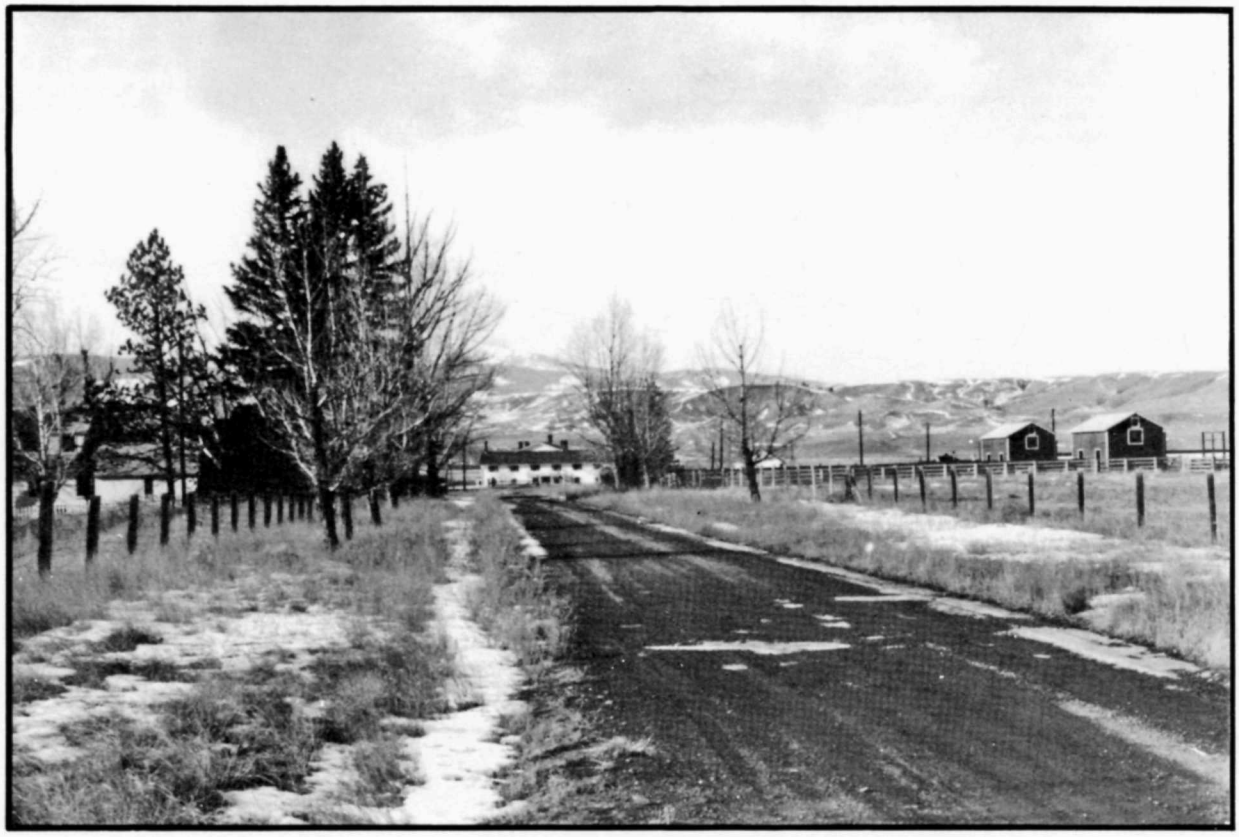
Environmental Impact Statement
General Management Plan
Development Concept Plan

March 1993



Grant-Kohrs Ranch National Historic Site

Powell County, Montana

U.S. DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
ROCKY MOUNTAIN REGION

Grant-Kohrs Ranch National Historic Site
Environmental Impact Statement for a General Management Plan and Development Concept Plan

Three alternatives, which provide for the preservation of historic resources and for visitor use, have been examined for Grant-Kohrs Ranch National Historic Site. The proposed action emphasizes management of the park as a working ranch. The rehabilitation and adaptive use of historic structures will be given priority. Consolidation of administrative, maintenance, and curatorial storage functions in the park proper will be provided, where feasible. The National Park Service (NPS) will pursue cooperative ventures and boundary expansion to protect historic scenes surrounding the park, including the acquisition of easements. While interpretation will focus primarily on the frontier, open-range cattle era (c. 1860s to 1890s), it will secondarily include conditions and events leading up to this period (for example, available grasslands, Public Domain, and so forth) and subsequent evolution of cattle ranching up to the mechanized feedlot operations of the 1930s and beyond. Initial visitor contact will include a full range of orientation, information, and interpretive services, media, and facilities. Personal service programs such as guided tours and special activities like demonstrations and costumed interpretation (as staffing levels permit) will be balanced with exhibits, audiovisuals, and other interpretive media to enhance visitor experience, awareness, understanding, and appreciation of the Grant-Kohrs Ranch National Historic Site.

The environmental consequences of the proposed action and other alternatives are fully disclosed in this draft environmental impact statement. Also included are the results of public involvement and consultation/coordination that have been conducted thus far.

Address Comments to:

Superintendent
Grant-Kohrs Ranch National Historic Site
P.O. Box 790
Deer Lodge, Montana 59722

SUMMARY

The purpose of this *Environmental Impact Statement/General Management Plan/ Development Concept Plan* is to define overall management strategies concerning park operations, visitor use and access, natural and cultural resource management, and general development at Grant-Kohrs Ranch National Historic Site. Important resource, interpretive, management, and external use issues and alternatives to address the issues are presented along with potential environmental consequences of implementing each alternative.

In June 1988 the National Park Service purchased, in fee, 1,059.85 acres of land, including several dozen historic buildings/structures, and a cultural landscape representative of the mechanized feed lot operation of cattle ranching. The 1980 *GMP* for Grant-Kohrs Ranch National Historic Site recommended that a detailed study be conducted to determine use and improvement actions, following fee purchase. This plan answers that need.

THE PROPOSED ACTION AND ALTERNATIVES

A proposed action and two alternatives, including a no-action alternative, have been analyzed.

The overall intent of the proposed action is to manage the park as a working ranch, giving priority to rehabilitation and adaptive use of historic structures over new construction and consolidation of administrative, maintenance and curatorial storage functions on park lands, where feasible.

Under the proposed action, the NPS will pursue cooperative ventures to protect historic landscapes surrounding the park, including donation or acquisition through purchase of scenic easements of approximately 1,100 acres to the west of the park, in order to guarantee that existing uses of these lands are retained. The NPS will seek authorization to expand park boundaries to include these lands. In cooperation with the city of Deer Lodge, the NPS will work toward minimizing impacts from development to the east and south boundaries of the park, through the implementation of city land-use zoning. The NPS will work closely with the USDA-Forest Service and the Montana State Prison to insure that lands within the jurisdiction of these agencies, in the west middle- and background of the park, be managed in a manner that will continue to provide a quality experience for park visitors.

Cultural resource management will emphasize the preservation and use of historic structures and grounds through rehabilitation, restoration and adaptive use. Proposed uses for the 88 buildings/structures are presented in table 1. Curatorial storage

requirements will be met through construction of a 10,000 square-foot facility, on the 11-acre tract near the park's southern boundary, where the construction will have no effect on historic scenes. Acquisition of the original Warren household furnishings and records will be pursued for use in future programs interpreting the ranch's later years. The feasibility of instituting a leasing program for the east feedlot, to help interpret the mechanized feedlot operation, will be studied. Eight landscape types associated with the ranch's historic use have been identified and each will be managed to represent a specific time period of ranch history. These landscape types and their associated time periods are described more fully in the "Cultural Resource Management" section of this plan and in the park's resource management plan.

Natural resource management will support the park's primary purpose of preserving and interpreting a working ranch. To this end, gopher management, noxious weed control programs, a vegetation injury assessment, agricultural use plan, entomology studies, resource inventories, a water resource management plan scoping report, and soils analysis will all need to be completed. Pest management for the museum collection and the ranch house will take into consideration the interrelationship of the various pests and will follow the principles of integrated pest management. The NPS proposes to acquire a 35.76-acre parcel of Union Pacific Railroad land, in order to preserve a remnant of shortgrass prairie native to the Deer Lodge Valley.

The park will continue to be managed as a day-use area. Interpretation will focus on visitor awareness, understanding, and appreciation of the frontier, open-range cattle era of roughly the 1860s through the 1890s. Conditions and events prior to this time period, and subsequent evolution of cattle ranching up to the mechanized feed lot operation, will also be interpreted using the eight landscape types and associated time periods mentioned previously. Self-guiding brochures, wayside exhibits and/or uniformed or costumed park staff will help to provide visitors with a vicarious ranching experience. Interpretation of modern (1950s - 1970s) ranch operations, pioneering work in artificial insemination, selective breeding, and conservation is planned. The large first floor of the Red Barn will be adaptively rehabilitated and developed as a visitor center, where a wide range of orientation, information, and interpretive materials and services will be available, including an information lobby/desk, a 2,000 square-foot exhibit hall, a 60-seat AV theater, and a sales area for interpretive literature. This facility will help visitors to plan their visit and will provide them with a comprehensive overview so they can more fully understand, experience, and enjoy the historic ranch. Support facilities will include public rest rooms, interpretive staff offices, library, preparation room, and cooperating association office and storage area. There are long-range plans for a variety of other buildings or parts of buildings (for example the Dairy [HS 9] and the basement of the main ranch building), which are now being used for maintenance, curatorial, and other administrative purposes, to be restored, refurnished, and interpreted to further the visitors' understanding of the ranch and cattle industry.

NPS curatorial functions and USDA-Forest Service administrative offices will be moved to the facilities to be constructed on the 11-acre tract near the park's southern boundary. Under this proposal, the new visitor center and administrative offices in the adaptively rehabilitated Red Barn will be fully accessible to visitors and employees alike, including associated parking, walkways, and rest rooms. The new curatorial/USDA-Forest Service facilities will be fully accessible to employees and researchers. Interpretive media planning and production will strive for maximum accessibility to all exhibits, audiovisuals, and publications for persons with visual, hearing, learning, and physical disabilities.

Under the proposed action, the park's headquarters will remain in the city of Deer Lodge until the Red Barn is rehabilitated for adaptive use, at which time the administrative function will be moved to the barn's second floor. The cow shed (HS 13) will provide 8,300 square feet for maintenance storage and remaining maintenance functions will be accomplished out of the existing maintenance shop. Site security will be provided via fire detection, fire suppression, and/or intrusion alarms. The mobile home in the home ranch complex, which is now used as a staff residence, will be removed, and the Warren residence will be used as an employee residence, when it becomes available. The park will continue to rely on the city and county for primary fire protection. Historic vehicular circulation routes in the ranch will be retained for emergency and administrative access to all buildings, structures, and visitor-use areas. Twenty FTEs (three additional) are required to implement the proposal, and annual operations and maintenance costs associated with the proposal are approximately $600,000.

Development is planned to take place in three phases, details of which are provided in the "Development Priorities and Costs" section of the plan. Class "C" estimates indicate the need for $6,030,500 to accomplish the items planned for Phase I of the construction. The construction planned for Phase II requires $2,846,000, and $1,257,000 are required for the historic structure repairs called for in Phase III. Total development costs for the proposal are estimated to be $10,133,500.

The no-action alternative (alternative B) would continue existing programs, development, and trends, requiring 17 FTEs and an annual operating budget of about $475,000.

Alternative A emphasizes management of the park as a working ranch, while minimizing non-historic uses. All non-historic uses, such as administration, most maintenance, curation, and visitor services, would be removed from the park's historic zone, and all new construction would occur outside of the historic zone. Administrative programs would move to the new visitor/administrative complex at HS-64. This alternative emphasizes the preservation of historic structures and grounds through rehabilitation and repair. Curatorial storage requirements will be met through construction of the new facility. Use of historic structures would be limited to historically accurate uses and activities. The ranch's historic landscape would be managed to represent the same time periods illustrated in the proposed action. Actions described in the proposed action regarding natural resource management also apply to this alternative. The NPS would

seek an expansion of boundaries to incorporate NPS lands outside of the present boundary and the cultural landscape west of the park. Interpretation would focus on the entire span of cattle operations. Initial functions of the contact station would be limited to site orientation. Actual interpretation would occur on site. A variety of time periods would be interpreted through a sequencing of visitor tours. Costumed interpretation and demonstration programs would be emphasized, including use of non-historic ranch equipment and livestock. Park housing would be removed and staff would be required to find housing in the city of Deer Lodge. Implementation of this alternative would require 26.7 FTEs, with associated annual operation and maintenance costs of $945,000. Development and rehabilitation costs for this alternative are estimated to be $6,872,000.

IMPACTS

Impact areas selected to analyze the potential consequences of the proposed action and the two alternatives include land protection, management zoning, surface water flows and effect of development on water quality, flash floods, 100- and 500-year floodplains, disturbance of Beaverell series soils, upland pasture and vegetation, soil compaction, trampling and crushing of vegetation, temporary soil erosion, loss of wildlife habitat, air quality deterioration due to increased auto emissions, construction and other dust, construction noise, rehabilitation/restoration of historic buildings and structures, museum collection management and protection, effect on one known aboriginal archeological site and on buried historic objects, enhancement of visitor services and interpretation, effect on local economy and on other agencies, and effect on efficiency of administrative and maintenance functions.

Implementation of the proposed action, which calls for the maintenance, rehabilitation, and restoration of historic buildings and structures to support adaptive use for park operations, interpretation and visitor use, will contribute to their long-term preservation. Use of the Warren residence for park housing should enhance abilities to fund preservation and maintenance requirements and contribute to their long-term preservation. Use of the ranch's historic entrance for access to the Red Barn visitor center parking lot will provide better site orientation and a historic approach to the ranch. Location of the visitor center parking lot in an area historically used by Warren for parking during cattle sale days, should augment the ranch's historic scene. Alternative A would limit use of historic structures and buildings to historic uses. Funding and resources necessary for preservation could be more difficult to attain when adaptive uses are not considered. Under alternative A, opportunities for visitors to view the ranch from a historic perspective would not be provided. Under the no-action alternative, curatorial storage would continue to be below standard, lack of building maintenance would result in continued natural deterioration of buildings and structures, and degradation of the historic scene would continue, with retention of the on-site trailer used as a ranger residence. Detailed summaries of the alternatives and their impacts are shown in tables 3 and 4.

CONTENTS

TABLES

PURPOSE AND NEED FOR THE PLAN

This *Draft Environmental Impact Statement/General Management Plan/Development Concept Plan (EIS/GMP/DCP)* addresses overall management strategies and some specific actions for Grant-Kohrs Ranch National Historic Site. Although the park was established nearly 20 years ago, it is only within the last few years that fee land acquisition within its boundaries has been nearly completed. A number of actions need to be prescribed in order to manage park lands and recently acquired historic structures.

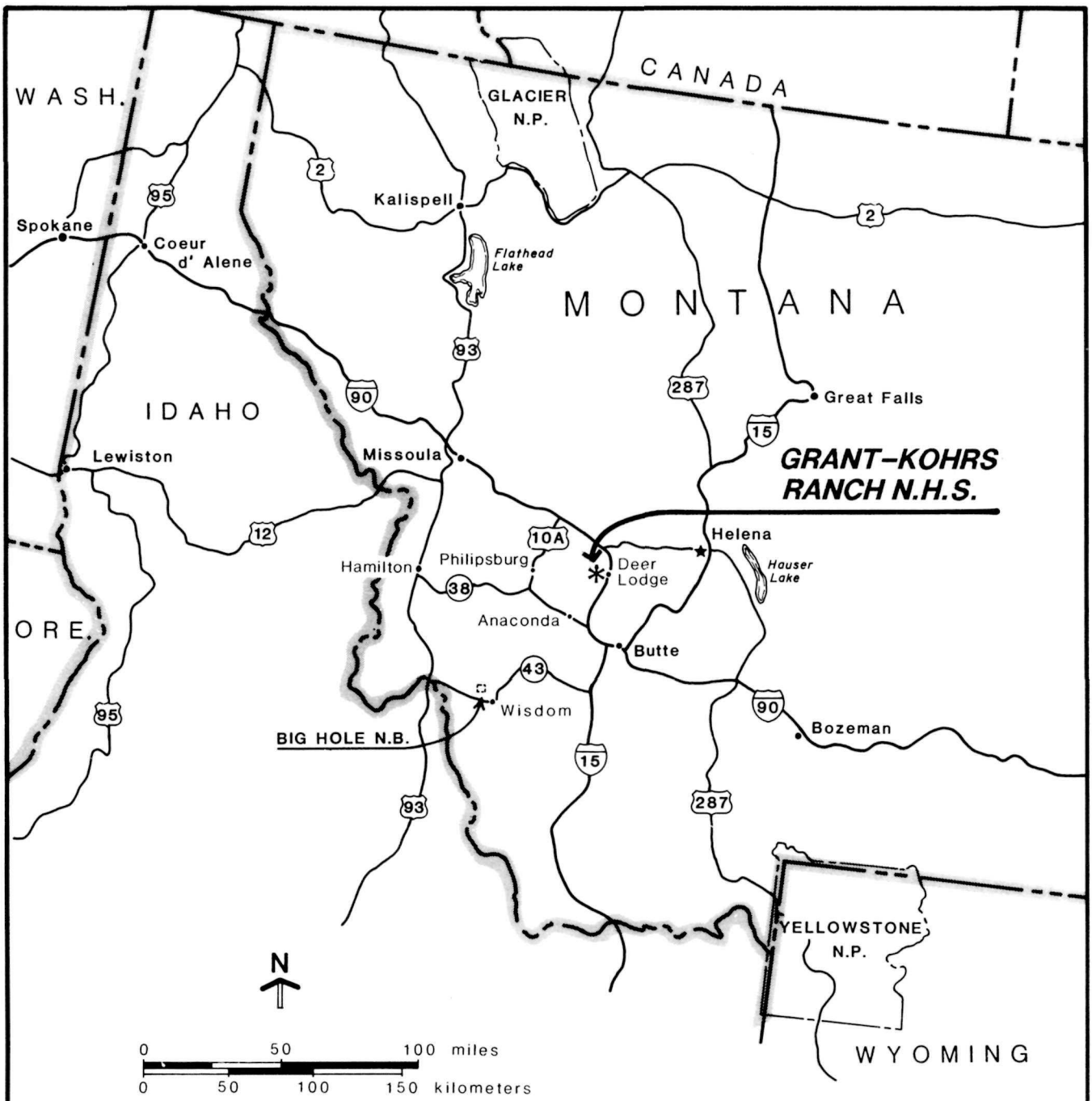
Grant-Kohrs Ranch National Historic Site is in the Northern Rockies of west-central Montana, Powell County, in the First Congressional District. The site lies adjacent to the city of Deer Lodge, with easy access to Interstate 90. Missoula is about 80 miles northwest and Butte is 40 miles south of the historic site.

In June 1988, the National Park Service purchased 1,059.85 acres of land in fee. This purchase included 120 acres outside the current park boundary. Most of the remaining lands had been covered by an inadequate scenic easement, and included on about 20 acres to the east of the home ranch complex, 31 historic buildings/structures and a cultural landscape that represent the mechanized feed lot operation of cattle ranching. In addition, the NPS acquired a house and 6 associated outbuildings on about 1 acre, for which Conrad Kohrs Warren retains a life estate. Use of these acquired structures for various park administrative and visitor purposes is being evaluated.

The 1980 *GMP* provided recommendations for adaptive use and rehabilitation of the buildings, structures, and grounds. The *GMP,* which does not recognize current trends or needs, recommended that a more detailed study be conducted to determine use and improvement actions, following fee purchase. In addition, no development concept plan (DCP) or resource management plan (RMP) exists for the park. The park's interim *Interpretive Prospectus (IP)* was approved in July 1975, but is outdated and no longer provides adequate direction. A resource management plan and a new interpretive prospectus are currently being prepared.

PARK PURPOSE AND MANAGEMENT OBJECTIVES

Grant-Kohrs Ranch was established by Public Law 92-406, 86 Stat. 632, August 25, 1972. The site's purpose as stated in the Act is ". . . to provide an understanding of the frontier cattle era of the Nation's history, to preserve the Grant-Kohrs Ranch, and to interpret the nationally significant values thereof for the benefit and inspiration of the present and future generations.. . ."



Vicinity Map

Grant-Kohrs Ranch National Historic Site

U.S. Dept. of the Interior - National Park Service

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The 1977 *Historic Resource Study* states, "The major historical theme concerns the range cattle industry in Western America. This is the focus of the entire site, and the reason for its inclusion into the National Park Service managed areas." Thus, the park's interpretive purpose centers on the cattle industry, from its beginnings in the frontier cattle era in the mid-1860s, through mechanized feed operations (that began in the 1930s and continued to the 1970s), with emphasis on the open-range era of the 1860s through the 1890s. All of these time periods have importance and validity. The livestock industry is not a single event or point in time, but a constantly changing process. In time, pioneering work in artificial insemination, selective breeding, and conservation could be seen as equally important as earlier historic ranching activities.

The following management objectives were developed as a basis for preparing planning documents, formulating alternatives, and analyzing potential impacts to park operations.

- To provide opportunities for the visitor to understand the cattle industry and its evolution from the open range of the mid-1860s, to mechanized feedlot operations that began in the 1930s and extended until establishment of the park in the 1970s.

- To maintain historic structures, buildings, objects, and landscapes in such a manner as to complement the ranch's primary purpose and enhance visitor understandings and appreciation of cattle ranch operations.

- To manage natural resources in such a manner as to complement the historic context of the ranch and cattle ranching operations.

LEGISLATIVE AND ADMINISTRATIVE CONSTRAINTS

Public Law 92-406, 86 Stat. 632, approved August 25, 1972, authorized the Secretary of the Interior to designate not more than 2,000 acres of the Deer Lodge Valley for establishment of Grant-Kohrs Ranch National Historic Site. The land acquisition ceiling was set at $350,000 and the total development ceiling at $1,800,000. On November 10, 1978, Public Law 95-625, 92 Stat. 3467, increased the land acquisition ceiling to $752,000 and the development ceiling to $2,075,000. Authorization was also given to acquire fee simple title to lands in which the United States had a less than fee interest inadequate to protect the land.

On December 28, 1980, Public Law 96-607, 94 Stat. 3539, further increased the land acquisition ceiling to $1,100,000 and the development ceiling to $7,818,000. It also changed the park boundary to exclude 25.66 acres of land owned by the city of Deer Lodge.

To date, 1,498.38 acres are included within the park boundary, leaving only 501.62 acres before reaching the 2,000-acre ceiling.

Grant-Kohrs Ranch is a National Historic Landmark and is listed in the National Register of Historic Places. Management and development decisions must be responsive to provisions of applicable laws and regulations.

PROBLEMS AND ISSUES

Cultural Resources - The use, rehabilitation, maintenance, interpretation, and management of historic structures, objects, and the historic landscape require evaluation.

The park has a very large curatorial storage requirement that is not being met. Public display of objects is limited. Historic objects are scattered in repositories throughout the ranch, including historic buildings and the ranch house, most of which are structurally and environmentally unsuited for the housing of such items. Because facilities are scattered, curation activities are mixed with administrative and visitor-use functions, creating security problems and conflicts. Some historic buildings that house the objects are within the 100-year floodplain. In addition, there is a lack of work space for preparation, treatment, and conservation of artifacts. Facilities for study and research are not available. Since storage of historic objects does not meet NPS standards, alternatives for curatorial storage must be analyzed.

Preliminary analysis indicates that the thirty-one recently acquired historic structures are in need of immediate and long-range repair and maintenance. The degree of repair and maintenance required needs to be determined. Also, there is a need to determine how the park's other historic structures will be used and maintained.

Use of these historic buildings for maintenance and other operational functions adversely affects the historic scene and degrades the interpretive experience in the immediate vicinity of the ranch house. Management of the cultural landscape, including lands outside the park to the west and north, requires evaluation. This would include the identification of the cultural landscape (pasture, fencing, ditches, etc.) and the primary time period(s) it represents.

Old dump sites, found throughout the ranch, need to be identified and recognized in planning for future use and development.

Visitor Use and Interpretation - The relationship of previous and recently acquired structures, and of the cultural landscape to visitor use of the site and park interpretive programs and facilities needs evaluation.

Many visitors assume that the rustic visitor contact station and comfort station adjacent to the existing parking area constitute the "ranch" and leave before visiting the actual historic home ranch. In addition, the location of the visitor contact station does not provide a good view of the historic complex. The small visitor contact station, about 400 square feet, lacks sufficient exhibits, sales area, work and storage space, audiovisual capabilities, and access for the disabled. The park needs an interpretive facility that is located and designed to avoid visitor confusion and to effectively tell the story of the frontier cattle era and subsequent developments. It also needs improved interpretive media throughout the site to help visitors understand the various aspects of ranching operations. Access for the disabled also needs to be considered for all developments and programs at the ranch.

The park has an outdated interim *Interpretive Prospectus (IP),* approved in 1975. A new IP is needed to guide interpretive media and facility development. Because interpretation focuses on a long time period (1860s to 1970s), many visitors are confused as to the story being told. In addition there is a lack of direction on how specific historic structures will be used and what time period will be interpreted.

Park visitor and employee access and parking can affect interpretation and preservation of the historic landscape. Present access from visitor parking requires visitors to travel a trail that passes under the Burlington Northern/Montana Western Railroad and the park-owned Milwaukee Road Railroad tracks. Changes in use and access could require an additional railroad crossing(s). Visitor-use facilities and access requirements should be evaluated in relationship to interpretation and retention of the historic landscape.

Operations - Efficiency of park operations as it relates to fragmentation of various functions requires evaluation.

The park is renting commercial space in the city of Deer Lodge for its headquarters. Park staff also work from the existing visitor contact station, the maintenance shop, and the curatorial work spaces on the ranch. There is a need to analyze consolidation of functions, including the potential to adaptively rehabilitate recently acquired structures. Analysis would focus on the long-range reduction of office space rental and the increased staff efficiency that could result from consolidation. In addition, the USDA-Forest Service and the National Park Service will create a joint administrative facility in or near Deer Lodge, which would include consideration of lands within the park.

On-site housing for a park ranger now exists in a mobile home in the historic ranch complex. The need for replacement or permanent on-site housing requires evaluation.

The NPS must have access to the historic complex during emergencies. Access for emergency equipment requires evaluation. The park, which owns a fire truck and maintains a fire cache, has a service contract with the city of Deer Lodge for fire protection. The need for NPS-provided fire protection should be evaluated. Should a need to replace or to supplement Deer Lodge services be determined, facilities for fire protection equipment would need to be provided, as would specialized training for fire suppression in historic structures.

Natural Resources - The park is facing several natural resource issues that require resolution, including overall management philosophy -- managing natural resources as part of a ranch operation or management that stresses natural processes.

Since Grant-Kohrs is a working cattle ranch, many ranchers and visitors feel that resource management should be oriented toward control of noxious weeds, pests, and rodents. Because the ranch is part of the National Park System, others believe that resource management should stress natural processes. Resource management philosophy must be determined for Grant-Kohrs.

Other natural resource issues include agricultural leasing and pollution of the Clark Fork River, caused by past upstream mining, milling, and smelting activities in Butte and Anaconda.

External Influences/Lands - The influences of activities and uses of land surrounding the park need to be determined.

The city of Deer Lodge abuts the park's southern and eastern boundaries. Development of these lands has occurred. Guidelines that can be used to work with local officials to minimize impacts of these and future developments need to be developed. The park's western boundary is contiguous with undeveloped grazing lands owned by the Rock Creek Cattle Company. These undeveloped lands are critical to park management and to quality visitor experiences, as illustrated in the park's 1987 *Cultural Landscape Report*. The plan will evaluate management options, such as boundary expansion, acquisition of scenic easements, and cooperative agreements.

Lands viewed from the ranch in the middleground and background are managed by the USDA-Forest Service and the Montana State Prison. These lands have been found to be

suitable for timber harvest. The plan needs to address actions that can be taken in cooperation with the USDA-Forest Service and state, to minimize visual impacts.

The Burlington Northern/Montana Western Railroad traverses the park and is in active use with a couple of trains each day. There is a 35.76-acre parcel owned by the railroad that needs to be acquired for the park.

There is a 120-acre parcel of land that has been purchased by the government, but which is outside of the park boundary. There is a need to evaluate this land to determine if it is necessary for management and protection of the park, and, if so, how it will be used.

PROPOSED ACTION AND ALTERNATIVES

Three alternatives are being considered for management of Grant-Kohrs Ranch. The proposed action provides for rehabilitation and adaptive use of historic structures. Alternative A provides for the rehabilitation of historic structures, while minimizing non-historic uses in the ranch complex. Alternative B (no action) would continue existing management and conditions.

ALTERNATIVES CONSIDERED AND ELIMINATED FROM DETAILED STUDY

The following alternatives were considered and analyzed by the planning team during development of this plan. A description of the alternatives considered and the rationale for their dismissal follows.

Use of an underpass or overpass to cross the Burlington Northern/Montana Western Railroad tracks. The railroad and its present on-grade crossing near the Red Barn are all considered to be integral parts of the ranch's historic setting and use. Construction of an overpass or underpass would significantly affect historic elements and the integrity of the ranch. Because of relatively flat terrain at the crossing site, the amount of vertical change required for an overpass or underpass, and trail grades necessary to accommodate visitors with physical disabilities, substantial construction would be required. Estimates indicate an underpass structure in excess of 450 feet would be needed. Such a structure would intrude upon or might require relocation of historic structures, would also be highly visible to visitors, would adversely affect visitor experience, and would have detrimental effects on historic resources. Because of these impacts, it was felt an on-grade crossing would better serve the needs of park visitors and the historic ranch.

PROPOSED ACTION

The proposed action constitutes the NPS's proposed plan for Grant-Kohrs Ranch National Historic Site. It emphasizes management of the park as a working ranch. The rehabilitation and adaptive use of historic structures will be given priority over new construction, where feasible. Consolidation of administrative, maintenance, and curatorial storage functions in the park proper will be provided. The NPS will pursue cooperative ventures to protect historic landscapes surrounding the park, including donation of, or acquisition of scenic easements by purchase, in an expanded boundary to the west. While interpretation will focus primarily on the frontier, open-range cattle era, it will

secondarily include conditions and events leading up to this period, and subsequent evolution of cattle ranching up to the mechanized feedlot operations, which began in the 1930s and continued until establishment of the park in the 1970s. Initial visitor contact will include a full range of orientation, information, and interpretive services, media, and facilities. Personal service programs such as guided tours, and special activities like demonstrations and costumed interpretation (as staffing levels permit), will be balanced with exhibits, audiovisuals, and other interpretive media, to enhance visitor experience, awareness, understanding, and appreciation of the Grant-Kohrs Ranch National Historic Site.

This alternative was selected as the proposed action because adaptive use of historic structures will better insure long-term protection. Consolidation of park functions will improve operational efficiency and effectiveness. Acquisition of scenic easements on lands west of the park will help preserve historic scenes, while retaining the land's current uses. Improved interpretive media and facilities will present the ranch's periods of use in a more logical order, so that visitors attain a clearer understanding of the ranch's history.

Land Use and Management

The type of management that will be emphasized on lands in the park provides a framework for decisions on use and development. This framework is displayed through management zones. Three management zones have been identified for Grant-Kohrs Ranch: historic zone, development zone, and special use zone. Each zone has been divided into subzones, to help focus on specific types of intended use and development.

The historic zone comprises about 92 percent of lands within the proposed park boundary, it is the largest and most significant. It is managed primarily to preserve cultural resources and settings and to provide public appreciation of their values. Two subzones have been designated within the historic zone. The preservation/adaptive use subzone includes the home ranch area west of the railroad tracks, as well as the mechanized feed operation area to the east. The grazing/hay meadow subzone includes the grazing lands and meadows north and west of the main ranch complex.

The development zone consists of an 11-acre parcel of land near the park's southeast boundary.

The special use zone, about 6 percent of the park's proposed acreage, includes improvements used by other interests. It includes two subzones: a utility subzone in the north part of the park, which contains easements through the park for city of Deer Lodge sewer lines and the sewage lagoons owned and maintained by the city of Deer Lodge;

and a transportation subzone composed of the Burlington Northern/Montana Western Railroad right-of-way.

Land Protection/Adjacent Lands

There are 1,498.38 acres of land within the boundary of Grant-Kohrs Ranch. This includes 69.47 acres owned by the city of Deer Lodge; 57.45 acres owned by Union Pacific Railroad and leased to Burlington Northern, who subleases to Montana Western; 165.68 acres of scenic and rights-of-way easements; and 1,205.83 acres of fee ownership land. There are also 120.0 acres owned in fee by the United States and managed by the NPS that are outside of, and adjacent to, the park's southern boundary. These lands were purchased with lands in the park as an uneconomic remnant under authority of P.L. 91-646, Uniform Relocation Assistance and Real Property Acquisition Policy Act of 1970. Under this proposal, federal ownership will be retained and a revision of park boundaries to include these lands will be pursued.

Non-federal lands in the park include the previously mentioned 57.45 acres of land owned by Union Pacific. Of this land, 35.76 acres were originally granted for a gravel operation. This 35.76-acre parcel has been fenced by the company and as a result it contains one of the few remnants of the native prairie that once blanketed the Deer Lodge Valley. NPS management of these lands will enhance the park. Potential donation or other acquisition of this land will be explored and pursued. Retention of the lands will help protect the park from encroaching development from Deer Lodge and will help retain uninterrupted landscape scenes.

In January 1991, a *Cultural Landscape Analysis* was completed for the park. That analysis found that lands immediately west of the park are critical to protecting park resources and values, as well as to enhancing the visitor experience. Roughly 1,100 acres, the entire parcel is owned by a single landowner (see boundary and land status map). Current use for livestock grazing complements the park. It is essential that the existing use not change; the "openness" of this land helps support the ranch's theme of the open-range cattle industry. Acquisition of easements to retain existing conditions will ensure long-term viability of the park. The NPS will seek authorization to expand park boundaries to include these lands by acquisition of easements, through donation or purchase.

The NPS is sensitive to retaining the historic integrity of the ranch and recognizes the diverse uses of surrounding lands. The city of Deer Lodge lies adjacent to the park's east and south boundaries. Development and uses of these lands have an impact on the historic scene of the ranch. Through city land-use zoning, impacts to the park can be minimized to help protect the park's integrity and long-term value to local residents.

existing historic site boundary

proposed historic site boundary

historic zone

preservation/adaptive use subzone

grazing/hay meadow subzone

development zone

special use zone

North

1" = 2000'

Hollow

Spring Gulch

Clark Fork

Sewage Disposal Ponds

sales barn with maintenance shop

Red Barn

temporary visitor center

temporary restrooms

ranch access trail

visitor center parking

Fairground

Jaycee Park

Deer Lodge

Courthouse

Powell Co High Sch

MILWAUKEE AVE

Taylor Creek

Hillcrest Cemetery

Proposed Management Zoning

Grant-Kohrs Ranch National Historic Site

Montana

U.S. Dept. of the Interior - National Park Service

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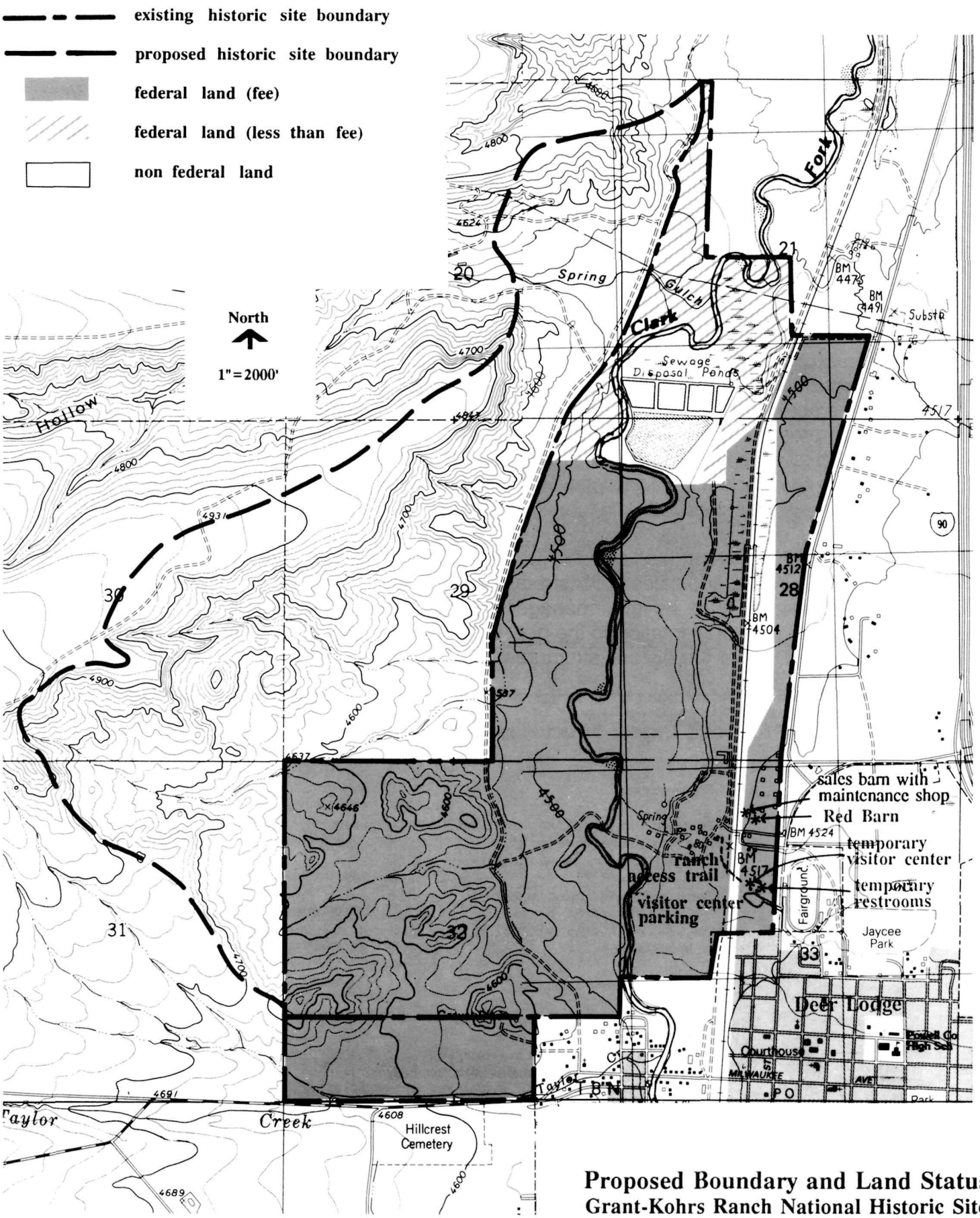

Proposed Boundary and Land Status
Grant-Kohrs Ranch National Historic Site
Montana

U.S. Dept. of the Interior - National Park Service

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Mar 93 | RMRO

Lands to the west, in the middleground and background, are managed by the USDA-Forest Service and Montana State Prison. Some of these lands are subject to timber harvest and other manipulative practices. Silvicultural and other techniques that maintain characteristic landscapes will contribute to maintaining a quality experience for park visitors. Land use guidelines should be prepared to serve as a tool for the park to cooperate with neighbors, state and local governments, and other agencies.

Cultural Resource Management

This section summarizes overall cultural resource management emphasis provided in the resource management plan that is being prepared for the park. Cultural resource management will emphasize the preservation and use of historic structures and grounds through preservation maintenance, rehabilitation, restoration, and adaptive use. Park curatorial storage requirements will be met through construction of a curatorial storage facility on the 11-acre tract near the park's southern boundary. Retention of the historic landscapes will be pursued, with management oriented towards a variety of time periods.

The "Affected Environment" chapter includes a discussion of historic structures, their materials, builders, and dates of construction. The following table illustrates proposed use of structures, as well as the "management time periods" that appear to be most representative for presentation to the public. These time periods also represent the best documented use of the historic structures.

Table 1 Proposed Use of Structures and Associated Time Periods

Historic Structure/ Building Number	Proposed Use	Time Period
1 - Ranch house	Basement - Display as furnished addition to house museum First Floor - Retain as house museum Second Floor - Minimal curatorial storage	1890-1920
2 - Bunkhouse Row	Retain as furnished museum space	1930s
3 - Garage/Blacksmith shop	Wayside exhibit, retain as public rest rooms, blacksmith demonstrations, multi-use storage	1930s
4 - Coal Shed	Display and museum building	1912-1915
5 - Ice House	Basement - General storage First Floor - Furnished museum space building and wayside exhibit to explain evolution of building use as ice house meat cooler, Chinese cook quarters and tack house	1930s
6 - Granary/Roller Mill	Wayside exhibit and display	1930s

Historic Structure/ Building Number	Proposed Use	Time Period
7 - Draft Horse Barn	Retain as active horse barn, storage of usable horse tack; wayside to interpret draft horses	1870s
8 - Privy (Roosevelt building)	Display building	1930s
9 - Dairy	Furnished interpretive structure with wayside exhibit	1930s
10- Oxen Barn	Display building	1870s
11- Horse Barn	Displayed building, some stalls used for spring calving, active horse barn	1880s
12- Machine Shed	Display building	1900s
13- Cow Shed	Display and maintenance storage	1900s
14- Stallion Barn	Display building with interpretation as stallion barn	1880s
15- Thoroughbred Barn	Display museum vehicles, wayside to interpret building and horses	1880s (exterior)
16- Stallion Barn	Display building, open interior for interpretation	1880s
17- Buggy Shed	Furnished interpretive building with wayside to explain current location and 1907 Milwaukee Road Railroad	1900s
18- Granary	Display building/storage	1890s
19- Stallion Barn	Wayside exhibit structure, interpret adaptive uses: stallion barn, garage, blacksmith shop	1920s
20- Privy	Display building	1920s
21- Brooding House	Housing fowl and feed storage, display building with wayside	1930s
22- Chicken House	Housing fowl	1930s
23- Metal Granary	Display as early metal granary	c.1910
24- Stock Shelter	Livestock shelter	1930s
25- Stock Shelter	Display building	1933
26- Hay Storage	Display building	1934
27- Stock Shelter	Winter shelter for calves	1933
28- Feed Storage House	Feed storage	1930s
29- Stock Shelter	Livestock shelter	1930s
30- Horse Barn	Display building and hay storage	1880s
31- Feed Storage House	Feed storage	1930s
32, 33- Stock Shelters	Livestock shelter	1930s

Historic Structure/ Building Number	Proposed Use	Time Period
34- Storage Shed	Display structure	1930s
35- Cattle Foot Bath	Display structure	1930s
36, 37, 38- Feed Racks	Feed rack	1900s
39- Manure Pit	Display structure	1930s
40- Beef Hoist	Display structure	1870s
41- Squeeze Chute	Use to work cattle	1930s
42- Feed Rack	Feed rack	1900s
43, 44- Feed Racks	Feed rack	1940s
45, 46- Feed Bunks	Display structure, feed storage	1930s
47- Squeeze Chute	Used to work cattle	1930s
48- Feed Bunk	Use to bunker calf winter hay	1930s
49- Feed Bunk	Display structure, feed storage	1930s
50- Flume, Active	Conveys irrigation water	1940s
51- Flume, Inactive	Previously removed	
52- Feed Bunk	Display structure	1930s
53- Squeeze Chute	Display structure	1930s
54- Bridge	Previously removed	
55- Bridge	Continue use, K-M Ditch Bridge	1930s
56- Railroad	Display structure	1900s
57- Siphon	Display structure	1880s
58- Warren Residence	Park employee residence, display and wayside	1930s
59- Chicken Coop	Park employee resident use	1940s
60- Boathouse	Park employee resident use	1950s
61- Residence Garage	Park employee resident use	1930s
62- Barn	Display building	1950s-1970s
63- Barn	Display building	1950s-1970s
64- Red Barn	First Floor - Visitor center Second Floor - Administrative offices	1950s-1970s

Historic Structure/ Building Number	Proposed Use	Time Period
65- Metal Barn	Maintenance facility	1950s-1970s
66- Scale House	Use as scale	1950-1970s
67- Squeeze Chute	Use as squeeze chute, display structure	1950s-1970s
68- Feed Rack	Feed rack, display structure	1950s-1970s
69- Loading Chute	Active loading chute, display structure	1950s-1970s
70-77- Cow Sheds	Occasional use, display structure	1950s-1970s
78-84 Feed Houses	Occasional use, display structure	1950s-1970s
85- Pump House	Restore for display	1950s-1970s
86, 87- Pump Houses	Use for irrigation	1960s-1970s
88- Pump House	Use for irrigation, stock water	1950s-1970s
89- Clark Fork Bridge	Retain/Use	1930s
90- Slough Bridge	Retain/Use	1930s

Approximately 10,000 square feet are needed to meet existing curatorial storage requirements. A facility will be constructed at the 11-acre site, where new construction will not affect historic scenes or structures. The facility will be compatibly designed to meet requirements of NPS-28. In addition to actual artifact storage, needs include work space for artifact preparation, treatment, and conservation, as well as office space for research purposes. Actual building layouts and designs will strive to complement those of the ranch and other typical western ranch architecture. Actual size will be determined by a collection storage plan.

The park will explore acquisition, by purchase or donation, of the original Conrad and Nell Warren household furnishings and records, located in HS 58. These items could be a valuable addition to the collection as future programs are expanded to more fully interpret the ranch's later years.

A leasing program for the east feedlot will be explored, and, if deemed feasible, implemented to help interpret the mechanized feedlot operation and to help give the visitor a sense of this operation. Any actions that might be taken should be structured to retain park management discretionary decisions and meet any applicable codes, laws, and regulations established by the state or other regulatory agencies governing the operation of feedlots.

The appendix is a cultural landscape inventory and analysis for Grant-Kohrs Ranch. It identifies eight landscape types associated with the ranch's historic use, and provides maps delineating the location of each landscape type. Landscape types and the managed time period(s) are as follows:

Table 2 Landscape Types and Associated Time Periods

Landscape Type	Time period
Home Ranch Complex	1862-1935
East Feed Lot/Warren Hereford Ranch	1950-1972
Residential, Ranch house	1881-1940
Warren House	1934-1972
Pasture/Hayfield	1860s-1972
Upland Pasture	1860s
Riparian/Woodland	1860s
Borrow Pit/Wetland	1907
Railroad Bed	1883-1907

Nearly all of the pasture/hayfield landscape type west of the river is leased through special-use permit for hay production and some grazing, after the final hay cut. This permit provides a viable mechanism to maintain historic scenes, is competitive, and provides funds back to the park based on fair market values. This program or a similar venture will be retained. At the home ranch complex, additional research will be conducted to identify the ranch house's historic landscape. This plan will include provisions for restoration of the landscape.

A number of dumps are scattered throughout the ranch. Archeological surveys will be scheduled and conducted to identify their locations. Research and excavation of these dumps will be undertaken only if their protection in-place cannot be assured.

Natural Resource Management

Natural resource management will support the park's primary purpose of preserving and interpreting a working ranch. Noxious weed control programs, a vegetation injury assessment, agricultural use plan, and entomology studies will be pursued. Also, compilation of resource inventories, preparation of a water resource management plan scoping report, stabilization of streambanks, and removal of old herbicides from recently acquired structures will be accomplished. The agricultural-use plan will address grazing management for the park. Technical assistance will be obtained from the Soil Conservation Service to ensure that Best Management Practices are applied and a monitoring system put in place. Past pollution of the Clark Fork River requires completion of soils analysis for heavy metal contamination, completion of the Superfund assessment of injury, and continued monitoring by the NPS and others.

Pest management for the museum collection is concerned mainly with control of dermestids, cluster flies, and rodents, all of which are detrimental to museum objects. Cluster flies, parasitic with earthworms, are abundant around the ranch house. They enter the house in the fall and emerge through the fall and winter. Dermestid larva feed on dead cluster flies and rodents. Rodents also feed on cluster flies. They have been known to eat flies off insect monitor traps. Integrated pest management is necessary to not increase one pest, while reducing populations of another.

Proposed acquisition of the 35.76-acre parcel of Union Pacific Railroad land will preserve a remnant of Deer Lodge Valley prairie. Management will protect and restore these native species.

The Kohrs-Manning ditch was constructed in 1947. The Kohrs-Manning Ditch Company operates and maintains the irrigation ditch running south to north across the site, and maintains a diversion dam on Cottonwood Creek and a flume crossing Johnson Creek within the park. No written agreement with the National Park Service exists for the ditch's maintenance, but access has been provided to the ditch company to maintain and operate the ditch. Deed Number 3 conveys the land "subject to the rights, if any, of the Kohrs-Manning Ditch Company," and grants the National Park Service 6 miner's inches of water from the Kohrs-Manning Ditch. The National Park Service maintains two headgates on the ditch, to divert water into the site's irrigation ditches. Any efforts made to change the historic character of the ditch will be opposed by the National Park Service.

Visitor Use and Interpretation

The park will continue to be managed as a day-use area. Interpretation will focus on visitor awareness, understanding, and appreciation of the frontier, open-range cattle era

(c. 1860s to 1890s), but it will secondarily include conditions and events leading up to this period (for example, available grasslands, Public Domain, etc.); and subsequent evolution of cattle ranching up to and beyond the mechanized feed lot operations of the 1930s. A variety and evolution of time periods will be interpreted as visitors circulate throughout the ranch and are exposed to structures and scenes from different eras of the ranch's history. The "Cultural Resource Management" section of this plan describes the time periods that will be interpreted for each historic structure and landscape.

Upon entering the park, visitors will travel along the ranch's historic access lane, having a view of the historic ranch, before parking in a former pasture adjacent to the large Red Barn (HS 64) in the more modern part of the ranch. There, wayside exhibits will direct them to the Red Barn, the large first floor of which will be adaptively rehabilitated into a visitor center. In the center, visitors will be exposed to a wide range of orientation, information, and interpretive facilities, media, and services, to prepare them to fully experience and enjoy the historic ranch. The center will include an information lobby/desk, 2,000 square-foot exhibit hall with artifact-rich exhibits, sixty-seat audiovisual theater, and an interpretive literature sales area. Interpretive staff, exhibits, audiovisual program, and publications will orient visitors to the site, help them plan their visit (including scheduling ranger-guided tours), and provide them with a comprehensive overview of the background, setting, and story of Grant-Kohrs Ranch. Support facilities will include public rest rooms, interpretive and administrative staff offices, library, preparation room, and cooperating association office and storage area.

When visitors leave the Red Barn visitor center, they will emerge into the setting of the modern (c. 1950s-1970s) ranch operations of mechanized feedlot, selective breeding, and conservation. This will serve as a point of reference and departure to go back in time. As they cross the railroad tracks, they will enter the world of times past, when ranching was far different from what it is today. Wandering along ranch drives and paths, visitors will be exposed to a wide variety of ranch buildings, scenes, and activities representing several different time periods, focusing on the near mythic, but certainly familiar, era of the 1860s to 1890s. Armed with their introduction from the visitor center, and guided by wayside exhibits self-guiding brochures, and/or park staff (uniformed or costumed, as appropriate), they will imagine and vicariously experience ranching of a far different kind, when the industry boomed, powered and shaped by the open range, and when the home ranch complex served as a headquarters for a far-reaching, million-acre range cattle empire.

In the long-term, a variety of additional buildings or parts of buildings -- currently used for maintenance, curatorial, and other administrative purposes -- will be restored and/or refurnished and interpreted, to further enhance the visitors' understanding of the ranch and the cattle industry. This includes the Dairy (HS 9) and additional portions of the main

ranch house, including the basement. Existing curatorial functions will move to the new facility designed for those purposes on the 11-acre administrative tract.

Interpretive themes and goals associated with this proposal are as follows:

Themes: The open-range cattle industry played a major role in American frontier history and has had a profound effect on American culture and environment, in reality, as well as in romance.

The American cattle industry resulted from unique and interacting environmental, economic, political, and social conditions; and evolved over time to something quite different from its now-mythical heyday - all the while adapting to changes in those same conditions.

The epic drama of the open-range cattle industry required many stages, acts, and players: from the sweeping prairies of central and eastern Montana, to the home ranch; from the headiness of roundup and trail drive, to the comfortable routine of everyday life; from the cattle king, to the common cowboy; each place, each scene, and each character an important part of the whole.

Grant-Kohrs Ranch and its people were unique and fascinating; yet they were also representative of the evolving American cattle industry.

Goals: To provide visitors - at parking lot and visitor center - with initial site orientation and information, so that they can plan and conduct an efficient, comfortable, and rewarding park experience.

To provide visitors - through appropriate visitor center media (exhibits, AV, artifacts) and services - with initial overview interpretation of the story and significance of the open-range cattle industry and Grant-Kohrs Ranch that are difficult to portray on the home ranch itself: for example, John Grant's/Conrad Kohrs' roles; environmental, political, and economic background and consequences; the size and scale of herds, grazing lands, roundups, trail drives; and so forth.

To prepare visitors - with information and materials necessary - to understand and appreciate the activities and firsthand experiences of touring the ranch itself.

To provide appropriate on-site routing, media (wayside exhibits, self-guiding publications) and personal services (guided tours, demonstrations), to enable visitors to fully experience, understand, and enjoy the ranch and its meaning - to the depth and degree of formality each wishes and at his or her own pace.

To protect park historical resources, through careful selection and siting of interpretive activities and through educating visitors about the need for, the process of, and their role in, resource preservation.

To offer visitors the opportunity to acquire free and/or to purchase publications and other educational materials that will provide more in-depth interpretation of the park story and themes, as well as serve as mementos of their visit to Grant-Kohrs Ranch.

By its very nature, Grant-Kohrs Ranch poses numerous challenges to access by the disabled, particularly physical access across dirt and gravel drives and walkways that are historic in appearance, if not actual fabric; and access into the second floor of the main ranch house, as well as numerous historic outbuildings. Under this proposal, the visitor center and administrative offices in the adaptively restored Red Barn will be fully accessible to visitors and employees alike, including associated parking, walkways, and rest rooms. The new curatorial/USDA-Forest Service facilities will be fully accessible to employees and researchers. Interpretive media planning and production will strive for maximum accessibility to all exhibits audiovisuals, and publications, for persons with disabilities.

More complex and sensitive are the questions regarding physical access to historic structures, landscapes, and surfaces, where historic fabric or appearance would be significantly impacted. In many cases, options exist that avoid significant impact, such as viewing interiors from outside, or not opening building interiors at all, when significant fabric would be lost by making them accessible.

In this latter case, wayside exhibits and publications with photographs or artwork can mitigate visitor disappointment at finding buildings closed. In all cases, however, visitors will have the same degree of access regardless of disability.

Because of the number of historic structures involved at Grant-Kohrs Ranch; because of the significant accessibility questions posed by ranch roads, drives, and walks (surfaces, grades, etc., of primary access routes to lower yard, demonstration sites, and other ranch areas); and because of the potentially conflicting mandates of preservation versus access; a special study team will be put together to develop a detailed access plan, to further

guide all planning design, construction and/or adaptive restoration at the park. The team will be multi-disciplinary (engineering, cultural resources, interpretation, access specialties) and will apply state-of-the-art thinking and technology to solving the access challenges of Grant-Kohrs Ranch. Where the solution is elusive, the team and plan will recommend a final action of modifying fabric/appearance in favor of accessibility, or keeping the area closed. Occasionally they could recommend alternative access, but this should be rare, with a primary goal of equal access to all.

Park Operations

The park's headquarters will continue to be in the city of Deer Lodge until funds are available for rehabilitation and adaptive use of the Red Barn. The barn's second floor will be used for park administration. The cow shed (HS 13) will provide 8,300 square feet for maintenance storage. Space for remaining maintenance functions will be provided in a new structure on an 11-acre tract near the park's southeast boundary. In addition to parking space for six vehicles, and a maintenance yard, maintenance facility functions within a 2,500 square-foot facility are as follows: Carpenter shop, welding room, paint booth, electrical/plumbing shop, wash room/showers, storage, and 3 garage stalls.

Site security will be provided by a variety of mechanisms. They could include fire detection, fire suppression, and intrusion alarms in all areas containing museum collections. The mobile home within the historic ranch complex, currently used as a staff residence, will be removed. When available, the Warren residence and associated building will be used as a residence for a park employee, perhaps a ranch hand.

The park has a contract with the city and an agreement with the state and USDA-Forest Service for fire-fighting services. The park does not maintain a structural fire brigade and the existing park truck is too small to respond adequately to structural fires. The park will continue to rely on city-provided services for primary fire protection. A fire truck will be retained for wildland fire and to support the city's response. Access for fire fighting and other emergency actions will be provided by use of the home ranch's access road. Historic vehicular circulation routes in the ranch will be retained for emergency and administrative access to all buildings, structures, and visitor-use areas.

Staffing necessary to implement this proposal follows:

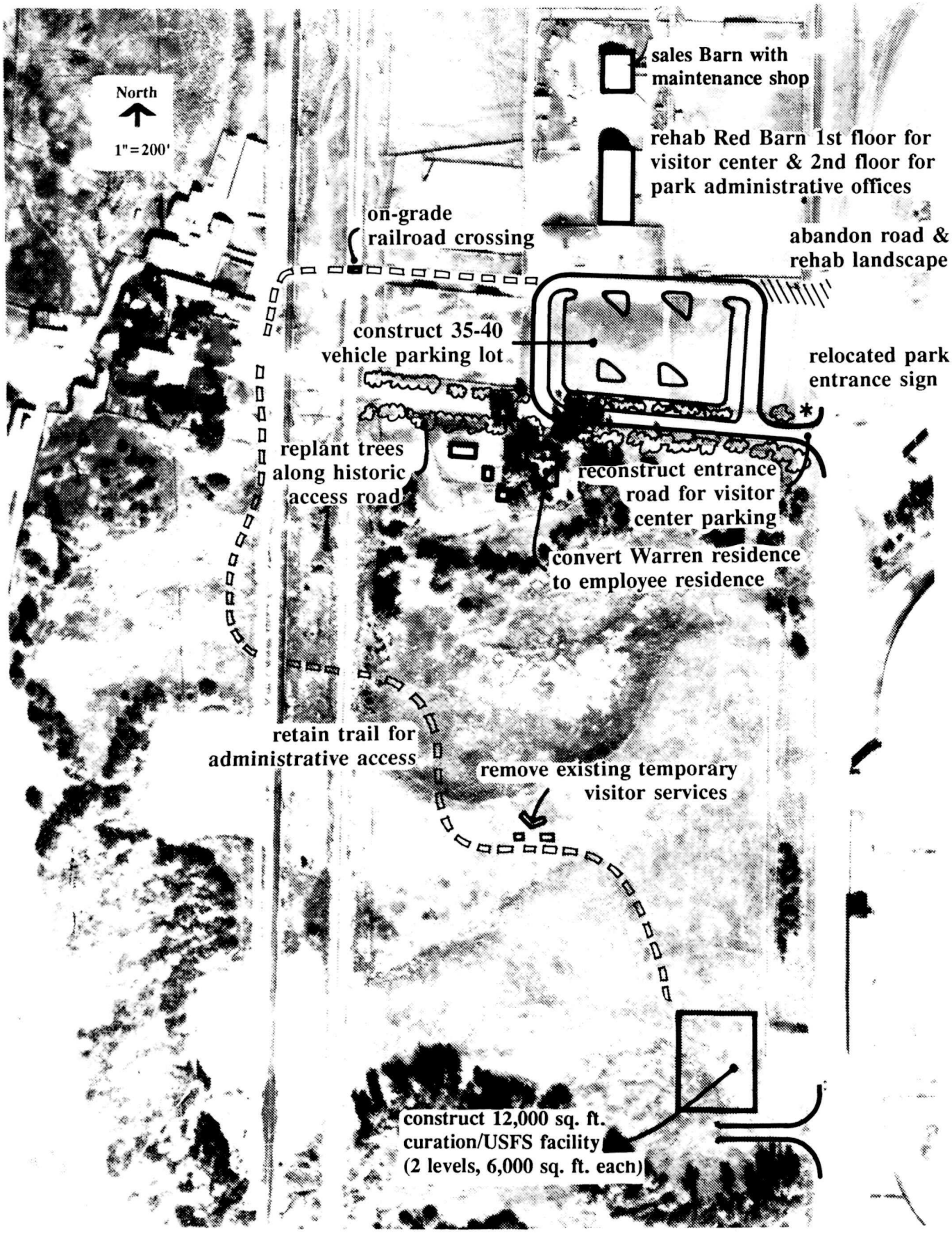
Function	**Position**	**FTEs**
Administration	Superintendent	1.0
	Secretary	1.0
	Administrative Officer	1.0
	Administrative Clerk	1.0
Maintenance	Maintenance Foreman	1.0
	Ranch Worker	1.0
	Maintenance Worker	2.0
	Maintenance Mechanic	1.0
Resource Management Protection	Chief Ranger	1.0
	Resource Management Specialist	1.0
	Park Ranger	1.0
Interpretation	Supervisory Park Ranger	1.0
	Park Ranger	3.0
Curation	Curator	1.0
	Museum Technician	3.0
	TOTAL	20.0

Annual operations and maintenance costs associated with this proposal are about $600,000.

General Development/Development Concepts

This proposal emphasizes the use or adaptive use of historic structures to meet a majority of park visitor and administrative needs. New development will meet maintenance and curation needs.

A visitor center will be provided through adaptive use of the Red Barn's first floor. Approximately 6,000 square feet in size, the visitor center will house a 60-seat auditorium, 2,000 square feet of exhibit space, a lobby/sales area, and support facilities: public rest



Development Concept

Grant-Kohrs Ranch National Historic Site

Montana

U.S. Dept. of the Interior - National Park Service

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rooms, cooperating association office and storage space, interpretation office, and library. A 35 - 40 space parking lot, including oversize spaces for buses and RVs, will be constructed in the pastures south of the Red Barn. This area was historically used by Con Warren for parking during livestock sales and auctions. Access to the parking lot will be provided from Highway 10 along the home ranch's historic access road. Upon entering the ranch, the visitor will view the ranch house, framed by trees along each side of the access road. A second existing access road just north of the historic access road will be abandoned and the land reclaimed. Park entrance and other information signing will be placed as appropriate.

The Red Barn's second floor will be modified to accommodate park administrative offices. It will include offices for all management functions, filing and copying room, break room, conference room, staff rest rooms, training room and other related uses. Staff will use the visitor center parking lot.

An approximately 12,000 square-foot USDA-Forest Service administrative and NPS curatorial storage facility will be constructed at the 11-acre site, where new construction will not affect historic scenes or structures. To help reduce mass of the building, the 12,000 square feet will be split equally between a first floor and a basement. The facility will be compatibly designed to meet requirements of NPS-28. In addition to artifact storage, needs include work space for artifact preparation, treatment, and conservation, as well as office space for research purposes. Actual building layouts and designs will strive to complement those of the ranch and other typical western ranch architecture, including that found in the city of Deer Lodge. New buildings will be built adjacent to the highway, in order to continue the Deer Lodge street scape. The architecture of the building should suggest commercial rather than ranch use.

Visitor access to the home ranch will require a crossing of the Burlington Northern/Montana Western railroad tracks. The deed conveying the right-of-way to the railway company reserved the right-of-private-way at three crossings in section 28 and three crossings in section 33. Some modifications to the crossing, such as leveling of surfaces and provision of train warning signals, will be pursued to eliminate hazards. The NPS will work with the appropriate railroad companies to establish the on-grade crossing.

Historic structure repair and rehabilitation needs are illustrated under "Development Priorities and Costs."

Development Priorities and Costs

The following is a conceptual phasing program for development of Grant-Kohrs Ranch. Costs presented are class "C" estimates, based on the NPS estimating guide (October 1988 through October 1991).

PHASE I

Item	Gross Construction Costs	Advance/Project Costs	Total
Rehabilitate first floor of Red Barn for visitor center	1,926,000	367,000	2,293,000
Rehabilitate the red barn second floor for park offices	1,009,000	193,000	1,202,000
Construct 35-40-space visitor center parking	94,000	18,000	112,000
Interpretive media for for new visitor center	1,927,500	60,000	l,987,500
Parkwide wayside exhibits	135,000		135,000
Reconstruct 1,150 LF of road for visitor center access parking	200,000	38,000	238,000
Abandon and restore 1200 LF of road	29,000	6,000	35,000
Remove existing visitor center parking lot	16,000	3,000	19,000
Subtotal Phase I			6,021,500

PHASE II

Item	Gross Construction Costs	Advance/Project Costs	Total
Construct 10,000 SF curation facility/parking	1,965,000	375,000	2,340,000
Subtotal Phase II			2,340,000

PHASE III

Several historic structures in the park are in need of immediate and long-range repair. The degree of repair, maintenance requirements, and estimated cost are illustrated below.

Scope of Work for Projects

PR= Preservation Maintenance. Preservation maintenance projects are small projects, such as window repair, foundation repair, painting, site drainage, roofing and like-kind replacement of fabric, which impact the structural stability of the building or structure.

R= Restoration. A structure needs major stabilization work in order to maintain its integrity.

The Historic Structure/ Building Number	Estimate Rehabilitation Cost	Scope
1 - Ranch House	$400,000	Restore terne roof/trim/gutters; repair/repair 2nd floor plaster; complete 1st floor restoration; restore landscape and grounds; restore north addition and basement; PR on building elements
2 - Bunkhouse Row	65,000	Rehab floor of shower room; install lighting system; install fire and security system
3 - Garage/Blacksmith	20,000	Rehab interior for AV; install fire and security system
4 - Coal Shed	25,000	Relocate electrical service
5 - Ice House	5,000	Rehab basement;elect. svce/lights;fire/security syst.
6 - Granary/Roller Mill	6,000	PR; fire/security system
9 - Dairy	40,000	Furnishing study; R; fire/security system
10- Oxen Barn	15,000	PR
11- Horse Barn	10,000	PR
12- Machine Shed	20,000	PR
13- Cow Shed	50,000	PR
14- Stallion Barn	30,000	Fire/security system; PR
15- Thoroughbred Barn	35,000	Fire/security system; R
16- Stallion Barn	10,000	PR
17- Buggy Shed	4,000	PR
18- Granary	3,000	PR
19- Stallion Barn	3,000	PR
20- Privy	1,000	PR
21- Brooding House	3,000	PR
22- Chicken House	10,000	R
23- Granary	6,000	PR
24- Stock Shelter	3,000	PR
25- Stock Shelter	3,000	PR
26- Hay Storage	5,000	PR
27- Stock Shelter	5,000	PR
28- Feed Storage House	6,000	PR
29- Stock Shelter	3,000	PR
30- Horse Barn	10,000	R
31- Feed Storage House	6,000	R
32- Stock Shelter	2,000	PR
33- Stock Shelter	2,000	PR

The Historic Structure/ Building Number	Estimate Rehabilitation Cost	Scope
34- Storage Shed	4,000	PR
35- Cattle Foot Bath	2,000	PR
36- Feed Rack	1,000	PR
37- Feed Rack	1,000	PR
38- Feed Rack	1,000	PR
39- Manure Pit	3,000	PR; fill in pit
40- Beef Hoist	1,000	PR
41- Squeeze Chute	3,000	PR
42- Feed Rack	1,000	PR
43- Feed Rack	1,000	PR
44- Feed Rack	1,000	PR
45- Feed Bunks	3,000	PR
46- Feed Bunks	3,000	PR
47- Squeeze Chute	2,000	PR
48- Feed Bunks	2,000	PR
49- Feed Bunks	2,000	PR
50- Flume, Active	1,000	PR
52- Feed Bunks	1,000	PR
53- Squeeze Chute	3,000	PR
55- Bridge	2,000	PR
56- Railroad	7,000	Replace railroad ties
57- Siphon	2,000	PR
58- Warren Residence	75,000	Measured dwngs-house; PR; roof replacement
59- Chicken Coop	10,000	PR; R
60- Boat House	45,000	R; stabilization
61- Garage	25,000	Stabilization and reroofing
62- Barn	3,000	PR
63- Barn	3,000	PR
64- Red Barn	75,000	Reroof bldg; PR; R feed chutes
65- Metal Sales Barn	65,000	R chutes and gates; PR building; remove site soils contaminated with oil and other hazards
66- Scale House	4,000	PR
67- Squeeze Chute	7,000	PR; R
68- Feed Rack	5,000	PR
69- Loading Chute	4,000	PR
70- Cow Shed	3,000	PR
71- Cow Shed	3,000	PR
72- Cow Shed	8,000	PR; R
73- Cow Shed	5,000	PR; R
74- Cow Shed	4,000	PR; R
75- Cow Shed	4,000	PR; R
76- Cow Shed	6,000	PR; R
77- Cow Shed	6,000	PR; R
78- Feed House	3,000	PR
79- Feed House	4,000	PR; R
80- Feed House	6,000	PR; R
81- Feed House	8,000	PR; R
82- Feed House	4,000	PR
83- Feed House	7,000	PR; R
84- Feed House	3,000	PR
86- Pump House	3,000	PR
87- Pump House	3,000	PR
88- Pump House	3,000	PR
Subtotal Phase III	$1,257,000	
TOTAL DEVELOPMENT COSTS	**$9,618,500**	

Future Plans and Studies

The following plans and studies are recommended.

1. Handicapped Access Plan
2. Historic Structures Report
3. Historic Resource Study for the recently acquired Warren property
4. Furnishing Studies for the recently acquired Warren residence and other buildings as needed.
5. Historic Structures Preservation Plan
6. Visitor Demographic Study
7. Land Use Guideline Recommendations for Surrounding Lands
8. Cattle Ranching Study to place Grant-Kohrs in an overall perspective with the cattle industry.
9. Collection Storage Plan
10. Rewrite National Register Nomination
11. HABS Recordation of Con Warren's House HS 58
12. Historical Landscape Analysis
13. Archeological Surveys

ALTERNATIVE A

This alternative emphasizes management of the park as a working ranch, while minimizing non-historic uses. Emphasis would be placed on removing all non-historic uses from the park's historic zone, with special attention to the ranch house complex. Activities in historic structures would normally be limited to historic uses. New construction to accommodate non-historic uses, such as administration, maintenance, curation, and visitor services, would be planned to minimize intrusions. All new construction would occur outside of the historic zone. Leasing of facilities in Deer Lodge for administrative purposes is a possibility. The NPS would seek an expansion of boundaries to incorporate NPS lands that are outside the present boundary, and the cultural landscape west of the park. Interpretation would focus on the entire span of cattle operations. Initial functions of a contact station would be limited to site orientation. Actual interpretation would occur on site. Costumed interpretation and demonstration programs would be emphasized, including use of non-historic ranch equipment and livestock.

Land Use and Management

Three management zones have been identified for Grant-Kohrs Ranch under this alternative: historic zone, development zone, and special use zone.

The historic zone, about 87 percent of the park, would be managed primarily to preserve cultural resources and settings, and to promote public appreciation of their values. One subzone has been designated within the historic zone; the grazing/hay meadow subzone, which includes the grazing lands and meadows north and west of the main ranch complex.

The development zone, about 1 percent of the park, includes the 11-acre tract near the park's southeast boundary. Facilities and services necessary to accommodate visitor, administrative, and management needs would be provided in this zone.

The special use zone contains about 12 percent of the park's lands. It contains improvements used by other interests. Included are two subzones: a utility subzone in the north part of the park, which contains the sewage lagoons owned and maintained by the city of Deer Lodge; and a transportation subzone composed of the Burlington Northern Railroad right-of-way.

Land Protection/Adjacent Lands

There are 120.0 acres owned in fee by the United States and managed by the NPS that are outside of and adjacent to the park's southern boundary. Under this alternative, expansion of boundaries to include this parcel would be pursued.

Non-federal lands in the park include 57.45 acres owned by Union Pacific Railroad, 35.76 acres of which were originally granted for a gravel operation. This parcel has been fenced by the company, and as a result, it contains remnants of Deer Lodge Valley native prairie. NPS management of these lands would enhance the park. Potential donation, or acquisition through purchase, of this land would be explored and pursued.

In June 1987 a *Cultural Landscape Analysis* was completed for the park. That analysis determined that 1,100 acres immediately west of the park are critical to protecting park resources and values, as well as the visitor experience. This alternative recommends that these lands be added to the park through boundary expansion, and scenic easements be purchased by the United States.

The NPS is sensitive to retaining the historic integrity of the ranch and recognizes the diverse needs provided by uses of surrounding lands. The city of Deer Lodge lies adjacent to the park's eastern and southern boundary. Development and use of these lands have had an impact on the historic scene of the ranch. The NPS recognizes that uses of these lands would continue. Through land-use zoning, impacts to the park can be minimized and the park's integrity and long-term value to local residents can be protected. Lands to the west, in the middleground and background, are managed by the

USDA-Forest Service and Montana State Prison. Some of these lands are subject to timber harvest and other manipulative practices. Silvicultural and other techniques that maintain characteristic landscapes would contribute to maintaining a quality visitor experience.

Cultural Resource Management

This alternative emphasizes the preservation of historic structures and grounds through rehabilitation and repair. Park curatorial storage requirements would be met through construction of a new facility for these needs.

The "Affected Environment" chapter includes a discussion of historic structures, their materials, builders, and dates of construction. Use of historic structures would be limited to uses and activities that are historically accurate.

Curatorial work space for artifact treatment and future research would be provided in the new facility. Equipment and other large artifacts (for example, wagons and plows) would continue to be stored in structures in the ranch complex. Some would support the interpretive program through display.

The ranch's historic landscape would be managed to represent the same time periods illustrated in the proposal.

Natural Resource Management

Natural resources would be managed to support the park's primary purpose of a working ranch. Actions described in the proposal also apply to this alternative.

Visitor Use and Interpretation

The park would continue to be managed as a day-use area, with interpretation focusing on visitor understanding of the frontier cattle era. A variety of time periods would be interpreted through a sequencing of visitor tours. Upon entering the park, visitors would be given orientation in a visitor contact station near the existing facility. Services would be limited to orientation and park interpretation, which would occur within the ranch complex.

After leaving the contact station, visitors would use the existing trail system and go under the railroad tracks to enter the home ranch complex. Interpretation would focus on the range cattle industry, when the ranch served as a headquarters for a far-reaching range cattle empire. The visitors would end their tour by the feed lot operation of cattle

ranching, where they would observe pioneering work in selective breeding and conservation associated with the 1950s to 1970s.

Park Operations

Under this alternative, park administrative programs would be provided in a new visitor administrative complex on the 11-acre tract. A 12,000 square-foot USDA-Forest Service administrative and NPS curation facility would be constructed on this site. Park housing would be removed. Housing available in the city of Deer Lodge is adequate to meet needs.

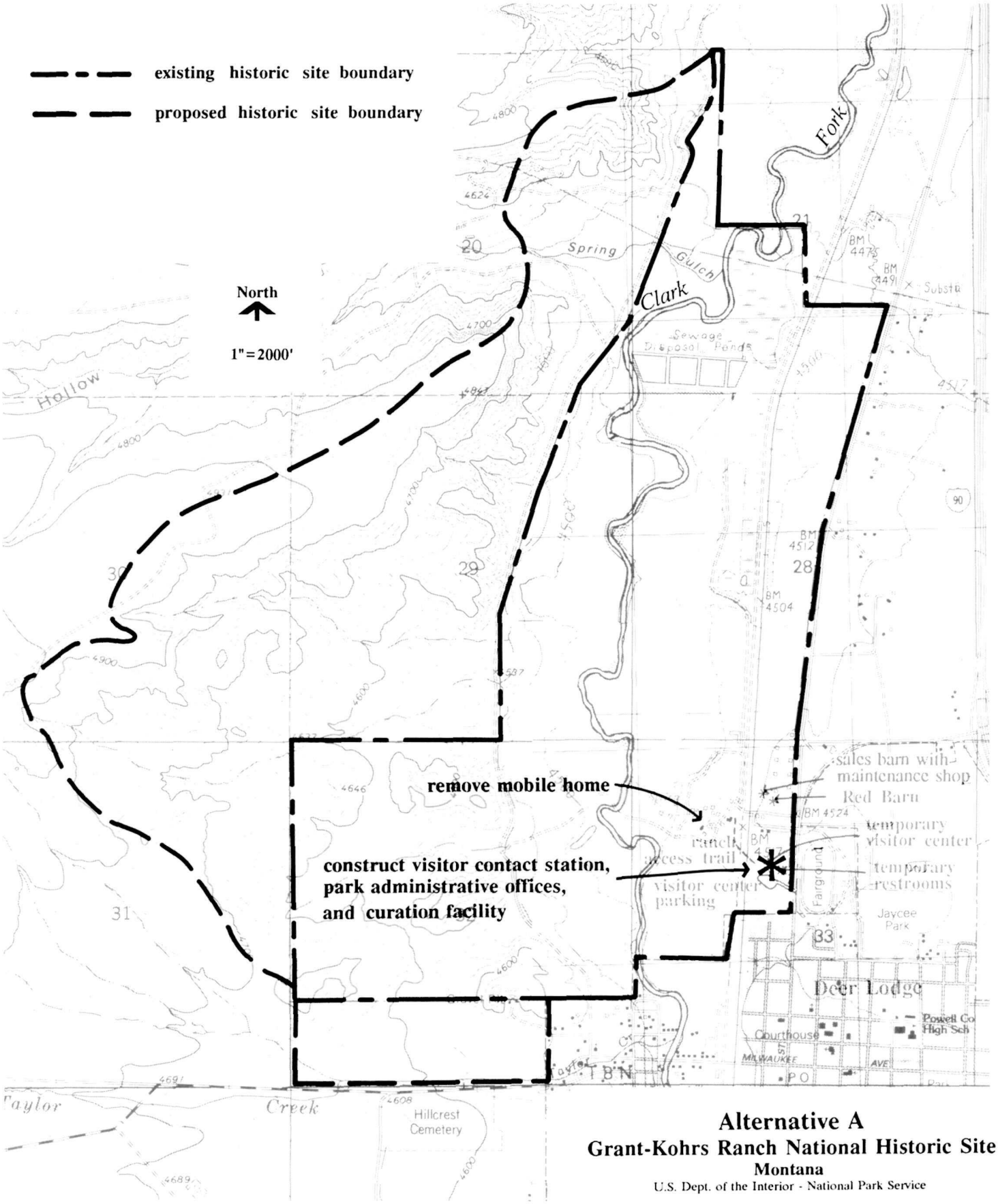
Staffing necessary to implement this alternative is 26.7 FTEs. Annual operation and maintenance costs associated with this alternative are $945,000.

General Development/Development Concepts

All non-historic uses and activities within historic buildings would be removed. A new complex would be provided on the 11-acre tract near the park's southeast boundary. The complex would include a 3,000 square-foot administrative office, 2,000 square-foot visitor contact station, a 50-vehicle parking lot, a 5,000 square-foot maintenance facility, fenced maintenance yard, and a 10,000 square-foot curation facility.

Development and rehabilitation cost estimates are as follows:

Construct a 5,000 square-foot visitor/administrative building	$1,638,000
Construct a 50-space parking lot	117,000
Construct a 10,000 square-foot curation facility	2,340,000
Construct a 5,000 square-foot curation parking area	24,000
Construct a 1,000 linear-foot access road	116,000
Remove existing visitor center, rest rooms, and parking	40,000
Rehabilitate historic structures and buildings	1,079,000
Provide interpretive media for contact station	420,000
Provide wayside exhibits	135,000
TOTAL	$5,909,000



Alternative A
Grant-Kohrs Ranch National Historic Site
Montana
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ALTERNATIVE B (No Action)

This alternative displays existing management strategies for the park, as outlined in current planning documents. Also displayed is a discussion of the park's existing conditions.

Land Use and Management

Existing management zoning is described in the park's 1990 *Statement for Management.* The historic zone is the largest and most significant zone in the park. It is managed to preserve cultural resources and settings, to provide public appreciation of their values. Two subzones exist in the historic zone: the preservation/adaptive restoration subzone includes the ranch headquarters area just west of the railroad tracks; the grazing/hay meadow subzone encompasses grazing lands and meadows north and west of the headquarters.

The park development zone includes the area east of the ranch house and railroad tracks. This zone also includes a small visitor services area in the southeast corner of the park.

The special use zone contains lands and improvements used by other agencies or interests. It includes two subzones: a utility subzone in the north part of the park, which contains sewage lagoons owned and operated by the city of Deer Lodge; and a transportation subzone, which contains the Union Pacific Railroad right-of way (leased to Burlington Northern, who subleases to Montana Western).

Land Protection/Adjacent Lands

The park's Land Protection Plan (LPP) was approved in 1991. Implementation of the LPP has resulted in the following land status: There are 1,498.38 acres of land within the boundary of Grant-Kohrs Ranch. This includes 69.47 acres owned by the city of Deer Lodge; 57.45 acres owned by Union Pacific Railroad; 165.68 acres of scenic and rights-of-way easements; and 1,205.83 acres of fee ownership land. There are also 120.0 acres owned in fee by the United States and managed by the NPS that are located outside of and adjacent to the park's southern boundary. These lands were purchased along with lands in the park as an uneconomic remnant, under authority of P.L. 91-646. An easement for the city of Deer Lodge sewer trunk line runs through the park, to the city's sewage treatment facilities.

In 1987 a *Cultural Landscape Analysis* was completed for the park. That analysis included relationship of 1,130 acres to the west of the park, and the impact those lands

have on cultural settings and visitor enjoyment. The report recommended that park management contact the owner (Rock Creek Cattle Company) to explore ways that would ensure retention of those lands in their current use. One option discussed was the donation of scenic easements.

Cultural Resource Management

Current cultural resource management is guided by a 1991 *Collection Management Plan,* 1986 *Cultural Resource Management Plan,* and 1986 Scope of Collections Statement. General management direction focuses on preservation, but could include restoration when it is essential to public understanding or to preservation of resources. Reconstruction of landscape features is limited to replacement of lost elements and is based on archival and archeological evidence.

Selected historic structures are maintained in working condition, as they existed during identified periods of time in ranch operations. Restoration is undertaken on selected structures, where necessary to return them to appearances of identified periods of time. The above-referenced plans address current cultural resource management programs in more detail.

Natural Resource Management

Because the park was established as a historic site, no specific guidance for natural resource management has been established. The 1980 *GMP* states that natural resources would be managed in line with management policies to achieve the historic setting and objectives of the park. A translation of this limited direction is that natural resources would be managed to complement a working cattle ranch, with actions to control noxious weeds, pests, and rodents.

The park is included in the Clark Fork River Superfund site. This site, which extends from Butte downstream 120 miles below the park, is contaminated with toxic metal. In a 1984 study, *Floral and Faunal Survey and Toxic Metal Contamination Study of the Grant-Kohrs Ranch National Historic Site*, metal concentrations were identified in the soils and vegetation one to two orders of magnitude higher than in nearby areas that are affected by pollutants from the defunct Anaconda smelter operation in lower Deer Lodge Valley, or by floodplain deposition of tailings carried by the Clark Fork River. The Environmental Protection Agency (EPA) and other federal and state agencies will continue to study the impacts. NPS actions in the park would be formulated as more information on impacts is developed. GIS mapping will be used to monitor the Superfund area and develop comprehensive environmental plans.

Visitor Use and Interpretation

These programs focus on cattle ranching -- how it developed and how it changed over time -- and on the significance of the Grant-Kohrs operation. Ranching activities, methods, and techniques from both the open-range and early farm/ranch eras are demonstrated in a historic ranch setting.

Primary interpretive themes cover the changes in the range cattle industry over time, the variety of people and jobs in support work, and how the industry's success hinged on the adaptability illustrated by people on the ranch. Personal services include visitor center contacts, a cattle industry slide program, a guided tour of the ranch, and guided tours of the ranch house. As staffing allows, demonstrations are available during the peak use season on blacksmithing, chuck wagon cooking, and the life of a cowboy.

Non-personal services include visitor center photographs, text, and exhibits and literature available through the cooperating association (outlet of the Glacier Natural History Association). The site brochure includes a map of the home/ranch complex, with a brief description. It is used for self-guided tours. Four wayside exhibits are available in the park along the entrance trail.

Park Operations

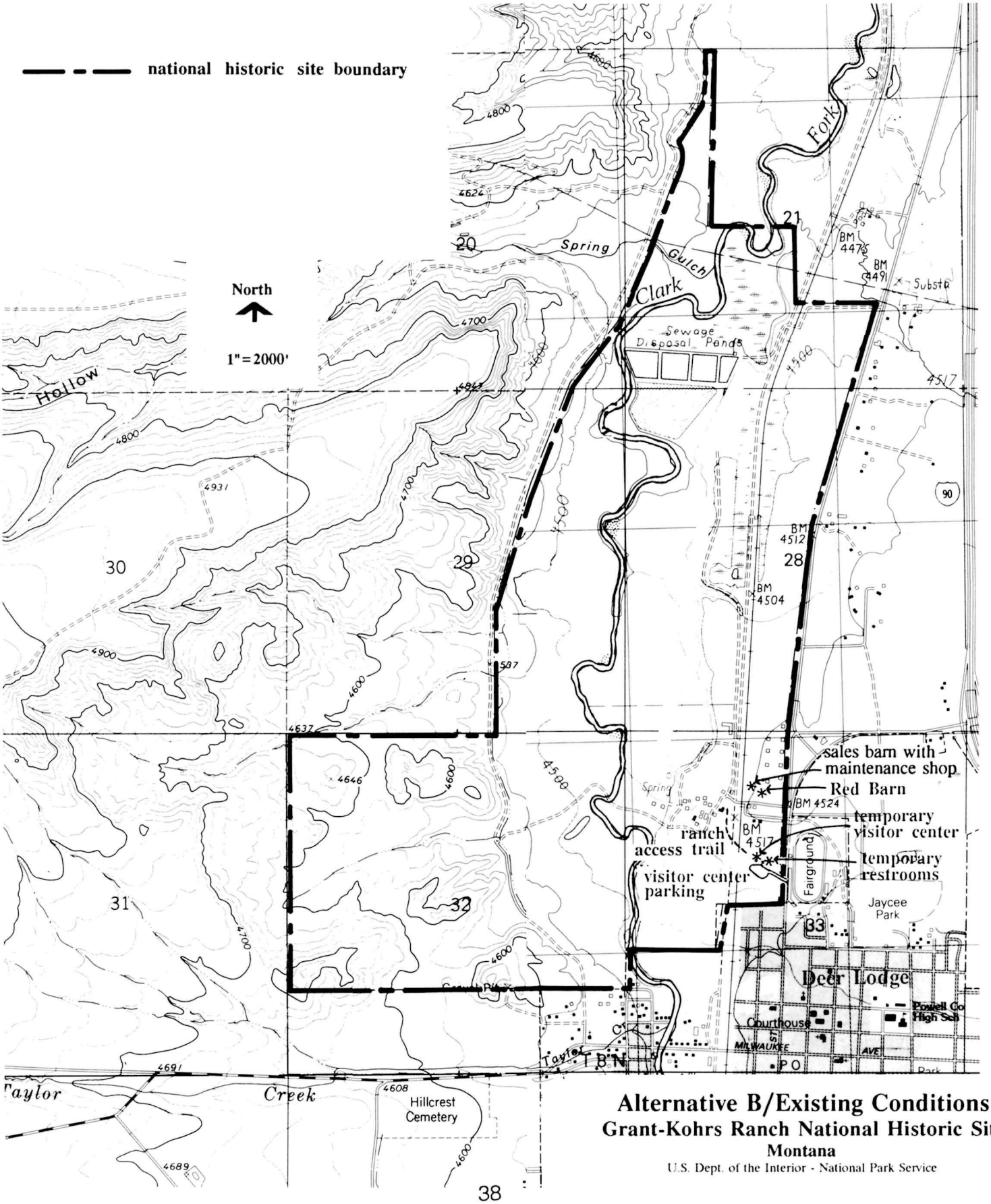
Grant-Kohrs Ranch normally has a staffing level of 17 full-time equivalents (FTEs). Annual operating budget has averaged about $630,000. Details of current park operations are described in the "Affected Environment" chapter.

General Development/Development Concepts

A "temporary" 400 square-foot building serves as the park's visitor center. A smaller building provides visitor rest rooms. These facilities are served by a small parking lot. All are located on the 11-acre parcel near the park's southeast boundary.

Approximately $1,079,000 is needed for the rehabilitation and repair of historic structures and buildings throughout the ranch.

Water is provided by the city of Deer Lodge and a well near the Warren residence. Commercial power provides all electrical needs of the park. All sewer services are provided by the city of Deer Lodge. Natural gas lines run to the Warren residence, the historic ranch house, and the maintenance facility.



Alternative B/Existing Conditions

Grant-Kohrs Ranch National Historic Site

Montana

U.S. Dept. of the Interior - National Park Service

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Table 3 SUMMARY OF PROPOSED ACTION AND ALTERNATIVES

RESOURCE TOPIC	PROPOSED ACTION	ALTERNATIVE A	ALTERNATIVE B (NO ACTION)
Management Zoning	Historic Zone 92%, including the preservation/adaptive use subzone and the grazing/hay meadow subzone. Development zone is approx. 11 acres & special use zone is about 6% of proposed acreage, including a utility subzone & a transportation subzone.	Historic Zone 87%, including the grazing/hay meadow subzone. The development zone, about 1%, includes 11-acres. The special use zone is about 12% of park, including utility subzone and a transportation subzone.	Management zoning would remain the same.
Land Protection	Donation or acquisition through purchase of 35.76 acres of Union Pacific land containing native prairie grasses will be pursued. Authorization to expand park boundaries to include 1,100 acres of private land just west of the park by acquisition of easements & 120 park-owned acres outside of & adjacent to the park's southern boundary will be pursued. NPS will cooperate w/the city of Deer Lodge, Forest Service & Montana State Prison to insure that other agency lands around the park are managed in ways that protect the historic integrity of the ranch.	Donation or acquisition through purchase of 35.76 acres of Union Pacific land containing native prairie grasses would be pursued. This alternative would pursue expansion of the park boundary to include 1,100 acres of land immediately west of the park, and the 120 park-owned acres outside of and adjacent to the park's southern boundary. The NPS would cooperate with the city of Deer Lodge, USDA-Forest Service and Montana State Prison to insure that these other agency lands surrounding the park are managed in a way that protects the historic integrity of the ranch.	Land Protection measures would remain unchanged and the 120-acre parcel of park-owned lands would remain outside of the park boundary.
Cultural Resources			
Preservation	Preservation of historic structures & grounds through rehabilitation, restoration, & adaptive use.	Preservation of historic structures and grounds through rehabilitation and repair.	Maintain preservation practices: restoration of historic structures when essential to public understanding or preservation of resources.

RESOURCE TOPIC	PROPOSED ACTION	ALTERNATIVE A	ALTERNATIVE B (NO ACTION)
Use of Historic Structures	Adaptive use of structures & time period-specific interpretation of use.	Limited to uses and activities that are historically accurate.	No change in current practices, which maintains selected historic structures in working condition representative of specified time periods.
Curatorial Storage	A 10,000 sq. ft. facility for curatorial storage will be built on the 11-acre tract.	Curatorial work space for artifact treatment & future research would be provided on the 11-acre tract. Structures in the ranch complex would continue to be used for storage of equipment & other large artifacts.	Curatorial storage and work space would continue to be located in several buildings with inadequate services that do not meet current NPS standards.
Historic Landscape	Eight landscape types associated with the ranch's history will be managed w/ associated time periods.	Same as for the proposal	No change in current practices.
Natural Resources	Natural resource management will support park's primary purpose of preserving & interpreting a working ranch. Noxious weed control, gopher mgmt., vegetation injury assessment, agricultural use plan, entomology studies, resource inventories, water resource mgmt. plan scoping report, streambank stabilization, removal of herbicides from recently acquired structures, soils analysis, & Superfund assessment of impact will be pursued.	Actions described in the proposal apply to this alternative.	Natural resource management would continue to be limited to activities that complement a working cattle ranch, including actions to control noxious weeds, pests, and rodents. The park would continue to be contaminated with toxic metals.
Pest Management	Pest management will be accomplished so as not to affect the natural balance.	Same as proposal.	No change in existing conditions.

RESOURCE TOPIC	PROPOSED ACTION	ALTERNATIVE A	ALTERNATIVE B (NO ACTION)
Land Acquisition	Acquisition of 35.76 acres of Union Pacific land would preserve Deer Lodge Valley prairie.	Same as proposal.	The remnant of native prairie would continue to go unprotected.
Visitor Use and Interpretation	The park will still be managed as a day-use area. Interpretation will stress visitor awareness, understanding, & appreciation of the frontier, open-range cattle era; will cover circumstances leading up to the era & later evolution of cattle ranching; & will interpret various time periods.	The park would continue to be managed as a day-use area with interpretation focusing on visitor understanding of the frontier cattle era. A variety of time periods would be interpreted through a sequencing of visitor tours.	Programs would continue to focus on cattle ranching, how it developed and how it changed over time, and on the significance of the Grant-Kohrs operation. Ranching activities, methods, and techniques from both the open range and early farm/ranch eras would continue to be demonstrated in a historic ranch setting.
Interpretive Services	A visitor center will provide orientation info and interpretive facilities/media/services including an information lobby/desk, 2,000 sq. ft. exhibit hall, 60-seat AV theater, & interpretive literature sales area. Staff, exhibits, AV program & publications will orient visitors, & give them an overview of the ranch. Support facilities will include public rest rooms, staff offices, library, prep room, & cooperating association office/storage area. Upon leaving the Red Barn, visitors will be guided by wayside exhibits, brochures, &/or park staff replicating the experience of ranching in the 1950s-1970s, then 1860s-1890s. Long-term plans will restore, refurnish & interpret more buildings or parts of buildings to further explain the ranch & cattle industry.	Visitors would be given orientation in a visitor contact station. Services would be limited to orientation and park interpretation that would occur within the ranch complex. Upon leaving the contact station, visitors would follow the existing trail system and enter the home ranch complex, where interpretation would focus on the range cattle industry when the ranch served as a headquarters, and visitors would end their tour at the feed lot operation of cattle ranching, where they would observe pioneering work in selective breeding and conservation associated with the 1950s to 1970s.	Primary interpretive themes cover the changes in the range cattle industry over time, the variety of people & jobs in support work, & the industry's success as associated with adaptability. Personal services include visitor center contacts, staffed orientation slide program, guided tour of the ranch, & ranch house. Demonstrations are available during peak use season on blacksmithing, chuck wagon cooking, & the life of a cowboy. Non-personal services include visitor center photographs, text, exhibits & literature. A site brochure used for self-guided tours includes a map of the home/ranch complex & brief description. Four wayside exhibits are available along the entrance trail.

RESOURCE TOPIC	PROPOSED ACTION	ALTERNATIVE A	ALTERNATIVE B (NO ACTION)
Access	The new curatorial/ USDA-Forest Service facility on the 11-acre tract & the visitor center & admin. offices in the adaptively rehab'd Red Barn will be fully accessible. Maximum accessibility to all exhibits, AVs, & publications will be provided. If possible historic structures, landscapes & surfaces will be made accessible to everyone. In some instances, an area might be closed in order to assure equal access.	Access considerations would be the same as described under the proposal.	Under the no-action alternative, access by the disabled, particularly physical access across dirt and gravel drives and walkways that are historic in appearance or actual fabric and access into the second floor of the main ranch house and historic outbuildings would continue to be difficult if not impossible.
Park Operations	Park headquarters will stay in the city of Deer Lodge until the Red Barn's 2d floor is ready for administrative use. The cow shed (HS 13) will provide 8,300 sq. ft. for maintenance storage. Fire detection/suppression, & intrusion alarms will help protect museum collections. The mobile home will be removed & Warren residence used as staff residence when available. Fire-fighting will be provided by the city and county and the park fire truck will be retained for initial response. The home ranch access road will be used for emergencies. Historic vehicular routes will be kept for access to all areas. 20 FTEs will be required under the proposal to accomplish all park operations , & annual operations & maintenance costs will be about $600,000.	Park administrative programs would be provided in a new visitor administrative complex on the 11-acre tract. A 12,000 square foot USDA-Forest Service/ curation facility would be constructed on this site. Park housing would be removed and staff would be required to find housing in the city of Deer Lodge. Annual operation and maintenance costs of $945,000 and 26.7 FTEs would be required for this alternative.	Staffing would remain at 17 FTEs and the annual operating budget would remain roughly $475,000. Administrative functions would continue to be scattered throughout and outside of the park.

RESOURCE TOPIC	PROPOSED ACTION	ALTERNATIVE A	ALTERNATIVE B (NO ACTION)
General Development /Development Concepts	The Red Barn's 1st floor will be adaptively used as a visitor center of approx. 6,000 sq. ft. w/a 60-seat auditorium, 2,000 sq. ft. for exhibits lobby/sales area, public rest rooms, coop. assn. office & storage, interp. office, & library. A 35-40 space parking lot, w/ spaces for buses/RVs will be built south of the Red Barn. An access road north of the historic access road will be abandoned & the land reclaimed. Signing will be as needed. The Red Barn's 2d floor will be modified for park use, including administration, filing/copying room, staff rest rooms, break, conference, & training rooms. A 12,000 sq. ft. curatorial storage/USDA-Forest Service administrative facility will be built at the 11-acre site. RR crossings will be modified to eliminate hazards.	All non-historic uses and activities would be removed from the historic buildings to a new complex on the 11-acre tract near the park's southeast boundary. The complex would include a 3,000 SF administrative office, a 2,000 SF visitor contact station, a 50-vehicle parking lot, and a 12,000 SF USDA-Forest Service/NPS curation facility.	No new construction would take place under the no-action alternative.
Development Cost Estimates	Phase I: $6,021,500 Phase II: $2,340,000 Phase III: $1,257,000 Total: $9,618,500	Total: $5,909,000	Approx. $1,079,000 would be needed for rehabilitation and repair of historic structures & buildings.

Table 4 IMPACTS OF THE PROPOSED ACTION AND ALTERNATIVES

IMPACT TOPIC	IMPACTS OF PROPOSAL	IMPACTS OF ALTERNATIVE A	IMPACTS OF ALTERNATIVE B (NO ACTION)
Water Resources/ Floodplains/Wetlands	No measurable increase in stream turbidity. Runoff from parking lots could contain petroleum and other auto waste products that could result in minor surface water contamination. No groundwater impairment is anticipated. There is no danger of flash flooding. No new construction is planned within 100- or 500-year floodplains. Twenty historic structures are within the 100- and 500-year floodplains and in the event of a flood, artifact damage, warping, delamination and loss of chinking could occur. Dirt access roads and the Clark Fork River bridge could suffer minor damage from flooding. Wetlands will not be affected by any proposed actions. There will be no effect on natural moderation of floods, water quality, groundwater recharge, fish, wildlife, plants, open space, natural beauty, scientific study values, outdoor education values, recreation, agriculture, aquaculture, or forestry. No navigable waters will be affected.	The intensity of development could increase runoff and increase turbidity of Johnson Creek. Contaminants from vehicles and maintenance operations could also enter Johnson Creek. All remaining water resource, floodplain, and wetland impacts are similar to those described under the proposal.	No change to impacts presently being experienced. Water quality of Johnson Creek is not affected. Impacts to floodplains from the historic west feedlots and corrals are the same as described under the proposal. No park wetlands are affected by development, visitor use, or management actions.

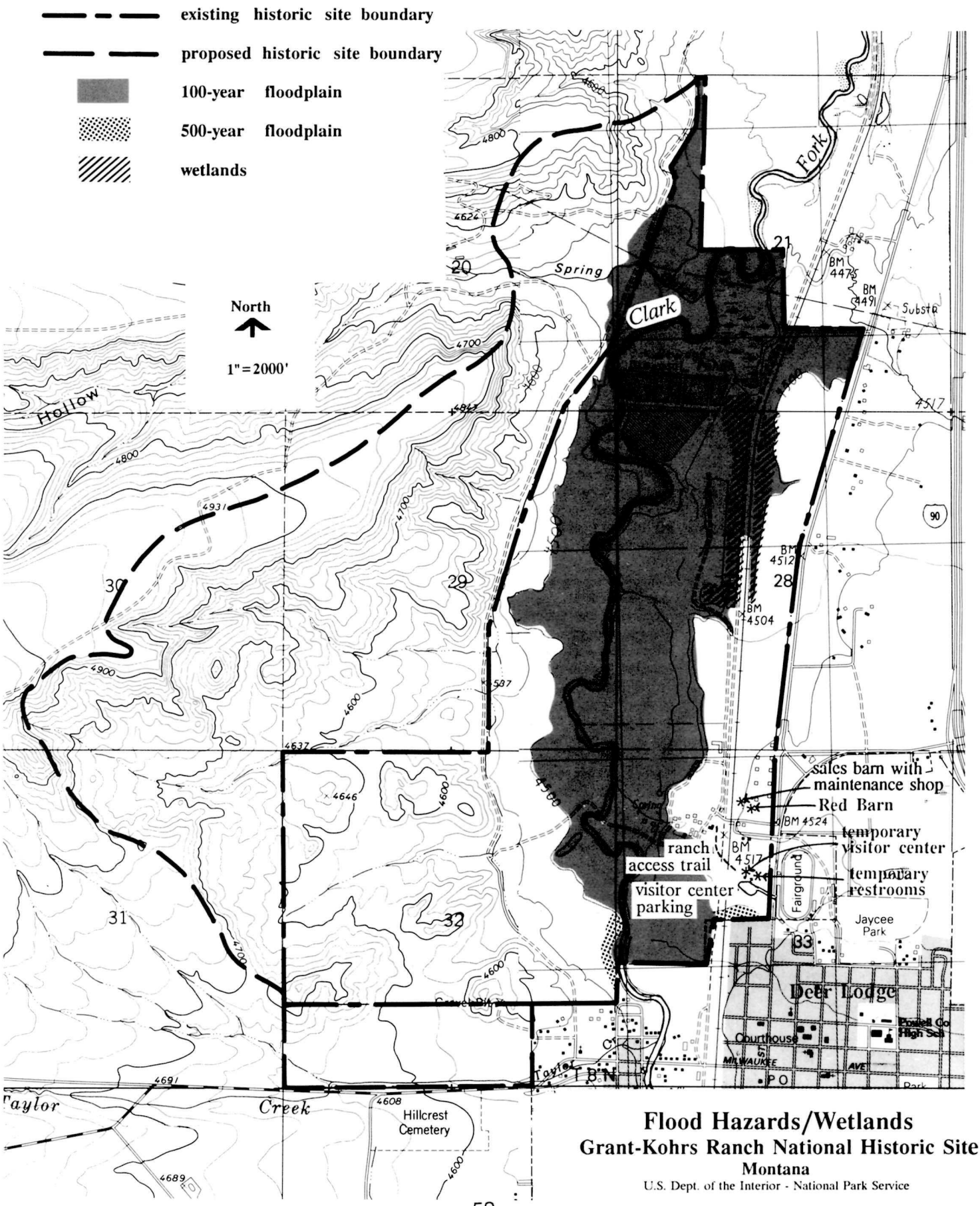
IMPACT TOPIC	IMPACTS OF PROPOSAL	IMPACTS OF ALTERNATIVE A	IMPACTS OF ALTERNATIVE B (NO ACTION)
Soils and Vegetation	Two acres of Beaverell series soils and upland pasture vegetation will be disturbed by construction of maintenance/curatorial complex. Construction of Red Barn visitor center parking lot will disturb an additional two acres. Proposed construction will eliminate water flow and will destroy 4 acres of vegetation, with 1 acre occupied by the visitor contact station parking lot being restored. Soil compaction will occur on 4 acres. Soil structure will be destroyed in about 3,000 cubic yards of soil. Accelerated, though minimal erosion will occur on all disturbed sites until revegetation is complete. Increased runoff and moisture in parking areas and roadside shoulders will alter vegetation composition and slightly change soil chemistry. Some vegetation along roadsides and in parking areas will be crushed by vehicles, which could encourage growth of thistles and other exotics. Soil next to trails will be compacted and vegetation trampled, as will soils and vegetation near interpretive waysides and displays. These areas will be subject to invasion by exotics.	About 4 additional acres of soils would be disturbed and 4 additional acres of vegetation removed. Increased levels of soil compaction and vegetation trampling would occur. Impacts associated with these activities are similar to those described for the proposal.	No additional disturbance to soil or vegetation is anticipated except for those associated with the upgrade of utilities, which would impact about one-third of an acre.

IMPACT TOPIC	IMPACTS OF PROPOSAL	IMPACTS OF ALTERNATIVE A	IMPACTS OF ALTERNATIVE B (NO ACTION)
Wildlife	Construction of the maintenance and curatorial facilities and the Red Barn visitor center parking lot will alter vegetation and result in the displacement and loss of some mice, common shrews, grasshoppers, beetles, ants, and flies. About 4 acres of habitat will be lost, however it is assumed displaced rodents and insects will relocate to other similar habitats within the park. None of these impacts is significant.	About 4 additional acres of habitat loss would occur in the 11-acre tract. Rodents and insects in the area would be displaced to similar habitats within the park, or lost. As with the proposal, birds, wildlife and fish associated with the Clark Fork River bottomlands and western foothills would not be affected.	No additional wildlife habitat would be lost. Current displacement of rodents and insects on 11-acre tract would continue. There would be no effect on birds, wildlife, and fish in other areas of the park.
Threatened and Endangered Species	There are no listed, proposed, or candidate threatened or endangered plant or animal species in the park.	See under proposal.	See under proposal.
Air Quality	Potential for more auto emissions because of more visitors. A temporary increase in noise level and dust during construction is expected. Staff use of dirt roads will generate dust, as will wind erosion of dirt roads. Class II airshed standards will not be violated by visitor use or construction. No problem with elevated radon levels is foreseen.	Air quality impacts are similar to those described for the proposal.	No construction-related air quality impacts. Impacts are limited to emissions from visitor use and dust from staff use of dirt roads. Class II airshed standards are not being violated.

IMPACT TOPIC	IMPACTS OF PROPOSAL	IMPACTS OF ALTERNATIVE A	IMPACTS OF ALTERNATIVE B (NO ACTION)
Historic and Ethnographic Resources	Use of buildings & structures to support visitors, operations, & interpretation will aid in long-term preservation. Eliminating storage in ranch house & other areas will reduce weight loads on buildings & stress & damage from collection storage, increasing longevity. Restoration/maint. funds available when Warren residence used for housing will help preservation. Use of historic entrance will provide historic site orientation. Use of historic parking area, location of maintenance/curatorial storage facility outside of historic zones & mgmnt. of identified landscape types will enhance historic scene. Boundary expansion will help retain vast, isolated landscapes. Mgmnt/ protection/access to museum collection will be enhanced. Efficiency of curatorial operations will be improved. Objects will be consolidated in a clean environment with reduced pest access, enhancing preservation. Handling, transportation, & fluctuations in temperature & humidity during moving could adversely affect museum objects. Red Barn visitor center will allow greater number of exhibits. No ethnographic impacts are anticipated.	Funding and resources necessary to preserve buildings and structures could be more difficult to obtain because adaptive uses are not considered under this alternative. Removal of maintenance operations from historic area would enhance historic scene. Opportunities to access the ranch from a historic perspective would not be provided. Park operation and visitor-use facilities would not affect historic scene. Management of landscape types, expansion of boundaries, and construction of new facility for curatorial operations would have impacts similar to those described under the proposal. No ethnographic impacts are anticipated under this alternative.	Natural deterioration of NRHP buildings and structures would continue. Inappropriate use of buildings would continue. The ranch house would not be adequately interpreted and stress damage to it from curatorial storage would continue. Fire and security problems would not be effectively dealt with. Degradation of historic scene would continue with retention of on-site trailer residence. Minimal maintenance would continue to be provided, compromising historic integrity and adversely affecting visitor experience. Curatorial storage would remain scattered and substandard and potential damage and/or loss of objects would continue to be high. There are no ethnographic impacts.

IMPACT TOPIC	IMPACTS OF PROPOSAL	IMPACTS OF ALTERNATIVE A	IMPACTS OF ALTERNATIVE B (NO ACTION)
Archeological Resources	One of four known aboriginal archeological sites is in the vicinity of the ranch house and will be avoided when trails and exhibits are established. The other three sites will not be affected by construction. Restoration of historic grades around house will affect archeo sites. All ground-disturbing activities will be monitored to mitigate any impacts that could occur should any historic or prehistoric sites be encountered. Sites near visitor-use areas are vulnerable to surface damage and could be inadvertently damaged. Grazing by park livestock could affect surface remains of sites yet to be discovered.	Impacts and mitigation procedures described for the proposal also apply to this alternative.	No impacts from construction-related activity would occur. Sites near visitor-use areas could be affected as described under the proposal, as could areas used for grazing of park livestock.
Visitor Use	Visitor center orientation, interpretive staff, visitor services, interpretive support facilities and circulation will all be enhanced under the proposal. An increase in visitation is anticipated, which will require monitoring traffic congestion & maybe speed limit reductions or other measures to minimize hazards. Increased visitation will increase fee collection revenues. Rest rooms, water fountains & access for disabled visitors will be provided in the new visitor center. Visitors' length- and quality-of-stay are expected to increase with improvements.	Quality and length of visitor experience and revenue generated are expected to be similar to those anticipated under the proposal. Accessibility to the ranch would not change, nor would traffic patterns on Highway 10.	A planned information/orientation wayside exhibit in the vicinity of the parking lot should encourage visitors who mistake the visitor center and rest rooms as the ranch, to stop. Other visitor-use issues such as space for interpretation/ orientation, visitor confusion, and access for persons with disabilities, would remain unresolved.

IMPACT TOPIC	IMPACTS OF PROPOSAL	IMPACTS OF ALTERNATIVE A	IMPACTS OF ALTERNATIVE B (NO ACTION)
Socioeconomic Resources	The proposal could contribute more than $216,000 yearly to the Deer Lodge economy. Proposed rehab & development could net about $300,000 in increased taxes. The proposal could create 37 permanent & 500 short-term jobs, enhancing local business.	This alternative would create approximately $230,000 in increased tax revenues and would create about 50 permanent jobs and 430 temporary jobs. Sales revenues from park tourism and impacts to services and businesses would be the same as described under the proposal.	Sales benefits from park tourism is about $130,000 annually. Total tax revenue being gained is about $24,000 annually. Operations and use of the park results in about 30 jobs.
Other Federal Agencies	The Forest Service's proposed development of an administrative/ curatorial complex of about 12,000 sq. ft. on the 11-acre tract will be implemented.	Impacts associated with this alternative are the same as those described for the proposal.	Current park operations have no impacts on other federal agencies.
Management and Operations	Consolidating admin., maintenance, & operational staff within the park should increase productivity & efficiency. The Red Barn visitor center could be open year-round. Injury to curatorial staff & objects will be reduced because of enhanced facilities. Responsibilities required to support the new facility will increase maintenance duties, resulting in higher operational & utility costs. The proposal requires about $600,000 yearly for operational & maintenance costs & about 20 FTEs.	Impacts described for the proposal are similar for this alternative. Annual operational and maintenance costs associated with this alternative are about $975,000 and 26.75 FTEs would be required.	Reduced operational efficiency would continue under the no-action alternative
Cumulative Impacts of the Proposal.	There are no cumulative impacts resulting from the proposal.		



Flood Hazards/Wetlands

Grant-Kohrs Ranch National Historic Site

Montana

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AFFECTED ENVIRONMENT

WATER RESOURCES/FLOODPLAINS/WETLANDS

Surrounded by mountains, the broad Deer Lodge Valley is drained by the Clark Fork of the Columbia River. This river traverses the center of the park south to north. Johnson Creek runs through a portion of the ranch complex before joining the Clark Fork. Cottonwood Creek joins the Clark Fork at the park's southern boundary. The Kohrs-Manning ditch passes through the park paralleling the Clark Fork River to the east. This ditch carries water during the summer months. Irrigation west of the river is provided by a river pump and by the Westside Ditch Company. There is a natural spring between the railroad tracks that was used to water the lawn and garden of HS 1.

An analysis of floodplains of the Clark Fork River and related tributaries was conducted for the Federal Insurance Administration's National Flood Insurance Program. The 100-year flood elevation was identified as 4,500 feet above sea level. Part of the home ranch complex is in the 100-year floodplain, elevations in the home ranch range from 4,498 feet to 4, 515 feet. The floodplain analysis also included areas between the 100-year flood and the 500-year flood. The National Flood Insurance Program identified the 500-year floodplain. This is displayed on the Flood Hazard/Wetlands map.

A small wetland of five to six acres, has been created by springs. This wetland is just south of the city of Deer Lodge sewage lagoons on the east side of the Clark Fork River. Specific locations of wetlands are illustrated on the Flood Hazard/Wetlands map.

Lands acquired in fee include water rights of the previous owner.

SOILS AND VEGETATION

Vegetation in the park reflects the diverse use of vegetation to support ranching operations. Thicket-woodlands occur along the bottomlands of the Clark Fork River. Paralleling this area are hay meadows, which rely on irrigation systems. Dry rangelands and dry farmlands are also located in several areas of the park.

The thicket-woodlands are mostly willows and shrubs. The hay meadows are seeded and irrigated pastures and are used for growing hay and grazing cattle. Most of the hay is used for the ranch's livestock operation. A small portion is sold each year. Dry rangelands are located on hilly and uneven terrain, with grasses as the predominant

vegetation. Dry farmlands are limited to about 135 acres. They have been used for cultivated intermediate wheat, but more recently have been used for grazing.

Soils adjacent to the Clark Fork River are mostly deep loams of the Anaconda series. These soils are favorable for irrigation and are subject to seasonal flooding. Lower bench soils east of the river are of the Beaverell series. They are generally deep and well drained with a gravelly loam surface and a clay loam to sandy clay loam substratum. Most of the bottomland soils and lower elevation lands west of the river are of the Teton View series, and are usually deep and poorly drained. Upland soils are shallow, with capabilities limited to grazing.

There are no prime or unique farmlands in the park.

WILDLIFE

Most wildlife in the park is associated with the Clark Fork River bottomlands or the western foothills, where there is less influence from humans. Ducks frequent the area and some migratory birds are occasionally seen. Over 100 types of birds, including magpies, ravens and robins, are common in the ranch. Several mammals, including gophers, coyotes, skunk, rabbit, muskrat, deer, fox, and beaver are frequently seen, especially near the Clark Fork River. Fish of the Clark Fork include brown trout, suckers, and rainbow trout. Most insects, reptiles, and amphibians are limited by the short summers and cool climate. However, mosquitoes, grasshoppers, and beetles do become a problem when populations are high. Cluster flies and shrews are abundant near the ranch house and are detrimental to museum objects.

THREATENED AND ENDANGERED SPECIES

On November 6, 1990, the National Park Service sent a memorandum to the U.S. Fish and Wildlife Service, requesting a summary of listed, proposed, and candidate threatened or endangered species that could be present in the park. A response from the U.S. Fish and Wildlife Service, dated November 21, 1990, stated there were no proposed species in the project area. Listed and Candidate species of concern include:

Listed Species	Expected Occurrence
Bald eagle *(Haliaeetus leucocephalus)*	Migrant, potential nesting.
Peregrine falcon *(Falco peregrinus)*	Migrant, potential nesting.

Candidate Species	Expected Habitat
Preble's shrew *(Sorex preblei)*	Sagebrush - grasslands.
Swainson's Hawk *(Buteo swainsoni)*	Grasslands - open woodlands.
Columbian sharptailed grouse *(Tympanuchus phasianellus columbianus)*	Sagebrush - grasslands.
Mountain clover *(Charadrius montanus)*	Shortgrass prairie, semi-arid grasslands.
Long-billed curlew *(Numenius americanus)*	Prairies, grassy meadows near water.
Sapphire rockcress *(Arabis fecunda)*	Steep sagebrush - grass slopes on calcareous soils.
Howell's gumweed *(Grindelia howellii)*	Pastures, grasslands, forest openings.

A survey for listed and candidate species was conducted by park personnel. No species were found.

AIR QUALITY

The Montana State Air Quality Bureau states that Grant-Kohrs Ranch is within a Class II airshed. Current monitoring indicates standards for this class are now being met. Unlike many mountain valleys, the Deer Lodge Valley is wide enough that inversions are not a significant problem, and overall conditions are good.

There appear to be no industrial sources of air pollution. Minor pollution occurs in the fall from timber slash and agricultural burning and from occasional burning at a sawmill south of the town. Spring pollution sources include road dust and agricultural burning and occasional burning from a sawmill south of Deer Lodge. During the winter months the major pollutant is residential fuelwood burning.

HISTORIC AND ETHNOGRAPHIC RESOURCES

The first documented settler on the Grant-Kohrs Ranch site was John Francis Grant, whose fur trade upbringing led to trade with emigrants on the Oregon Trail at Fort Hall, Idaho. This led into the acquisition of livestock, which evolved into ranching. He established the ranch in 1862. In 1866 Grant sold the ranch and its assets to Carsten Conrad Kohrs. Kohrs and his half-brother, John Bielenberg, made it the operations base of a range cattle empire extending, by the 1890s, over several states, with land holdings of about 30,000 acres in the Deer Lodge Valley alone. He also owned nearly one million

acres (in fee and by water rights) and grazed over ten million acres of public land, mainly in eastern Montana. Kohrs and Bielenberg, the Pioneer Cattle Company, were instrumental in upgrading the quality of range cattle, with the introduction of Shorthorn and Hereford bloodlines into the herds. Even the catastrophic losses of stock, which hit the industry in the unusually severe winter of 1886-1887, represented only a minor setback to their operation. Kohrs became prominent in the cattle industry and participated in territorial and state politics. In 1868 Conrad Kohrs married Augusta Kruse. After Conrad and Augusta Kohrs moved to Helena, Montana, in 1899-1900, Bielenberg continued ranching operations at Deer Lodge, but with homesteading encroaching on the open range and their fortunes made and secure, the partnership began winding down operations. When the two men died (Kohrs in 1920 and Bielenberg in 1922), Augusta Kohrs cared for the 1,000 or so remaining acres of the home ranch, which was officially operated and controlled by a corporation, the Kohrs Company. Augusta died in 1945.

In 1932, Kohrs' grandson, Conrad Kohrs Warren, was employed as a foreman, and a new phase of expansion began. In 1934 Warren moved into the house, east of the railroad tracks, which had been a wedding gift to him and his wife, Nell Warren, from Augusta Kohrs. He bought the holdings of the Kohrs Company in 1940, and the ranch became known for its registered Hereford cattle and Belgian horses. In 1952, Warren moved the operations east of the railroad tracks to the upper bench of the ranch. The registered Herefords were dispersed in 1958, but ranching continued under Warren's direction with a commercial herd, even after purchase by the National Park Foundation in 1970. In 1980, Warren began leasing his remaining lands to local ranchers, until the 1988 purchase by the NPS. It was Warren and his wife who recognized the importance of the site, and through their efforts, it was preserved intact. When the NPS purchased the acreage and buildings at the center of the property from the National Park Foundation in 1972, they acquired a site changed only slightly from its origins as the headquarters for an open-range ranching operation.

At present, the park includes 90 historic structures. The earliest structures date from the 1860s and the most recent from the 1950s. The site was acquired with much of its furnishings, many personal artifacts, horse-drawn vehicles, business and financial records dating back to the 1860s. Ranch tools and equipment representing nearly all periods of the ranch's human occupation are represented.

Table 5 illustrates historic structures and buildings and their conditions. The condition rating assessment is as follows:

Excellent (E)	Like new	Poor (P)	Failure of systems/materials
Good (G)	Intact, needs no repair	Obsolete (O)	Beyond Rehabilitation
Fair (F)	Signs of wear		

Table 5 Historic Structure Status

Historic Structure/ Building Number/Condition	Materials	Builder	Dates	Current Use
1/Ranch house/G	Log Frame/Brick	Grant Kohrs Warren	Built 1862-1865 Addition 1889-1890 Maintenance 1940s Reroofed 1973-1974 Climate controls 1975 Paint 1975 Walkways altered 1975 Exterior maintenance 1976 Ceiling altered rm 214 1976 Paint 5 rooms 1976 Wiring 1977 Alterations/maint 1979 Stabilization-ceiling 1982 Rehab shutters 1983 Repair/rehab/maintenance 1984 Repair/rehab 1985 Rehab/paint 6 rooms 1987 Repair/rehab 1990	Basement - Curatorial Storage 1st Floor - House museum 2nd Floor - Work space and storage
2/Bunkhouse Row/G	Log Frame	Grant Kohrs Kohrs Warren	Begun circa 1860 Additions 1860s-1890s Shortened 1907 Altered 1933 Repairs 1976 Maintenance 1977 & 1979 Reroof/wiring 1982 Maintenance 1984-1987 Altered 1988 Maintenance 1989-1990	Furnished museum spaces and vehicle storage
3/Garage-Blacksmith Shop/G	Frame	Warren	Built 1935 Wiring 1976 Altered/reroof/maint. 1977 Altered/rehab 1981 Repairs 1986 Altered 1991	Public rest rooms, blacksmith demonstrations, offices, paint and custodial supply storage, AV program
4/Coal Shed/E	Frame	Kohrs	Built 1915 Reroofed 1974 Install electrical mains 1976 Maintenance 1977 Rehab 1988	Displayed building and ranch electrical mains
5/Ice House/G	Log Frame	Kohrs KHP Warren	Built circa 1870 Built 1912 Altered 1935 Reroofed 1975 Painted 1976 Maintenance 1978-1979 Rehabilitation 1980	Basement - Curatorial storage 1st floor - furnished museum space

Historic Structure/ Building Number/Condition	Materials	Builder	Dates	Current Use
5/Ice House/G (continued)			Maint 1982,1985,1987 Altered 1988	
6/Granary-Roller Mill/G	Frame	Warren	Built 1935 Reroofed 1976-1977 Repainted 1978 Repair/rehab 1979 & 1983	Maintenance tool and supply storage, grain bins not used
7/Draft Horse Barn/G	Log/Frame	Kohrs	Built circa 1870 Rehab 1976 Repair/alter 1978 Rehab 1983 Repair 1986	Active horse barn and storage of usable horse tack
8/Privy (Roosevelt Building)/G	Frame	Warren	Built 1934 Repair/reroof/paint 1983	Displayed building
9/Dairy/G	Frame	Warren	Built 1932 NPS Altered 1975 Rehab 1975 Paint/reroof 1977 Rehab 1985	Maintenance workshop
10/Oxen Barn/G	Log	Kohrs	Built circa 1870 Stabilized 1978 Rehab/rebuild 1981 Rehab 1985	Displayed building
11/Horse Barn/G	Post and Pole	Bielenberg	Built circa 1880 Maintenance 1976 Rehab 1982 Maintenance 1983 Reroof/rehab/paint 1984 Rehab/maintenance 1985 Maint 1987, 1989, 1991	Displayed building, Active horse barn, 2 stalls of 9 used for spring calving
12/Machine Shed/G	Frame	Kohrs	Built circa 1890 Moved 1907 Rehab/reroof 1981 Paint 1984	Curatorial storage
13/Cow Shed/G	Frame	Kohrs	Built 1908-1909 Rehab/reroof 1981 Painted 1984 Rehab 1985	Curatorial, interpretive, and maintenance storage
14/Stallion Barn/G	Log	Kohrs	Built circa 1880 Repair 1975 Reroof 1976 Moved/foundation 1977-1978 Maintenance 1979 Maintenance/rehab 1982 Maint 1985,1987,1989,1991	Displayed building, sometimes used to isolate a horse or cow and calf

Historic Structure/ Building Number/Condition	Materials	Builder	Dates	Current Use
15/Thoroughbred Barn/G	Frame	Kohrs Warren Warren	Built circa 1885 Maintenance 1941 Addition 1954 Painted 1975 NPS Altered 1976 Wired 1977 Repair/paint 1979 Foundation 1988 Rehab 1990	Displays museum vehicles
16/Stallion Barn/F (Leeds-Lion)	Log	Kohrs	Built circa 1885 Maintenance 1976, 1979 Rehab/reroof 1980 Rehab/foundation/maint 1982 Maint 1985, 1987, 1989, 1991	Displayed building, sometimes used to isolate a horse and cow and calf
17/Buggy Shed/F	Post and Pole	Kohrs Kohrs	Built circa 1890 Moved 1907 Maintenance 1976 Rehab/reroof 1977 Repair 1978 Rehab 1979 Maint 1979,1982,1985,1987,1989,1991	Curatorial display, curatorial and interpretive storage
18/Granary/F	Frame	Kohrs	Built circa 1890 Reroofed, painted 1975 Repair 1984-1985	Curatorial storage
19/Stallion Barn/F	Log/Frame	Kohrs Kohrs	Built circa 1880 Addition circa 1890 Altered circa 1928 Foundation, rehab, maint 1978 Wood floor 1979 Maintenance 1982 Rehab/maintenance 1989	Curatorial storage
20/Privy/F	Frame	Kohrs	Built circa 1900 Reroof 1975 Maint, paint 1978/1980	Displayed building
21/Brooding House/F	Frame	Warren	Built 1935 Wire 1976 Painted/temp. roof 1977 Rehab 1980 Reroof 1982 Paint/upgrade electric 1988	Housing fowl and feed storage
22/Chicken House/F	Frame	Warren	Built 1935 Alter/wire 1976 Temp. roof/paint 1977 Rehab 1979 Upgrade electric 1981 Reroof 1982 Rehab 1985 Upgrade electric/paint 1988	Housing Fowl

Historic Structure/ Building Number/Condition	Materials	Builder	Dates	Current Use
23/Granary/P	Metal	Kohrs Warren	Built 1910 Moved 1935 Maint 1975, 1978, 1982, 1985, 1986, 1991	Not used
24/Stock Shelter/F	Frame	Warren	Built 1933 Rehab/reroof 1983 Paint 1984, 1986 Maintenance 1990 Paint 1991	Shelter for livestock
25/Stock Shelter/P-O	Frame	Warren	Built 1934 Building collapsed 1991	Not used
26/Hay Storage/P-O	Frame	Warren	Built 1934	Not used
27/Stock Shelter/F	Frame	Warren	Built 1933 Rehab/reroof 1983 Paint 1984 Repaint roof 1986, 1991	Winter shelter for calves
28/Feed Storage House/F	Frame	Warren	Built 1933 Paint 1977 Rehab 1978, 1979 Reroof 1980 Rehab/repair 1983	Feed storage
29/Stock Shelter/F	Frame	Warren	Built 1933 Rehab/reroof 1983 Paint 1984 Repaint roof 1986 Repair 1990 Repaint roof 1991	Livestock shelter
30/Horse Barn/F	Frame	Kohrs	Built circa 1880 Foundation/repair/ rehab/paint 1979 Reroof 1983	Displayed building, sometimes used for protecting small quantities of hay
31/Feed Storage House/P	Frame	Warren	Built 1932 Paint 1977 Roofed 1980 Rehab 1983 Alter 1986	Feed storage
32/Stock Shelter/F	Frame	Warren	Built 1934 Rehab/reroof/paint 1984 Maintenance/paint 1989 Paint roof 1991	Livestock shelter
33/Stock Shelter/F	Frame	Warren	Built 1932 Rehab/reroof/paint 1984 Maintenance/paint 1986 Maintenance 1990 Paint roof 1991	Livestock shelter

Historic Structure/ Building Number/Condition	Materials	Builder	Dates	Current Use
34/Storage Shed/P	Frame	Warren	Built circa 1930 Moved 1934 Maintenance 1978 Rehab/paint 1991	Displayed structure
35/Cattle Foot Bath/P	Frame	Warren	Built 1935	Displayed structure
36/Feed Rack/F	Pole	Warren	Built circa 1930 Rehab 1983	Displayed structure
37/Feed Rack/F	Pole		Built 1907 Rehab 1983	Used on occasion
38/Feed Rack/F	Pole		Built 1907 Rehab 1983	Used on occasion
39/Manure Pit/F	Concrete	Warren	Built 1932 Cleaned/covered 1981	Covered for safety reasons
40/Beef Hoist/F	Pole	Kohrs	Built circa 1880 Rehab/paint 1982 Paint 1990	Displayed structure
41/Squeeze Chute/F	Frame	Warren	Built circa 1930 Rehab 1983 Paint 1984 Repair 1989	Used to work cattle
42/Feed Rack/F	Pole		Built circa 1900 Rehab 1975	Used on occasion
43/Feed Rack/F	Pole	Warren	Built 1942 Rehab 1983	Used on occasion
44/Feed Rack/F	Pole	Warren	Built 1942 Rehab 1983	Used on occasion
45/Feed Bunks/P	Frame/Pipe	Warren	Built 1932 Rehab 1991	Not used
46/Feed Bunks/P	Frame/Pipe	Warren	Built 1932 Rehab 1991	Not used
47/Squeeze Chute/P	Frame	Warren	Built 1933 Rehab/paint 1984	Not used
48/Feed Bunks/F	Frame	Warren	Built 1933 Rehab/paint 1987	Used to bunker calves/winter hay
49/Feed Bunks/F	Frame	Warren	Built 1933 Rehab/paint 1987	Displayed structure
50/Flume, Active/G	Frame	Kohrs-Manning	Built 1947	Conveys irrigation water Maintained by ditch company

Historic Structure/ Building Number/Condition	Materials	Builder	Dates	Current Use
51/Flume, Inactive/O	Frame	Kohrs-Manning	Built 1947 Removed by NPS 1976	NPS Demolished 1976
52/Feed Bunks/F	Frame/Pipe	Warren	Built 1932 Rehab/paint 1987	Displayed structure
53/Squeeze Chute/P	Frame	Warren	Built 1934 Rehab 1984	Not used
54/Bridge/O	Frame	Warren	Built circa 1930 Removed by NPS 1976	NPS Demolished 1976
55/Bridge/F	Frame	Warren	Built circa 1930 Rehab 1982	Used by Warren
56/Railroad/P	Rails/Ties	CM St.P & PRP	Built 1907 Maintenance 1986 Repair 1990	Displayed structure
57/Siphon/P	Concrete	Kohrs	Built circa 1883	Inactive
58/Warren Residence/G	Stone/Frame	Warren	Built 1934, alt 1941	Occupied by Warren
59/Chicken Coop/P	Frame	Warren	Built 1940	Used by Warren
60/Boathouse/na	Frame	Warren	Built circa 1950 - 1960	Used by Warren
61/Residence Garage/na	Frame	Warren	Built 1934	Used by Warren
62/Barn/G	Concrete/Frame	Warren	Built 1952	Used by Warren
63/Barn/G	Concrete/Frame	Warren	Built 1952	Used by Warren
64/Red Barn/F	Concrete/Frame	Warren	Built post - 1952 Repair 1989 Maintenance 1990	NPS storage and fire truck
65/Metal Barn/F	Concrete/Metal	Warren	Built post - 1952	Maintenance facility
66/Scale House/G	Concrete/Frame	Warren	Built post - 1952 Machinery to museum 1975 Rehab/paint 1982	Scale house
67/Squeeze Chute/P	Post/Frame	Warren	Built post - 1952	Not used
68/Feed Rack/P	Pole/Frame	Warren	Built post - 1952	Not used
69/Loading Chute/F	Frame	Warren	Built post - 1952	Not used
70/Cow Shed/G	Frame/Metal	Warren	Built post - 1952	Not used
71/Cow Shed/G	Frame/Metal	Warren	Built post - 1952	Not used
72/Cow Shed/P	Frame/Metal	Warren	Built post - 1952	Not used

Historic Structure/ Building Number/Condition	Materials	Builder	Dates	Current Use
73/Cow Shed/P	Frame/Metal	Warren	Built post - 1952	Not used
74/Cow Shed/F	Frame/Metal	Warren	Built post - 1952	Not used
75/Cow Shed/F	Frame/Metal	Warren	Built post - 1952	Not used
76/Cow Shed/P	Frame/Metal	Warren	Built post - 1952	Not used
77/Cow Shed/P	Frame/Metal	Warren	Built post - 1952	Not used
78/Feed House/F	Frame	Warren	Built post - 1952	Not used
79/Feed House/G	Frame	Warren	Built post - 1952	Not used
80/Feed House/P	Frame	Warren	Built post - 1952	Not used
81/Feed House/P	Frame	Warren	Built post - 1952	Not used
82/Feed House/P	Frame	Warren	Built post - 1952	Not used
83/Feed House/P	Frame	Warren	Built post - 1952	Not used
84/Feed House/G	Frame	Warren	Built post - 1952	Not used
85/Pump House/O	Frame	Warren	Built circa 1950	Not used
86/Pump House/F	Frame	Warren	Built circa 1960	Houses irrigation pump
87/Pump House/F	Concrete	Warren	Built circa 1960	Houses irrigation pump
88/Pump House/F	Frame	Warren	Built 1952	Pump for Warren residence
89/Clark Fork Bridge/G	Log	Warren	Built circa 1930 Pilings driven 1977 Rehab 1982	Used river bridge
90/Slough Bridge/G	Log	Warren	Built circa 1930 Rehab 1982	Used log and plank bridge

In addition to the above, the ranch contains 26 miles of various fencing, including jack leg, wood post and wire, steel post and wire, and wood post and wood rail. Fencing is generally in fair to poor condition. There are in excess of 100 gates, including frame, log, pole and wire, and steel. Gates are in good to poor condition. Livestock watering on the Warren complex is provided by nine electrically heated troughs, both steel and concrete.

There are more than 18,000 cataloged objects. It is estimated that the total collection size is 23,000 objects. There is a cataloguing backlog of about 3,300 objects. The collection

is estimated to contain 3,700 archeological, with a few ethnographic objects, 240 biological specimens, 1,600 archival items, and 16,500 cultural objects.

The archeological objects include 36 prehistoric lithics from the surveyed archeological sites and historical artifacts from in and around the main ranch complex structures and dump excavation between the ranch house and ice house. This collection is essentially ranch debris and includes fragments of glass, metals, metal objects, and remnants from the butchering of animals.

About 25 of the objects could be classified as ethnographic. These include such items as a Hawaiian War Club, a bow and arrows, a wolf robe, a tomahawk, two Navajo rugs, and assorted fragments of items found under the ranch house. Most of the items were acquired as curiosities by Kohrs family members in very limited interaction with eastern Montana Indian tribes, or as souvenir items on trips in the early 20th century. Except for the wolf robe, once owned by John Grant, and an arrow found under the ranch house, the items have little cultural affiliation with Indian tribes that once occupied the Deer Lodge Valley, even though Grant had married into at least the Bannock Tribe. Regarding other ethnographic resources, there is an autobiography by John Grant in the park collection that recounts some aspects of life in the Deer Lodge Valley, while the Kohrs records contain no mention of interaction with American Indian populations. There are no known ethnographic sites within the park.

About 98 percent of the museum collection is specific to the ranch. General condition of the collection is good, although some objects are deteriorating and many need conservation treatment. The museum collection contains objects dating from the 1860s to the 1970s. Included are ranch equipment, building furnishings, horse-drawn and motorized vehicles and equipment, personal gear, archeological material, archival material, and an architectural collection. About 10 percent of the collection is on display. Much of the collection is of value for research.

Current emphasis of the collection management program includes control of pest populations, documentation/accountability, improvements in storage, and preventive maintenance. Conservation problems are increasing.

The second floor and basement of the ranch house are primarily used for storage of an approximately 16,500-object museum collection. It is substandard for museum storage. Seven other historic buildings are used to store remaining museum objects. Most staff have access to the museum collections. With the exception of the ranch house, buildings are not equipped with fire and intrusions alarms, fire suppression systems, or environmental controls.

ARCHEOLOGICAL RESOURCES

The park, including lands then held in easement, was inventoried in 1973 (Sharrock). Since that time, 1,600 acres have been added that will need to be inventoried. Known sites include four prehistoric and 11 historic archeological sites. In addition, there are several isolated occurrences of historic farm equipment around the park. Four aboriginal sites found included a tepee ring site, and three open sites or scatters of flakes and ground stone. The cultural affiliation of the aboriginal sites is unknown. Three are not eligible for the National Register of Historic Places and one's eligibility is unknown (see table following; Hartley 1989). Site 24PW1077 has not been evaluated and needs to be tested before a National Register evaluation can be made. This property is closest to the Ranch headquarters development and the site will be avoided during the planning of any activities in its vicinity. Within the 11-acre development zone is a historic cabin site that will also be avoided.

The surface around the ranch facilities has been extensively modified, and at least 12 areas with buried historic remains relating to the ranch operations are known to exist. Since 1973, monitoring and testing for projects around the home ranch buildings and main house revealed four important buried historical remains in builder's trenches (Brown 1975; Legard 1976; Sudderth 1985). Seven additional historic dumps are outside of the home ranch complex and have not been documented (Cheryl Clemmensen, personal communication, 1991). Other historic remains will be present and ground-disturbing activities will require monitoring.

Table 6 **National Register Status for Sites**

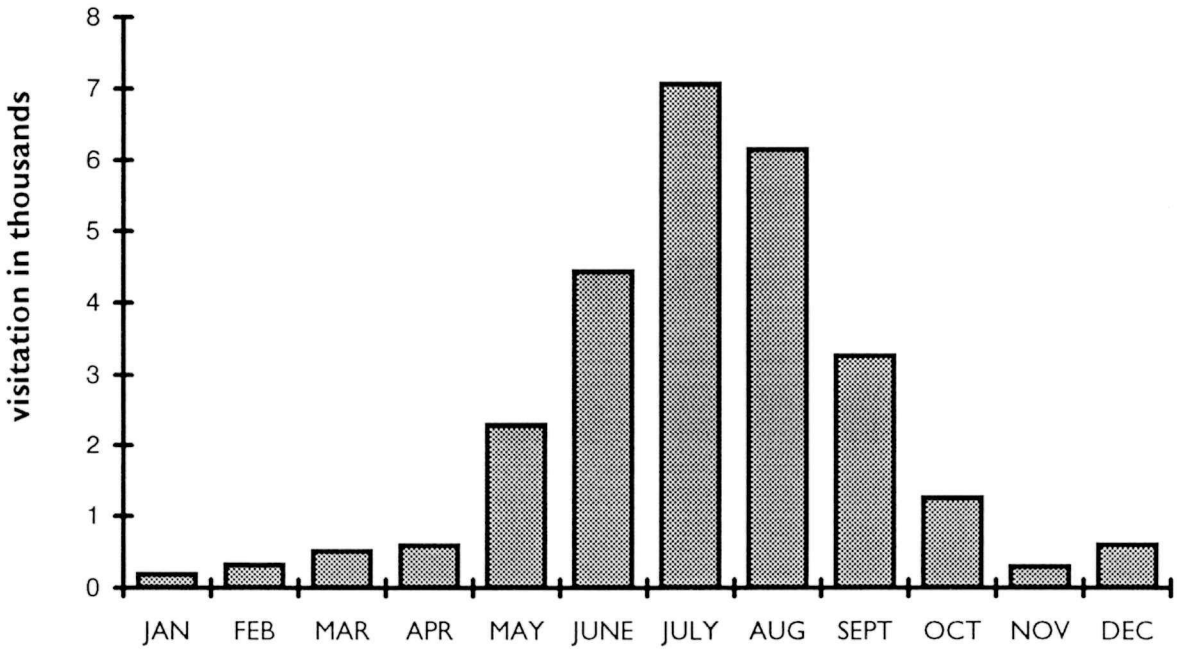
Site	Eligible	Ineligible	Not Evaluated	SHPO Concurrence Date
24PW1076		X		1/29/90
24PW1077			X	1/29/90
24PW1078		X		1/29/90
24PW1079		X		1/29/90
Historic debris in Clark Fork River at bridge			X	
Historic debris in willows west of Clark Fork River at bridge			X	
Historic debris far side of Cottonwood Creek			X	
Historic debris between ice house and bunkhouse			X	
Historic debris side of new wing of house			X	
Depression at chicken coop (outhouse?)			X	

Site	Eligible	Ineligible	Not Evaluated	SHPO Concurrence Date
Warren dump north end of site			X	
Historic debris west end of far feedlot fence			X	
Homestead on west side of Clark's Fork River			X	
Hobo camp north of L-shaped barn and in wetland borrow			X	
Con Warren and Ole Berg dump (near 24PW1077)			X	
Tom Stuart Cabin foundation on 11-acre tract			X	

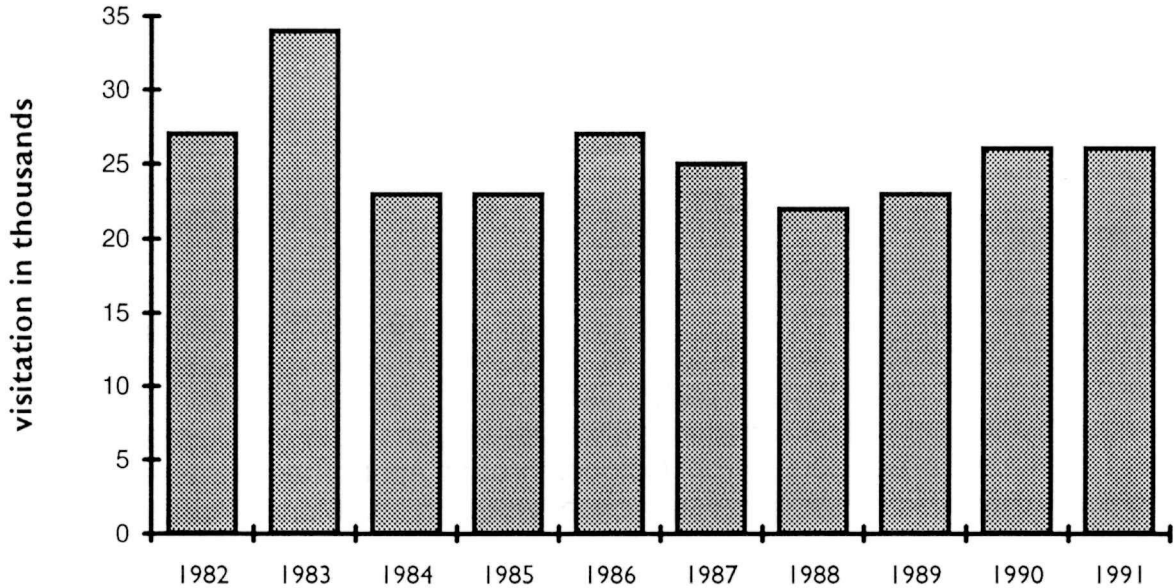
VISITOR USE

Visitation at Grant-Kohrs Ranch has increased from 19,949 in 1980 to 26,927 in 1991. Highest recorded visitation was 34,292 in 1983, when a railroad centennial was celebrated. About 67 percent of the park's visitation occurs during the summer season (June-August), and about 20 percent during shoulder seasons (May and September). The remaining 13 percent of use occurs from October through April. These visitation patterns are graphically displayed on the Ten-Year Annual Visitation and Monthly Visitation - 1991 illustrations.

The average visitor length-of-stay is 1.2 hours; there is no overnight use of the park. Thirty-three percent of use originates from residents in the local and regional area (residents who live within a day's drive of the park), 57 percent of use originates from national destinations, and 10 percent of use is international. For the most part, visitors



1991 Monthly Visitation



Annual Visitation

Grant-Kohrs Ranch National Historic Site

are on an extended trip or vacation and the park is one stop on their itineraries. Eight percent of visitors are travelling alone, 52 percent are with a peer group, 10 percent are on an organized tour, and 29 percent are in family groups.

The primary visitor activity is touring the historic ranch complex. Sixty-seven percent of visitors attend personally conducted or presented activities, such as the guided-tour of the ranch house, or the blacksmith shop demonstrations. Ninety-five percent of all visitors use some type of information, orientation, or personal services provided by the park. Interpretation is the essence of visitor enjoyment of Grant-Kohrs Ranch.

Accessibility for the disabled is minimal. There are handicapped spaces in the visitor contact station parking lot. Due to narrow stalls and other impediments, rest rooms adjacent to the contact station are not accessible, even though ramped. The contact station itself is ramped, although the interior is so small, a wheelchair would have difficulty maneuvering if the building were even somewhat crowded. The walkway from the contact station to the home ranch complex is paved, although its length and at least one steep grade makes its accessibility marginal, if not impossible. Disabled visitors are encouraged to enter the site by the north access to park nearer the home ranch complex.

The home ranch complex, however, no matter how it is approached, is technically not accessible. Dirt and loose gravel driveways and walkways, some rutted and potholed, make independent use from a wheelchair or with walking aids difficult. This is especially true near the main ranch house, as the primary walking tour route involves a fairly steep grade without any alternative access. The rest rooms in the garage in the lower yard are technically accessible, although routes to get there are not. In addition, most of the historic structures are inaccessible because of steps, high thresholds, dirt surfaces, narrow openings, and other obstacles. Problems for other disabilities include dim lighting and/or glare in most buildings, including the main ranch house. The first floor of the house is marginally accessible. Narrow doorways, carpets, dim lighting and other obstacles present barriers. The house tour itself is not signed or otherwise accessible to the hearing impaired. No provisions have been made for the visually impaired.

LANDOWNERSHIP

There are 1,498.38 acres within the boundaries of the park. Of this total 1,205.83 acres are owned in fee by the federal government and on 165.68 acres, the federal government owns scenic easements and a small (0.05 acres) access right-of-way. Non-federal lands in the boundary include 69.47 acres owned by the city of Deer Lodge for sewage lagoons and 57.45 acres owned by Union Pacific Railroad, which is leased to Burlington Northern,

who leases it to Montana Western. Conrad Warren retains a life estate on about 0.7 of an acre.

Outside and adjacent to the park's southern boundary, 120.00 acres are owned in fee by the federal government. This tract was purchased as an uneconomic remnant under authority of P.L. 91-646. A 0.75-acre waterline right-of-way near the southeast corner of the park's boundary, is also owned by the federal government.

SOCIOECONOMIC RESOURCES

Grant-Kohrs Ranch has a substantial impact on the Deer Lodge economy. Park-related federal expenditures in fiscal year 1991 totaled $589,000. This resulted in total annual sales, considering indirect and induced multipliers, of about $1,024,000. Sales benefits from park tourism results in direct sales of about $72,000 annually, and when considering indirect and induced multipliers contributes nearly $130,000 annually to the Deer Lodge economy. Total tax revenue gained as a result of NPS operations and tourism is nearly $21,000 annually.

Deer Lodge offers all normal services from a clinic and hospital to 150 businesses, including motels, campgrounds, grocery, drug and dry goods stores, restaurants, beauty shops, and veterinarians. Service and gas stations are open 24 hours a day. USDA-Forest Service, state, and private campgrounds are nearby. Three major shopping centers and colleges are available in the area at Butte, Missoula, and Helena.

During the last 10 years, the population of Deer Lodge has decreased some 24 percent, from 4,023 to 3,376. During that same period, the population of Powell County decreased only one-half of a percent. There is an increased trend toward small "ranchettes" north and south of Deer Lodge.

MANAGEMENT AND OPERATIONS

Grant-Kohrs Ranch normally has a staffing level of 17 full-time equivalents. The annual operating budget has averaged about $475,000. Nearly $6,000 in entrance fees is collected each year and annual income from leases is about $15,000.

Park administrative, management, and operational functions are scattered in various facilities in and outside of the park. Rented space in the city of Deer Lodge serves as the park administrative headquarters. Curatorial staff work from the second floor of the

historic ranch house. Some interpretive staff work in the small visitor contact station. Maintenance uses a number of historic structures in the ranch for a variety of purposes.

Current permanent staffing for the park is as follows:

Number of positions	Position
1	Superintendent
1	Supervisory Park Ranger
1	Maintenance Mechanic Foreman
1	Administrative Officer
1	Ranch Worker
1	Curator
4	Park Ranger
1	Maintenance Worker
1	Maintenance Mechanic
1	Museum Technician
1	Administrative Clerk
1	Secretary

Current seasonal staffing for the park is as follows:

Number of Positions	Position
4 - 5	Interpreters
1 - 2	Museum Aids
2 - 5	Laborers and Maintenance Workers

In addition to responsibilities for Grant-Kohrs Ranch, the superintendent is responsible for the overall administration and management of Big Hole National Battlefield. Grant-Kohrs Ranch provides administrative, curatorial, interpretive, and maintenance support.

OTHER FEDERAL AGENCIES

Federal agencies in the area include the Postal Service and bureaus within the Department of Agriculture. The Agricultural Stabilization and Conservation Office and Soil Conservation Service frequently provide assistance on land management matters. During the fire season, there is frequent contact with the USDA-Forest Service. Bonneville Power has power lines in the area.

The Clark Fork River Superfund site cuts down the long axis of the national historic site. Federal agencies involved, in addition to the NPS, include the USDA-Forest Service, Bureau of Land Management, Environmental Protection Agency, Fish and Wildlife Service, Department of the Interior Environmental Office, and Consolidated Salish Tribes (Bureau of Indian Affairs). State agencies include Fish, Wildlife and Parks, and Department of Health and Environmental Sciences.

ENVIRONMENTAL CONSEQUENCES

WATER RESOURCES/FLOODPLAINS/WETLANDS

Impacts of the Proposal

The 11-acre tract designated for construction of the USDA-Forest Service and curation complex is drained by Johnson Creek. Within this development tract is a historic cabin site (Tom Stuart), which precludes construction in the immediate area of Johnson Creek. Its location on a small, flat natural bench would minimize materials entering Johnson Creek, even during construction. No measurable increase in stream turbidity is anticipated.

The closest drainage to the Red Barn visitor center and Warren Ranch Complex is about 1,200 feet to the south. The absorption rate of soils and distance to surface water precludes any measurable increases in turbidity.

Parking lots and buildings in the 11-acre tract and parking lots for the Red Barn visitor center would increase the amount of runoff. The soil's high absorption rate in both locations will minimize runoff into adjacent streams during normal rains and snowmelt. Runoff from parking lots could contain petroleum and other products leaked from vehicles that could result in minor surface water contamination.

Water for human consumption will be provided by the Deer Lodge water system. If the Warren residence well is retained and used, the water would be used solely for livestock and irrigation.

No groundwater impairment from construction, management, and use of the site is anticipated. Before Conrad Warren constructed the Red Barn and feedlot complex, dye tests were performed. It was determined that water absorbed into the ground did not enter the aquifer supplying his well. Sewage waste will be treated by the city's system, to eliminate any potential contamination from human waste.

There is no danger of flash flooding within the national historic site. All new construction, utilities, and adaptive reuse of historic buildings are proposed on lands above the 100- and 500-year floodplain elevations.

Approximately twenty historic buildings and structures in the west feedlots and corrals are within the Clark Fork River 100- and 500-year floodplains. These buildings and structures were used for stock shelters, barns, chicken houses, and granaries. None are proposed

for adaptive non-historic reuse or human occupancy. Proposed uses are limited to display for interpretive purposes, or short-term shelter for livestock operations. This area will be closed to visitor use when conditions for flooding are favorable. During a flood event, up to 2 feet of water could inundate historic buildings and structures. Most buildings and structures are log, frame, or post and pole construction. Their conditions range from fair to good. In the event of flooding, artifact damage, water damage from warping, delamination, and loss of chinking could occur. Restoration maintenance would be required to correct damage. Dirt administrative access roads serving the west feedlots and the Clark Fork River bridge, which provides access to upland pastures, could suffer minor damage from flooding.

The park's wetlands are well out of any area proposed for construction, historic building rehabilitation, and visitor use. Wetlands will not be affected by these activities or any proposed management actions.

The actions proposed do not support or encourage any additional floodplain or wetland development. The actions do not reinforce any existing unplanned floodplain or wetland land use. There are no secondary effects to floodplains or wetlands and there is no increase in flood loss potential to existing developments from the proposal or any alternatives. There will be no effect on natural and beneficial floodplain values, including water resource values (natural moderation of floods, water quality maintenance, and groundwater recharge), living resource values (fish, wildlife, and plant resources), cultural resource values (open space, natural beauty, scientific study, outdoor education, and recreation), and cultivated resource values (agriculture, aquaculture, and forestry). The proposal does not involve the placing of structures or fill in navigable waters; nor does it call for discharge of dredged or fill material.

There are no state or local floodplain standards applicable to the proposal.

Impacts of Alternative A

Under this alternative non-historic uses would be removed from the ranch complex. All new development would be placed on the 11-acre tract. The intensity of development could increase runoff and increase turbidity of Johnson Creek. Contaminants from vehicles and maintenance operations could also enter Johnson Creek. Remaining water resource, floodplain, and wetland impacts for this alternative are similar to those described for the proposal.

Impacts of Alternative B - No Action

There would be no change to impacts presently being experienced. The temporary visitor center and parking lot on the 11-acre tract does not affect water quality in Johnson Creek.

Impacts to floodplains from the historic west feedlots and corrals are the same as those described for the proposal. No park wetlands are affected by development, visitor use, or other management actions.

SOILS AND VEGETATION

Impacts of the Proposal

Construction of the curatorial/USDA-Forest Service complex will disturb about 2 acres of Beaverell series soils and upland pasture vegetation. About 1 acre of this area is presently occupied by a temporary visitor contact station and parking lot. Construction of the Red Barn visitor center parking lot will disturb an additional 2 acres of the same soil and vegetation type. Soils in this area were previously compacted when used by Warren for parking during sale auctions.

Proposed access roads, parking, and buildings will eliminate direct flow of water to soil and will destroy about 4 acres of vegetation. One acre, now occupied by the visitor contact station parking lot, will be restored, resulting in a net change of 3 acres. Soil compaction will occur from construction activities, pavement, and settling of buildings on 4 acres. Construction of foundations and basements for the USDA-Forest Service/ curatorial complex will destroy soil structure in about 3,000 cubic yards of soil. Topsoil will be removed from areas to be converted to pavement and buildings and stored for use in site rehabilitation and revegetation. This will reduce the overall loss of topsoil and enhance revegetation efforts. Accelerated erosion will occur on all disturbed sites until revegetation is complete, approximately one growing season, and until road, parking, and building drainage structures are complete. These drainage structures will divert runoff to natural drainages. Although revegetation will be complete in one growing season, natural vegetation composition will not be complete for several years. The levels of erosion are expected to be minimal, since all proposed construction will occur on lands with a slope of less than 5 percent. Areas experiencing increased runoff will be limited to parking and roadside shoulders. In these areas, increased runoff and moisture will alter vegetation composition and create slight changes in soil chemistry. Vegetation composition will be slightly altered and some vegetation along roadsides and near parking areas will be subject to crushing by vehicles. This could encourage the growth of thistle and other exotic species.

Trails to and through the site will be provided where heavy foot traffic is anticipated, and visitors will be encouraged to stay on maintained trails. All trails will be located on gentle slopes to minimize potential for erosion. Soil next to trails would continue to be compacted and vegetation trampled. Establishment of trails will help reduce traffic in non-designated areas. Soils and vegetation near interpretive waysides and displays will be subject to compaction and trampling by foot traffic. Invasion of those areas by weedy species could become a problem requiring control actions. Because of NPS presence and enforcement programs, this impact is expected to be limited to slight changes in vegetation composition.

Other areas of ground disturbance, such as water and utility lines, will have topsoil removed before construction. The topsoil will be used to revegetate trenches with native species.

These soil and vegetation types are common in the region, and the amount of disturbance will not be significant.

Impacts of Alternative A

Under this alternative, construction-related impacts would be confined to the 11-acre development tract. In addition to 1 acre already occupied by a parking lot, about 4 additional acres of soil would be disturbed and 4 additional acres of vegetation would be removed. The concentration of uses in this area would result in increased levels of soil compaction and vegetation trampling. Impacts associated with these activities are similar to those described for the proposal.

Impacts of Alternative B - No Action

No additional disturbance to soil or vegetation is anticipated, except for those associated with the upgrade of utilities (power, sewer connections, natural gas extensions, water). This would impact an area about 3 yards wide and 530 yards long, or about one-third of an acre. The 11-acre development tract would continue to be used for visitor parking and as a visitor contact area. In the Warren Ranch Complex, minimal disturbance of soil or vegetation would occur.

WILDLIFE

Impacts of the Proposal

Wildlife associated with the Clark Fork River bottomlands and the park's western foothills will not be affected by the proposal. Fish in the Clark Fork River and birds common in the park will also not be affected.

Impacts will generally be limited to the 11-acre development tract and the Warren Ranch complex. Construction of the maintenance and curatorial facilities and the Red Barn visitor center parking lot will alter vegetation and result in the displacement and loss of some rodents (mice, common shrew) and insects (grasshoppers, beetles, ants, flies). About 4 acres of habitat will be affected initially. One acre, now used for parking, will be restored for a net loss of 3 acres of habitat. It is anticipated that a majority of displaced rodents and insects will relocate in other similar habitats of the park. None of these impacts is significant.

Impacts of Alternative A

Under this alternative, about 4 additional acres of habitat loss would occur in the 11-acre development tract. One acre was previously lost from construction of the visitor parking lot. Rodents and insects occupying this area would be displaced to other similar habitats in the park, or lost. As with the proposal, birds and wildlife and fish associated with the Clark Fork River bottomlands and western foothills would not be affected.

Impacts of Alternative B - No Action

No additional wildlife habitat would be lost, and current displacement of rodents and insects from the temporary parking lot and visitor contact facilities on the 11-acre development tract will continue. There would be no effect on birds, wildlife, and fish in other habitats of the park.

THREATENED AND ENDANGERED SPECIES

There are no listed, proposed, or candidate threatened or endangered plant or animal species within the park.

AIR QUALITY

Impacts of the Proposal

Minor increases in visitation are anticipated; this will result in increased auto emissions. Construction of parking lots and maintenance and curatorial facilities will increase the amount of dust in the air. If necessary, construction dust will be controlled with application of water or other approved dust palliatives. There will also be a temporary increase in noise level during construction.

Administrative use of dirt roads within the ranch and its pastures will generate some additional dust. Because of sporadic and low use, accumulations of dust will be minimal with no measurable effect to roadside vegetation. Wind erosion of these dirt roads will contribute to fugitive dust levels.

Class II airshed standards will not be violated by visitor use or construction activities. Because the Deer Lodge Valley is wide and not subject to significant inversions, increased emissions and dust should not be visually noticeable.

Based on radon sampling done in the home ranch complex, no problem is foreseen with elevated radon levels in historic and proposed buildings.

Impacts of Alternative A

Air quality impacts under alternative A are similar to those described for the proposal.

Impacts of Alternative B - No Action

There would be no construction-related air quality impacts under this alternative. Impacts are limited to emissions from visitor use and dust from administrative use of dirt roads within the park. Current emissions and road dust are not visually noticeable and are within standards prescribed for Class II airsheds.

HISTORIC AND ETHNOGRAPHIC RESOURCES

Impacts of the Proposal

The proposal provides for the maintenance, rehabilitation, and restoration of historic buildings, structures, and landscapes, with a "management time period" that reflects historic periods of use. Use of buildings and structures to support park operations, interpretation, and visitor use will contribute to their long-term preservation. Removal of

maintenance operations from the dairy and other historic buildings will provide for uses that are more historically compatible. Removal of collection storage from the ranch house and other areas used for storage will reduce weight loads on those buildings and eliminate, or reduce, the stresses and damages from collection storage, which should increase longevity. Use of the Warren residence for park housing should enhance abilities to fund restoration and maintenance requirements and contribute to their long-term preservation. The Red Barn, adaptively used as a visitor center and for administrative offices, will be the visual focus for the ranch. The integrity of the barn's exterior will be retained and construction techniques used in the interior will minimize damage. Historic American Building Survey (HABS) documentation will be required for the Red Barn and Warren residence before they can be used adaptively. Proposed uses of all historic buildings and structures within the park are described under the proposal in chapter II.

Use of the ranch's historic entrance for access to the Red Barn visitor center parking lot will provide better site orientation and a historic approach to the ranch. Location of the visitor center parking lot in an area historically used by Warren for parking during sales days should retain the ranch's historic scene. Location of the new USDA-Forest Service and curatorial storage facility outside of historic zones will also lead to the retention of historic scenes. Identification and management of the landscape types described in the proposal should further retention of the ranch's historic scene. Also, the proposed expansion of boundaries to the western foothills will greatly enhance abilities to retain vast isolated landscapes and a sense of open-range cattle grazing associated with the ranch.

The proposal will improve museum collection management. The proposed curatorial storage facility will provide environmentally controlled space, with fire detection and suppression systems and intrusion alarms. Access to the collections will be more easily controlled and further improve security. Efficiency of curatorial operations will also be improved. Museum objects will be consolidated in a clean environment in stable conditions, with less cleaning required and a slowed rate of deterioration. Pest access to the collections will be greatly reduced or eliminated, further contributing to object preservation. Provisions for curatorial work areas will expand on-site treatment abilities for objects with minor problems, reducing the need for more expensive off-site treatment. Curatorial office space will provide room for filing and use of curatorial records. More research into the collection will be possible, both by staff and visiting researchers.

Moving museum objects from their present locations in historic buildings to a new facility could have adverse effects on the collections from handling, transportation, fluctuations in temperature and humidity. These effects could be mitigated by use of trained staff and adequate materials and equipment to properly move the collection. An estimated 350 objects will remain in the ranch house for display, while an estimated 17,000 objects will

be moved. Removal of curatorial work space from the ranch house will require more exhibited objects to be temporarily moved for minor on-site treatment and will require staff time for packing and moving and will temporarily increase the chance for harm to objects.

Some additions to the collection could occur when the proposal is implemented. The proposed curatorial facility should be adequate to accommodate anticipated increases. Use of exhibits in the Red Barn visitor center will increase the number of objects on exhibit. An increase in staff time will be required to prepare short-term exhibits.

No impacts to ethnographic resources are anticipated under the proposal.

Impacts of Alternative A

Under this alternative, use of historic structures and buildings is limited to historic activities. This alternative provides for the maintenance, rehabilitation, and restoration of historic buildings and structures with a "management time period" that reflects historic periods of use. Funding and resources necessary for preservation could be more difficult to obtain when adaptive uses are not considered. Removal of maintenance operations from the dairy and other historic buildings will provide for uses that are more historically compatible. Removal of collection storage from the ranch house and other areas used for storage would reduce weight loads on those buildings and eliminate or reduce the stresses and damages from collection storage.

Visitors would continue to access the ranch on the trail leading from the present visitor center. Opportunities to view the ranch from a historic perspective would not be provided. Because development would be concentrated within the 11-acre development tract, park operational and visitor-use facilities would not affect the historic scene. Identification and management of the landscape types should further park management's ability to retain the ranch's historic scene. Also the expansion of boundaries to the western foothills would greatly enhance ability to retain vast isolated landscapes associated with the ranch.

A new facility for curatorial operations would be provided. Impacts are similar to those described for the proposal.

No impacts to ethnographic resources are anticipated under this alternative.

Impacts of Alternatives B - No Action

The lack of building maintenance would result in continued natural deterioration of buildings and structures listed on the National Register of Historic Places. Inappropriate use of buildings would continue, such as maintenance operations in the dairy and curatorial storage in the ranch house. The basement and second floor of the ranch house would not be adequately interpreted and stress damage from heavy curatorial items to the ranch house would continue. Deterioration of the Warren buildings would continue and fire and security problems cannot be effectively dealt with. Degradation of the historic scene would continue, with retention of the on-site trailer used as a ranger residence. Retrofitting buildings with climatic controls for curatorial storage could be damaging to historic buildings and fabrics.

Only minimal maintenance would be provided for site fences and corrals. The historic scene could be impacted by unchecked external forces, such as the construction of ranch-related structures, roads, and irrigation systems, compromising the historic integrity of the ranch and adversely affecting visitor experience and appreciation of historic periods.

Curatorial storage would remain scattered and substandard. Potential for substantial loss of the collections would continue. Many objects would deteriorate quickly because of a lack of environmental controls and treatment. Risk of loss by theft, vandalism and fire would be high because of a lack of security and fire suppression systems. Low operational efficiency would continue for curatorial activities. Most of the curatorial and museum management issues would remain unresolved.

There are currently no impacts to ethnographic resources.

ARCHEOLOGICAL RESOURCES

Impacts of the Proposal

Construction of the USDA-Forest Service/curatorial storage facility, trails, and Red Barn visitor center parking will not affect three of the four known aboriginal archeological sites. These three sites are well away from the proposed construction zones. The fourth site is in the vicinity of the ranch house; its specific location has been noted and the site will be avoided when trails and exhibits are established in this area.

There are buried historic remains around several ranch facilities, however, their locations are not well documented. All ground-disturbing activities in these areas will be monitored to mitigate any impacts that could occur should these sites be encountered. Sites located

in close proximity to visitor-use areas are vulnerable to surface damage and could be inadvertently damaged. In addition, grazing activity by park livestock could affect surface remains of sites yet to be discovered.

Prior to any land-modifying activity an archeologist will inspect the proposed development site and its immediate vicinity for the presence of cultural remains, both prehistoric and historic. Should newly discovered or previously unrecorded cultural remains be located, additional investigations will be performed.

No known prehistoric or historic site will be disturbed under any alternative. All locations have been avoided by the proposed developments. When funding becomes available for landscaping and other rehabilitation, the historic debris and dump sites, and prehistoric site 24PW1077 will be considered during planning, and avoided if possible. If avoidance is not possible, each location will be tested to determine its eligibility for the National Register, and mitigating measures will be implemented if necessary.

Impacts of Alternative A

Impacts and mitigation procedures described for the proposal also apply to this alternative.

Impacts of Alternative B - No Action

No impacts from construction-related activity would occur. Sites in close proximity to visitor-use areas are vulnerable to surface damage and could be inadvertently damaged. In addition, grazing activity by park livestock could affect surface remains of sites yet to be discovered.

VISITOR USE

Impacts of the Proposal

The proposal will enhance existing visitor use by upgrading visitor center orientation capabilities, by providing additional interpretive staff and visitor services, and by redesigning support and interpretive facilities that have been informally established over the years, to better tell the ranch's story. Use of the ranch site will continue. Interpretive and visitor circulation problems will be solved, thereby providing the visitor a better experience and opportunity to appreciate the ranch's historic values.

The placement of a new entrance and visitor center at the historic ranch entrance, will reduce visitor confusion and improve site orientation. An expanded range of choices for visitors will be provided through interpretive media and services.

Establishing a new visitor access route to the ranch will allow tours of the site to be conducted in a logical, topic-oriented manner. Tours will begin with secondary interpretation of mechanized feedlot operations and proceed to the ranch's primary interpretation of the frontier cattle era. An on-grade railroad crossing to the home ranch complex will be provided. Adequate warning and control devices will be necessary to prevent visitor/train conflicts, although passage of trains through Deer Lodge is limited to a couple of trains per day.

Relocation of the visitor center and parking lot will increase site visibility from Highway 10 and should contribute to some increases in visitation, although this increase cannot be calculated. Traffic congestion at the entrance will need to be monitored and, if necessary, measures such as a reduction in speed limits pursued to minimize hazards.

The new visitor center will provide improved conveniences like rest rooms, water fountains, and access for visitors with disabilities. Its new location should eliminate the need for tour group buses, visitors with disabilities, and others with special needs to use a separate entrance.

Proposals to protect landscapes to the west and north of the ranch and to identify and manage historic landscapes will result in enhanced visitor understanding and appreciation of the cattle frontier, and will prevent incompatible uses from occurring. Returning many buildings and structures to their historic use will enhance the visitor's stay and provide better opportunities to experience the historic period(s).

Increased visitation should result in slight increases of fee collection revenues. With improved orientation, interpretive programs, and facilities, the visitors' length-of-stay at the ranch is expected to increase. This increase could be as much as 4 hours, with an estimated average length-of-stay of 2 hours. The quality of stay is also expected to improve, because of more and better programs.

Impacts of Alternative A

Impacts of this alternative are largely the same as with the proposal. The quality and length of the visitor experience and revenue generated are expected to be similar to those anticipated from the proposal. Accessibility to the ranch would not change, and visitors would be required to approach the ranch via the railroad underpass. Visitors and groups with special needs would continue to be directed to a separate site entrance. Signs and

wayside exhibits could be usable in their current form since the access trail would provide for chronological interpretation of the ranch's history. Traffic patterns along Highway 10 would remain as they are, since no change in highway access is proposed. Protection of landscapes to the west and north would prevent incompatible uses from occurring.

Impacts of Alternative B - No Action

Current plans include a new information/orientation wayside exhibit in the vicinity of the existing parking lot. This wayside exhibit should help encourage drive-through visitors, who mistake the visitor center and rest rooms as the ranch, to stop. Other visitor-use issues would remain unresolved. The 400 square-foot visitor center would not be able to provide space for interpretive and orientation programs, visitor confusion on the history of cattle ranching and Grant-Kohrs Ranch would probably persist, access for the disabled would not be improved, and future direction to improve interpretation and visitor use will be lacking. Landscapes to the west and north could be changed due to development of ranch-related roads, structures and irrigation systems. Close coordination with the USDA-Forest Service regarding timbering would continue, to allow protection from that activity.

SOCIOECONOMIC RESOURCES

Impacts of the Proposal

The proposal will continue to substantially contribute to the Deer Lodge economy. Increased visitor services could result in increasing the visitor's length-of-stay from 1.2 hours to an average of about 2 hours. Sales revenues from park tourism could result in direct sales of about $120,000 annually, and when considering indirect and induced multipliers, could contribute more than $216,000 annually to the Deer Lodge economy.

An estimated annual park budget of $600,000 could result in total sales, considering indirect and induced multipliers, of about $1,080,000 annually. The proposed rehabilitation and development program anticipates a one-time expenditure of about $10 million. Total sales in the area from this expenditure should exceed $19 million, netting nearly $300,000 in increased tax revenue.

Annual park operations and tourism benefits will result in approximately 37 jobs. Implementation of the rehabilitation and development program will result in a short-term gain of an additional 500 jobs.

The results of the above economic benefits could increase levels of normal services available in Deer Lodge and enhance local businesses. No measurable change in population levels or changes in lifestyle are anticipated.

Impacts of Alternative A

Impacts similar to those described for the proposal are anticipated for alternative A. Staffing and operational budget requirements are higher than those required for the proposal. An estimated annual budget of $975,000 would be required. This would result in total sales of about $1,775,000 annually. The one-time rehabilitation and development program of about $7 million should result in short-term sales of around $15 million with approximately $230,000 in increased tax revenues. Jobs created by operations and tourism should total about 50, while the rehabilitation and development program should result in a short-term gain of about 430 jobs.

Sales revenues from park tourism and impacts to services and businesses would be the same as described under the proposal.

Impacts of Alternative B - No Action

Economic benefits of current park operations are described in the "Affected Environment" chapter of this document. Total sales from park operating expenditures is about $1,024,000 annually. Sales benefits from park tourism is about $130,000 annually. Total tax revenue being gained is about $24,000 annually. Operations and use of the park results in about 30 jobs.

OTHER FEDERAL AGENCIES

Impacts of the Proposal

The 12,000 square foot USDA-Forest Service administrative/NPS curatorial facility to be constructed within the park near the southern boundary will benefit the USDA-Forest Service by providing them with needed office space. No other federal agencies will be affected by the proposal.

Impacts of Alternative A

Impacts associated with this alternative would be the same as those described for the proposal.

Impacts of Alternative B - No Action

Current park operations have no impacts on other federal agencies.

MANAGEMENT AND OPERATIONS

Impacts of the Proposal

Consolidating all administrative, maintenance, and operational staff within the park should increase productivity and efficiency. The Red Barn visitor center can be operated year-round with monitoring of activities by staff located in offices on the second floor.

Potential of injury to staff from handling museum objects in spaces not designed for such use would be reduced. Specialized object-handling equipment that will reduce back injuries, as well as provide safer treatment of objects, could be used in a new storage facility.

Removal of the maintenance work and storage areas from historic structures and consolidation of those activities into one area will improve operation efficiency. However, increased responsibilities associated with supporting a new maintenance facility, curatorial storage area, administrative offices, and visitor center will cause an increase in the existing maintenance duties, resulting in higher operational costs and increased purchased utility costs. During actual construction activities, there should be little effect on existing maintenance operations.

The proposal requires about $600,000 annually for operational and maintenance costs. About 20.0 FTEs will be required to fully implement operational and management aspects of the proposal.

Impacts of Alternative A

Impacts described for the proposal would be similar for this alternative. Because historic structures would not be adaptively used and more new construction is proposed, annual operational and maintenance costs associated with this alternative are about $975,000. FTE requirements are 26.75. This increase is mainly attributed to the location of visitor contact and administrative facilities away from the historic ranch complex and increased maintenance responsibilities.

Impacts of Alternative B - No Action

With park headquarters remaining in the city of Deer Lodge and other management and operational functions scattered in various buildings in the ranch, reduced operational efficiency would continue. The majority of the staff make frequent, daily trips between the office and the ranch. Because of a lack of government vehicles, many staff use private

vehicles, therefore, concerns of accident liability would continue. Additionally, these trips result in a loss of time and efficiency.

CUMULATIVE IMPACTS OF THE PROPOSAL

There are no cumulative impacts resulting from the proposal.

CONSULTATION/COORDINATION

SUMMARY OF PUBLIC INVOLVEMENT

A scoping brochure for this plan was distributed and made available for public comment in October and November 1990. A Notice of Intent (NOI) was published in the Federal Register on April 30, 1991. The scoping brochure was again made available for comment.

Only nine responses were received from the original release of the scoping brochure and NOI. Eight comments were received from Montana and one from Alberta, Canada.

Issues identified by these respondents are reflected in issue statements contained in the "Purpose and Need for the Plan" chapter of this document.

LIST OF AGENCIES, ORGANIZATIONS, AND PERSONS TO WHOM COPIES OF THE STATEMENT ARE SENT

Federal Agencies

ACHP - Western Division of Project Review - Ms. Claudia Nissley
Big Thicket National Park - Don Cory
Bureau of Land Management
Colorado National Monument - Superintendent Jim Taylor
Department of Interior - Regional Environmental Officer - Robert F. Stewart
Glacier National Park - Cliff Martinka
Honorable Bruce Vento
Oregon Caves National Monument - Stuart Nuss
U.S. Congressman Ron Marlenee
U.S. Congressman Pat Williams
USDA-Forest Service - Bob Gilman
U.S. Environmental Protection Agency - David Wann
U.S. Environmental Protection Agency - Julie DalSoglio
U.S. Environmental Protection Agency - John Wordell
U.S. Fish and Wildlife Service - Don Palawski
U.S. General Accounting Office
U.S. Geological Survey - Bob Davis
U.S. Senator Max Baucus
U.S. Senator Conrad Burns

Whiskeytown/Shasta/Trinity National Park - Bob Cherry

State Agencies

Bannack State Park - Dale Tash
Chief Plenty Coups State Park - Rich Pittsley
Ecological Services Office - Field Supervisor
Endangered Species Office - Billings
Honorable Stan Stephens - Governor of Montana
Montana Department of Health and Environmental Sciences - Dick Peterson
Montana Environmental Information Center
Montana Fish, Wildlife and Parks, Director
Montana Fish, Wildlife and Parks, Parks Division
Montana Fish, Wildlife and Parks, Wayne Hadley
Montana Land Reliance
Montana Power Company
Montana State Historic Preservation Office - Marcella Sherfy
Montana State University - APHIS - Bob Richards/Ron Lang
Montana Wildlife Federation
Northern Plains Resource Council
State Senator Tom Beck
State Representative Gary Beck
University of Montana - School of Forestry - Robert Pfister/Paul Hansen

Local Agencies

Butte Chamber of Commerce - Connie Kenney
City of Deer Lodge
City of Deer Lodge - Police Department
County Extension Agent - Mr. Dave Streufert
Powell County Commissioners
Powell County Courthouse - Planner
Powell County Sheriff
Soil Conservation Service - Soil Survey - Huey Long

Organizations

Agricultural Stabilization and Conservation Office
ARCO - Ms. Robin Bullock
ARCO - Sandy Stash
Burlington Northern Railroad Sales and Property Management

Clark Fork Coalition - Kathy Hadley
Colorado State University - Documents Librarian
Five Valleys Audubon Society
Land and Associates - Jim Lane
Last Chance Audubon Society
Montana Alliance for Progressive Policy
Montana Audubon Council
Montana Historical Society - Lawrence Sommers
Montana Stockgrowers Association - President
Montana Travel Promotion Unit
Montana Western Railroad
Montana Western Railroad Co - Mike Green
Montana Wilderness Association
National Parks and Conservation Association - Federal Activities
The Nature Conservancy
Old St. Stephen's College - Historic Sites Planner
Pintlar Audubon Society
Powell County Museum & Arts Foundation - Dick Bauman
Rock Creek Cattle Company - Don Davis
Russell Stover Candies, Inc. - Louis Ward
Soil Conservation Service
Towe Ford Museum - Andy Towe
Western Region - Calgary, Alberta - Historical and Archeological Research - W.B. Yeo

Individuals

Berg, Ole
Brubaker, Mr. & Mrs. Ed
Colburn, Hal
Daniels, Kermit
Faye, Dr. Peter
Getchell, Mr. & Mrs. W.M.
Harvey, Mark & Phyllis
Johnson, Bill
Johnson, Dave
Johnson, Jim and Bev
McNally, Judy
Nesman, Lisa
Olsen, Lars
Reiswig, Barry
Schillo, Bernie

Shaw, Deirdre K.
Shaw, Mr. & Mrs. Frank
Shelley, Davis Mckee
Stoecker, Don
Tavenner, Gary
Vaughan, Thomas
Warren, Conrad
Warren, Patricia Nell

PUBLIC AND OTHER AGENCY COMMENT AND RESPONSE

Copies of letters from the Advisory Council on Historic Preservation, Clark Fork - Pend Oreille Coalition, and the Environmental Protection Agency are included here. There were no other written responses.

Advisory Council On Historic Preservation

The Old Post Office Building
1100 Pennsylvania Avenue, NW, #809
Washington, DC 20004

July 30, 1992

Michael D. Snyder
Associate Regional Director
Planning and Resource Preservation
National Park Service
Rocky Mountain Regional Office
P.O. Box 25287
Denver, CO 80225-0287

REF: Draft Environmental Impact Statement, General Management Plan, and Development Concept Plan, Grant-Kohrs Ranch National Historic Site, Deer Lodge, MT

Dear Mr. Snyder:

We have reviewed the Draft Environmental Impact Statement, General Management Plan, Development Concept Plan (April 1992) for the Grant-Kohrs Ranch which has been designated a National Historic Landmark and is listed on the National Register of Historic Places. The proposed action is consistent with the recommendations contained in the earlier draft reviewed by this office and we continue to have no objection to its overall intent. We noted that the number of individual landscape types referenced on page 2 is inconsistent with other references in the text on pages iv. and 18. We look forward to working with you to review the individual components of this plan which may affect this National Historic Landmark property.

If you have any questions, please contact Lee Keatinge of the Western Office of Project Review at (303) 231-5320.

Sincerely,

Claudia Nissley
Director, Western Office
of Project Review

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII, MONTANA OFFICE
FEDERAL BUILDING, 301 S. PARK, DRAWER 10096
HELENA, MONTANA 59626-0096

Ref: 8MO

August 28, 1992

Eddie L. Lopez
Superintendent
Grant-Kohrs Ranch National Historic Site
P.O. Box 790
Deer Lodge, Montana 59722

Re: Grant-Kohrs Ranch National Historic Site Draft Environmental Impact Statement and General Management Plan

Dear Mr. Lopez:

In accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, the Environmental Protection Agency's Region VIII Montana Office (EPA) has reviewed the above-referenced Draft Environmental Impact Statement (DEIS).

The National Park Service (NPS) has developed three (3) alternatives for the Grant-Kohrs Ranch site. The Proposed Action was selected as the preferred alternative. This alternative would make the park a working ranch, rehabilitate/protect historic structures, and acquire approximately 1,100 more acres to the west of the park.

The EPA agrees with recommendation 4 of the Cultural Landscape Inventory and Analysis (Appendix, page 38), that "both the land and wildlife have suffered damage as the result of upstream mining activities".

The EPA has no environmental objection or concern with the preferred plan. This draft document was very well prepared. We do wish the NPS the very best of luck with this development.

In accordance with the criteria that EPA has established for rating draft environmental impact statements, we have rated this DEIS as category LO-1 (Lack of Objections - Adequate Information). A copy of EPA's rating criteria is attached. If you have any questions or need EPA assistance, please contact Jeff Bryan of my staff at 406-449-5486.

Sincerely,

John F. Wardell, Director
Montana Office

Attachment

cc: Phyllis Williams, 8WM-EA
Pearl Young, OFA-A104

Clark Fork - Pend Oreille Coalition

P.O. Box 7593 • Missoula MT 59807 • (406) 542-0539
P.O. Box 1096 • Sandpoint ID 83864 • (208) 263-0347

29 August 1992

Eddie L. Lopez
Superintendent
Grant-Kohrs National Historic Site
P.O. Box 790
Deer Lodge, MT 59722

Re. DEIS on General Management Plan and Development Concept Plan

Dear Mr. Lopez:

(1) The Clark Fork-Pend Oreille Coalition generally supports much of the preferred alternative in the draft environmental impact statement for management and development at the Grant-Kohrs historical site. There are several items, however, we would like to see added or emphasized more strongly. They include:

(2) - Aggressive participation in land use decisions on surrounding state and federal lands when off-site activities affect the Grant-Kohrs site. For the most part that means making participation in state and federal actions affecting visual quality and water a high management priority.

(3) - Making acquisition of the 37 acre grassland on Union Pacific a top priority. No historical resources on the site are more rare than examples of native prairie. For the public to fully appreciate the ranching tradition of the site, it should have some understanding of what the biological community was in the presettlement era.

(4) - Consider converting additional acres to native prairie.

(5) - Review literature and other sources to gain an understanding of what the historical biological resources on the site were before settlement and during the free-range period of 1860-1890. Resources to be examined should include vegetation, wildlife and fish. In order for the public to fully appreciate the ranching and anthropological features of the site, it should

know what wildlife, fish and vegetation were eliminated and which are still present. That information should be available in interpretation features at the site. It's important to note that if the site is to as much as possible replicate 1860-90, then it should have different wildlife, fish and vegetation than the present. For example, rainbow and brown trout were not native to the area. Cutthroat and bull trout, which are probably not there now, were the native salmonids in the river and its tributaries at the time.

(6) - Take an active role in Superfund remediation affecting the site. Grant-Kohrs staff should participate in upcoming remedial investigation/feasibility studies for two EPA operable units relevant to the ranch: the Milltown site (which includes the floodplain from the reservoir upstream to Warm Springs Ponds); and the Streamside Tailings Operable Unit, which though covering just Silver Bow Creek will include decisions on cleaning up streamside tailings, an area that should concern the Park Service.

(7) - Assess what injuries have occurred to natural resources on the site by mining and smelting. Assess damages for those injuries, including what it would take to restore injured resources (such as smelter-damaged soils, fisheries and riparian areas). We recommend that Park Service/Interior Department file a natural resource damage claim against ARCO to recover restoration funds for damages on the site.

(8) - The DEIS does not address the ranch's consumptive uses of surface water and its impacts. Nor does the document mention the site's water rights. It should. A goal of the management plan should be to help ensure consumptive uses on the ranch do not adversely affect in-stream flows and aquatic life in the Clark Fork. In addition, the Park Service should work to protect its water rights as well as in-stream flows in the river where it flows through the ranch.

(9) - The DEIS is unclear as to how much cattle grazing occurs on the ranch. It also ignores what the impacts of that grazing is. The DEIS is incomplete without that information.

Thanks for consideration of these comments.

Sincerely,

Bruce Farling

Bruce Farling
Conservation Director

1 A Grant-Kohrs staff member is now on the subcommittee of the Clark Fork Steering Committee to address water use from Butte to Garrison. The subcommittee is in the process of making recommendations to the Governor and the Legislature concerning water storage and various water-use issues.

2 All potential impacts and threats are being monitored by Grant-Kohrs' staff.

3 The Burlington Northern property officer is researching ownership of the parcel and upon completion, acquisition will be accomplished.

4 The issue of expanding the size of the native prairie will be addressed in the upcoming grazing plan this year (93).

5 Vegetation mapping is under way and historical research is listed as a project statement in the Resource Management Plan.

6 Grant-Kohrs is the repository for all Superfund research documents and a study is being conducted in 1993 on the Clark Fork River slickens. In the spring of 1993, National Park Service specialists will meet to identify future needed studies. GIS is being implemented to provide mapping and modeling.

7 The National Park Service is presently working with other federal agencies on future courses of action.

8 These issues will be addressed in April at a water resources scoping session.

9 A grazing plan is being developed to address these issues, and text concerning grazing has been added to the GMP under the section entitled "Proposed Action," subsection "Natural Resource Management."

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LIST OF PREPARERS

Randi Bry, Curator, Grant-Kohrs Ranch National Historic Site. Education: BA in History. Experience includes 14 years as Curator including 11 years as head of the Curatorial Division, Grant-Kohrs Ranch National Historic Site. Two years as Interpretive Historian, California State Department of Parks and Recreation. Responsibility at Grant-Kohrs Ranch is curatorial information--needs and concerns.

Linda Carlson, Editor, Rocky Mountain Region, National Park Service. B.A. Sociology Purdue University. Experience includes Division of Planning and Compliance, Rocky Mountain Region, National Park Service (5 years); Free-lance Writing/Editing (5 years); Correctional Counselor/Parole Officer, Federal Correctional Institution, Englewood, Colorado, Bureau of Prisons, Department of Justice (2 years); Program Assistant, Rocky Mountain Region, National Park Service (3 years).

Cheryl Clemmensen, Chief of Resource Management, Grant-Kohrs Ranch National Historic Site. Education: BA in Anthropology (Archeology)/History and MA in Anthropology (Archeology)/Museum Studies. Experience includes 19 years active NPS Interpreter in five parks; Chief, Interpretation and Resource Management for 16 years including 11 at Grant-Kohrs Ranch National Historic Site.

Richard Cronenberger, Regional Historical Architect, Division of Cultural Resources, Rocky Mountain Regional Office, National Park Service. Education: BARCH in Architecture, University of Miami. Experience includes 4 years as Regional Historical Architect, 5 years as project Historical Architect, and 3 years with the Historic American Building Survey (HABS). Responsible for condition assessments, cost estimates and Impacts to Historic Resources.

Neysa Dickey, Chief of Interpretation, Grant-Kohrs Ranch National Historic Site. Education: BA in Biology and Environmental Science. Experience includes 14 years as NPS interpreter, 9 years as an Interpretive Supervisor and a member of the Rocky Mountain Region's Interpretive Skills Team. Is responsible for Visitor Use and Interpretation (alternative B - no action) and Environmental Consequences - Visitor Use (impacts of each alternative).

Laura Joss, Regional Curator, Division of Cultural Resources, Rocky Mountain Region. Education: BA in Anthropology and MA in Museum Studies. Experience includes 9 years as a curator at museums and NPS sites including Glen Canyon National Recreation Area, Mesa Verde National Park, The Children's Museum in Indianapolis, New York State Museum, Buffalo Museum of Science, and John Wesley Powell Museum.

Joe Helmkamp, Landscape Architect, Division of Construction and Maintenance, Rocky Mountain Region. Education: BLA Landscape Architecture. Experience includes 7 years as project coordinator/landscape architect, NPS; 8 years landscape architect USDA-Forest Service; 4 years landscape architect, private practice. Responsible for site planning alternatives.

Thomas Keohan, Historic Architect/Landscape Architect, Division of Cultural Resources, Rocky Mountain Region. Education: BLA; MA studies in Historic Preservation and Conservation. Experience includes 7 years as Historical Architect/Landscape Architect and Regional HABS/HAER Architect; Technical Field Representative for the National Trust for Historic Preservation (2 years); Mainstreet Design Project Coordinator, city of Manhattan, Kansas (2 years). Responsible for Cultural Landscape Inventory and Analysis, Grant-Kohrs Ranch National Historic Site.

Lori Kinser, Visual Information Specialist, RMR-PP. Experience includes Division of Planning and Compliance, Rocky Mountain Region, National Park Service (14 years as primary provider of graphics support).

Eddie Lopez, Superintendent, Grant-Kohrs Ranch National Historic Site and Big Hole National Battlefield. Experience includes: Superintendent (3 years), Chief of Maintenance (3½ years) at Death Valley National Monument; Project Supervisor, Santa Monica Mountains National Recreation Area (4 years); Youth Programs Director, Grand Canyon National Park (2 years); Carpenter, Grand Canyon National Park (2 years). Responsible for overall content and implementation of plan.

Mike McWright, Chief of Maintenance, Grant-Kohrs Ranch (16 years).

Les Siroky, Architect, Division of Construction and Maintenance, Rocky Mountain Region.

Michael Snyder, Chief, Division of Planning and Compliance, Rocky Mountain Region, National Park Service. BLA Landscape Architecture. Experience includes Division of Planning and Compliance, Rocky Mountain Region, National Park Service (7 years, 4 years as Chief); Landscape Architect, Shoshone and Medicine Bow National Forests, U.S. Forest Service (7 years); Landscape Architect, Kansas Park and Resources Authority (2 years). Responsible for Purpose and Need of the Plan, Alternatives, overall project coordination, and served as planning team captain.

Ron Thoman, Chief, Division of Interpretation, Rocky Mountain Region, National Park Service. BS Education. Experience includes 2 years as Chief, Division of Interpretation, RMR; 11 years as Chief of Interpretation, Cuyahoga Valley National Recreation Area; 2 years as Instructor, Albright Employee Development Center; 2 years as Chief of

Interpretation, Point Reyes National Seashore; 2 years as Superintendent, Carl Sandburg Home National Historic Site; 2 years as Assistant Chief of Interpretation Cape Hatteras National Seashore; 2 years as Unit Manager, Federal Hall National Memorial and Castle Clinton National Monument, New York City Group; 3 years as Park Ranger, Chickamauga-Chattanooga National Military Park; and 3 years as a high school teacher in Ohio.

Tom Ulrich, Park Ranger, Grant-Kohrs Ranch National Historic Site.

Rodd L. Wheaton, Chief, Division of Cultural Resources, Rocky Mountain Region, National Park Service. Bachelor of Architecture and Masters of Architectural History. Experience includes 5 years as Chief of the Division of Cultural Resources; 13 years as Chief, Branch of Park Cultural Programs and Regional Historical Architect, Rocky Mountain Region, during which time worked extensively with Grant-Kohrs restoration, stabilization and preservation projects; 2 years as Architect, Historic American Buildings Survey, National Park Service, Washington, D.C.

Richard Young, Chief, Lands Resource Division, Rocky Mountain Region. Experience includes Cartographic Technician (cadastral) with Corp of Engineers (7 years); Realty Specialist/Realty Officer at National Capitol Region, Sleeping Bear Dunes National Lakeshore, Appalachian National Scenic Trial, and Rocky Mountain Region (18 years).

CONTRIBUTORS

Herbert E. Dawson, Montana Deputy State Historic Preservation Officer

Advisory Council on Historic Preservation

U.S. Fish and Wildlife Service

United States Department of Agriculture, Deerlodge National Forest

United States Department of Agriculture, Soil Conservation Service

Montana State Air Quality Bureau

National Park Service, Water Resources Division

National Park Service, Harpers Ferry Center

National Park Service, Air Quality Division

Tom Wylie, Division of Science and Natural Resources, Rocky Mountain Region

Patricia Roberts, head of Montana Census and Economic Information Center, Helena, Montana

Mike Green, Manager, Montana Western Railroad

Keith Dunbar, Chief of Planning, Pacific Northwest Regional Office

Wayne Hadley, Montana Fish, Wildlife and Parks, Deer Lodge, Montana

Bill Bayer, Tri-County Planner, Deer Lodge, Montana

Dick Labbe, Mayor, Deer Lodge, Montana

Dave Austin, Chamber of Commerce, Deer Lodge, Montana

Lee Jewell, Powell County Progress, Deer Lodge, Montana

Huey Long, Soil Survey, Soil Conservation Service, Deer Lodge, Montana

Steve McCool, Institute of Tourism and Recreational Research, University of Montana, Missoula, Montana

Bob Rafferty, Labor and Industry Research Bureau, Missoula, Montana

Gail Brockbank, Travel Promotion, Helena, Montana

Larry Swanson, Bureau of Business and Economic Research

Sam Stevenson, ARCO Coal, Anaconda, Montana

Chris Marvel, Branch of Park Planning, Rocky Mountain Region, National Park Service

Chris Turk, Division of Planning and Compliance, Rocky Mountain Region, National Park Service

Ann Johnson, Branch of Park Cultural Programs, Rocky Mountain Region, National Park Service

INDEX

APPENDIX- Cultural Landscape Inventory and Analysis

CULTURAL LANDSCAPE INVENTORY AND ANALYSIS
Grant-Kohrs Ranch National Historic Site

Montana

United States Department of the Interior
National Park Service
Rocky Mountain Region
1991

CULTURAL LANDSCAPE INVENTORY AND ANALYSIS

Grant-Kohrs Ranch National Historic Site

Deer Lodge, Montana

Thomas G. Keohan
Historical Landscape Architect

DIVISION OF CULTURAL RESOURCES * ROCKY MOUNTAIN REGIONAL OFFICE
NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR
DENVER, COLORADO
1991

CONTENTS

ACKNOWLEDGEMENTS

This report was completed with the assistance of the Grant-Kohrs Ranch National Historic Site Superintendent, Eddie Lopez and his staff. Chief Ranger, Cheryl Clemmensen was particularly helpful in providing research material and editorial comments. Rodd Weaton, Chief, Division of Cultural Resources and Regional Historical Architect, Richard Cronenberger also provided valuable guidance in the evaluation and significance sections of the report.

I. INTRODUCTION

INTRODUCTION

The Grant-Kohrs Ranch in western Montana is one of the last remaining great cattle ranches associated with open-range cattle ranching from the 1860's to the early 1900's in the western United States. Beginning in the late 1850's, Johnny Grant settled in the Dear Lodge Valley and in less than a decade had assembled a large herd of cattle by trading with westward-bound emigrants along the Oregon Trail. Then in 1866, Grant sold his ranch to Conrad Kohrs, a young German immigrant and entrepreneur who had successfully established a market selling beef to mining camps in Montana. Kohrs success on the ranch peaked in the 1890's when he and his half brother, John Bielenberg owned 25,000 acres and controlled over 10 million acres of grazing land in 4 states and Canada. After a period of decline and the deaths of Kohrs and Bielenberg, the ranch was again productive under Kohrs grandson, Conrad Kohrs Warren, who pioneered different breeds of cattle on the ranch during the 1930's to the early 1970's. On August 25, 1972, Congress established the Grant-Kohrs Ranch National Historic Site (NHS) "...to provide an understanding of the frontier cattle era of the Nation's history, to preserve the Grant-Kohrs Ranch, and to interpret the nationally significant values thereof for the benefit and inspiration of present and future generations."

A. DELINEATION OF THE STUDY AREA

The study area identified in this report includes both the area within the official park boundary and an area outside the boundary that incorporates the various landscape types related to the ranch's historic operation. The defined study area provides the physical and visual qualities necessary to maintain the ranch's historic integrity, while providing a resource base necessary for public understanding and interpretation of the western cattle frontier. The same study area boundary was also identified in the June 1987 National Park Service (NPS) "Grant-Kohrs Ranch National Historic Site Cultural Landscape Analysis" as an area of land which can feasibly be managed to maintain the landscape's historic association with the ranch. The Cultural Landscape Inventory and Analysis map in this report illustrates both the NHS boundary and the study area boundary. The study area includes about 2,630 acres.

B. DESIGNATION OF LANDSCAPE TYPE

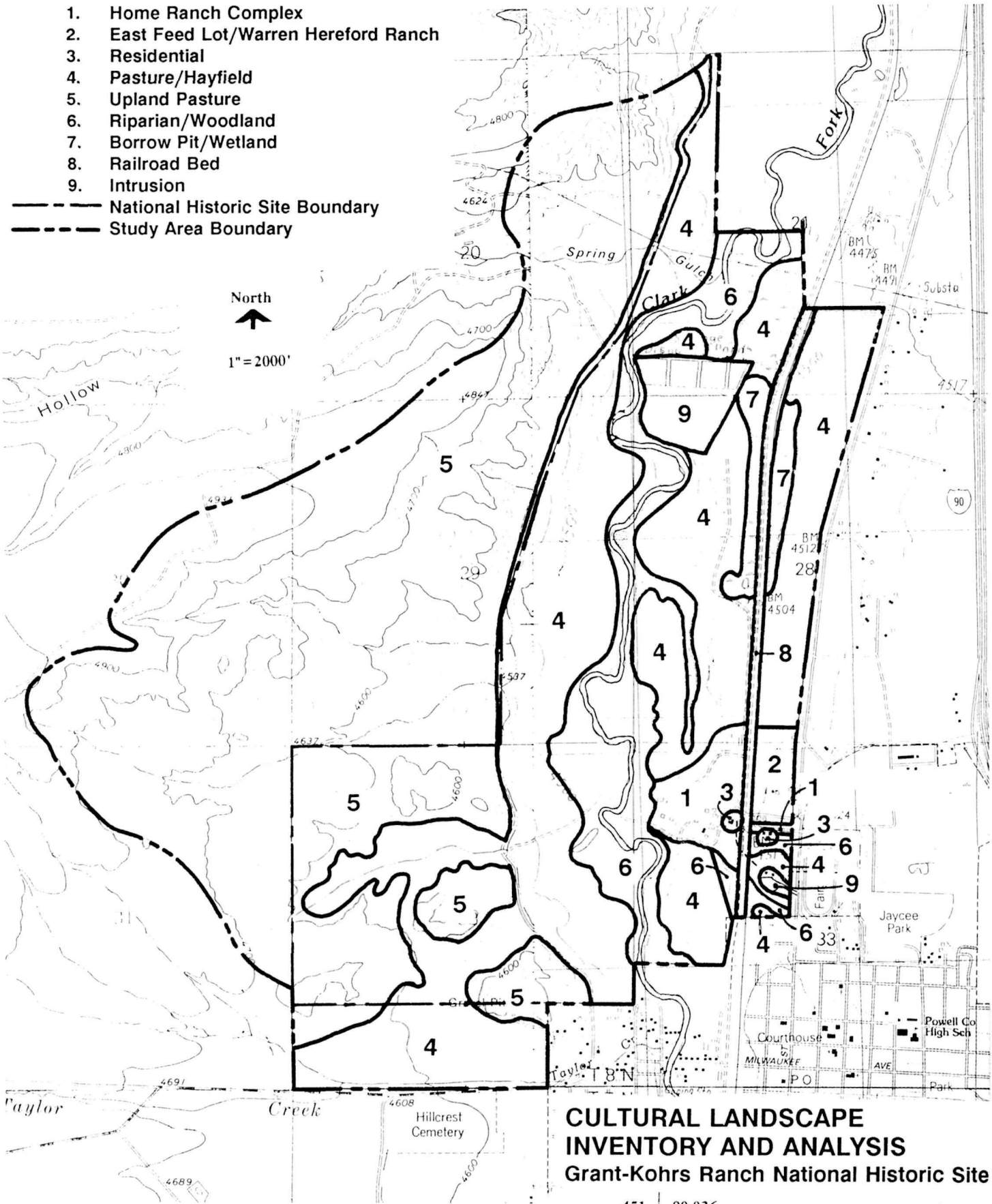
Nine individual landscape types have been identified in this report as having distinct qualities that add to the historic character of the Grant-Kohrs Ranch. Delineated by visual and functional qualities, each landscape type has its own identity, yet all combine to establish an overall identity to the ranch. Each landscape type is described within the report along with any associated historic elements. The historic significance integrity, and period of significance of each type is also identified.

II. SITE MAP

1. Home Ranch Complex
2. East Feed Lot/Warren Hereford Ranch
3. Residential
4. Pasture/Hayfield
5. Upland Pasture
6. Riparian/Woodland
7. Borrow Pit/Wetland
8. Railroad Bed
9. Intrusion

National Historic Site Boundary

Study Area Boundary



CULTURAL LANDSCAPE INVENTORY AND ANALYSIS

Grant-Kohrs Ranch National Historic Site

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July 92	RMRO

III. INVENTORY AND ANALYSIS

LANDSCAPE TYPE: Home Ranch Complex

Description

The Home Ranch Complex, consisting of approximately 40 acres, contains the most highly developed area within the Grant-Kohrs Ranch National Historic Site. Historically, this area served as the hub of the ranch operation, providing such functions as housing, equipment and food storage, health and maintenance care for livestock, and was the center of ranch management. Dominated by a variety of historic structures, the landscape is an integral part of the area, both in terms of the spacial relationships between buildings and the various landscape elements. Those elements include fence rows and feed and water troughs that are integral to the function of the area. The most dominant feature of this area is the ranch house (see landscape type "Residential") which sits on a natural bench and is flanked by most of the ranch's 91 historic buildings and structures. Adjacent to the ranch house to the north are several important historic buildings. These include bunkhouse row, the granary, draft horse barn, dairy building, and horse barn. West of the ranch house and below the bench is the lower yard, which contains a variety of buildings and fenced livestock pens extending to the Kohrs-Manning flume. A series of smaller feed lots form the western boundary of this area. To the south are located feed bunks dating from ca. 1932. A perimeter road forms the southern boundary of the complex. A series of large corrals and irrigated pastures extend to the north and west of the horse barn. A machine shed and large L-shaped cow shed, and smaller corrals with a squeeze chute form the northern limits of the Home Ranch Complex. The historic entrance to the ranch from the Deer Lodge and Garrison Road, now Business U.S. 90, consisted of a tree-lined lane perpendicular to the ranch house. Most of the trees have died or have been removed and the drive is now in limited use.

INVENTORY

Historic Elements

This area is dominated by historic structures with historic landscape features supporting a variety of ranching functions. A combination of post-and-pole, jack leg, and post-and-rider fencing form several smaller livestock pens to the west and south. Other significant elements include the service access roads connected to the north drive, the Kohrs-Manning irrigation ditch and flume, vegetable garden in the lower yard, and feed and water troughs in the corrals and feed lots. While transient in nature, ranch equipment in this area, such as the Steam Thresher, Self Feeders, and farm machinery, add to the "historic scene" and serve to more fully interpret the historic function of the landscape.

Natural Landscape Character

A natural bench forms an elevated platform to the east, and drops approximately 10 feet to the lower yard west of the ranch house. The area is heavily drained with several natural springs below the bench. Two forks of a small but active stream, named Johnson Creek, run through the area on the south and west, joining south of the ranch house and flowing west to the Clark Fork River. The ground adjacent to the streams tend to be soggy

and waterlogged as result of the high water table. Black cottonwoods and willows line both creeks. The ground to the north is slightly elevated, sloping to the south and west. Natural and cultivated grasses are the dominant vegetation.

Historic Significance/Integrity

The existing complex reflects the turn-of-the-century ranch at its highest level of development under the Kohrs's ownership. The relationships of the fence lines to the ranch activities, and of buildings to feedlots, pastures, corrals, squeeze chutes, and irrigation ditches, are integral to the history of the ranch. The placement of the various feed sheds within the lots, and of the feed racks in the fences, etc., all reflect the exact purpose of that portion of the ranch. The lanes delineated by the fences were placed to facilitate the moving and separation of livestock. The relationship of buildings to pasture, buildings and structures to fence lines, and juxtaposition of the buildings themselves, are a vital resource to understanding the operation of the ranch. This area possesses a high degree of historic integrity, the only intrusion is a NPS residential trailer house located to the west of the thoroughbred barn. With the minor exceptions of the west feed lot and some buildings built in the 1930s, the Home Ranch Complex retains its early 1900 appearance.

Period of Significance

The Home Ranch Complex conveys a historic period from 1862, when John Grant settled in the Deer Lodge Valley and built his ranch house, to 1954 when Conrad Warren built a new sales barn and moved the remaining cattle operation from the Home Ranch Complex to the East Feed Lot.

LANDSCAPE TYPE: Home Ranch Complex

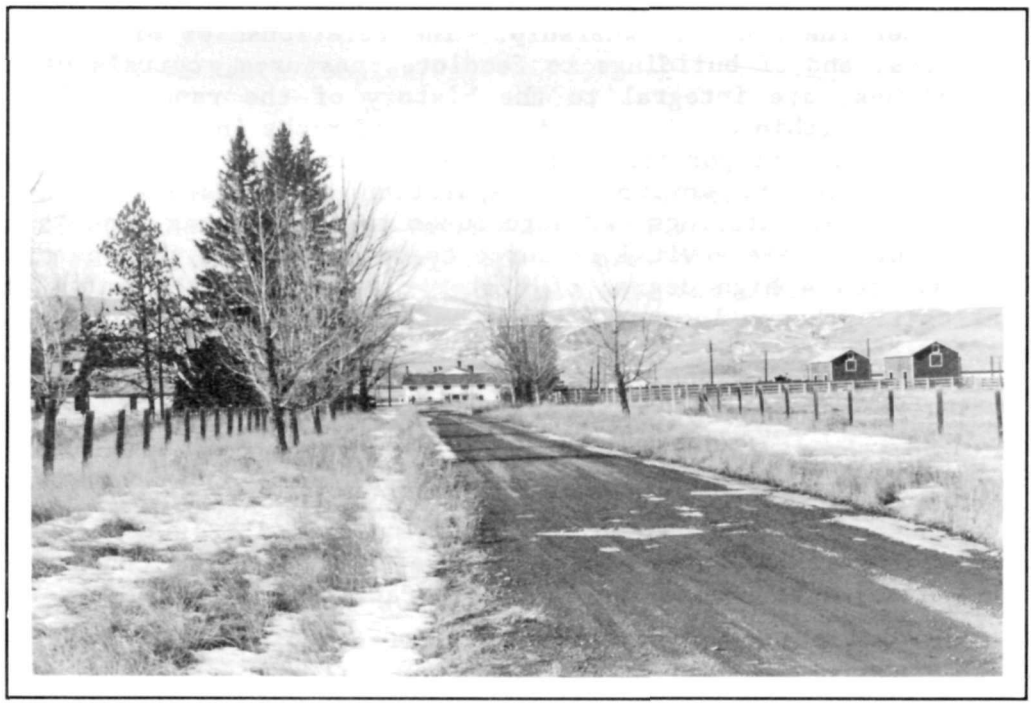

Figure 1. Historic entrance to the ranch. View of the Home Ranch looking west from U.S. Business 90. Note the historic tree lined drive and visual axis to the Kohrs ranch house. Horse corrals to the right are part of East Feed Lot/Warren Hereford Ranch.

Figure 2. Looking east from the Kohrs-Manning ditch and flumes to the ranch house. Cattle pens, fence rows and buildings dominate the landscape. Johnson Creek can be seen in the foreground with Black Cottonwoods along its banks.

LANDSCAPE TYPE: Home Ranch Complex

Figure 3. Lower yard, as seen from the rear porch of ranch house, showing spacial characteristics of the Home Ranch Complex established by building arrangement, fence and corral placement and natural features. Farm machinery in the yard helps interpret the historic landscape.

Figure 4. Corrals north of the ranch house looking west to the Pasture/Hay Field and Upland Pasture in background. Photograph shows evidence of a strong continuity and visual relationship between these different landscape types.

LANDSCAPE TYPE: Home Ranch complex

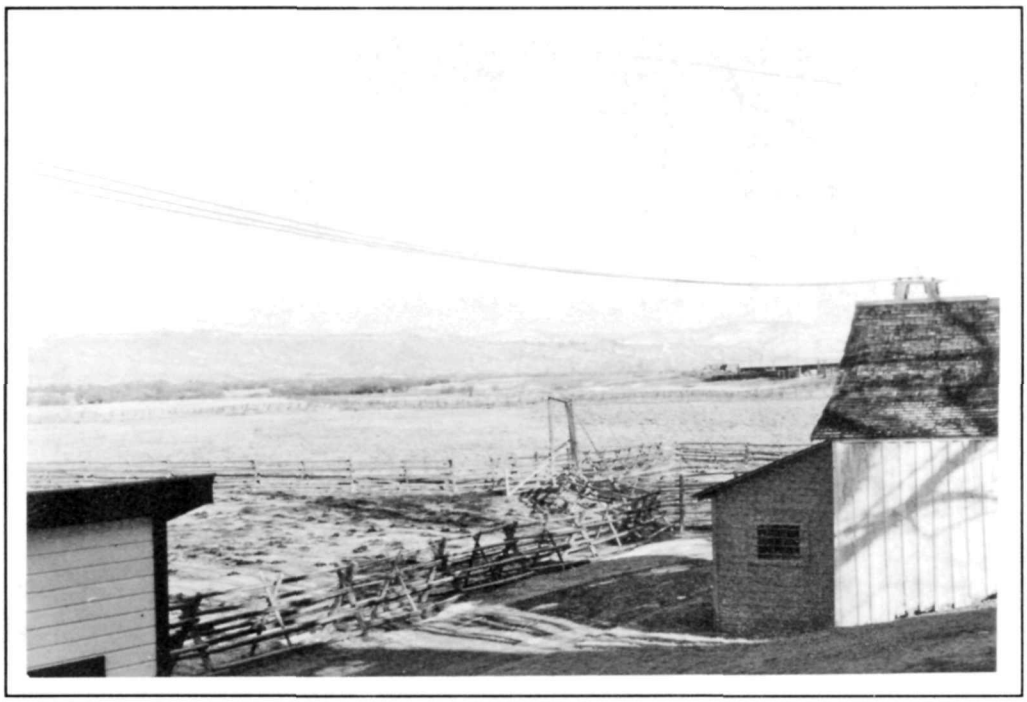

Figure 5. Looking northwest from the back porch of ranch house to larger corrals and "L" shaped barn in upper right corner. Historic "Jack-Leg" fence and gate in foreground. Bands of the Riparian/Woodland landscape and Upland Pasture can be seen in the background.

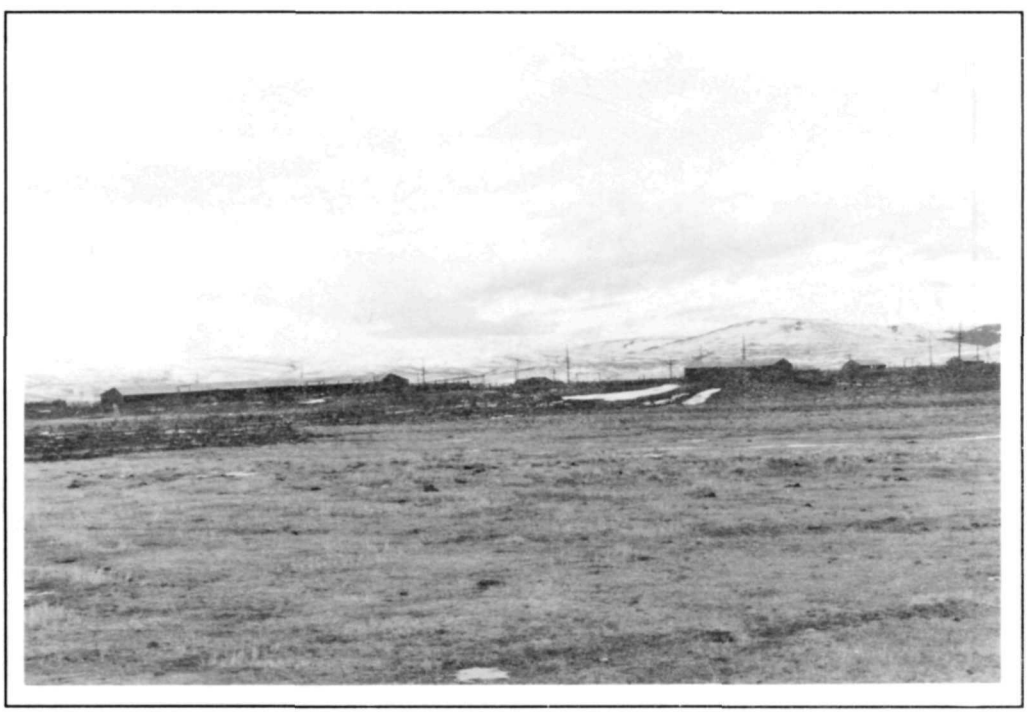

Figure 6. View looking northeast from north pasture to "L" shaped barn and smaller corrals. Natural landscape is relatively flat and gently sloping west to the Clark Fork River.

LANDSCAPE TYPE: Home Ranch Complex

Figure 7. Looking from the southern perimeter road at the west feed lot with feed trough in foreground. A small section of the Riparian/Woodland landscape can be seen along Johnson Creek.

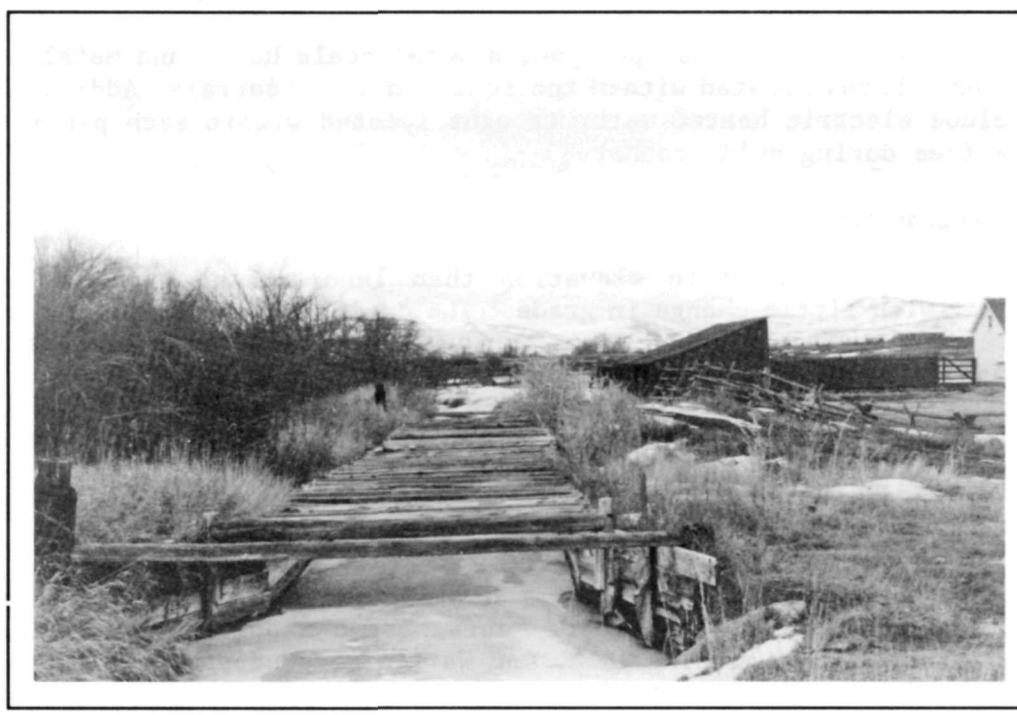

Figure 8. View looking north at the historic Kohrs-Manning flume as it crosses Johnson Creek. Willow thickets can be seen along the creek.

LANDSCAPE TYPE: East Feed Lot/Warren Hereford Ranch

Description

Known as the Warren Hereford Ranch, this area is located near the southeast corner of the park boundary, east of the home ranch complex, west of business I-90, and north of the Con Warren residence. Approximately 35 acres in size, this area is dominated by large rectilinear cattle pens serviced by two alleys running north and south. These form the linear arrangement of development and land use. Cattle sheds are located within each pen and a large red barn dominates the south end of the area. A gravel drive separates the red barn and two horse corrals to the south. The south horse corral is slightly elevated and consists of compacted rocky soil, the result of vehicular parking which occured during cattle sales held at the ranch in the Warren era. The East Feed Lot, along with the red barn, was constructed beginning in 1950. The entire operation was active until the late 1970s when the last remaining stock was sold.

INVENTORY

Historic Elements

Existing historic landscape elements, associated with the feed lot operation, include a combination of post-and-pole fencing, which defines eleven cattle pens and two alleys. Other features include wood and metal gates, wood squeeze and loading chutes, and overhead electric lines with glass insulators supported by wooden poles. This important landscape provides a context for several historic structures. They include cattle sheds and wooden feed troughs located within each pen. Other historic buildings include the large red barn, which dominates this landscape type, a metal scale house and metal sales barn, and two smaller horse barns located within the southern horse corrals. Additional significant features include electric heated water troughs located within each pen which kept water supplies ice free during cold weather.

Natural Landscape Character

The site is slightly higher in elevation than land to the west and south, and is relatively flat with little change in grade. The dominant grade changes occur to the west of the cattle pen, where the grade drops to form a natural drainage swale. As a result, the landscape drains to the south and west. Natural grasses and forbs have taken over the cattle pens; otherwise, the area is devoid of vegetation. Visually, the East Feed Lot is separated from the Home Ranch Complex on the west by the railroad tracks discussed as landscape type "Railroad Bed" in this report.

Historic Significance/Integrity

Following a 20-year period of decline, a new era for the ranch began in 1932 as Con Warren, the grandson of Con and Augusta Kohrs, began managing the ranch. Facing tough economic times and limited grazing land, Con Warren responded by converting the ranch to a feed lot operation, beginning with the home ranch complex. As space demands increased and the wet, boggy, lower yard conditions worsened, he developed the East Feed Lot. This

area is significant for its contribution to the understanding of the progressive evolution of cattle ranching in the western United States, from open land grazing to controlled feed lot operations, during the early to mid 20th century. The important physical remains of this landscape represent the peak of this new era of cattle ranching. The area retains a high degree of historic integrity with few intrusions. The one exception is the service/access drive between the red barn and south horse corrals, which was installed in 1972 by the NPS.

The East Feed Lot was the center of much activity on the ranch as highly productive breeds of cattle were developed and sold. The ranch became well known throughout the western United States as the show place for champion Herefords. During the 1940's, hundreds of people often congregated at the ranch during a stock sale. The south horse corrals served as parking for more than forty cars and trucks.

The importance of the developments associated with the Con Warren era at the ranch are summarized in the 1979 NPS Historic Resource Study.

> "While Con Warren's tenure with the ranch continued the Kohrs family association, unbroken from 1866 to 1972, the imprint of Warren's style of ranching and of modern techniques lay heavily on it.... In the continuities shared and in the differences between the home ranch of Kohrs and Bielenberg and the Warren Hereford Ranch lay the story of the open-range days of the late nineteenth century, of the transition that began following the hard winter of 1887 and the influx of homesteaders who followed close on its heels, and of the ever-developing changes of the twentieth century. Conrad Kohrs began the story in 1866; 106 years later Conrad Kohrs Warren closed it."

Period of Significance

The East Feed Lot conveys a historic period from 1950, when the cattle pens and sheds where built (the sales barn was built in 1954) to 1972, when Con Warren sold the Home Ranch to the NPS and significantly curtailed his cattle operation on the site.

LANDSCAPE TYPE: East Feed Lot/Warren Hereford Ranch

Figure 1. A large red barn dominates this landscape type as viewed through gate. The non-historic service road constructed by NPS in 1972 is seen in the foreground. Post and pole fencing contributes to the historic character of this landscape.

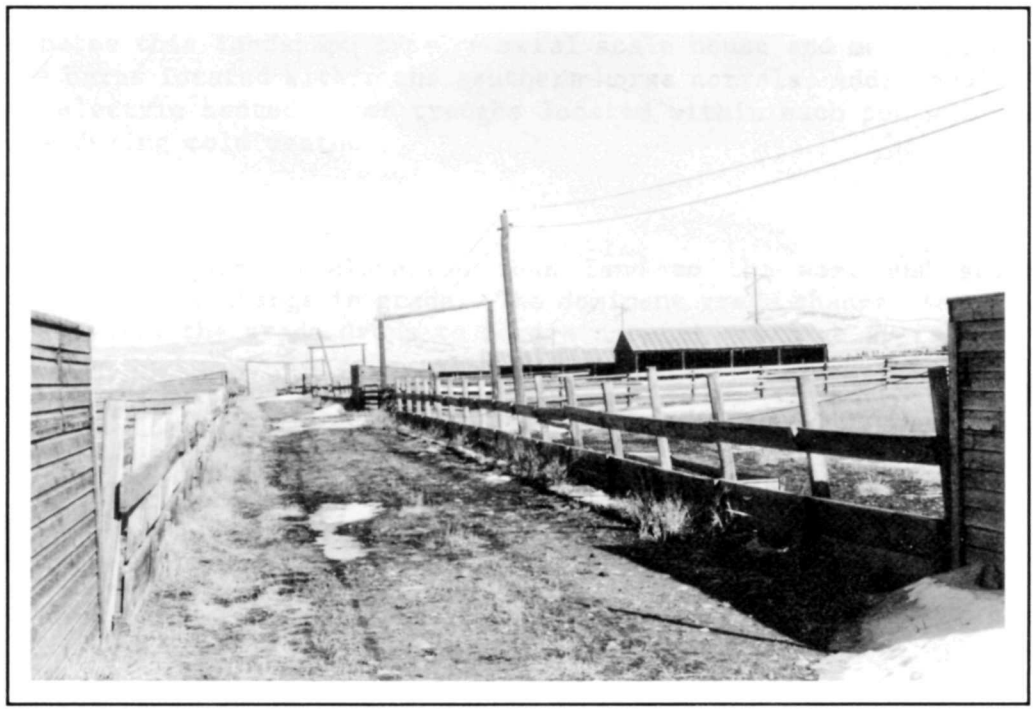

Figure 2. Looking north at the eastern alley and adjacent cattle pens. Cattle sheds are located within each pen while feed troughs are adjacent to the alley. Overhead electric lines and poles are part of the historic landscape.

LANDSCAPE TYPE: East Feed Lot/Warren Hereford Ranch

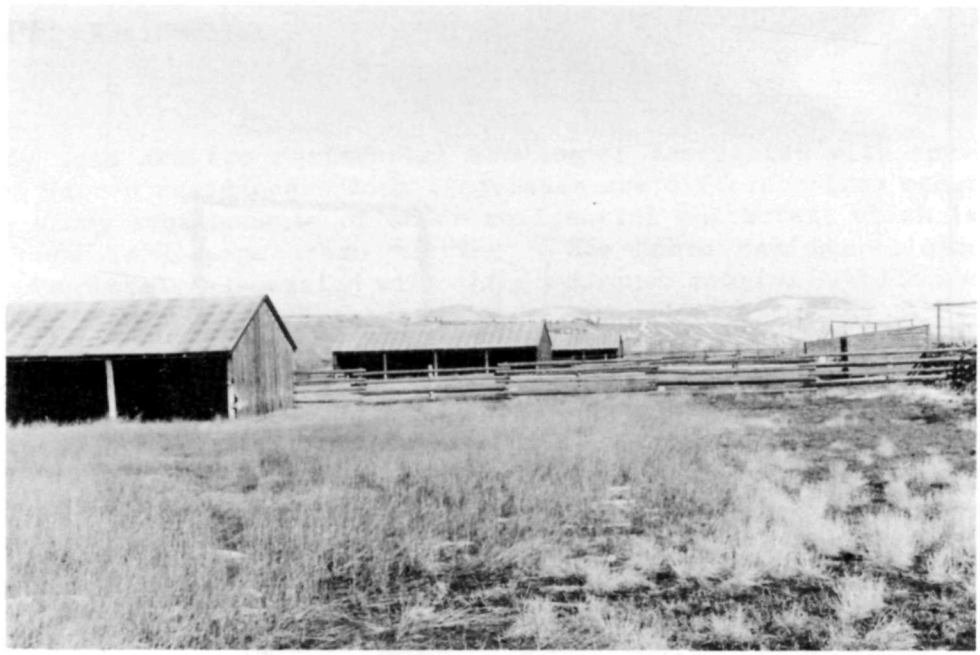

Figure 3. Cattle pens and sheds looking north. Post and pole fence and wood feed troughs can be seen at the right.

Figure 4. Loading chute with metal scale barn on the left. Metal sales barn can be seen on the right.

LANDSCAPE TYPE: East Feed Lot/Warren Hereford Ranch

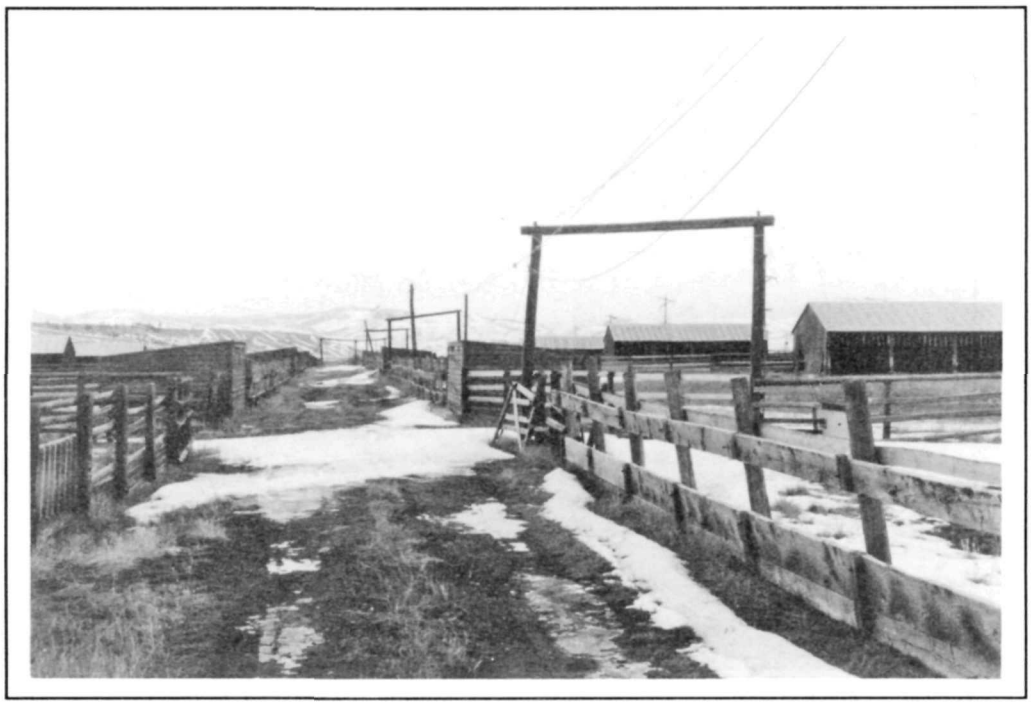

Figure 5. View of alley looking north showing gates that allow access to the cattle pens. Overhead electric lines and power poles with glass insulators add to the historic character of the site.

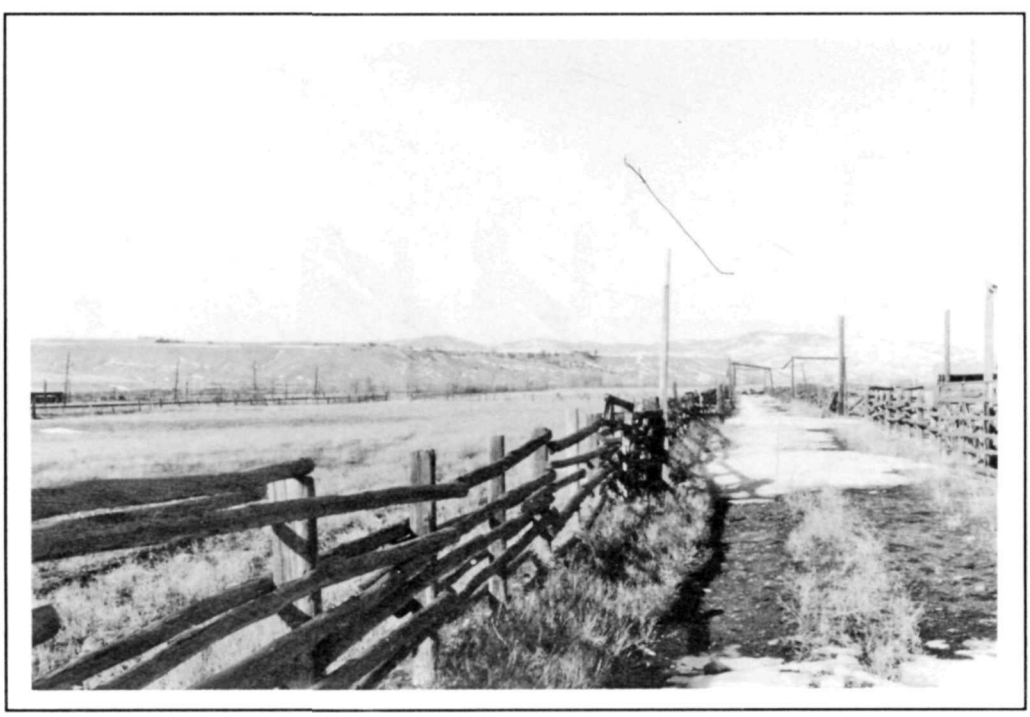

Figure 6. Western most alley looking north at pasture. The Railroad Bed and Upland Pasture landscape type can be seen on the left.

LANDSCAPE TYPE: Residential

Description

Within this study area are two residential landscapes associated with the Kohrs ranch house and the Con Warren residence. Both landscapes are different from other landscapes found within the study area because of their residential character, which is similar to what might be found in a more urban setting. The Kohrs residence, along with its landscaped yard, is closely associated with the home ranch complex. While about one half acre in size, the Con Warren residence and landscaped yard, constructed in 1934, could more closely be associated with the east feed lot, which is located immediately to the north of the house. Both landscapes feature enclosed yards surrounded by white picket fencing with evergreen and deciduous trees and shrubs planted in an informal arrangement. Planted short stem grasses serve as the predominate groundcover. Flowering plants are used as accent features.

About one half acre in size, the Kohrs residential landscape historically had a formal arrangement of deciduous trees planted in a linear pattern on both sides of the sidewalk leading to the front door. A flower garden exists at the southwest corner of the yard below the upper bench. Stairs serve as an access from the upper yard to the lower south yard.

INVENTORY

Historic Elements

Elements associated with this landscape type are the white picket fences, informal and formal arrangement of plant materials, and stone retaining walls on the west and south sides of the Kohrs residence. A flower garden on the southwest corner of the Kohrs residence dates to an early period of the yard.

Natural Landscape Character

The Kohrs residence sits on a natural bench with the residential yard dropping to the south and west. The Con Warren residence is located on a flat section of land that slopes to the south.

Historic Significance/Integrity

Both residential landscapes are physical extensions of the living spaces associated with the residences. They are separated from the more "public" ranch landscapes by the white picket fencing. Careful attention to these landscapes shows the level of sophistication that reflects the success of the ranch, of a family proud of its accomplishments, and a family aware of the imposing nature of their ranch headquarters. The Kohrs residential landscape has changed over the course of its history, yet early features still remain. Missing from the landscape is the tree-lined front walk and several larger deciduous trees in the east yard. Also missing, and presumed buried under several inches of fill, is a wood trough irrigation system constructed by Con Kohrs. The picket fence was replaced in

the 1940's and while reminiscent of the earlier historic feature, it's pickets are of a different design and configuration. With the exception of these three features, the landscape retains much of its 1900 appearance, when Con and Augusta Kohrs moved from the ranch to Helena, Montana. The Con Warren residential landscape appears to be intact from its early period. Both landscapes contribute significantly to the ranch and appear to retain a high degree of historic integrity.

Period of Significance

The Kohrs residential landscape conveys a historic period from 1883, when the residential landscape was predominately in place based on historic documentation, to the early 1940's when the Conrad Kohrs family ceased their annual visitation and the home ranch and residential landscape entered a period of decline.

The Warren residential landscape conveys a historic period from 1934, when the house was constructed, to 1972, when Warren sold most of the ranch to the NPS.

LANDSCAPE TYPE: Residential

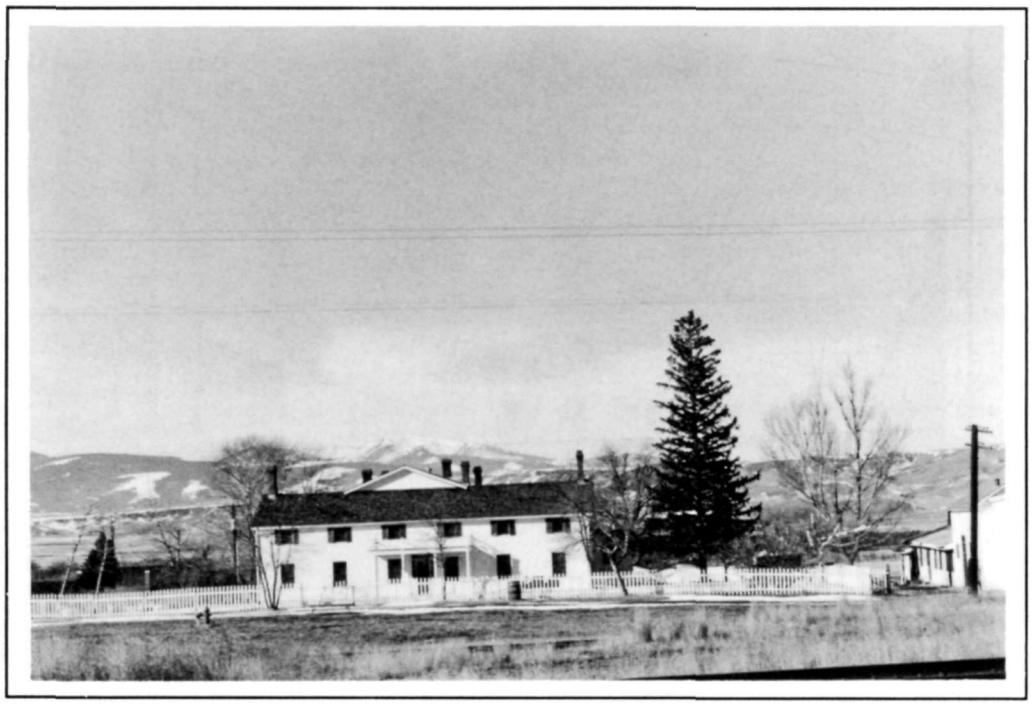

Figure 1. Kohrs ranch house with picket fence enclosure and tree planted east yard. Upland Pasture can be seen in the background.

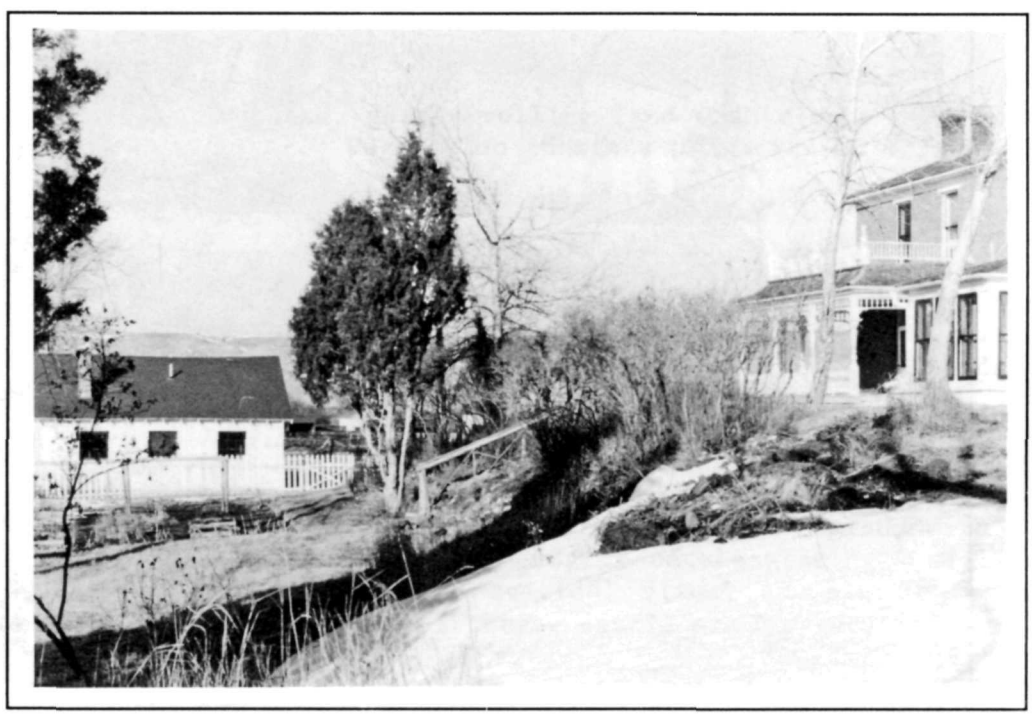

Figure 2. South side yard of the Kohrs ranch house showing drop from the upper bench. Stairs and rock wall can be seen along with flower garden in lower left. This landscape is part of the "private" space defined by the fenced yard.

LANDSCAPE TYPE: Residential

Figure 3. Kohrs residential landscape looking northwest at side yard. While several trees have been lost over the years, the existing mature deciduous and evergreen trees within the fenced yard contribute to the landscape's historic character.

Figure 4. Con Warren residence looking south to house and fenced yard. Mature deciduous and evergreen trees dominate the landscape. Drive in foreground is the historic entrance to the ranch.

LANDSCAPE TYPE: Pasture/Hay Field

Description

Approximately 850 acres fall into this category. This landscape is characterized by open, gently rolling fields used for grazing and hay production. The majority of this landscape is west and north of the Home Ranch and is separated in long, linear north-south sections by the Riparian/Woodland and Barrow Pit/Wetland landscapes. This is a treeless, wide-open and isolated grassland of both native and exotic species of grass. Much of this landscape is irrigated for hay production and systems of irrigation ditches are visible from most vantage points, particularly to the west. These irrigation ditches visually segment the landscape into a series of terraces. South of the Con Warren residence, this landscape is more confined by the Riparian/Woodland landscape associated with the Cottonwood and Johnson Creeks and does not have the openness associated with the areas to the west and north. A slice of native grassland exists in the northeast section of the site, east of the railroad and adjacent to the Barrow Pit/Wetland area.

INVENTORY

Historic Elements

Historic elements associated with this landscape can be described in terms of both visual qualities and pattern of use. Historically, this landscape was used for grazing and the production of hay during later years. It remained open and undisturbed, except for the addition of irrigation ditches which added to its usefulness in the production of hay crops.

Natural Landscape Character

The natural landscape is treeless, gently rolling land with slopes of 2 to 4 percent, sloping to the Clark Fork River. Vegetation consists primarily of alfalfa and crested wheatgrass.

Historic Significance/Integrity

This landscape type remains much as it did prior to 1900. Characteristic of the open Deer Lodge valley, this land provides the setting for the Home Ranch Complex and supported the grazing needs of the Kohrs ranch. Few intrusions exist in this landscape and it therefore exhibits a high degree of historic integrity, both visually and functionally. The irrigation ditches added during the early 1930s can be considered contributing elements. They are evidence of the progression from open grazing to feedlot operation and the need for increased hay production in the mid 1900s. The ranch flourished during the late 1800s. The ranch became one of the largest in the region, with holdings of 25,000 acres in the Deer Lodge valley, and herds of cattle grazing 4 million acres of western land. This open landscape is a critical visual example of the open range grasslands which greatly influenced the frontier cattle era.

Period of Significance

The Pasture/Hay Field landscape conveys a historic period from 1887, when Conrad Kohrs, along with many other Montana ranchers began planting hayfields and fencing pasture land as winter feeding became a major activity, to 1972, when Con Warren sold the Home Ranch Complex to the NPS.

LANDSCAPE TYPE: Pasture/Hay Field

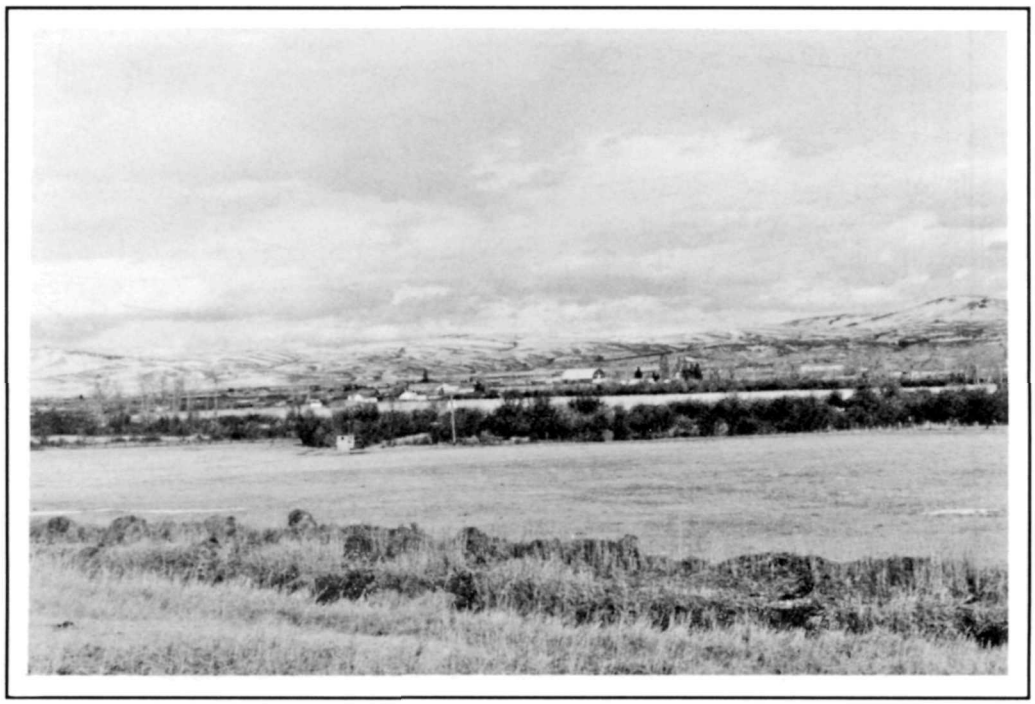

Figure 1. View looking east to the Home Ranch Complex from the western boundary of Pasture/Hay Field landscape. An irrigation ditch can be seen in the foreground and Riparian/Woodland landscape is shown in the middle ground. The large red barn from the East Feed Lot dominates the horizon.

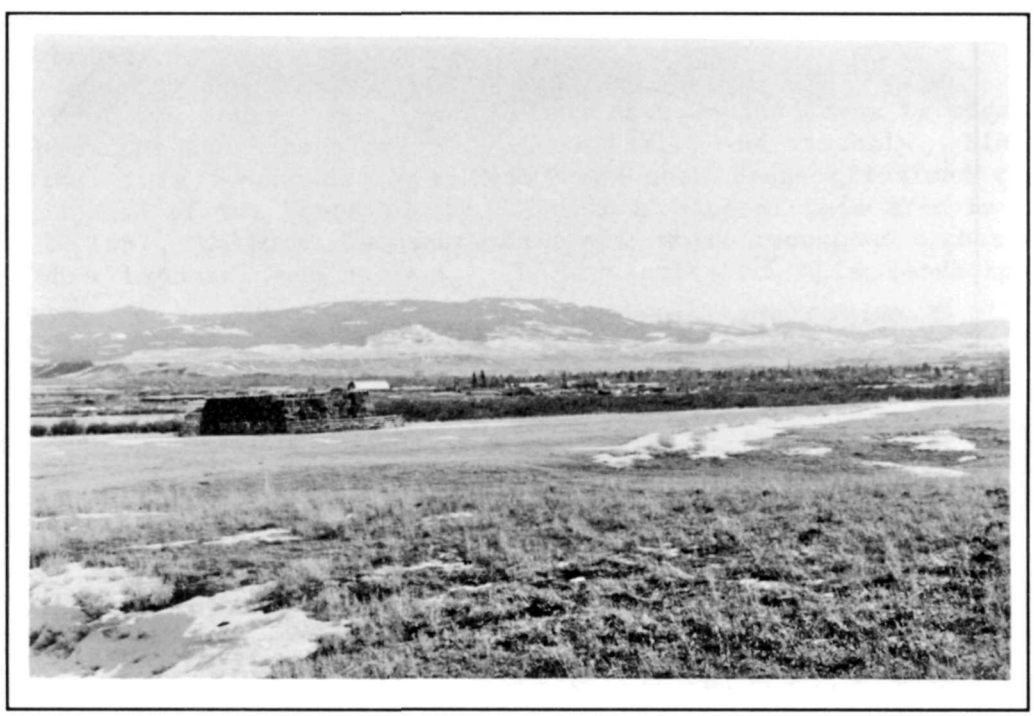

Figure 2. Looking southeast to the Home Ranch Complex. Rolling topography is characteristic of this landscape type. Historically, hay would be loose piled into stacks by a hay stacker or baled as shown here.

LANDSCAPE TYPE: Pasture/Hay Field

Figure 3. Area south of Home Ranch Complex showing Kohrs-Manning ditch and west feed lots of Home Ranch in background. Hay is harvested in late- June or early-July with grazing taking place after the harvest. The Upland Pasture landscape can be seen on the horizon.

Figure 4. Gently rolling wide-open and isolated landscape is characteristic of the area west to the Home Ranch. Adjacent Upland Pasture dominates the background.

LANDSCAPE TYPE: Upland Pasture

Description

This landscape consist of rolling, grass covered foothills primarily to the west of the current park boundary. Most of this landscape type is privately owned, with the exception of two hayed areas in the south 300 acres of the park. A north/south service road separates the Pasture/Hay Field landscape and the upland area. The western boundary of this area is along a ridge line, generally visible from the Home Ranch Complex. Approximately 1,130 acres in size, this area was identified in the NPS June 1, 1987, "Cultural Landscape Analysis" as an area of land that should be included within the Grant-Kohrs National Historic Site boundary through the purchase of scenic easements or similar management strategy. This landscape type is generally steeply sloped with deep valleys and, as a result, not irrigated.

INVENTORY

Historic Elements

The undisturbed open range grassland has wooden and wire fences as demarcation of property boundaries.

Natural Landscape Character

The landscape is steeply sloped (8 to 35 percent) grassland devoid of trees and other woody plants, dominated by native wheat grasses.

Historic Significance/Integrity

Historically part of the Kohrs ranch, this upland pasture landscape is significant for its relationship to the ranch complex, both historically and visually. Similar to the Pasture/Hay Fields, this landscape is an important open range grassland that greatly influenced the success of the Kohrs ranch. The importance of this area is illustrated in the NPS June 1, 1987, "Cultural Landscape Analysis" which recommended that it be added to the Grant-Kohrs Landmark nomination. The integrity of this landscape has been maintained.

Period of Significance

The Upland Pasture landscape conveys a historic period from 1862, when John Grant settled in Deer Lodge Valley and built his ranch, to 1972, when the NPS aquired a portion of the ranch as a National Historic Site. This landscape retains a high degree of historic integrity, and is virtually unchanged from the Grant era.

LANDSCAPE TYPE: Upland Pasture

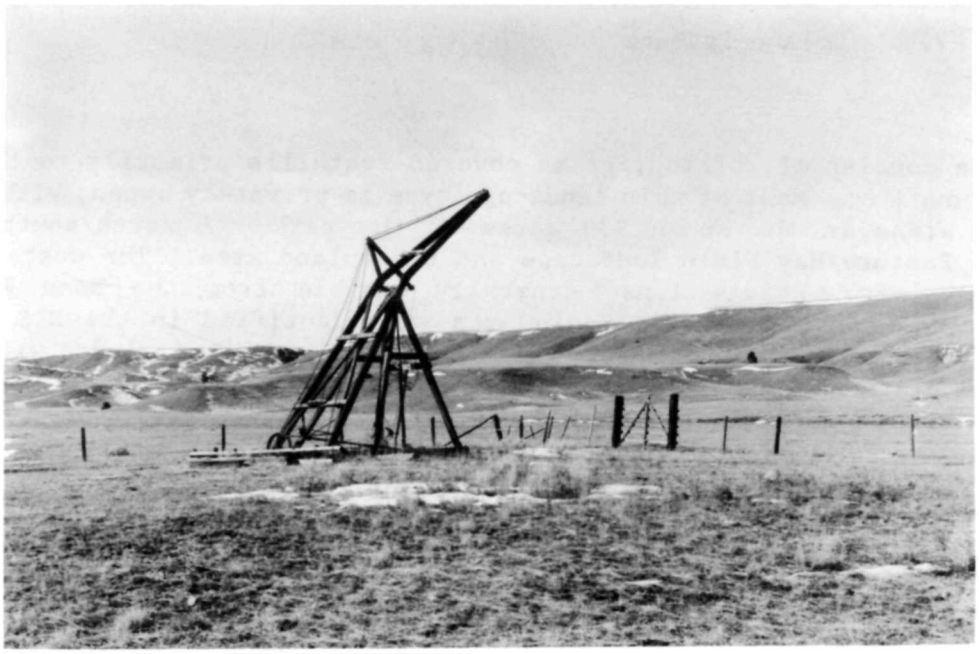

Figure 1. View of foothills forming the Upland Pasture landscape. Photograph is taken in front of the road separating the Pasture/Hayfield and Upland Pasture landscapes. Historic hay stacker in foreground adds to the integrity of the historic landscape and should be retained.

Figure 2. Looking northwest to the steep sloped hills, characteristic of this landscape type. Ridge line marks the western boundary of the Upland Pasture.

LANDSCAPE TYPE: Riparian/Woodland

Description

This landscape is an area of thick woodlands and semi-wetlands in riparian areas associated with the Clark Fork River floodplain. The riparian/woodland area is a linear band stretching north and south along the river bisecting the Pasture/Hay Field landscape into long linear bands.

INVENTORY

Historic Elements

These elements are natural landscape features that existed during the ranch's period of significance and contribute to the landscape character of the ranch. Associated river vegetation includes willow thickets, deciduous trees and shrubs, and mixed native wheatgrasses.

Natural Landscape Character

Semi-wet land and rocky soil, often boggy with thick vegetation growth, characterize this landscape type.

Historic Significance/Integrity

Historically, this landscape has served as a major wildlife habitat within the Deer Lodge valley and retains much of its early character. It has remained mostly undisturbed because of its unsuitable nature for grazing and hay production. The riparian lands remain relatively intact with the exception of smaller areas of killed vegetation called slickens, which are the result of heavy metal deposits associated with drainage from upstream mining activities.

Period of Significance

The Riparian/Woodland landscape conveys a historic period from 1862, when John Grant entered the Deer Lodge Valley to settle, to 1972 when Con Warren sold the Home Ranch Complex to the NPS. The natural character of the landscape has remained consistent during this time period and appears much as it did during the early Grant era.

LANDSCAPE TYPE: Riparian/Woodland

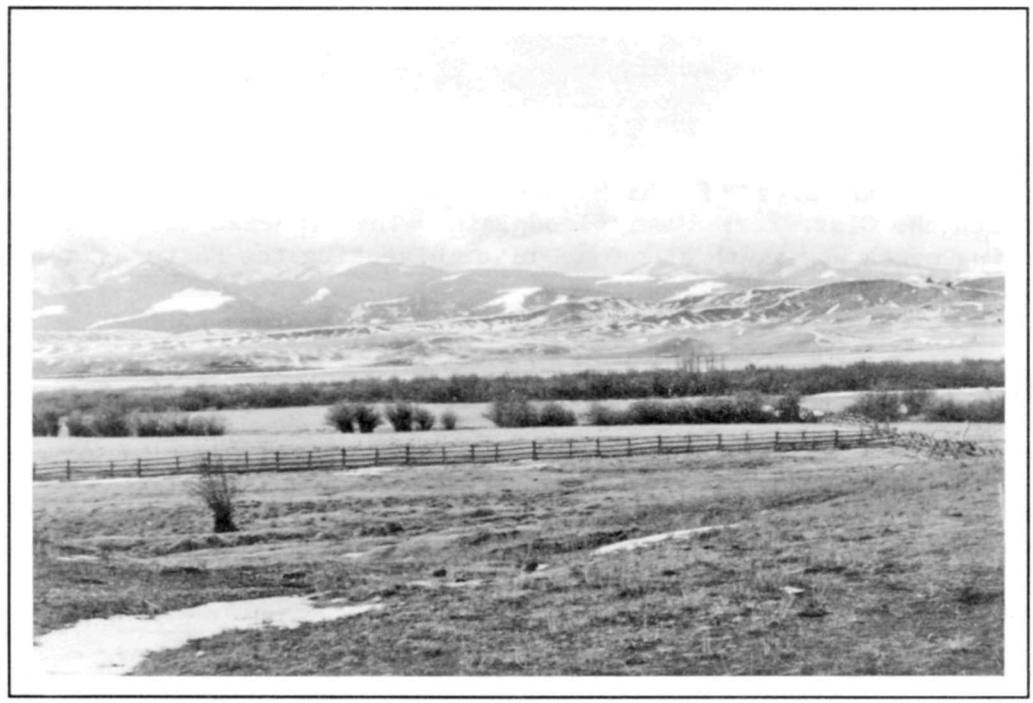

Figure 1. Heavily wooded character of this landscape type is illustrated as seen looking from the "L" shaped barn of the Home Ranch Complex. The linear characteristic of this landscape is also evident as seen here separated into long north/south bands.

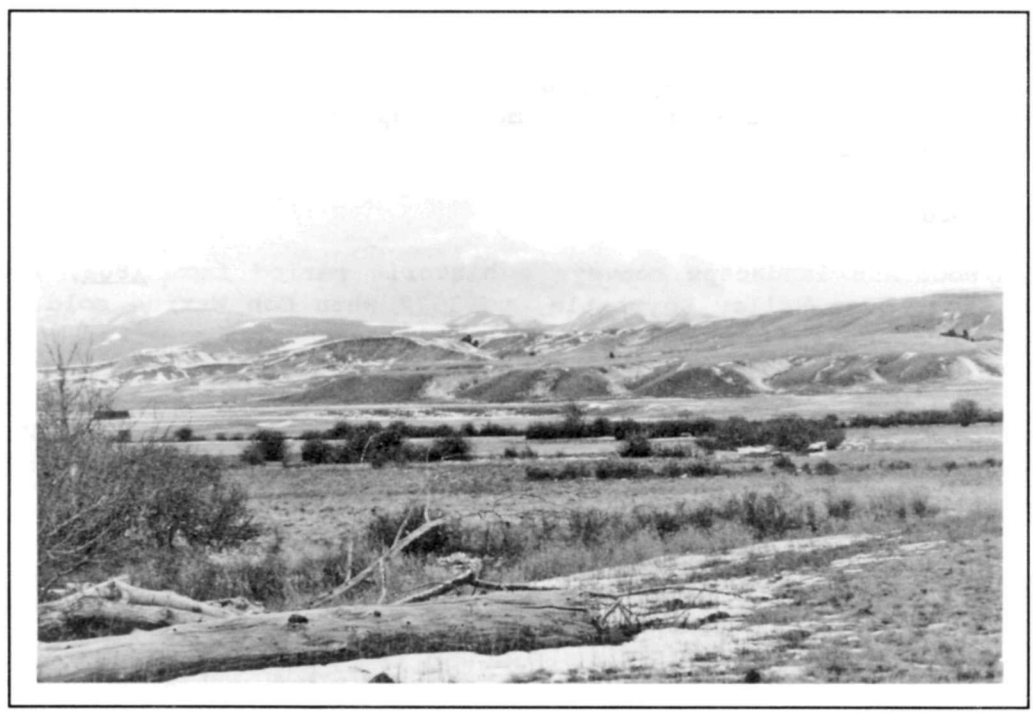

Figure 2. Thick woody bands of riparian area seen separating Pasture/Hay Fields looking southwest. The character of this area has remained predominantly unchanged from early ranch history.

LANDSCAPE TYPE: Riparian/Woodland

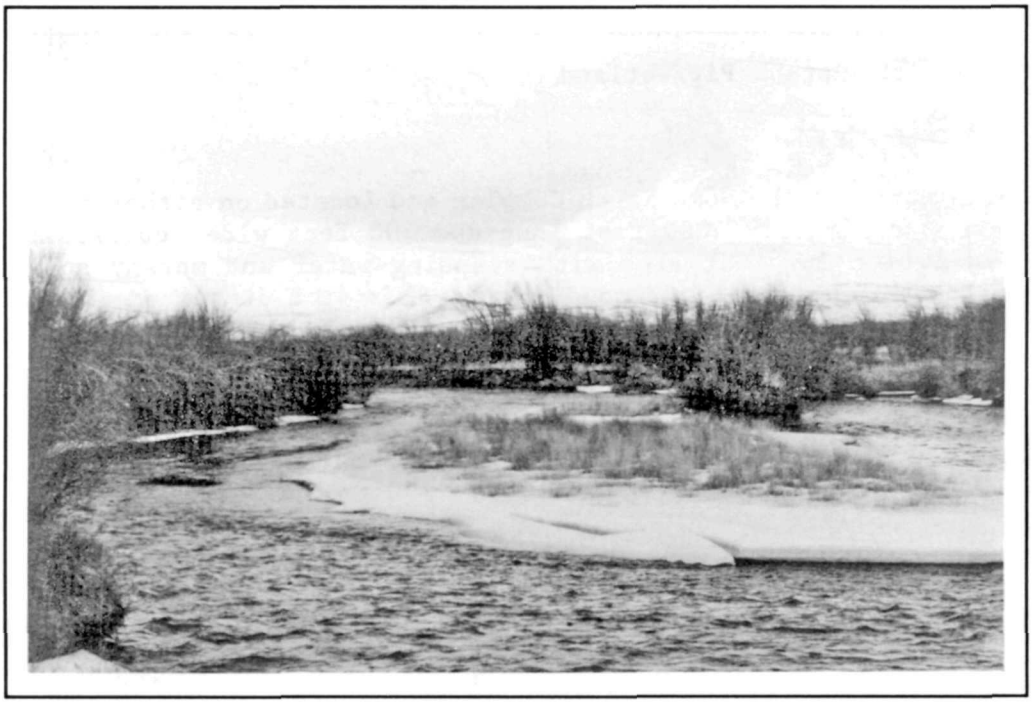

Figure 3. Central to this landscape is the Clark Fork River. Willow thicket and native grasses are the dominant vegetation types.

Figure 4. Looking east from Pasture/Hay Field to the Clark Fork River. Photo showing dense areas of woody shrubs and trees.

LANDSCAPE TYPE: Borrow Pit/Wetland

Description

This is an area north of the Home Ranch Complex and located on either side of the railroad tracks. It is approximately 4000 feet long and 700 feet wide, comprising approximately 64 acres. This is a low, wet area with standing water and marshy soils, dominated by cattails, willow shrubs, and cottonwood trees. This is a disturbed area that was dredged for gravel by the Milwaukee Railroad to construct the elevated railroad bed, which also bisects the landscape.

INVENTORY

Historic Elements

Historic elements associated with this landscape type include the rugged land forms left by the dredging activity, marshy features, and associated vegetation.

Natural Landscape Character

This area is lower in elevation than the surrounding landscape. This is more noticeable to the west, as this higher pasture area drops significantly into the wetland to the east. Gravelly soil disturbed by early dredging activity dominates this landscape.

Historic Significance/Integrity

Associated with the construction of the Milwaukee Railroad in 1907, this landscape type has long been connected with the ranch and remains intact with little disturbance from its 1907 appearance. This landscape historically served as a wildlife habitat and continues to do so today.

Period of Significance

The Borrow Pit/Wetland landscape conveys a historic period from 1907, when the area was dreged for the railroad bed to 1972, when the NPS aquired the Grant-Kohrs Ranch as a National Historic Site.

LANDSCAPE TYPE: Barrow Pit/Wetland

Figure 1. The marshy conditions of this landscape are evident by the thick cattails and standing water which are dominant features. Black Cottonwoods and willow also can be seen along the edge of the landscape type.

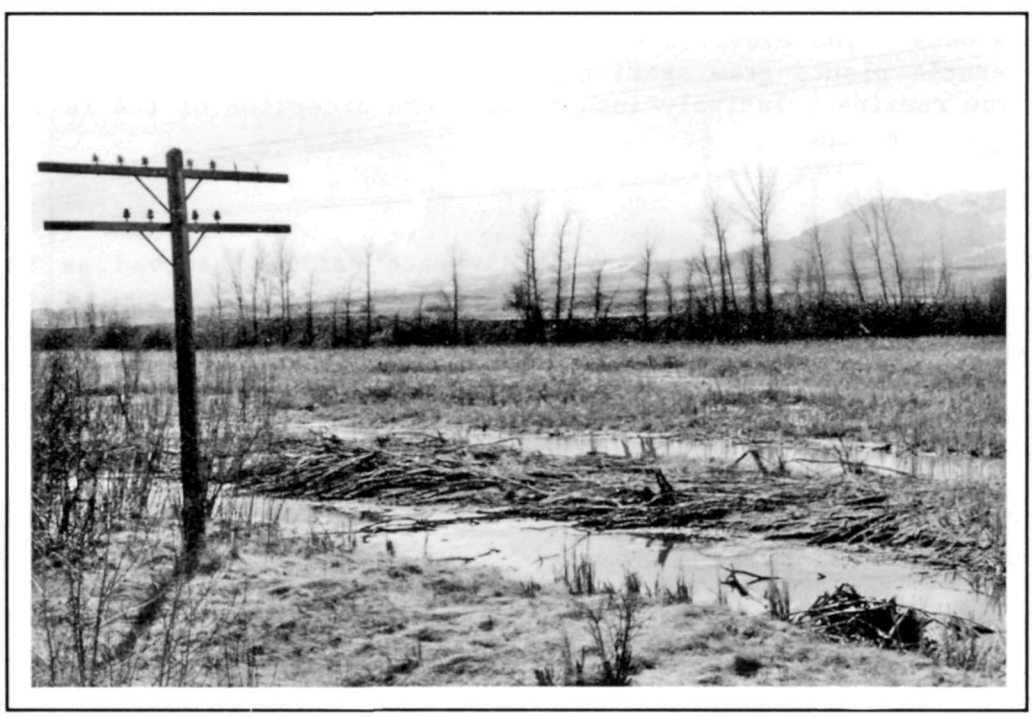

Figure 2. Depression from gravel dredging is noticeable in this view. Photograph taken from near the Railroad Bed which bisects the Borrow Pit/Wetland landscape.

LANDSCAPE TYPE: Railroad Bed

Description

Two side-by-side north/south railroad tracks bisect the study area near its eastern boundary. The Northern Pacific Railroad was constructed in 1883 and is currently owned by the Union Pacific and leased to the Burlington Northern Railroad. Burlington Northern now subleases the active rail link to the Montana Western Railroad. The Milwaukee Railroad bed was constructed in 1907, and abandoned in 1983 and now owned by the National Park Service. The two beds are elevated above grade for most of their length, except near the home ranch where they are at grade. Each bed is approximately 10 feet wide and separated by varying width, from 10 to 60 feet. This is an area of linear, elevated land with deep drainage swales at each side of the elevated portions of the railroad bed. Remaining electric power lines and poles within the Milwaukee rail bed corridor are remnants of the once electrified railroad. Most of the Milwaukee tracks and power poles along the abandoned line have been removed, except for a small section near the Home Ranch Complex.

INVENTORY

Historic Elements

Historic elements consist of the elevated railroad beds, tracks, and power lines and poles. Two period cattle cars sit on the Milwaukee tracks near the Home Ranch Complex.

Natural Landscape Character

The natural character of this area has been modified to facilitate the construction of the railroad beds. The elevated section of land provides a foundation for the rails. Native and exotic plants grow sparingly along the sides of the elevated areas. This landscape type remains relatively intact, with the exception of the removed power poles along the Milwaukee line.

Historic Significance/Integrity

Both the Northern Pacific Railroad and Milwaukee Railroad served as important early transportation networks for transporting cattle to markets. Constructed in 1883 and 1907, these railroads allowed for the expansion of the ranch during that time period and of the western cattle industry in general.

Period of Significance

The Railroad Bed landscape conveys a historic period from 1883, when the Milwaukee Railroad was constructed to 1972, when the Home Ranch Complex was aquired by the NPS.

LANDSCAPE TYPE: Railroad Bed

Figure 1. View looking north from the abandoned Milwaukee Railroad. The railroad bed is elevated with steep sided banks. Note that the historic train rails and power poles have been removed. The Montana Western Railroad can be seen to the right.

Figure 2. The heavily sculptured landscape is characteristic of the Railroad bed area. Elevated beds and tracks and overhead power lines can be seen in this photo.

LANDSCAPE TYPE: Intrusion

Description

Two areas of recent, intrusive developments exist within the boundaries of the Grant-Kohrs Ranch NHS. The first is a 69.45-acre sewage disposal operation, located 1-1/2 miles north of the Home Ranch Complex next to the Clark Fork River, owned and operated by the City of Deer Lodge. The second is a parking lot, developed by the National Park Service, providing visitor parking at the southeast corner of the site near U.S. Business 90 south of the Con Warren residence. The proposed Gereral Management Plan (GMP) for Grant-Kohrs Ranch NHS recommends that the visitor parking lot be removed from this area and the site developed for park maintenance and curatorial facilities.

While the sewage disposal operation is not visible from the Home Ranch Complex or other public view corridors, it nevertheless is a major intrusion that weakens the integrity of the National Historic Site. Likewise, the parking lot to the south is located in an area historically used as pasture land. This area also contains an archeological site of an the early home site of Tom Stuart.

INVENTORY

Historic Elements

None.

Natural Landscape Character

The natural landscape character of both areas, the sewage lagoons and the parking lot, has been changed from open pasture land to developments supporting the new uses.

Historic Significance/Integrity

The historic character of both these sites has been compromised by the new development. While the sewage lagoons may be difficult to relocate, more options exist for relocating the parking lot and restoring the historic pasture landscape.

Period of Significance

None

LANDSCAPE TYPE: Intrusion

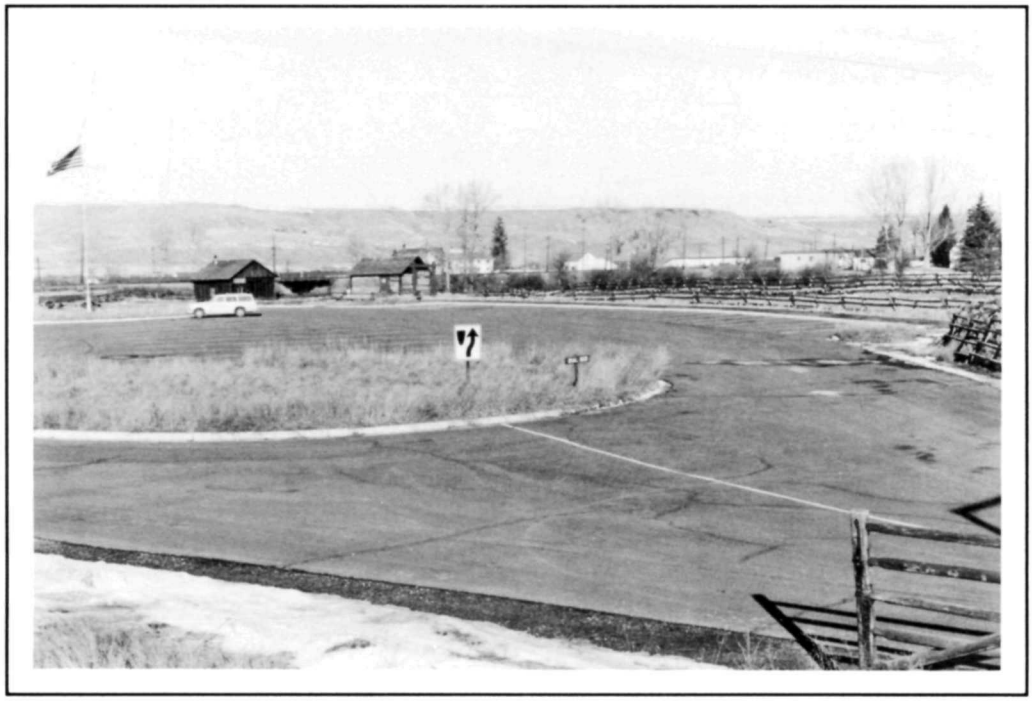

Figure 1. The visitor parking lot is constructed in the pasture south of the Home Ranch Complex. While a necessary element in the park, this function should be relocated to an area that would have less of an impact on the historic landscape.

Figure 2. While not seen from public view corridors, the Deer Lodge sewage lagoon near the northern boundary of the site has a negative impact on the historic integrity of the Grant-Kohrs Ranch.

IV. RECOMMENDATIONS

RECOMMENDATIONS

The nine landscape types identified within this report retain a great deal of historic integrity, and combine to illustrate an important part of the American west, that is the evolution of western cattle ranching from open grazing to modern feed lot operation. If properly managed, the Grant-Kohrs Ranch National Historic Site will continue to serve as a rich legacy of this important era in American history. The following recommendations are predicated on the physical and historical research compiled in the "Inventory and Analysis" section of the report. If implemented, these recommendations will serve to maintain important historic features associated with the Grant-Kohrs Ranch and its operation.

Recommendation 1

Relocate Existing Visitor Parking Lot: Relocating the existing visitor parking lot from the pasture south of the Home Ranch Complex to the southern horse corrals associated with the East Feed lot would accomplish a number of preservation goals and several functional needs of the Park. It has been established, through historic documentation, that the horse corrals south of the feed lot and red barn, were used as parking areas during cattle sales and special events at the Ranch in the Con Warren era. During this time, the East Feed Lot was the center of much activity on the ranch and it would be common to see 40 or more cars and trucks parked in this area during stock sales. Relocating the parking lot from the south pasture would make this area available for other park functions to be moved from historic buildings and located here in newly constructed facilities. To disassociate new buildings with the historic ranch setting should be a primary consideration for any development on this site. Therefore, new construction should be located close to the southeast corner of the park boundary and Business U.S. 90, thus "blending" with the existing commercial buildings to the south and east of the park boundary along U.S. 90. In this same way, the architectural style of the new buildings should "blend" with the existing commercial, rather than appear as ranch related buildings.

Relocating the parking to this area also allows the Red Barn to be adapted to a visitor center and park offices. Additional benefits of relocating these functions to this area would be a greater opportunity to interpret the East Feed Lot operation as part of the ranch.

It is recommended that any design for the new parking lot include the restoration of the historic tree lined entry drive to the ranch. The new design and paving material should be compatible with the historic features of the site. This may include the use of a "grass crete" type paving system allowing the visual qualities of the grass covered horse corrals to be maintained. Any new design for parking should also consider other historic features such as fences and the small horse barns on the north side of the corrals.

Recommendation 2

Manage Non-NPS Upland Pasture Land There are approximately 1,100 acres of Upland Pasture west of the current Park boundary that are held in private ownership and not managed by the NPS. The Upland Pasture has been identified as being significant for its historic and visual relationship to the Grant-Kohrs Ranch. While the integrity of this important landscape has been maintained, there is no assurance that current use, and management of the landscape will continue to be compatible with the historic qualities of the Ranch. Any change such as

conversion to residential, mining or other incompatible uses, would have a drastic negative effect on the Grant-Kohrs Ranch National Historic Site. There are a number of management options for this area that should be studied.

Recommendation 3

Restore Kohrs Residential Landscape The Ranch house has been restored by the NPS, yet the residential landscape remains in its post 1972 condition. Several important historic features of this landscape have been identified as missing, such as the yard irrigation system, picket fence (the existing fence is non-historic) and yard trees. In addition, the finished grade of the yard was modified in the 1950's (outside the period of significance) with the addition of approximately 6" of fill, which should be removed in the restoration.

Recommendation 4

Restore Riparian/Woodland Wildlife Habitat Both the land and wildlife have suffered damage as the result of upstream mining activities. While the land has slowly regenerated, the wildlife has been slow to recover. Efforts to restore the once abundant wildlife that inhabited this landscape should be explored.

V. APPENDIX

Figure 1. Home Ranch Complex and East Feedlot 1971.

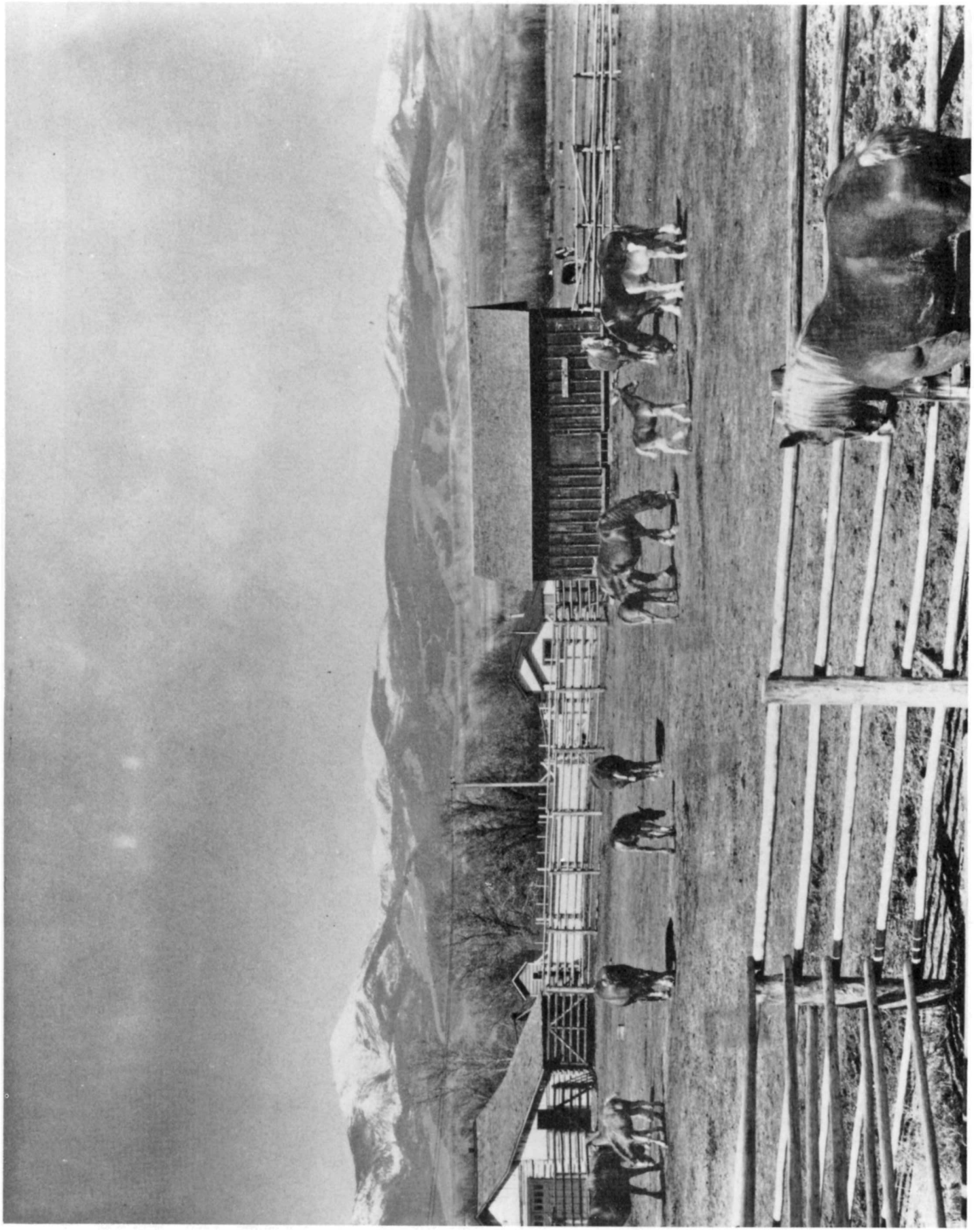

Figure 2. Corrals north of the ranch house in 1936. Compare with "Home Ranch Complex" figure 4.

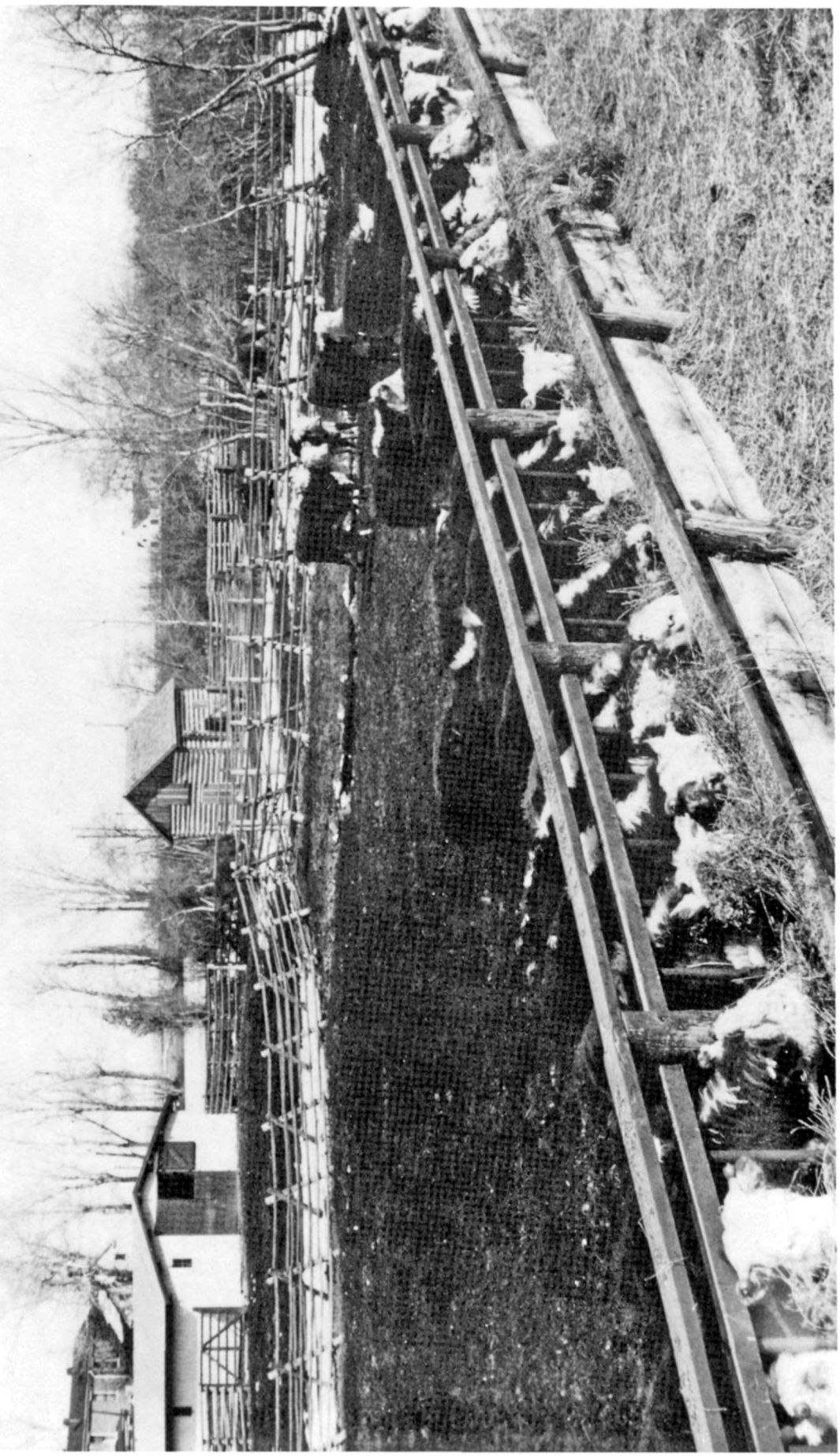

Figure 3. West feed lot in 1940. Compare with "Home Ranch Complex" figure 7.

Figure 4. Corrals looking southeast to ranch house on the right in 1940. Note trees in front yard of house.

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