2017

Using Agriculture as an Interpretive Management Strategy at Grant Kohrs National Historic Site to tie Together Historical Significance and Natural Resource Conservation

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Using Agriculture as an Interpretive Management Strategy at Grant Kohrs National Historic Site to tie Together Historical Significance and Natural Resource Conservation

Abstract
The core question being investigated within the scope of this thesis is how does Grant Kohrs Ranch National Historic Site use an interpretive management involving agriculture to tie together historic significance and natural resource conservation? In order to establish a firm knowledge of the site, a visit to the ranch that included site documentation, investigation, and interviewing of staff members was conducted in October 2016. The type of interpretation conveyed to visitors at GRKO is unique, but what makes GRKO really special is that visitors have unrestricted access to the entire site. This allows for the purest form of interpretation allowable at a historic site.

The historic significance at the site is similar to other but still special because of its particular topic under the subject of agriculture. Natural resource conservation is an important part of the sites function and history. It allows the site to be interpreted as historically accurate as possible while still preserving the cultural landscape. The agricultural interpretations at the site include: interpretive signage and displays, living history demonstrations, actual ranch work involving livestock, maintaining the presence of agricultural structures and features and the whole cultural landscape of the ranch. These interpretations tie together the historical significance and natural resource conservation of the historic ranch.

Keywords
interpretation, cultural landscape, conservation, preservation, agriculture

Disciplines
Historic Preservation and Conservation

Comments
Suggested Citation:
USING AGRICULTURE AS AN INTERPRETIVE MANAGEMENT STRATEGY AT GRANT KOHRS NATIONAL HISTORIC SITE TO TIE TOGETHER HISTORICAL SIGNIFICANCE AND NATURAL RESOURCE CONSERVATION

Garrett Tyler Richardson

A Thesis

in

Historic Preservation

Presented to the Faculties of the University of Pennsylvania in Partial Fulfillment of the Requirements of the Degree of

MASTER OF SCIENCE IN HISTORIC PRESERVATION

2017

Program Chair and Advisor
Randall F. Mason
Associate Professor
Acknowledgements

I would like to express my gratitude to my Advisor Randy Mason for his patience and guidance on this thesis. It has been an honor and a privilege to work with Randy while attending Penn. I will forever be grateful for his mentorship.

I would also like to extend a special thanks to my remaining professors at Penn--Frank Matero, David Hollenberg, Francesca Ammon, Donovan Rypkema and John Hinchman. Each one of them guided me through this program in a unique way and I will always cherish my time with them.

To my peers in the Historic Preservation Program--Thank you for challenging me in my studies, for supporting each other in your studies and for your friendship.

Lastly I would like to thank my family whose love and support helped me accomplish something that I only dreamed of. To my wife Erica--I love you more than I can express. Thank you for always supporting me.

God said, "I need somebody willing to sit up all night with a newborn colt, and watch it die, then dry his eyes and say, 'Maybe next year.' I need somebody who can shape an ax handle from a persimmon sprout, shoe a horse with a hunk of car tire, who can make harness out of haywire, feed sacks and shoe scraps; who, planting time and harvest season, will finish his forty-hour week by Tuesday noon, and then pain'n from tractor back,' put in another seventy-two hours. So God made a farmer."

- Paul Harvey
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Introduction: The Ranch

Grant Kohrs National Historic Site is a unique National Park Service site because of its history, size, function and cultural and natural resource management. As an historical site it largely focuses on living history for interpretation. As an active cattle ranch it utilizes the natural resources and continuous historic function of the site, while providing unrestricted access to visitors thus allowing them the purest form of interpretation at a historical site and direct participation in the living heritage of the place. This is rare within the NPS and even historic sites in general, and allows visitors to have a complete interpretive experience if they wish.

A typical visitor experience at GRKO starts at the visitors center (HS-9002) (Fig. 1). After pulling into the parking lot, visitors are most likely inclined to enter the visitors center for information about the site. They would then proceed down the path that leads to the historic complex surrounding the main ranch house (HS-1) (Fig. 2). Here a visitor would be able to tour and interpret the surrounding historic buildings, including the ranch house if a tour is has been scheduled. Depending on the season, visitors would also be able to watch and take part in one of the several historic demonstrations involving agriculture at the ranch. Lastly, visitors could explore the remaining 1,500-acre ranch allowing them to fully experience and interpret the site, though this does not typically occur. How does agriculture as an interpretive management strategy tie together the interpretation of historical significance and natural resource conservation? This is the focus of my thesis.

Without agriculture civilization would cease to exist. Yet today very few people work in the agricultural industry or even understand how a functioning farm or ranch
operates. Therefore there is a great need for the preservation and interpretation of this historic industry and way of life. In fact, as of 2012 only 1.5 percent of the United States population worked in agriculture.\(^1\) Whereas in 1880, when the Grant Kohrs ranch was thriving, 49 percent of the American workforce worked in the agriculture industry.\(^2\) Not a single state requires that agriculture be a necessary unit of study in public schools.\(^3\) However, most rural schools have agricultural related classes as elective subjects and student organizations such as FFA and 4-H. Aside from schools and agricultural organizations, it is up to places such as museums and historical sites that are dedicated to agriculture to provide agricultural education to people. Many of these sites are known as living history farms and can be found throughout America, including one in the state of Hawaii. Additional opportunities to visit agricultural history sites are available at agriculture museums, state parks, and national parks. The latter of which has very few sites with any sort of agricultural history, only one that is completely dedicated to telling the story of the open range cattle era in the west, and arguably the only NPS site completely dedicated to an agricultural subject.

On August 25, 1916, President Woodrow Wilson signed the Organic Act creating the National Park Service (NPS). The Act states that the purpose of the NPS:

“…is to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.”

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As a bureau within the U.S. Department of the Interior, the National Park Service currently manages 413 parks in the United States covering more than 84 million acres. With 19 different designations, these include 128 historical parks or sites, 84 national monuments, 59 national parks, 25 battlefields or military parks, 19 preserves, 18 recreation areas, 10 seashores, four parkways, four lakeshores, and two reserves. Over 22,000 employees within the NPS ensure that these sites are preserved and protected for use by more than 300 million visitors each year.  

Since the beginning of the Park Service’s existence, interpretation has continually been emphasized within each historical site that the NPS manages. Interpretation for the NPS directly supports their preservation mission and is driven by a philosophy that charges interpreters to help the visitor care about and understand park resources. Interpretative measures further establishes the value of preserving park resources by helping audiences discover the meanings and significance associated with those resources. The tangible resources that are preserved within the parks and heritage sites are relevant not only to the park service but to the people who visit them each day. The reason the park service conveys interpretation is to help visitors discover and understand the meanings of these sites. Therefore interpretation offers visitors opportunities to discover a broad understanding of the site and see it in a different perspective.

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5 Bacher, Kevin; Baltrus, Alyssa; Barrie, Beth; Bliss, Katie; Cardea, Dominic; Chandler, Linda; Dahlen, Dave; Friesen, Jana; Kohen, Richard; and Lacome, Becky, “Foundations of Interpretation Curriculum Content Narrative”, (March 1, 2007), pg. 1. https://www.nps.gov/idp/interp/101/FoundationsCurriculum.pdf.
Each of the 413 NPS sites are unique in their own ways and contain different interpretive opportunities, while the cultural landscape at each site weather natural, vernacular, designed, or ethnographic is preserved according to various factors that are important to the site. However, Grant Kohrs National Historic Site is a particularly unique historical site for the National Park Service because of its focus on living agricultural history and corresponding programs, design decisions, management strategies and function. As a historical site it largely focuses on living history and agricultural features for interpretation. GRKO was designated a National Historic Site on August 25, 1972. As an active cattle ranch, agriculture is used as a living history tool which preserves the cultural landscape and history of the site, while also providing an unrestricted form of interpretation to the visitor. Thus GRKO uses agriculture as an interpretive management strategy to tie together the interpretation of historical significance and natural resource conservation which therein is their form of cultural landscape preservation.

The Ranchers Roles

Richard Grant, a Canadian of Scottish and French ancestry, was a twenty-seven year veteran of the northwest fur trade when the Hudson’s Bay Company assigned him to Fort Hall, in what is now present day Idaho. Grant assumed his duties in July 1842 and soon fell into the lucrative sidelines business of cattle ranching. By the mid 1840’s emigrants were passing over the Oregon Trail in droves but many of the short horned cattle that were purchased previous to their journey had all but been exhausted by the time they
reached Fort Hall. 6 Montana’s economic development was spurred by those traveling across the Oregon trail searching for precious metals, conducting military expeditions, and seeking land for agricultural development. Most traveling west were seeking gold and other metals, but some remained in agricultural production, driving Texas cattle to the region. 7 Grant saw this as an opportunity to relieve the emigrants of their lame cattle at a handsome profit for the Hudson’s Bay Company. Grant would pasture the cattle from one season to the next until they were recuperated and then sell them to different westbound emigrants passing through. By 1851 Grant was in failing health and decided to retire from Hudson’s Bay and settle near Fort Hall. Grant and his son John Francis (Fig. 3) later moved their cattle operation to Deer Lodge Valley for the winter of 1857 – 58. By this time Johnny Grant considered himself a permanent resident and businessman of the region, dealing greatly with the Mormon community. Johnny Grant also decided that the Deer Lodge Valley would be the perfect place to settle with his then three Indian wives and several children. He built a rough-hewn log cabin that stood at the mouth of the Little Blackfoot Creek about twelve miles north of the present day ranch. In 1861 the Grants, feeling too isolated from the small community that had gathered in the valley, moved from their first home and settled on the banks of the Clark Fork River. There Grant built two small adjoining cabins, augmented in the fall of 1862 by two story home of hewed logs. The buildings formed the beginning of the present day Grant-Kohrs Ranch. The elder Grant

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continued to raise cattle in the Flathead Indian country of the Bitterroot for another three years until he eventually died from over-exertion on a return trip from Oregon in the spring of 1863.  

In 1862, Danish-born immigrant Conrad Kohrs (Fig. 4), drawn by the news of gold in Idaho territory, traveled through the Deer Lodge Valley along with many others arriving at the town of Cottonwood (later renamed Deer Lodge) where his future in the cattle industry awaited him. Needing financial assistance to start mining, Conrad took a job at a butcher shop in the boom town of Bannack. Conrad was not unfamiliar with the trade and soon was recognized by the shop owner for his talents. However, after an altercation with the local sheriff, Conrad’s employer skipped town, leaving Kohrs the proprietor of the shop. Kohrs soon made a decent profit and began investing the money in cattle to supply his business. Being a family man, Kohrs convinced his half brothers, Charles, John, and Nick Bielenberg to join him in Montana. With careful breeding and endless grazing opportunities, Kohrs became one of the leading cattlemen in southwestern Montana by 1865. Kohrs soon required a more adequate ranch operation for his growing industry and was very familiar with Deer Lodge Valley. His business dealing had put him in contact with Johnny Grant whose ranch was ideal for what Kohrs needed. Kohrs made a failed proposal to purchase Grant’s ranch in 1865, but he would reconsider a year later when Grant sold his ranch to Kohrs for $19,200. The purchase included the ranch and 350 head of cattle. This would end the Grant families association with the ranch, turning over the property to the Kohrs family for more than one hundred years to come. After a few years

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Con’s half-brother John Bielenberg (Fig. 5) became a close and trusted associate in the ranching enterprise. Con tended to range between making solid business deals in cattle, land, and mining interests, while John usually stayed close to the ranch managing the day to day operations. When Con initially purchased the ranch he was living the life of a bachelor, but this would change during the Christmas holiday of 1867. His mother reacquainted con to a childhood acquaintance Augusta Kruse. Con visited Augusta at her home in Ohio during Christmas and was married in February 1867. Augusta seemed to be more than willing to move to Montana with her new husband. She made the ranch house her domain and assumed the role of wife to one of Montana’s most successful entrepreneurs. By 1870 Kohrs and Bielenberg had expanded their cattle operation far beyond the home ranch. The herd were growing rapidly and grass was becoming increasingly scarce in the Deer Lodge Valley, so Con moved his herd to the open range northeast of Deer Lodge. Around this time Kohrs and Bielenberg began to explore wider markets for their beef. They began shipping cattle to Chicago via a southerly route through Idaho and Wyoming. In connection with this rapid growth the half-brothers also placed a large herd of cattle on the Snake River and another that was moved from western Nebraska, to Wyoming, and even into North Park, Colorado depending on where the grass was best. This activity marked a major turning point for the business as it would continue to be developed and expanded in the future. Kohrs experienced prosperity throughout the 1870’s and this was reflected in several aspects of his professional and personal life. For instance it allowed him to purchase additional lands for the home ranch with Bielenberg. In the early 1880’s Kohrs and Bielenberg thrived beyond all previous measures of success. In 1883 Con purchased 12,000 head of cattle and other ranch property for $400,000, making it the
largest such transaction in Montana to date. The ranch had, by this time, become an operation that could not be managed on a daily basis by its owners. Immediate supervision of the herds and drives was relinquished to trusted foremen, while Con and John assumed oversight responsibilities riding long distances to monitor various herds along the Canadian border to the Crow Indian Reservation in southeastern Montana Territory. Kohrs’ success correlated with the building of the Northern Pacific Railroad across the territory in 1883. Coupled with the decline of the buffalo, livestock operations shifted principally to the Sun River region on the plains east of the Continental Divide. During the late 1870’s the home ranch had assumed an increasing importance as a breeding operation. Kohrs had begun acquiring blooded Short Horn breeding stock from the Midwest. The number of these cattle multiplied significantly after 1880. He soon added registered Herefords to his ranch in 1884.  

After years of success in the ranching business, Kohrs and Bielenberg would see a major turning point in the year 1886. The risk of loss was made evident by dry conditions that failed to replenish grasses. Prairie fires took a tool on the ranges and experienced stock growers recognized the precarious situation posed by escalating number of cattle and the fragility of an overgrazed range, but they decided to trust luck rather than change methods. Winter would come early in 1886 and it was severe. Temperatures were recorded at sixty degrees below zero leaving massive amounts of thick snow and no forage for the cattle. When the spring thaw melted the snow, dozens of stiffened carcasses were revealed across the landscape. Investors from overseas lost everything and disappeared from cattle

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9 Ibid, McChristian, pg. 7-10.
investing. Many of the large ranchers and most of the small ones went bankrupt in the following months. Kohrs being one of the wealthiest ranchers was able to hang on, despite the loss of two thirds of his stock, because of his financial cushion. However, he had still had to borrow heavily to regain momentum. Kohrs and Bielenburg built a new herd, but the nature of the cattle industry would be changed forever. The days of open range grazing were finished and the stockmen who survived the losses of 1886-87 had to make changes to stay in business. Vast open landscapes would soon be sectioned off by fencing to control cattle herds more efficiently. They became much more conscious and watchful of range conditions and carrying capacities. Ranchers also became serious students breeding to improve stock quality. This would result in more weight per head, thus reducing the numbers necessary to generate sufficient financial return. During the 1890’s Kohrs and Bielenberg further altered their ranching methods by buying tens of thousands of acres of range land close to the home ranch in Deer Lodge. By doing this they placed their operation on a self-sustaining basis, combining pasture with meadow lands that provided hay for the winter. As time progressed further changes would come to the ranch. In 1894 Con was seriously injured while riding and John could barely manage the ranch by himself. Con would place his son-in-law John Boardman in charge of the day to day operations. Kohrs and Bielenberg placed great faith in Boardman while they developed a strategy for future operations. Con and Augusta in their old age moved to Helena in 1899 and only made summer visits back to Deer Lodge after leaving. The rapid development of the west after the turn of the century took its effects on the ranch. By 1914 homesteaders were moving in
and occupying land that was once used for cattle grazing. 10 This migration of homesteaders and farmers can be seen in other parts of the west as well. In the late 19th and early 20th century the states of Colorado, New Mexico, western Oklahoma and Texas saw an influx of farmers and settlers seeking land that once was completely devoted to ranching. A variety of causes spurred this migration of settlers that included generous homestead laws, use of barbed wire fences to spatially organize the landscape, a serious drop in cattle prices and the spread of the railroad system. 11 Several of these occurrences were also seen in Montana, which spurred changes for Kohrs and Bielenberg. Kohrs realized that the old ranching days were gone and formed the Kohrs-Bielenberg Land and Livestock Company in 1915 to incorporate most of their property holdings. He then began to liquidate their extensive empire the following years. Sales progressed quickly and in just three years the massive ranch was reduced to a remnant. By 1924 Con Kohrs, John Bielenberg and John Boardman, being the last, had all passed away. The same year was also when the last of the ranch land was sold with the exception of 1,000 acres surrounding the home ranch. For the next few years hired caretakers managed what was left of the ranch. It seemed that the ranch was all but gone when Kohrs’ grandson Conrad Warren (Fig. 6) began working there in 1926. Conrad was the son of Katherine Kohrs and Robert O. Warren. He began working as a hand on the haying crew during summer breaks from college at the University of Virginia. Conrad would return and work at the ranch after graduating from 1929-1932.

Conrad was the only grandson of Con Kohrs that took an interest in ranching. The ranch caretaker left in 1932 and Con Warren became the new manager of the ranch.  

Throughout the 1930’s and 40’s Con stocked the ranch with fine purebred Herefords and registered Belgian horses. He also realized additional lands would need to be acquired and soon owned 6,200 acres of land, of which 500 were devoted to hay meadows to provide the cattle with winter feed. By 1940 Warren had a highly successful stock raising operation that was nationally renowned for its registered Hereford cattle and purebred Belgian draft horses. The 1940’s brought changes to Conrad’s operation. Advances in agricultural technology was pushing the need for horses out. Con had an emotional connection to his Belgians, but he did not hesitate to sell them when an Iowa horse breeder offered to buy them at a fair price. Despite Conrad’s earlier success, his solvency declines in the post war era. In the late 1950’s he suffered a major blow to his reputation and finances when it was discovered that the blood line of his registered cattle had a variation of genetic dwarfism. He decided to sell the cattle and reportedly only had $10,000 after settling his debts. Conrad then would only raise common feeder cattle. Warren maintained a herd of around 350 head for several more years, until he again changed his operation to raising and selling yearlings. In the late 1960’s Conrad’s activates were limited to feeding and marketing heifers and calves. Even though he suffered from economic struggles, Conrad would never sell the home ranch.

NPS Role at the Ranch

12 Ibid, McChristian, pg. 11-12.
In 1966 the National Park service initiated Mission 66 in order to rehabilitate the park system. Part of the mission’s goals was to create new park service sites. They began looking for a site to tell the story of the open range cattle era and found one with Conrad Warren looking to preserve the ranches legacy beyond his lifetime.\textsuperscript{14} Initially Conrad was reluctant to invite government involvement into his ranching business. In September 1967 historian Merrill J. Mattes arrived at the ranch to inspect the site and determine its true historical value. Mattes recognized the potential impacts of historical animation or “living history” as it became known in the NPS.\textsuperscript{15} After assessing that it would be a welcome addition to the NPS, Mattes left and the long process of planning and acquisition began. The site was inspected by the NPS in 1967, but it would not be until 1970 that Conrad would allow the Park Service to purchase a portion of his ranch. They purchased around 130 acres plus 1180 acres of easement for $250,000. This was the first time in 104 years that the ranch had passed hands to a member outside of the Kohrs family. Two years later on August 25, 1972 President Nixon signed the legislation establishing the ranch as Grant-Kohrs National Historic Site. The remaining lands were officially acquired by the NPS in 1988.\textsuperscript{16}

Today the Grant-Kohrs Ranch National Historic Site encompasses a roughly 1,600 acre property just north of Deer Lodge, Montana. The site currently contains 98 historic structures that include: The ranch house, bunkhouse row, garage/blacksmith shop, coal

\textsuperscript{15} Ibid, McChristian, pg. 18-19.
\textsuperscript{16} Ibid, McChristian, pg. 28.
shed, ice house, granary/roller mill, draft horse barn, two privies, dairy barn, oxen barn, quarter horse barn, machine shed, seven cow sheds, four stallion barns, thoroughbred barn, buggy shed, two granaries, brooding house, chicken house, six stock shelters, hay storage shed, two feed storage houses, general storage shed, two cattle scales, seven feed racks, manure pit, beef hoist, four squeeze chutes, five feed bunkers, active flume, inactive flume, four bridges, railroad, siphon, the Warren House, chicken coop, boat house, garage, two general storage barns, large red barn, garage/shop, loading chute, seven feed houses, four pump houses, one NPS residence, restroom, visitors center, office, museum/archives building, and two unnamed historic structures. The majority of the historic buildings and structures (Fig. 7) are located around the main ranch house on the eastern portion of the ranch. Furthermore the landscape at GRKO is comprised mostly of upland and lowland pasture, four separate bodies of water and several dozen irrigation ditches located throughout the pastures. Each of the upper and lower pastures have been given corresponding names for identification purposes (Fig. 8). The lower pastures include:

- Seven small pastures (Bull, L Barn, Machine Shed, Horse, Horse Swamp, Longhorn, and Johnson Creek Feedlot) within the immediate vicinity of the ranch house.
- Effluent Fields 1-5 which are located north of the ranch house.
- North Range Meadow and Riparian also located north of the ranch house and west of Effluent Fields 1-5.
- Cottonwood, Middle and South Riparian located immediately west of the ranch house.
- Triangle also located immediately west of the ranch house.
- West Fields 1-4 located further west and northwest of the ranch house.
- Stuart Annex and Field located immediately south of the ranch house.
- Cottonwood Creek Riparian located south of the two Stuart fields.
- VC North and South located southeast of the ranch house near the visitors center.

Most of the pastoral landscape is located within these lower pastures totaling 734.2 acres.

The upper pastures on the other hand consist of:

- Upper Northwest Range located west of the lower west fields.
- Big Gulch located south of the Upper Northwest Range.
- Taylor Ridge and Field located south of Big Gulch.
- Ridge Road Range located east of Big Gulch.
- Gravel Pit Range located east of Taylor Field.

The upper pastures total 467 acres. Additionally there are over 100 segments of fencing throughout the site composed mostly of jackleg, barbwire, and electric fences, though there are some areas with five rail stacked end, picket and woven wire fences.

As a functioning cattle ranch, GRKO has several different breeds of cattle, horses, and even chickens on site. Between the Longhorn, Shorthorn, Herford, and Black Angus breeds, there were officially 191 head of cattle as of October 2016. These include:

- 23 steers that are Shorthorn, Herford, and Longhorn mix,
- two Herford Bulls,
- one Black Angus Bull,
- 122 Shorthorn, Longhorn, and Herford heifers, and
- 43 cow-calf pairs that are Shorthorn, Longhorn, and Herford breeds (Fig. 9).

Of course the number of cattle on the ranch fluctuates depending on sale of calves and unexpected deaths. The horses used at GRKO include:

- four quarter horses,
- five Belgian draft horses, and
- two Percheron draft horses (Fig10.).

Additionally there are several chickens that are kept in the chicken coop, made up of Road Island Red, and other varying breeds (Fig 11).

Grant, Kohrs and Bielenberg built an empire in the west during the open range cattle era. After that era, Kohrs and Bielenberg helped re-establish the ranch near the

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18 GRKO GIS, “Grant Kohrs Ranch National Historic Site Geographic Land Map”, (October 2014).
19 Davis, Phillip B; Rew, Lisa, “Grant Kohrs Ranch Fencing Report”, (Montana State University; Department of Land Resources and Environmental Sciences, March 2011) pg. 5. Acquired October 16, 2016.
headquarters of the current ranch today. After their time was up and it looked like the ranch was going to be run by the ranch manager or be sold, Con Warren made a decision that changed his life and the fate of the ranch forever. After many years of doing what he loved, Con decided he wanted the legacy of the ranch to go on forever. The NPS soon took an interest in the ranch as a result of the property being identified due to the reactivated survey of historic buildings and sites program in 1957 and after years of diplomacy and land acquisition the Grant Kohrs Ranch National Historic Site was established in 1972. Today the park tells the story of the open range cattle era and the following years of ranching through the lives of four ranchers who were pioneers of the cattle industry in the west.

\[\text{Ibid, McChristian, pg. 2}\]
Literature Review

My literature review will draw mostly on GRKO related professional reports, academic literature on living history, ranching history, and philosophical landscape histories. The literature from GRKO used to support my argument includes cultural landscape reports, a management plan, interpretive plans, supporting historical narratives, and cultural and natural resource documentation. It is also important to include literature on living history because this is an important concept used by GRKO in both their interpretive and management plans. Cultural and resource management is a vital function of GRKO and is supported by documentation of the subject at GRKO and other parts of the west. The cultural landscape of GRKO is central to the scope of my thesis and is supported by literature on discussing the cultural landscapes of GRKO and other historic agricultural sites. The resources that have been consulted include National Park Service documents for Grant Kohrs National Historic Site, Lyndon B, Johnson National Historical Park, Ebey’s Landing National Historical Reserve and Theodore Roosevelt National Park. These National Park sites are very similar to GRKO and provide interesting and useful comparisons on the subject of historic agricultural sites. Additional documentation includes journal articles on rangeland sustainability, irrigation, GRKO and living history farms. These supporting articles help provide background information on the subjects of natural resource conservation, interpretation, living history, and the history of GRKO. Interviews have also been conducted with several park staff member at GRKO and inform Sections 1-3 of my thesis.
McChristian’s administrative history examines the history of Grant Kohrs Ranch dating from its formation as a working cattle ranch in 1842 to its current status as a National Park. The history documents the effort it took to purchase the ranch over a time period of several years and planning process involved in the National Park Service establishing the Park. McChristian also discusses the decision for the site to remain a functioning cattle ranch as the main reason for the park’s existence. This decision is one of the most important that the NPS made when developing the management plan for the site. Telling the story of the cattle empire in west through the existence of the Grant Kohrs Ranch became the mission of the National Park. Further discussion of the agricultural interpretations and natural resources at Grant Kohrs are reviewed by McChristian. The formation of the interpretative plan and natural resource conservation help show the development and evolution of the current form of interpretation used at GRKO. The administrative history helps to supplement information for the cultural landscape reports for GRKO. 21

Milner’s Cultural landscape Report on GRKO gives a brief introduction to the site and a description of the landscape. They relate an extensive history of the landscape dating from the Paleo-Indian Period to the acquisition of the ranch by the NPS. Milner has then documented the existing conditions of the landscape and its features. Milner also provides an analysis of the landscape and an evaluation of the site. These evaluations and documentations provide an extensive background into the history of GRKO’s landscape.

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and the elements and features it contains. It is extremely useful to examine this document while trying to understand the nature and evolution of the cultural landscape. 22

Collins has provided a second part to Milner’s original Cultural Landscape Report. This second part focuses solely on treatment recommendations for the pastures, hay fields and upland pastures. Collins provides a brief overview of the project and again gives a short historical overview. He then discusses the management of the pastures and hayfields, along with the issues involved, and proposes a treatment for the landscape. Collins advises then NPS to maintain the native vegetation within the pastures/hayfields and to fight the spread of invasive species. He also suggests that it would be crucial to maintain existing historic structures, maintain the riparian woodland along the Clark Fork River and develop a plan for managing the vegetation in the front fields. He also provides recommendations on the upland pastures, land use practices, spatial organization, structures and buildings, constructed water features, circulation, public use and interpretation and new design and construction. These suggestions and recommendations made by Collins give an accurate insight into how the conservation of the landscape is being done today and if GRKO has taken any of these into account. 23

The General Management Plan for GRKO, which is similar to the Cultural Landscape Reports, discusses the need for the management plan because of the park’s management objectives and issues revolving sound cultural resources, visitor use, interpretation,
operations, natural resources, and external influences. It then proposes action and alternatives on a range of topics. A summary of the effected environment and environmental consequences is discussed further in the document. Though somewhat outdated, the management plan is a helpful source of information involving agriculture, interpretation, the environmental and the cultural landscape. Supporting reports specific to certain features and work that is done at GRKO help inform the Management Plan and Cultural Landscape Reports.  

Davis and Rew’s fencing report discusses the various types of fencing structures throughout the ranch. The analysis is broken down to each singular field and pasture. This also includes the fencing around any riparian features. It was found that overall the fences at GRKO contribute to the mission and interpretation of the site. Even though more than half the fences on the site are not historic they still are constructed in the same manner or use the same type of materials, thus conveying the historical significance of the ranch. The fencing report is useful in conveying the history and evolution of fencing at GRKO, including a complete guide as to which portion of the landscape contains a specific fencing type.  

Griffin and Endecott have produced a helpful document that discusses the livestock management practices on GRKO. It begins with a brief summary of the ranches history, including the historic cattle breeds, followed by security and cattle handling

https://www.nps.gov/grko/getinvolved/planning.htm  
25 Davis, Phillip B; Rew, Lisa, “Grant Kohrs Ranch Fencing Report”, (Montana State University; Department of Land Resources and Environmental Sciences, March 2011).
recommendations. The bulk of the document contains instructions on raising the various breeds of cattle at Grant Kohrs and is broken up into spring, summer, fall, and winter seasons. Different jobs and responsibilities are required depending on what season it is. Responsibilities range from detecting signs on calving in the spring, branding in the summer, vaccinating on the fall and selling calves in the winter. The document also applies to equine care at GRKO. It has provided insight into the standards and practices used by GRKO involving livestock. This is helpful in determining if they are historically accurate to a certain time period and if the livestock are being used for historic purposes.  

In addition to supporting documents for GRKO, various documents at similar NPS sites are also used to help to compare interpretation, management techniques, agricultural use, and conservation. The Management Plan and Environmental Impact Statement at Lyndon B. Johnson National Historic Park is broken up into two parts. Part one consists of Planning Background and Alternatives that touches on the need for the document and proposed action. Part two gives an environmental analysis of the site that includes the affected environment, cultural and natural resources, interpretation, visitor use and environmental consequences. The rest of Part two gives three alternatives and proposed action for the environmental impact. Each part helps make comparisons to the interpretive and management strategies at GRKO, as well as the heritage significance.  

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Further documentation on rangeland conservation and living history farms provide supporting information that helps inform the current conservation work being done at GRKO and the importance of living history at historic sites. Carson’s journal article, though not specific to ranching or historical sites, examines the biological conditions and health of people living in the nineteenth century western frontier. The article could potentially help explain one of the reasons that people settled in Montana in the nineteenth century and why cattle ranching was so successful. Carson found that rural lifestyles improved relative to geographic regions where markets and industrialization were more fully integrated. Furthermore it was discovered that nineteenth-century western statures reflect a complex set of economic, social, and biological factors and confirm stature relationships that reflect economic development in the western United States. The article is helpful in identifying reasons why people were moving into Montana and informs the root cause as to why the ranch was settled when and where it was. ²⁸

Morain discusses the rise of popularity in living history farms with the American public and why farms and agriculture have a special place in preservation. Morain discusses the issues of managing a living history farm and how these issues may be solved. Aside from being a monument to agriculture (an ultimate necessity for all of humanity), living history farms provide both academic and internship resources for students interested in preservation, agriculture, and museum work. Furthermore they are an educational resource for those who have no knowledge of agriculture. Morain argues that living history

farms also appeal to a public who realize that we have lost faith in the technology which provides the abundance of life. It is appealing to people who see the future of their grandchildren as survival instead of thriving. Morain’s article helps to identify some of the reasons for people interest in living history farms that can be compared attributed to GRKO.  

Miekle’s article on the history of GRKO contains some repetitive information about the site which can be found in NPS supporting documents, but gives some additional information not found within them. Additionally the article provides a fresh perspective on the history of the ranch that isn’t provided solely by the NPS, even though Miekle was a NPS ranger at GRKO. The article provides new information about the families that occupied the ranch and about the town of Deer Lodge. It also gives historical first person accounts of people who passed through the area and has remarked upon the beauty of the ranch’s landscape characteristics. The article adds an additional perspective of someone who worked at GRKO.  

The collection of authors involved in this article discuss the proper business planning and resource monitoring strategy for rangeland sustainability. The article focuses mainly on ranching and can be compared to the conservation efforts on rangeland being conducted at GRKO. The strategy is broken down into several indicators which include: soil, water, plant, animal, productive capacity, socioeconomic, legal and institutional, and weather.

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These indicators are used on various ranches throughout the western states, and could be used by GRKO. A summary of each indicator is provided along with different solutions and strategies for each. While GRKO may not use this specific document to help natural resource conservation, they do conduct very similar work on the ranch. 31

Also important for understanding the cultural landscape of GRKO and other western landscapes are sociological articles on the subject of western landscapes. Jackson discusses why the high plains landscape saw an influx of farmers migrating into ranching territory towards the end of the 19th century and beginning of the 20th century. He also briefly mentions the initial conflict between farmers and ranchers and the eventual fight for survival in a climate that saw years of drought and depression. Though not directly related Montana’s cattle industry, Jackson’s article emphasizes the push westward in the 19th century and the reason for the end of free range grazing in the west. This is an important part of GRKO’s history looked at in a different context. Furthermore Jackson mentions the bleak yet beautiful landscape of the high plains that is today littered with abandoned homesteads. This may have been the fate of GRKO if it had been established elsewhere or had not been protected by the NPS. 32

Sando’s article on Haying Imprints on western landscapes refers to the cultural landscape of the west as a canvas that different generations of haying technology have left their marks on. By including study areas such as Montana and Idaho, and discussing the

different methods of haying using various technologies over the years, Sando has unknowingly made a brilliant comparison to the landscape and haying methods used at GRKO. One of the main feature at GRKO is the Beaver slide hay stacker, which is used for demonstrations and some of the actual ranching functions. However, GRKO also uses modern methods of collecting and cutting hay. It is interesting to now view the landscape as not just shaped by the cattle that have grazed it, but the ways in which the vegetation has been cultivated and collected for hay over the years.  

In Fiege’s article, he examines historical geography of western weeds as a problem for property owners in Montana. Fiege tracks the spread of weeds from the early 20th century to the year 2005. He also examines the means by which invasive weed species were spread throughout the landscape and issue of discerning property boundaries. It is emphasized that the history of Montana’s weedy common spaces provides an alternative perspective on ordinary rural western landscapes. Further discussion is made about the effect that invasive weeds had on native plants species, agriculture and wildlife. 

In conclusion the documents that have been reviewed will factor greatly into discovering the question of how agriculture as an interpretive management strategy ties together the interpretation of historical significance and natural resource conservation at GRKO. Not only are there many NPS documents about the site, but also other supporting NPS documentation on similar historical sites. The remaining literature such as the

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Rangeland Management article, Fiege’s Weedy West article and Morain’s Living History article will add context to the discussion of interpretation, conservation, economics, sociology, tourism and landscape preservation theory.
Section 1: Historical Significance and Comparisons

The current boundaries of GRKO cover a fraction of the previous ranch that Grant started which encompassed more than 27,000 acres with additional feed, water, and grazing rights to more than 10 million acres of public land that spanned Montana and parts of Utah, Idaho, Wyoming, Colorado, and Canada. The purpose statement for GRKO reads:

“Grant-Kohrs Ranch National Historic Site provides an understanding of the nation’s frontier cattle era commemorating cowboys and cattlemen through the preservation, interpretation, and operation of an intact ranch with more than 150 years of unbroken history.”

The significance of the ranch that has been summed up into four areas within the NPS significance statement that read:

“Grant-Kohrs Ranch National Historic Site is the only unit of the national park system specifically dedicated to tell the story of the frontier cattle era and its role in shaping the history and character of the United States.

The unbroken history of ranching, as told through the Grant and Kohrs families and the individuals connected to their ranch, provides an exceptional opportunity to compare and contrast the lives of the diverse peoples, communities, and industries touched by cattle ranching.

Grant-Kohrs Ranch provides an authentic historic setting to experience the cattle industry as it matured and contributed to Western culture. The Home Ranch’s integrity is illustrated by its original structures, family furnishings, personal papers, ranching equipment, and its continued use of land and heritage skills for livestock production.

Grant-Kohrs Ranch was once the headquarters of a 10 million acre cattle empire, and remains an important symbol of the American West and its wide open spaces, hardworking cowboys and their horse, and vast herds of cattle.”

Furthermore, as an historic site, it is crucial that the fundamental resources and values be identified, described and documented. The character defining features and values identified for GRKO (described below) contribute to the overall significance of the ranch and its unique character. Likewise they form the basis for the interpretation of the historical significance. GKRO has identified six main features and values that contribute to the significance of the ranch which are cultural landscapes, historic structures, the museum and archive collection, the historic setting and ambiance, the opportunity to understand and appreciate an operating ranch, and the ranching process and heritage skills.36

Six Main Features and Values

1. The cultural landscape is vital to understanding and interpreting the significance of GRKO, and is equally important at virtually any other historic site. The cultural landscape resources at GRKO encompass a 150-year continuum of cattle ranching operations that include the Grant, Kohrs and Warren periods of ownership. There are nine component landscapes identified at the ranch that retain a high degree of integrity reflecting the 1862-1982 period of significance. (These nine landscapes will be discussed further in the next section.) GRKO has responded to the natural features and systems, patterns of spatial organization, physical construction and functional relationship of buildings, structures, fences, fields, corrals, view, roads, vegetation, and constructed water features within the landscape in order to convey the historical significance of the site to park visitors. Even though the land use capacity and diversity of livestock has been reduced

36 Ibid, Park Staff, pg. 6.
during the period of NPS ownership, the landscape still conveys the character and use of the historic period thanks to preservation efforts. 2. As stated previously there are 98 historic structures at GRKO, 72 of which are contributing, 20 supporting and 6 noncontributing. Collectively these buildings represent all the structures necessary for a functioning cattle ranch. They date from the mid-19th century to the latter part of the 20th century. Many of the buildings are located near the ranch house and are easily available for interpretation to visitors, but some are located at distant locations on the ranch. 3. The museum and archive collection provides additional significance to the ranch. The collection consists of approximately 35,650 objects and 105 linear feet of archival material. GRKO has a truly remarkable collection of artifacts with a connection to the site, their representation of daily ranch life from the mid-19th century to the late 20th century, and overall good condition. The collection contains items such as furnishings for all structures, personal belongings of Grant, Kohrs, Bielenberg and Warren families, ranching and personal papers and photographs, horse drawn vehicles and agricultural tools. Some of the items are stored in several of the ranches historic structures but most are kept in the curatorial facility. The facility was built in 2004 and paid for with visitor entrance fees (HS-9004) (Fig. 12). Additionally it contains three separate climate controlled rooms where the artifacts are stored. Visitors are given the opportunity to see the curatorial facility every Friday on 20-30 minute tours. Different items are shown each week in order to allow a broad range of interpretation. Multiple tours by visitors, if possible, would ultimately allow them to get a better sense of the significance of the museum collection. 4. GRKO’s setting allows visitors to experience the historic ranch experience via the cultural landscape, historic structures and museum collection. 5. Careful orchestration of ranching activities
combined with the setting and original view sheds allow the visitor to understand the significance of the site and learn about its history. Likewise the ranch offers exceptional opportunities to experience the sights, sounds, and smells of an operating ranch by viewing, participating and interacting with the diverse cultural landscape. Visitors are able learn about the stories of the people that worked at the ranch through demonstrations and exploring the expansive property. 6. The ranching processes and heritage skills displayed at the ranch continue more than 150 years ranching history at GRKO. These skills have helped shape the cultural landscape that the ranch currently strives to protect. The ranching processes include those that preserve the cultural landscapes for future generations, sustain natural resource, and integrate agricultural practices as a functioning system.37

In comparison these features and values attributed to GRKO are similar for other historic sites that function as living history farms and at sites that feature agriculture as a defining part of their historical significance. Other NPS sites that feature agriculture do not solely revolve around the importance of agriculture for historical significance, and instead mention other aspects of historical importance. This is what makes GRKO unique to the NPS. However, the fact that GRKO relies specifically on the history of the cattle empire in the west is what establishes it as a unique historical site compared to all others in the country. Lyndon B. Jonson National Historic Park is a NPS site that is very closely related to GRKO and provides a useful comparison between the two.

Comparison to Lyndon B. Johnson National Historical Park

37 Ibid, Park Staff, pg. 6-7.
At Lyndon B. Johnson National Historical Park, the question of why the site is significant is obvious. It is the ideal location to experience the environment that helped shape the character of the 36th President of the United States. The fundamental resources at LBJNHP place value in the structures and lands that represent the origins, ancestry, life span and legacy of President Johnson. The park has defined its significance as encompassing three broad areas:

“The resources of the Lyndon B. Johnson National Historical Park document and communicate the life and heritage of the 36th president of the United States. Here, as in few other historical parks, one can see the lands and structures that represent the origins, ancestry, full life span, and continuing legacy of a major historical figure.

President Johnson had a deep and abiding connection with the Hill Country of central Texas and with the people of Texas. He used his experience with the people, land, and resources to advocate his local, national, and international programs. It was this connection and his commitment to a government that works for people that sustained him throughout his life.

President Johnson was directly involved in the restoration and preservation of the sites within the park. The Texas White House remains Mrs. Johnson’s residence, and the Johnson family continues to be involved in the park’s activities.” 38

Of course with the home of President Johnson being on a ranch, agriculture is an important part of the sites significance and also key to understanding a figure who was a rancher and a president. His desire to demonstrate ranching culture and conservation practices prompted him to ensure the property remain a working ranch after his passing. 39 Needing the knowledge of ranching to understand the figure who commanded the operation is

similar to GRKO’s understanding of historical significance. Understanding the history of Grant, Kohrs, Bielenberg and Warren help visitors understand why the ranch is important and worth preserving. Likewise this was all possible due to the preservation efforts of the ranching families to ensure their legacy continued. Like GRKO, the LBJNHP places emphasis on the interpretive exhibits, the cultural landscape, historic setting and historic structures within the ranch site such as the Martin Barn, Ranch House, and Show Barn. Even though these aren’t the only elements of historical significance at the site, they are an important part of understanding the sites history. The individual features are also certainly key to the overall historical significance of agriculture at the park. Even though the ranch is an important part of LBJNHP’s history, the principal historical significance of the site is its association with the personage of LBJ; the ranching landscape is secondary and supportive; and there is little emphasis providing an opportunity to understand and appreciate an operating ranch, and the ranching process and heritage skills. This contrasts with GRKO, which has made the ranching process its central theme of historical significance.

Comparison to Theodore Roosevelt National Park

Another park within the NPS which features agriculture as part of its historical significance is Theodore Roosevelt National Park located north of Medora, North Dakota. Within TRNP are three separate units, South, North and Elkhorn Ranch. Each unit contains its own visitors center and focuses on separate yet similar forms of conservation and

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Ibid, Department of the Interior, pg. 77 & 84.
preservation. Likewise each unit has different values and features of historical significance. Besides a 36-mile scenic loop with several pullouts, interpretive signs and hiking trails, the South Unit also contains the historic Peaceful Valley Ranch. Peaceful Valley is the only remaining historic ranch in the South Unit of the park. Guided horseback rides have been a popular activity there since 1918. The historic structures remain today and have been undergoing rehabilitation for the past three years. Additionally the North Unit of the park displays longhorn cattle as part of a historical demonstration that represents the significance of the 1880’s cattle drives into the Dakotas. A portion of the Long X cattle trail is reported to have crossed the park. During the winter the herd consists of about 20 steers that have to be tended to by park staff. The Elkhorn Ranch Unit is considered to be the heart of the park’s historical significance, related to the life of Theodore Roosevelt. This is where Roosevelt established what he called his “home ranch” in 1884. Today the site includes remnants of the ranch house, barn, utility shed, chicken coop, blacksmith shop, dugout and well. Even though the historic structures of the ranch are mostly gone, visitors can still understand the significance of the site by visiting and taking part in the experience. Each of the three individual units contains elements of agricultural significance and gives visitors an opportunity to understand why they are a part of the overall historical significance of the park. TRNP is similar to GRKO in that it includes agricultural features and processes as part of its historical significance, but TRNP also

includes other aspects of historical significance such as the history of Theodore Roosevelt as a presidential figure, conservation of the natural landscape, and wildlife conservation priorities. The cultural landscape, historic setting, historic structures, and exhibits are important to the significance of the park, but again they are secondary to the presidential narratives/significance and there is little opportunity to understand and appreciate an operating ranch, the ranching process and heritage skills.

**Comparison to Barrington Living History Farm**

Stepping outside of the NPS and comparing GRKO to a historic ranch such as Barrington Living History Farm near Navasota, Texas, we can see similarities in agricultural history being the central feature of the overall historical significance of the site. Barrington is one of several historic agricultural sites in the state of Texas that feature a living history program. The structure of historical significance is very similar to LBJNHP. The site was the home of the last president of the Republic of Texas, Dr. Anson Jones. This is the primary significance of the site. Agricultural significance is of secondary importance, but what differs in this comparison to GRKO and LBJNHP is the specific topic under the subject of agriculture. As a farm Barrington’s purpose was the cultivation of crops, specifically cotton, while both GRKO and LBJHP function primarily as cattle ranches. Also the presentation of historical significance, demonstrations and interpretive discussions at the site carries both similarities and differences to GRKO. Barrington was originally a farmstead settled by Dr. Anson Jones in 1840. As a congressman for the Republic of Texas, minister to the United States, senator and secretary of state, Dr. Jones name carries historical importance for the state of Texas. The farm was sold in 1857 by Dr.
Jones and has since traded hands several times only to end up being owned and operated by the Texas Parks and Wildlife Department. The historic structures at Barrington include the Farm house, Kitchen, Smokehouse, Chicken/Duck Coop, Corn and Cotton Crib, Barn, Slave Quarters and Hog Pen. Additionally a Kitchen Garden and Field Crops have been re-created to create a more authentic image of the site. Visitors to the site are offered tours of the historic home, with several staff members dressed in period clothing creating reenactments and demonstrations for visitors. However, many of the demonstrations and interpretive themes are geared towards educating children.  

Similarly GRKO also features demonstrations, but few of them are meant to educate children unless a school has visited for an educational field trip. The overall purpose at Barrington is to demonstrate how families lived and worked on a farm in Texas. The presence of costumed staff and hands on activities are supposed to show visitors a way of life on a 19th century Texas Farm. Barrington thus places the cultural landscape, historic setting, demonstrations and exhibits, and historic structures as features under the historical significance of the site. Since Barrington is an operating living history farm it also includes providing an opportunity to understand and appreciate an operating 19th century farm, and the farming process and heritage skills as part of their historical significance. Barrington’s historical significance is more similar to GRKO than TRNP or LBJNHP in that it includes how a functioning farm in Texas operates and the farming process and heritage skills under its historical significance. This is in addition to including the cultural landscape, historic structures,

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exhibits, and the historic setting. The difference as stated earlier is the specific topic under the subject of agriculture. Barrington tells the story of farming on a 19th century farm in Texas with focus on the Jones family, while GRKO tells the story of the open range cattle empire in the west with focus on Kohrs, Grant, Bielenberg, and Warren. The demonstrations, displays, and agricultural features are likewise representative of a different subtopic of agriculture at Barrington.

Not only is GRKO the only NPS site dedicated to telling the story of the frontier cattle era, but it is arguably the only NPS site completely dedicated to an agricultural subject. Even though other NPS sites such as LBJNHP and TRNP convey the history of ranching, it is only one of the subjects covered in the overall historical significance of those sites. The main story being told at LBJNHP is that of Lyndon B Johnson’s life at his historic home and as president. Likewise TRNP features the story Theodore Roosevelt as President and conservation of the natural landscape. GRKO has several similarities to Barrington’s historical significance, but the particular subject of life on a farm in Texas, which is conveyed at Barrington, is different than that at GRKO. Aside from being a farm cultivated with cotton and other crops, Barrington was worked by slaves, whereas there were never any slaves at GRKO. The specific type of agricultural production, and labor force are two of the main differences between the two.
Section 2: Nine Component Landscapes and Natural Resource Conservation

The ongoing natural resource conservation work conducted at GRKO is one of the most important and efficient ways to preserve the cultural landscape of the ranch. As stated previously, management of the landscape at GRKO has been divided into nine component landscapes (Fig. 13).

“The Home Ranch Complex includes all landscape features associated with the core complex of the Grant Kohrs Ranch. It is bounded by the railroad corridor on the east, the riparian corridor of the Clark Fork River on the west, and consists of the lower yards, lower house yards, bunkhouse yards, Johnson Creek field, west Corrals, and west feedlots. The East Feed Lot/Warren Hereford Ranch area consists of the landscape east of the railroad corridor, which was developed by Con Warren. It contains the land bordered by the main entry road on the south, the park boundary on the east, the rail corridor on the west, and the south edge of Front Field on the north. The Grant Kohrs Residence includes the features contained within the domestic landscape immediately surrounding the ranch home built by John Grant and later added onto by Conrad Kohrs. The Warren Residence consists of the features contained within the domestic landscape immediately surrounding the home built by Conrad Warren which now houses the NPS offices. The Pasture/Hay Field component includes the irrigated and low lying lands bordering the Clark Fork riparian corridor. It consists of the Stuart Field, Olson Fields, and the Front Field located north of the East Feed Lot. Next the Upland Pasture area includes the land west of the Westside Ditch and contains the Big Gulch, Little Gulch, Taylor Field and the ranges and hilltops in between. Even though this area contains pastures and hayfields it has been separated due to its relative sense of isolation from the rest of the ranch. The Riparian Area/Woodland consists of the riparian woodlands along the Clark Fork River corridor, Johnson, Cottonwood Creek, and the Olson Property to the north. The Railroad Bed and Barrow Pit/Wetland includes the linear railroad corridor and utility lines associated with it. There is also a depressed wetland area bordering the railroad corridor. Lastly the Development Zone contains the Visitors Center, restrooms, curatorial building,
Identifying the nine component landscapes was an important first step in beginning landscape conservation at the ranch. In 2013 each component landscape was analyzed in order to determine which management practices needed to be incorporated for better conservation of the land. Of the nine landscapes, the four that stand out as potentially being the most important for the ranch are the Home Ranch, East Feed Lot/Warren Hereford Ranch, Pasture/Hay Field, and Upland Pasture. These four individual landscapes make up the majority of the land used to sustain the cattle and horses. Additionally the Pasture/Hayfield and Upland Pasture areas contain several dozen ditches used to irrigate the land. They also include the land that is used for historical demonstrations and interpretations for the visitors and are where the visitor is most likely walk about the site.

**Home Ranch Complex**

Within the home ranch landscape (Fig. 14) are the oldest structures on site which include the bunkhouse, ice house, draft horse barn, oxen barn, and the ranch house itself. The land sits on at the edge of a bench formation overlooking the Clark Fork River and lowland pastures to the west. Below the bench to the west, the land slopes down into Johnson Creek. Most of the structures in the home ranch complex reside in this area. At times it does create boggy conditions in the lower feedlots adjacent to the creek. Johnson Creek is perhaps the most culturally significant creek within the ranch due to the domestic

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and work buildings that were built around it. It is fed by another natural spring located just inside the southeast boundary of the ranch. At that location it is contained by fences that allow riparian vegetation to grow. Much of the vegetation within the home ranch complex that would grow along the banks of Johnson Creek has been removed due to intensive grazing and the area being developed for ranching operations. The lawn areas near the ranch house consist of some grasses, while willows and cottonwoods are found primarily within the Johnson Creek Field south of the house and the Johnson Creek feedlot. Several large cottonwoods are also found along the southern edge of the demonstration field. A variety of Pasture grasses comprise the majority of vegetative cover within the Home Ranch corrals and feedlots. This vegetation provides nourishment for livestock contained within them. The species composition is a mix of native and non-native grasses and forbs due to heavy grazing.47

**East Feed Lot/ Warren Hereford Ranch**

The East Feed Lot/Warren Hereford Ranch (Fig. 15) is situated on a fairly flat parcel of land consisting of deep loams that have been drained. These loams define the upper bench area of the landscape. There is a slight grade change that occurs to the west of the corrals, where the drainage swale is located along the railroad corridor. As a result the area drains to the south and west. The vegetation within the East Feed Lot/Warren Hereford Ranch is comprised of pasture grasses which proved food for the livestock that graze there.

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Again the species composition in this area is a mix of native and non-native grasses due to the landscape being heavily grazed by livestock.⁴⁸

**Pasture/Hayfield Component**

The landscape of the Pasture/Hayfield component (Fig. 16) consists of gently rolling to flat topography. Several loams are found throughout the meadowland and hay fields on either side of the rivers floodplain, but primarily on the east side where the land is cultivated for hay. The pasture located within the Front Field contains several different loam which are deer and drained. Spring Creek feeds into the now abandoned Warren Ditch located in the northwest corner of the ranch before it joins with the Clark Fork River further north. Likewise there are two unnamed gulches, one of which is one the east side and feeds into the Kohrs-Manning Ditch near the Warren Pump and the other is on the west side and feeds into the “Big” Kohrs Ditch in the middle of the ranch. No-Name Creek, located within the Pasture/Hay Field on the east side of the Clark Fork riparian woodland, serves as a tributary to the Clark Fork River. Several different types of grasses can be found within the Pasture/Hay Field landscape. The most common grasses in the hay fields and meadows along the riparian zone are smooth brome, common timothy, Kentucky bluegrass, red clover, Canada thistle, crested wheatgrass and white clover, all of which are exotic species. The Lower Yard Field and North Meadows area contains a mix of riparian and dry upland grasses. Bebb willows, slender willows, river birch and black cottonwoods are found along the irrigation ditches, natural springs and sloughs. Throughout the dry upland benches and

non-irrigated pasture areas the most abundant grasses are bluebunch wheatgrass, moss phlox, needle and thread grass, Missouri goldenrod, hairy goldenaster, desert alyssum and blue grama. All of these species are native to the region except for the crested wheatgrass and desert alyssum. Species that are common to the non-irrigated upland benches include: western wheatgrass, crested wheatgrass, leafy musineon, scarlet gaura, standing milkvetch, plains reedgrass, prairie smoke, little-leaf alumroot spineless horsebrush, Bessey’s locoweed, winterfat and skeletonweed. All of these species are native to the region. 49

**Upland Pasture**

The Upland Pasture landscape (Fig. 17) is made up of the steepest slopes and highest elevations within the ranch property. These upland areas are comprised of deep well drained soils that contain cobble loam, clay loam, and clay containing a large mixture of gravel. Without irrigation these soils are naturally limited to the pasture. Taylor creek is the primary drainage corridor in the upland pasture area. The creek is located along the southern boundary of the ranch and provides irrigation water to the ditches that tap into it. Separate drainage swales drain the gulches, but are intercepted by the lateral ditches used to irrigate these upland pasture areas. The Upland Pasture contains by far the most diverse collection of vegetative species, of which the most predominant species within the four dry ranges of the area include: common yarrow, crested wheatgrass, standing milkvetch, fringed sagebrush, blue grama, smooth brome, spotted knapweed, waveleaf thistle, rubber rabbitbush, shaggy fleabane, cutleaf daisy, rough fescue, scarlet gaura, prairie smoke,

curly-cup gumweed, broom snakeweek, baby’s breath, needle-and-thread, little-leaf alumroot, winterfat, bitterroot, yellow sweetclover, plains pricklypear, Bessey’s locoweed, western wheatgrass, longleaf phlox, moss phlox, sanbergr’s bluegrass, bluebunch wheatgrass, tall tumblemustard, Missouri goldenrod, scarlet globemarrow, dandelion, spineless horsebrush and intermediate wheatgrass. Of the 35 species located within the dry ranges, eight of them are exotic and the rest are native to the region. The irrigated areas of the Upland Pasture contain much less vegetative species. These include smooth brome, common timothy, Kentucky bluegrass, red clover, Canada thistle, crested wheatgrass, and white clover, all of which are exotic.  

In order for these four landscape components to develop a healthy ecosystem and thrive, six different management practices have been incorporated at GRKO. These management practices consist of pasture and hayland planting, irrigation water management, nutrient management, irrigated hayland practices, prescribed grazing on rangeland and prescribed grazing along wetlands and riparian zones.

**Pasture/Hayland Planting**

Due to the extreme importance of the Pasture/Hayfield and Upland Pasture landscape components, a separate CLR was written to assess the health and treatment of the landscape. It was suggested that in these areas the NPS manage the vegetation in the Pasture/Hayfield area to represent the evolution of the landscape during the period of significance. This would mean maintaining a mixture or irrigated pastures and hayfields.

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from various periods as well as non-irrigated areas. Also they should continue to irrigate lowland pastures and hay fields while maintaining and enhancing native plant species that characterize dry upland benches and non-irrigated pasture areas. Furthermore it was emphasized that the existing riparian woodland along the Clark Fork River, Cottonwood Creek and the other bodies of water be maintained as wooded buffer zones to reduce soil runoff and protect water quality. The conditions of the irrigation ditches and control of vegetation along the ditches was recommended as well. Lastly it was suggested the fencing along the riparian corridor of the Clark Fork River be retained in order to protect it from grazing. 51 For the upland pasture area managing the vegetation within the landscape to reflect the long history of the land was one of the primary suggestions for treatment. Much like the Pasture/Hayfields it was also recommended that the historic irrigated fields continue to be used in order to grow hay as a primary crop. In doing this it is important to make the distinction between irrigated hayfields/pastures and dryland pasture areas. The NPS was also instructed to preserve existing vegetation from previous historic farmstead such as apple tree clusters. Lastly the NPS was told to retain clusters of cottonwood trees and retain vegetation such as willows, river birch and black cottonwood growing along irrigation ditches, natural springs and sloughs. 52 The NPS later determined that the purpose of pasture and hayland planting is to establish native or historically appropriate forage species for sustainable production, improve the soil quality, reduce soil erosion and improve water quality, improve livestock nutrition, provide food and cover for wildlife,

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52 Ibid, Shapins Belt Collins, pg. 25.
balance the forage supply and demand during periods of low forage production, increase carbon sequestration and provide opportunities for the visitor to enjoy and accurately interpret the landscape. The fields that have been and are currently being used for hay production include the: Upper Taylor Field, Lower Taylor Field, Stuart Fields, Bull Pasture, Big Gulch, Little Gulch, and West Fields 1-3. 53 A few measures have been taken to ensure the pasture and hay planting is done properly. In areas that are frequented by high densities of animals, it is important to establish persistent species that can tolerate close grazing and trampling, while also considering those species that may have historical significance. When wildlife management is an objective, it is important to use an approved habitat evaluation procedure to help select certain plant species that will provide for their habitat. 54

Within the last year the West Fields have been re-seeded with timothy orchard and alfalfa grasses using a no till drill and were also irrigated (Fig. 18). This was done due to an invasion of ground squirrels that dug holes in the ground causing invasive weeds to grow in place of healthy vegetation. Even with modern advances in weed control, it is still a problem on ranches in Montana and other western states that must be addressed. It is an issue that can be traced back decades, ever since ranchers had divided up land into parcel and created separate boundaries. The tumbleweed, an iconic symbol of western history, was once one of the main perpetrators of this issue. Carried by wind, water, animals, vehicles and other means, weeds easily sowed their way across the landscape. Before a

53 Olson, Bret; Leinard, Bob, “BMP Report: Grant Kohrs National Historic Site”, (Animal and Range Sciences Department, Montana State University, 2013) pg. 19.
54 Ibid, Olson, Bret; Leinard, Bob, pg. 21.
strong push in the 1970’s for weed management, Montanans learned that divided boundaries did not simply mean there would be spatial order. When seeds would cross the boundaries they began to open a landscape defined less by linear divisions than by the shared experience of ecological conditions. This presented an opportunity for ranchers to work together to solve the problem of weed infestation, a problem that Con Warren surely had to deal with after the days of free range cattle grazing had passed into history.55

**Irrigation and Water Management**

Irrigation and water management at GRKO (Fig. 19) is the process of establishing and controlling the volume, frequency and application rate of irrigated water in an efficient manner. The primary purpose of irrigation management is to: preserve the cultural landscape of GRKO as described in the CLR; manage soil moisture to ensure the appropriate crop growth; make proper use of available water supplies; minimize soil erosion brought on by irrigation; decrease non-point source pollution of surface and groundwater resources; manage air, soil and plant micro-climate; ensure proper and safe irrigation of the effluent fields; create better air quality by managing soil moisture to minimize particle matter movement; manage the system as a whole in support of the cultural landscape while ensuring flexibility in preserving its individual components; provide opportunities for enhancing visitor understanding of a working cattle ranch, and provide visitor enjoyment. The irrigation management practices are applied to all fields.

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that are irrigated. These include: the five Effluent Fields, the four West Fields, Big Gulch, Little Gulch, Upper Taylor, and Lower Taylor. The irrigation system in place include hand line sprinklers for all five Effluent Fields and flood irrigation on the remaining fields.56

**Nutrient Management**

Nutrient management conducted at the historic ranch includes the process of managing the amount, source, placement, form, and timing of applying plant nutrients and soil amendments. Nutrient management at GRKO is used as a tool in order to accomplish: maintaining and improving the physical, chemical and biological conditions of the soil; reducing agricultural source pollution of surface and groundwater resources; properly utilizing manure and organic by products as a nutrients source for vegetation; protecting air quality by limiting nitrogen emissions and the forming of atmospheric particles; maintaining the desired cultural and historic landscape appearance; reducing synthetic fertilizers while maintaining resources; and capturing opportunities to increase visitor understanding and enjoyment. Nutrients are managed as needed when GRKO is periodically applying livestock manure or when a hayfield is being renovated. The practice applies to all fields where vegetative nutrients and soil amendments are applied. These typically include hay fields and Effluent Fields. GRKO primarily uses livestock manure produced on the ranch. When it is considered necessary, managing nutrients will be used along with other agronomic practices such as planting pastures and hay lands, managing irrigation water, managing pests, and rotating hay fields. Currently the city of Deer Lodge

56 Ibid, Olson, Bret; Leinard, Bob, pg. 24.
monitors and controls the amount of nutrients that are delivered to the Effluent Fields at the ranch. The primary interest in this practice remains to be maintaining sustainable yields to ensure that the historic and cultural landscape remains intact. Hay is the principle crop used at GRKO, however, grains or hay barley with a legume such as alfalfa have been used as part of hay rotation.57

Irrigated Hayland Management

The irrigated hayland management practices at GRKO relate closely to pasture and hayland planting and are essentially the next step in the process of conservation on the Hayland/Pasture landscape components. GRKO has defined the process of hayland management as the timely hay cutting and removal of forages from the fields of hay. The main purpose of this practice on the ranch is to: sustain the cultural and historic landscape of the ranch; cultivate a healthy and sustainable stand; promote sustainable plant re-growth; manage the landscape for the desired species composition; incorporate forage plant biomass as a soil nutrient tool; ensure integrated management techniques manage insects, disease and weeds; sustain and improve wildlife habitat; develop yield and the quality of forage at the desired level; manage erosion; and provide opportunities for visitor enjoyment and understanding. This practice of irrigated hayland management applies where machine harvested forage crops are grown on the ranch, including seeded hayland and native grass/sedge meadows harvested for hay. The fields and pastures at GRKO where this

57 Ibid, Olson, Bret; Leinard, Bob, pg. 29.
applies are the: Upper and Lower Taylor Fields, Stuart Fields, Bull Pasture, Big Gulch, Little Gulch, and West Fields 1-3.58

**Prescribed Grazing**

As a functioning cattle ranch prescribed grazing practices are essential to managing the controlled harvest of rangeland, tame pasture, and riparian area vegetation. The primary purpose of prescribed grazing as part of GRKO’s conservation management is to: sustain the cultural and historic landscape of the ranch; improve or manage desired species composition of plant communities; improve or manage surface and subsurface water quality and quantity; stop accelerated soil erosion and sustain or improve soil conditions; improve the quantity and quality of forage for the livestock that are grazed and browsed on the ranch, primarily for their health and productivity; improve and maintain the quantity and quality of food and cover available for wildlife; enhance and sustain riparian and watershed functions; manage fine fuel loads in order to achieve desired conditions; and improve visitor opportunities for increased enjoyment and understanding of a historic working cattle ranch. This conservation management technique applies to the Dry Rangeland Pastures (Upper Northwest Range, Taylor Ridge, Ridge Road Range, Gravel Pit Range, VC South, VC North and North Range); Irrigated Pastures (West Field 4, Effluent Fields 1-5 and Bull Pasture); Sub Irrigated Pastures (North Meadow, Stuart Annex, Horse Pasture Swamp, Horse Pasture, Longhorn Pasture, L-Barn Pasture and Fenced Riparian Superfund Pasture); Hay Fields (Upper Taylor, Lower Taylor, West Fields

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58 Ibid, Olson, Bret; Leinard, Bob, pg. 43.
1-3, Big Gulch, Little Gulch and Stuart Field); and Riparian Areas (Cottonwood Creek Pasture and Stuart Johnson Creek Pasture). The remaining fields and pastures are grazed at times when the situation and conditions call for it. 59

All of these prescribed management practices help the landscape in individual ways but they also work together complementing one another as they are conducted at the ranch. By ensuring that the best management practices are being conducted on the ranch, the landscape will thrive and by connection so will the livestock being grazed on it. Furthermore by restoring the landscape, visitors will get a more accurate interpretation of the ranch. All of the component landscapes and the management practices used on them are essential to conserving the ranch for agricultural purposes and for the visitor experience, however, more serious conservation work is being conducted at GRKO due to its status as a Superfund site.

Superfund Site

When the 1980 passage of the Comprehensive Environmental Response, Compensation and Liability Act passed, this led to the creation of the Superfund Program. This designation, which is administered by the Environmental Protection Agency, places a site on the national priorities list and facilitates the funding and cleanup of hazardous waste onsite. In 1992 a section of the Clark Fork River was designated as the Clark Fork River Superfund Site (Fig. 20) and unfortunately the site included the portion of the river that runs through GRKO. 60

59 Ibid, Olson, Bret; Leinard, Bob, pg. 53.
60 Park Staff, “Grant Kohrs National Historic Site”, Superfund Fact Sheet, Acquired October 16, 2016.
In the 1860’s the cities of Butte and Anaconda, Montana were a center of copper and gold mining that lasted more than a century. In order to remove the metals from the earth, placer, underground and open pit mining were used. As a consequence of the mining operations and the subsequent processing of ore by milling and smelting, a significant amount of waste was created. The waste and waste rock known as tailings, contained high levels of copper and arsenic as well as other heavy metals. Until 1982 contaminated waste was released into Silver Bow Creek and Warm Spring Creek, which are both tributaries of the Clark Fork River. For decades the water washed these tailings downstream, while several flood events have exacerbated this deposition. The result in this process has been the findings of exposed tailings and tailings mixed with soil on riverbanks, riverbeds. Leaching in the groundwater has also been discovered as far away as Missoula (118 miles from Butte). The Superfund designation encompasses an area of the Clark Fork River 120 miles long, 2.5 of which are located in GRKO. The riparian corridor at GRKO includes close to 135 acres. Documentation of exposed mining waste along the riverbank has been documented as far back as 1930 at the ranch. The result was dying vegetation and bare soil. The contamination has further prevented plant growth and left other areas without vegetation. Over the years, the lack of riparian vegetation has led to erosion and instability along the riverbank, while also degrading the hydrological connectivity of the river, floodplain and water table. Hope is not lost for the recovery of the Clark Fork River though. As of 2004 a Record of Decision was released by the EPA. This document has assessed the existing conditions at the site, analyzed three alternative remediation plans, and proposed a cleanup strategy based on the analysis. Also a Draft Preliminary Design Plan (PDP) and Draft Selection Criteria Plan were published in 2015 outlining the removal of
contaminated soils, bank stabilization, revegetation and restoration of hydrologic connectivity in the floodplain. After removal of the exposed tailings, contaminated vegetation and contaminated soil the riverbank will then be stabilized using a variety of methods. The riverbank will be reconstructed using gravel and other similar materials providing structure during varying flow conditions. Willows and other appropriate vegetation are to be planted along the bank to increase stabilization. Likewise coconut fiber rolls will be placed on top of vegetation to enhance the growth and health. Once the Montana Department of Environmental Quality is awarded a contract, it is estimated that the construction phase will take approximately 400 days. 61 Conservation efforts are practiced at all NPS sites, but GRKO is one of the only NPS sites that carries the Superfund designation. In comparison to other NPS sites with strong agricultural heritage, GRKO is unique in its conservation strategy.

Comparison to Ebey’s Landing

Preservation of agricultural landscapes is rare within the NPS but not unseen. Ebey’s Landing National Historic Reserve off the coast of Washington state protects the historical, agricultural and cultural traditions of both native and European American settlers of the island. The agricultural landscape of the island is one of the focuses of these preservation efforts. In order to best preserve the farmland, strategies have been broke up into three main categories of protecting the farmland, supporting the farmers and cultivating markets. Under the category of Protecting Farmland recommendations have been made to adopt an

61 Ibid, Park Staff, *Superfund Fact Sheet.*
“overlay district” so that development is guided by additional rules specific to that area. This way the area could have stronger agricultural zoning laws in place. Further recommendations have been made on the subject of conservation easements at Ebey’s Landing. If Ebey’s Farmland Trust bought development rights to valuable and vulnerable farmland, then delicate areas of important agricultural farmland would forever be protected. This suggestion is in connection to encouraging increased density on the island.\(^\text{62}\) In contrast GRKO uses different methods of conservation on agricultural landscapes. For instance GRKO practices mob grazing which is a healthier alternative for the grasses in the pastures. Even though this can’t be practiced everywhere it is a useful tool in areas where the vegetation is in a delicate state. Likewise they are also adamant about expelling invasive vegetation from the ranch’s landscape. This will help healthy grasses grow in order to provide nourishment for cattle and horses. As stated previously GRKO is also being supported by the EPA to ensure the Clark Fork River be properly cleaned because of contaminated runoff from Butte. GRKO takes a more hands on approach to conservation of agricultural landscapes, while Ebey’s Landing is more involved in planning and advocating within the community.

Within the nine component landscape zones at GRKO there are varying degrees of conservation work that has been done and is continuing to be done for the betterment of the ranch. Care of the natural and cultural landscape ensures that the fields and pastures retrain a healthy ecology and represent the historical makeup of vegetative species. This

\(^{62}\)Jones and Jones Architects and Landscape Architects Ltd, “Farmland Preservation Recommendations for Ebey’s Landing National Historical Reserve”, (Seattle, October 22, 2001) pg. 5.
will also ensure better livestock nutrition throughout the year weather they are being grazed or hay fed. Since GRKO is also a superfund site, additional conservation work is necessary along the Clark Fork River corridor. When completed the river and its banks will represent the historical image of GRKO and also be more sustainable for the future. GRKO is not the only NPS site that focuses on conservation of the natural and cultural landscape, but is more similar to Ebey’s landing which also conveys agricultural significance.
Section 3: Agricultural Interpretation

The nature of GRKO as an agricultural site plays an important role for the NPS where the agricultural interpretations and demonstrations tie together with the preservation of historical significance and natural resource conservation of the landscape. There are several different methods of agricultural interpretation within GRKO that define the management strategy the visitor may experience that include: signage and displays, living history demonstrations, actual ranch work involving livestock, maintaining the presence of agricultural structures and features and the whole cultural landscape of the ranch. By allowing the visitor to experience the site in these different ways, they are given the opportunity to understand not only the historical significance of the site but also the conservation work that is being done to preserve the site. It is also important to note that the visitors at GRKO are granted unrestricted access to the ranch, thus allowing them to have the chance to interpret the entire site.

Living History interpretation is an important part of GRKO’s overall interpretive strategy. However, there are pros and cons to any living history strategy whether it be on a historic ranch, in a museum or at a historic reenactment. It is possible for visitors at a historic site or museum using living history to receive an accurate interpretation of a certain time period. This is potentially a rare opportunity for visitors to experience an accurate representation of historical events, life specific to a certain region, or the life of specific people that they would not find anywhere else. Additionally being able to see, hear, smell and feel during the interpretive experience, gives the visitor a better understanding of life during that time period. Interaction using demonstrations and displays at living history sites
gives the visitor a unique experience that they can hold on to. Since visitors are able to be more involved in living history interpretations, it is important that all buildings, clothing artifacts, and tools are as accurate to the period of representation as possible. Aside from benefiting visitors, living history also benefits the interpretive staff by providing jobs for them at various historic sites and museums.

As much as living history interpretation provides visitors with unique and accurate representations of the past, it can also be detrimental to historic sites and visitors. Interpretations can also convey inaccurate information to visitors if the proper precautions are not taken. Historic sites and museums should make sure their facts are accurate before conducting living history demonstrations. Events such as reenactments and historic festivals tend to be even less accurate at times giving the visitor the wrong idea about certain historic events or time periods. Living history interpretation can also be more cost effective for a site or museum, because of having to pay for additional staff, period clothing and historic artifacts. Additionally it can be difficult to find staff to conduct the demonstrations if they involve a trade or set of tools that is rarely used today.

To better facilitate the correct interpretation of the ranch to the visitor, GRKO has outlined five primary interpretive themes:

1. The historical integrity and intactness of Grant Kohrs Ranch facilitates a deeper understanding of the myths and realities of cattle ranching and the American West.

2. The story of Conrad Kohrs’ rise from hopeful emigrant to powerful cattle baron exemplifies the pursuit of the American Dream through flexibility, vision, determination and good fortune.

3. The relationship of the cultural and natural landscape at Grant Kohrs Ranch provokes appreciation for the interconnectedness of all life, the direct human dependence on natural resources for food and other products and the necessity of wise and sustainable stewardship to ensure continues prosperity
4. The history of Grant Kohrs Ranch offers insights into how an enterprise often attributed to the effort of one person or family is inextricably tied to many people of diverse talents and backgrounds working together for individual and mutual advantage.

5. The deliberate preservation of Grant Kohrs Ranch by Conrad and Nell Warren, including original buildings, records, artifacts, and landscapes, represent values of historical awareness and connects to the larger idea of cultural memory and its preservation.

The five interpretive themes are delivered via the different methods of interpretation. In order for these interpretive themes to resonate with the visitor, interpretive audiences were taken into consideration when deciding what forms of interpretation would be the most effective. The audiences targeted by GRKO are the General Audience (including farmers and stock growers primarily from the Northwest, but also nationally) and School Group (including home schoolers).

GRKO has skillfully conveyed daily life on the ranch along with the sites significance and preservation efforts through their various methods of interpretation. Interpretation is expected to accomplish the following within the park:

- “Develop local and state support: be part of a seamless network of heritage resources with our partners and neighbors.
- Work within the park and with partners to provide curriculum-based educational services to teachers and students.
- Tie park resources to the land. Connect the park’s stories to land use and land-use ethics.
- Make the park a safe place to visit; and do that interpretively by connecting visitor safety to the realities of ranch life.
- Understand the values of people and cultures; Plan interpretation to make the park more relevant to people. Make a personal connection to visitors, understand their values, and meet their needs. Connect historic values of the ranch era folks to people’s values today.
- Offer hands-on experiences: include sights, sounds, smells, touches, etc.

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Tell the site-specific story (the story of the particular history and significance of this ranch), but also convey the story of the NPS (both the System and the Service). Among the obstacles that living history farms such as GRKO face is that there was very little recording and interpretation of daily life during the period of significance. Likewise interpretation can sometimes create several distinct and competing audiences for living history farms. Most sites are non-profits and must depend on the site as a commercial success. GRKO, however, is accessible free of charge because of it being a unit of the NPS. Though GRKO does arguably have specific audiences that visit the site with most of their visitors tend to be over the age of 50, they have developed interpretive methods that cater to all ages.

### Interpretive Signage and Visitors Center

One of the most useful forms of interpretation within the site is informative signage and displays (Figs. 21, 22, 23, 24). This is common throughout all National Park sites and any historical sites in general. Several different types of signs are used for interpretation throughout the park that cater to the different target audiences of GRKO. These include standard NPS wayside signs used to describe various historical and environmental elements of the park, identification signage used to identify historical items in the park, informative panels/sings used to explain how certain buildings, items, tools or machines were used and the function of a cattle ranch, a timeline panel used to explain the history and evolution of

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64 Ibid, Park Staff, pg. 7.
66 Ibid, Morain, Thomas, pg. 553.
cattle ranching over time, an additional timeline explaining the end of the open range cattle era, directional signs that indicate where different programs and demonstrations take place, a welcome sign near the visitors center giving a brief history of the ranch, trail signs directing the visitor to walking and hiking trails throughout the park, a sign marking the site as a National Historic Landmark, signs informing visitors about the biology and use of draft horses, interactive flip panels informing young visitors about cattle, and interactive flip panels for young visitors in which visitors put their hand into a tube and try to guess which piece of equestrian equipment they are touching. These different signs allow visitors to interpret the different historical and agricultural features of the site, within the perimeter of the main ranch house. The historical significance of buildings, agricultural equipment, livestock, ranching, and the landscape are emphasized by the interpretive signage. Furthermore the specific signs describing the environment of the ranch give the visitors an idea of how important conservation of the landscape is.

The visitors center at GRKO is also strongly associated with the interpretive signage. This is the first place the visitors see and interpret and should be effective in communicating what the park is about. Previously there have been concerns that the visitors center detracts from the visitor experience and interpretation because of its location. It was assessed that many visitors assumed that the visitors center and comfort station adjacent to the parking area constituted the “ranch”. This caused them to leave before actually seeing the any of the historic ranch site. The rustic look of the visitors center may have attributed to this. Additionally the visitors center and parking area do not provide a good view of the historic complex. The combination of a misleading rustic look and distant location have caused visitors to misinterpret the site. Likewise it also lacked
appropriate signage, audiovisual equipment, and handicap access.\textsuperscript{67} The visitors center has since been updated to allow for handicap access, added more helpful interpretive signage directing visitors to the historic complex, and also added audiovisual interpretation (Fig. 25 & 26) inside various historic building within the historic complex near the main ranch house. The audio/visual interpretations are located in certain rooms of the historic structures such as the Bunkhouse (HS-2) and aid visitors in describing what has been preserved within those room behind the walls of glass that prohibit further entry. The visitors center has retained its rustic look, which is arguably still misleading to visitors but also does not detract from the historic setting.

**Demonstrations**

Historical agricultural demonstrations further provide an accurate interpretive experience for the visitor that is also unique. GRKO has incorporated several different but equally informative demonstrations that occur throughout the year depending on the season. The first demonstration that is typically conducted at GRKO during the calendar year is the historic hay mowing demonstration in the month of July. The mowing equipment (Fig. 27) is horse drawn using either the Belgian draft horses or Percherons. This demonstration gives visitors an accurate display of historic mowing that would have taken place at GRKO and other ranches throughout the west in the 19\textsuperscript{th} century and early 20\textsuperscript{th} century until the mechanization of industrial equipment. Likewise not only is the

https://www.nps.gov/grko/getinvolved/planning.htm
demonstration an important learning activity for visitors but is part of the larger mowing operation that must take place as conservation and care of the landscape. Additionally GRKO schedules a Haying with Horses demonstration in July and August. This demonstration includes using the Belgian draft Horses and Percherons to pull historic haying equipment. The equipment includes hay raking machines (Fig. 28 & 29) and the beaver slide hay stacker (Fig. 30). After mowing (hay cutting) has taken place the hay must then be raked after being allowed to dry for several days. Two types of hay rakers are used at GRKO. The dump rake is a horse drawn rake with two wide wheels and steel teeth in the back with a mounted seat over the rake. It is used to turn the hay over and get it off the ground. The buck rake, another horse drawn rake with long wooden teeth in the front used to pick up the hay and deliver it either to a wagon or hay stacker. The beaver slide hay stacker is one of the center pieces at GRKO. Standing near the historic ranch house, the beaver slide cannot help but be noticed in the distant Stuart Field. The beaver slide is a device composed of wooden poles and planks at an inclined plane used to stack loose hay into a small fenced in area. A team of two horses that are attached to the pulling cable walk horizontally away from the slide thus causing the hay to be pushed up the slide and into the hay pen. This hay will then be used to feed livestock throughout the fall and winter. The cutting and stacking demonstrations at GRKO provide a historically accurate interpretation for visitors. These activities were an integral part of ranching at GRKO and by allowing visitors the opportunity to understand them, they have a new understanding of their significance. Likewise these demonstrations are an important part of the historic landscape conservation. As mentioned previously by cutting out invasive species and
implementing historic vegetation, not only is the landscape healthier, but the vegetative mix makes for a healthier food for livestock.

Another demonstration conducted during the summer months at GRKO is a cattle branding demonstration (Fig. 31). This demonstration is conducted by additional seasonal staff members who have experience working with cattle. The process of the demonstration includes the staff gathering the calves to be branded and putting them in a pen, roping them one at a time and holding them down while the brand is applied, and then simply letting them go. The cattle branding demonstration was an important part of ranching in days of open range grazing and is still practiced on some ranches today. The demonstration educates visitors on the process of rounding up calves and branding them in order to identify them. Historically this was the only way to identify the owner’s cattle during the 19th century, and was an especially vital task when grazing cattle on an open range. Even though there are additional ways to identify cattle today such as ear tagging, (which is used at the ranch but is not included in any demonstration) cattle branding shows visitors why the task was important and why it is still considered to be important on ranches today. It is a significant part of GRKO’s history and the park still uses the same branding techniques that were used when Grant, Kohrs, Bielenberg, and Warren ran the ranch as well as the same brand design (Image), which is still registered with the state of Montana and paid for by GRKO.

GRKO also has several other demonstrations that require less staff to conduct them and are equally important in the interpretive experience of the visitor. The blacksmith shop (HS-3) (Fig. 32), which was built in the 1930’s, is still used by GRKO to make horse shoes and other pieces of equipment; it also at times serves as a stage for demonstrations. The
original forge and work bench remain in the shop and are used by the employees for a diversity of skill demonstrations. The blacksmith shop provides an opportunity for visitors to learn about the tools and skill that were necessary to produce items such as nails, horse shoes, and other metal works on the ranch. The horse shoe and branding iron displays in the shop provide further knowledge on the history of those items. Even though the shop was not there during the Grant, Kohrs and Bielenberg era, it can still educate visitors on the need for blacksmithing at the ranch during that time period. In the past GRKO has had problems with the blacksmith shop being accurate for visitor interpretation. One of the blacksmiths hired in the past was well skilled, but tended to produce pieces of ironwork that were not usually associated with ranching. Due to the difficulty in hiring skilled artisans and the trouble with following the interpretive plan for GRKO, the program became shortened and re-focused on making utilitarian items such as hoof picks and horse shoes. 68

Chuck wagon (Fig. 33) talks are another told part of the living history program that take place at GRKO at times. This event is conducted by one or more individuals dressed in period attire and includes historical narratives about cattle drives, round ups, cooking on the trail and describing what a chuck wagon is. In the past cooking demonstrations have also been performed during this interpretive program, which has the potential to further the visitors experience by allowing them to see, hear, smell, feel, and potentially taste what is going on. This is an important part of GRKO’s living history demonstrations because the NPS employee directly explains the history of different topics that revolve around

ranching. It is also a stationary place where visitors are able to engage in informal discussion.

Similar to the branding demonstrations, GRKO also holds cowboy demonstrations with seasonal employees dressed in appropriate period apparel. These demonstrations are usually done within the historic complex in one of the livestock pens near the granary building. This demonstration includes the use of horses and some ranching equipment such as ropes. It is an extremely important opportunity for children to be able to approach a live horse and interact with it. The NPS staff also give talks about the life of a cowboy at GRKO and discuss various topics such as herding and driving cattle from the perspective of a cowboy. Roping demonstrations (Fig. 34) are another demonstration in which children can participate. GRKO has several replica roping dummies and one original that would have been used in the 19th and early 20th century. The NPS staff instruct kids and adults on the proper roping technique and allow them to try their hand at it using an actual lariat rope. The cowboy demonstrations are perhaps the most useful in conveying information to the visitor. Not only are the visitors shown ranching demonstration but are allowed to interact with the livestock and participate in the actual demonstration. Watching and listening can allow the visitor to assess the demonstration and interpret it accurately but participating gives them an entirely different perspective.

**Actual Ranch Work**

Aside from elements and features of the park that are designed for interpretation by visitors, there are other events and characteristics that are equally important to understanding the history of the site and how it is being conserved. Since the park also
operates as a functioning cattle ranch, visitors at times have the opportunity to see the staff doing actual ranch work. This is both intentional and by happenstance and depends on if a demonstration that constitutes actual ranch work is being conducted or if an employee is doing daily work such as feeding cattle. Work on the ranch can involve a number of different tasks including fixing fence, checking and fixing water gaps, monitoring irrigation ditches, and checking and feeding the various species of livestock that are present on the ranch. Even though the visitors are not directly involved in the work that takes place on the ranch, certain aspects must appear historically accurate since visitors have unrestricted access to the entire ranch and will be interpreting everything they see. Of course because of technological advances in farming and ranching, not every feature of the ranch is 100 percent accurate to the period of significance. Rather the features and characteristics that make up the ranch are representative of a collection of time periods in order for the ranch to function properly. Likewise the work that is done on the ranch includes a variety of machines and equipment from the 21st, 20th and 19th centuries. It is because of this that everything has been orchestrated very carefully in order to serve the correct interpretation to the visitors about the nation’s frontier cattle era while also balancing the understanding of livestock and natural/cultural resource conservation.

In the context of working with cattle and other livestock on the ranch, the history of GRKO and the interpretive story has been taken into account by the park. Each year the herd is bred to Hereford, Shorthorn or Longhorn bulls, though the ranch does currently have a Black Angus bull as well. The breed of bull is rotated every three years and then repeated twice, after which the bulls are sold after three years of use. Both the breeding process and the breeds themselves are essential to the ranch in different ways. The rotation
is important because it increases heterosis (the tendency of a crossbred individual to show qualities superior to both of its parents) within the herd, which can potentially increase the ability for the progeny to show qualities superior to both parents. Crossbreeding is likewise utilized to increase progeny performance and can lead to a higher weight gain, thus increasing profits. 69 This exact rotation and breeding program is not historically accurate to any of the previous ranch owners, but instead utilizes the same basic breeding process using three historic breeds of cattle. Conrad Kohrs owned Hereford cattle as early as the 1880’s and Conrad Warren also owned Herefords as part of his well-known purebred operation. Grant, Kohrs and Warren all three owned Shorthorn cattle because of their versatility. Longhorns weren’t often found at the ranch during the ownership of Grant or Kohrs, but the bulls were sometimes bred to replacement heifers because Longhorn calves are usually smaller and easier to deliver, which is important for first calf heifers. 70

The handling of cattle by staff is something that visitors may see on the ranch at times, however, it would not be in the same manner that Grant, Kohrs, or Warren handled them. Today GRKO utilizes the teachings of Temple Grandin, an authority on the behavior of cattle, when dealing with cattle in close proximities. Grandin’s teachings and inventions have been and continue to be a revolutionary tool for the cattle industry. This calls for low stress handling of cattle that should be taken into the highest consideration year round. It has been proven that reducing stress during handling will improve productivity and prevent

69 GRKO’s financial budget and profits are not discussed in this thesis.

physiological changes that could lower productivity in the animal.\textsuperscript{71} These are relatively new recommendations that were promoted and eventually accepted within the last 40 years. They are also practices that Grant, Kohrs and possibly Warren would not have necessarily taken into consideration and could be misleading if the visitor is unfamiliar with cattle and assumes it is how cattle have always been handled on the ranch. Furthermore the livestock practices at GRKO are broken down by season.

Each season requires a different set of practices that must be conducted. Some of these practices would have also been conducted during the Grant, Kohrs and Warren eras and have simply been updated into more efficient practices. However, others are more complex and require modern food, medicines, and care that are not historical to what the previous ranchers would have used. For instance during the spring season one of the practices is to check heifers and cows. This is a universal practice among ranchers today and is also one that would have been historical to GRKO. When heifers are calving in the spring it is essential to check them a couple times a day, and in inclement weather several times a day. In the harsh conditions that Montana can bring forth, it is even necessary sometimes to move them inside in order to give birth in a protected environment, however, this would not have occurred during the open range cattle era.\textsuperscript{72} Heifers and cows would have been subjected to the environments and the cowboys in charge would have just hoped for the best. Later after the ranch was consolidated to where it currently is, this practice of moving heifers inside would have been more likely to occur. Of course in the 19\textsuperscript{th} century and early 20\textsuperscript{th} century this all would have been done from horseback with cruder

\textsuperscript{71} Ibid, Griffin, C.R.; Endecott, R.L., pg. 5
\textsuperscript{72} Ibid, Griffin, C.R.; Endecott, R.L., pg. 9-10.
implements as tools. GRKO does do some work and demonstration from horseback but must use vehicles (trucks and ATVs) to check on their cattle most days. The practice of checking heifers and cows is certainly relevant to the historical practices of the ranch, but the method has been updated for better efficiency. Seeing staff check on cattle using vehicles should allow for obvious interpretation by visitors and not be misconstrued for some other action or practice. Additionally one of the practices common in the summer is pasture nutrition. In the summer cows and calves must be moved to pastures that provide the appropriate amount of forage and nutrients to maintain body condition. The pasture should not be over utilized and it may be necessary to move the cattle several times throughout the summer, but this also depends on the stocking rate and climate. GRKO maintains a stocking rate of approximately 100 AU’s (Animal Units) or 1200 AUMs (Animal Unit Months) per acre. The AUM is the amount of forage needed by an animal unit for one month of grazing. One animal unit is standardly a 1000 pound cow with average milking ability with a calf less than four months old. Stocking rate formulas can also be used by GRKO to find the number of grazing animals, number of acres, forage, biomass, rate of use and time. It is likewise important to monitor adequate levels of minerals and vitamins that are needed. If cattle are not receiving enough minerals and vitamins then they must be supplemented by the staff. 73 This practice of ensuring pasture nutrition in the summer is very different from what would have been practiced in the open range cattle days and up into the early 20th century, but the concept is the same. Cattle would have been driven to nutrient rich forage by Grant and Kohrs when necessary but

moving cattle around fenced in pastures is a more modern practice that Warren would have taken advantage of. Paying attention to nutrients and using formulas to find values associated with healthy nutrition is an even more modern part of the practice though. The additional supplementary material needed for cows and calves is also more advanced using minerals made up of calcium, phosphorus, crude protein, iron, copper, manganese and dry matter to ensure the cattle are healthy. 74 Attention is also payed to the pastures and fields that make up the landscape. Moving the cattle around is not only healthy for them but the landscape a well. Likewise the park must keep out any invasive or toxic plants that would cause harm to livestock and also destroy the ecosystem of the landscape. The foundations of this practice have remained relatively the same, but have evolved into a more complex science over time. However, the practices reflect the underlying historical significance of cattle work at the ranch and are also conscious of the conservation of the cultural landscape. They also represent the dependency of humans on livestock as a food source.

The care of horses is equally important at GRKO and also very significant to the history of the ranch. Con warren used registered Belgian horses on the ranch during his time as proprietor. Today the ranch has four quarter horse, five Belgians and two Percherons. The horses are kept in close proximity to the historic complex near the ranch house which makes them easily noticed by visitors, but are intentionally brought into the pastures for visitor enjoyment around May 1. In the spring the horse are vaccinated, shoed, trimmed, given a general health evaluation and dental examination. This includes being wormed 30 days after the first flies start appearing. 75 Care of horses would have been

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equally important throughout the history of the ranch. Shoeing, trimming and health examinations have always been essential treatments, while dental exams and worming are more recent treatments that have become universally conducted practices. Allowing visitors to see the horses in pastures is important for interpretation. This allows the visitor to make the connection of horses being used on a cattle ranch in the past and present. All three breeds have been used on the ranch throughout its existence. While the horses are not used every day at GRKO, it is not uncommon to see various staff member riding them in order to exercise them. They are also cared for and fed daily in the fall and winter when the grass has died and hay feeding is necessary. The same forage practices used for cattle also apply to horses, thus resulting in not only the care of nutrition for the horses but care in conserving the landscape in order to provide it. Visitors are not guaranteed an encounter with cattle or horses, but have an extremely high chance of it. However, if each visitor explored the ranch to its fullest extent they would certainly encounter cattle or horses at some point.

Several species of chicken can also be found at GRKO. The chickens, which include eight hens and one rooster, are kept in the chicken coop which is original to the site. An original laying box even exists within the coop, but has been boarded up in order to preserve it. Though not tip priority when it comes to livestock, they do tie into the history of the site and offer further interpretation of a working ranch. The hens do lay eggs which are collected by the staff who sometimes allow visiting school groups or children to participate in egg collecting. Again allowing visitors to interact with the chickens by entering the chicken coop, walking amongst them, and collecting eggs allows them to gain a different interpretive perspective.
**Agricultural Structures and Features**

The presence of agricultural features and structures can be found throughout the ranch, some of which are historic and others non-historic. Constructed agricultural features range from fences, roads and irrigation ditches, while structures can include any one of the 100 plus structures on the ranch ranging from the historic ranch house to the visitors center. GRKO has been careful in their use of these features and structures in order to convey the correct interpretation to visitors, however there are some features and structures that may still convey a different interpretation than they should. All of the features and structures used at GRKO are required for the ranch to function properly in the 21st century. Sometimes using historic features and items is not feasible all the time and can only be utilized certain times of the year for demonstrations, while others are used every day.

Around half of the fences that exist on the ranch today have been installed by the NPS, with the other half being constructed prior to the NPS owning the ranch. Even though half of the fences were constructed by the park, it is still important that historical accuracy be conveyed. Fencing at GRKO have an impact on ranch management, visitor experience and the ability to interpret the ranches history. They also convey spatial arrangement and historical uses of the fields within the cultural landscape. 76 Jackleg and barbed wire fencing (using both metal T-posts and log posts) can be found prominently throughout the ranch, while some electric fencing has recently been installed. A few small segments of fencing on the ranch also consist of five rail stacked end, picket, and woven wire fencing.

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76 Ibid, Davis, Phillip B; Rew, Lisa, pg. 1.
Jackleg (Fig. 35) is the most common fencing type on the ranch. It is composed of two vertical notched members that cross forming an X. The remaining members are then attached to the X portions. Jackleg is surprisingly resilient to the elements only needing to be replaced every thirty years. 

Historically Jackleg fencing has been used on the ranch and reflects local vernacular traditions while also possessing interpretive and scenic value. However, many have been built by the NPS and are only supporting and not contributing features. It is still important though that the style of fence be represented at GRKO to convey historical accuracy to visitors. Barbed wire fencing is also common throughout the ranch. It is often used as cross fencing, which subdivides fields and pastures into smaller plots. The NPS has also installed a large portion of this fencing type in order to facilitate management and reduce the threat of overgrazing. Specifically barbed wire is used on the ranch for mob grazing as well. Even though using cross fencing is a common practice today and contributes to the health and conservation of the landscape, it contrasts the historic conditions which were characterized by a greater sense of openness and expansive landscapes. Likewise mob grazing promotes better nutrient distribution and weed control. Even though cross fencing may detract from the historical characteristics of the landscape, barbed wire is still a historic fencing type used on the ranch. The historical significance of the fencing type and its contribution to conservation arguably outweigh the detraction from the historic character of the landscape. Some electric fencing has been

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78 Ibid, Shapins Belt Collins, pg. 17.  
79 Ibid, Shapins Belt Collins, pg. 17.
installed by the NPS in certain areas of the Upland Pasture component. It is one of the most wildlife friendly fencing type because of how visible and flexible it is. However, electric fencing has been considered a diminishing feature at the ranch that does not reflect the historic sense and intrudes on the visitor experience at the ranch. Arguably the electric fencing should be under consideration for replacement by a more suitable type of fencing. Five rail stacked end fencing is also used in a few places on the ranch as hay corrals for both bailed loose hay stacks. This type of fencing is historic to the ranch and contributes to the site’s significance, representing a long history of ranching practices. It also serves for correct historical interpretation to visitors. Around the main ranch house on the east and north sides is a white picket fence of standard design. It is likely that Con and Augusta Kohrs contributed to the design of the picket fence. It is estimated to have been built around 1883-1884. The picket fence may not be strictly an agricultural feature but it should be noted that it does contribute to the overall historical accuracy of the site along with other fencing structures. Lastly woven wire fencing can be found at GRKO in certain locations. This fencing type is used to create a barrier for animals that are too young or unable to jump over them because there is no room to crawl under the fence. This fence type is notable along the Clark Fork River Bridge Road, west of the bridge. Woven wire, though not historic, arguably does not detract from the historic character of fencing structures and is a necessary tool in livestock control. Maintenance on fencing structures, and other agricultural features throughout the site is not specifically part of the living history.

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80 Ibid, Shapins Belt Collins, pg. 29.
82 Ibid, Davis, Phillip B; Rew, Lisa, pg. 46.
program, but can still be interpreted as such by visitors. If a visitor potentially came across an employee doing fencing repairs or repairs on an irrigation ditch then they would have the accurate way to repair that particular structure or feature conveyed to them.

The irrigation system at GRKO is a vital part of the ranch’s survival using historic features within the pastoral landscape. By using a series of ditches, headgates and pumps (Fig. 36, 37, 38) the water flowing into the property can be controlled and diverted to the pastures and fields in order to irrigate them. Johnny Grant first developed a preliminary irrigation system in 1861 when experimenting with raising crops. 83 Grant made three claims to water right in 1862 and likely built the first irrigation ditches associated with the Clark Fork River between the years 1862-1863. 84 Under the ownership of Kohrs, the irrigation ditch systems were expanded upon between 1866 and 1887. Between 1887 and 1922 they continued to use the irrigation ditch system on other lands that they acquired near the home ranch. 85 By 1932 when Con Warren took over the ranch he realized the irrigation ditches could be further improved. From the 1930s through the 1950s he conducted ditch burnings in order to maintain weed control. He also continued to improve upon the old irrigation systems established by Grant and Kohrs. One of these improvements came between 1940 and 1941 with the establishment of the first irrigation pump house in the valley. Warren also installed buried pipe, standpipe risers and hand line sprinklers on

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84 Ibid, Milner, John and Associates, Rivanna Archaeological Consulting, Susan Maxman and Partners Architects, pg. 64.
the ranch by 1954 in order to irrigate the fields east of the railroad. \(^{86}\) Today the historic irrigation system of ditches, headgates and pumps is maintained by the park and retain their essential roles of supplying water to the hayfields and pastures. Some features such as the headgates and pumps have been updated but are necessary changes that are still compatible with the ranch’s history and visual character. Thus interpretation of these features should be historically accurate to visitors showing the human adaption to the environment over several periods of time. Since the ditches are a manipulated portion of the landscape, they must be burned and mowed to ensure a healthy ecosystem. This is in keeping with historic measures that were taken by Warren and help to conserve an important portion of the landscape. GRKO also continues to use risers and pipe irrigation on all five of the Effluent Fields.

The various areas throughout the ranch are connected by a network of roads. Most of these roads were developed during the period of significance and are contributing features. \(^{87}\) Currently there are three types of roads on the ranch. The primary roads connect the core of GRKO to its large context. These are comprised of east-west oriented main entry roads connecting the ranch with U.S. Highway 10. The oldest entrance is the Kohrs-Warren Lane, which is centered on axis with the ranch house and provides access to the Warren Residence. A secondary entrance parallel to the Kohrs-Warren Land provides access to the larger Warren Hereford Ranch complex and maintenance buildings. However, visitors to the park enter from a southern drive providing access to the visitors center and

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\(^{86}\) Ibid, Milner, John and Associates, Rivanna Archaeological Consulting, Susan Maxman and Partners Architects, pg. 105-121.

\(^{87}\) Ibid, Shapins Belt Collins, pg. 2.
parking area. Secondary roads provide north-south internal access throughout the ranch. These include all dirt and gravel roads around the home ranch complex, the gravel county road along the western benchland, the unpaved road along the west edge of the railroad corridor, the unpaved road providing access the effluent ponds at the north end of the Front Field and the unpaved road paralleling Highway 10 on the eastern edge of the front field.

Tertiary roads at GRKO are labeled as those that provide access to meadows and pasture land. These roads are not well defined, but can be followed throughout the landscape in a vehicle. Roads are important form of circulation on the ranch providing the staff with access to every portion of the ranch. They can also provide visitors with access to these locations, if the visitor is willing. This is important because if the visitor does choose to follow them, then they are likely following historic roadways that were historically used on the ranch.

GRKO contains over 100 structures, 98 of which are contributing to the sites significance. All of the structures are associated with agriculture in some manner since they were built on the ranch, but only some of these historic structures were built specifically for agricultural work on the ranch and interpretation of these structures is important in order to understand their function and reason for being built. For example the first structures built on site in 1861 by Johnny Grant was a log cabin which is now part of the Bunk House (HS-2) (Fig. 39). The log cabin was built as temporary shelter for Grant until the larger Ranch House (HS-1) he built was completed in 1862. Both structures were not built for agricultural work but instead were necessary in order to house Grant and his employees.

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from the elements while working on the ranch. Interpretation of such housing structures should be obvious to visitors. Even though the log cabin is now part of the Bunk House, it is still part of a housing structure. The Draft Horse Barn (HS-7) (Fig. 40) on the other hand was built in 1875 by Kohrs and Bielenberg to house their draft horses and tack supplies. Though another shelter, this time for draft horses, it is directly associated with agricultural work since the draft horses were used for such. The Draft Horse Barn continues to be used for its original purpose, but interpretation could be troublesome for visitors because it looks very much like a log cabin and could be identified as one. However, GRKO’s unrestricted access policy will allow visitors to go inside the barn when its open and see for themselves what it is used for, at which point the use should be obvious. Another structure the Beef Hoist (HS-40) (Fig. 41), which was built in 1880 by Kohrs and Bielenberg, is not a housing structure of any kind but instead an elaborate tool that was used to hoist slaughtered cattle. Like the draft horse barn this structure was used specifically for agricultural work involving livestock. Interpretation of this structure could also be difficult for visitors because there is no interpretive signage describing what it is. The L-shaped Cow Shed (HS-13) (Fig. 42) built in 1890 was used as a shelter for cattle acting similarly to the Draft Horse Barn. The shelter is open on one side with horizontal poles defining bays in the open portion. There is also an enclosed room on one end that was used for calving.

90 Ibid, Milner, John and Associates, Rivanna Archaeological Consulting, Susan Maxman and Partners Architects, pg. 82.
the Cow Shed is used to store various pieces of equipment and tools. This could also be misleading to visitors interpreting the structure. It is being used as a shelter of sorts but currently not for cattle. Understandably GRKO has limited space for equipment or tools and must store them in available spaces, but some form of interpretation informing visitors of the Cow Sheds historic function would be helpful for interpretation. Not all historic structures can be misinterpreted as easily as the ones previously mentioned and do in fact serve their historic purpose and correct form of interpretation.

**Cultural Landscape**

The cultural landscape of the ranch is one of the most important agricultural components that contains the overall collection of components at GRKO, both for the functionality of the ranch as a working cattle ranch/historic site and for interpretation. The landscape at GRKO has evolved over time and continues to evolve, thus interpretation of the landscape will also change. Features such as roads and ditches that have previously been discussed are a manipulation of the landscape by humans in order to serve their needs. Both features served a purpose on the ranch during its creation and continue to today. It is the location and quantity of these features that have changed over time at GRKO thus changing the physical landscape as well. Another feature such as fencing also serves the needs of the rancher, but instead of manipulating the physical landscape it changes the configuration of the landscape into parcels, fields and pastures while also changing the spatial relationship. Understanding the evolution of spatial configuration at GRKO from open range grazing to the formation of the home ranch is an important part of interpretation and storytelling.
The action of Haying at GRKO has created an imprint of haying technology on the landscape over time. The landscapes of the west have evolved as a result of technological changes introduced because of economic realities. These changes have taken place over different eras of time. The first era ranges approximately from 1880 to 1940. This is when Euro-American settlers began to arrive and engage in ranching and farming. Hayscapes began to appear during this time period. 93 After realizing hay could be stacked outside instead of being stored in a barn, a device was invented that could quickly stack large amounts of hay gathered from the meadow. The beaver slide was devised by two ranchers in Beaverhead County, Montana in 1907-1908. 94 Large haystacks soon changed the landscape of Montana and continue to shape it today. GRKO continues using a beaver slide on the ranch and as a result there are large loose hay stacks (Fig. 43) that can be seen on the ranch at certain times of the year. Even though the beaver slide is used mainly for demonstrations it also serves the purpose of stacking hay, which is necessary for feeding livestock. After 1950 the use of tractors to cut and bail hay became more and more common on ranches in Montana and eventually made the use of horses obsolete. There was hesitation to switch to tractors among some ranchers though because of the trust they had in these animals. Horses also didn’t trample as much hay as tractors did. The use of horses created a different landscape than tractors. Instead of raking loose stacks with horses, the automatic bailer became common use with tractors. After this the sight of loose stacks of hay was replaced by neat stacks of square or rectangular bails. Not all ranchers made this

http://www.jstor.org/stable/23145839
change though and large ranches in Montana continued to use the beaver slide because it was actually faster than using a small bailer. \(^95\) Square bail stacks can also be found at GRKO at after haying has taken place at the ranch (Fig. 44). Two different types of hay stacks thus signify two different time periods of haying technology that have left their imprint upon the landscape.

Conservation and sustainability of the landscape at GRKO is an important measure to ensure there is a healthy ecosystem, healthy forage for nutrition of livestock and that the landscape is accurately interpreted. Species composition is a large part of maintaining a healthy landscape. Changes in the key species in the plant community can provide the rancher with an indication of the efficiency of land management in regards to the desired plant composition. Likewise the extent of invasive species must be monitored in order to maintain a healthy environment. \(^96\) Removing invasive species and incorporating healthy natural species cause the landscape to change. Without this change the landscape would be interpreted very differently. Prescribed fire burning is another tool used at GRKO that ensures a healthy landscape along the irrigation ditches. Again it changes the growth of vegetation on a portion of the landscape, but in on a portion of the landscape that has already been altered by humans. Keeping these irrigation ditches in working order is necessary for the health of the pastures and hayfields, but it was also historically conducted on the ranch, which makes it necessary for interpretive purposes. Along with the current

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\(^95\) Ibid, Sando, Linnea C, pg. 16-17.

conservation efforts, the superfund restoration that will take place on the ranch will be for the betterment of the riparian corridor, but will alter the existing landscape. This could alter a visitor’s interpretation of the landscape after vegetation has been replaced, even though historic and natural vegetation to the area may be used. Furthermore the use of livestock on the ranch has further altered the landscape, but since the presence of livestock is the entire reason of the ranch’s existence this is expected and anticipated. Nonetheless it is an important part of the interpretation of the landscape.

Agricultural interpretations at GRKO vary in methods but are all vital to understanding the significance, purpose and history of the ranch. Signage and displays at the ranch come in varieties, including audio visual displays. These allow visitors to wander around the site and still be able to understand what they see. Demonstrations give visitors a live interpretive experience with sights, sounds, and smells. Certain demonstration even allow visitors to engage in the demonstration giving them an even more unique interpretive experience. Actual work involving livestock at the ranch allow visitors to experience a realistic version of how the ranch functions today. This can be seen around the main ranch complex or throughout other parts of the ranch if the visitor is willing to explore. Agricultural structures and features accompany the work involving livestock. Some of the features must be updated in order for the ranch to function properly, but most have been maintained within historic context of the ranch in order to convey historic accuracy. The canvas upon which all of these methods of interpretation occur is the cultural landscape, which is itself and vital form of interpretation. Maintaining the health of the landscape but also using it in a historic manner is a complex relationship between needing the ranch to function properly and historic interpretation.
Conclusion

The hard work and innovation of four ranchers over a one hundred year period helped shape the ranch that today is an important unit of the NPS. Through the NPS the story of the open range cattle era and its role in shaping the history of the United States. This story is told through the landscape created by the Grant, Kohrs and Warren families who affected the history of ranching in the west. This historic significance is part of what makes GRKO such a unique site. Of all the units within the NPS only a few cater to the topic of agriculture. LBJNHP includes the history of President Johnson’s ranch a vital part of their historic significance, but the sites agricultural history is not the only important aspect. Likewise TRNP also contains agricultural history specifically involving the ranches that were located within the park, but that is arguably second to the importance of environmental conservation. Ebey’s Landing is also similar to GRKO in that the park considers the agricultural history of the site of highest importance, but features other parts of the sites history along with the agricultural history. Outside the Park Service there are sites that were established as living history farms in order to preserve agricultural history. Barrington living history farm in Texas is a fine example of this. However, GRKO is the only unit within the NPS and other historic agricultural sites that was established specifically to preserve the history of the open range cattle era, even though it is likely that other historic sites may mention this historic topic.

Without preservation and conservation efforts, it is likely that the ranch would not exist today along with several other ranches still in their recognizably historic condition. Con Warren wanted the legacy of the ranch to continue after he was gone, and the NPS has
ensured that it has. GRKO has removed invasive plant species in order to and reintroduced native species to ensure the landscape retain its authentic composition. This not only provides health for the ecosystem of plant species, but livestock as well since they are fed via the vegetative species. Monitoring animal activity is also an important part of landscape conservation. Overgrazing or overuse of a pasture or field would damage the land. GRKO has incorporated sustainable grazing methods including mob grazing which will help maintain healthy pastures and fields. Likewise without irrigation there would be no fields or pastures to maintain. The historic irrigation methods used at GRKO not only keep the landscape healthy, but also contribute to the historical significance of the ranch. The contamination from Butte and Anaconda, Montana has slightly affected the health of riparian corridor of the Clark Fork River, which runs through the ranch and is a water source for livestock. However, livestock and other animal species have not been affected, only the soil and vegetation along the banks of the river. Additional conservation with help from the EPA will ensure the future sustainability and health of the Clark Fork River Corridor. Though conservation efforts are present at all NPS sites, they are unique at GRKO because of the nature, function and location of the site. Even at Ebey’s Landing, a site featuring an agricultural landscape, conservation efforts are much more community based compared to GRKO which utilizes a more hands on approach.

The agricultural interpretations at GRKO are used as an interpretive management strategy that tie together both the historical significance and landscape conservation. The type of interpretation conveyed to visitors is unique, but again what makes GRKO really special is that visitors have unrestricted access to the entire site. The variety of interpretive signage throughout the park allow visitors to visually interpret historical structures,
landscapes, and the significance of the site. By using designs specific to different age
groups, GRKO has allowed for a demographic range of visitors to leave the site with some
form of knowledge and understanding of what they saw and experienced. Also by using
audio visual equipment in buildings, the monotony of signage is broken up and allows for
a different form of interpretation without compromising the significance of the structure.

Interpretive signage further helps to facilitate the historic demonstrations that take
place on the ranch. These demonstrations are a crucial part of interpretation at the ranch.
This is where visitors can have more than just a visual interpretation of the site, by also
smelling, hearing and at times touching. By allowing the visitor to be immersed in the
demonstration using all of their senses, they can get the most out of what the demonstration
is try to convey. While the demonstrations are an intentional form of interpretation for
visitors, actual ranch work involving livestock can be unintentional but just as informative.
Even though the ranch is a historic site, it is also an operating cattle ranch making park
staff responsible for running a site that has two different functions. Ranch work can take
place anywhere throughout the site, and because of this visitors can see a variety of tasks
being conducted and because of this there is potential for them to have a more in depth
experience. The ranch work will likewise help their understanding of how a ranch
functions, the significance of the site and conservation of the landscape.

Agricultural features and structures are likewise present throughout the ranch and
play a role in the work that takes place. Fencing, roads, and irrigation are all necessary for
the ranch to operate properly but are also all historic to the ranch and contribute to the
ranch’s preservation and landscape conservation. However, understanding the evolution of
these features is also an important part of the sites history. The site contains 98 historic
structures, many of which are still used by the NPS for both their intended and unintended purposes. This can beneficial and detrimental to visitor interpretation. Using the structures for their intended purposes conveys an accurate interpretation, but using them for different purposes may be confusing to a visitor that assumes the structures were built for what they are displaying. The cultural landscape of GRKO is the setting for all of the sites interpretive measures and is itself a form of interpretation. The landscape has been changed by human intervention in various ways using structures, features, and other means. The vegetative species throughout the landscape has also been changed over the year due to conservation work that removed invasive species and reintroduced native ones. How the landscape has changed over time in order to serve the function of the ranch and to better conserve the historic setting is an important part of the story at GRKO and should be interpreted by visitors.

**Recommendations**

After conducting site research and analysis and evaluating the interpretive measures taken at GRKO the research and site analysis of this thesis highlights several recommendations to consider in the future to extend/improve the interpretive strategy. These changes would arguably enhance visitor interpretation, understanding of the sites significance and how the site operates as both a functioning ranch and historic park.

- Additional interpretive signage on certain buildings or in certain areas of the landscape would be helpful to further enhance visitor interpretation. Visitors may not be able to understand what structures such as the beef hoist (HS-40) are. Likewise some historic structures such as the L-shaped cowshed (HS-13) are being used for
purposes they were not intended for. This may also mislead visitors into thinking they were built or a different purpose. It would also benefit visitor interpretation if 1-2 waysides explained the evolution of the ranch’s landscape. This would further help visitors understand how the ranching landscape has changed over time and conservation efforts that have been conducted to ensure the landscape remain healthy and historically accurate.

- Allowing visitors to further participate during some of the demonstrations would greatly enhance their experience, thus enhancing their understanding of the demonstration. Visitors are allowed to participate in some of the demonstrations such as roping and egg gathering, but possibly allowing them to safely participate in other current demonstrations or new demonstrations may enhance their understanding of the demonstrations purpose. A current demonstration that has the potential to allow visitors to further participate is the beaver slide hay stacking demonstration. By allowing visitors to help load some loose hay onto the slide or even help set up the beaver slide for the process, they would then enhance their understanding of the device and the process. A potential new demonstration that could be proposed is saddling demonstration involving one or more quarter horses. Again by allowing visitors to help staff members saddle a horse in a safe and controlled environment would give them a better understanding of how the process works and why it is important. It would also place them in close proximity of an animal used for ranching purposes, giving them an intimate and memorable experience at the site.
• Consider replacement of the electric fencing on the ranch. The electric fencing is not a contributing or historic feature and does detract from the site’s significance. Understandably it is used for wildlife protection, but another option such as barbed wire with woven wire on top and bottom or just woven wire fencing may suffice. It can also be considered a misinforming interpretive feature. Visitors who choose to explore the site and come across electric fencing may assume that it was historically used at the ranch.

• Though not directly in the hands of GRKO, the superfund rehabilitation of the landscape should try to ensure that the landscape remain as close to possible to the original character. The EPA does plan on using native plant species to replace what is removed, but overusing certain species may alter the current visual character of the riparian corridor. This would in turn alter how that portion of the landscape is interpreted. Working with the EPA can also help incorporate the need to make additional partnership, which is important for any management strategy.

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Olson, Bret; Leinard, Bob, “BMP Report: Grant Kohrs National Historic Site”, (Animal and Range Sciences Department, Montana State University, 2013) pg. 19, 21, 24, 29, 43, 53.


Appendix I: Images

Figure 1. The Visitors Center (HS-9002).

Figure 2. The Main Ranch House (HS-1).
Figure 3. Johnny Grant.

Figure 4. Conrad Kohrs.

Figure 5. John Bielenberg riding his horse.

Figure 6. Con Warren with a champion Hereford c. 1950.
Figure 7. Map showing the majority of the historic buildings.

Figure 8. Map of the Upper and Lower pastures and fields.

GRKO GIS, November 2009, Acquired October 16, 2016 at Grant Kohrs National Historic Site.
Figure 9. Varying breeds of cattle.

Figure 10. Two Percherons and one Belgian Draft Horse.
Figure 11. Varying breeds of chickens.

Figure 12. The curatorial facility (HS-9004).
Figure 13. Map of the nine landscape components within GRKO.

Figure 14. Map of the Home Ranch Complex. Labeled are Natural Systems, Vegetation and Constructed Water Features.

Figure 15. Map of the East Feed Lot/Warren Hereford Ranch. Labeled are Natural Systems, Vegetation, Circulation, Spatial Organization and Views.

Figure 16. Map of the Pasture/Hayfield Component. Labeled are Natural Systems, Vegetation, Buildings and Structures.

Figure 17. Map of the Upland Pasture Component. Labeled are Natural Systems and Constructed Water Features.

Figure 18. Re-seeded vegetation in one of the West Fields.

Figure 19. Flume on the Kohrs-Manning Ditch used for irrigation management.
Figure 20. Map of the Clark Fork Basin Superfund Area.

Figure 21. Descriptive Signage located in the Buggy Shed (HS-17).

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