Grant-Kohrs Ranch Cultural Landscape Report, Part Two

Treatment Recommendations

Pasture / Hay Fields Component Landscape
Upland Pastures Component Landscape

Final 100% Draft
February 2009

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Approved: _____
Director, Intermountain Region

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Executive Summary

PROJECT OVERVIEW AND PURPOSE

This Cultural Landscape Report, Part Two: Treatment (CLR, Part Two) is for two component landscapes within Grant-Kohrs Ranch National Historic Site (GRKO). These two component landscapes are the Pasture/Hay Fields component landscape and the Upland Pastures component landscape. It builds off of the John Milner Associates Cultural Landscape Reprot, Part One which is the primary source of information for this project concerning the property's history, significance, existing conditions, and contributing landscape resources.

The overarching purpose of this CLR Part Two is to make appropriate recommendations for the preservation and enhancement of cultural landscape resources at GRKO Ranch, and for the two component landscapes in particular. This document presents a vision for the property intended to guide long-term management of natural, cultural, and historic resources, and the related topics of public enjoyment and understanding. This guidance is intended to be broad-brush. Park personnel will develop specific strategies through other written policies and procedures including the anticipated Resource Stewardship Strategy. However, some guidelines and suggested treatments have been developed in fair detail to address specific management concerns of the park.

HOW TO USE THIS DOCUMENT

In addition to this executive summary, this document contains the following chapters:

- Chapter 1 - Background Information,
- Chapter 2 - Management Summary, and
- Chapter 3 - Treatment Plan

Chapter 1 – Background Information

Chapter 1 summarizes the ranch's historical significance and integrity, particularly related to the Pasture/Hay Fields and Upland Pasture component landscapes. It also contains a brief physical description of these two component landscapes and charts that highlight contributing cultural landscape features and patterns. This information, which has been adapted from the CLR Part One, establishes a solid understanding of the component landscapes' existing conditions and their place in history.

Chapter 2 – Management Summary

Management Philosophy – The first part of Chapter 2 is the Management Philosophy, which consists of separate sections.

- *Desired Future Conditions* – The first section is a description of desired future conditions for the entire GRKO Ranch cultural landscape. This "broad-brush," future-oriented narrative is intended to paint the ideal

Beaver Slide Hay Stacker and Jack-Leg Fences in Stuart Field

scene with regard to landscape resources and public use, much like an expanded vision statement.

- *Primary Treatment Approach* – Next is the Primary Treatment Approach, which describes the selected overall treatment for the entire GRKO Ranch cultural landscape. Along with a discussion of the Secretary of the Interior's four treatments—preservation, rehabilitation, restoration, and reconstruction—this section also contains a passage that explains how this primary treatment approach ("preservation with selected rehabilitation and restoration as needed") relates to the various landscape characteristics (e.g. circulation, land use etc.) used in cultural landscape planning.
- *Primary Treatment Approach for Component Landscapes*-The Management Summary also contains a primary treatment approach for the two component landscapes addressed in this plan.

Management Issues – A summary of management issues relevant to the Pasture/Hay Fields and Upland Pastures follows the Management Philosophy.

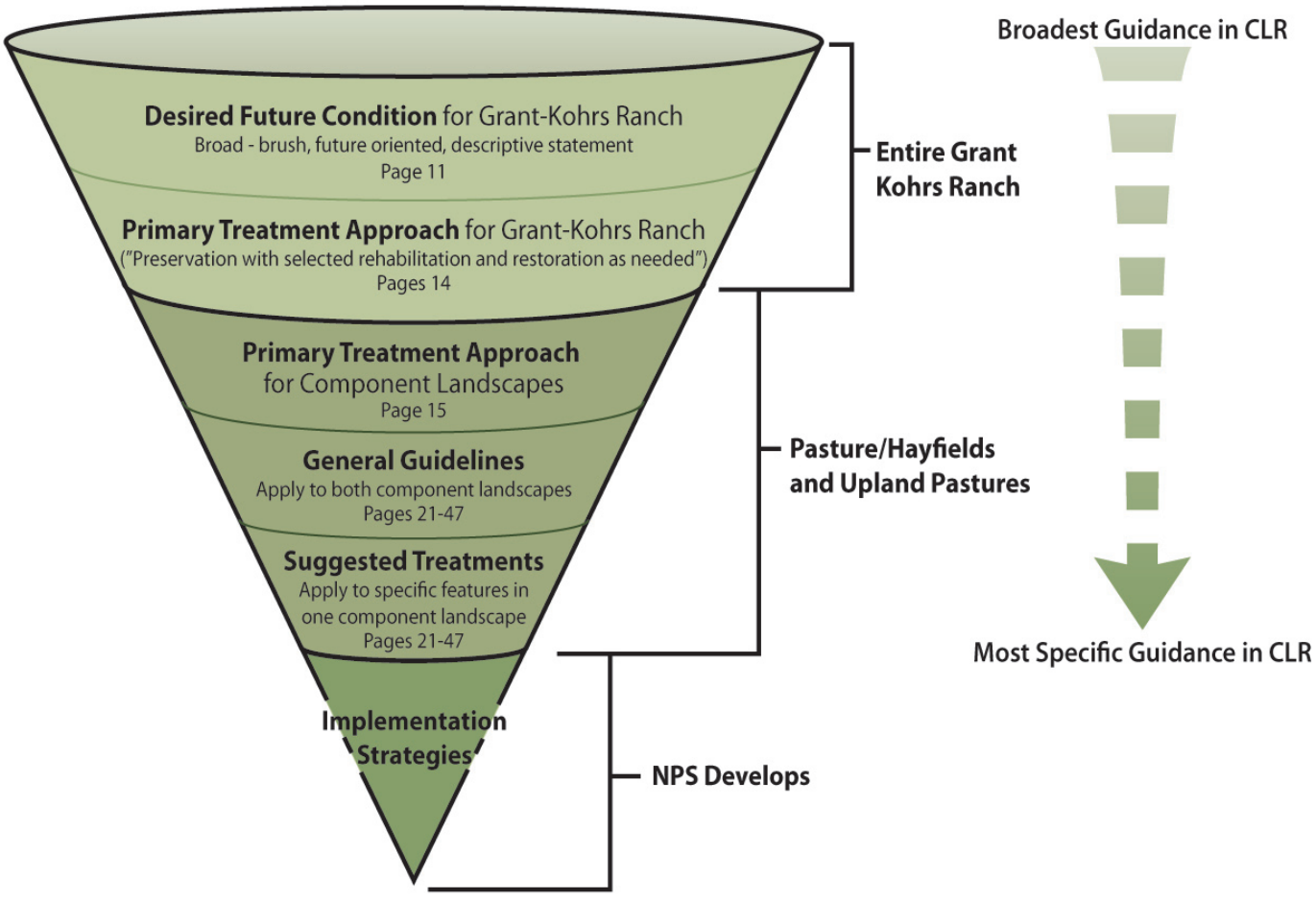
Chapter 3 – Treatment Plan

The Treatment Plan presents general guidelines and more specific suggested treatments for the Pasture/Hay Fields and Upland Pastures component landscapes. These are organized by landscape characteristic (e.g. "Circulation," "Vegetation and Natural Systems") and other relevant topics (e.g. "Public Use and Interpretation" or "New Design and Construction."). Tabs of these headings have been included along the right-hand margin of the page so that park employees will be able to find the appropriate guidelines and treatments quickly. Chapter 3 also contains maps of recommendations that can be depicted graphically.

Sequence of Guidance

Although Chapter 3, Treatment Plan is the heart of the document, guidance for cultural landscape preservation is included throughout. This guidance proceeds in order from broadest (i.e. a statement of desired future conditions for the entire GRKO Ranch cultural landscape) to most specific (i.e. specific recommended treatments for particular landscape features within one of the component landscapes). The following diagram summarizes this organization.

ORDER OF GUIDANCE CONTAINED IN THE CLR



KEY FINDINGS OF THE CLR

This section outlines key findings of this document including: I) major findings of the CLR Part One regarding historical significance; II) relevant management issues; III) primary treatment for the ranch's cultural landscape and for the Upland Pastures and Pasture/Hay Fields component landscape; and IV) key recommendations for the two component landscapes set forth in the Guidelines and Treatments in Chapter 3.

I. Key Findings from CLR Part One

For more explanation, see CLR Part One (JMA 2004) pages 1-11 through 1-13 or Chapter 1, page 1 of this CLR Part Two.

- The National Historic Landmark (NHL) District—nearly the entire ranch—is significant under NHL Criterion 1 in the areas of Agriculture and Developing the American Economy.
- The ranch also possesses state and national significance under National Register Criteria A and C.
- CLR Part One recommends the ranch also be considered significant at the state and national level under NR Criterion B for its association with John Grant, Conrad Kohrs, and Con Warren.
- CLR Part One establishes the period of significance for the ranch as 1862-1982, including two subperiods: 1862-1919 and 1929-1982.

II. Relevant Management Issues

A thorough list of management issues was compiled through correspondence with park personnel and review of literature. These management issues are either challenges that the recommendations contained in this CLR Part Two should help to address, or broad goals of park management with which the recommendations must accord. These goals are set forth in planning documents such as the GRKO *Foundation for Planning*. For a more detailed list of relevant issues, see Chapter 2, pages 16-19.

Key Management Issues

- The NPS must preserve the Grant-Kohrs Ranch NHS as an operating cattle ranch (i.e. it is central to the legislated purpose of the park).
- Historic agricultural practices including grazing livestock and raising hay are the preferred means for managing the cultural landscape.
- Where possible, the park should integrate ecological considerations with cultural resource management.
- Sustaining healthy plant communities representative of dry upland pastures and irrigated hayfields and pastures is of primary importance for park management.
- In particular, the preservation of shortgrass prairie communities in the dry ranges of the Upland Pasture component landscape is a priority.
- Noxious weeds are a major threat to the cultural landscape and must be controlled using an IPM approach that strives to minimize environmental harm.
- The park will likely lose the authority to irrigate the Front Fields with effluent water in coming years. Therefore, the park must develop a plan for managing vegetation in these areas.
- Though native, beavers and Columbian ground squirrels pose a threat to the cultural landscape because they damage the historic irrigation network. Control of these and other pests must be achieved through IPM.
- Erosion due to overgrazing is always a concern. Park managers seek to restore eroded areas and prevent it from occurring by eliminating overgrazing.
- Open views of undeveloped land, both within and outside the boundaries of the park, are very important in maintaining the historic character of the ranch.
- NPS cross-fences that were added after the period of significance have served a valuable role in park management; however, they have resulted in a system of smaller subdivided fields that contrasts with historic conditions, which were characterized by a greater sense of openness and expansiveness.
- Visitation to the Grant-Kohrs Ranch NHS has declined in recent decades. Enhancing interpretation and use of the cultural landscape may be tactics for helping meet this challenge.
- Park staff has determined that interpretation at the park should emphasize the evolution of ranching through time, rather than focusing on one particular period.

III. Primary Treatment

- The overall landscape treatment for the Grant-Kohrs Ranch cultural landscape is preservation, with selected rehabilitation and restoration as needed (see Chapter 2, pages 13-14 for further explanation).
- The primary treatment for both the Pasture/Hay Fields and Upland Pastures component landscapes is preservation, with selected rehabilitation and/or restoration as needed (see Chapter 2, page 15 for further explanation).

IV. Key Recommendations (Ideas contained in Guidelines or Treatments)

Chapter 3 "Treatment Plan" provides guidelines and specific treatments for the two component landscapes, organized by topic. The following discussion summarizes key recommendations and main ideas. Please also refer to the maps on pages 45-47.

Vegetation/Natural Systems and Features (for further explanation, see pages 22-25)

Recommendations for this topic emphasize:

- **Retaining and preserving contributing vegetation that is representative of the ranch's entire history.** This includes: native prairie plant communities in the dry ranges of Upland Pastures, communities of introduced pasture and hay grass communities in the irrigated hay fields, and even clusters of apple and cottonwood trees that are vestiges of the historic Kading farmstead. A preservation approach seeks to represent the evolution of these lands during the period of significance rather than their appearance during one particular period.
- **Maintaining plant communities in historically appropriate places**, for instance by fighting the spread of introduced species into areas characterized by native communities. Guidelines stress maintaining a strong distinction between irrigated and dry areas.
- **Managing vegetation to maintain or enhance historic spatial organization patterns**, for instance enhancing the open and unified character of the Western Hay Fields by equally grazing and irrigating the separate quadrants so that this area "reads" at a distance as one expanse.
- **Using an IPM approach to control invasive exotic plants or animal pests that threaten the cultural landscape**. These include: spotted knapweed, leafy spurge, Canada thistle, and where appropriate, beavers or Columbian ground squirrel.
- **Developing a plan for managing vegetation in the Front Fields**. The guidelines present alternative approaches that would be acceptable from a cultural landscape standpoint.

Land Use including Ranching Practices (for further explanation, see pages 26-27)

Recommendations for this topic stress:

- **Using historic agricultural practices as the primary tool for maintaining the ranch landscape.** These practices include grazing, flood irrigation, and haying with horses or motorized equipment.
- **Interpreting historic land uses and supporting efforts to keep alive traditional ranch practices and cowboy skills**.
- **Viewing horses (in addition to cattle) as a valuable component of the historic scene.**

Spatial Organization, Views, and Fencing (for further explanation, see pages 28-31)

For these topics, the guidelines and treatments stress:

- **The protection of views within the park and beyond its borders**, by maintaining good working relationships with adjacent landowners, continuing use of conservation easements, and by participating in local and regional planning activities.
- **The selective removal of non-essential non-contributing NPS cross-fences, where it will aid in reinstating the open character of historic pastures and hay fields**.
- **Not building additional non-contributing fences, if at all possible**. Avoiding additional new fences adheres to the overall philosophy of preservation; however the recommendations also acknowledge that occasionally new fences may be desirable for park management. Therefore, guidance is provided for the design and placement of new fences and for other topics, such as wildlife-friendly fences.

Buildings, Structures, and Small-Scale Features (for further explanation, see pages 32-33)

Recommendations for this topic emphasize:

- **Protecting and stabilizing pump house HS-86.**
- **Preserving pump house HS-87**, and ensuring that modifications or additions are compatible.

Constructed Water Features (for further explanation, see pages 34-35)

Guidelines and treatments for this topic emphasize:

- **The continued operation of the historic irrigation network**.
- **Retaining all existing major irrigation features** including main ditches, lateral ditches, abandoned ditches, and hand lines as a record of the evolution of the ranch.
- **The repair and/or compatible replacement of headgates, walls, and other minor features.** Repair is preferred over replacement; compatible replacement would match the old construction in materials and form.

Circulation (for further explanation, see pages 36-37)

For this topic, guidelines and treatments recommend:

- **Avoiding new construction of roads or trails.**
- **Retaining the existing roads and maintaining their historic utilitarian character** (e.g. narrow width, dirt or gravel surfacing, primary use for ranch operations).

- **Restoring Cottonwood Creek Nature Trail**, even though is not a contributing feature, for its value in interpretation and visitor experience. This includes realigning the trail so that the portion subject to routine flooding is moved to higher ground.

Public Use and Interpretation (for further explanation, see pages 38-39)

The CLR contains suggestions for enhancing public use, interpretation, and accessibility while minimizing major changes to the landscape. For example:

- **Developing recommended loop hikes and horseback rides along existing roads**, rather than building new trails.
- **Developing a publication to interpret the cultural landscape and inform the public of opportunities to explore the landscape**, thereby reducing the need for interpretive signs.
- **Expanding existing wagon ride tours** to a natural overlook in the Upland Pastures to offer a commanding view of the ranch and a view to Hillcrest Cemetery.
- **Considering options for upgrading accessibility of the Cottonwood Creek Trail**.
- **Outside the Cottonwood Creek Trail, strongly favoring accessibility solutions that would not require physical changes to the landscape**, for example, making horse-drawn wagons accessible.
- **Considering options for the location and interpretation of the Jenkins Hay Stacker**.

New Design and Construction (for further explanation, see pages 40-41)

Guidelines and treatments for this section recommend:

- **New construction is to be avoided** if at all possible. Cottonwood Creek Trail may be an acceptable location for very modest public facilities (e.g. interpretive sign, resting place). Elsewhere in the Pasture Hay Fields and Upland Pastures, facilities should be kept to an absolute minimum.
- **Avoid introducing interpretive or informational signage in the Upland Pasture or Pasture/Hay Fields component landscapes**. To the extent possible, accomplish interpretation through less visually intrusive means (guidebook, audio tours etc.).
- **If deemed necessary, any new structures (fences, visitor facilities, directional signage etc.) are to be low, minimal, and unobtrusive, constructed of compatible materials, and located out of important viewsheds**. Signs should only be visible at close range.

Chapter One - Background Information

HISTORICAL BACKGROUND and SIGNIFICANCE

Grant-Kohrs Ranch National Historic Site (GRKO) is located in Powell County, Montana, adjacent to the community of Deer Lodge, within the Clark Fork River Valley. John (Johnny) Grant established the ranch in 1862. Conrad Kohrs, who purchased the ranch from Grant, operated it during the years 1866-1920. During this time Kohrs and his partner and half brother, John Bielenberg, developed the ranch into the center of an expansive cattle empire. The close of the open range era brought tremendous changes to the cattle industry of western Montana, and during the later years of his life, Conrad Kohrs sold off great portions of his once mighty ranch. Conrad Warren, grandson of Conrad Kohrs, moved to his grandfather's former ranch in 1929 and assumed management of the ranch a few years later. Warren operated the ranch for the next 50 years, transforming the remnants of his grandfather's cattle empire into a modern cattle breeding and sales complex.

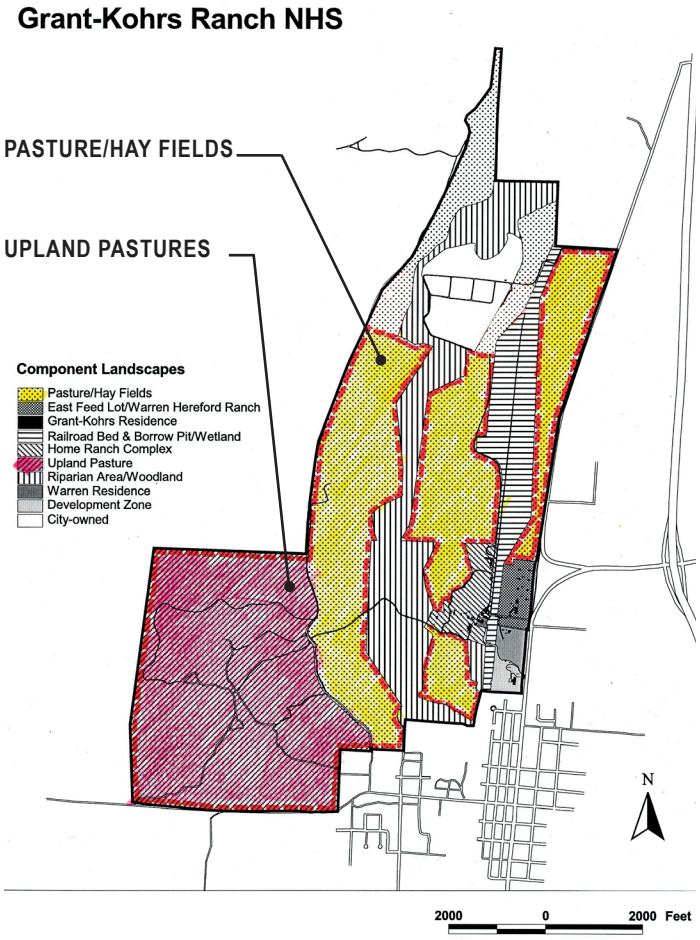
The Grant-Kohrs Ranch is an outstanding representation of the days of the open range cattle industry in the American West during the 19th and early 20th centuries. It also represents changes in agriculture and the continuum of cattle ranching from the days of the open range right up to the modern era. The park's landscape resources preserve and interpret the evolution of western cattle ranching throughout the 19th and 20th centuries, as well as the story of continuity of ownership. Nearly the entire park—an area measuring approximately 1600 acres—has been declared a National Historic Landmark in recognition of its exceptional national significance. This NHL district is significant under NHL Criterion 1 in the areas of Agriculture and Developing the American Economy (JMA 2004, 1-1, 1-2). The ranch also possesses state and national significance under National Register Criteria A and C. Furthermore, the CLR Part One recommends that the ranch also be considered significant at the state and national levels under Criterion B for its association with Grant, Kohrs, and Warren. The CLR establishes a period of significance for the ranch: 1862-1982, which encompasses two sub-periods:

- **1862-1919** – from John Grant's establishment of the ranch to the dissolution of the Kohrs and Bielenberg cattle empire, and
- **1929-1982** – covering Con Warren's arrival at the ranch to his retirement from active ranching (JMA 2004, 1-12).

PROJECT AREA DESCRIPTION – COMPONENT LANDSCAPES

The CLR Part One divided the entire Grant-Kohrs Ranch into nine component landscapes that took form as the direct result of design, construction, and agricultural practices during the Grant, Kohrs, and Warren periods (JMA 2004, 1-13). This project addresses two of these component landscapes in particular: the Pasture/Hay Fields component landscape and the Upland Pastures component landscape.

PROJECT AREA MAP



Pasture/Hay Fields Component Landscape

The Pasture/Hay Fields component landscape includes irrigated, low-lying lands on both sides of the Clark Fork River riparian corridor. Historically, managers have used these areas for two primary purposes: grazing livestock (cattle) and cultivating hay. The Pasture/Hay Fields component landscape includes several distinct fields and pastures including: Stuart Field, the Lower Yard Fields, the North Meadows, the L-Barn Fields, the Western Hay Fields, Front Field, and the Olson Fields. This project area does not include the Olson Fields, in the northern part of the park, because they remain in private ownership. Some of these agricultural fields are not currently irrigated. However, most of these spaces have been irrigated, and are characterized by a mix of exotic pasture species, including smooth brome, common timothy, Kentucky bluegrass, red clover, crested wheatgrass, and many other species. These plant species were deliberately introduced to the ranch during the Kohrs and Warren periods. In 2004, when the CLR Part One was published, approximately 224 acres were being maintained as pasture, while the remaining 308 acres were being used to produce hay.

A network of ranch roads connects the various areas of the Pasture/Hay Fields. Most of these roads developed during the period of significance and are contributing features. Several irrigation ditches also wind through these spaces. Historic ditches include the Kohrs-Manning Ditch, the Kohrs "Big" Ditch, the Warren Ditch, and the Johnson Ditch. Park officials believe that the current Kohrs-Manning Ditch incorporates some of the very earliest ditches constructed on site, which were excavated by Johnny Grant. This component landscape also contains two large hay stacker structures: the NPS-built Beaver Slide Hay Stacker, which rests in Stuart Field, and the Warren Era Jenkins Hay Stacker in the Western Hay Fields. These structures are of great value in interpreting historic haying practices. Fences from many periods are also prominent in the landscape. These fences mark the boundaries of fields, protect riparian areas from livestock, and subdivide large fields into manageable units. The entire Pasture/Hay Fields component landscape falls within the existing NHL and NR districts and retains integrity. According to the CLR Part One, the period of significance for which the component landscape retains greatest integrity is 1950s-1972 (JMA 2004, 3-5-1 through 3-5-9).

Beaver Slide Hay Stacker and Irrigated Fields

Upland Pastures Component Landscape

The Upland Pastures component landscape consists of rolling, grass-covered foothills to the west of the Kohrs Ditch (or "Big" Ditch). This area is bordered by the NPS property line to the north, south, and west. Major agricultural spaces within this component landscape include Big Gulch, Little Gulch, and the Taylor Fields, as well as the ranges and hilltops in between. These areas encompass irrigated pastures and hay fields and non-irrigated, dry pastures. The same introduced species mentioned in the Pasture/ Hay Fields description (above) characterize the irrigated portions. Non-irrigated pastures are located in upland areas and primarily consist of native grasses and forbs of the shortgrass prairie. These plants generally fall within one of two habitat types: the bluebunch wheatgrass/western wheatgrass habitat type and the bluebunch wheatgrass/ Sandber's bluegrass type. These upland areas are among the best examples of native plant communities within the park, and they may constitute some of the last native prairie remnants in the Deer Lodge Valley. In 2004 approximately 235 acres were used for grazing, while another 177 acres were kept in hay.

Several primitive roads wind through the Upland Pastures component landscape, generally following the base of hills and benches. Other notable built features include a network of contour irrigation ditches, many of which date to the mid-20th century, after Con Warren purchased these lands for his expanding ranch, and re-graded some existing fields. The Upland Pastures landscape also contains several remnants of older farmsteads, including a mature cluster of apple trees, a cluster of cottonwoods presumed to have once lined an entry drive, and foundations of agricultural and residential buildings. The period of significance most strongly represented by the Upland Pastures component landscape is 1930s-1972. The entire area lies within the existing NHL and NR historic district and retains historic integrity (JMA 2004, 3-6-1 through 3-6-5).

Tables summarizing landscape features of the two component landscapes follow. These tables have been adapted from the CLR Part One. Contributing features are highlighted in yellow.

Expansive Views in the Upland Pasture Area

TABLE OF CONTRIBUTING FEATURES - PASTURE/HAY FIELD

PASTURE/HAYFIELD: Inventory of Existing Conditions and Contributing Resources

C = Contributing; **NC** = Non-Contributing; **S**=Supporting; **ND**=Not Determined				**Associated Historic Period**					
Map #	CLR/Map ID#	Feature	C/NC/S/ND	Grant-Kohrs 1862-1919	Warren 1929-1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
EC-19,20	**Natural Systems and Features**								
	NS-1	Bench	C	X	X	X			
	NS-7	Springs	C	X	X	X			
	NS-8	No-name Creek	C	X	X	X			
	NS-9	Spring Gulch	C	X	X	X			
	NS-10	West Gulch	C	X	X	X			
	NS-11	East Gulch	C	X	X	X			
	NS-17	Beaver Lodges	C	X	X	X			
EC-19,20	**Vegetation**								
	VE-13	Irrigated hay grasses							
		smooth brome	C		X	X	ca. 1950	E	*Bromus inermis*
		common timothy	C	X	X	X	1893	E	*Phleum partense*
		Kentucky bluegrass	C		X	X		E	*Poa pratensis*
		red clover	C	X	X	X	1894	E	*Trifolium pretense*
		Canada thistle	NC		?	X		E	*Cirsium arvense*
		crested wheatgrass	C		X	X	1951	E	*Agropyron cristatum*
		white clover	ND		X	X	?	E	*Trifolium repens*
		redtop bentgrass	C		X	X	?	E	*Agrostis stolonifera*
		intermediate wheatgrass	C		X	X	ca. 1939-45	E	*Agropyron intermedium*
	VE-14	Non-irrigated pasture grasses							
		bluebunch wheatgrass	C	X	X	X		N	*Agropyron spicatum*
		moss phlox	C	X	X	X		N	*Phlox muscoides*
		needle-and-thread grass	C	X	X	X		N	*Stipa comata*
		Missouri goldenrod	C	X	X	X		N	*Solidago missouriensis*
		hairy goldenaster	C	X	X	X		N	*Chrysopis villosa*
		desert alyssum	NC		?	X		E	*Alyssum desertorum*
		blue grama	C	X	X	X		N	*Bouteloua gracilis*
	VE-15	Irrigated pasture grasses (effluent fields)							
		smooth brome	C		X	X	ca. 1950	E	*Bromus inermis*
		spotted knapweed	NC		X	X		E	*Centaurea biebersteinii*
		bluebunch wheatgrass	C	X	X	X		N	*Agropyron spicatum*
		moss phlox	C	X	X	X		N	*Phlox muscoides*
		needle-and-thread grass	C	X	X	X		N	*Stipa comata*
		Missouri goldenrod	C	X	X	X		N	*Solidago missouriensis*
		hairy goldenaster	C	X	X	X		N	*Chrysopis villosa*
		desert alyssum	NC			X		E	*Alyssum desertorum*
		blue grama	C	X	X	X		N	*Bouteloua gracilis*
		orchard grass	NC			X	ca. 1950	E	*Dactylis glomerata*
		western sticktight	C	X	X	X		N	*Lappula occidentalis*

PASTURE/HAYFIELD: Inventory of Existing Conditions and Contributing Resources

C = Contributing; **NC** = Non-Contributing; **S**=Supporting; **ND**=Not Determined				**Associated Historic Period**					
Map #	CLR/Map ID#	Feature	C/NC/S/ND	Grant-Kohrs 1862-1919	Warren 1929-1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
EC-21,22	**Spatial Organization**								
	SO-29	Stuart Field	C	X	X	X			aka Stuart Meadow
	SO-30	Lower Yard Fields	C	X	X	X			
	SO-31	North Meadows	C	X	X	X			aka Lower Meadows
	SO-32	L-Barn Field North	C	X	X	X			
	SO-33	Western Hay Fields	C		X	X	ca. 1930		aka Pumphouse Fields, Lower Meadow Fields (1 4), River Bridge Field, West Side Fields
	SO-34	Front Field	C	X	X	X			spatial organization altered by WH Ranch, 1952
	SO-35	Olson Field, East	C	X	X	X			
	SO-36	Olson Field, West	C	X	X	X			
	SO-37	Treatment Pond Field	C	X	X	X			spatial organization altered by sewage pond, 1958-60
	SO-38	L-Barn Field	C	X	X	X			
	SO-39	Kohrs "Big" Ditch Road	C		X	X	late 1930s		
	SO-40	Kohrs-Manning Ditch Road	NC		X	X	ca. 1973		constructed by NPS
	SO-41	Warren Pumphouse Road	C	X	X	X	ca. 1890		
	SO-42	Clark-Fork River Bridge Road	C		X	X	ca. 1930		
	SO-43	Sewage treatment service road	C		X	X	1958-60		
	SO-44	South park entry road	C		X	X	late 1930s		
EC-21,22	**Land Uses**								
	L-3	Livestock grazing	C	X	X	X	1860s+		
	L-5	Hay production	C	X	X	X	1860s+		
	L-10	Water treatment/Effluent irrigation	NC			X	1999		
EC-23,24	**Constructed Water Features**								
	CW-1	Kohrs-Manning Ditch	C	X	X	X	ca. 1870		
	CW-6	Kohrs "Big" Ditch	C	X	X	X	ca. 1885		assumed by water rights
	CW-7	Johnson Ditch	C	X	X	X	ca. 1874 or earlier		assumed by water rights
	CW-8	Lateral ditches	C		X	X	1930-50		
	CW-9	Old/abandoned ditches	C		X	X	ND		
	CW-10	Irrigation Risers	S		X	X	1999		Original irrigation system by Warren, 1954; NPS reconstructed with co-op agreement
	CW-11	Irrigation Headgates	S		X	X	1999		Original irrigation system by Warren, 1954; NPS reconstructed with co-op agreement
	CW-12	Effluent Wells	NC			X	1999		Co-op agreement

PASTURE/HAYFIELD: Inventory of Existing Conditions and Contributing Resources

C = Contributing; **NC** = Non-Contributing; **S**=Supporting; **ND**=Not Determined				**Associated Historic Period**					
Map #	CLR/Map ID#	Feature	C/NC/S/ND	Grant-Kohrs 1862-1919	Warren 1929-1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
	CW-13	Irrigation Mainline	S		X	X	1999		Original irrigation system by Warren, 1954; NPS reconstructed with co-op agreement
	CW-14	Test Wells	NC			X	1997		Special use permit
	CW-15	Culverts	ND			X	ND		Not inidividually analyzed
	CW-16	Warren Ditch	C		X	X	pre-1947		1947 aerial photo
EC-21,22	**Circulation**								
	C-23	Kohrs Ditch Road	C		X	X	late 1930s		
	C-24	Kohrs-Manning Ditch Road	NC		X	X	ca. 1973		constructed by NPS
	C-25	Warren Pumphouse Road	C	X	X	X	ca. 1890		
	C-26	Clark-Fork River Bridge Road	C		X	X	ca. 1930		
	C-27	Sewage treatment service road	C		X	X	1958-60		
	C-28	South park entry road	C		X	X	late 1930s		
	C-29	Cottonwood Trail	NC			X	1993		
EC-25,26	**Views and Viewsheds**								
	V-20	Views to riparian corridor	C	X	X	X			
	V-21	Views to western foothills	C	X	X	X			
	V-22	Views of Deer Lodge	C	X	X	X			
	V-23	Views of sewage treatment ponds	C		X	X	1958-60		
	V-24	Views of Home Ranch Complex	C	X	X	X			
	V-25	Views of Business Loop 90 corridor	C	X	X	X			
	V-26	Views of Railroad Corridor	C	X	X	X	1879+		
	V-27	Views of Hillcrest Cemetery	C	X	X	X			
EC-19,20	**Buildings and Structures**								
	S-43	Jenkins Hay Stacker	C			X	ND		Note: CLR Part 1 identified as Supporting but Part 2 determines to be Contributing
EC-27,28	**Objects and Small-scale Features**								
	SS-56	Jack-Leg Fence	C/S/NC	X	X	X	1860s+		Not individually analyzed; refer to park GIS database for details
	SS-57	Metal Post and Wire Fence	C/S/NC		X	X	ND		Not individually analyzed; refer to park GIS database for details; cross fence NC (1990s)
	SS-58	Wood Post and Wire Fence	C/S/NC		X	X	ND		Not individually analyzed; refer to park GIS database for details
	SS-59	Overhead Gates	ND			X			
	SS-60	Double 5-Rail Braced Gate	ND			X			

PASTURE/HAYFIELD: Inventory of Existing Conditions and Contributing Resources

C = Contributing; **NC** = Non-Contributing; **S**=Supporting; **ND**=Not Determined				**Associated Historic Period**					
Map #	CLR/Map ID#	Feature	C/NC/S/ND	Grant-Kohrs 1862-1919	Warren 1929-1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
	SS-61	Metal Pipe Gate	NC			X	ca. 1999		
	SS-62	Metal Pipe and Mesh Gates	NC			X	ca. 1999		
	SS-63	Wood Post and Woven Wire Fence	C/S		X	X	ND		Not individually analyzed; refer to park GIS database for details
	SS-64	Blue water troughs	NC			X	ca. 1999		
EC-27, 28	**Archeological & Missing Resources**								
	A-29	Wood frame structure, ruins	M				ND		
	A-30	Road to Hell Gate	M	X	X		pre-1868		aka "Old County Road"; moved late 1930s

TABLE OF CONTRIBUTING FEATURES - UPLAND PASTURE

UPLAND PASTURE: Inventory of Existing Conditions and Contributing Resources

C = Contributing; **NC** = Non-Contributing; **S**=Supporting; **ND**=Not Determined				**Associated Historic Periods**					
Map #	CLR/Map ID#	Feature	C/NC/S/ND	Grant-Kohrs 1862-1919	Warren 1929-1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
EC-29	**Natural Systems and Features**								
	NS-1	Bench	C	X	X	X			
	NS-12	Hilltops	C	X	X	X			
	NS-13	Taylor Creek	C	X	X	X			
EC-30	**Vegetation**								
	VE-13	Irrigated hay grasses							
		smooth brome	C		X	X	ca. 1950	E	*Bromus inermis*
		common timothy	C	X	X	X	1893	E	*Phleum partense*
		Kentucky bluegrass	ND		X	X		E	*Poa pratensis*
		red clover	C	X	X	X	1894	E	*Trifolium pretense*
		Canada thistle	NC			X		E	*Cirsium arvense*
		crested wheatgrass	C		X	X	1951	E	*Agropyron cristatum*
		white clover	ND			X	ND	E	*Trifolium repens*
		redtop bentgrass	C		X	X	ND	E	*Agrostis stolonifera*
		intermediate wheatgrass	C		X	X	ca. 1939-1945	E	*Agropyron intermedium*
	VE-16	Dry range/pasture grasses							
		common yarrow	C	X	X	X		N	*Achillea millefolium*
		crested wheatgrass	NC			X		E	*Agripyron cristatum*
		fringed sagebrush	C	X	X	X		N	*Artemisia frigida*
		standing milkvetch	C	X	X	X		N	*Astragalus adsurgens*
		blue grama	C	X	X	X		N	*Bouteloua gracilis*
		smooth brome	NC		X	X		E	*Bromus inermis*
		spotted knapweed	NC			X		E	*Centaurea biebersteinii*
		waveleaf thistle	C	X	X	X		N	*Cirsium undulatum*
		rubber rabbitbush	C	X	X	X		N	*Ericameria nauseosa*
		shaggy fleabane	C	X	X	X		N	*Erigeron pumilus*
		cultleaf daisy	C	X	X	X		N	*Erigeron compositus*
		rough fescue	C	X	X	X		N	*Festuca camperstris*
		scarlet gaura	C	X	X	X		N	*Gaura coccinea*
		prairie smoke	C	X	X	X		N	*Geum triflorum*
		curly-cup gumweed	C	X	X	X		N	*Grindelia squarrosa*
		broom snakeweed	C	X	X	X		N	*Gutierrezia saothrae*
		baby's breath	NC			X		E	*Gypsophia paniculata*
		needle-and-thread	C	X	X	X		N	*Hesperostipa comata*
		little-leaf alumroot	C	X	X	X		N	*Heuchera parvifolia*
		winterfat	C	X	X	X		N	*Krascheninnikovia lanata*
		bitterroot	C	X	X	X		N	*Lewisia rediviva*
		yellow sweetclover	NC			X		E	*Melilotus officinalis*
		plains pricklypear	C	X	X	X		N	*Opuntia polyacantha*
		Bessey's locoweed	C	X	X	X		N	*Oxytropis besseyi*
		western wheatgrass	C	X	X	X		N	*Agropyron smithii*

UPLAND PASTURE: Inventory of Existing Conditions and Contributing Resources

C = Contributing; **NC** = Non-Contributing; **S**=Supporting; **ND**=Not Determined				**Associated Historic Periods**					
Map #	CLR/Map ID#	Feature	C/NC/S/ND	Grant-Kohrs 1862-1919	Warren 1929-1982	NPS Post 1982	Date of Origin	Native or Exotic	Comments
		longleaf phlox	C	X	X	X		N	*Phlox longifolia*
		moss phlox	C	X	X	X		N	*Phlox muscoides*
		sandberg's bluegrass	C	X	X	X		N	*Poa juncifolia*
		bluebunch wheatgrass	C	X	X	X		N	*Agropyron spicatum*
		tall tumblemustard	NC			X		E	*Sisymbrium altissimum*
		Missouri goldenrod	C	X	X	X		N	*Solidago missouriensis*
		scarlet globemarrow	C	X	X	X		N	*Sphaeralcea coccinea*
		dandelion	NC			X		E	*Taraxacum officinale*
		spineless horsebrush	C	X	X	X		N	*Tetradymia canescens*
		intermediate wheatgrass	NC		X	X		E	*Agropyron intermedium*
	VE-17	Apple tree cluster	C		X	X	ca. 1890	E	*Malus sp.*
	VE-18	Cottonwood tree cluster	C		X	X	ca. 1890	N	*Populus trichocarpa*
EC-30	**Spatial Organization**								
	SO-45	Big Gulch	C		X	X	1930s		
	SO-46	Little Gulch	C		X	X	1930s		
	SO-47	Lower Taylor Field	C		X	X	1930s		aka Taylor meadow
	SO-48	Upper Northwest Range	C		X	X	1930s		
	SO-49	Taylor Ridge Range	C		X	X	1930s		
	SO-50	Gravel Pit Range	C		X	X	1930s		
	SO-51	Ridge Road Range	C		X	X	1930s		
	SO-52	Upper Taylor Field	C		X	X	1930s		
EC-30	**Land Uses**								
	L-3	Livestock Grazing	C		X	X	1930s		
	L-5	Hay production	C	X	X	X	1860s+		
EC-29	**Constructed Water Features**								
	CW-6	Kohrs "Big" Ditch	C	X	X	X	ca. 1885		
	CW-8	Lateral ditches	C		X	X	1930-50		
	CW-9	Old/abandoned ditches	C		X	X	ND		
	CW-13	Irrigation Mainline	NC			X	ND		location approximate
	CW-17	West-side Ditch	C	X	X	X	1887		
	CW-18	Hartz Ditch	C	X	X	X	ca. 1890		assumed association with Kading homesite
	CW-19	Talyor Ditches	C			X	ca. 1885		GRKO water rights
	CW-20	Salmonson Waste Ditch	ND			X	ND		
	CW-21	Irrigation Headgates	S/NC		X	X	ND		Most headgates in original location but reconstructed; not individually analyzed
	CW-22	Earthen Dam	ND			X	ND		based on NPS comments

UPLAND PASTURE: Inventory of Existing Conditions and Contributing Resources

EC-31	**Circulation**								
	C-23	Kohrs Ditch Road	C		X	X	late 1930s		
	C-30	Upland Pasture Road	C		X	X	ca. 1890		assumed association with Kading homesite
	C-31	Ridge Road	C		X	X	ca. 1890		assumed association with Kading homesite
	C-32	MTSR-4691	C		X	X	ND		
	C-33	Gravel Pit Road	C		X	X	late 1950s		
	C-34	Little Gulch Road	C		X	X	ND		
	C-35	Big Gulch Road	C		X	X	ND		
EC-31	**Views and Viewsheds**								
	V-28	Views of the ranch and riparian zone	C	X	X	X			
	V-29	Views of Deer Lodge/Hillcrest Cemetery	C	X	X	X			
	V-30	Views to Deer Lodge Mountain/Mt. Powell	C	X	X	X			
	Buildings and Structures								
		N/A							
EC-32	**Objects and Small-scale Features**								
	SS-65	Metal Post and Barbed Wire Fence	NC			X	1998		
	SS-66	Wood Post and Barbed Wire	C/S		X	X	ca. 1930s		not individually analyzed
	SS-67	Electric Fence	NC			X	ca. 2002		
	SS-68	5-Rail Stacked-End Fence	C		X	X	ND		
	SS-69	Wire Gates	ND			X	ND		
EC-32	**Archeological & Missing Resources**								
	A-31	Dump Areas	M		X		ND		
	A-32	Pig Farm Foundation	M		X		ND		
	A-33	Kading Homestead	M	X	X		ca. 1890		
	A-34	Excavations	M		X		ND		gravel pit excavated late-1950s, reclaimed 1994
	A-35	Brickyard	M		X		ND		
	A-36	Archeological-Tipi	M				ND		
	A-56	Hilltop (removed for road grade)	M	X	X	X	ND		NPS removed ca. 1992

Chapter Two - Management Summary

MANAGEMENT PHILOSOPHY

DESIRED FUTURE CONDITIONS STATEMENT

This "broad-brush," future-oriented narrative is intended to describe the ranch's cultural landscape in visual terms. It presents an idealized picture to which park management can be directed.

The cultural landscape of Grant-Kohrs Ranch National Historic Site preserves and interprets the legacy of cows, cowboys, and cattle barons. Here, in the shortgrass prairies of western Montana, successive generations of ranchers shaped the natural landscape to meet their needs. Over more than a century, they manipulated plant communities and built a collection of modest structures and landscape features to serve their purposes, giving rise to a distinctive landscape that bears witness to their values of hard work.

Today the NPS continues the tradition of working the land. They manage the park as a working ranch to enrich visitor understanding and enjoyment, while devoting care to the protection of natural resources. Under this approach, the entire spectrum of ranch resources has been preserved in excellent condition. NPS officials carefully manage the scene to portray the evolution of the property's history, from the open range period of the mid-nineteenth century to the ranch's modernization in the mid-twentieth.

The heart of the ranch is the land itself: a western tableau of dry hills, wide fields, and open vistas. Grasslands cover most of the ranch: native shortgrass prairie on the dry hills and cultivated pasture grasses in the irrigated lowlands and uplands. The NPS sustains these healthy plant communities through grazing and other means. In keeping with the property's past, they maintain a mixed herd of Longhorn, Shorthorn, and Hereford cattle. Many of these animals have even been trained to eat noxious weeds to reduce the impact of invasives on the landscape.

Views of open spaces and agricultural scenes remain a major component of the visitor experience. Looking west, a visitor to the ranch will notice irrigated pastures and hay fields in the foreground and middle ground. Predominantly introduced pasture species, these grasses grow tall in this well-watered environment. For much of the year, they shine a vibrant green, which sets off these irrigated fields from the dry hills beyond, which are clothed in tan and gold. One observes in this view patterns of land use and spatial organization that were in place during the period of significance. Due to careful management of grazing and irrigation regimes, and the selective removal of non-contributing fences, these fields maintain an open, expansive quality as compared to contemporary neighboring ranches. One scarcely notices any separation between the upland pastures at the western

edge of the park and the private lands beyond, which are protected by conservation easements and other agreements. From a distance, the NPS boundary fence is hardly visible, and cattle graze on both sides of the line. Further west, the forested slopes of Deerlodge Mountain and Mount Powell are the last features in view. Even this distant portion of the viewscape, lying well beyond the limits of the park, has been protected. Along with its partners, NPS is actively engaged in planning efforts to secure its long-term survival.

A variety of built features, from historic hay stackers to irrigation ditches, attest to the working quality of the landscape. All of these contributing features are preserved and used to the greatest extent possible. The informal network of ranch roads has seen few changes since the mid-twentieth century. Roads are surfaced in dirt or gravel and receive fairly light use, except during periods of busy activity on the ranch. Constructed over many decades, the historic irrigation system of ditches, headgates, and pumps is maintained in good working order and retains its essential role in supplying water to hayfields and pastures. The NPS updates irrigation equipment and implements other necessary changes in a way that is compatible with the ranch's history and visual character. For example, they preserve the historic pump houses in good condition and design any modifications to these structures to be unobtrusive and visually compatible.

The evolution of ranching over time may also be observed in the variety of historic fence types on the property. The presence of non-contributing fences that were added after the period of significance has been reduced, especially in the dry ranges of the Upland Pastures component landscape. Before making any changes to the fence network, NPS managers carefully weigh historic evidence with effects to wildlife and other natural resources, as well as the impacts to views. The NPS maintains this entire suite of historic infrastructure and uses it in the day-to-day operations of the ranch. As a host site for innovative preservation programs, the park attracts and trains skilled personnel, including students and volunteers, who learn the historic practices and skills integral to the ranch's long-term preservation and daily operations.

Public use and interpretation of the landscape has expanded, with careful attention to enhancing visitor experience through compatible activities. A better-informed public takes advantage of the park's opportunities for self-guided hikes and horseback rides, as well as future guided programs such as an overnight "cow camp" on the open range. In general, interpretive signs are avoided in favor of forms of interpretation that do not require additions to the landscape. However, a limited number of well-sited directional signs ensure that non-guided visitors will be properly oriented and safe. These directional signs are very low profile and unobtrusive, and are compatible with the historic setting in materials, color, and finish.

The Cottonwood Creek Trail has been restored and realigned to avoid major flooding and is better incorporated into interpretive programming. Aside from this trail, built visitor facilities are kept to an absolute minimum. By seeking creative solutions, the NPS implements accessibility with few, if any, permanent changes to the landscape. In summary, increased use of the cultural landscape reflects an enhanced appreciation for it as one of the park's primary assets. The public views the ranch landscape as a collection of interconnected places and spaces where visitors may imagine themselves in another time, and experience the sights, sounds, smells, and traditional practices of a historic American cattle ranch.

SECRETARY OF THE INTERIOR'S FOUR TREATMENTS

The Secretary of the Interior recognizes four appropriate treatment alternatives for historic landscapes: preservation, rehabilitation, restoration, and reconstruction. Published standards for each of these treatments are available (Birnbaum 1996, 17-19, 47-49, 89-91, 127-129). These standards provide managers with the philosophical framework for a consistent approach to a cultural landscape project, once a specific treatment approach has been selected. A variety of factors may influence the decision of primary treatment. These factors include: a property's level of historical significance and degree of historic integrity (physical evidence of significance), a property's proposed use, and long- and short-term objectives. The overall goal for each of the four treatments is the preservation and enhancement of historic integrity. However, both restoration and reconstruction are concerned with introducing measures to return a landscape to its conditions and appearance at a particular time in history. By contrast, both preservation and rehabilitation "seek to secure and emphasize continuity, while acknowledging change" (Birnbaum 1996, 6).

Preservation

Preservation is defined as the act or process of *applying measures necessary to sustain the existing form, integrity, and materials of an historic property*. Preservation work generally focuses upon ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of systems to make properties functional is appropriate within a preservation project. Preservation may be viewed as an appropriate treatment when a property's distinctive materials, features, and spaces are essentially intact and thus convey the historic significance without the need for extensive repair or replacement; when depiction at a particular period of time is not appropriate; and when a continuing or new use does not require extensive changes. Of the four treatments, preservation standards require the greatest amount of historic fabric, including the landscape's historic form, features, and details *as they have evolved over time* (Birnbaum 1996, 3, 17-18).

The Secretary of the Interior has set forth eight standards that outline the philosophy for preservation in detail. These standards emphasize stabilization and repair over replacement, although they do allow for limited replacement of historic features. The standards also respect changes that have occurred to a landscape over time and acquired significance in their own right. The stated goal of the preservation standards is the retention of a historic landscape's existing form, features, and materials, provided that these actions will not result in a degraded landscape condition—that is, provided the actions do not conflict with other resource objectives (Birnbaum 1996, 3, 19-20).

Rehabilitation

Rehabilitation is the act or process of *making possible a compatible use* for a property through repair, alterations, and additions, *while preserving those portions or features that convey its historical, cultural, or architectural values*. Rehabilitation may be an appropriate treatment when repair and replacement of deteriorated features are necessary; when alterations are planned for a new or continued use; and when depiction at a particular period of time is not appropriate. The standards for rehabilitation—as with those for preservation—emphasize retaining and repairing existing historic features, finishes, and materials; however rehabilitation standards acknowledge the need to alter a cultural landscape to meet continuing or new uses (Birnbaum 1996, 3, 47-48).

Restoration

Restoration is the act or process of *accurately depicting the form, features, and character of a property as it appeared at a particular period* of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. Restoration may be appropriate when the property's significance or design during a particular period outweighs the potential loss of extant materials, features, and spaces from other periods (Birnbaum 1996, 89-90). In light of established park direction, which emphasizes the preservation and interpretation of all periods of the park's history, restoration is not appropriate as an overall landscape treatment for Grant-Kohrs Ranch National Historic Site.

Reconstruction

Reconstruction is the act or process of *depicting, by means of new construction, the form, features, and detailing of a non-surviving landscape*, site, or object for the purpose of *replicating its appearance at a specific period* of time and in its historic location. Reconstruction is primarily undertaken for interpretive purposes (Birnbaum 1996, 127-128). Reconstruction is not appropriate as an overall treatment for the park.

PRIMARY TREATMENT APPROACH FOR GRANT-KOHRS RANCH CULTURAL LANDSCAPE

The overall landscape treatment for the entire Grant-Kohrs Ranch cultural landscape is preservation, with selected rehabilitation and restoration as needed.

This CLR Part Two establishes **preservation** as the overall landscape treatment for the Grant-Kohrs Ranch, **with selected rehabilitation and restoration** projects as appropriate. Planners arrived at this decision through a conversation with key NPS personnel in August 2007, as part of a site visit for this project. Those present from within the park included the superintendent and key representatives from the interpretation, resource management, and facilities/maintenance divisions. Jill Cowley, NPS cultural landscape program lead for the Intermountain Region, moderated the discussion.

Several factors influenced the determination of primary treatment. One of these factors was the park's very high level of significance and integrity, as reflected by the National Historic Landmark designation. These circumstances rule out restoration and reconstruction as appropriate, and further suggest a fairly conservative approach. While the period of open range ranching is the primary interpretive theme, the evolution of ranching is important - more so as time passes and the Warren Era become more distant. Park officials verify this in recent planning documents. For instance, the updated *Foundation for Planning* document records that management of the park will be oriented towards a variety of periods. It also states the park's intention to manage the GRKO Ranch cultural landscape for the entire period of significance, with consideration for the integrity of component landscapes to certain sub-periods (NPS 2008, 15-18). For these reasons, preservation, which honors the continuum of development and history on the ranch, was chosen as the primary treatment. Within this overall approach, carefully planned rehabilitation and or restoration projects may occur.

Land Use and Vegetation

Under this philosophy, the primary land uses of the park will remain the same. Congress intended the NPS to maintain the property as a working cattle ranch. The major agricultural activities that occur at the ranch—raising cattle including their support through grazing and producing hay by means of contour irrigation and other methods—are central to the park's purpose, and must therefore remain. They help to preserve the cultural landscape in a number of ways and to keep heritage, for instance by helping to keep heritage skills alive (NPS 2008, 20). Another important use is interpretation. The historic agricultural practices at the ranch provide tremendous potential for interpretation and for enhancing public appreciation and enjoyment (NPS 2008, 3-4).

Related to agricultural practices is the topic of vegetation management. Maintaining healthy and historically appropriate plant communities is a primary consideration for park managers. Under the philosophy of preservation with selected rehabilitation or restoration, park officials will continue to preserve the distinct communities that have arisen over time, including native prairie communities and the communities of introduced but not necessarily historic or heritage pasture species. The goal is to sustain these communities rather than to "freeze them in time." Park officials are free to consider a range of management options. This is one area where cultural resource and natural resource objectives need to coordinate.

Circulation, Constructed Water Features, Small-Scale Features and Building/Structures

The overall treatment philosophy emphasizes retaining, repairing, and using historic built features such as roads, structures, and irrigation ditches. These features preserve a record of human adaptation to the environment over many periods. For instance, the origins of the Kohrs-Manning Ditch may be traced to the period when Johnny Grant operated the ranch in the 1870s. Con Warren built many of the ditches in the Western Hay Fields much later. The philosophy of preservation acknowledges the significance of all of these contributing features, rather than dictating that some be preserved while others removed. At the same time, park officials may minimally upgrade certain features if new uses or other demands require. This may especially be the case with regard to existing roads.

Spatial Organization and Views

Views of relatively undeveloped land play a key role in maintaining the historic and scenic character of the ranch. According to the CLR Part One, views are much the same today as they were during the Grant-Kohrs and Warren periods; however, fencing erected by the NPS after the period of significance has altered historic patterns of spatial organization and diminished integrity of feeling in both the Upland Pastures and Pasture/Hay Fields slightly (JMA 2004, 4-30, 4-76, 4-77). The overall treatment would favor strategies that protect and preserve the open views within the ranch and surrounding lands. Under this philosophy, park officials could also choose to restore the open, undivided character of historic fields and pastures by selectively removing fences, if they determine that this is warranted.

Public Use, Interpretation and Facilities

Through conversations with park staff, public use and interpretation emerged as the main area for which the park may elect to follow a rehabilitation approach. The park already offers several high quality interpretive programs and activities, including a house tour and guided wagon rides. Yet the park appears to be struggling to attract visitors. Under this philosophy, park officials may consider limited new uses, facilities, or interpretive strategies in order to expand public use of the ranch landscape and enhance visitor experience. This document will not specify specific actions to take; park officials should explore the range of options. However, we are including some guidelines and treatments as examples of public use and interpretation measures that would fit within the treatment of preservation with selected rehabilitation or restoration.

The authors of this report can imagine new and expanded uses that would respect the cultural landscape. For instance, the park may choose to consider options for offering horseback riding. Existing use for hiking could also be expanded. For the most part, both hiking and riding could be accommodated on existing roads and fields. The park, for instance, could establish designated loop hikes along existing roads. They could recommend them to visitors depending upon the experiences desired, and promote these opportunities through publications and other means.

In some instances the park may consider minimally upgrading existing roads to support expanded uses. For instance, the park could feasibly improve roads in the Upland Pasture component landscape so that wagon rides could access a natural overlook near the apex of the Ridge Road. This change would allow the visitor to experience the dry upland pastures, a landscape type quite different from other portions of the ranch, and one of the park's most significant natural resources. This change would also allow visitors to enjoy views to Hillcrest Cemetery, where members of the Kohrs, Bielenberg, and Warren families are buried, offering the park an opportunity to interpret additional themes, such as the ranch's historic connection to the community of Deer Lodge.

New visitor facilities should be avoided, but if some are determined necessary, these new facilities should be kept very minimal. Furthermore, these facilities should be designed so that they don't intrude upon the historic scene, including views. The park should consider options that do not impact the landscape's integrity. For instance, managers may propose temporary structures or exhibits that can easily be removed (the interpreted camp is a good example), or they may explore new interpretive media that leave no mark on the landscape (such as brochures or audio cell phone tours). Signage should be kept to an absolute minimum, and designed to minimally impact the landscape.

PRIMARY TREATMENT FOR COMPONENT LANDSCAPES

The overall treatment of preservation with selected rehabilitation and restoration also applies to the Pasture/Hay Fields and Upland Pastures component landscapes. These two component landscapes lie within the NHL district boundary and possess historic integrity. They contain significant landscape resources from many time periods. According to the CLR Part One, the period of time for which the Pasture/Hay Fields component landscape maintains greatest integrity is 1950s-1972. For the Upland Pastures these dates are 1930s-1972 (JMA 2004, 4-77). In light of surviving contributing resources, it would not be appropriate to "restore" these areas to reflect an earlier period of time. Rather, management of these lands should emphasize the entirety of development and the evolution of ranching. **The overall approach for both of these component landscapes will be preservation with selected rehabilitation and/or restoration.**

MANAGEMENT ISSUES

Below is a summary of management issues, concerns, and objectives that are relevant to the management of the Upland Pastures and Pasture/Hay Fields component landscapes. These points have been gathered from a variety of sources including the CLR Part One, the *Foundation for Planning*, and notes supplied by the park's Chief of Resource Management.

Vegetation and Natural Systems

- Maintaining healthy plant communities representative of dry upland pastures (composed primarily of native grasses and forbs) and irrigated hayfields and pastures (primarily consisting of introduced pasture grasses) is of primary importance for park management. Both communities are valuable for interpreting the park's long history of ranching.

- Plant communities should exist in appropriate locations—i.e. places on the ranch where these communities were maintained during the period of significance.

- In particular, the preservation of shortgrass prairie communities located on the dry range pastures of the Upland Pasture component landscape is a priority. These healthy and diverse communities are remnants of a once vast prairie ecosystem, and are probably among the last such remnants in the Deer Lodge Valley. They are very valuable from an ecological standpoint.

- Several plant and animal species negatively impact the natural resources/cultural landscape of the ranch (see discussion of noxious weeds below and discussion of beavers and Columbian ground squirrels below and under "Constructed Water Features"). The NPS promotes the control of such pests through implementation of Integrated Pest Management (IPM). IPM is an effective and environmentally sensitive approach to pest management that relies on a combination of common-sense practices. A primary aim of IPM is to drastically reduce the use of pesticides and herbicides, which cause a variety of harmful ecological effects (e.g. degradation of water quality, negative effects to desirable species etc.).

- Noxious weeds are a primary threat to the healthy functioning of both dryland pastures and irrigated pastures/hay fields. Three particularly troublesome species are: spotted knapweed, leafy spurge, and Canada thistle. The presence of these species results in a reduction of wildlife habitat, reduced capacity for grazing, increased soil erosion and topsoil loss, and also threatens the ability of the ranch to produce weed-free hay for use in other NPS units. The park maintains an aggressive integrated program to control these species. (JMA 2004, 3-5-2).

- The protection of native wildlife and the protection of cultural resources are both primary responsibilities of the NPS. Oftentimes these concerns go hand-in-hand, but occasionally they are in opposition. At Grant-Kohrs Ranch NHS, populations of Columbian ground squirrels and beavers lead to conflicts with the maintenance of a functioning cultural landscape (see "Constructed Water Features"). Where possible, the NPS should balance cultural resource management with ecological considerations.

- Since the 1990s the Eastern Front Fields have been irrigated with effluent water form the effluent ponds. As a result, the species composition of this area has been transitioning from dry upland species to smooth brome and spotted knapweed—aggressive exotic species that are outcompeting native species. However, this area was irrigated historically by Con Warren and the current irrigation by hand line and risers replicates historic conditions, although the source of water has changed (JMA 2004, 3-5-2, 3-5-3). The park feels that it is important to interpret the practice of irrigation by hand line as part of the continuum of ranching history and practices on the ranch. The park will likely lose the authority to use effluent water for irrigation in the coming years. Restoring the historic system in this area and continuing use of the hand line is likely to be expensive and unsustainable, given projected staffing and funding. A plan is needed.

- Erosion due to overgrazing is always a threat to park resources. Park managers seek to restore eroded areas and to prevent it from occurring by eliminating overgrazing. Other factors, including the proliferation of noxious weeds, may also contribute to erosion.

Land Use

- Congress intended the NPS preserve the Grant-Kohrs Ranch NHS as an operating cattle ranch. Historic agricultural practices including grazing livestock and producing hay are the preferred means for managing/preserving the cultural landscape (NPS 2008, 3, 22)

- There are challenges associated with the overall strategy of managing natural resources as part of a working cattle ranch. Questions arise about how to balance practices such as hay production (e.g.

how much), livestock grazing (e.g. where it is appropriate, and how to prevent overgrazing), exotic weed control (including the use of herbicide), water quality, and the appropriateness of non-native grass species. The park has difficulty articulating the management philosophy to neighbors and partners (JMA 2004, 1-4).

- Soil and water quality issues include erosion, soil loss, and excessive runoff. According to the recent *Foundation Report*, however, these conditions, along with the related issue of exotic invasive species, have improved significantly in recent years due to aggressive management (NPS 2008, 21).

Spatial Organization and Views

- Open views of undeveloped land are very important in maintaining the historic character of the ranch. Of particular importance to the historic scene are the views of the western foothills and the Flint Creek Mountain Range beyond. These landmarks are prominent in view from nearly every location in the park, including areas of high visitation, and they contribute to the historic sense of openness associated with the open range period. Two conservation easements now afford protections against development and require the maintenance of cultural landscape values. NPS maintains one of these easements, which covers land north of the park boundary (the Olsen fields). The foothills along the western boundary of the park are now protected through the Five Valleys Land Trust and Rock Creek Ranch conservation easement. Yet the preservation of views to the Flint Creek Range is still a concern. A United States Forest Service planning document involving this range is currently under review.

- Now that much of the western viewshed is under protection of scenic easements, preservation of the historic agricultural scene within the park becomes increasingly important. Near and middle-ground views across the Pasture/Hay Fields and Upland Pastures are significant, as are views from these areas back to the center of the historic Home Ranch complex.

- Continuing land uses are an important component of the contributing views. Depending upon the season, cattle and horses may be grazing in the field, and agricultural activities (flood irrigation, hay baling etc.) may be occurring. These activities contribute to the historic agricultural scene and enhance the visitor experience.

- The Grant-Kohrs Ranch contains numerous types of fencing, totaling approximately 30 miles. A large percentage of this total is contained within the Pasture/Hay Fields and Upland Pasture component landscapes. Fences are essential to the proper functioning of the ranch. They divide pastures and hay fields into separate areas and prevent escape by livestock from one area to another (JMA 2004, 3-5-8). Park staff requests direction for dealing with the existing fencing in a historically appropriate manner.

  - Of particular interest are the NPS cross-fences that subdivide fields into smaller plots. The NPS installed these fences in recent decades to facilitate management and reduce the threat of overgrazing. However, the resulting system of smaller subdivided fields contrasts with historic conditions, which were characterized by a greater sense of openness and expansiveness. This situation slightly diminishes the integrity of feeling for the Upland Pastures and Pasture/Hay Fields component landscapes (JMA 2004, 4-76, 4-77).

  - In past years the NPS has built many jack-leg fences. These fences reflect local vernacular traditions, and possess interpretive and scenic value. However, they were built by the NPS after the period of significance and are non-contributing (but supporting) features. The park requested advice for treatment.

  - Electric fences exist in certain areas within the Upland Pasture component landscape. According to the CLR Part One, these electric fences diminish the integrity of feeling slightly. The appropriateness of using electric fences should be evaluated. (JMA 2004, 4-77).

Buildings, Structures and Small-Scale Features

- Aside from fences, there are few permanent structures in the Upland Pasture or Pasture/Hay Fields component landscapes. Two impressive hay stacker structures stand on the Pasture/Hay Fields. Resting in the Stuart Field, the Beaver Slide Hay Stacker is representative of historic construction, but the NPS built it on site within the past decade to demonstrate historic haying practices. The Jenkins Hay Stacker is an original

piece of equipment used on the ranch by Con Warren. The CLR Part One incorrectly classified it as a supporting feature; it is a contributing feature. How can the park maximize the value of these structures for interpretation?

- The pump house (HS-86) located along the Warren Pump House Road is a contributing feature and is eligible to the National Register at the state level, although it was constructed about 1960. Historically, this pump house supplied water diverted from the Kohrs-Manning Ditch to the Front Fields, which were irrigated during Con Warren's time using a hand line. This pump house appears to be deteriorating.

- The pump house (HS-87) is associated with the Big Ditch and Western Hayfields. Although there is some debate about its historic value, it has been determined eligible to the National Register and is a contributing feature of the cultural landscape. The irrigation system in this area including the pump house equipment functions poorly and needs to be rehabilitated. The park may face difficulty in ensuring proper functioning of the system while maintaining the historic integrity of the structure.

Constructed Water Features

- The Upland Pasture and Pasture/Hay Fields component landscapes are home to a variety of irrigation structures, including an extensive operating ditch network. These features continue to play an essential role in the operation of the ranch, enabling the historic practice of flood irrigation to continue for the purposes of cultivating hay and maintaining pastures. These ditches developed over the ranch's long history. A number of utilitarian features are associated with the historic irrigation ditch network. These include headgates and headwalls, diversion dams, culverts, and irrigation mainlines and risers. These must be constantly maintained to keep the irrigation system operating effectively (JMA 2004, 3-5-6). Repair and replacement of these features must weigh historic construction, materials, and operation techniques with costs and more sustainable design.

- Beavers and Columbian ground squirrels pose hazards to the irrigation network. Squirrels burrow into ditches, often weakening the ditch banks and causing them to wash out. Beaver dams flood areas not historically flooded and can damage ditches. Both of these activities may also prevent the legally mandated flow of water to neighboring lands. The NPS issues special use permits to authorize reduction of beaver populations through trapping and relocation. In the past, NPS has used poison to control the Columbian ground squirrels. Control of these pests will be achieved through Integrated Pest Management techniques. (JMA 2004, 3-5-6).

Circulation

- The park's internal network of roads developed over time as a result of ranching and park management. Two were established by the NPS. Some management questions relating to roads include: which roads should be retained? Which of these roads should be open to the public and under what circumstances? What should the character of these roads be, in terms of width, surfacing etc.?

- Some local public officials maintain that the West Side Road remains a county road and should be open to public travel. The NPS questions this and maintains that reopening the road may negatively impact the park's natural resources. The NPS does not support this view and maintains that reopening the road would negatively impact the park's natural resources. Currently the road is a primitive, dirt-surface "two-track" that receives light use for the purpose of park operations. Likely impacts of reopening the road could include increased erosion and dust, damage to vegetation, and the visual impacts on the cultural landscape of significantly increased traffic within the park's primary viewshed, among others. Park managers would like the road to remain much as it is with regard to present condition and with compatible uses.

Public Use and Interpretation

- Visitation to the Grant-Kohrs Ranch NHS has declined in recent decades. In informal discussions, park personnel indicated that in 1983, when the ranch was the setting of major events commemorating the centennial anniversary of the Northern Pacific Railroad's Golden Spike ceremony, park visitation reached 23,000; and that in more typical years it was about 18,000. Perhaps the park is struggling with the challenge of staying relevant, particularly to young populations. Enhancing interpretation and use of the cultural landscape may help meet this relevancy challenge. Options must be carefully considered. What types of use are appropriate, where, and when?

- Park staff has determined that interpretation at the park should emphasize the evolution of ranching through time, rather than focusing on one particular period. Interpretation should also emphasize the

interconnectedness of cultural resources and natural systems (NPS 2008, 5). New interpretive facilities and programs should accord with these decisions.

- The Cottonwood Creek Nature Trail, which provides access from the ranch visitor center to Stuart Field and nearby Cottonwood Creek, is the only self-guided interpretive trail within the Pasture/Hay Fields component landscape (or Upland Pasture). This trail has fallen into disrepair due to flooding by Cottonwood Creek.

- Both the Beaver Slide Hay Stacker, located in Stuart Field, and the Jenkins Hay Stacker, at the western edge of park, play a role in the existing interpretation of the park. The historic haying demonstration that takes place at the annual Grant-Kohrs Days celebration centers on the Beaver Slide Hay Stacker. One day a year park staff leads a guided hike to the Jenkins Hay Stacker. Options for enhancing interpretation of the Jenkins Hay Stacker are desired.

- In recent years the park has been offering regularly scheduled wagon rides from the Ranch House across the Clark Fork River to an "interpreted cowboy camp" at the eastern edge of the Pasture/Hayfields. Visitors enjoy these concessioner contractor led programs and they present opportunities for expansion.

- NPS is subject to the Architectural Barriers Act of 1968 and the Americans with Disability Act of 1990. NPS Management Policies (5:14) prescribes "the highest feasible level of physical access for disabled persons to historic properties, consistent with the preservation of the properties' significant historical attributes." Accessibility must be implemented in a way that respects the historic significance and the character of the landscape. The park would appreciate some guidance.

New Design and Construction

- A minimal amount of infrastructure for visitor use and understanding is probably needed. What should be the approach to new visitor use facilities? If new structures or roads/trails are to be developed for public use, where should they be located, and what should their character be? What should be the experience offered by trails? How should the park handle signs in the landscape?

Chapter Three - Treatment Plan:
Pasture/Hay Field and Upland Pastures Component Landscapes

GENERAL TREATMENT GUIDELINES AND SUGGESTED TREATMENTS

The following pages present a series of general guidelines and suggested treatment recommendations for the preservation and enhancement of historic integrity within the Pasture/Hay Fields and Upland Pasture component landscapes. Preservation guidelines and suggested treatments are provided for eight topics:

- Vegetation, Natural Systems and Features;
- Land Use including Ranching Practices;
- Spatial Organization, Views, and Fencing;
- Buildings, Structures, Small-Scale Features;
- Constructed Water Features;
- Circulation;
- Public Use and Interpretation; and
- New Design and Construction.

These guidelines offer general guidance regarding the maintenance and use of existing landscape features, as well as the addition of new features and the design of those features. These guidelines reflect the selected overall landscape treatment of "preservation with selected rehabilitation and restoration." These guidelines apply to both component landscapes, as appropriate.

The suggested treatments offer more focused guidance. Generally, these treatments build upon the more general guidelines by providing specific examples. A treatment may refer to specific landscape features within the two component landscapes, for example, a particular tree cluster, pump house, trail, viewpoint, or the character of vegetation in a certain field. As with all other guidance provided in this CLR Part Two, the recommended treatments are offered as suggestions and are not intended to tie the hands of park managers.

Note: To maintain consistency with CLR Part One, this document uses the boundaries given for the component landscapes in that earlier document. Thus, the Upland Pastures component landscape is defined as everything west of the Kohrs Ditch Road, even though a large portion of this area (Big Gulch, Lower Gulch, Taylor Field) consists of irrigated pastures and hay fields that are managed much the same as the Pasture/Hay Fields component landscape. The map of the Upland Pastures uses different colors to differentiate between these irrigated upland areas and the dry ranges that support native pastures.

SPECIAL REQUIREMENTS

All treatments to the cultural landscape must reflect the core principles of the National Park Service. These special requirements would include the park's responsibility and obligation to:

- Provide a safe environment for both visitors and employees,
- Maintain an environmentally friendly and sustainable setting,
- Abide by federal regulations and policies on topics such as sustainability and energy use,
- Be economically efficient, and
- Promote strong working relationships with outside partners.

VEGETATION / NATURAL SYSTEMS and FEATURES

GENERAL GUIDELINES

- Retain and preserve contributing vegetation representative of the Grant-Kohrs ranch's entire history and legacy of land use.

- Enhance the health of native prairie plant communities.

- To the greatest extent possible, use historic agricultural practices (e.g. grazing, flood irrigation, haying with both horses or motorized equipment) as the primary tool for managing and maintaining vegetation.

- Use an IPM approach to control invasive exotic plants including spotted knapweed, leafy spurge, and Canada thistle. Use ecologically sound removal techniques such as the "educated cattle" program. Use herbicides only as part of a comprehensive plan in combination with other strategies. Use only approved herbicides. Monitor water quality for impacts. Continue to use data from monitoring to inform management practices.

- Follow best management practices to reduce erosion and soil loss and to protect water quality. Prevent livestock damage to banks and waterways. For instance, consider strategies such as not mowing in the center of drainages, or protecting vulnerable banks with unobtrusive fences, as appropriate. Consider avoiding agricultural operations on moderate to steep slopes in areas of erosive soils, particularly if adjacent to drainage corridors.

- Protect contributing plant groupings (tree clusters etc.). Replace in kind a single plant or entire grouping when vegetation is too deteriorated to be saved.

- Consider retaining and perpetuating vegetation through propagation methods such as seed collection from existing plants to preserve the native, local seed pool.

- Strive to maintain or enhance historic spatial organization patterns (particularly the open and unified character of historic hay fields) through vegetation management. For example, make efforts to equally graze and irrigate the separate quadrants of the Western Hay Fields so that this area "reads" at a distance as one expanse, regardless of whether non-contributing NPS cross-fences are left in place or removed. (see "Spatial Organization, Views, and Fencing")

- The overall goal of vegetation management is to sustain the appearance or actual historically

Irrigated Hay Fields, Stuart Field

appropriate plant communities. However, in some instances the park may consider introducing grass/forb species not grown historically on the ranch, if it supports natural resource management or other objectives. Carefully consider the effect of new species on overall visual character of landscape (e.g. do not use species that will contrast with color and texture of existing communities, consider appearance of species in different seasons, do not select species that will form dense monospecific stands).

- Carefully consider the issue of raising other historically appropriate crops (such as alfalfa or potatoes) for interpretive value. This would be done in terms of a historic restoration using accurate historic information rather than developing a new element that did not exist during the period of significance. Limited instances of this type of restoration would be acceptable under the Secretary of Interior's Standards for historic properties if the park feels there is value in this approach and has the resources to support it. Avoid creating a non-historic condition by using only historically appropriate species and growing them only where there is firm evidence to support their historic presence. Carefully consider long-term management of this (for instance, the visual or other environmental effects to the landscape of abandoning the efforts).

- Strive to make fences compatible with wildlife. Where feasible, fences should allow safe passage through the ranch. (See "Spatial Organization, Views, and Fencing" for more specific guidance.)

- Implement IPM to control pests such as the Columbian ground squirrel. Recognize that the use of poison may harm natural resources and result in other unintended consequences. Therefore, explore alternatives to poison.

Riparian Woodland Along Cottonwood Creek

SUGGESTED TREATMENTS – PASTURE/HAY FIELDS

- Manage vegetation within the Pasture/Hay Fields component landscape to represent the evolution of these lands during the period of significance (i.e. maintain a mix of irrigated pastures and hay fields from various periods as well as non-irrigated areas. Do not "restore" areas irrigated by Con Warren - such as the Western Hayfields - to an earlier appearance.)

- Continue to irrigate lowland pastures and hay fields. Maintain established communities of introduced pasture and hay grasses in those areas where it is historically appropriate: for example, Western Hayfields, Stuart Field, portions of Front Fields and North Meadows.

- Maintain and enhance established native plant communities that characterize dry upland benches and non-irrigated pasture areas.

- Fight the spread of introduced species into areas characterized by native communities. Maintain a strong distinction between irrigated pastures, hayfields and dryland pastures, which is illustrative of past and present land use practices.

- Maintain existing riparian woodland along Clark Fork River, Cottonwood Creek, and other water bodies (within Pasture/Hay Fields component landscape or immediately adjacent) as wooded buffer zones to reduce soil runoff and protect water quality. Where wooded areas are not present along watercourses, follow other best management practices to uphold the integrity of the ditches or other cultural features (allow tall grass to grow in drainages etc.).

- Retain NPS fencing native vegetation such as willows, river birch, and black cottonwood growing along irrigation ditches, natural springs, and sloughs. Monitor condition of irrigation ditches and control vegetation when it threatens the integrity of the ditches.

- Retain fencing along the riparian corridor of the Clark Fork River. Protect this riparian corridor from grazing.

- Develop a plan for managing vegetation in the Front Fields because effluent ponds water may cease to be available for irrigation purposes. Determine likelihood of losing this water source.
  Long Term (Option # 1) – The preferred long-term goal for this area would be to irrigate these fields to maintain the appearance of irrigated hay fields during the Con Warren period and to continue using the hand line system.
  - An option is to restore the historic irrigation system in this area (e.g. water diverted from Kohrs-Manning Ditch and conveyed by mainline under railroad to the hand line.
  - Restoration would likely require great expenditure of money and staffing (electrical and other costs of pumping, time and effort in moving the line by hand).
  - Park may consider alternatives to reduce costs and make irrigation more practical, such as mix of hand line and wheel line. If possible, wheel line would be used where not readily visible.

  Long Term (Option # 2) – Park may consider an alternate long-term solution (let these areas go dry) if park determines that the Front Fields do not need to maintain the appearance of irrigated hay fields. This alternative may be justified because the Front Fields were maintained as irrigated hay fields for only a portion of the period of significance.
  - Interpret the hand line practice through other methods (e.g. museum exhibits, publications, etc.).
  - Would likely require establishment of dryland species including initial irrigation. Park may consider establishing these species and irrigating while effluent water is still available.
  - Be vigilant and proactive about invasion by weeds or other consequences brought about by loss of irrigation.

  Short Term (Option # 3) – Regardless of long-term solution, CLR advises that in the short term, it is acceptable to cease irrigation of these fields and allow them to revert back to dry upland species.
  - Interpret the hand line practice through other methods (e.g. museum exhibits, publications, etc.).
  - Would likely require establishment of dryland species including initial irrigation. Park may consider establishing these species and irrigating while effluent water is still available.
  - Be vigilant and proactive about invasion by weeds or other consequences brought about by loss of irrigation.

SUGGESTED TREATMENTS - UPLAND PASTURE

- Manage vegetation in the Upland Pastures component landscape to reflect the long history of these lands: i.e. a combination of native prairie communities in the dry uplands and introduced pasture species in irrigated areas. Dry upland areas convey a sense of the open range period while irrigated areas represent later phases of ranching. Do not implement changes that would diminish the ability of these lands to represent these periods.

- Preserve the dry upland pasture areas as native prairie communities. Continue to use grazing as a primary tool for preserving these plant com-munities. Carefully monitor the health of this community and adjust management correspondingly. Do not overgraze.

- Continue to use historic irrigated hayfields within the Upland Pasture component landscape (Taylor Field, Big Gulch, Little Gulch) to grow hay as the primary crop. Make every effort to cultivate, harvest, and store hay in a manner that is appropriate to the period of significance for which the Upland Pasture component landscape retains integrity (1930s-1972).

- Maintain a strong distinction between the dryland pasture areas and the irrigated pasture and hay fields. As feasible, halt the migration of introduced species up drainages into upland areas.

- Promote practices that restore areas damaged by erosion, particularly on slopes. Plant native or culturally appropriate species as part of the restoration strategy. (Note: targeted restoration of degraded natural resources is wholly consistent with the overall cultural landscape treatment approach of "Preservation.")

- Preserve existing apple tree cluster as a vestige of the historic Kading farmstead. If needed, protect the tree cluster from livestock damage using unobtrusive measures (e.g. post-and-wire fence).

- Retain the cluster of cottonwood trees as a vestige of the old farmstead. Protect cluster from livestock damage, if necessary.

- Retain native vegetation such as willows, river birch, and black cottonwood growing along irrigation ditches, natural springs, and sloughs. Monitor condition of irrigation ditches and control vegetation when threatening the integrity of the ditches, or cultural features.

Apple Tree Cluster from Old Kading Farmstead

Big Gulch with its Irrigated Hay Fields and the Dry Upland Pastures Beyond

LAND USE including RANCHING PRACTICES

GENERAL GUIDELINES

- To the greatest extent possible, continue use of historic agricultural practices (e.g. grazing, flood irrigation, haying with horses and motorized equipment) as the primary tool for maintaining the ranch landscape.

- Continue to interpret historic land uses and maximize potential of these uses for visitor enjoyment and appreciation.

- Support efforts to keep alive traditional ranch practices and cowboy skills. In partnership with other groups and existing programs (Montana Academy of Living History, Cowboy Hall of Fame, school groups, Elderhostel, Tahabi university internship, other NPS units etc.) be a host site for programs that perpetuate heritage skills.

- Continue to retain a variety of livestock breeds that represents those raised during historic periods (for example, Longhorn, English Shorthorn, Hereford).

- Consider horses as a valuable component of the historic scene. Continue to maintain a small number of horses for interpretation and to enhance visitor understanding and appreciation. Recognize that horses have long been an important part of life on the ranch, and were bred at the ranch during certain periods. Consider financial options for maintaining horses.

- Livestock species (e.g. sheep) and breeds currently not represented on the ranch may be introduced to advance interpretation or natural resource objectives. However, their presence must be supported by the history of the ranch, and park managers must have a plan for managing these new species/ breeds.

Haying on the Westside. circa 1937 (Source: CLR, Part One, p. 2-177)

SUGGESTED TREATMENTS – PASTURE/HAY FIELDS

- Maintain a portion of the Pasture/Hay Fields component landscape in pasture and a portion for hay production. Ensure these uses occur in places where they existed historically. Acreage devoted to pasture and hay production will likely fluctuate by year according to management needs, but a mix of the two is desirable. (Also see "Vegetation, Natural Systems, and Features.")

- Continue leasing pasture land to private ranching operations. Ensure that private ranching activities conform to the guidelines developed to protect the park's historic, cultural, and natural resources.

- Expand/enhance public information so that the public is better informed of what activities may be occurring on the ranch and can witness these activities: where livestock may be grazing, where and when flood irrigation will take place, when hay baling will occur etc. (See "Public Use and Interpretation" for more ideas.)

SUGGESTED TREATMENTS - UPLAND PASTURE

- Maintain a portion of the Upland Pasture component landscape in pasture and a portion for hay production. A mix of the two is desirable. Ensure these occur in places where they existed historically. Acreage devoted to pasture and hay production will likely fluctuate by year according to management needs but a mix of the two is desirable. (Also see "Vegetation, Natural Systems and Features.")

- Continue leasing pasture land to private ranching operations. Ensure that private ranching activities conform to the guidelines developed to protect the park's historic, cultural, and natural resources.

- Expand/enhance public information so that the public is better informed of what activities may be occurring on the ranch and can witness these activities: where livestock may be grazing, where and when flood irrigation will take place, when hay baling will occur etc. (See "Public Use and Interpretation" for more ideas.)

Longhorn, English Longhorn and Hereford are Historically Appropriate for the Ranch.

SPATIAL ORGANIZATION, VIEWS and FENCING

GENERAL GUIDELINES

Note: The section below contains guidelines associated with spatial organization and views. Because fences are so connected to these topics, they are also addressed here.

Spatial Organization and Views

- Protect and preserve open spaces and views within the park that contribute to the park's significance.

- Protect the setting of the park and the historic/scenic value of adjacent lands. Use preservation tools such as land acquisition or conservation easements. Maintain working relationships with adjacent property owners. Participate in local and regional planning activities.

- Protect and stabilize features that define historic spatial organization and land patterns. These may include contributing fences, woodlines, historic ditches, and roads, and topographic features that define the edges of historic fields or pastures.

- Strive to maintain or enhance historic spatial organization patterns (particularly the open and unified character of historic hay fields) through vegetation management. For example, make efforts to equally graze and irrigate the separate quadrants of the Western Hay Fields so that this area "reads" at a distance as one expanse, regardless of whether non-contributing NPS cross-fences are left in place or removed.

- Avoid the addition of new vertical elements in the landscape whenever feasible, including large structures, antennas, windmills, tall fences, and screening trees. Where screening is appropriate, recognize the value of existing vegetation to serve this function (for instance, it could be appropriate to maintain certain existing trees standing along ditches at a higher height than during the period of significance to screen visual intrusions of the town of Deer Lodge from particular vantage points). If, under limited circumstances, new plantings for screening are deemed appropriate, use culturally appropriate species and arrange plantings to avoid creating an obvious wall of vegetation (e.g. avoid planting an obvious row of evergreen trees).

Fences

- Retain and maintain in operation a wide variety of fence types (e.g. jack-leg, metal post-and-wire, wooden post-and-wire, five-rail stacked end) and gates (overhead gates, metal pipe gates, mesh gates) to represent the long history of ranching practices.

- Avoid introducing further non-contributing fences, if at all possible. With regard to fences and spatial organization, follow the overall philosophy of preservation; however, limited restoration or rehabilitation projects may be undertaken.
  Restoration - In this sense, restoration projects would involve re-establishing a historic fence style in a place where it existed during the period of significance. Restoration may include any fence type used on the ranch between 1862 and 1982 (i.e. not just very old jack-leg types, but split cedar post and even newer types of fence). Fence restoration should only occur where good documentary evidence exists. Avoid creating an artificial sense of history by adding a "period type" fence where one did not exist in the past.
  Rehabilitation - This type of treatment makes it possible to develop a compatible use through some change to fences (for instance, erecting a new fence to protect natural resources while allowing grazing). However, the larger objective is NOT to erect additional non-contributing fences, if at all possible.

- If additional fences are necessary, consider implementing them as a temporary measure.

Electric Fence in Upland Pastures

- Identify areas where NPS cross-fences are most disruptive to the historic scene. When feasible, and not in opposition to other resource goals, reinstate the open character of historic pastures and hay fields by removing selected non-essential NPS cross-fences if the park believes that removing these fences will aid in reinstating the open character. (CLR Part One states that NPS cross-fences diminish the historic integrity of the ranch. Close up, these fences do detract from the sense of history. Yet at a distance the appearance of vegetation in the fields [color, texture etc.] is probably more important than the fences in determining whether fields feel open and expansive or "chopped-up." NPS cross-fences are likely to be most disruptive in areas frequented by visitors. Removal of fences may be less of a priority in areas usually viewed from a distance.)

- Design new fences that are not restorations to be historically compatible and as visually unobtrusive as possible. Use Visual Resource Management (VRM) principles and the *Secretary of Interior's Standards with Guidelines for Cultural Landscapes* to guide design. For example, consider color of materials and permeability of fence, as well as siting. (See Birnbaum and Peters, 1996 and various BLM or USFS publications/websites about VRM)

- Where feasible, locate new fences that are not restorations so that their visual impact is minimized. For example, VRM advises that siting linear elements (such as fences) at natural breaks is one way to lessen their visual contrast with the natural environment. The crease at the toe of an escarpment is one example of such a natural break. Explore methods for evaluating the impact of fences or other new proposals, for instance by taking a photograph of an existing view, and superimposing the line of a proposed fence on this view.

- Electric fences may be used in places where there is sufficient evidence for its use prior to 1982. Strive to use a type that reflects historic conditions. Especially in high visibility areas, seek alternatives to the current type of electric fence used (with white tape and white posts), which is highly apparent and probably does not represent the historic scene.

- Revisit the policy of replacing historic split cedar post boundary fences with round wooden posts. Maintain the old split cedar post type where feasible. Consider restoring these historic fences in limited cases, for instance in areas of high visibility. Carefully weigh considerations of cost and preservation.

- Strive to make fences compatible with wildlife. Where feasible, fences should allow safe passage through the ranch. Many sources of information on fences and wildlife are available. In efforts to ensure safe passage, avoid introducing additional fence types to the ranch. Instead, where feasible, implement compatible design principles (e.g. for jack-leg fence the park may consider dropping a section every so often for passage of elk, deer, and moose; consider smooth wire on the bottom of a barbed wire fence for smaller animals and on the top for deer, elk, and antelope).

Taylor Field

SUGGESTED TREATMENTS – PASTURE/HAY FIELDS

- Protect views listed as contributing to the significance of the Pasture/Hay Field component landscape in the CLR Part One (e.g. views to riparian corridor and western foothills, views eastward to riparian corridor and home ranch complex, views to Deer Lodge and Hillcrest Cemetery, and views of historic railroad corridor). Avoid inappropriate development within these viewsheds.

- Maintain as separate and distinct spaces the major contributing spaces of the Pasture/Hay Fields component landscape (Stuart Field, Lower Yard Fields, North Meadows, L-Barn Field, Western Hay Fields, Front Field). Stabilize and protect the major features that define these spaces. For instance, in the case of the Stuart Field, these elements include the riparian woodland on the west, the Kohrs-Manning ditch on the west, and jack-leg fences.

- Retain non-contributing but supporting jack-leg fences built by the NPS after the period of significance for their interpretive value (Stuart Field/Cottonwood Creek area, Lower Yard Fields, western edge of the riparian area etc.). However, do not build more of these features.

- Maintain in place fencelines that were established by the end of the period of significance. These fencelines include: the outer boundaries of Front Fields, the western edge of the Western Hay Fields, and around the Railroad corridor and barrow pits.

- Identify areas where NPS cross-fences are most disruptive to the historic scene. Potential areas for removing cross-fences could include: Front Fields, Western Hay Fields, and especially the Lower Yard Fields. Only remove fences if documentary evidence supports this change.

- Leave in place NPS cross-fences marking the boundaries of the Clark Fork River riparian woodland.

Typical NPS Cross-Fences

Five-Rail Stacked End Fence

SUGGESTED TREATMENTS - UPLAND PASTURE

- Protect views listed as contributing to the significance of the Upland Pasture component landscape in the CLR Part One (e.g. views to the Home Ranch and riparian zone, views to Deer Lodge and Hillcrest Cemetery, and views to Deerlodge Mountain and Mt. Powell). Avoid inappropriate development within these viewsheds.

- Thoroughly evaluate the options for preserving and protecting views of features lying beyond the western boundary of the park, particularly the western foothills and the Flint Mountain Range. Options may include additional partnerships, easements, or an expanded NHL boundary, to incorporate the conservation easement currently managed by the Five Valleys Land Trust.

- Maintain as separate and distinct spaces the major contributing spaces of the Upland Pasture component landscape (Big Gulch, Little Gulch, Lower Taylor Field, Upper Taylor Field, and upland ranges). Stabilize and protect the major features that define these spaces.

- Identify areas where NPS cross-fences are most disruptive to the historic scene. When feasible, and not in opposition with other resource goals, reinstate the open character of historic pastures and hayfields by removing non-essential NPS cross-fences. Only remove fences if cross-fences subdivide areas that were open at the close of the period of significance (1982), and only when there is documentary evidence.

- Minimize fences in the Upland Pasture component landscape, especially in the dry upland ranges. Because these ranges retain a very high level of historic integrity (very few built features, well preserved native plant communities), the goal is to NOT implement any changes that would detract from the ability of these spaces to convey the open range period.

- Carefully consider appropriate locations for fences in the Upland Pasture component landscape. Siting unobtrusive necessary fences at the base of drainage escarpments (for instance in Big Gulch or Little Gulch) could be one way to maintain a separation between the irrigated hayfields and the dry ranges for grazing, while reducing the number of fences in the dry ranges (see General Guideline above).

View Across the Pasture Hayfields and Upland Pasture to Flint Mountain Range. Note Jack-Leg Fence and Overhead Gates.

BUILDINGS, STRUCTURE and SMALL-SCALE FEATURES

GENERAL GUIDELINES

Note: Fences are addressed under previous section. ("Spatial Organization, Views and Fencing.")

- Retain contributing and non-contributing, supporting structures and small-scale features.
- Repair, rather than replace deteriorated historic features.
- Replace in-kind a feature of a building, structure, fence, or other object when it is too deteriorated to repair. New materials should match the old in composition, design, color, and texture.
- Avoid future changes that create a false sense of historical development, including the addition of conjectural or "typical" features. Base all future restorations on firm documentary evidence.
- Protect and preserve archeological resources in place.

Jenkins Haystacker

Pump House HS-86

Pump House HS-87

SUGGESTED TREATMENTS – PASTURE/HAY FIELDS

- Maintain in good condition, continue to use where feasible, and interpret the Beaver Slide Hay Stacker, a non-contributing, supporting structure of great value for interpretation, and Jenkins Hay Stacker, a contributing feature that is authentic to the ranch.

- Determine how to effectively interpret the Jenkins Hay Stacker (whether it should be located somewhere permanently or remain mobile; how to present to visitors etc.).

- Protect and stabilize pumphouse HS-86. Regardless of whether it is feasible to restore historic functioning (pumps, buried pipes etc.), take steps to halt deterioration of exterior frame structure and conduct routine maintenance. Restoration or adaptive reuse of the pump house may be pursued if the park chooses.

- Retain pump house HS-87, a contributing feature of the component landscape and a structure determined eligible to the National Register. Repair equipment and structure as necessary, and continue to use, if feasible. However, recognize that the greater goal is proper functioning of the historic irrigation network that this structure supports. Modifications or additions to the structure are preferred over its replacement. Yet if necessary, a new functioning pump house may be added by HS-87 with the existing structure left standing in place. Ensure design of new structure or other solution respects the cultural landscape (e.g. similar in form and materials to existing structure; or if looks different from existing structure, then visually inconspicuous with low profile, and color that is compatible with surrounding landscape etc.).

SUGGESTED TREATMENTS - UPLAND PASTURE

- Preserve in place the remnants of the Kading Homestead, mining excavation sites, and remnants of what is believed to be a pig farm.

Pig Farm Foundations (JMA Oct. 2002)

CONSTRUCTED WATER FEATURES

GENERAL GUIDELINES

- Retain all major existing irrigation features (main ditches, lateral ditches, abandoned ditches, hand lines) as a record of the evolution of land use practices and human handiwork at the Grant-Kohrs and Warren Hereford Ranches.

- Continue to operate the irrigation network as a working system that plays an integral role in the functioning of a working ranch, and in keeping alive heritage skills such as flood irrigation.

- Maintain historic irrigation ditches using non-destructive methods and seasonal or other cyclical tasks (e.g. burning, cleaning litter, minor excavation). To the extent possible, continue historic maintenance practices.

- Repair and retain mechanical systems (headgates and headwalls, diversion dams, distribution gates etc.) associated with the proper functioning of the irrigation ditch network. Maintain these systems to ensure proper flow.

- Repair, rather than replace, features associated with the irrigation network. For example, patch and reinforce a headwall that has developed a crack. When a feature is too deteriorated to be repaired, replace with materials that match the old in composition and design. However, be mindful that these are utilitarian rather than ornamental features, and their primary contribution to the cultural landscape is to support the proper functioning of the irrigation system.

Concrete Headgate (JMA, Oct. 2002)

Kohrs-Mannning Ditch

Wooden Headgate (JMA, Oct. 2002)

Westside Ditch (JMA Oct. 2002)

SUGGESTED TREATMENTS – PASTURE/HAY FIELDS

- Preserve contributing features (Kohrs-Manning Ditch, Kohrs "Big" Ditch, Johnson Ditch, Warren Ditch, lateral ditches, abandoned ditches) as well as supporting and undetermined features (irrigation risers, headgates, irrigation mainline, and culverts).

- Preserve historic linkages between the irrigation network and natural sources of water (springs, creeks, river etc.). To the extent possible, irrigate specific areas using water from the same natural sources as in the historic period.

- Continue to monitor Columbian ground squirrels and beaver activity for threats to the irrigation network. Continue IPM approach to control pests using the least amount of poison possible. Continue to issue special use permits for beaver trapping to achieve resource preservation objectives.

- See "Buildings, Structures, and Small-Scale Features" for a discussion of pump houses within the Pasture/Hay Fields component landscape.

- See "Vegetation, Natural Systems and Feature" for a discussion of the Front Fields and irrigation via effluent water.

SUGGESTED TREATMENTS - UPLAND PASTURE

- Preserve contributing features (Kohrs Big Ditch, lateral ditches, old abandoned ditches, West-Side Ditch, Hartz Ditch, Taylor Ditches), as well as supporting and undetermined features (headgates, earthen dam). The non-contributing may be altered or replaced if necessary to achieve other management objectives.

- Preserve historic linkages between the irrigation network and natural sources of water (springs, creeks, river etc.). To the extent possible, irrigate specific areas using water from the same natural sources as in the historic period and as defined in the parks water rights.

- Monitor Columbian ground squirrels and beaver activity for any threats to the irrigation network. Continue IPM approach to control pests. using the least amount of poison possible.

Contour Ditch Network in Western Hay Fields

CIRCULATION

GENERAL GUIDELINES

- Retain the existing road network, which has evolved over time as a result of historic ranching practices and park management.
- Maintain the historic utilitarian character of existing roads (e.g. fairly primitive condition of roads including narrow width and dirt or gravel surfacing, as well as limited use, primarily for the purpose of ranch operations).
- Retain or restore historic surface material (gravel, dirt etc.) where it does not conflict with natural resource objectives (e.g. where there are not serious erosion or dust concerns). When re-surfacing or a new surface treatment is required, implement with a material that matches the old in composition, color, and texture or is visually compatible with the landscape.
- Avoid constructing new roads.
- Minimize the visual intrusion of new circulation features such as trails. If new trails are proposed, carefully consider their visual and other impacts. To the extent possible, use existing roads for public use rather than building new trails.

Warren Pumphouse Road

SUGGESTED TREATMENTS – PASTURE/HAY FIELDS

- Retain, repair, and maintain the primary ranch roads in the Pasture/Hay Fields component landscape for use in ranch operations and park administration.
- To extent practical, maintain the roads in a fairly primitive condition (narrow width, gravel roads or two-tracks that are mix of dirt and grass etc.). Minimally upgrade existing roads as necessary to repair drainage and erosion problems or to support any new uses.
- Continue to advocate for maintaining the West Side Road in its present condition as a primitive two-track with only compatible and minimal travel that receives light use for ranch operations/park administration. Recognize that, in addition to other impacts, use of this road as a public thoroughfare would disrupt the ranch's scenic, historic setting by interfering with views that contribute to its historic significance.
- Restore Cottonwood Creek Nature Trail. Realign trail so that the portion that is subject to routine flooding is moved to higher ground. Design the trail so that the main body of the trail will not be washed out and so that it still provides access to Stuart Field and connection to water. Recognize that a restored Cottonwood Creek Nature Trail would offer opportunities for increased visitor appreciation. Although the trail is not a contributing feature, it encourages and facilitates exploration of a portion of the Pasture/Hay Field slightly removed from the core of the ranch. Furthermore, it provides access to an area—Stuart Field, with its jack-leg fences, irrigation ditches, and Beaver Slide Stacker—that possesses scenic and interpretive value.
- See "Public Use and Interpretation" for recommended treatments involving the topic of accessibility, particularly regarding the Cottonwood Creek Trail.

SUGGESTED TREATMENTS - UPLAND PASTURE

- Retain, repair, and maintain the primary ranch roads in the Upland Pasture component landscape for use in ranch operations and park administration.

- To extent practical, maintain the roads in a fairly primitive condition (narrow width, gravel roads or two-tracks that are mix of dirt and grass etc.). Minimally upgrade existing roads as necessary to repair drainage and erosion problems or to support any new uses.

- Consider facilitating public access to a natural overlook near the apex of the Ridge Road (or other suitable location) so that visitors may experience this dry range area, either on their own, or part of a guided program. Options could include expanding existing horse-drawn wagon rides by making a loop using the Big Gulch Road and Little Gulch Road or promoting self-guided walks to the same overlook. (Also see suggested treatments under "Public Use and Interpretation.")

The Upland Pasture area contains a network of minimally visible roads. (JMA Oct. 2002)

PUBLIC USE & INTERPRETATION

GENERAL GUIDELINES

Note: Park comments on the 60% draft requested additional ideas for public use and interpretation. The guidelines and suggested treatments below are presented as inspiration. The park may evaluate these suggestions or add to this list as appropriate.

Interpretation

- Continue to interpret historic land uses.
- Explore the potential of cultural landscape features to further enhance interpretation.
- In the interpretive program, continue to address cultural resources and natural systems and to emphasize the interdependence of the two.
- Expand existing high quality interpretation (wagon rides, house tours, historic haying demonstration) with new regularly scheduled or special programs that would allow visitors to closely experience the Upland Pastures or Pasture/Hay Fields. Consider opportunities for guided walks along Cottonwood Creek Trail to Stuart Field. Consider overnight "cowboy camp" programs. Coordinate special programs to maximize interest and participation (e.g. offering a guided horseback ride to the Jenkins Hay Stacker in conjunction with the historic haying demonstration using the Beaver Slide in the Stuart Field).
- Treat the ranch house tour as also an opportunity to introduce visitors to the ranch landscape. For instance, the house tour generally ends at a porch that offers great views of the Pasture/Hay Fields and Upland Pastures. Rangers could use this view to quickly interpret the broader landscape and to inform visitors of opportunities for experiencing these lands (e.g. recommended loops, special events, hand out cultural landscape guides etc.).

Recreation and Expanded Uses

- Consider carefully the appropriateness of any proposed recreational uses. Introduce recreation in a way that respects cultural landscape values including archeological features and natural resources. Encourage public use that is not detrimental to resourecs.
- Permit recreational uses that do not endanger visitors or require intensive facility development. Examples of incompatible activities include organized field sports, mountain biking, off-trail horseback riding, ATV use, and sport-hunting.
- Consider appropriate locations for new or expanded uses. Consider the impact of new activities on primary viewsheds.
- Encourage walking whenever possible on existing two-tracks and roads.
- Limit, monitor, and control access to areas that are vulnerable to damage from human access or that pose hazards to visitors, e.g. riparian area.
- Avoid conflicts with livestock, but provide access to areas where livestock may be viewed closely. Consider visitor safety.
- Maintain one centralized primary point of access to the park. Do not open secondary entrances to public access except under very limited circumstances or where staff accompanies user such as special programs or events.

Signs, Publications and Outreach

- Minimize the number of signs needed to identify, direct, interpret, and regulate the park.
- Be very selective when introducing interpretive or informational signs in the landscape. Utilize non-intrusive interpretation as first choice (i.e. podcast, wand, guidebook). Where absolutely necessary, use standard NPS sign systems that are appropriate for rural, vernacular parks.
- Develop a brochure, guidebook, or similar publication or series of publications that interprets and celebrates the ranch's cultural landscape. It would serve to inform the public of opportunities for exploring the ranch landscape and entice visitors to do so, and also share the landscape's sights and stories with those unwilling or unable to venture away from the main developed areas. The guide would contain maps, photos, and other information (mileage, level of difficulty, time allowances) about recommended self-guided hiking or horseback routes, as well as guided activities. Through historic photographs, quotes, and other engaging media it would narrate the stories associated with the pastures and hay fields. It would also contain

interpretive materials on historic structures and equipment (ditches, pump houses, fence types, hay stackers), making interpretive signs in the landscape unnecessary. Guidebook should also describe the traditional skills and tasks associated with operating the ranch and include information about where and when these practices (branding, haying, ditch clearing, flood irrigation) might be observed at the park. Relying heavily on graphics, this type of information could also easily be posted on the park webpage, once it had been developed. This guide would also be ideal for school groups.

- Continue to maintain high quality park website that advertises events at the ranch and engages potential visitors using historic photographs of the ranch. Consider also uploading audio clips for interpretive purposes (e.g. sounds of cows, cattle drives, interviews with former ranch workers etc.).

- Partner with concessioner to design items for sale to the public in the visitor center that would promote awareness and understanding of the ranch landscape and traditional ranching practices (e.g. notecards with historic photographs etc.).

- Partner with other organizations (Chamber of Commerce, 4-H etc.) to better promote the ranch as a destination where traditional land uses and ranching practices may be experienced.

- Expand/enhance public information so that the public is better informed of what activities may be occurring on the ranch and can witness these activities: where livestock may be grazing, where and when flood irrigation will take place, when baling hay will occur.

- Investigate options for strengthening the public presence of the park within the town of Deer Lodge. For instance, sponsor art exhibits or show historic photographs of the ranch in public spaces in town or at the Grant-Kohrs Ranch.

- Strive to accommodate accessibility to major park features, except where implementation will threaten historic integrity. To help weigh accessibility and resource preservation considerations, refer to established policies and regulations for updated guidance on accessibility, in particular to the *Architectural Barriers Act (ABA) Accessibility Guidelines for Outdoor Developed Areas*: Proposed Rule, published in 2007 by the Access Board. Recognize that cultural landscapes of historic significance may not always be compatible with fully accessible facilities. Become familiar with the "conditions for exceptions to the technical provisions" that are included in the ABA *Accessibility Guidelines* and may be pertinent to Grant-Kohrs Ranch NHS. These include:
  - Condition 1 – Compliance would cause substantial harm to cultural, historic, religious, or significant natural features or characteristics.
  - Condition 2 – Compliance would substantially alter the nature of the setting or the purpose of the facility, or portion of the facility.
  - Condition 4 – Compliance would not be feasible due to terrain or the prevailing construction practices.

Contractor led wagon ride

SUGGESTED TREATMENTS – PASTURE/HAY FIELDS

- Provide ADA accessibility to primary interpretive elements or programs in the Pasture/Hay Fields component landscape. Strongly favor solutions that do not require physical changes to the landscape. For example, provide shuttles to special events. If feasible, ensure that horse-drawn wagons used for wagon rides are accessible, thus ensuring reasonable access for all to more remote portions of the ranch.

- Restore Cottonwood Creek Nature Trail (see Circulation).

- Consider options for enhancing accessibility of the Cottonwood Creek Trail. The intent of the *Architectural Barriers Act (ABA) Accessibility Guidelines for Outdoor Environments*: Proposed Rule is to ensure that accessibility is considered for all newly constructed and altered trails or other outdoor elements, recognizing that full accessibility may not be appropriate in certain settings (such as historically significant sites). The Cottonwood Creek Trail is the only trail designed and dedicated for pedestrian use in this component landscape. Reconfiguration/ restoration of this trail (see "Circulation") could theoretically constitute an "alteration," triggering the provisions in the proposed rule. However, give careful thought to applicable conditions for exceptions for compliance (see general guidelines above).

- If NPS determines that the Cottonwood Creek Trail will be "altered" and should be accessible, follow the updated guidelines and regulations regarding trail width, slopes, resting intervals, firmness and stability of trail surfacing, and signage in the ABA *Accessibility Guidelines*. Remember that an accessible trail does not necessarily mean a paved trail (i.e. a crusher-fine surface may apply if designed appropriately).

- Whether work proposed for the Cottonwood Creek Trail does or does not meet the requirements for "trail alterations," view routine trail maintenance and repair activities as an opportunity to improve accessibility, for instance by clearing downed limbs, improving drainage crossings etc.

- Consider options for expanding horseback riding. Develop trips of various lengths using existing park roads and agricultural spaces.

- Carefully consider the appropriate location for the Jenkins Hay Stacker. This interesting and authentic structure should continue to be located in a place appropriate to its historic use and function (i.e. a hay field associated with Con Warren); but its current remote location means that very few visitors are able to view it. The park may decide it is best to leave it in place; however managers should be free to consider its relocation, as long as a one-time move would not harm the structure in any way. The stacker was designed and used as a mobile piece of equipment. Consider relocation only if there is a compelling reason to do so. If the park determines that the structure should stay in its current location:
  - Continue to lead guided hikes to it; consider coordinating this special event with the historic haying demonstration during Grant-Kohrs Ranch Days;
  - Consider presenting the structure as a destination for a self-guided hike or horseback ride; but monitor visitation to ensure preservation;
  - Ensure that it is interpreted using other means (photographs in guidebook or museum etc.) for those not able to visit it.

Cottonwood Creek Nature Trail is overgrown in places.

Jenkins Hay Stacker in the Western Hay Fields

SUGGESTED TREATMENTS - UPLAND PASTURE

- Provide ADA accessibility to primary interpretive elements or programs in the Pasture/Hay Fields component landscape. Strongly favor solutions that do not require physical changes to the landscape. For example, provide for shuttles to special events. If feasible, ensure that horse-drawn wagons used for wagon rides are accessible, thus ensuring reasonable access for all to more remote portions of the ranch. Avoid building new trails.

- If the park determines horseback riding is appropriate, consider options for expanding horseback riding. Develop trips of various lengths using existing park roads and agricultural spaces.

- Limit, monitor, and control access to areas that may pose hazards to visitors. Evaluate quarry area for any potential safety hazards if the general area will be open to increased use.

- Consider options for interpreting views to the Hillcrest Cemetery, which contains gravesites of significant members of the Kohrs, Bielenberg, and Warren families. Utilize these views to interpret the thematic link between the park's history and the community of Deer Lodge. For example, the park could expand wagon rides to a natural overlook in the Upland Pastures area, by making a loop on existing park roads (taking visitors up the Big Gulch Road in the north, then heading south on the Little Gulch Road to the apex of the Ridge Road and a view of Hillcrest Cemetery, and then out the southern side of Little Gulch Road). Another option could be to lead guided hikes, or promote self-guided walks or horseback rides to the same overlook by following the Ridge Road to its apex.

Potential Wagon Ride Tour to Natural Overlook

NEW DESIGN and CONSTRUCTION

GENERAL GUIDELINES

- Under a "Preservation" approach, new construction is to be avoided if at all possible. Options for reusing existing buildings and providing space off-site must be pursued before resorting to new construction.

- If, after thoroughly considering other options, it is determined that new structures are necessary to meet needs, design and situate new additions and alterations to the landscape in such a way that, if removed in the future, the essential form and integrity of the cultural landscape would be unimpaired.

- Any new site development should be designed to fit the existing landform and minimize changes to the natural topography.

- Avoid constructing new buildings, fences, or other structures in character-defining viewsheds. Design any new facilities to be low, minimal, and unobtrusive.

- New visitor facilities are to be avoided wherever possible, but the park may choose to implement minimal provisions for visitor safety and comfort in certain appropriate locations. Most visitors would probably be content with short excursions into the ranch landscape, such as that provided by the Cottonwood Creek Trail. Excepting directional signs, this trail may well be the only place where new public facilities are appropriate; but even here public facilities should be very limited, modest in scale, and understated in design (e.g. a simple place to rest in the shade, accessible surface as discussed above). Elsewhere in the Pasture/Hay Field or Upland Pasture component landscapes, facilities should be kept to an absolute minimum.

- Avoid constructing new trails. To the extent possible, use the existing road network for public use and administration. Develop designated loop hiking or horseback riding routes using existing roads and agricultural spaces.

- Undertake design of new features, systems, and programs to be as accessible as possible.

- Avoid introducing interpretive or informational signs in the landscape. Interpretation can be accomplished using less visually intrusive means. Explore the opportunities presented by interpretive media (brochures, audio tours, cell phone tours) that leave no impact on the landscape but do not totally disconnect visitors from the visceral experience of the ranch.

- Directional signage in the landscape should be very limited and appropriate to the level of use, which is expected to remain fairly low. Design and construct directional signs to be very subtle and very low profile, using materials compatible with the historic character of the ranch. Signs should only be visible at close range.

- Document all major changes and treatments through drawings, photographs, and notes. Maintain records of treatment and preserve documentation according to professional archival standards.

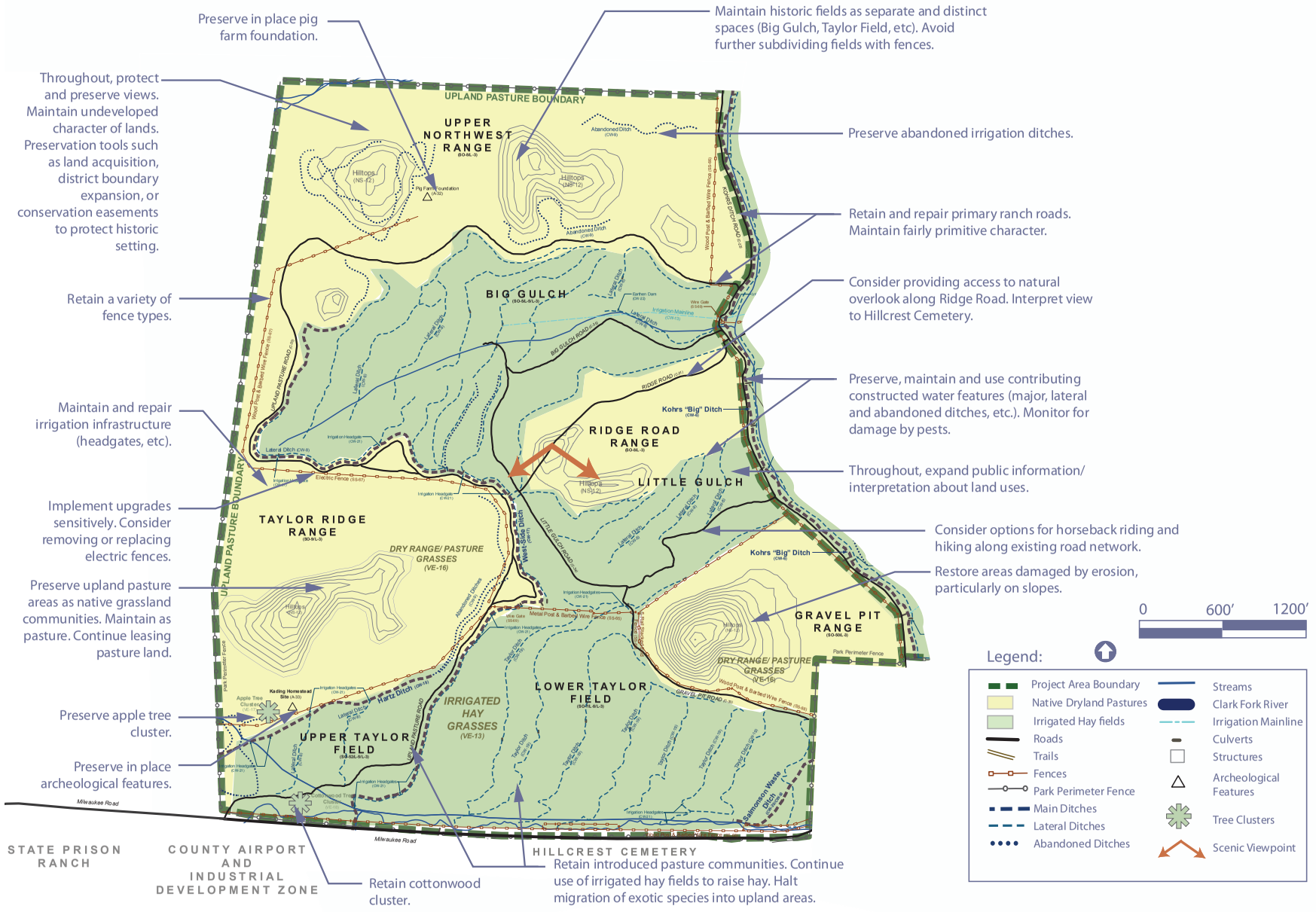
Fully accessible and employing materials compatible with the vernacular setting, this interpretive sign is an example of one appropriate for the more developed portions of the ranch. This approach could be used along the Cottonwood Creek Trail, but in more remote portions of the Pasture/Hay Fields or Upland Pastures, interpretive signs should be avoided or kept to an absolute minimum.

GRKO Ranch CLR, Part Two

Treatment Plan- Pasture / Hayfields

February 2009

GRKO Ranch CLR, Part Two
Treatment Plan–Upland Pastures
February 2009



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