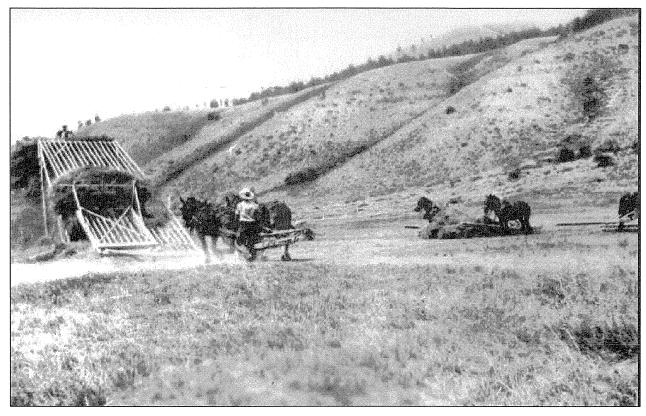
Mormon Row Historic District

Grand Teton National Park, Wyoming



Management Alternatives and Environmental Assessment

Prologue



Beaver Slide near Blacktail Butte.

Photograph courtesy of Teton County Historical Society and Museum.

Mormon Row – officially called Grovont by the US Postal Service – was an agricultural community that took root, flourished, and died within the span of two generations. Its passing helped complete present-day Grand Teton National Park, which preserves the surviving vestiges and stories of the Mormon Row Historic District – among many other natural and cultural resources – for public enjoyment and inspiration.

Mormon Row is a microcosm of the western settlement experience. Established in an environment both breathtaking and forbidding, it reflects a hardscrabble, frontier way of life that extended well into the modern 20^{th} century. Founded and populated principally by Mormons, Grovont's development, layout, farming and irrigation practices, and civic organization were shaped by the Mormon pioneer experience in the American West. The six historic homesteads that remain along Mormon Row constitute one of the best representations of an early 20^{th} century western farming community within the National Park system.

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Purpose of the Mormon Row Management Alternatives Plan

Few people visiting Mormon Row today realize that the six remaining homesteads constitute about a fifth of those that once defined the Mormon Row community. Time and the harsh climate have taken an extreme toll. Most structures that remain stand abandoned and in need of repair. The farms are not interpreted and most visitors probably do not even know that the historic area is within the boundaries of Grand Teton National Park. Nevertheless, the area receives a light but steady amount of visitation. Visitors remark about inadequate parking, lack of interpretation, the deteriorated condition of many of the historic structures, and the overall lack of amenities. The purpose of this plan is to address these problems and to propose a longterm management and interpretive program for Mormon Row.

In the summer of 1998, a small planning team was assembled to address the issues described above and to propose management and interpretive alternatives for Mormon Row. The team was composed of cultural and natural resource professionals, interpreters, landscape architects, and planners. While formulating these management alternatives, the planning team was asked to address the following questions:

- What are the important stories to be told at Mormon Row?
- What are the educational opportunities for the site?
- What structures and lands are vital to telling these stories?
- What are the management alternatives for preservation and treatment of the historic structures and landscapes?
- How might pedestrian, bicycle, and vehicular circulation be provided throughout the site to minimize impact to the cultural resources and minimize conflicting use patterns?
- Is a parking area needed? What are the various parking alternatives?
- What are the likely wildlife, environmental and other consequences of various alternatives for protection, interpretation, and management?

The preliminary management and interpretive alternatives developed by the planning team are outlined below and then presented in detail later in this report. The report also presents a brief history of Mormon Row, provides a description of the natural and cultural resources, and outlines the interpretive program that could be told along Mormon Row. Also included is an environmental assessment of how each alternative may impact the natural and cultural environment.

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Summary of Management and Interpretive Alternatives

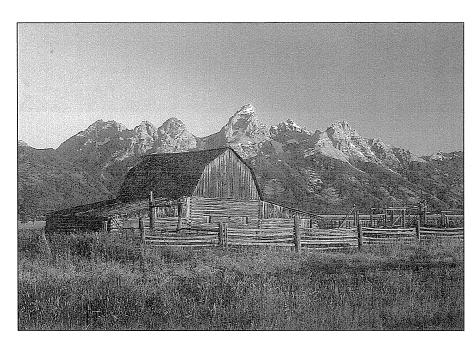
The Mormon Row Planning Team developed five alternatives for the management and interpretation of the Mormon Row Historic District:

Under **Alternative 1**, a core area of Mormon Row would be stabilized. However, some of the more recently constructed historic buildings would be removed and other structures would be allowed to deteriorate. The cultural landscape would gradually revert to a more natural presettlement condition. A vehicle turnaround would be constructed north of the Ditch Creek Bridge on the Mormon Row Road. No wayside exhibits would be constructed and the area would not be actively interpreted. **Alternative 1a** is the same as Alternative 1 with the exception that the site topography and vegetation would be actively restored to a pre-settlement condition.

Under **Alternative 2**, the historic structures associated with Mormon Row would be stabilized. The cultural landscape would gradually revert to a pre-settlement condition. Small vehicle pullouts would be constructed along Mormon Row and a small parking area and bus passenger drop zone would be constructed at the intersection of the Antelope Flats and Mormon Row Roads. Two vehicle turnarounds would be constructed: one on the Antelope Flats Road near the non-extant Pfiefer Homestead, and the other on Mormon Row Road north of the Ditch Creek Bridge. No toilets or other facilities would be constructed. Three wayside exhibits would be placed along the row. Except for the wayside exhibits, there will be no on-site interpretation.

Under **Alternative 3**, the historic structures of Mormon Row would be stabilized. The historic cottonwood trees and ornamental plantings would be maintained and preserved where feasible. Primary access to the Historic District would be from the north via the Antelope Flats Road. One site-sensitive parking area would be developed at the intersection of the Mormon Row and Antelope Flats Roads. An accessible pathway would be developed from this parking area to the John Moulton homestead. Two additional small pullout parking areas and a vehicle turnaround would be developed along Mormon Row. Five wayside exhibits, interpreting the history of Mormon Row, would be constructed. Visitors would take self-guided walking tours of the area having been provided a brochure focusing on homesteading and the John Moulton site. There would be no on-site personal interpretive services. The bridge over Ditch Creek would be repaired to provide emergency vehicle, pedestrian, and bicycle access along the entire length of Mormon Row.

Under **Alternative 4**, the historic structures of Mormon Row would be stabilized. The historic cottonwood trees and ornamental plantings would be maintained and preserved where feasible. Primary access to the Historic District would be from the north via the Antelope Flats Road. One five-car parking area would be constructed near the John Moulton homestead. A second parking area with a large vehicle turnaround would be constructed near the swimming hole. Mormon Row Road would be modified to direct visitors into the parking area and a sign would be installed informing them that only Mormon Row residents are to go beyond that point. Accessible pathways would be constructed around the John Moulton and Andy Chambers



T.A. Moulton Barn.

Photograph courtesy of Roger Whitacre.

homesteads. Seven wayside exhibits, interpreting the history of Mormon Row, would be constructed. Visitors would take self-guided walking tours of the area focusing on homesteading and the John Moulton site. There would be no on-site personal interpretive services. The bridge over Ditch Creek would be repaired to provide emergency vehicle, pedestrian, and bicycle access along the entire length of Mormon Row.

Under Alternative 5, the historic structures within the Mormon Row Historic District would be stabilized and the interiors of the barn and main house at the Andy Chambers homestead rehabilitated. The cultural landscape of Mormon Row, such as the cottonwood trees and ornamental plantings, would be maintained and preserved where feasible. Primary access to Mormon Row would be provided from the south, via Kelly Road. Two of the existing small pullout parking areas along Antelope Flats Road would be formalized. However, no new parking areas would be developed via the Antelope Flats Road. Personal interpretive services would be provided at the Andy Chambers homestead at select times during the summer months. In addition, nine wayside exhibits would be developed in and around Mormon Row. Parking would be developed at two locations, both at the southern portion of Mormon Row. The Ditch Creek Bridge would be repaired to provide emergency vehicle, pedestrian, bicycle, and inholder access along the entire length of Mormon Row. As a consequence, the southern portion of the Mormon Row Road will be widened and improved with a gravel surface.

Grand Teton National Park welcomes your comments about these alternatives. Please address the comments to:

Jack Neckels, Superintendent Grand Teton National Park P.O. Box 170 Moose, Wyoming 83012

History of Mormon Row

The T. A. Moulton barn dominates the landscape of Mormon Row. With its spectacular backdrop of the Tetons, the rustic barn has been shot by countless professional and amateur photographers, painted by numerous artists, and even filmed by noted Hollywood cinematographers. In many ways, the weathered log barn has become an icon of the self-proclaimed "Cowboy" state of Wyoming. Standing alone and proudly along the sagebrush flats of Mormon Row, the historic structure seems to symbolize the "rugged individualism" that people commonly equate with the settlement of the "Old West." As is so often the case, however, the history of the barn and of Mormon Row does not completely match this romantic image.

Thomas Alma (T.A.) Moulton began constructing his impressive barn in 1913. The location for the barn had been selected seven years earlier. In 1906, 24-year-old T.A. left his home in Idaho, crossed Teton Pass and descended into the Snake River valley of Wyoming with his younger brother John and friend Thomas Perry. The three Mormons hoped to scout out good farmlands. As they rode their horses east of Blacktail Butte in Jackson Hole, a narrow belt of land stretching northward caught their attention. Here, tall healthy sagebrush indicated rich, deep topsoil suitable for farming. Moreover, a number of Mormon families that had already established farms nearby assured that they would receive help when starting up their own homes. The two brothers chose two adjacent 160-acre tracts. Perry selected his parcel on the other side of the primitive road that would become known as Mormon Row. Proving up on the

homestead would have to wait, however. More important matters pressed. T.A. returned home to Idaho to serve his two-year mission for the Church of Jesus Christ of Latter-day Saints (LDS).

These small homesteads along Mormon Row formed part of the northernmost colonization effort of what Pulitzer Prizewinning author Wallace Stegner has called "Mormon Country." Soon after Brigham Young and his followers arrived in the Salt Lake Valley in 1847, he began planning additional Mormon settlements throughout the western United States. As Stegner aptly describes:

No sooner were the bastions of the City of Zion anchored solidly in the alluvial slopes below City Creek Canyon than the dream began to expand. Here would be the City of the Saints. How about the country of the Saints. For that too Brigham had a plan, and it was no picayune or humble plan. It was a plan of empire.

With missionaries spread across northern Europe, South and Central America, India, Australia, the Sandwich and Solomon Islands, thousands of faithful converts poured into the valley of the Great Salt Lake. Almost as guickly, these converts and their families were sent outward from Salt Lake City to scout and settle unoccupied lands. Within 30 years, Young planted over 500 western towns. His so-called empire stretched south through the inhospitable canyonlands of southern Utah, southwest to desert-like San Bernardino, California, and finally northward to the Snake River country of northern Idaho and Wyoming. It was to these lands along the Snake River that T.A.

Moulton and his family, friends, and neighbors emigrated.

Long cold winters, a severely limited growing season of 60 frost-free days, rocky soils, and lack of rainfall all contributed to the struggle to survive. Mormon Row's inherent natural obstacles forced many farmers into debt and soon temporarily gave rise to the name "Poverty Flats." These marginal lands were nothing new to Mormon settlers. In 1846, Brigham Young and his Mormon followers turned aside as other emigrants continued westward to the temperate climes of California and Oregon. Instead, Young led his people to the Great Salt Lake. Emerging from Emigration Canyon, "this is the place," he said. It was a land so bleak of farming prospects that the famous trapper Jim Bridger said that he would give a \$1,000 if a bushel of corn could grow there. Undeterred, Brigham Young and his colonists quickly built irrigation ditches and turned the arid lands into productive small farms.

The story of the T.A. Moulton barn and of Mormon Row is not so much about the role of the "rugged individual" as about group cooperation; not so much about democratic traditions as the theocratic hierarchy of the Mormon Church; and not so much about unbridled individual freedoms as about group discipline and obedience. All these so-called non-western attributes were essential ingredients in shaping Mormon culture. These same characteristics helped to produce what one historian has called, "the most systematic, organized, disciplined, and successful pioneers in our history." In 1906, T.A. Moulton confidently carried these traditions over the Tetons and transplanted them into the sagebrush flats of Jackson Hole.



The First Homesteaders

James I. May was the first homesteader to settle along Mormon Row. In 1894, May left his home along the Snake River in Idaho and crossed Teton Pass into Jackson Hole, Wyoming. Scouting the sagebrush flats east of Blacktail Butte, May found fertile flat land, protection from the prevailing winds, and accessible water from the nearby Gros Ventre River. May determined that these conditions were suitable for farming and quickly filed his homestead entry. He returned home to Rockland, Idaho, that fall and within two years had \$500 and a small herd of cattle and horses. In June 1896, he loaded his family, as well as his favorite fiddle and harmonica, into two wagons and started over the Tetons. Like earlier Mormon migrations, the May family did not travel alone. Charles and Mariah Allen and their five children, newlyweds James and Mary Ann Allen Budge, and Roy and Maggie McBride also joined the small party. The Idaho contingent sought refuge with neighbors from adjacent communities before constructing cabins in the spring of 1897. The McBrides chose to settle on Flat Creek, south near Jackson. The Allens chose land to the north, near the town of Moran, while the May and Budge families filed on homesteads at the south end of Blacktail Butte, along what would become Mormon Row.

Subsequent settlers along Mormon Row filed in a linear progression of claims that stretched north from the Budge homestead. When T. A. Moulton proved up his homestead claim in 1916, 12 families lived along Mormon Row. Of these, 75% were Latter-day Saints. This percentage decreased with time as more settlers homesteaded in and around Mormon Row. Still, when John Hoagland received patent to

the last homestead along the Row in 1926, Mormons still constituted the majority of residents within the community.

Mormon Row presents a striking contrast to earlier communities established by Latterday Saints, especially those founded in Utah. Throughout the 1850s, 1860s, and into the 1870s, Brigham Young demanded that Mormon settlers follow a tightly prescribed homesteading pattern. Homes were to be clustered together near the Ward House (church) in the center of town and surrounded by farmlands. In the beginning, Mormon settlers drew numbered lots from a hat to determine where their homes and farmlands would be located. If dissatisfied with the blind draw; homesteaders could swap or bargain with a neighbor, but whatever the ultimate outcome, you lived in the village with everyone else and were physically separated from your farmland. "Hives in the middle of the clover field," wrote one noted Mormon historian when describing the Mormon practice. This "farm-village" settlement plan promoted group cooperation in both religious and agricultural pursuits.

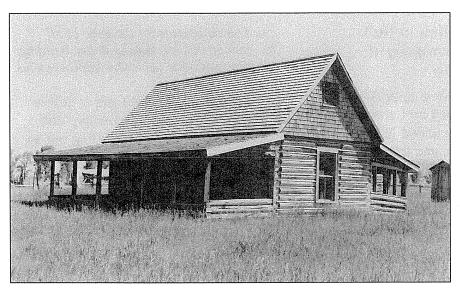
This settlement pattern proved extremely successful but, by the time the first homesteaders arrived at Mormon Row, was beginning to break down. The break from tradition was not easy. As early as 1882, Mormon farmers in Logan, Utah, had asked permission to relocate to the land that they farmed. The reply from the president of the Church was swift.

In all cases in making new settlements, the Saints should be advised to gather together in villages as has been our custom from the time of our earliest settlements in these mountain valleys . . . By this means the people can retain their ecclesiastical organizations, have regular meetings... They

can also co-operate for the good of all in...making ditches, fencing fields, building bridges, and other necessary improvements.

These tangible cooperative and cohesive qualities would be "frittered away," the president continued, "by spreading out so thinly that communication is difficult, dangerous, inconvenient, and expensive." Despite the warning, many Mormons had abandoned the traditional "farm-village" settlement pattern by the turn of the century. Mormon Row reflected this trend. Settlers along Mormon Row chose to remain close to one another and within walking distance of church and school, but each homesteader built his house on the lands that he farmed.

Settlers initially constructed homes that met the minimal requirements of the Homestead Act – a habitable cabin no smaller than 12 feet x 12 feet - and usually little more. These small log structures sheltered Mormon Row residents during those first years when preparing the fields and sheltering the stock took precedence over human comforts. Often these firstgeneration buildings were converted to animal shelters or storage as soon as possible. James and Ann May resided in a two-room log cabin for the first five years while they "proved up." They then purchased a prefabricated two-story Victorian vernacular farmhouse. By July 1916, three years after filing his claim and constructing a rudimentary cabin, Andy Chambers had felled the logs needed for a two-room house with a shingle roof. This house was, in turn, relegated to a bunkhouse when the Chambers purchased the Eggleston homestead. John and Bartie [Bartha] Moulton resided in their original homestead cabin for almost 30 years before hiring professional carpenter Ted Woodard of Kelly to construct the 1 ½-story stucco



Andy Chambers Homestead. *Photographer, Arnold Thallheimer.*

residence that continues to dominate their site. The Joe Heniger residence was expanded through a series of additions, as was the Thomas Perry house, later owned by Wallace Moulton and by Ida Chambers.

The settlers built their homes and barns with logs harvested from Shadow Mountain (located eight miles east of Mormon Row) or from Timbered Island (a mass of glacial till four miles northwest of Mormon Row, west of the Snake River). Lodgepole pine from Shadow Mountain was easily harvested and adequate for hastily constructed secondary outbuildings. But, recalled Mormon Row resident Clark Moulton, "if you wanted a house to last, you got timber from the Timbered Island." Local tradition holds that here, pine grew straight and so solid that you could hear it ring when it hit the ground. Prior to the 1927 completion of a bridge across the Snake River, residents harvested logs during the winter months, when the low flow of the river afforded a crossing and respite from Menor's Ferry charges or hazardous water fords.

Neighbors helped each other build their homesteads. Logs were used whole, or milled at local sawmills. Each homestead usually included a dwelling, stable or barn, granary, chicken house, corral, and miles of fence. Machine sheds, hay sheds, lambing sheds, hog barns, large granaries and barns, storage facilities, and a garage marked established and productive farms. Postand-pole and post-and-

wire fencing kept cattle out of fields, defined feed lots, screened haystacks from livestock and elk, and marked property and ditch lines. Vertical-board fences, lining the north elevation of feed lots and winter pasture, protected cattle and loose hay from prevailing winds.

Life in Mormon Row

Mormon Row was a community of the late frontier, subject to the vagaries of weather, market, and a crude regional transportation network – yet spared the chilling isolation that dominates so many memoirs of early settlers of the prairie and mountain west. From the beginning, the men and women of Mormon Row had friends and family with which to share their labor and with whom they could "neighbor." Officially named Grovont, the small community was quickly christened "Mormon Row" by non-Mormon residents of Kelly. The title described both the primary (but not exclusive) religious orientation and the neat pattern of linear

settlement imposed by water, soil, kinship, and the road.

Along Mormon Row, the first three to five years of "proving up" were spent grubbing the land of sage, harvesting native hay, and planting gardens and 90-day oats and barley. Residents helped each other during these first (and subsequent) years. Alma Moulton, John Moulton, and friend and neighbor Thomas Perry worked their land in common until at least 1916. They also ran stock together, harvested timber together, and raised their barns together. All participated in the annual harvest, combining strength and manpower to stack hay and thresh grain on May's steam-powered thresher. After

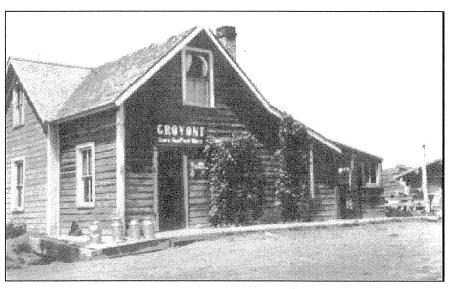
1935, children and adults relaxed from their labors by cooling off in the swimming hole at the end of the coulee near Alma and Lucile Moulton's place. Such "creature comforts" were few and far between. Residents did not begin digging wells until "many years after they arrived," and waited even longer for indoor plumbing. Electricity did not arrive until the mid-1950s,

along the lines of the Rural Electric Administration. (The poles and wires were removed in May 1995.)

Women's work was communal, and demanding. They assisted in their neighbors' births, tended their sick, minded their children, and joined together to feed the threshing and branding crews. The numerous children of Mormon Row were clothed in homemade and hand-cleaned clothing; warmed in homemade bedding; washed with homemade soap; and fed with

home-canned produce, hand-churned butter, home-grown and hand-plucked chickens. Domestic tasks completed, women assisted their husbands in the fields and pastures.

Winter offered little respite from the hectic summer months of planting and harvest. As ditches froze, the residents of Mormon Row had to haul water for home and stock from the river. They also used the winter months to construct and repair buildings. Their stock had to be fed, and elk kept from the haystacks. During the long winter months, residents sometimes found recreation by skiing and sledding on "The Knoll" behind Andy and Ida Chambers place.



Grovont Store and Post Office.

Photograph courtesy Teton County Historical Society
and Museum.

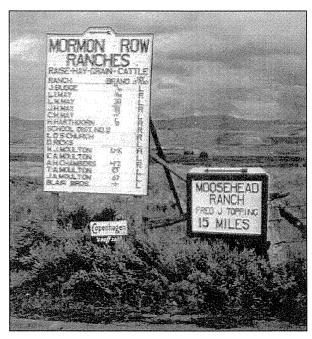
School was first held in individual homes, then the living room of the Thomas Perry homestead (ca. 1911), then the basement of the new Mormon Church, and finally in a new school building built on land donated by Hannes Harthoorn. With official recognition of the area as a distinct community (ca. 1920), the Grovont post

office was housed in Andy and Ida Chambers residence, from which Ida served as postmistress. The nearby town of Kelly boasted a general store, a drug store, and a doctor's office, all frequented by Mormon Row residents. Until 1916, the area's Mormon residents traveled 16 difficult miles to the Latter-day Saints (LDS) church in Jackson. After constructing their own church (1916), trips to Jackson were limited to major buying excursions and are remembered as being "quite an occasion." The church formed the social and geographic hub of the community. Constructed at the center of Mormon Row on an acre of land donated by Thomas Perry, it housed religious ceremonies, dances, school concerts, and plays.

Irrigating the Land

The settlers of Mormon Row realized quite early that, without irrigation, farming in Jackson Hole was a tenuous proposition. Fortunately, the Mormons brought with them irrigation techniques and traditions dating back to the settlement of the Great Salt Lake Valley in 1847. They dug ditches by hand or with a team of horses and a fresno. Manure was hauled to the fields and used to form the levees and dikes that divided field laterals from central canals. Constructed from 1896 through 1937, the intricate layering of these irrigation systems reflect the inner workings of the community, as its members formed changing partnerships to get dependable water to their individual parcels.

James May and Jim Budge watered their fields and gardens with water from the Gros Ventre, diverted through the Cedar Tree (Budge) Ditch (constructed ca. 1897) or the Savage Ditch (1911). The Trail Ditch (1897), Eggleston/Johnson Ditch (1910),



Mormon Row Ranch Sign that was located at the intersection of the Mormon Row and Kelly Roads. Photograph courtesy of Clark and Veda Moulton.

and Pfeifer/Geck/Ireton Ditch (1915) diverted water from Ditch Creek to Mormon Row farms, providing water for stock and irrigation. Yet Ditch Creek is an intermittent stream, raging in spring, providing a measure of water in June, and failing in the hot days of July and August. Residents of north Mormon Row hauled water from the Gros Ventre River, irrigated when they could, and practiced dryland farming.

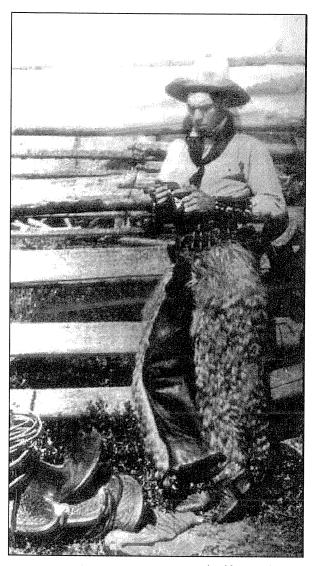
Those who stayed through the dry 1920s began the task of augmenting and reconstructing the Savage Ditch network, drawing from the Gros Ventre River. Yet not until 1927 were they assured of a significant and dependable water source. On June 23, 1925, after a long winter and a wet spring, a mile-wide block of earth slid from the northwest slope of Sheep Mountain, creating an earthen dam that backed up the Gros Ventre River. On May 18, 1927, the dam collapsed, sending a wall

of water through the canyon, killing six people, and destroying canyon farms, the town of Kelly, and much of the region's irrigation system. Mormon Row residents assisted in the rescue and the clean up and shared in the grief over the loss of life and property.

Yet the flood carried a blessing that may well have assured the future economic viability of the north Mormon Row farms: it opened a warm spring within easy reach of the Savage Ditch network. In 1929, Joe Heniger, Andy Chambers, and the Moulton brothers filed claim to the water of "Mud Springs," gratefully yet unofficially christened "Miracle Springs" and now know officially as "Kelly Warm Springs." The 3.37-mile long Mormon Row Ditch was constructed between 1929 and 1933 and provided the legal maximum of one cubic-foot-per-second (cfs) to every 70 acres irrigated.

Making a Living

Whether dry-farmed or irrigated, Mormon Row feed crops were marketed locally and regionally, and sustained the dairy cows, beef cows, pigs, and chickens that provided subsistence and served as the area's primary cash crop. Cattle were released in early spring, in a communal herd, and under the auspices of the Ditch Creek Cattle Company to the sagebrush lands of Antelope Flats. Private land formed the eastern and southern borders of this spring range, while Hedrick Pond formed a rough northern limit. The Snake River bottom formed the western limit. Grazing fees for the "Ditch Creek allotments" were paid first to the U.S. Forest Service and then to the National Park Service after the creation of Grand Teton National Park. Bulls were turned out with the cows in June, assuring an April calving



Joe May, cowboy. Photograph courtesy of Teton County Historical Society and Museum.

season. Shortly after the 4th of July, 6-8 local-residents-turned-cowboys trailed the herd of 800 to 1,000 cattle to national forest summer range. Calves were pulled from the herds in early October, and trailed over Teton Pass to the Oregon Shortline railhead, from which they were shipped to markets in Omaha and Chicago. The remainder of the herd was rounded up and trailed home in early November, where they were released into feed lots and cropped pasture, and fed

through the winter. Water for domestic use and for stock came from the ditches, when they ran, or was freighted in barrels from the Gros Ventre River during the height of the summer and the dead of the winter.

Around 1910, local ranchers George Riniker and Rudy Harold challenged the Jackson Hole cattlemen's unwritten moratorium against sheep in the valley. Although prepared for violence in a range-use war that raged throughout the West, their flock of 100 sheep was introduced without substantial protest. By the 1920s, Clifton May, Joe May, and Hannes Harthoorn also ran sheep on Blacktail Butte; their children made "fine shepherds" and the mutton and wool "provided a fine cash crop."

The large barn at the John Moulton site was constructed in the early 1930s to house the family's growing herd of dairy cows. Bartie Moulton sold butter, cottage cheese, and cream to area dude ranches. Other dairy operations included George and Martha Riniker's short-lived and unsuccessful venture, initiated in false anticipation of a creamery in Jackson Hole.

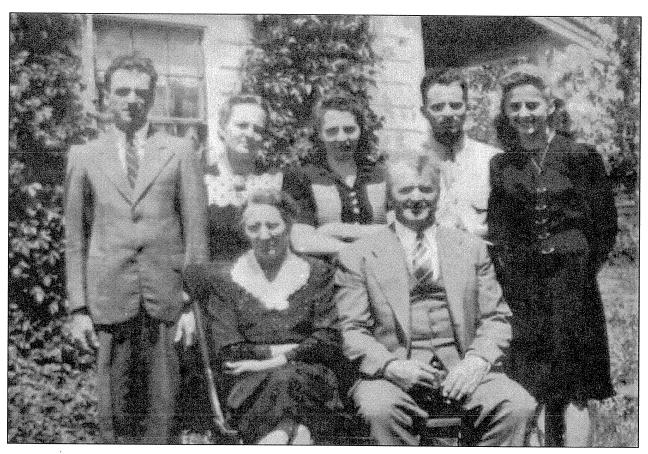
In addition, each family maintained at least one milk cow – Alma and Lucile Moulton's "Blossom" earned a bit part in the Hollywood western Spencer's Mountain – as well as hogs and chickens. Typical of many agricultural communities, eggs provided subsistence, a medium with which to barter, and petty cash for good children, who traded the eggs for "penny" candy and other treats at the Kelly general store. Until convinced by his sons to invest in beef cattle, Alma Moulton considered himself rich if he had "six milk cows and 100 chickens."

The Mays and Chambers earned extra cash by providing meals and rooms to travelers along the Jackson-to-Moran Road. Andy Chambers also supplemented his income by trapping the banks of the Snake River and the foothills of the Tetons, selling mink, coyote, muskrat, and martin to fur traders. In the mid-1920s, Joe Heniger acquired the Jackson-to-Moran mail contract, and a large barn to house the trucks used in the summer, the horses and sleighs used in the winter, and tons of hay. Andy Chambers inherited the mail route in 1932, a job he held until 1940. And, in an economic pattern witnessed throughout Jackson Hole, James Budge spent much of the fall and winter months as hunting guide for eastern "dudes."

The Decline

Many families had short tenures in the valley. Several Mormon Row homesteaders – including Eggleston, Johnson, the Rinikers, Perry, Woodward, Murphy, Mahon – sold out during the lean years of the 1920s and 1930s. Many sold to the Snake River Land Company. John D. Rockefeller, Jr. created the Snake River Land Company in the summer of 1927.

During a trip to Jackson Hole in 1926, the wealthy philanthropist met with the superintendent of Yellowstone National Park, Horace Albright. The meeting convinced Rockefeller of the need to protect the beautiful Snake River Valley from growing commercialism. The primary purpose of the newly formed company was to purchase land north of Jackson along the Snake River and donate it to the National Park Service. With the creation of Grand Teton National Park comprising most of the mountains but little of the Snake River Valley in 1929, the Rockefeller project to preserve the valley seemed even more critical from a preservationist perspective.



T.A. and Lucille Moulton (seated) and their family. Photograph courtesy of Clark and Veda Moulton.

The land acquisition program was controversial from the beginning. Many landowners, however, were ready to sell for the right price. But some Mormon Row residents questioned the "right price". With Rockefeller paying nearly \$113 per acre for undeveloped but scenic land west of the Snake River, Mormon Row farmers wondered how their improved land were considered to be worth only about \$40 per acre.

The cooperative spirit of the Mormon Row community briefly reasserted itself during this hectic period. In 1930, representatives of the Snake River Land Company met with Mormon Row residents at their LDS Church. Responding to pressure from the

community, Harold Fabian, an attorney representing Rockefeller, proposed a new acquisition strategy:

I further told them that we would not again undertake the piecemeal purchase of their property and that if they desired to have their lands re-included it would be necessary for them to agree among themselves on a lump sum to be paid for the entire Mormon Row section.

Although the consolidated purchase of Mormon Row proposed by Fabian failed, the land acquisition program of the Snake River Land Company proceeded rapidly. By 1933, the company had purchased over 35,000 acres and spent over \$1,400,000. Many of the sales included Mormon Row

homesteads. On March 15, 1943, these lands became part of the 221,000-acre Jackson Hole National Monument designated by President Franklin D. Roosevelt. Seven years later, Congress enacted legislation that merged the existing Grand Teton National Park and Jackson Hole National Monument into an expanded Grand Teton National Park.

Following the 1950 expansion of Grand Teton National Park, most of those who remained on Mormon Row sold to the National Park Service, often after years of negotiation. Many leased back the land for a designated number of years or for their lifetime. Until the late 1980s, both the Perry/Chambers and the John Moulton sites were inhabited seasonally. Today, only Clark and Veda Moulton, descendents of original Mormon homesteaders, continue to own and reside on their land. The James May and Henrie May farmhouses, the

Grovont school, the Mormon church, and other buildings were moved to out-of-park sites. Other buildings were burned or left to collapse as part of Snake River Land Company and National Park Service attempts to return the land to its presettlement or natural condition.

Despite the losses, six homesteads continue to mark Mormon Row. The grubbed fields, irrigation ditches, cottonwood trees, and fence lines have proven even more intractable. Although the last hay was bound and the last oats threshed in the late 1970s, the sagebrush has not returned. The fields remain clearly distinguishable from the surrounding sagebrush flats in verdant testimony to the settlers' successful attempts to farm in harsh country. Although fading, the story of western settlement – of small-scale agriculture, of failed homesteads, of raising families, and of creating communities – remains on the land.

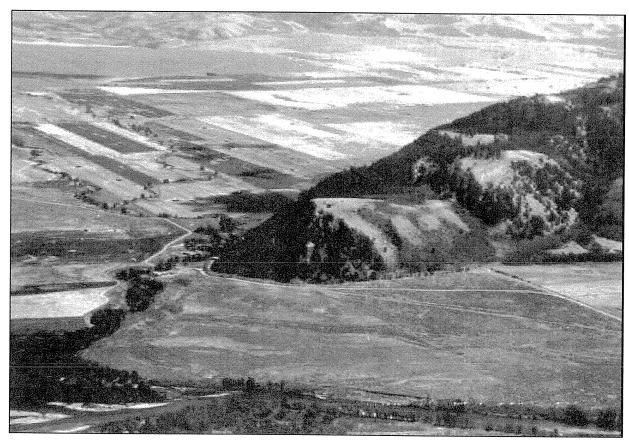
Description of Cultural Resources

Wherever you go in Mormon Country, whether the irrigated Snake River Plains of eastern and southern Idaho...or the mountain valleys of western Wyoming...you see the characteristic marks of Mormon settlement: the typical, intensively-cultivated fields of alfalfa...the irrigation ditches, the solid houses, the wide-streeted, sleepy green towns. Especially you see the characteristic trees, long lines of them along ditches, along streets, as boundaries between field and farm. They are as typical as English hedgerows.... Wherever they went the Mormons planted them. They grew boldly and fast, without much tending, and they make the landscape of the long valleys of the

Mormon Country something special and distinctive.

Wallace Stegner, Mormon Country

The six remaining homesteads along Mormon Row represent only a small percentage of the homes and farms that once defined the community. The school and church are gone. The fields are no longer cultivated. Only the barn remains at the T. A. Moulton homestead, and only a ruin – once a homestead cabin – remains of Joseph Eggleston's claim. A prolonged visit to Mormon Row, however, pays dividends.



Aerial View of Mormon Row. Photograph courtesy of Teton County Historical Society and Museum.

Subtle landscape elements – agricultural fields, irrigation ditches with their distinctive cottonwood trees, windrows, and the rambling ruins of fence lines – convey a clear sense of the farming community that once flourished here. In short, the remaining historic homesteads and their associated cultural landscape allow visitors to envision what life must have been for settlers of this high-valley, late-frontier, small agrarian community.

The Mormon Row Historic District was listed in the National Register of Historic Places on June 5, 1997. Today, the Mormon Row Historic District is defined by a linear array of six homesteads lining the northsouth old Jackson-to-Moran Road, located in the southeast corner of Grand Teton National Park. The Mormon Row community once extended from the Gros Ventre River at the south, to the rocky soils north of Blacktail Butte. The Historic District contains a much smaller area focusing on the remaining historic buildings and structures. The District also encompasses landscape features such as fences, ditches, a hay derrick, the windrows that mark the location of former homes and of the community church, and the still sagefree fields and pasturage laboriously cleared by the original settlers. The historic road that once linked residents of Moran, Wyoming with those of Jackson bisects the community and defines the strikingly linear (row) pattern of settlement. This linear pattern is reinforced by fence and field lines that conform to the cadastral survey, and by the linear character of the lateral field ditches. The curvilinear, irregular patterns of tree-lined drainages (most notably Ditch Creek and the primary canal of the Mormon Row Ditch system) as well as of topographic features (most notably Blacktail Butte, The

Knoll, and the Tetons) stand in stark contrast to the human-imposed grid.

Natural Environment

Both natural and cultural forces have shaped the physical landscape visible around Mormon Row. Glaciers that moved down from the mountains to converge from the north, east, and west shaped Jackson Hole, beginning about a quarter million years ago. The terraces and alluvial fans are products of the retreat of these glaciers. Located in the relatively gentle slopes of Jackson Hole, Mormon Row lies on an alluvial outwash at the southern end of Antelope Flats. This river bench is approximately three miles wide by four miles long and gently slopes toward the southwest. The area is sheltered on the southwest by Blacktail Butte, which rises 1,000 feet from the valley floor. The Gros Ventre River and the slopes of the Gros Ventre Range form the southern visual boundary. Shadow Mountain and forested peaks within the Teton National Forest provide the eastern enclosure. The creeks, sloughs and seasonal drainages flow predominantly toward the Snake River to the northwest. The Teton Mountains are seven miles to the northwest and a dominant visual presence.

Mormon Row's productive farmlands are the fortuitous combination of deep, well-drained soils, seasonal streams, and the shelter offered in the lee of the butte. Farther north on the more exposed Antelope Flats, the soils are rockier, and the lack of shelter and a steady water supply reduced the area's attractiveness to the early homesteaders. Within this spectacular natural setting, cultural forces changed the physical landscape.

Cultural Landscape

One of the more visually striking landscape patterns in Mormon Row is the contrast between the cultivated fields and the surrounding native sagebrush. Even though the fields have not been actively farmed since the last crop in 1976, the natural sage encroachment has been slowed in many locations by such major barriers as roads and irrigation ditches. Where such barriers do not exist, such as on the Budge and May properties (south of the District boundaries), the sage is beginning to crowd out the remnant fine-texture brome grasses that had been planted by farmers.

In spite of their low visual impact, irrigation structures played a critical role in the history and settlement of Mormon Row. The overall character of the landscape as irrigated fields and expansive farm clusters is a direct byproduct of the 17 irrigation ditches that once laced Mormon Row. Of these 17, only the Mormon Ditch and the Johnson/Eggleston Ditch irrigated lands within the Mormon Row Historic District. Both ditches include an earthen main ditch. head gates, appropriation gates and instream structures. Wooden distribution gates controlled the flow of water into the fields and are still visible on the Joe Heniger, John Moulton, T.A. Moulton, J. Eggleston, and Andy Chambers properties.

In late spring, one can easily see the historic irrigation pattern and formerly watered fields. The parallel ditch and plowing pattern in 40 to 160-acre patchwork has changed little over the past 50 years. The modern ditch contour methods utilized by the US Fish and Wildlife Service in producing hay for elk, with ditches that snake or diagonally stripe across Sections 33, 4 and 3, are visually disparate from the traditional methods.

An equally strong vegetation pattern is the natural demarcation of drainages and creeks by the cottonwoods. These clusters of trees are located primarily on the multiple arms of Ditch Creek, but have also sparsely populated the older ditches such as Trail Ditch (appropriated in 1896). These vegetation patterns have typically survived where gravelly soils or steep banks hindered cultivation.

The only other dominant vegetation pattern occurs at a small scale in planted windrows. Due to their linear nature and regular spacing, the windrows contrast sharply with the natural tree patterns. The windrows are typically a single line (or "L" or "C" shaped) with trees spaced 15 to 25 feet apart on the north, east, and sometimes south sides of the main residence. Cottonwood appears to be the primary species choice for windrows; John Moulton's row of aspen trees stands as the only exception. Many of the cottonwood trees are over-mature and have begun to break up or be knocked over in storms.

The remnant of a kitchen garden and several ornamental plantings of rose, lilac, and juniper, remain at the John Moulton homesite. Ornamental fir or spruce trees are found in the front yards of the John Moulton, T.A. Moulton, Clark Moulton, Andy Chambers and Roy Chambers homesites and in the vicinity of the church.

Buildings

The Mormon Row Historic District includes 43 buildings and structures dating from the homesteading period. Like earlier Mormon communities, the church and school of Grovont were located near the center of the community. Though the church was moved to Wilson, the site at the southwest corner of the Thomas Perry homestead is still marked

by fence posts, two cottonwoods and a spruce tree. There are no visible remnants of the school that also once stood immediately south of the Perry homestead.

Mormon Row's buildings are typical of the period and represent vernacular architecture found throughout the Rocky Mountain West. Most of standing structures are log and display evolutionary construction common in homesteaded settlements – expanding as the need arose and resources were available. The five barns along Mormon Row are its most prominent structures. They are clearly visible to motorists on the primary park thoroughfare, advertising the presence of the community and testifying to its agricultural orientation.

The domestic buildings – main house, bunkhouse, shower house, pumphouse and outhouses – are typically clustered together. Settlers often replaced their log homes with larger, more expensive structures when financially able. In 1938, John and Bartie Moulton built a new stucco home, reflecting this second-generation of construction. Although the barns, granaries, and chicken coops and other outbuildings were constructed away from domestic structures, fences encircled the entire complex. The fences were utilitarian, constructed of easily procured materials: wood and wire defining the fields, wood and rail for stock corrals. Remnants of fence are also visible throughout the area, although much of it appears to be replacement (as on the Chambers property).

The buildings and structures described briefly below are the extant structures within the Mormon Row Historic District. With the exception of the shower house at the John Moulton homestead, all structures have been determined to be "contributing" historic

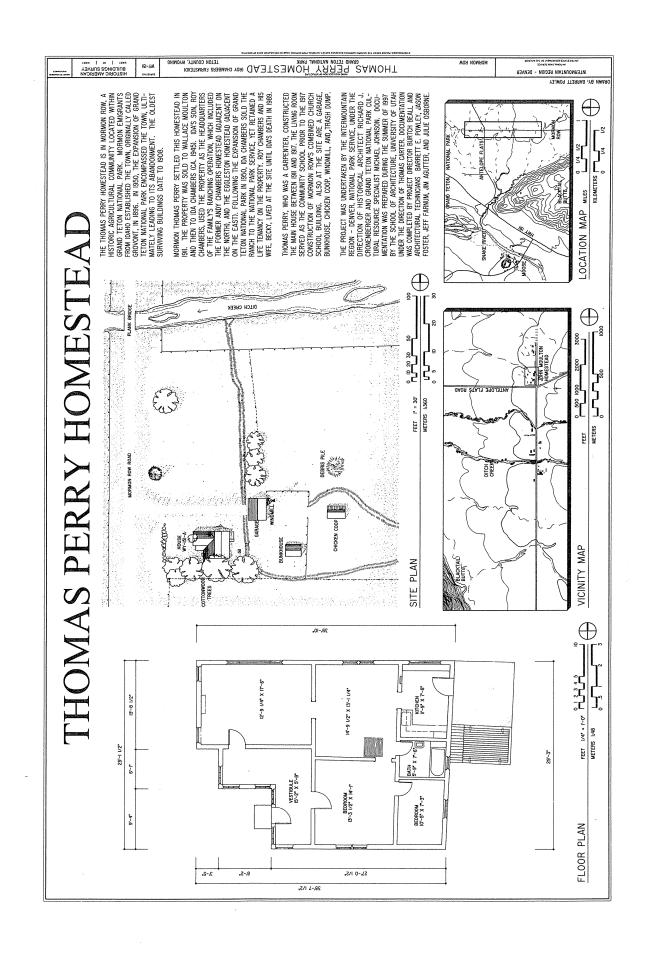
resources by the Keeper of the National Register of Historic Places. A "contributing" structure means that the property possesses historical and or architectural importance.

Joe Eggleston Homestead

The partially collapsed one-story building is located at the south end of the Mormon Row Historic District, on the west side of the old Jackson-to-Moran Road. The homestead was constructed by Joe Eggleston and then sold to Jacob Johnson and later to Andy and Ida Chambers. Constructed in ca. 1910 as a homestead cabin, the log building was later converted to a granary. A two-story frame house built by Eggleston was used by the Chambers as their primary dwelling and served briefly as the Grovont post office. Unfortunately, the house burned ca. 1935. A chicken house was moved to the neighboring Thomas Perry/Roy Chambers property ca. 1950.

Thomas Perry Homestead/Roy Chambers Farmstead

Settled by Mormon Thomas Perry in 1911, the homestead was sold first to Wallace Moulton and then (ca. 1945) to Ida Chambers. With this purchase, the Chambers ranch, run by son Roy Chambers, was expanded to include Andy Chambers' original homestead (adjacent, to the north), J. Eggleston's original homestead (adjacent, to the west), and the Perry site. Ida Chambers sold the land to the National Park Service soon after extension of the park, yet retained a life tenancy. Roy and Becky Chambers lived at the site until Ida's death in 1989. The property is now abandoned and deteriorating rapidly.



The complex is located on the east side of the old Jackson-to-Moran Road, near the site of the Mormon church and the Grovont school. Ditch Creek forms the north site boundary; the Jackson/Moran Road and a parallel irrigation ditch form the western border; a post and rail fence and parallel lateral of the Mormon Row Ditch bound the property to the south. Pasture, laboriously cleared of sage during the historic period, extends east from the termination of the building cluster. These boundaries are emphasized by a neat row of wild rose bushes along the west border and a cottonwood windbreak along the south border.

Resources include a residence (1911), garage (1950), bunkhouse (unknown date), chicken coop (unknown construction date), windmill (1946), and a trash dump filling an old channel of Ditch Creek. Perry constructed the frame house between 1911 and 1917; the living room served as the Grovont School prior to the 1917 construction of the church/school. Ca. 1950, Roy Chambers moved the well house to its current location where it was converted to a bunkhouse. At approximately the same time, the garage was constructed on the original well house site. The chicken house is a transplant from the "old Eggleston place."

Andy Chambers Homestead

Andy Chambers filed claim to this land in 1912 under the terms of the Forest Homestead Act of 1906. The General Land Office granted him title in 1916, after Chambers and his witnesses/neighbors testified to construction of a log cabin and a log stable, cultivation of 20 acres, and the fencing of 30 acres. The homestead is on the east side of the old Jackson-to-Moran

Road, west of the Clark Moulton homestead, and at the center of Mormon Row. A field lateral from the Mormon Row Ditch defines the north edge of the site; the Jackson-to-Moran Road defines the western border; and Ditch Creek, dividing the site from the adjacent Roy Chambers complex, defines the southern border. To the east, sage-free meadows – once irrigated hay field, now seasonal pasturage for National Park Service stock – extend smoothly from the termination of the building cluster. Fences divide the site into distinct use areas and divide the complex from adjacent sites, from the road, and from pasture. Gate posts and a symmetrical planting of spruce trees mark the original entrance to the house.

This is the most extensive historic complex remaining on Mormon Row, with a full range of log and frame agricultural infrastructure. The buildings and structures include a residence (1916), barn (1912), gas and oil house (1917), granary (1917), machine shed (1917), saddle shop (1917), chicken house (1917), garage/pumphouse (1917), elaborate fence and corral systems, outhouse, hay shed, and miscellaneous storage sheds.

Clark and Veda Moulton Home

Clark and Veda Moulton's home is on an acre of land gifted to Clark ca. 1935 by his father T. Alma Moulton. From this home base, the Moultons worked their 160-acre dryland farm located on the flank of Shadow Mountain, and leased or managed other Mormon Row lands. In the late 1970s, Clark and Veda Moulton stopped farming and initiated their retirement with construction of six tourist cabins.

A fence separates Clark and Veda Moulton's home from the adjacent hay meadows, from the T. A. Moulton barn (north), and from the

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Andy Chambers homestead (east). The compound contains residential, agricultural, and tourist buildings, roughly clustered by function and all located along the east and south edges of the site, leaving an unimpeded view of the Grand Tetons to the northwest. The old Jackson-to-Moran Road and a row of cottonwood trees, growing along the course of an irrigation ditch, bound the site to the east. A post-and-wire fence forms the north and west borders, and a vertical plank windbreak fence delineates the south border. The historic outbuildings have weathered to varied shades of brown and grey, in stark contrast to the oiled vellow logs of the modern log guest cabins. All buildings are privately owned and owner occupied.

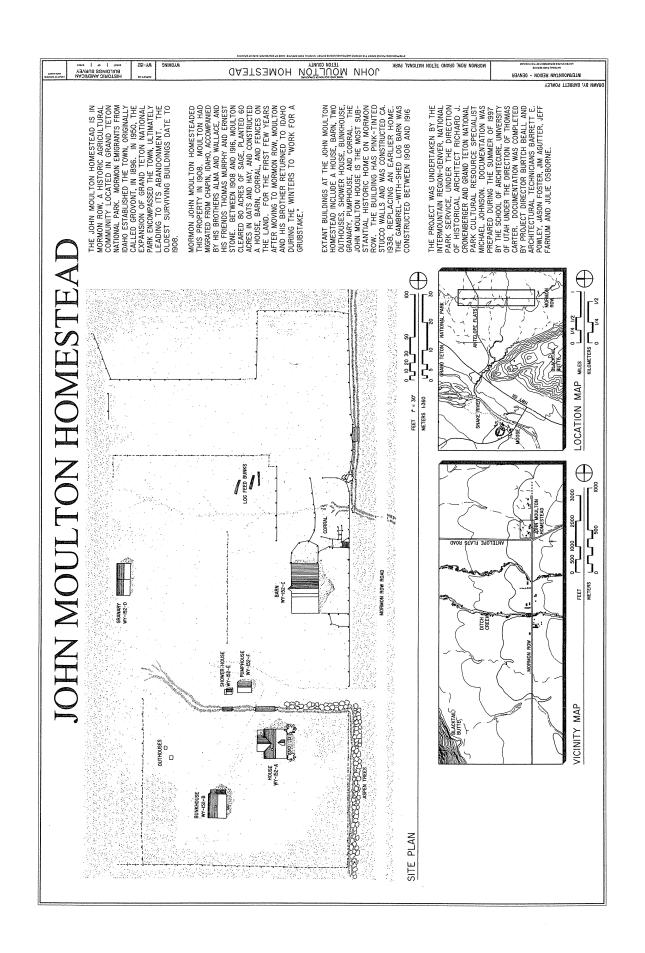
T. A. Moulton Homestead

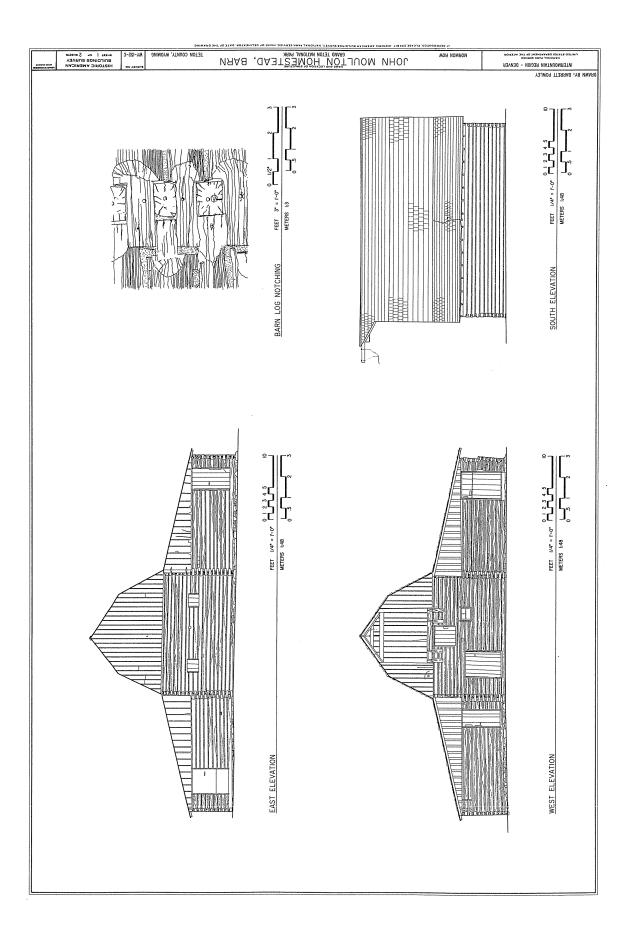
A barn, irrigation ditch, and remnants of jack-leg fence are all that remain of the T. A. Moulton homestead, claimed by Mormon T. Alma Moulton in 1908 and first inhabited by Moulton, his wife Lucille, and their infant son Clark in 1913. Here, the Moultons raised a small herd of dairy cows, a large number of chickens, work and buggy horses, 90-day oats, and hay. Moulton expanded his stock holdings to include beef cattle and hogs only after many years in the valley. Minor outbuildings, including a granary and small shed, have been removed to the adjacent Clark and Veda Moulton place. (The 1½-story farmhouse, blacksmith shop, and chicken house were removed following National Park Service acquisition of the site.) An orderly row of cottonwood trees marks the former location of the residence. Irrigated hay fields historically associated with the site remain in use (and sage-free), used by the National Park Service as pasturage.

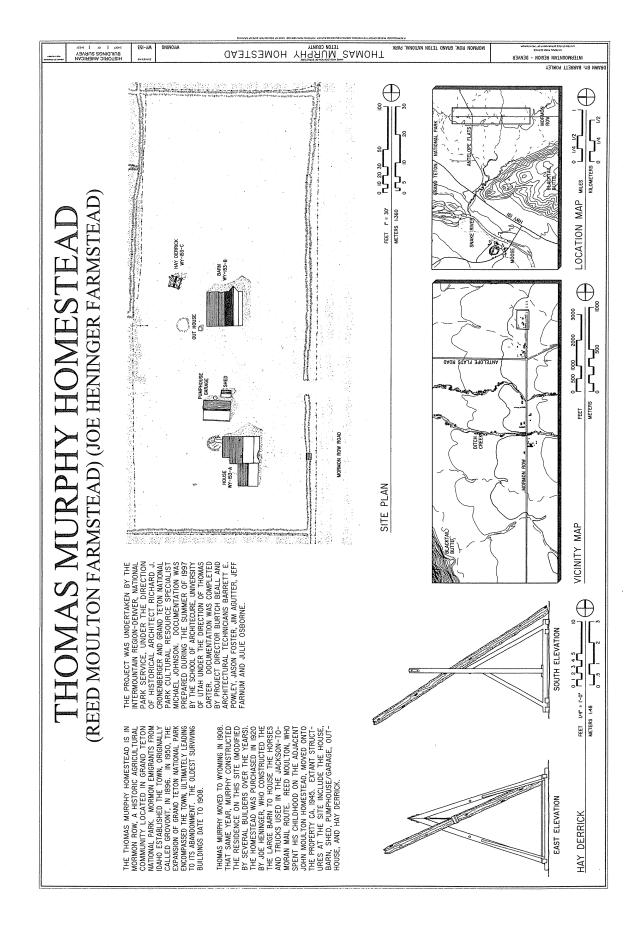
The imposing 1½-story log barn was built between 1913-1934 and is a dominant visual element of Mormon Row. With its scenic mountain backdrop – its hay hood mirroring the summit of the Grand Teton – the barn has been used by countless professional and amateur photographers to symbolize the "Old West," and to provide a human element and scale against the Teton Range. The barn is constructed in the classic western gable-with-shed style. The upper floor contains a hayloft, while the ground level was used primarily for storage of farm machinery. The shed-roof addition provided a stall for animals.

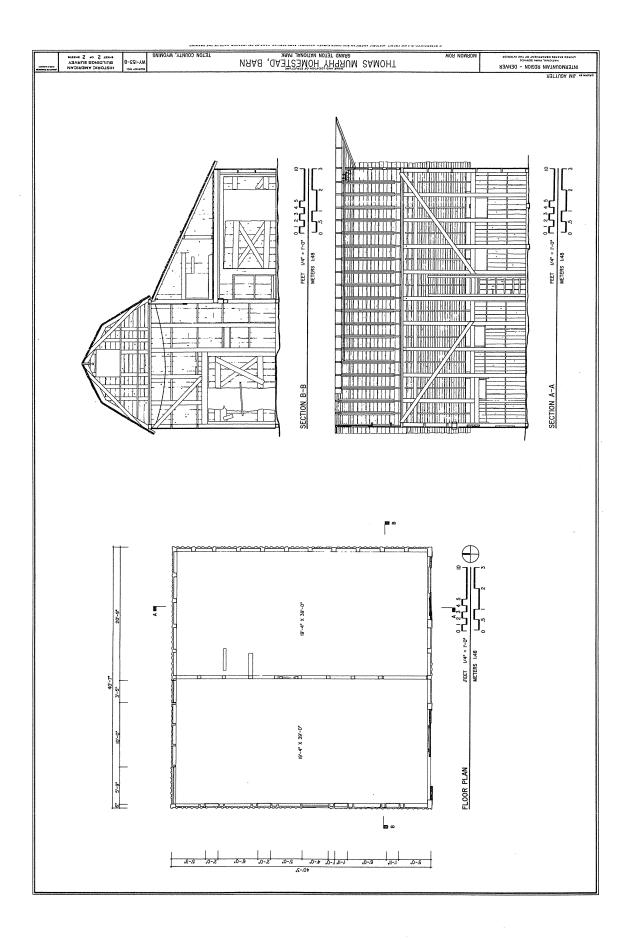
John Moulton Homestead

John Moulton migrated from Chapin, Idaho in 1908, in the company of his brothers Alma and Wallace and his friends Thomas Murphy and Ernest Stone. Between 1908 and 1916, Moulton cleared 80 acres of sage, planted 60 acres in oats and hay, constructed a house, barn, and corral, and fenced his land. Like his brothers. Moulton returned to Idaho during the first winters, where he "work[ed] for a grubstake." In 1916, eight years and one extension after filing, the General Land Office granted Moulton title to the land. After almost 30 years of hard labor, Moulton and his wife Bartha [Bartie] replaced their log house (the second constructed at the site) and barn with a new carpenter-constructed, stuccoed frame house, and a large and impressive two-story gambrel barn. Historic structures include a residence (1938), outhouses (unknown construction dates), shower house (post 1950), barn (1930), bunkhouse (1945), granary (date unknown), pumphouse (1918), and other miscellaneous ranching structures including corral, loading chute, and log feed bunks.









Thomas Murphy Homestead/Joe Heniger (Reed Moulton) Farmstead

Thomas Murphy immigrated to Jackson Hole in 1908, with T. Alma and John Moulton and patented this homestead. In the 1920s, Joe Heniger purchased it, and constructed the large barn. Reed Moulton, who grew up on the adjacent John Moulton homestead, moved onto the homestead ca. 1945. Although the Jackson-to-Moran Road was abandoned in 1939, the historic buildings continue to mark the road alignment. The site contains a house (1949) (modified by several builders over the years), a pumphouse/garage (construction date unknown), a large barn (1925), a shed (construction date unknown), hay derrick (1945), and an outhouse.

Historic Ditches

Mormon Row Ditch

The Mormon Row Ditch is the longest linear feature within the Mormon Row Historic District, stretching almost four miles from the Gros Ventre River and Kelly Warm Springs on the southeast, through the heart of Mormon Row. Although many small-scale components are missing, enough of the irrigation system remains to allow visitors to visualize how water was diverted from the Gros Ventre River to the fields throughout Mormon Row, before returning to Ditch Creek where it ultimately joins with the Snake River.

Construction on Mormon Row Ditch began in 1911, and was expanded through 1934. Water appropriation records indicate that the official source of the Mormon Row Ditch is Mud Springs (currently known as Kelly Warm Springs). However, the springs are supplemented by water from the Gros Ventre River utilizing the enlarged Savage

Ditch. The ditch's headgate on the Gros Ventre is not easily accessible due to the steep bluff in this portion of the river. Viewed from the entry to Teton National Forest, approximately \(^{3}\)4 mile upstream, the head gate appears to consist of a large concrete headwall with two metal gates and turn screws. Water that passes through these twin gates is appropriated to three ditches: the Savage Ditch, Mormon Row Ditch and May Stock Ditch. The waters flow together until the northwest corner of Kelly Warm Springs where an "L"-shaped concrete headwall defines where the gates for the Savage Ditch and Mormon Row Ditch once separated these appropriations. The gates are no longer in place in the headwall. This headwall marks the official headgate of Mormon Row Ditch. The Mormon Row Ditch is a trapezoidal earthen ditch originally appropriated to be two feet deep, five feet wide at the top, with a four-foot bottom channel and two-feet-wide levees. one foot above adjacent grade. This ditch varies in width from a few feet to the designed five feet, and runs swiftly through most of its length.

Johnson/Eggleston Ditch

On June 13, 1910, neighbors Joseph Eggleston and Jacob Johnson appropriated four cubic feet per second (cfs) of water from Ditch Creek, sufficient to irrigate four 70-acre parcels. Construction specifications were for a ditch one-foot deep, four feet wide at the bottom, and five feet wide at the top. The ditch no longer carries water, the banks have sloughed, and vegetation lines the bed. However, the ditch continues to conform roughly to historic construction specifications and its alignment remains clearly discernible.

Other Historic Features

Swimming Hole

The local swimming hole is located just east of the T. A. Moulton barn, adjacent to the Jackson-to-Moran Road. Clark Moulton constructed the hole ca. 1935 by damming the natural drainage at the east end and sloping the sides of the bank. Although no longer holding water, the excavation remains clearly visible, approximately 165 feet long, 57 feet wide, and 5-7 feet deep.

Historic Archeological Site

One dumpsite is located within Mormon Row Historic District, and historic archeological investigations could provide insights into the material culture of Mormon Row residents. This dump appears to be an abandoned channel of Ditch Creek behind the Thomas Perry homestead chicken coop. The site is filled with domestic trash such as appliances, cans, bottles, fencing, and building remnants such as timbers and lumber and bailing twine.

Description of Natural Resources

The natural landscape of Mormon Row remains largely unchanged from the homesteading era. The lands surrounding present-day Mormon Row reflect decades of use for homesteading, grazing and hay production. Most of the homesteads, except for Clark Moulton's property, have been vacated since 1990. However, as recently as the mid 1970s, the Fish and Wildlife Service mowed the fields for hay production to feed elk during the winter. Since then, no hay production has occurred and the irrigation ditches have not been maintained, although water still flows through several of them.

Soils

Soils within Mormon Row area are composed of two main types: the Youga-Tineman complex on alluvial fans and the Leavitt-Youga complex on stream terraces along the Snake River. Both soils form on nearly level slopes of zero to three percent.

The Youga-Tineman soils formed in alluvium at elevations of 6,000 to 7,000 feet northeast of Blacktail Butte. The very deep, well-drained Youga soil is composed of silty clay loam, formed in layers about six inches thick. The Youga soil has a moderate permeability and a high ratio of available water capacity. Surface runoff is slow, and the erosion hazard is slight. The Tineman soils are also very deep and well drained, having formed in alluvium. The surface layer is brown gravely loam about seven inches thick. Permeability is moderate, and the available water capacity is low. Like the Youga soils, surface runoff is slow, and the erosion hazard is slight.

The Leavitt-Youga complex soils formed on alluvial fans and stream terraces along the Snake River. Leavitt soil forms a thick surface layer, up to eight inches, of dark grayish brown loam. In both Leavitt and Youga soils, permeability is moderate, and the available water capacity is high. Surface runoff is low, and the erosion hazard is slight. The very deep, well-drained Youga soil has a six-inch surface layer of silty clam loam with moderate permeability.

The Soil Survey of Teton County, Wyoming, Grand Teton National Park notes that because of the low available water capacity, frequent light applications of irrigation water are needed to support crops. Heavy applications of water cause excess seepage and loss of water and soil nutrients.

Vegetation

Ranchers primarily planted three non-native species for hay production: smooth brome (Bromus inermis), Kentucky bluegrass (Poa pratensis), and timothy (Phleum pratense). These plants still dominate the landscape of Mormon Row, and the National Park Service grazes horses and mules during summer months in the field east of the Andy Chambers homestead.

Prior to the human activities of land clearing and hay cultivation begun in 1890s, dry and moist sagebrush communities, along with wet meadows and cottonwoods lining Ditch Creek, dominated the landscape. Today, these native sagebrush, meadow and cottonwood communities have been displaced somewhat by the cultivated landscape of Mormon Row. However, with

the passage of time, sagebrush, as well as numerous species of weeds such as Canada thistle and musk thistle, is creeping into the cultivated landscape, somewhat obscuring the lines between the native and cultivated landscapes.

Today, the dry sagebrush community borders the southeast face of Blacktail Butte between Ditch Creek and Kelly Road surrounding the Eggleston Homesite. Plants such as mountain big sagebrush (Artemisia tridentata var. vaseyana), bluebunch wheatgrass (*Elymus spicatus*), Idaho fescue (Festuca idahoensis) and Sandberg bluegrass (*Poa secunda* var. *secunda*) grow on these dry, nearly flat expanses. Prior to cultivation, wet meadows and moist rocky sagebrush shrubland lined much of Ditch Creek and the base of Blacktail Butte. The moist sagebrush community exists today, particularly to the northeast of Mormon Row. Here mountain big sagebrush flourishes along with mesic forbs including sticky geranium (Geranium viscosissimum) and mountain hollyhock (*Iliamna rivularis*), along with grasses such as Nevada bluegrass (Poa nevadensis) and redtop (Argostis stolonifera). The wet meadow community presently found along the base of the northeast face of Blacktail Butte supports such species as monkshood (Aconitum columbianum), mountain bluebell (*Mertensia ciliata*), and butterweed groundsel (Senecio triangularis). The seeps and snowmelt from Blacktail Butte produce the moist to persistently wet conditions preferred by these plants. Finally, a community of narrowleaf cottonwoods (*Populus angustifolia*) lines portions of the banks of Ditch Creek.

A variety of non-native plants have also become established at Mormon Row with considerable tenacity. These include Canada thistle (*Cirsium arvense*) and musk

thistle (*Carduus nutans*), spotted knapweed (*Centaurea maculosa*), yellow sweet-clover (*Melilotus officinalis*), dalmation toadflax (*Linaria dalmatica*) and yellow toadflax (*L. vulgaris*).

Floodplains and Wetlands

Ditch Creek threads a course through the Historic District, and Kelly Warm Springs, to the east of Mormon Row, is connected to the District by irrigation ditches. Wetlands also lie at the base of Blacktail Butte.

Currently, the bridge over Ditch Creek is not safe for vehicular crossing due to failure of the structure. The bridge is also too narrow for the channel, causing sediment to deposit upstream of the crossing. As a result, maintenance crews must periodically clear the upstream channel to restore flow. Those vehicles that cross Ditch Creek do so by fording Ditch Creek which causes destabilization of the banks and temporary turbidity in the water.

Threatened and Endangered Species

Three animal species that have been listed as "threatened" or "endangered" have been recorded in the area of Mormon Row, Blacktail Butte, and Kelly Warm Springs. The peregrine falcon (*Falco peregrinus anatum*) and whooping crane (*Grus americana*) are listed as endangered; the bald eagle (*Haliaeetus leucocephalus*) is listed as threatened. Two other animal species have been reported in proximity to – but not within – the Mormon Row Historic District: grizzly bears (*Ursus arctos horribilis*), which are a threatened species, and gray wolves (*Canus lupus*), which are

being reintroduced into the area as an experimental population.

Peregrine Falcon: Peregrine falcons have been observed by at Kelly Warm Springs, west of Kelly, and at Blacktail Ponds. While there are no known nests by these sites, peregrines may hunt prey in the meadows and ponds.

Whooping Crane: Park wildlife observation files indicate two sightings of whooping cranes flying over Blacktail Butte.

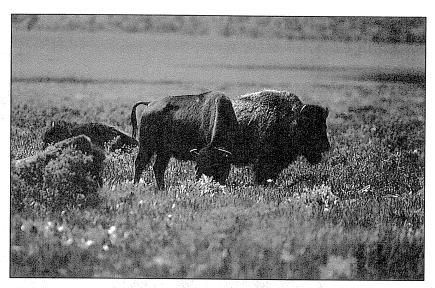
Bald Eagle: Bald eagles nest along the nearby Snake River and may be seen flying over the river corridor. Some use of areas adjacent to Mormon Row occurs in the fall, when eagles feed on gut piles left during the fall elk reduction program. As many as ten bald eagles can sometimes be seen in the area during this period.

Grizzly Bear: Grizzly bears exist near the general project area but have not been documented using areas immediately adjacent to the proposed projects. The proposed project area is outside the Grizzly Bear Recovery Area.

Gray Wolf: Wolves have been documented in several areas of the Park during the last two years. In December 1998 three wolves were observed near Timbered Island, five miles to the northwest of the project area, as well as two other wolves on the Elk Ranch (on park property), fourteen miles northeast of Mormon Row. It is possible that as wolves continue to recolonize Jackson Hole some use of areas immediately adjacent to the project area will occur.

Other Wildlife Species

The Mormon Row and Kelly Warm Springs area has an abundance of other wildlife species because of its locations within a migration corridor for big game, as well as breeding and winter habitat for numerous birds and mammals.



Bison at Grand Teton National Park.

Bison: Up to 400 bison seasonally use Antelope Flats to graze on the vegetation in the cultivated fields and surrounding sagebrush and wet meadow communities. Bison begin migrating to the area from the National Elk Refuge in April, and generally return to the refuge by December. From April to December, varying numbers of bison can be found in the area. Use tends to be heaviest during April and May, and then again during August, September, and October. Often the entire herd is present during the rut, which occurs in August. The 1994 Mormon Row fire, a lightning-caused fire that burned several hundred acres of sagebrush/grassland in the area, created foraging conditions that attracted large numbers of bison for several years.

Future prescribed fires can be expected to have similar results.

Bison in the Jackson herd are habituated to humans and are often found near human developments such as roads and buildings. They use the road surfaces and adjacent areas of the Mormon Row road, Antelope Flats road, and Kelly roads on a regular basis. They forage and rest in the project area as well.

Elk: Elk can also be found in and around Mormon Row. Like bison, elk begin migrating into the Park from the Refuge during April. Literally thousands of elk travel through the Hayfields and Antelope Flats, and through the meadows between

Mormon Row



Pronghorn in Grand Teton National Park.

and Blacktail Butte each spring and fall. During these migration periods, several hundred elk at a time may bed down and forage in the area for a night before moving on. Generally by the end of May the migration to more northern parts of the valley is complete and elk are largely absent from the area until the fall migration begins in October and November. A few elk summer on Blacktail Butte and may occasionally forage in its adjacent meadows or travel through the Ditch Creek riparian corridor.

From about mid-October through the first week in December the Park, the park conducts an elk reduction. The area open to hunting includes all areas adjacent to Mormon Row, and large numbers of hunters can be found hunting in the immediate vicinity during the fall elk migration.

Moose: Moose can be found in the areas surrounding Mormon Row year around.

The Antelope Flats and hayfields areas are particularly important winter and spring habitat for moose, and concentrations of 50 or more can be found there during those periods. Moose use the Ditch Creek riparian corridor upstream of Mormon Row and Blacktail Butte throughout the year, and

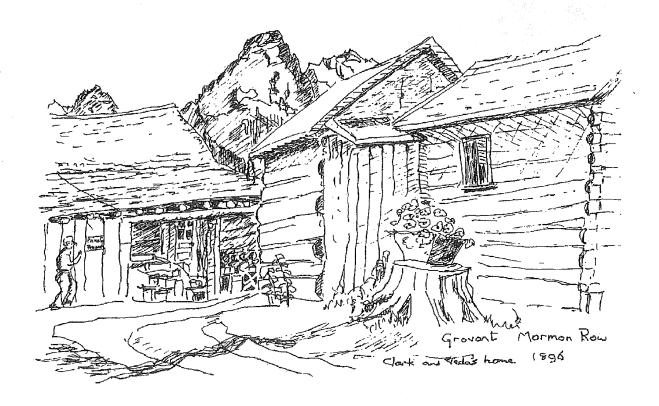
concentrate on the south end of Blacktail Butte throughout the winter as well.

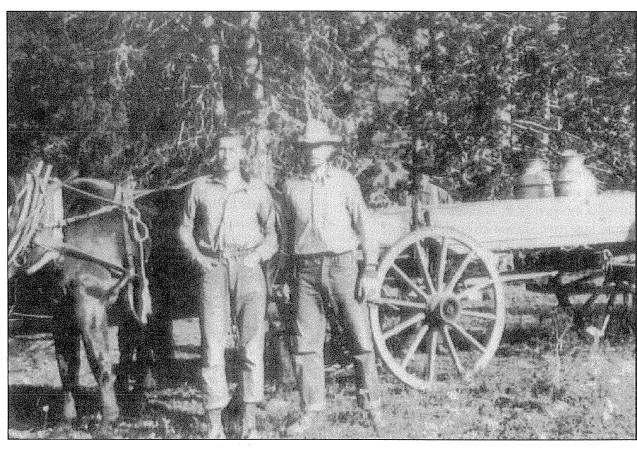
Pronghorn: Pronghorn in small numbers forage year round in the sagebrush communities around Antelope Flats, from the south end of Mormon Row to one-mile north of the Gros Ventre pasture.

Other mammals that frequent Mormon Row, Antelope Flats, and Kelly Warm Springs are coyotes, badgers, Uinta ground squirrels, pocket gophers, mule deer, montane voles, deer mice and various other rodent species. The National Park Service has not detected the presence of bats in the historic buildings. However, biologists will be asked to conduct formal bat searches prior to any work in the interiors. Mountain lion and black bear live on Blacktail Butte.

Birds that breed around Mormon Row include the red-tailed hawk, Swainson's hawk, American kestrel, northern harrier, common raven, short-eared owl, mountain bluebird, horned lark, Brewer's sparrow, vesper sparrow, savannah sparrow, and long-billed curlew. Other species that may be observed are prairie falcons, barn owls, golden eagles, crows, sage grouse, fox sparrows, swallows, and a variety of other passerines. Among amphibians, it is

possible that boreal chorus frogs and spotted toads breed along Ditch Creek. Because of its geothermal (high 70 to low 80-degree Fahrenheit range) waters, Kelly Warm Springs also supports a host of exotic fish and amphibians that have likely been added by members of the local communities who are attempting to get rid of unwanted pets and aquarium fish. These fish include the striped "convict" fish, black and orange swordtails, and guppies. The exotic bullfrog also lives in the warm springs, and its tadpoles have been found at the base of Blacktail Butte in wet meadows bordering Ditch Creek. The common garter snake finds habitat throughout the low elevations of the park.





Mormon Row Ranch Hands. Photograph courtesy of Teton County Historical Society and Museum.

Interpretation of Mormon Row Historic District

Interpretive Intent

The intent of interpretation at Mormon Row Historic District is to tell the story of this short-lived community; the people who eked out an existence within it; and how its inhabitants were shaped by their struggle to farm the land. Set against the timeless Grand Tetons, Mormon Row is a poignant reminder of human transience.

Mormon Row conjures a religious faith that is noteworthy in 19th century western U.S. history. Interpretation of the Mormon Row Historic District is not intended in any way to advocate or proselytize for the Church of Jesus Christ of Latter-day Saints. Nevertheless, some sensitive treatment must be allowed in order to meaningfully convey the distinctive attributes of the founding and existence of this community.

While the legislative establishment of Grand Teton National Park emphasized natural values, its interpretive themes incorporate all periods of human habitation, from prehistory to modern times. Interpretation within Mormon Row Historic District will further enrich the visitor experience, by compelling visitors to relate their life experiences with those of the inhabitants who once lived and toiled in the shadow of the Teton Range.

Current Visitor Expectations and Activities

In March 1998, Margaret Littlejohn, VSP Coordinator for the National Park Service at the Cooperative Park Studies Unit, University of Idaho/Moscow, completed a park visitor study conducted in the summer of 1997. The study reveals, among other

things, the indispensability of motor vehicles: fully 66% visit by private car, van, or pickup, and another 27% arrive via rental car or van. The Grand Teton National Park Visitor Study also gauges the expectations of visitors arriving at the park, and their actual activities while there. The study is useful in considering development and interpretation of Mormon Row Historic District.

The study indicates that most visitors have a relatively a short length of stay in Grand Teton National Park, with 45% visiting less than one day, 4% for one day, 21% for two days, and 13% for three days. With almost half of park visitors staying a day or less, or 70% staying for no more than two days, one can anticipate the kind of activities visitors could reasonably carry out in the course of such a short time frame.

According to the survey, those activities are view scenery (98%), view wildlife (88%), drive for pleasure (71%), stop at roadside exhibits (59%). This parallels the reasons visitors cited for visiting Grand Teton National Park: sightseeing (87%), view wildlife (75%), experience wilderness/open space (62%). Further down the list: visit museums/historic sites (27%).

It is noteworthy that a quarter of visitors surveyed cited this heritage interest, particularly because historic sites within the park received scant mention in the survey. Indeed, a survey of places visited indicated only 17% visited Antelope Flats/Kelly Road, the vicinity of the Mormon Row Historic District; and only 11% visited the historic Cunningham Cabin. Of the people visiting Antelope Flats/Kelly Road, there were only three mentions of viewing the Moulton Barn

and 12 mentions of photography. The discrepancy between a quarter of park visitors seeking heritage experience, and the scant few who find it, may be explained in part by Mormon Row's obscurity in park maps and literature and a lack of any interpretive program. It may also be due to the realization upon arrival that there is so much to see within Grand Teton National Park, and so little time.

How can this survey assist in directing interpretive development of Mormon Row Historic District? While a miniscule number of visitors surveyed ventured to the District, public awareness and traffic will surely intensify upon improved vehicle accessibility, the development of wayside exhibits, and Mormon Row's identification on park road signs and in park literature. Visitor motivations cited in the survey are prescient in anticipating future public use of the District. Develop it and visitors will come - though as compared with major inpark visitor destinations such as South Jenny Lake, Snake River, and Colter Bay/Moose villages – visitation in Mormon Row will most likely remain relatively small.

Interpretive Themes

The principle themes governing future interpretation of Mormon Row Historic District are:

- Mormon Row is revealed in the stories of the people who lived, worked, and played there.
- Technical ingenuity, innovation, and adaptability determined a farmer's survival.
- Mormon Row is a fleeting chapter in man's struggle to shape the natural environment.
- The community's decline helped foster the rise of present-day Grand Teton National Park.

Interpretive Goals

The goals of interpreting Mormon Row Historic District are to make visitors aware of:

- The historical context of Mormon Row's existence, and the social, economic, and environmental conditions contributing to its rise and fall.
- The composition of the community of Mormon Row, and the contributions of its inhabitants to individual and the community good.
- The transformation of the natural landscape in establishing homesteads and farmsteads at Mormon Row's beginning; and, in the aftermath of its disappearance.
- Mormon Row's relationship to John D. Rockefeller, Jr., and present-day Grand Teton National Park.

Interpretive Objectives

As a result of their visit to Mormon Row Historic District, visitors will be able to describe:

- One economic, one social, and one environmental motivation for the establishment of the community of Grovont;
- Why Grovont came to be popularly known as Mormon Row, and two examples of how the community differed from non-Mormon settlements in the West;
- Three representative occupations found at Mormon Row;
- The indispensability of irrigation to successful farming;
- Representative activities of Mormon Row's inhabitants:
- How Mormon Row declined, and why and to whom its inhabitants sold their interests;
- The responsibility of the National Park Service in preserving Mormon Row Historic District.

Interpretive Services

Alternatives for delivering interpretation range from least-costly non-personal services (i.e. site bulletins, outdoor wayside exhibits and indoor exhibit panels) to more



Last meeting held in the Church of the Latter-day Saints, Grovont Branch, March 10, 1963. Photograph courtesy of Clark and Veda Moulton.

costly personal services delivered on site by park rangers and volunteers, and production of sales publications. One poissible combination would incorporate outdoor wayside exhibits, a self-guided brochure (which may be developed in cooperation with the park's cooperating association), and a select interior exhibit for public day-use only in one or two stabilized farm structures.

The gradual ascent of interpretive development and cost options is summarized in Management and Interpretive Alternatives 1 through 5. Cooperating association sales publications are determined to be relevant to all development alternatives, including Alternative 1 and 1a. Wayside exhibits will be created for Alternatives 2, 3, 4, and 5.

The planning team believed that wayside exhibits would provide an effective

interpretive tool for Mormon Row. These wayside exhibits could incorporate oral history quotes from surviving Mormon Row residents, as well as historic photographs illustrating vanished homesteads. The oral history and historic photographs would lend immediacy and human interest to the sites that the waysides interpret. Suggested wayside location and story topics might be:

- 1. Kelly Warm Spring called "Miracle Spring" for its sudden appearance, this irrigation source prolonged Mormon Row's existence.
- 2. T.A. Moulton barn a familiar feature the world over as a photographer's mecca.
- 3. Joe Heniger barn (Thomas Murphy Homestead) the rhythm of agriculture through seasons of planting, irrigation,

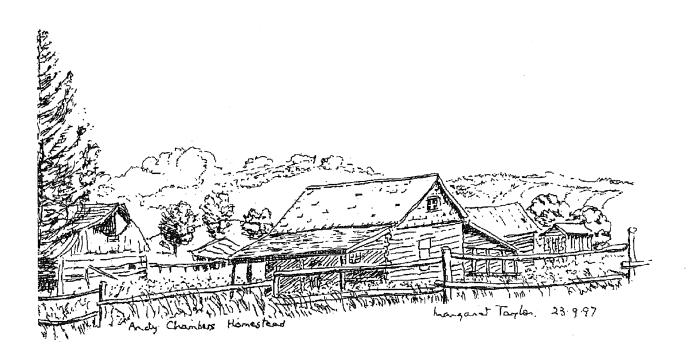
haying, harvest (may alternatively be told in the T.A. Moulton Barn wayside).

- 4. John Moulton homestead the story of a representative family whose homestead evolved over time.
- 5. Church and School site the role of the church and school in community life.
- 6. Andy Chambers homestead a homestead little changed from Mormon Row's early days; a hardscrabble existence.
- 7. Swimming Hole children's work and play in Mormon Row.
- 8. Between John and T.A. Moulton homesteads looking west - the changing scene, with introduction and withdrawal of farming and subsequent impacts on the native plant and animal communities.
- 9. South Kelly Road (Mormon Row Overlook) or Parking Lot (Ditch Creek

Bridge) – orientation to Mormon Row's establishment, layout, and preservation as a Historic District of Grand Teton National

Summary

Mormon Row Historic District will enrich visitors by providing them a glimpse into the human experience of the recent past at Mormon Row. While not now a consequential public destination, site development and publicity will generate use among visitors interested in sightseeing, reading wayside exhibits, photography, and wildlife viewing. Done well, its interpretation will leave visitors an impression as inspiring and lasting as that of the Tetons itself.



Management Alternatives and Environmental Impact Analysis for Mormon Row

Detailed below are Management and Interpretive Alternatives 1, 1a, 2, 3, 4, and 5. Also included is an impact analysis of these alternatives. The primary purpose of these analyses is to identify some of the issues and concerns surrounding each proposed alternative. The same management action can, of course, be viewed as a positive or negative impact, depending on the background of the reader. This is especially evident when examining the alternatives from a cultural resource vs. a natural resource manager's perspective. For example, a naturalist might perceive the removal of old buildings and introduced plants as a positive impact on the landscape. On the other hand, a historic preservationist would view the deterioration or removal of historic resources as the irreplaceable loss of an important part of our nation's heritage.

Alternative 1: Selective Removal of Historic Structures

CONCEPT

Under Alternative 1, most of the historic structures and buildings owned by the National Park Service along Mormon Row would be stabilized. Others, however, would be removed or allowed to deteriorate. Any areas that are actively disturbed during the demolition of the historic structures would be re-seeded with indigenous plant materials. The cultural landscape, including, irrigation ditches that no longer convey water, cottonwood trees and smooth brome grass fields, would be allowed to naturally

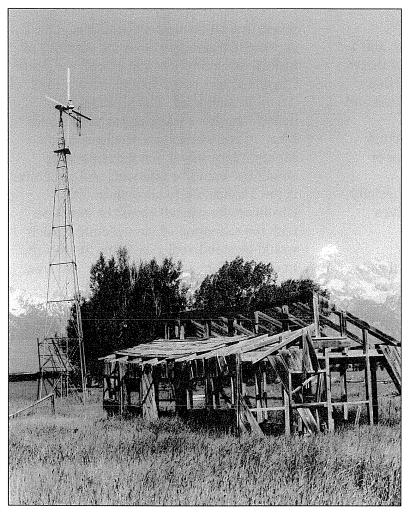
revert to a pre-settlement condition. The T. A. Moulton barn as well as the majority of historic structures associated with the Andy Chambers and John Moulton homesteads would be stabilized. The barn and hay derrick would be stabilized at the Thomas Murphy homestead (Joe Heniger/Reed Moulton farmstead), but the remaining structures would be removed. All structures at the Thomas Perry homestead (Roy Chambers farmstead) would be removed with the exception of the windmill, which would be stabilized. (See plans for specific treatments for each homestead.) The area would not be actively interpreted.

INDIVIDUAL BUILDING ACTIONS

The National Park Service structures to be stabilized would, to a certain extent, still convey the scale and density of Mormon Row. Most of the buildings to be removed or allowed to deteriorate are second or thirdgeneration buildings in the Historic District and do not date from the turn-of-the-century-homesteading period. Many were built or heavily modified near or after 1949. Only the Chambers homestead will retain a complete assemblage of residential and utilitarian farm buildings. This alternative substantially lowers the maintenance and operational costs associated with Mormon Row.

Under Alternative 1, the remnants will be retained as archeological sites with foundations, landscape features, and plantings left in place wherever possible. Foundations, basements and other hazards may be filled, but not completely covered,

for safety considerations. Complete removal and restoration of disturbed ground and cultural landscape features will not be undertaken. Leaving traces of removed



Windmill at Thomas Perry Homestead. Photographer, Arnold Thallheimer.

buildings will also convey the original size and scale of the removed structures and provide a "discovery site" consistent with the minimal interpretive program planned under this alternative. The individual building actions are listed below:

Joe Eggleston Homestead

The collapsed homestead cabin is the only remaining structure at the Joe Eggleston homestead. The cabin was later converted to

> a granary. The structure will be allowed to deteriorate.

Thomas Perry Homestead/Roy **Chambers Homestead**

All of the historic structures except the windmill will be removed. The structure is the last remaining windmill along Mormon Row and is a good example of 1940s wind energy technology.

Andy Chambers Homestead

All of the existing structures at this complex will be stabilized in this alternative. The homestead is the most intact and complete example of a homestead within the Historic District. Because of its location directly across the road from the Clark and Veda Moulton home site, the area receives an added degree of protection from vandalism during the summer. The historic pasture is currently used for park trail crew horses. Electricity is

readily available. Fences and corrals will be maintained to facilitate continued grazing and interpretation.

Clark and Veda Moulton Home

T. A. Moulton gave this one-acre private inholding to his son Clark in the 1930s. It will remain in private ownership.

T.A. Moulton Homestead

The last remaining structure at the T.A. Moulton homestead, the barn is one of the most striking and historically important structures within Mormon Row, and will be stabilized.

John Moulton Homestead

This alternative would stabilize the house, barn, granary, outhouse, and pumphouse. The non-contributing shower house, outhouse #2 and bunkhouse would be removed.

House: Stabilize Barn: Stabilize **Granary:** Stabilize Outhouse #1: Stabilize

Outhouse #2: This alternative would remove one of

the two deteriorated outhouses.

Pumphouse: Stabilize **Shower House:** Remove Bunkhouse: Remove

Fences and Corrals: Remove Feed Bunks: Allow to deteriorate

Thomas Murphy Homestead (Joe Heniger/Reed Moulton Farmstead)

The large horse barn and hay derrick will be stabilized. All other historic structures will be removed or allowed to deteriorate.

Barn: Stabilize Hay Derrick: Stabilize **House:** Remove

Garage, Shed, and Outhouse: Remove

Mormon Row Ditch: Maintain as working

ditch

Johnson/Eggleston Ditch: Allow to

deteriorate

Swimming Hole Site: Allow to deteriorate

INTERPRETATION

Under this alternative, Mormon Row would not be interpreted in any way - neither with personal nor non-personal interpretive services. No wayside exhibits or self-guided interpretive brochures of any kind would be developed. At most, a non-National Park Service publication may be offered for sale by the park cooperating association, but the National Park Service would make no attempts to facilitate public understanding of Mormon Row on site or elsewhere. As at present, this alternative assumes minimal public use by visitors principally driving through the Historic District, spending less than an hour sightseeing and photographing before continuing their park visit. Mormon Row's existence would not be reflected or indicated on park signs, brochures, or any other visitor information materials, as is presently the case at Grand Teton National Park.

VISITOR FACILITIES AND SERVICES

Under this alternative, no visitor facilities or services would be provided at Mormon Row.

ACCESS

Under this alternative, access would remain unchanged for visitors and would continue to be from the Antelope Flats Road. With the exception of a vehicle turnaround north of the Ditch Creek Bridge on Mormon Row Road, there would be no improvement to roads and no additional developments. The bridge over Ditch Creek will not be repaired, but possibly removed and replaced with a hardened low water crossing.

DEVELOPMENT AND OPERATING COSTS

Stabilization and future maintenance of the structures would be the largest cost associated with this alternative.

CULTURAL IMPACT ANALYSIS

The Mormon Row Historic District was listed on the National Register of Historic Places on June 6, 1997. As a consequence, the demolition and neglect of the historic structures and continued degradation of the cultural landscape would represent an irretrievable loss of historic resources. Without water, most of the cottonwood trees and other distinctive vegetation patterns of the former agricultural community would be lost.

The removal and neglect of historic structures, buildings, and cultural landscape features would constitute an adverse effect according to Section 106 of the National Historic Preservation Act of 1966, as amended (16 USC 470-470t, 110). Consultation would be required with the Wyoming State Historic Preservation Office to determine appropriate ways to mitigate or otherwise address the adverse action.

Buildings would continue to suffer from encroachment and damage from animals such as rodents, elk, cattle, and birds, as well as insects such as carpenter ants that would not be readily controllable.

Visitors would continue to enter the historic structures for shelter and out of curiosity, posing legal and health/safety issues for park management.

Prior to any ground-disturbing activities, an archeological survey would have to be undertaken to identify any historic or prehistoric archeological sites and to

determine whether these cultural resources were eligible for listing in the National Register of Historic Places.

NATURAL IMPACT ANALYSIS

Soils: Under this alternative, no new soil disturbance would occur. The removal of the majority of historic structures and subsequent planting with native plant materials would result in the reclamation of ½ to ¾ acre of soil.

Vegetation: Under this alternative, no new vegetation disturbance would occur. The removal of the majority of historic structures and the subsequent planting with native plant materials would result in the reclamation of ½ - ¾ acre of vegetation. However, with this comes the potential for further invasion of weeds that are favored by disturbance. In order to mitigate this impact, park personnel would replant disturbed areas with native plant material and control weeds through monitoring, pulling, and judicious use of herbicides.

For this alternative and all those to follow, the majority of plants that would be impacted by human activities are the three species planted by the homesteaders – Kentucky bluegrass, smooth brome, and timothy. While these species are important to the cultural landscape, they will not be replanted. Instead, in all the alternatives, native species will be used which fit the composition of the surrounding, native landscape. The introduced species will also invade the disturbed sites without any encouragement such as direct seeding or transplanting of plugs.

Floodplains and Wetlands: No change.

Threatened and Endangered Species:

Park biologists have reviewed each alternative and determined that there will be

no effect on threatened and endangered wildlife species. The peregrine falcon only occasionally uses the area for hunting and perching, and this activity would not be compromised. The bald eagle does not use the project area regularly, and its habitat would not be compromised by the planned activities. Whooping cranes rarely fly over

during migration, and the planned activities do not constitute any impact to the birds.

Other Wildlife: No new impacts to wildlife would occur under this alternative.

DEVELOPMENT AND OPERATING COSTS (Note: All estimates given in this report are "Class C" estimates, prepared by Grand Teton National Park)

Development Costs

NO.	ITEM	UNIT	QUANTITY	PRICE	AMOUNT
1	Demolition of Structures	Lump Sum	1	30,000.00	\$30,000.00
2	Stabilize Structures	Lump Sum	1	135,000.00	\$135,000.00
3	Restoration of Native Vegetation	Acre	0.7	7,500.00	\$5,250.00
4	Construct Vehicle Turnaround	Lump Sum	1	22,000.00	\$22,000.00
					\$192,250.00

Operating Costs

Maintenance 3,500

Visitor and Resource Protection 3,500

Yearly Operating Cost 7,000

Alternative 1a: Selective Removal of Historic Structures And Restoration Of Native Vegetation

CONCEPT

Same as Alternative 1, except that the site topography and vegetation would be restored to a more natural condition. Essentially, the abandoned irrigation ditches would be filled, the soil surface regraded, and the disturbed areas revegetated with native species.

INTERPRETATION

Same as Alternative 1.

VISITOR FACILITIES AND SERVICES

Same as Alternative 1.

ACCESS

Same as Alternative 1.

DEVELOPMENT AND OPERATING COSTS

As in Alternative 1, the highest costs are those associated with stabilizing and maintaining the structures.

Development Costs

NO.	ITEM	UNIT	QUANTITY	PRICE	AMOUNT
1	Demolition of Structures	Lump Sum	1	30,000.00	\$30,000.00
2	Stabilize Structures	Lump Sum	1	135,000.00	\$135,000.00
3	Restoration of Native Vegetation	Acre	1.45	7,500.00	\$10,875.00
4	Construct Vehicle Turnaround	Lump Sum	1	22,000.00	\$22,000.00
5	Backfill of Irrigation Ditches-½ with Native Material	Lin. Ft.	10,560	8.00	\$84,480.00
	& ½ with Imported Borrow	Cu. Yd	750	30.00	\$22,500.00
					\$304,855.00

Operating Costs

Maintenance 3,500
Visitor and Resource Protection 3,500
Yearly Operating Cost 7,000

CULTURAL IMPACT ANALYSIS

Same as Alternative 1, except the loss of some historic resources, including irrigation ditches and the historic vegetation patterns, would be accelerated.

NATURAL IMPACT ANALYSIS

Soils: The impacts to soil would be the same as Alternative 1, except for the difference in the treatment of irrigation ditches. In Alternative 1A, the irrigation ditches would be filled with soil, and the surface regraded to help restore a more natural appearance.

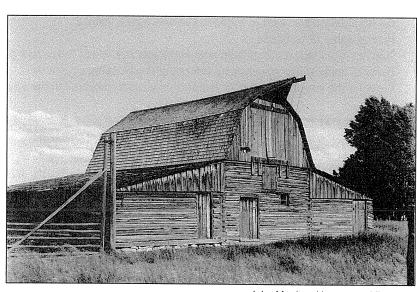
The filling of irrigation ditches would impact ½ to ¾ acres of soil. All fill used for this project would come from park sources that are as weed-free as possible.

Vegetation: The impacts to vegetation would be the same as Alternative 1, except for the difference in the treatment of irrigation ditches. In Alternative 1A, the irrigation ditches would be filled with soil, and the surface regraded and re-vegetated to help restore a more natural appearance. The filling of irrigation ditches would increase vegetative cover by ¾ acres. All fill used

for this project would come from park sources that are as weed-free as possible. Weed control along the irrigation ditches would be needed to help control the inevitable invasion from human activity.

Floodplains and Wetlands: Same as Alternative 1.

Threatened and Endangered Species: Same as Alternative 1.



John Moulton Homestead Barn.
Photographer, Arnold Thallheimer.

Other Wildlife Species: The filling of irrigation ditches would increase vegetative cover by ¾ acre and provide more cover and forage for wildlife. However, the net increase in vegetation would probably be outweighed by the decrease in benefits of water to the vegetation. Currently the irrigation ditches provide the green succulent plants favored by animals such as bison. This, in combination with the effects of fire, has significantly impacted wildlife by drawing them to these sites to feed in a concentrated manner.

Alternatives 1 and 1A-Summary Impacts

- Entails the loss of unique and significant park cultural resources.
- Constitutes an adverse effect according to Section 106 of the National Historic Preservation Act of 1966, as amended, because of the demolition and neglect of historic resources.
- Demolition and removal of significant historic resources would provide visitors with a less accurate image of the community of Mormon Row.
- Absence of interpretation contributes to loss of public understanding and appreciation of Mormon Row.
- Restoration of native grasses would result in a loss of non-native grasses for cattle grazing.
- Continues risk of vandalism and illegal entry due to lack of on-site National Park Service occupation at Mormon Row.
- Continues visitor safety concerns due to lack of established pathways around homesteads.
- Removal of historic resources and lack of interpretation would provide for less human disturbance of the migratory elk as well as improve the area for elk habitat.
- Potential loss of wetlands.
- Native vegetation would reclaim area and landscape would return to a pre-settlement pattern.
- Reduces some safety concerns by removing deteriorating structures.
- Provides the lowest overall park maintenance costs compared to the other alternatives.

Alternative 2: Stabilization, Minimal Development and Interpretation

CONCEPT

Under Alternative 2, the historic structures associated with Mormon Row would be stabilized. The cultural landscape would gradually revert to a pre-settlement condition. Access would remain from the north, via the Antelope Flats Road. Small vehicle pullouts would be constructed along Mormon Row and a small parking area constructed near the intersection of the Antelope Flats and Mormon Row roads. No on-site interpretation would be provided beyond one to three wayside exhibits.

INTERPRETATION

The Historic District would be identified on the park brochure, visitor newspaper, and posted road signs on the present Antelope Flats/Kelly Road accesses, but there would be no other significant effort by the park to overtly direct or make visitors aware of Mormon Row. Park staff or volunteers would not provide on-site interpretive services. This alternative assumes increased vehicular access by sightseers, commercial tour buses, and recreational bicycling along the row, but minimal public use (i.e. less than one hour).

Three wayside exhibits would be located in the Historic District. One would be located at the parking area near the John Moulton homestead. Its story would summarize the existence of Grovont as a predominantly Mormon settlement, whose vestiges are preserved by the National Park Service as a Historic District within Grand Teton National Park. Two more waysides would be located near the open field along Mormon Row Road immediately south of the Antelope Flats Road intersection. One wayside would tell the story of the rhythm of agriculture through planting, irrigation,

and harvest amid a lovely but forbidding environment. The second wayside at this location would focus visitor attention on the changing scene resulting from the introduction and cessation of farming – challenging the viewer to think: what is heritage and how do we preserve both the natural and cultural features of Mormon Row for future generations?

VISITOR FACILITIES AND SERVICES

Under this alternative, pullout parking for 5-7 vehicles would be provided along Mormon Row, and a small parking area and bus passenger drop zone would be constructed at the intersection of Antelope Flats Road and Mormon Row Road. Two vehicle turnarounds would be constructed: one on the Antelope Flats Road near the non-extant Pfiefer homestead site and the second on

Mormon Row Road north of the Ditch Creek Bridge. No toilets or other facilities would be constructed.

ACCESS

Under this alternative access would remain from the north along the Antelope Flats road. Buses would be encouraged to unload visitors at the junction of the Mormon Row Road and then proceed to the turnaround at the Pfiefer homestead. The bridge over Ditch Creek would not be repaired.

DEVELOPMENT AND OPERATING COSTS (Note: All estimates given in this report are "Class C" estimates, prepared by Grand Teton National Park)

Development Costs

NO.	ITEM	UNIT	QUANTITY	PRICE	AMOUNT
. 1	Stabilize Structures	Lump Sum	1	275,000.00	\$275,000.00
2	Construct Gravel Parking	Space	14	850.00	\$11,900.00
3	Interpretive Waysides	Each	3	4,500.00	\$13,500.00
4	Construct Vehicle Turnaround	Lump Sum	2	22,000.00	\$44,000.00
					\$344,400.00

Operating Costs

3,500 Interpretation 6,500 Maintenance Visitor and Resource Protection 6,500 **Yearly Operating Cost** 16,500

CULTURAL IMPACT ANALYSIS

Although the historic buildings would be stabilized, major elements of the cultural landscape, including mature cottonwood trees, would gradually be lost. Since Mormon Row was nominated to the National Register of Historic Places as a cultural landscape, this action would have an adverse effect on the Historic District. Consultation would be required with the Wyoming State Historic Preservation Office to determine appropriate ways to mitigate or otherwise address the adverse action.

The buildings would continue to be threatened from fire due to the absence of any fire suppression, detection or alarm systems. Although the buildings could be lost, Mormon Row has already been recorded to Historic American Buildings Survey (HABS) standards. This archival documentation could facilitate the restoration of the historic structures should they be destroyed by fire.

Prior to any ground-disturbing activities, an archeological survey would have to be undertaken to identify any historic or prehistoric archeological sites and to determine whether these cultural resources

were eligible for listing in the National Register of Historic Places.

NATURAL IMPACT ANALYSIS

Soils: Installation of three wayside exhibits would result in the disturbance of 150 square feet of soil. The construction of the 5-7-vehicle pullouts and the vehicle turnaround would disturb ½ to one acre of soil. Soils that would be affected have a low surface runoff and slight erosion hazard; therefore, impacts to soils from the construction would be minimal.

Vegetation: Installation of three waysides would result in the disturbance of 150 square feet of vegetation. The construction of the 5-7-vehicle pullouts and the bus turnaround would remove ½ to one acre of vegetation that would be replaced by gravel parking areas. The traffic islands in the parking pullout and large vehicle turnaround would require revegetation of approximately ¹/₃ acre. Such development will slightly increase the chance for weeds to propagate because of the disturbance. Without weed monitoring and control, the new developments have the potential to cause further weed infestations.

Floodplains and Wetlands: No change.

Threatened and Endangered Species: Same as Alternative 1.

Other Wildlife Species: The construction of the two 5-7-vehicle pullouts and the vehicle turnaround would remove ½ to one acre of vegetation and potentially increase the chances of human-wildlife interactions.

Alternative 2-Summary Impacts

- Continues degradation of cultural landscape, including Cottonwood trees fields, and other historic features.
- Constitutes an adverse effect on the National Register Historic District according to Section 106 of the National Historic Preservation Act of 1966, as amended.
- Placement of exhibits establishes a National Park Service identity for Mormon Row.
- Provides less information to visitors about Mormon Row due to lack of on-site interpretation as compared to Alternatives 3, 4, and 5.
- Continues risk of vandalism and illegal entry due to lack of on-site National Park Service occupation at Mormon Row.
- Potential loss of wetlands.
- Constitutes minimum disturbance of natural and cultural landscape resources.
- Continues visitor safety concerns due to lack of established pathways around homesteads
- Results in lower operation and construction costs compared to Alternatives 3, 4 and 5.

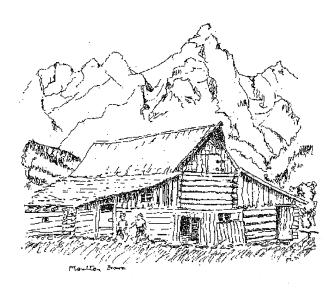
Alternative 3: North Access, North Parking, Interpretive Focus at The John Moulton Homestead

CONCEPT

Under this alternative, the historic structures of Mormon Row would be stabilized. The historic cottonwood trees and ornamental plantings would be maintained and preserved whenever feasible. Access to the Historic District would be provided from the north via the Antelope Flats Road. One sitesensitive 2-vehicle parking area would be developed at the intersection of Mormon Row and Antelope Flats Roads. Two small vehicle pullouts would be constructed along Mormon Row Road. An accessible trail would be constructed to the John Moulton homestead from the parking area. Five wayside exhibits, interpreting the history of Mormon Row, would be constructed. The bridge over Ditch Creek would be repaired to provide pedestrian, bicycle, and emergency vehicle access.

INTERPRETATION

A self-guided walking brochure, focusing on the John Moulton homestead, would be developed that explains the history of Mormon Row and describes the homesteads. In addition, five wayside exhibits would be developed to convey Mormon Row's interpretive themes and stories of its inhabitants and community: all five would be placed along Mormon Row. Visitors would be encouraged to begin their experience at the north end of Mormon Row at the parking area near the John Moulton homestead. The District would be fully accessible to pedestrians and bicyclists with repair of the Ditch Creek Bridge and development of a walking path around the John Moulton homestead. This alternative assumes and encourages visitors to get out of their vehicles and spend some time (i.e. an hour) exploring the District and learning about Mormon Row's past. Mormon Row would be identified on the park brochure, in the visitor newspaper, and on directional park road signs. No personal interpretive services would be offered under this alternative.



VISITOR FACILITIES

One parking area would be constructed near the junction of Mormon Row and Antelope Flats Road to accommodate 20-25 vehicles. Two pullouts that would accommodate 5-7 cars would be developed between the Andy Chambers homestead and the site of the swimming hole. Mormon Row Road, between Ditch Creek and Antelope Flats Road, would be improved and stabilized to accommodate larger vehicle traffic. A vault toilet would be installed at the intersection

parking area. This parking area would incorporate limited bus parking and a bus turnaround. A pedestrian pathway would be developed around the John Moulton homestead. Finally, the bridge over Ditch Creek would be repaired to allow emergency vehicle, pedestrian, and bicycle traffic.

ACCESS

Under this alternative, vehicular access would continue to be from the north via the Antelope Flats Road. Mormon Row Road, between Ditch Creek and Antelope Flats Road would be improved and stabilized to accommodate larger vehicle traffic. Vehicular traffic would be prevented from continuing south along Mormon Row Road across Ditch Creek by a gate just north of the bridge. A vehicle turnaround would be constructed at that location. Bicycle and pedestrian traffic would be allowed the full length of Mormon Row.

DEVELOPMENT AND OPERATING **COSTS** (Note: All estimates given in this report are "Class C" estimates, prepared by Grand Teton National Park)

Development Costs

NO.	ITEM	UNIT	QUANTITY	PRICE	AMOUNT
1	Stabilization of Structures	Lump Sum	1	275,000.00	\$275,000
2	Gravel Parking Areas	Space	32	1,000.00	\$32,000.00
3	Construct Vault Toilet	Each	1	14,000.00	\$14,000.00
4	Improve Gravel Roadway	Mile	1	400,000.00	\$400,000.00
5	Construct One-Lane Vehicle Bridge	Each	1	100,000.00	\$100,000.00
6	Install Interpretive Waysides	Each	5	4,500.00	\$22,500.00
7	Construct Pedestrian Pathways	Sq. Yd.	170	15.00	\$2,550.00
8	Construct Gravel Turnaround	Lump Sum	1	22,000.00	\$22,000.00
			·		\$868,100.00

Operating Costs

Yearly Operating Cost	32,400
Visitor and Resource Protection	8,200
Maintenance	8,200
self-guiding brochure	7,500
Interpretation	8,500

CULTURAL IMPACT ANALYSIS

Under this alternative, all contributing historic structures within the Historic District would be stabilized. In addition, the

cultural landscape, including cottonwood trees and ornamental plantings would receive water wherever feasible and thereby be preserved.

Prior to any ground-disturbing activities, an archeological survey would be undertaken to identify any historic or prehistoric archeological sites and to determine whether these cultural resources were eligible for listing in the National Register of Historic Places. If archeological resources are discovered, efforts must be made to protect these cultural resources and to minimize the impact from construction activities.

NATURAL IMPACT ANALYSIS

Soils: As in Alternative 2, soil disturbance would be minimal. Installation of five wayside exhibits would affect 250 square feet of soil. Construction of parking sites for a total of up to 32 vehicles in three separate locations would permanently disturb 1½ acres of soil, however the revegetation of the

Ranch Hand Dave Ricks and family at the Andy Chambers Homestead. Photograph courtesy of Teton County Historical Society and Museum.

traffic islands would reclaim ½ acre of soil and vegetation. Construction of the vault toilet would disturb an additional 350 square feet and construction of pedestrian pathways through the Moulton homestead would disturb 2,000 square feet of soil and vegetation. However, in the absence of designated pathways, numerous social trails are likely to develop with a greater net disturbance. The construction of a new bridge over Ditch Creek would initially impact 400 square feet of soil. However, this would eliminate fording of the creek by vehicles, which currently compacts soils and causes erosion.

Vegetation: As in Alternative 2, minimal vegetation restoration would occur. Construction of parking sites for a total of up to 32 vehicles in three separate locations would remove 1½ acres of non-native

> plants. Revegetation of the traffic islands will result in ½ acre of native species restored to the site. The vault toilet would remove 400 square feet of plants. Construction of a pedestrian pathway through the Moulton homestead would disturb 2,000 square feet of soil and plants. However, in the absence of designated pathways, numerous social trails are likely to develop with a greater net disturbance to vegetation. The replacement of the bridge over Ditch Creek would initially cause a small amount of vegetation loss due to construction impacts. Construction would occur in an area

where steep banks and continued erosion have denuded vegetation from the site. Construction of a new bridge would eliminate fording of the creek by vehicles, which currently compacts soils and causes erosion, preventing plants from living.

Floodplains and Wetlands: Due to the deteriorating nature of the bridge over Ditch Creek, this alternative calls for the removal of the existing bridge and replacement with an adequate one that allows for restricted vehicular access (see discussion of access

under each management alternative) without restricting the channel. The replacement of the bridge will have a favorable effect on hydrologic resources by allowing flows to move naturally and by eliminating the need to put heavy equipment in the stream to remove sediment.

Threatened and Endangered Species: Same as Alternative 1.

Other Wildlife Species: Construction of the vault toilet, parking sites for a total of up to 32 vehicles in three separate locations would concentrate human use in new areas, having unknown effects on wildlife such as bison, elk and moose. Hunters would also use the parking spaces in the fall.

Alternative 3-Summary Impacts

- Establishes a National Park Service identity for the area.
- Preserves important historic structures and cultural landscape features, such as the Cottonwood trees.
- Enhances visitor understanding of the history of Mormon Row through wayside exhibits.
- Improves visitor safety and provides minimal facilities.
- No potential loss of wetlands.
- Repair of Ditch Creek Bridge improves creek hydrology.
- Improves access to site.
- Reduces automobile traffic within the Mormon Row Historic District.
- Facilitates multiple use needs by providing parking for elk reduction program and maintains historic grazing lands for horses and cattle.
- Results in higher costs than previous alternatives due to more site development.
- Increases likelihood of human-wildlife contact and conflict.

Alternative 4: North Access, Central Parking, Interpretive Focus at The Andy Chambers And John Moulton Homesteads

CONCEPT

Under this alternative, the historic structures of Mormon Row would be stabilized. The historic cottonwood trees and ornamental plantings would be maintained and preserved whenever feasible. Access to the Historic District would be provided from the north via the Antelope Flats Road. Two

site-sensitive parking areas would be developed along Mormon Row. One five-car parking area would be constructed near the John Moulton homestead. A second parking area with a large vehicle turnaround would be constructed near the site of the historic swimming hole. Mormon Row Road would be modified to direct vehicles into the parking areas and a sign would be posted informing visitors that only residents can go beyond that point. Accessible trails would be constructed around the John Moulton and Andy Chambers homesteads. Seven wayside exhibits, interpreting the history of Mormon Row, would be constructed. The bridge

over Ditch Creek would be repaired to provide pedestrian, bicycle, and emergency vehicle access.

INTERPRETATION

A self-guided walking brochure would be developed that explains the history of Mormon Row and describes the homesteads, focusing on the John Moulton and Andy Chambers properties. In addition, seven wayside exhibits would convey Mormon Row's interpretive themes and stories of its inhabitants and community: all seven would be placed along Mormon Row. Visitors would be encouraged to begin their experience near the Andy Chambers homestead, near the center of the Historic District. Mormon Row would be fully accessible to pedestrians and bicyclists with the repair of the Ditch Creek Bridge and development of walking paths around the John Moulton and Andy Chambers homesteads. This alternative assumes and encourages visitors to get out of their vehicles and spend some time (i.e. an hour) exploring the District and learning about Mormon Row's past. Mormon Row would be identified on the park brochure, in the visitor newspaper, and on directional park road signs. No personal interpretive services would be formally offered under this alternative.

VISITOR FACILITIES

Two parking areas would be constructed to accommodate a total of between 25-35 vehicles. A small parking area would be

developed near the junction of Mormon Row and Antelope Flats Road. A larger second parking area would be developed between the Andy Chambers homestead and the swimming hole. This parking area would incorporate limited bus parking and a bus turnaround. A vault toilet would be installed at the swimming hole parking area. Pedestrian pathways would be developed around the Andy Chambers and John Moulton homesteads. Finally, the bridge over Ditch Creek would be repaired to allow emergency vehicle, pedestrian, inholder access, and bicycle traffic.

ACCESS

Under this alternative, vehicular access would continue from the north via the Antelope Flats Road. Mormon Row Road, between Ditch Creek and Antelope Flats Road would be improved and stabilized to accommodate larger vehicle traffic. All visitor traffic on Mormon Row Road would be directed into the swimming hole parking lot. A sign would be posted beyond the entrance to the parking lot that states "residents only beyond this point". Bicycle and pedestrian traffic would be allowed the full length of Mormon Row.

DEVELOPMENT AND OPERATING COSTS (Note: All estimates given in this report are "Class C" estimates, prepared by Grand Teton National Park)

Development Costs

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NO.	ITEM	UNIT	QUANTITY	PRICE	AMOUNT		
1	Stabilization of Structures	Lump Sum	1	275,000.00	\$275,000.00		
2	Rehabilitate Building Interiors	Lump Sum	1	60,000.00	\$60,000.00		
3	Gravel Parking Areas	Space	35	1,000.00	\$35,000.00		
4	Reconstruct Gravel Roadway	Mile	1	400,000.00	\$400,000.00		
5	Construct Vault Toilet	Each	1	14,000.00	\$14,000.00		
6	Construct One-Lane Vehicle Bridge	Each	1	100,000.00	\$100,000.00		
7	Install Interpretive Waysides	Each	7	4,500.00	\$31,500.00		
8	Construct Pedestrian Pathways	Sq. Yd.	600	15.00	\$9,000.00		
					\$924,500.00		

Operating Costs

Interpretation	8,500

self-guiding brochure 7,500

Maintenance 8,200

Visitor and Resource Protection 8,200

Yearly Operating Costs 32,400



Sunday school was held at the May residence before the church was constructed in 1916. Photograph courtesy of Teton County Historical Society and Museum.

CULTURAL IMPACT ANALYSIS

Under this alternative, all contributing historic structures within the Historic District would be stabilized. In addition, the cultural landscape, including cottonwood trees and ornamental plantings would receive water wherever feasible and thereby be preserved.

Prior to any ground-disturbing activities, an archeological survey would have to be undertaken to identify any historic or prehistoric archeological sites and to determine whether these cultural resources were eligible for listing in the National Register of Historic Places. If archeological resources are discovered, efforts must be made to protect these cultural resources and to minimize the impact from construction activities.

NATURAL IMPACT ANALYSIS

Soils: Seven wayside exhibits would be developed that affect 350 square feet of soil. Since the new parking area would be in the center of the Historic District, existing pullouts along Mormon Row could be removed, the compacted soils loosened, and the area planted with native vegetation. Walkways would be constructed through the Chambers and Moulton homesteads and would disturb approximately 4,000 square feet of soil. Construction of parking sites for approximately 25-35 vehicles in two separate locations would permanently disturb one acre of soil. However, the revegetation of the traffic islands would reclaim ½ acre of soil and vegetation. Construction of the vault toilet would disturb an additional 350 square feet, and construction of pedestrian pathways around

the Moulton and Chambers homesteads would disturb 340 square yards of soil and vegetation. However, in the absence of designated pathways, numerous social trails are likely to develop with a greater net disturbance. The construction of a new bridge over Ditch Creek would initially impact 400 square feet of soil, but would eliminate fording of the creek by vehicles, which currently compacts soils and causes erosion.

Vegetation: Seven wayside exhibits would be developed that affect 350 square feet of plants. Since the new parking area would be in the center of the District, existing pullouts along Mormon Row could be removed and the area restored, including replanting with native vegetation. Also, the preliminary design of the new parking area calls for a large traffic island that would allow for the restoration of approximately 4,300 square feet of native plants. The construction of walkways through the homesteads would disturb 4,000 acres of soils and plants, but this is preferable to the development of more social trails. Construction of the parking sites for up to 25-35 vehicles in two separate locations would remove one acre of nonnative plants. The vault toilet would remove 400 square feet of plants. Construction of pedestrian pathways around the Moulton and Chambers homesteads would disturb 340 square yards of soil and plants. However, in the absence of designated pathways, numerous social trails are likely

to develop with a greater net disturbance to vegetation. The replacement of the bridge over Ditch Creek would initially cause a small amount of vegetation loss due to construction impacts. Construction would occur in an area where steep banks and continued erosion have denuded vegetation from the site. Construction of a new bridge would eliminate fording of the creek by vehicles, which currently compacts soils and causes erosion, preventing plants from living.

Floodplains and Wetlands: Due to the deteriorating nature of the bridge over Ditch Creek, this alternative calls for removal of the existing bridge and replacement with an adequate one that allows for restricted vehicular access (see discussion of access under each management alternative) without restricting the channel. The replacement of the bridge will have a favorable effect on hydrologic resources by allowing flows to move naturally and by eliminating the need to put heavy equipment in the stream to remove sediment.

Threatened and Endangered Species: Same as Alternative 1.

Other Wildlife Species: Construction of the vault toilet and parking sites for up to 25-35 vehicles in two separate locations would concentrate human use in new areas, having unknown effects on wildlife such as bison, elk and moose. Hunters would also use the parking spaces in the fall.

Alternative 4-Summary Impacts

- Establishes a National Park Service identity for the area.
- Preserves important historic structures and cultural landscape features, such as the Cottonwood trees.
- Enhances visitor understanding of the history of Mormon Row through on-site interpretation.
- Facilitates the option for occasional personal (i.e. roving) interpretive services during the summer months.
- Improves visitor safety and provides minimal facilities.
- No potential loss of wetlands.
- Repair of Ditch Creek Bridge improves creek hydrology.
- Improves access to site.
- Reduces automobile traffic within the Mormon Row Historic District.
- Facilitates multiple use needs by providing parking for elk reduction program and maintains historic grazing lands for horses and cattle.
- Results in higher costs than previous alternatives due to more site development.
- Increases likelihood of human-wildlife contact and conflict.

Alternative 5: South Access, South Parking, Interpretive Focus at Andy Chambers Homestead

CONCEPT

Under this alternative, the historic structures within the Mormon Row Historic District would all be stabilized and the interiors of the barn and main house at the Andy Chambers homestead rehabilitated. The cultural landscape of Mormon Row, such as the cottonwood trees and smooth brome grass fields, would be maintained and preserved.

Personal interpretive services would be provided at the Andy Chambers homestead at select times during the summer months. In addition, nine wayside exhibits would be developed in and around Mormon Row. Parking would be developed at two locations, both at the southern portion of Mormon Row. No parking would be developed via the Antelope Flats Road.

Access would be provided to Mormon Row from the Kelly Road.

INTERPRETATION

Personal interpretive services would provide on-site interpretation during the peak visitor use period. Services might include roving interpretation, guided walks and bicycle tours, and occasional historic life skill demonstrations by costumed interpreters. Personal interpretive services might be undertaken cooperatively with local historic preservation organizations and the park volunteer program. During the summer season, visitors would be allowed access to the rehabilitated interiors of the Andy Chambers barn and residence, which would be adapted for exhibits providing additional insight into past life on Mormon Row. Nine wayside exhibits would be developed along Mormon Row, including one at the Warm Springs area and one at an interpretive overlook near the intersection of the Kelly and Mormon Row Roads.

A self-guided walking brochure would explain the history and salient features of Mormon Row homesteads, complementing a cooperating association sales publication. The public would begin their visit at the south end of Mormon Row, where visitors would be oriented at an interpretive overlook near Kelly Road. The Historic District would be identified in all park informational media, on road signs, and featured in the visitor newspaper. This alternative constitutes the maximum, most in-depth interpretation of the Historic District, would be the costliest to undertake and sustain from the vantage of summer staffing, and would stimulate public interest to the degree that visitors would spend well over an hour of their park visit at Mormon Row.

VISITOR FACILITIES AND SERVICES

Two parking areas would be constructed to accommodate between 30-50 vehicles. The first parking area would be constructed south of the Ditch Creek Bridge. A vault toilet would be installed at the Ditch Creek parking area. This parking area would incorporate large vehicle parking and turnaround. A second parking area would be developed near the junction of Mormon Row and Kelly Road. This parking area would also accommodate larger vehicles and would provide a staging area for horseback and bicycle riding. In addition to the formal parking lots, two existing informal vehicle

pullouts will be formalized along Antelope Flats Road. Mormon Row Road will be gated at the Antelope Flats intersection and just north of the Ditch Creek Bridge. Pedestrian pathways would be developed around the Andy Chambers and John Moulton homesteads. Finally, the bridge over Ditch Creek would be repaired to allow emergency vehicle, pedestrian, inholder access, and bicycle traffic.

ACCESS

Under this alternative, visitors would be encouraged to access Mormon Row from the south using the existing Kelly Road. Vehicular access from the north via the Antelope Flats road would not be allowed. The southern end of Mormon Row Road, between Ditch Creek and Kelly Road, would be widened to 22 feet and improved with an asphalt surface to accommodate larger vehicle traffic. Visitors would park their vehicles at either of the two southern parking areas or at the pullouts on Antelope Flats Road. Vehicular traffic would be prevented from continuing north along Mormon Row Road across Ditch Creek. Bicycle and pedestrian traffic would be allowed the full length of Mormon Row.

DEVELOPMENT AND OPERATING

COSTS (Note: All estimates given in this report are "Class C" estimates, prepared by Grand Teton National Park)

Development Costs

NO.	ITEM	UNIT	QUANTITY	PRICE	AMOUNT
1	Stabilization of Structures	Lump Sum	1	275,000.00	\$275,000.00
2	Rehabilitate Building Interiors	Lump Sum	1	60,000.00	\$60,000.00
3	Asphalt Parking Areas	Space	50	1,800.00	\$90,000.00
4	Construct Asphalt Roadway	Mile	2	825,000.00	\$1,650,000.00
5	Construct Vault Toilet	Each	1	14,000.00	\$14,000.00
6	Construct One-Lane Vehicle Bridge	Each	1	100,000.00	\$100,000.00
7	Install Interpretive Waysides	Each	9	4,500.00	\$40,500.00
8	Construct Pedestrian Pathways	Sq. Yd.	400	15.00	\$6,000.00
					\$2,235,500.00

Operating Costs

Interpretation 8,500

self-guiding brochure 7,500

Maintenance 8,200

Visitor and Resource Protection 8,200

Yearly Operating Costs 32,400

CULTURAL IMPACT ANALYSIS

This alternative provides the most beneficial impact to the cultural resources located within the Mormon Row Historic District. Under this alternative, the old granary as well as the contributing historic resources within the T.A. Moulton, John Moulton, Joe Heniger, and Roy Chambers homesteads would be stabilized. In addition, the interiors of the main house and barn at the Andy Chambers homestead would be rehabilitated to allow seasonal public access. The remaining historic structures at the Andy Chambers homestead would be stabilized. The cultural landscape along Mormon Row, including cottonwood trees and ornamental plantings, would receive water and thereby be preserved wherever feasible.

Prior to any ground-disturbing activities, an archeological survey would be undertaken to identify any historic or prehistoric archeological sites and to determine whether these cultural resources were eligible for listing in the National Register of Historic Places. If archeological resources are discovered, efforts must be made to protect these resources and to minimize the impact from construction activities.

NATURAL IMPACT ANALYSIS

Soils: As in Alternative 4, nine wayside exhibits would be developed that would affect 450 square feet of soil. The parking lot development at the southern end of Mormon Row would be constructed almost entirely on a previously disturbed site. Construction of the a 30-space parking area near Ditch Creek and a vault toilet would disturb approximately 1½ acres of soil and vegetation. Since vehicular access from the

- north would be decreased, existing pullouts along Mormon Row could be restored through decompaction of soils and planting with native vegetation. The designation of walkways leading from the parking lot and through the Chambers homestead would disturb approximately 4,000 square feet of soils.

Improvements to the unpaved, rough road between the Mormon Row Historic District and the Kelly Road would disturb four acres of soil through widening the road to 22 feet. (This figure does not include the existing width of the unpaved portion.) At the completion of the project, the entire surface would be paved. Portions of the southern length of the road contain clays that produce poor traction and will require consideration during road construction.

Vegetation: As in Alternative 4, nine wayside exhibits would be developed that would affect 450 square feet of plants. The preliminary designs for the parking areas call for large traffic islands that would allow for the restoration of native plants in those areas. The parking lot development at the southern end of Mormon Row would have very limited impact on vegetation. Since vehicular access from the north would be decreased, existing pullouts along Mormon Row could be restored, including decompaction of soils and planting with native vegetation. The construction of a pathway from the parking area through the Chambers homestead would disturb would disturb 4,000 square feet of soils and plants, but this is preferable to the development of more social trails.

Improvements to the unpaved, moderately rough road between Mormon Row and Kelly Road would disturb four acres of plants

through widening the road to 22 feet. At the completion of the project, the entire surface would be paved.

Floodplains and Wetlands: Due to the deteriorating nature of the bridge over Ditch Creek, this alternative calls for removal of the existing bridge and replacement with an adequate one that allows for restricted vehicular access (see discussion of access under each management alternative) without restricting the channel. The replacement of the bridge will have a favorable effect on hydrologic resources by allowing flows to move naturally and by eliminating the need to put heavy equipment in the stream to remove sediment.

Threatened and Endangered Species: Same as Alternative 1.

Other Wildlife Species: Same as Alternative 4. Nine wayside exhibits would be developed, and two parking areas constructed at the southern end of Mormon Row. Vehicular use from the north end would decrease, but that from the south would increase following paving of the road.

Alternative 5-Summary Impacts

- Establishes a National Park Service identity for the area.
- Interpretive program that fosters local partnerships
- Greatest preservation of the historic structures and major elements of the Mormon Row cultural landscape, including Cottonwood trees and ornamental plantings.
- Maximizes visitor understanding and appreciation of the significance of the Mormon Row Historic District
- Removes automobile and bus traffic from the Mormon Row Historic District.
- Constitutes the most expensive alternative in terms of operational and construction costs.
- Repair of Ditch Creek Bridge improves creek hydrology.
- No loss of wetlands.
- Improves visitor access to site.
- Increases potential for human-wildlife contact and conflict.
- Facilitates multiple use needs by providing parking for elk reduction program and maintains historic grazing lands for horses and cattle.

OTHER ALTERNATIVES CONSIDERED

The Mormon Row Planning team considered and evaluated several other management alternatives, including demolition of all the historic structures along Mormon Row. This option was rejected due to the devastating impact on cultural resources as measured by the National Historic Preservation Act of 1966, as amended (16 USC 470-470t, 110).

The team also considered the possibility of allowing vehicular access along the complete length of Mormon Row under several different alternatives. This option would have allowed through traffic from Kelly Road via the Mormon Row Road to the Antelope Flats Road. This alternative was rejected due to the added expense of building a two-lane bridge and paving the entire length of Mormon Row. The alternative was also rejected because of the increased traffic, speed, and pollution (dust) that would have been generated within the Mormon Row Historic District.

Summary Of Concerns of Current And Former Residents Of Mormon Row

On July 15, 1998, the Mormon Row planning team met with 11 individuals who are either descendents of Mormon Row homesteaders or stakeholders who share a common interest in the past and future of Mormon Row. The purpose of the consultation was to learn more about the history of Mormon Row and to assess how the descendents of the original homesteaders felt about the remaining cultural resources.

The majority of these people still possess strong ties to Mormon Row. Clark and

Veda Moulton, live within the Mormon Row Historic District, were given their land by Clark's father, T. Alma Moulton, one of the original homesteaders. Other descendents of Mormon Row pioneers such as Frances (Moulton) May and Betty Gardner (daughter of Clark and Veda Moulton) also attended the meeting. Members of the Jackson Hole Historical Society and Museum and the Teton County Historical Preservation Board also participated in the meeting.

All the invited guests expressed a hope that the history of Mormon Row would remain alive and that those historic resources that make the row a special place would be preserved. They recognized that Mormon Row is a local story, but one that represents national patterns about the settlement of the West. They complained that many visitors to Mormon Row "do not even know that it is part of Grand Teton National Park." They recommended the construction of wayside exhibits and other "homestead markers" to establish a stronger National Park Service identity for the row.

If the National Park Service actively interprets the site, they hoped that the following stories could be told:

- The lives of the people who homesteaded Mormon Row.
- The growth of the community of Mormon Row.
- The construction of irrigation ditches and how the landscape has changed as a consequence.
- The role of women and children.
- The creation of Warm (Miracle) Springs that enabled many to survive along Mormon Row.
- The reason they sold their land to the National Park Service.

All stated hope that visitation would remain low so that the rustic character of Mormon Row would not be lost. With this goal in mind, the group recommended that the roads remain unpaved and improvements kept to a minimum. The group was unanimous about

the need to repair Ditch Creek Bridge in order to re-open the road to Kelly.

Names of the non-National Park Service people participating in the meeting:

Hal and Iola Blake*

Bonnie Budge*

Barry Dennis, Teton County Historical Preservation Board

Betty Gardner*

Robin Hartnett, Teton County Historical Preservation Board

Lokey Lytjen, Jackson Hole Historical Society and Museum

Frances (Moulton) May*

Clark and Veda Moulton* (Mormon Row inholders)

Norma Nethercott *

Pierce Olson, Jackson Hole Historical Society and Museum

*Descendent of Mormon Row Homesteaders

Mormon Row Planning Team

National Park Service Members

Gregory Kendrick, Team Leader
Michael Johnson, Historical Architect
Christine Whitacre, Historian
Jayne Schaeffer, Landscape Architect
Scott Eckberg, Interpreter
Sheri Fedorchak, Natural Resource Specialist
Lori Kinser, Graphic Artist

Consultants

Bill Swift, Chief of Interpretation, Grand Teton National Park
Michael M. Long, Field Supervisor, Fish and Wildlife Service (Endangered Species
Consultation)
Sheila Bricher-Wade, Wyoming State Historic Preservation Office

Judy Wolf, Wyoming State Historic Preservation Office

Todd Thibodeau, Wyoming State Historic Preservation Office

Jim Lindberg, National Trust for Historic Preservation

Stuart Markow, University of Wyoming

Original Artwork by Margaret Taylor, St. Albans, England

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Bibliography

Bennion, Lowell C. "Mormon Country a Century Ago: A Geographer's View," *The Mormon People: Their Character and Traditions*, Thomas G. Alexander, ed. Provo, UT: Brigham Young University Press [Charles Redd Monographs in Western History No. 10], 1980.

Daugherty, John. "A Place Called Jackson Hole: A History." Unpublished draft manuscript. Denver, CO: National Park Service1990.

Francaviglia, Richard. *The Mormon Landscape: Existence, Creation & Perception of a Unique Image in the American West.* New York, AMS Press Inc., 1974.

Gates, Paul W., with a chapter by Robert W. Swenson. *History of Public Land Law Development*. Written for the Public Land Law Review Commission. Washington D.C.: Zenger Publishing Co., Inc., 1968.

General Land Office, Tract Book Indexes for townships 43N 115W and 42N 115W, Wyoming Principal Meridian. Bureau of Land Management, Cheyenne, WY.

Harmata, A. and B. Oakleaf. *Bald Eagles in the Greater Yellowstone Ecosystem: An Ecological Study with Emphasis on the Snake River, Wyoming.* Cheyenne, WY: Wyoming Game and Fish Department, 1992.

Meinig, D. W. "The Mormon Culture Region: Strategies and Patterns in the Geography of the American West, 1847-1964." *Annals of the Association of American Geographers* 55, June 1965.

"Mormon Row Historic District National Register of Historic Places Nomination Form," A. Hubber, et al. NPS, Intermountain Support Office, Denver, CO, June 1997.

Moulton, Candy Vyvey. *Legacy of the Tetons; Homesteading in Jackson Hole*. Boise, ID: Tamarack Books, Inc., 1994.

Moulton, Clark and Veda. Interviewed at their home on Mormon Row by Janene Caywood, Historical Research Associates, Inc., May 31, 1995.

Patent File (Andy Chambers) #542215, Evanston, Wyoming land office, Box 19111, Record Group 49. National Archives, Suitland, MD.

Patent File (John Moulton) #519467, Evanston, Wyoming land office, Box 18174, Record Group 49. National Archives, Suitland, MD.

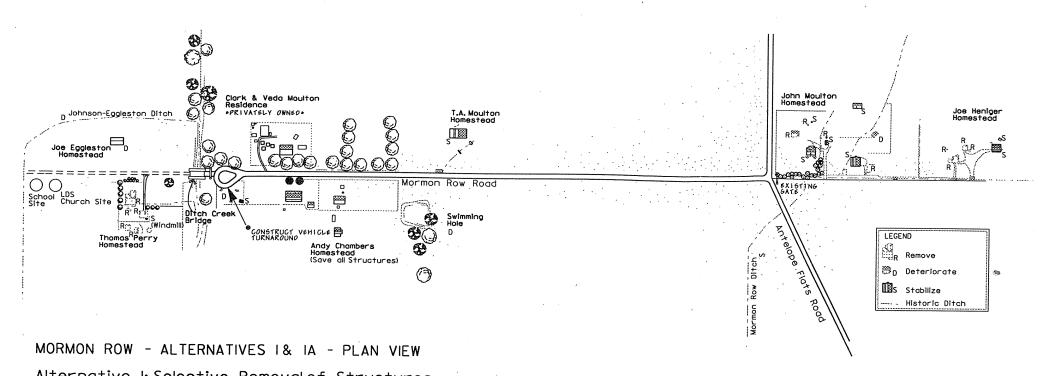
Soil Survey of Teton County, Wyoming, Grand Teton National Park Area. Washington, D.C.: Soil Conservation Service, U.S. Department of Agriculture, 1982.

State of Wyoming, "Certificate of Appropriation of Water," Permit No. 9992 [Certificate Record No. 41, Johnson and Eggleston Ditch], February 19, 1920 [Appropriation: June 13, 1910]. Wyoming State Engineer's Office, Cheyenne, WY.

Stegner, Wallace. Mormon Country. Lincoln, NE: University of Nebraska Press, 1942.

Villalobos, B.B. "Exotic Vegetation Management Plan, Grand Teton National Park." Grand Teton National Park, WY: Grand Teton National Park, 1997.

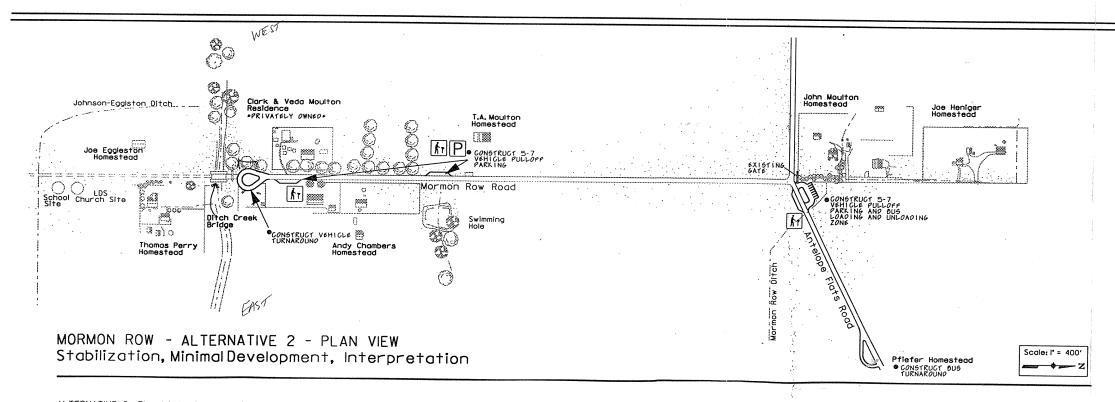
Villalobos, B.B. and J. Herrema. "Survey of Noxious Non-native Vegetation on Grand Teton National Park." Grand Teton National Park, WY: Grand Teton National Park, 1997.



Alternative I: Selective Removal of Structures Alternative IA: Selective Removal of Structures with Restoration of Native Vegetation

ALTERNATIVE I: A core area of Mormon Row would be stabilized. However, some of the more recently constructed buildings would be removed and other structures would be allowed to deteriorate. The cultural landscape would gradually revert to a more pre-settlement condition. No wayside exhibits would be constructed and the area would not be actively interpreted. A vehicle turnaround would be constructed just north of the Ditch Creek Bridge.

ALTERNATIVE IA: Is the same as Alternative I with the exception that some of the site topography and vegetation would be actively restored to a more 'natural' (pre-settlement) condition.



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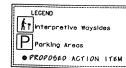
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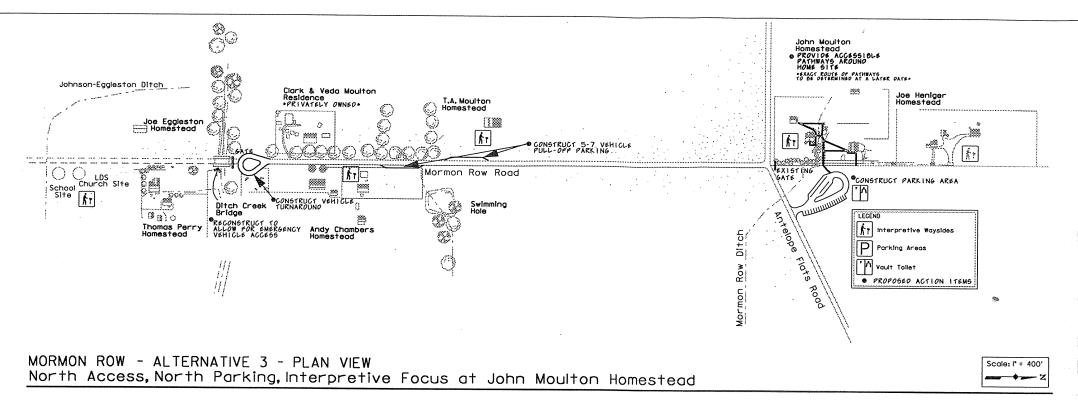
ALTERNATIVE 2: The historic structures associated with Mormon Row would be stabilized. The cultural landscape would gradually revert to a more pre-settlement condition. A small parking lot and bus drop-off area would be constructed at the intersection of Mormon Row Road and Antelope Flats Road. A bus turnaround would be built near the Pfelfer Homestead. Vehicle pull-outs and the vehicle turn around would be constructed along Mormon Row Road. Three waysides would be placed along the Row. Except for the wayside exhibits, no personal services interpretation would be provided.



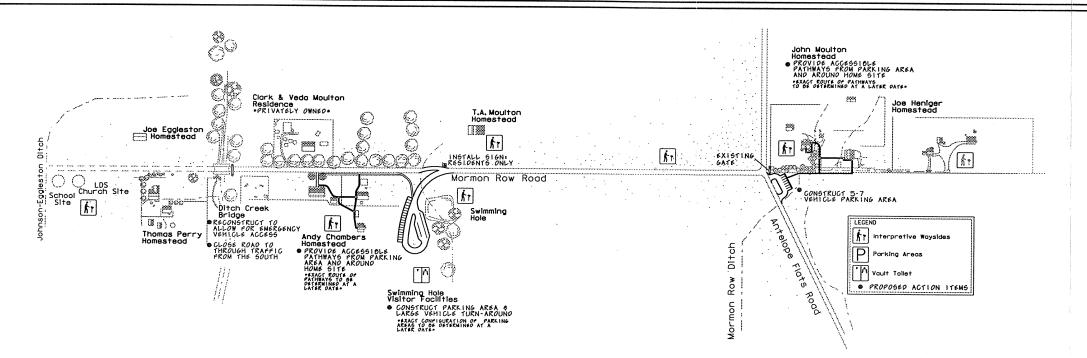
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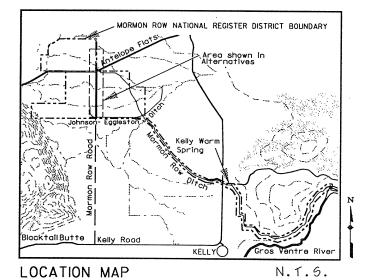
LOCATION MAP



ALTERNATIVE 3: The historic structures of Mormon Row would be stabilized. The historic cottonwood trees and ornamental plantings would be preserved when feasible. One site sensitive parking area would be developed at the intersection of Mormon Row and Antelope Flats Roads. Two parking pulloffs and the vehicle turnaround would be constructed on Mormon Row Road. Five wayside exhibits interpreting the history of Mormon Row would be constructed. No personal services interpretation would be provided. The bridge over Ditch Creek will be repaired to provide pedestrian and emergency vehicle access.



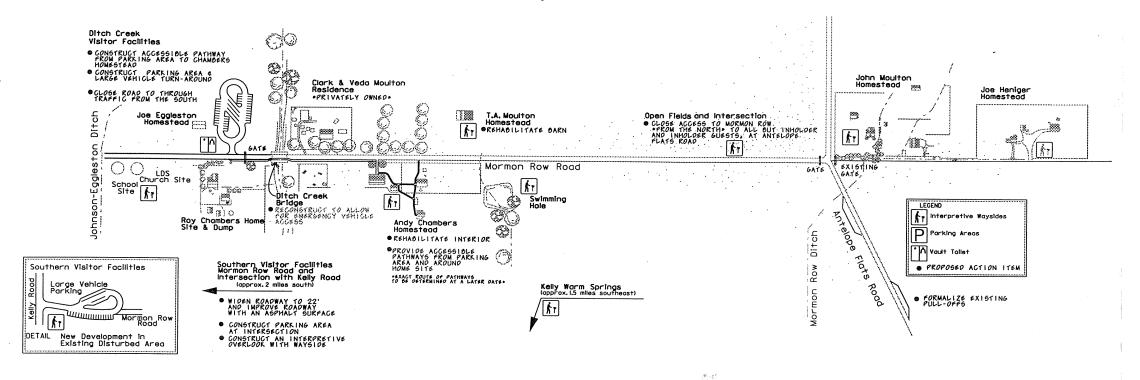
MORMON ROW - ALTERNATIVE 4 - PLAN VIEW
North Access, Central Parking and Interpretive Focus at Andy Chambers and John Moulton Homesteads



ALTERNATIVE4: The historic structures of Mormon Row would be stabilized. The historic cottonwood trees and ornamental plantings would be preserved when feasible. One five cor parking area would be constructed near the John Moulton Homestead. A second parking area with large vehicle turnaround would be constructed near the swimming hole. Mormon Row Road would be modified to direct visitors into the parking area and a sign would be installed informing them that residents only are to go beyond that point. Accessible pathways will be constructed around the John Moulton and Andy Chambers Homesteads. Seven wayside exhibits interpreting the history of Mormon Row would be constructed. No personal services interpretation would be provided. The Ditch Creek Bridge would be repaired to provide emergency vehicle, pedestrian, bicycle and in-holder access along the length of Mormon Row.

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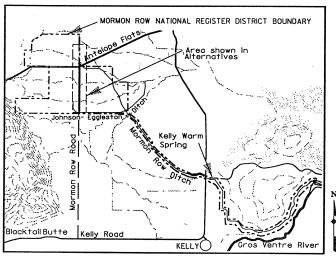
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MORMON ROW - ALTERNATIVE 5 - PLAN VIEW South Access, South Parking, Interpretive Focus at Andy Chambers Homestead

ALTERNATIVE 5: The historic structures within Mormon Row Historic District would be stabilized and the interiors of the barn and main house at the Andy Chambers' homestead rehabilitated. The cultural landscape of Mormon Row, including many of the Cottonwood trees and other features, would be maintained and accounted. would be maintained and preserved.

Personal interpretive services would be provided at the Andy Chambers homestead at select times during summer months. In addition, nine wayside exhibits would be developed in and around Mormon Row. Parking would be developed at two locations, both at the southern portion of Mormon Row. Two of the existing pull-offs on Antelope Flats Road would be formalized, however, no new parking areas would be developed via the Antelope Flats Road. Access would be provided to Mormon Row from Kelly Road. The southern parking area at Kelly Road would be provided to facilitate bicycle, pedestrian and horseback riding in the area. As in Alternatives 3 and 4, the Ditch Creek Bridge would be repaired to provide emergency vehicle, pedestrian, bicycle and in-holder access along the entire length of Mormon Row.



LOCATION MAP

Scale: I' = 400'

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