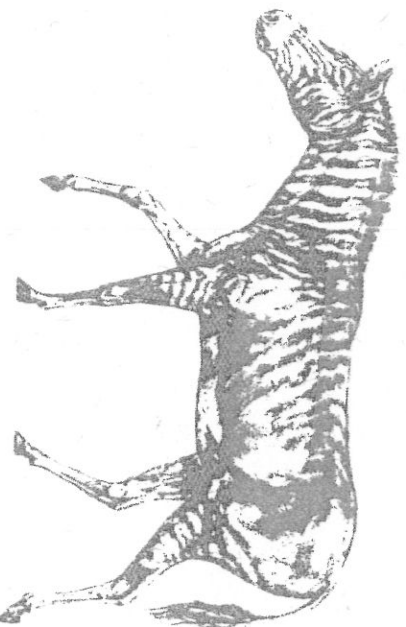
ARCHITECTURAL REQUIREMENTS AND CONCEPTUAL DESIGN

In the development of architectural requirements for the research center/museum, consideration must be given to research space requirements, interpretive themes, and park management operation and administrative needs, in combination with functional space relationships. All visitor areas will be designed for optimum use of fossil displays and exhibits, education, interpretive media, visitor service, and accessibility. A preliminary gross space requirement for the research center was determined to be 18,000–21,000 square feet. These figures are based on those from other facilities in the national park system and existing centers for scientific research and education. The preliminary program and gross space requirements could be expanded during the design

phase to meet projected visitation demands. The architectural style and colors for the research center/museum will reflect the horizontal character of the surrounding landscape.

Sustainability will be a primary consideration in the site and building architecture. This includes the use of natural lighting and passive heating/cooling through design application and building orientation; natural, nontoxic finishes and interior fabrics; and materials or components made with recycled products. Also included will be recovery of onsite drainage water through a catchment filtration system and the use of energy-efficient fixtures and equipment.

A separate maintenance facility will be located near the research center/museum.



PLANNING BACKGROUND

GOALS AND OBJECTIVES

The intent of the planning study was to develop and conduct a comparative evaluation of internal and external site criteria in the selection of a preferred site for the proposed research center/museum. The planning approach included development of a research center/museum building and site program, development of a research and interpretive program, selection of the preferred and alternate sites, and preparation of site concept plans for the preferred and alternate sites.

Goals

- To identify a preferred location and establish a program for development of the site, building, and interpretation at a proposed research center/museum, which will integrate with the ongoing general management plan process.
- To conduct a comprehensive approach to planning and facility programming that will meet the mandate of the enabling legislation for Hagerman Fossil Beds National Monument.

Objectives

- To develop criteria for conducting evaluations of potential locations for the research center/museum.
- To prepare a program for facility development, research, and interpretation at the center and surrounding site use areas that will remain valid in the

current and future phases of the monument's development.

- To determine the most appropriate locations for a research center/museum that will offer meaningful research capability, interpretation, and visitor experience with minimal effects on natural, cultural, and paleontological resources.

- To prepare concept plan alternatives for the preferred and alternate sites and to recommend a preferred concept that will support the proposed architectural, research, interpretive, and site programs as determined by the general management plan process.

SCOPING

Public scoping meetings were conducted in late January 1990 to identify issues and concerns for a general management plan/environmental impact statement. These meetings, which were held at Hagerman and Twin Falls, Idaho, produced many comments and concerns about the planned uses and management of the monument, including the location of a future research center/museum. The following uses and actions were suggested by public comment:

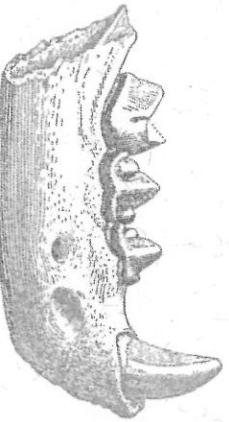
- Allow for continued waterfowl hunting and fishing in the monument along the Snake River.
- Locate the research center/museum in Hagerman; the monument's location should support the economy of the area.

PLANNING BACKGROUND

- Combine the research center, museum, and fossil-research center in the town of Hagerman, including self-guiding interpretive displays.
- Provide interpretive displays, which may include assembled fossils in the museum and in the field.
- Protect fossils existing on the site; interpret local and regional history; provide educational programs for schools.
- Provide adequate protection of monument and fossils.

In addition to public scoping meetings, the National Park Service sought information about paleontological research, processes, and education from leading paleontologists and universities through a questionnaire process and a workshop. This allowed the NPS team to assemble data pertinent to fossil research, education, and interpretation. These data were used in developing the architectural, research, interpretive, and site design programs for the research center/museum.

Because planning funds were not available in fiscal years 1991 and 1992, progress on the general management plan/



environmental impact statement was suspended until additional funding could be obtained in fiscal year 1993. Public meetings were held in 1993, and the document is scheduled for completion in 1996.

ISSUES

Planning issues have been identified from past planning efforts by the National Park Service, in meetings with monument staff, from comments made during the general management planning and public scoping process, and from input received from the established professional paleontological community through questionnaires and a workshop. The major issues are briefly described below.

Development in Areas of Paleontological Resources

The issue of developing a substantial research center/museum facility within paleontological resource areas surfaced during the public scoping process. All the developable sites within the authorized monument boundary are considered important as prime paleontological resources. Guidance from NPS management policies indicates that while placing a facility within a paleontologic resource is not prohibited, major mitigation would be required. This could include a paleontologic survey of the entire affected area, excavation, and collection of fossil material. The following statements are from *NPS Management Policies*, 1988.

Paleontologic resources, including both organic and mineralized remains in body or trace form, will be protected, preserved, and developed for public enjoyment, interpretation, and scientific research in accordance with

park management objectives and approved resource management plans.

When structures that are not historically significant are determined to be inappropriately placed in prime resource areas, they will be removed.

Land Acquisition

The National Park Service is prohibited by law from constructing facilities on lands not contained within authorized boundaries. Since the establishment of the Hagerman Fossil Beds National Monument in 1988, no changes have been made to the boundary limits. All 4,280 acres of the monument are on the west side of the Snake River.

Legislative action authorizing a boundary adjustment and land acquisition authority is being pursued for the preferred or alternate site. This legislative authority is necessary before the construction of the research center/museum and related facilities can move forward.

Other Issues

Issues that have posed potential constraints on development within the monument, and that were not recognized during the initial suitability/feasibility study prepared in 1974, are as follows: disruption of adjacent agricultural lands, significant development constraints related to the serious lack of potable water and sewer infrastructure on the west side of the Snake River, and competition with agricultural truck traffic on the only access road to the monument.

SITE REQUIREMENTS

During the scoping process for the general management plan, potential sites for the research center/museum were suggested by the public and the paleontologic community. Early in the site selection process it became apparent that an objective method of evaluating sites was needed. To accomplish this need, a combination of broad-scale site analysis and, later, a more detailed site suitability analysis was used to ensure that all potential sites in and around the monument were evaluated.

The planning team performed a broad-scale analysis of sites within and around the monument during the early stages of the project. It was estimated that 45 acres would be the minimum needed to accommodate the site development program. Through the analysis, several areas of approximately 45 acres were identified. The areas identified would have accommodated the site development programs and would have met certain general criteria. Landownership was not an initial criterion. The general criteria and rationales for selecting the sites are described below.

Criteria and Planning Assumptions

Along with the site requirements, two criteria were used in the initial selection of possible sites:

- *The site must be within 0.5 mile of an existing access road.* Because of monetary, environmental, and public access concerns as well as reluctance to extend infrastructure, only locations within 0.5 mile of existing access roads were considered.

PLANNING BACKGROUND

- *The site must be on land with direct views of the monument.* Because the major part of the visitor experience will be provided by the center, the site should provide direct views of the monument and the Fossil Horse Quarry.

Before evaluation and selection of possible sites, the following general planning assumptions were developed for use with all alternatives to ensure that each alternative would address the functions of research, fossil collection, visitor use, and management.

- The major part of the visitor experience will be provided by the research center/museum, and for some visitors to Hagerman Fossil Beds National Monument, the center might be most or all of their experience.
- Because the paleontologic resources at the monument are very fragile, the research center/museum should be located to ensure protection of these resources.
- There must be a visual connection (panoramic view) between the monument, the historic Fossil Horse Quarry, and the center.
- To provide opportunities for visitor access to the monument, as determined by a general management plan, the research center/museum should be located to provide reasonable access to U.S. Highway 30, Interstate Highway 84, and other principal routes of travel.

- The research center/museum should be located to provide reasonable access to and from the town of Hagerman.

- The site location for the research center/museum should offer viable access to and from the monument, and it should be within a manageable boundary.

- The National Park Service should provide the capability within the site and its buildings for future expansion of the facilities, should that be required to fulfill the monument's legislative mandate.

Acreage Requirements

To develop the relative space requirements for research, fossil collection, interpretation, visitor use, and monument administrative functions for Hagerman, the planning team made initial comparisons of facility and site uses of existing park units. This information, along with input from professional paleontologists and from the staffs of the monument and the NPS Denver Service Center, was used to establish preliminary development programs. Those programs in turn were used to determine the amount of land needed and to support the future design requirements of the facilities.

Net facility acreage is the amount of space required to actually accommodate structures, parking areas, and other physical infrastructure. This acreage was determined by estimating the area required for each site function or use in accordance with accepted planning and architectural standards. The net facility acreage required for the preliminary site program is a minimum of 45 acres.

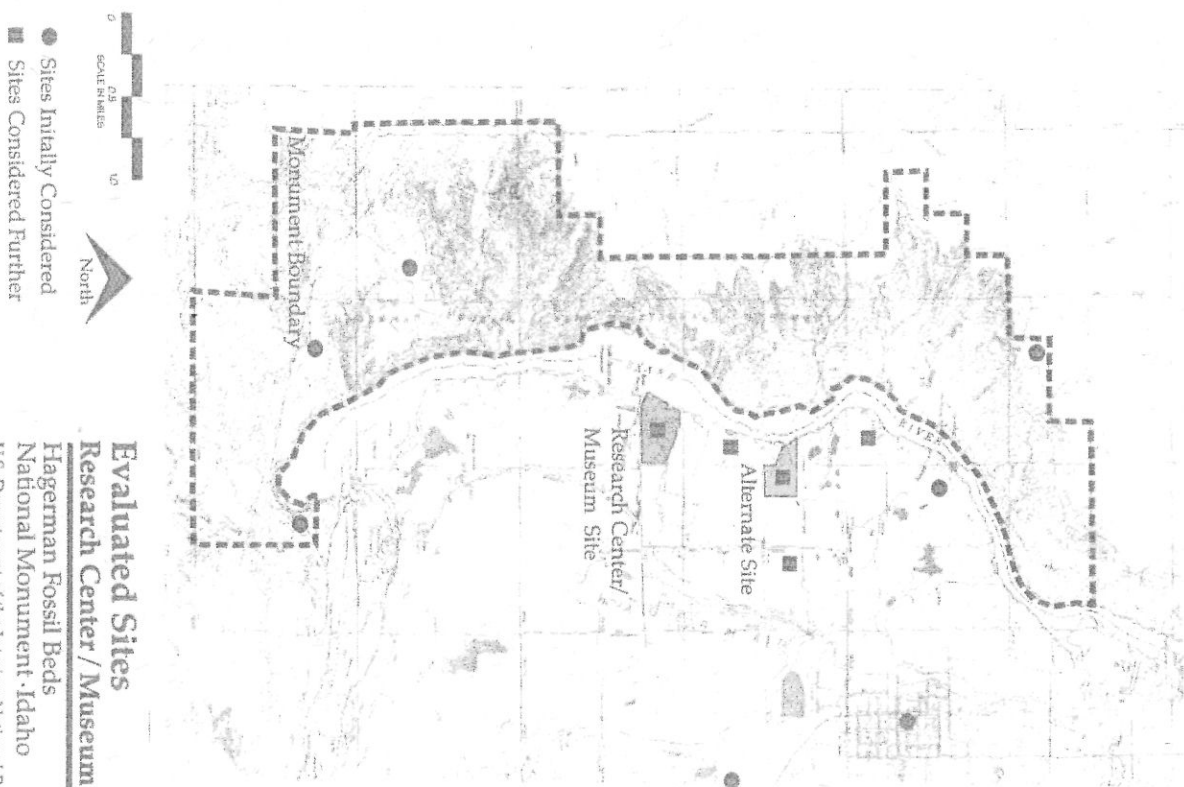
SITES CONSIDERED

Through a general broad area analysis, sites on both sides of the Snake River were considered. An evaluation team of NPS employees and local citizens (representing Gooding and Twin Falls Counties) examined the sites further and arrived at 12 potential sites. Seven sites were not considered feasible for the research center/museum because of specific location, topography, or other site characteristics. These unsuitable sites were dismissed without further consideration.

The five remaining sites were all in private ownership. Before further consideration and evaluation, the National Park Service contacted the owners of the private land parcels to determine their interest in having their land considered as a site for a research center/museum. A detailed site-suitability evaluation was conducted for the five sites. In this evaluation, individual factors were ranked on a value scale. The two sites that ranked highest (the selected site and the alternate site) were then considered for full evaluation.

The selected site and the alternate site are both on the east side of the Snake River. The alternate site is approximately 0.75 mile north of the preferred site. The parcel for the alternate site is roughly 50 acres. The property is oriented predominantly east and west; a small triangular section borders the river edge, which drops off abruptly.

The view from this site is adversely affected by intrusions such as an irrigation pump station, a pipeline, and an access roadway on the monument's shoreline. Views to the west and into adjacent properties to the north are acceptable, but the potential exists for viewed intrusions from properties to the south and southwest. The present road access is an improved gravel roadway that runs along the northern property line. The property is accessible from a county road and the town of Hagerman.



Evaluated Sites
Research Center / Museum Site
 Hagerman Fossil Beds
 National Monument, Idaho
 U.S. Department of the Interior, National Park Service
 300/20016/DSC/6-95

APPENDIXES

APPENDIX A: LEGISLATION AND PURPOSE

Hagerman Fossil Beds National Monument was established by Public Law 100-696, title III, dated November 18, 1988. Some significant elements of the Hagerman enabling legislation are as follows:

Section 301:

(a) In order to preserve for the benefit and enjoyment of present and future generations the outstanding paleontological sites, known as the Hagerman Valley fossil sites, to provide a center for continuing paleontological research, and to provide for the display and interpretation of the scientific specimens uncovered at such sites

Section 306

To provide for continuing paleontological research, the Secretary shall incorporate in the general management plan provisions for the orderly and regulated use of and research in the monument by qualified scientists, scientific groups, and students

Section 301 illustrates the common language found in similar park areas, keeping within NPS mission directives, except for providing for a *center* [for research], which is unique to Hagerman.

Section 306 also is unique in that it directly mandates a research function while making a strong statement toward an educational emphasis.

The purpose and significance of the monument is clearly presented in the sections quoted above. Research and educational activities could potentially include the following:

- research with some emphasis on paleontological wetlands ecology
- research in support of Fossil Horse Quarry activities
- fossil collection
- instruction about in-field fossil documentation and collection
- curatorial collections management
- fossil molding, casting, and exhibit preparation
- seminars and short courses in paleontology
- field trip interpretation for area schools

APPENDIX B: FINDING OF NO SIGNIFICANT IMPACT

Project Description

The National Park Service (NPS) has prepared a site selection planning study and environmental assessment for the Hagerman Fossil Beds National Monument research center and museum. The site is located approximately 1½ miles southwest of the town of Hagerman, Idaho. A new facility is necessary to conduct scientific and educational studies and to increase the interpretation opportunities of the monument, as directed by the monument's enabling legislation (Public Law 100-696, title III).

A complete description of the proposal and the alternatives considered is included in the *Draft Site Selection Planning Study/Environmental Assessment for the Research Center/Museum, Hagerman Fossil Bed National Monument*, March 1993.

Compliance

The National Park Service has determined the proposed action can proceed with no significant adverse effect to natural or cultural resources as documented by the EA. Site specific environmental compliance will be done at the time of the facility's design as appropriate. A summary of the impacts is as follows-

Bald eagles winter and migrate near the site; however, there will be no adverse impacts to these eagles or other wildlife as a result of the proposed project. The US Fish and Wildlife Service has been consulted regarding this project.

Approximately 4 acres of soils and land surface would be impacted due to construction of research/visitor and maintenance facilities none of which is prime farm land or special soils.

There would be no long-term adverse impacts on air or water quality. At the time of design and construction, measures will be taken to ensure minimal runoff from the site.

The NPS, in consultation with the Idaho State Historic Preservation Officer and Advisory Council on Historic Preservation, signed a Memorandum of Agreement to mitigate adverse effects to the Bell-Gisler Homestead. The Bell-Gisler homestead will be documented prior to construction activities. An area survey conducted by the Idaho State Historic Preservation Officer found no evidence of significant archeological resources.

If previously unknown cultural resources are discovered during design and/or construction phases, every effort will be made to avoid impacts to them according to the requirements of 36 CFR 800.11 and, as appropriate, provisions of the Native American Graves Protection and Repatriation Act of 1990. If avoidance is infeasible, the National Park Service will develop mitigating measures with the Idaho State Historic Preservation Officer and the Advisory Council on Historic Preservation.

APPENDICES

The proposed action complies with the Endangered Species Act, the National Historic Preservation Act, and Executive Orders 11988 (Floodplain Management) and 11990 (Protection of Wetlands).

Public Review

Public review of the draft study and environmental assessment (EA) was conducted from April 1993 to May 1993. Public meetings on the draft study were held in Hagerman, Twin Falls, Buhl, and Gooding, Idaho during May 1993. During this review period the only substantive comments received were regarding a potential increase in traffic. The National Park Service has funded a traffic study in conjunction with preparation of the General Management Plan now in progress. The impacts from increased traffic and appropriate mitigation will be addressed in the GMP.

Finding of No Significant Impact

I find that the proposed action does not constitute a major federal action significantly affecting the quality of the human environment. Therefore, in accordance with the National Environmental Policy Act of 1969 and the regulations of the Council on Environmental Quality (40 CFR 1508.9), an environmental impact statement will not be prepared.

Decision

It is my decision to implement the proposed action from the Hagerman Fossil Beds Research Center and Museum Site Selection Study and Environmental Assessment.

Recommended: /s/ Neil King, Superintendent, Hagerman Fossil Beds National Monument June 7, 1995

Approved: /s/ William C. Walkers, Interim Deputy Field Director, Pacific Field Area June 15, 1995

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