History of Utah

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NATIVE AMERICAN INDIANS

Prior to Euro-American settlement, the Great Basin-Colorado Plateau region was inhabited by Native American Indians. Anthropologists, archeologists, and historians have identified several Indian cultures, including the Desert, Basket Maker, Pueblo, Fremont, Ute, Paiute, Goshute, Shoshoni, and Navajo (Tyler, 1989). The earliest known inhabitants were primitive nomadic hunter-gatherers of the Desert Culture who occupied the region between 10,000 B.C. and A.D. 400 (Lewis, 1994a).

Beginning in A.D. 400, the Anasazi Culture began to move into present-day southeastern Utah from south of the Colorado River. Anasazi, a Navajo word which means "the ancient ones," refers to the early Anasazi period Basket Maker Culture (A.D. 400 to 700) and the later Anasazi period Pueblo Culture (A.D. 700 to 1300) (Tyler, 1989). The Anasazi Cultures were sustained by hunting-gathering techniques and a growing dependence on semi-agricultural systems that incorporated a maize-bean-squash horticultural component. The Anasazi Cultures built masonry dwellings in cliff caves, mesa tops, and sheltered canyons, as depicted at Mesa Verde National Park, Hovenweep National Monument, and Grand Gulch (Lewis, 1994a). The Pueblo Culture prospered in present-day Utah until A.D. 1300 when they withdrew from their settlements in the San Juan River drainage and retreated to pueblo villages in New Mexico and northern Arizona. Climatic changes, crop failure, and the intrusion of nomadic tribes are attributed to the decline of their culture (Tyler, 1989; Hurst, 1994).

Parallel to the Anasazi Culture, the Fremont Culture began to emerge in central and northern Utah in A.D. 400. The Fremont Culture, a society characterized by variation, diversity, and adaptability, retained some of the traits of the Desert Culture, while simultaneously developing similar Basket Maker-Pueblo characteristics and integrating the maize-bean-squash horticultural component. Near the end of the thirteenth century, a cultural regression occurred among the Fremont Culture, which corresponded to the retreat of the Anasazi from southwestern Utah. The Fremont people were likely displaced by or assimilated into cultures of hunter-gatherers who were ancestors of the Numic-speaking Shoshoni, Goshute, Paiute, and Ute Native American Indians (Tyler, 1989; Madsen, 1994a).

Numic- or Shoshonean- speaking cultures of the Uto-Aztecan language family began to enter the Great Basin region from Death Valley sometime after A.D. 1000. They evolved into four distinct groups: the Northern Shoshone, Goshute or Western Shoshone, Southern Paiute, and Ute (Lewis, 1994a). The Northern Shoshone, a culture that occupied northern Utah, southern Idaho, and Wyoming, were hunter-gatherers who adopted many traits of the nomadic Plains Indians through trade (Tyler, 1989). Their diet consisted of fish and waterfowl found in the Bear, Weber, and Snake river drainages, as well as grouse, large game, beavers, badgers, and rabbits (Rogers, 2000). The Goshute (Kusiutta) inhabited the arid and formidable desert regions to the southwest of the Great Salt Lake. The Goshute were proficient and adaptive hunter-gatherers, as they had an understanding of growing cycles, variations in climate, and animal distribution patterns. Their culture was sustained by seasonal seeds, grasses, roots, insects, larvae, small reptiles. They also hunted antelope, deer, and rabbits (Lewis, 1994a; Defa, 1994).

The Southern Paiute (Nuwuvi) occupied the southwestern region of Utah where the Great Basin and Colorado Plateau converge. While the largest population concentrations were along the Virgin and Muddy rivers, many Paiutes adapted to the surrounding arid desert environments. Both riverine and desert groups combined their hunting-gathering subsistence techniques with some floodplain or irrigated agriculture (Holt, 1994; Lewis, 1994a). The Ute Indians (Nuciu) were geographically separated into eastern and western groups. The eastern Utes inhabited the high plateaus and Rocky Mountains of Colorado and northern New Mexico, while the western Utes, or Utah Utes, occupied the central and eastern two-thirds of Utah. The Utes practiced a flexible hunting-gathering subsistence system and adopted the horse and buffalo culture of the Plains Indians. The Utah Utes benefitted from the abundance of fish in Utah Lake (Lewis, 1994b).

Ethnically and linguistically distinct from the Numic-speaking cultures of the Great Basin and Colorado Plateau, the Athabaskan-speaking Navajo (Dine) migrated to present-day southwestern United States from the subarctic of western Canada between A.D. 1300 and 1400 (Lewis, 1994a). In A.D. 1700, the Navajo entered the San Juan River drainage area of southeastern Utah in search of pasture for sheep and goats they acquired from the Spaniards. The Navajo were skillful hunter-gatherers who incorporated domestic livestock and agriculture into their

subsistence system. The San Juan River, one of the few reliable sources of water in the Navajo territory, permitted plantings of maize, beans, and corn on floodplains and tributaries (McPherson, 1994).

EARLY EXPLORATION

Historic accounts written by Pedro de Castaneda, the chronicler of the Coronado expedition, suggest that Don Garcia Lopez de Cardenas may have entered southeastern Utah in 1540 in search of a large river reportedly lying northwest of Tusayan, the Hopi villages in northeastern Arizona. Additional accounts during the periods of the Cortez and Coronado expeditions mentioned the lands of Lake Copala and El Gran Teguayo located to the northwest of the pueblo villages of New Mexico and Arizona. Historians presume that these lands were probably in the vicinity of Utah Lake and Great Salt Lake (Warner, 1989).

During the 1760s, the Spaniards developed a fervent interest to explore the lands north of New Mexico and Arizona. The previously documented accounts from two centuries prior, in addition to the aspiration of expanding the Spanish Empire, prompted New Mexican authorities to send expeditions northward. Explorer Juan María Antonio Rivera was instructed by the government to explore the Río del Tizon, the Colorado River, and to learn the extent of Indian settlements in the north. Rivera and his party traveled along well-worn Spanish and Ute-trader trails, moving northward into the Dolores River drainage in Colorado. In October of 1765, Rivera ventured into unfamiliar territory, crossing into Utah northeast of Monticello and travelling into the Lisbon Valley and Spanish Valley (Alexander, 1996).

In 1776, the year of the nation's declaration of independence, the Spanish friars Francisco Atanasio Domínguez and Silvestre Vélez de Escalante from Santa Fe, New Mexico, were instructed by their ecclesiastical superiors in Mexico City to find an overland route between the mission in Santa Fe and the recently established mission in Monterey, California (Alexander, 1996; Johnson and Anderson, 1989). Although their directive was not successfully executed, their exploration provides some of the first detailed records of present-day Utah (Peterson, 1977).

The Domínguez-Escalante Expedition entered the present state of Utah on September 11, 1776, passing through the area where Dinosaur National Monument is today. The friars directed their course to the southwest until they arrived at the junction of the Uinta River (Río de San Damián) and the Duchesne River (Ribera de San Cosme). The expedition traveled westward and ascended the Duchesne and Strawberry Rivers to the rim of the Great Basin. They descended along the Diamond Creek River (Río de San Lino) to the Spanish Fork River (Río de Aguas Calientes), where they were subsequently directed to Utah Valley and the settlements of the Laguna or Timpanogot (Ute) Indians on the eastern shores of Utah Lake. They arrived on September 23-24, 1776 (Warner, 1989). Domínguez and Escalante gave Utah Valley the name of La Valle de Nuestra Señora de la Merced de los Timpanogotzis, describing the great valley and the lake of the Tympanocuitzis as an inviting Spanish settlement with abundant resources and a docile and affable nation of Indians (Peterson, 1977; Warner, 1989; Alexander, 1996).

From Utah Valley, the Domínguez-Escalante Expedition proceeded toward Monterey, California, passing through Juab Valley, across Scipio Pass, and through the Beaver River drainage to present-day Milford. However, in early October 1776, an intense snowstorm with intolerable cold prompted a momentous decision by Domínguez and Escalante to abandon the quest for Monterey and to return to Santa Fe. On October 11, 1776, the members of the expedition cast lots to validate the decision. The explorers directed their course to the south through Cedar Valley, down Ash Creek, and across the Virgin River where they encountered the high tablelands of the Colorado River. Exploration ensued to find a place where the river could be forded. On October 26, 1776, an attempt to cross the Colorado River at the mouth of the Paria River failed. The crossing was eventually accomplished on November 7, 1776, at a location about 33 miles below the mouth of the San Juan River, 3 miles north of the present Utah-Arizona boundary. After crossing the Colorado River, the expedition proceeded southward to Hopi villages and Spanish missions, eventually arriving in Santa Fe on January 2, 1777 (Warner, 1989; Johnson and Anderson, 1989).

Beginning in 1821, many fur trading companies and individual trappers began to occupy the Rocky Mountains and Intermountain West, as insatiable American and European markets for fur and pelts flourished. In 1824, fur trappers, later referred to as mountain men, entered Utah from three directions. Americans enlisted with the William Ashley-Andrew Henry Fur Company came from St. Louis; the Hudson's Bay Company traveled from the north and northwest; and independent French-Canadian-American trappers journeyed from New Mexico, primarily Taos and Santa Fe (Miller, 1989a).

A group of Ashley-Henry trappers, under the lead of Jedediah Smith and Thomas Fitzpatrick, reached the upper Sweetwater River early in 1824 and turned westward to cross the Continental Divide by way of South Pass. Although South Pass had been traversed in 1812, the rediscovery of the pass represented a landmark for fur trappers, missionaries, goldrushers, and Mormons, as it became the major thoroughfare to the Great Basin. During the summer of 1824, John Weber, one of the most prominent members of the Ashley-Henry Fur Company, and his brigade crossed South Pass and Green River Valley and descended into the Bear River region and Cache Valley for the fall hunt (Alexander, 1996; Miller, 1989a). James Bridger, a member of John Weber's brigade, became a distinguished trapper, hunter, trader, and frontiersman. He is also recognized as one of the first documented discoverers of the Great Salt Lake (Despain and Gowans, 1994).

The British Hudson's Bay Company, led by Peter Skene Ogden, set out from the company's Flathead Post in Montana on December 20, 1824. The brigade worked their way to the Bear River near the present site of Alexander, Idaho, and followed the river southward into Cache Valley. From the south end of Cache Valley, the brigade traversed into Ogden Valley. While Peter Skene Ogden and his brigade were traveling through Cache Valley, American trappers followed the Bear River to its mouth and explored southward along the front of the Wasatch Range (Miller, 1989a).

As American and British fur companies were exploring the regions in northern Utah, Taos Trappers, including Etienne Provost and Antoine Robidoux, ranged into the San Juan, Colorado, Green, and Duchesne River drainages, and eventually voyaged into the Great Basin and Wasatch Mountains. In 1824, Etienne Provost, the most notable trapper operating from the Taos base in New Mexico, entered Utah by the same general route as Catholic missionary-explorers had in 1776 (Miller, 1989a). Provost followed the Duchesne River to the river that bears his name, the Provo River, and followed it to Utah Lake. Some historians affirm that Provost may have been the first Euro-American to see the Great Salt Lake (Nichols, 1995).

In May of 1825, conflict and conspiracy between American and British trappers at Deserter Point on the Weber River forced Peter Skene Ogden to retreat to the Snake River. American trappers continued to trap and trade in Utah even though the area legally belonged to Mexico. For over a decade, the Ashley-Henry Fur Company had tapped the richest fur areas in the West, and in turn, William Ashley developed a new system whereby fur supplies were brought to designated locations in the West. This social business activity became known as the annual rendezvous. The first rendezvous was held at Henry's Fork of the Green River; the next one in Cache Valley; the next two on the south end of Bear Lake; and the remainder were held in southwestern Wyoming and eastern Idaho until their discontinuance in 1840 (Alexander, 1996; Miller, 1989a).

Through this wide-ranging activity, much of modern Utah was documented, described, and named. Renowned mountain men, including William Ashley, Jedediah Smith, John Weber, James Bridger, Peter Skene Ogden, and Etienne Provost, made significant contributions to the knowledge of the West by providing the foundation for later detailed exploration and mapping. Scientific and military expeditions conducted by John C. Fremont, John W. Gunnison, Howard W. Stansbury, and John Wesley Powell yielded detailed documentation of the Utah landscape (Johnson and Anderson, 1989).

John C. Fremont, an officer in the Topographical Corps of the United States, led five expeditions into the West. The 1843-44 expedition undoubtedly had the greatest impact. He surveyed the vast region he appropriately named the Great Basin and he traversed across the Salt Lake Desert. He recorded detailed descriptions of the soil, vegetation, and wildlife, and he made reference to the valleys as locations for future settlement (Spence, 1994; Miller, 1989b; Peterson, 1977; Alexander, 1996). While Mormons began to settle the Utah region in 1847, scientific explorations continued. Of momentous importance were the expeditions conducted by John Wesley Powell. In 1867, John Wesley Powell, an appointed professor of geology, commenced a series of expeditions to the Rocky Mountains and the canyons of the Green and Colorado rivers. Powell and his party journeyed 900 miles with four boats, traveling from the Union Pacific Railroad crossing of the Green River in Wyoming down through the Grand Canyon (Bearnson, 1994).

COLONIZATION AND SETTLEMENT

On July 24, 1847, Mormon (Latter-day Saint) pioneers entered the Great Salt Lake Valley from Emigration Canyon. The westward migration was prompted by unyielding religious persecution in New York, Ohio, Missouri, and Illinois that had culminated in the assassination of their prophet and leader, Joseph Smith. The new prophet of the Mormon Church (Church of Jesus Christ of Lat-

ter-day Saints), Brigham Young, made a definitive commitment to move west when it became apparent that the Mormons could not peacefully survive in Nauvoo, Illinois. The Great Salt Lake Valley was chosen as an isolated location where they could practice their faith in comparative freedom (Campbell, 1989a; Hill, 1989; Johnson and Anderson, 1989).

Within days of their arrival to the Salt Lake Valley, the Mormon pioneers cooperatively established a base settlement for growing crops and building homes (Alexander, 1996). Thirty-five acres of cropland were staked out, plowed, and irrigated for planting potatoes, corn, buckwheat, beans, turnips, and other crops. The city of Salt Lake was laid out in 135 ten-acre blocks, with a site for a temple in the center. The blocks were subdivided into one-and-a-quarter-acre town lots, which loosely replicated the plat of the City of Zion that was designed by Joseph Smith. Within a month, 29 log houses were built within the walls of an adobe fort (Campbell, 1989b; Alexander, 1996).

Although the primary emphasis of the Mormons was to establish a base of operations in the Salt Lake Valley, leaders directed parties of explorers to investigate the surrounding territory and to document the availability and abundance of natural resources. Brigham Young led a party around the Salt Lake Valley; Albert Carrington, an apostle of the Mormon Church, and two men surveyed the southern end of the Salt Lake Valley; and Jesse Little, an ordained leader, and three companions explored the northern end of the Salt Lake Valley into the Bear River Valley and eastward into Cache Valley (Alexander, 1996; Campbell, 1989b).

While pioneers continued to enter the Salt Lake Valley, plans to establish additional colonies were initiated. Within the first year, small towns were settled in Salt Lake Valley and Weber Valley. Bountiful and Farmington were founded in 1847. Ogden was founded in 1848 with the acquisition of Fort Buenaventura, a trading post built by trapper and trader Miles Goodyear. Centerville, Holladay, and West Jordan were also founded in 1848 (Arrington, 1994). In 1849, colonies were established in Utah, Tooele, and Sanpete valleys. Utah Valley, which impressed Domínguez and Escalante, James Bridger, and John C. Fremont, became a logical place for an early settlement. Tooele Valley, a location separated from Salt Lake Valley by the Oquirrh Mountains, was partially explored by Brigham Young in 1847. Thorough exploration of Tooele Valley in 1849 encouraged colonization on Settlement Creek. In the fall of 1849, 50 families journeyed to Sanpete Valley and established the town of Manti. On November 23, 1849, Parley Pratt, another prominent church apostle, guided a group of 50 persons to determine locations for settlement between the Salt Lake Valley and the Santa Clara Valley. Detailed reports from this exploration became the foundation for establishing a line of colonies from Utah Valley to the Sevier and Virgin rivers (Campbell, 1989c).

From 1847 to 1857, 90 settlements were founded, from Wellsville and Mendon in the north to Washington and Santa Clara in the south. This period of settlement signified the founding of the north-south line of settlements along the Wasatch Front and Wasatch Plateau. As immigration proceeded throughout the 1850s, settlements multiplied. However, during the second decade of settlement, the approach of the Utah Expedition of General Albert Sidney Johnson threatened settlement in outlying areas. The Utah Expedition, commonly referred to as the Utah War, was an armed dispute between Mormon settlers in the Utah Territory and United States Federal Government. The confrontation began in May 1857 and was ultimately resolved in July 1858 through negotiation. During the 10 years after the Utah War, 112 new communities were founded in Utah. Settlements in Bear Lake Valley, Cache Valley, Pahvant Valley, Sevier River Valley, Virgin River Valley, and Muddy River Valley were established. Important cities that were founded during this period include Logan (1859), Gunnison (1859), Morgan (1860), St. George (1861), and Richfield (1864) (Arrington, 1994).

During the following decade of settlement, 93 new settlements were established. Continued expansion occurred in Cache Valley, Bear Lake Valley, the Sevier River Basin, and on the east fork of the Virgin River. Several residents of Sanpete Valley migrated across the eastern mountains and established new settlements in Castle Valley (Emery County), along the Price River (Carbon County), along the Fremont River (Wayne County), and along Escalante Creek (Garfield County). In the remaining years of the nineteenth century, new colonies were founded in the few remaining places that could be irrigated (Arrington, 1994). By 1877, Brigham Young and other renowned Mormon leaders planned and supervised the migration of approximately 80,000 Mormons and facilitated the establishment of over 300 settlements in and near the Great Basin (Campbell, 1989c).

POLITICAL DEVELOPMENT

From 1535 to 1820, the Spanish claimed a political unit of Spanish territories referred to as the Viceroyalty of New Spain. These lands included present-day southwestern United States, Mexico, and Central America. The vast expanses north of New Spain, including present-day Utah, were explored in 1776 by Domínguez and Escalante, and accordingly claimed by the Spanish Empire. The Mexican War of Independence (1810-1821) resulted in the expulsion of the Spanish colonial government with the authorization of the Treaty of Córdoba. Consequently, Mexico gained independence as a constitutional monarchy and acquired the lands presently defined by the country of Mexico and the states of California, Nevada, Arizona, New Mexico, Texas, Colorado, and Utah (Tyler, 1989; Alexander, 1996).

In February 1848, with the Treaty of Guadalupe Hidalgo, the present states of California, Nevada, Arizona, and Utah were ceded to the United States by Mexico, as well as portions of Arizona, New Mexico, Colorado, and Wyoming. This cession, commonly referred to as the Mexican Cession of 1848, was a condition for the end of the Mexican-American War (Johnson and Anderson, 1989). Once Utah became part of the United States, Mormons formed a theodemocratic political government, the People's Party, and petitioned Congress to designate the region they occupied as the State of Deseret. The State of Deseret encompassed the Great Basin, the Colorado River Basin, and a corridor to the Pacific Ocean around San Diego (Poll, 1994). However, the application for statehood was denied by the government of the United States because lawmakers were not inclined to grant the Mormons control over such a vast domain (Campbell, 1989d; Lyman, 1994).

However, Utah was organized as a territory of the United States on September 9, 1850, under an Organic Act of Congress and as part of the Compromise of 1850. The Compromise of 1850 attempted to resolve the territorial and slavery controversies caused by the Mexican-American War by admitting California into the Union as a free state and creating the territories of Utah and New Mexico (Johnson and Anderson, 1989; Campbell, 1989d). The Utah Territory embraced over 220,000 square miles; extended from the Continental Divide in Colorado and Wyoming to the California state line; and spanned the width from the 37th and 42nd parallels of latitude. Within the following two decades, the extent of the Utah Territory was reduced as mining developments in California and Colorado expanded, as migration and transportation routes were established, and as social, cultural, and political conflicts heightened between Mormons and non-Mormons. In 1861, the territories of Nevada and Colorado were formed in whole or part from the Utah territory, and an addition to the territory of Nebraska was made. Further portions of the territory were allocated to Nevada in 1862 and 1866 and to Wyoming in 1868. These events formed the present borders of the state of Utah (Johnson and Anderson, 1989).

Throughout this period of territorial development in the western United States, Mormon leaders made additional attempts to gain statehood, as statehood was considered integral to independence in local affairs. In 1856, Mormons sent Congress a draft of a constitution for a state much smaller than the proposed State of Deseret. Simultaneously, the Republican Party's first presidential campaign was featuring a platform that denounced slavery and polygamy. This denouncement produced friction between the federal government and the Mormons, and eventually resulted in the Utah War (1857-1858) (Lyman, 1994).

A third effort to acquire statehood occurred in 1862, but serious consideration was not given by Congress because legislation prohibiting plural marriage was in the process of being enacted. The fourth attempt, occurring in 1876, was unsuccessful because executive and legislative leaders pronounced that statehood was not possible as long as plural marriage continued to be condoned and practiced in the territory of Utah. In 1882, the territorial legislature devised a new plan to obtain statehood. The plan entailed the request of a republican form of government that provided the citizens of the Utah Territory with the liberties sought by the founding fathers of the nation. Although the Mormons presented appropriate legislation to Congress, the request was ignored (Lyman, 1994). In 1887, a sixth organized effort for statehood was initiated that involved the submission of a state constitutional clause that recognized polygamy as incompatible with a republican form of government. This elaborate attempt at statehood met the same fate as its predecessors (Larson, 1989).

After six unsuccessful bids for statehood were made between 1849 and 1887, Mormon leaders realized that the unsettled church-state conflict needed to be resolved in order to be admitted to the Union. Therefore, the leaders of the Utah Territory affirmed that the church would not advocate new plural marriage in defiance of the laws of the land. Additionally, the Mormon People's Party was quietly disbanded, and members were encouraged to join the recently organized Republican and Democrat parties. This final endeavor resulted in the Utah Enabling Act of 1894;

however, it was stipulated that Utah not be admitted until after the current congressional term. Consequently, Utah was finally admitted as the 45th state of the Union on January 4, 1896 (Lyman, 1989; Larson and Poll, 1989).

THE LIVESTOCK INDUSTRY AND RANGE MANAGEMENT

The introduction of livestock into the western United States is associated with exploration and colonization. In 1540, the Spanish explorer Francisco Coronado journeyed from Mexico northward into Arizona, New Mexico, and Colorado with a large number of cattle, sheep, hogs, horses, and mules (Sampson, 1952; Stoddart et al., 1975). Subsequent explorations were helpful in extending colonies and livestock into the southwestern and western United States. Spanish missions established in Texas, New Mexico, and Arizona became livestock centers in the early 1700s (Stewart, 1936; Sampson, 1952).

The first documented account of livestock in Utah was in 1845 when Miles Goodyear built Fort Buenaventura and brought livestock from Santa Fe to graze near the fort. Goodyear built the enclosed fort on the Weber River near present-day 28th Street in Ogden. However, the first considerable amount of livestock in Utah was brought by Mormon pioneers. Beginning in 1847, Mormons began to fill Utah ranges with foundation stock they drove across the Plains, and with lean cattle and horses obtained by trading with other emigrants. In total, they brought with them 358 sheep, 887 cattle, 2,213 oxen, 35 hogs, 124 horses, and 716 chickens (Stewart, 1936; Sampson, 1952; Jacobs, 1984). On November 25, 1847, Miles Goodyear sold Fort Buenaventura and most of his livestock to the Mormons, and subsequently, they acquired an additional 75 cattle, 75 goats, 12 sheep, and six horses (Sadler, 1994; Jacobs, 1984).

During the following years, livestock markets and production were stimulated by the California Gold Rush (1848–1855) and the Civil War (1861–1865). Large herds were driven to California from Mexico, Arizona, and New Mexico. The demand for meat and animal products during the Civil War brought large cattle shipments from Texas to the Confederate Army (Stewart, 1936; Sampson, 1952). The inflationary period after the Civil War and the completion of the first transcontinental railroad in 1869 initiated a livestock boom which affected much of the western United States. The development of mining camps in the Great Basin also brought a great demand for wool and mutton (Knapp, 1996).

While the Mormon pioneers were establishing settlements in the Salt Lake Valley, Brigham Young took possession of Antelope Island in the Great Salt Lake for use as a herd ground for livestock. However, Antelope Island became overstocked with grazing animals, so Brigham Young sent large numbers of horses and cattle to new range near the Sevier River. In 1855, a number of families moved a substantial amount of cattle, sheep, and horses to high-quality rangeland in the south end of Rush Valley. By 1875, the range in Rush Valley was extremely depleted, and cows were calving only every other year. Grazing problems in Utah became acute, and it was recognized that principles of good range management had not been learned by the settlers (Jacobs, 1984).

By 1890, the last western open range was fully stocked. It is estimated that there were over 26 million cattle and 20 million sheep in the 17 western states. The resulting competition for forage between cattle and sheep was intense. While cattle and sheep competed for many of the same resources, the impact of sheep on the landscape was greater than that of cattle. Cattle were confined to relatively gentle terrain in sagebrush-bunchgrass ecosystems, whereas sheep could travel into steeper and rougher terrain (Knapp, 1996). As an outcome, range and forest lands were heavily overgrazed and depleted, and stockmen of both factions engaged in bitter disputes over land (Stewart, 1936; Sampson, 1952). High-elevation watersheds on the Wasatch Plateau in central Utah were severely overgrazed, resulting in catastrophic flooding in the adjacent communities of Manti and Ephraim (Prevedel et al., 2005).

As an initial solution to halt overgrazing, the federal government began managing livestock grazing on the established forest reserves. In 1902, Sanpete Valley citizens petitioned the federal government to establish another forest reserve above Manti. Subsequently, President Theodore Roosevelt signed the proclamation creating the Manti Forest Reserve. In 1905, the jurisdiction of the existing forest reserves was transferred from the General Land Office to the Bureau of Forestry in the Department of Agriculture. The agency was shortly renamed the Forest Service, and Gifford Pinchot, the Chief of the Forest Service, imposed grazing fees and established a use-by-permit system (Prevedel and Johnson, 2005). The establishment and expansion of the National Forest system virtually ended the range wars and marked the beginning of scientific range management (Sampson, 1952; Stoddart et al., 1975).

During the 1910s and 1920s, scientific and professional techniques of range management were adopted. Region 4 of the Forest Service established a research station as a model for the implementation of research-validated models. In 1912, the Great Basin Experiment Station was established in Ephraim Canyon on the Manti Forest. Arthur W. Sampson, who is noted for his range and forest research, became the first director, and his research became models for range reconnaissance and carrying-capacity studies. Sampson's work in Utah also provided the justification for deferred and rotation grazing (Alexander, 1987). This practice of technical professionalism and experimentation initiated close cooperation between scientists and range managers and allowed rapid implementation of the research results. Subsequently, it helped Region 4 to develop the capacity to adopt changing techniques and implement effective range management in the Intermountain West. Additionally, long-term records and early studies evaluating the impacts of various levels of grazing at the Great Basin Experimental Station contributed to the advancement of methods in rangeland restoration (Alexander, 1987; Lugo et al., 2006).

In 1933, the Desert Experimental Range in Pine Valley, approximately 40 miles west of Milford, was established. President Herbert Hoover provided the basis for the Desert Experimental Range when he withdrew 87 square miles of land from the public domain as an agricultural range experiment station. The development of the experimental range was prompted by concern for the condition of public rangelands. Expanses of Great Basin rangelands dominated by low shrubs had nearly become devoid of vegetation (Clary and Holmgren, 1982). In the winter of 1934-35, sheep grazing studies were initiated to study the economic and ecological impacts of grazing at different intensities, seasons, and frequencies (Adams et al., 2004). Early studies concluded that poor range condition was a result of improper grazing practices rather than the cyclical periods of drought. Restoration efforts were attempted; yet cultural improvement practices using planting techniques were not successful. Subsequent studies indicated that range recovery was possible given that higher levels of grazing during the winter months were not permitted and that grazing was not allowed to repeatedly occur on the same area year after year during the late winter-early spring months (Clary and Holmgren, 1982).

The progression of scientific range management was accompanied by additional legislation which sought to regulate grazing on public lands. The Taylor Grazing Act of 1934 created the Grazing Service (presently the Bureau of Land Management) and authorized the establishment of grazing districts on public domain lands that were considered to be valuable for grazing and raising forage crops. This act also established the permit and leasing system on public lands and defined the requirements for the distribution of funds received from grazing. In 1976, the Federal Land Policy and Management Act was established to limit the length of permits and leases to 10 years and to regulate seasonal limits on grazing. In 1978, the Public Rangeland Improvement Act required the Bureau of Land Management and Forest Service to inventory and manage lands in the western states with the commitment to improve the conditions on public rangeland. As a component of this commitment, the grazing fee formula was established to account for cattle density and forage consumption (US GAO, 2005).