A STUDY ON THE HISTORIC SETTLEMENT OF THE COLUMBIA RIVER BASIN

EXECUTIVE SUMMARY

submitted by:

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"There once were men capable of inhabiting a river
without disrupting the harmony of its life." -- Aldo Leopold, 1940

In the closing years of the twentieth century -- the end of a millennium -- harmony of people with nature is missing in most comers of the earth. One of the most striking stories of the alteration of such harmony is the history of the Columbia River Basin. This report focuses on the story of how people used the lands in the areas drained by the Columbia River Basin from 12,000 BP to 1940.

The landscape touched by the Columbia River's drainage is a land mass larger than the country of France. This large, diverse geographical area spans the desert lands of southern Oregon to the heights of the Northern Rocky Mountains in western Montana. In between lies the Columbia Plain, rolling, dry, and in some places, arid terrain whose only native trees were the willows and cottonwoods that hugged the stream and creek bottoms. Forest lands trim the borders of the plain -- the Okanogan Highlands to the north, the Cascade Range to the west, the Ochoco Mountains to the south, and the Northern Rockies to the east. But the dominating presence of the Cascades prevents moisture from the Pacific Ocean from entering the Columbia Plateau, which remains quite dry for most of the year.

This study takes a look inside the watersheds of the Columbia River Basin, those on the Columbia Plateau in eastern Washington and Oregon, those in the Northern Great Basin south of the Deschutes country to the southern border of Oregon, as well as those in the Northern Rockies of Idaho and Montana. To be sure, the occupation of the land by people had an effect. By telling their story of land use, questions regarding ecological balance and alteration of the landscape by Native American and Euro-American alike will be raised. A history of people's presence on the land may reveal where people kept or broke the harmony of the Columbia River's life.

HISTORIC OVERVIEW

Humans first appeared in the region west of the Mississippi River some 12,000 years ago, having migrated from Asia through the Bering Straits land bridge. These earliest trans-Mississippi peoples were nomadic big-game hunters, dependent on herds of Pleistocene megafauna (mammoths, mastodons, and bison antiquus). Warming climatic conditions associated with glacial retreat around 8,000 BP resulted in environmental changes and the extinction of the megafaunal game. In response to these environmental changes, the early hunters diversified into regional cultures that included hunting, gathering, and fishing activities, depending on available resources. In the interior Northwest, Northern Rockies, and Northern Plains, these regional cultures have been identified as the Plateau, Great Basin, and Plains cultures, which developed between 7,000 BP and 2,000 BP. Historic tribal entities became identifiable between 1000 A.D. and 1700 A.D. throughout the trans-Mississippi West.

It was these historic tribes that were encountered by the first European and Euro-American explorers, beginning with Spanish adventures and missionaries in the Southwest and along the California Coast during the 1500s and 1600s. This initial contact resulted in acquisition of the horse by Southwestern tribes. The subsequent dispersion of horses throughout the trans-Mississippi region radically altered native hunting and territorial patterns, particularly those of the Plains and Plateau cultures. By the late 1700s, Russian fur ships had probed the Pacific Northwest coastal area, and French-Canadian and English fur traders had moved onto the Not-them Great Plains and eastern fringes of the Rocky Mountains from the northeast and east. Americans breached the Continental Divide in 1805, when the government-sponsored Corps of Discovery (Lewis and Clark Expedition) followed the Missouri River to its headwaters, crossed the Northern Rockies, and reached the Pacific Ocean by way of the Columbia River system.

Other government explorations of the West followed during the early nineteenth century, including the expeditions of Zebulon Pike (1805- 1807) and Stephen Long (1820) in the Central Great Plains, Southern Rockies, and the Southwest; but it was the profit-driven fur trade that brought Euro-American influences to bear most heavily on the native cultures of the trans-Mississippi West. Between 1807- 1840, fur trade activity entered virtually every comer of the West, resulting in both a vast body of geographic knowledge, which would serve future Euro-American migration, and profound alterations of native lifestyles by the introduction of Euro-American customs and technology, especially guns. Christianity, previously brought to the Southwest by Spanish explorers, was among the cultural influences the fur trade carried into the

Northern Plains and Rockies. Disease was another, decimating whole populations of native tribes during the eighteenth and early nineteenth centuries.

With the establishment of permanent or semi-permanent trading centers and travel routes, the fur trade encouraged subsequent Euro-American migration into the trans-Mississippi West for agricultural and mercantile purposes. By the middle of the nineteenth century, at least three major agricultural migrations had occurred, drawing thousands of Euro-American settlers to Texas in the 1820s and 1830s; to Oregon and California during the 1820s, 1830s, and 1840s; and to the Great Basin in the 1840s and 1850s. Such migrations further resulted in the expansion, improvement, and military protection of travel routes. This in turn increased pressure on tribal cultures and disrupted traditional tenitorial patterns. Discovery of gold in California in 1849 further accelerated the influx of non-Indian populations to the region as goldseekers from around the world poured into the mountain West in search of precious metals.

Over the next three decades, the mining frontier quickly drew agriculture, industry, modem transportation, and government to the most remote comers of the West, with their consequent effects on the environment, its resources, and native inhabitants. By the mid-l 880s, nearly all native tribes had been confined, by force or treaty or both, to reservations that represented mere Fractions of their previous territories; and native cultures were aggressively suppressed by government agents and missionaries. Three major transcontinental railroads crossed the trans-Mississippi West via northern central and southern routes. Placer miners and boom camps had been overshadowed by industrial mining capable of altering the landscape of an entire watershed with water-power, explosives, heavy equipment, and world-class mills and smelters. The demand for logs and lumber by both railroads and mines led to the emergence of the western wood products industry, particularly in the Northern Rockies and Pacific Northwest. Agriculture had expanded rapidly from a subsistence of localized commercial activity to a large-scale farming and ranching industry with major effects on land, vegetation, wildlife, and water resources.

Largely as a result of such radical changes in western land and resource use during the late nineteenth century, federal and state governments became increasingly involved in land and resource management over the next hundred years. In addition to regulatory activities, government agencies played an increasing role in fostering resource use through the establishment of national forests and parks, and reclamation and irrigation projects during the early decades of the twentieth century.

OVERVIEW OF HUMAN SETTLEMENT IN THE NORTHERN ROCKIES PORTION OF THE COLUMBIA RIVER BASIN

Humans first appeared in the Northern Rockies portion of the Columbia River Basin some 12,000 years ago. These earliest inhabitants were nomadic big game hunters, dependent on herds of Pleistocene megafauna (mammoths, mastodons, and bison antiquus). Warming conditions associated with glacial retreat (c. 8,000 BP) led to environmental changes and the extinction of the megafaunal game. In response ot these environmental changes, the early hunters diversified into regional cultures that included hunting, gathering, and fishing activities, depending on available resources.

The regional culture identified with the west slope of the Northern Rockies is the Plateau Culture. Taking its name from the Columbia Plateau, this culture developed between 7,000 BP and 1700 A.D. Representatives of the Plains, Great Basin, and Coastal Culture areas frequently entered the Columbia Plateau, and aspects of their cultures were frequently assimilated by Plateau groups. Historic tribal entities became identifiable in the Northern Rockies between 1000 and 1700.

It was these historic tribes that were encountered by the first European and Euro-American explorers, beginning with the Spanish adventurers and missionaries in the Southwest and along the California Coast during the 1500s and 1600s. This initial contact resulted in acquisition of the horse by Southwestern tribes. The subsequent dispersion of horses throughout the Great Plains and Rocky Mountains radically altered native hunting and territorial patterns, particularly those of the Plains and Plateau cultures. By the late 1700s, Russian fur ships had probed the Pacific Northwest coastal area, and French-Canadian and English fur traders had moved onto the Northern Great Plains and eastern fringes of the Rocky Mountains from the northeast and east. Americans breached the Continental Divide in 1805, when the government-sponsored Corps of Discovery (the Lewis and Clark Expedition) followed the Missouri River to its headwaters, crossed the Northern Rockies, and reached the Pacific Ocean by way of the Columbia River system.

Within a few years of the Corps' successful exploration, the profit-driven fur trade would bring Euro-American influences to bear heavily on the native cultures of the Nor-them Rockies. Between 1807-1840, fur trade activity entered virtually every comer of the region, resulting in both a vast body of geographic knowledge that would serve future Euro-American migration, and in profound alterations of native lifestyles by the introduction of Euro-American customs and technology, especially by the introduction of guns. Christianity was among the cultural

influences carried into the Northern Rockies by the fur trade, often in conflict with and in many cases supplanting the tribes' traditional beliefs and values. Disease was another influence, decimating whole populations of native peoples during the late eighteenth and early nineteenth centuries.

With the establishment of permanent or semi-permanent trading centers and travel routes, the fur trade encouraged subsequent Euro-American migration through and later into the Northern Rockies for agricultural and mercantile purposes. During the 1820s, 1830s, and 1840s, a swelling tide of emigration poured through the Northern Rockies along the Oregon and California trails. This migration further resulted in the expansion, improvement, and military protection of travel routes, which in turn increased pressure on tribal cultures and disrupted traditional territorial patterns. The discovery of gold in California in 1849 further accelerated the influx of non-Indian population to the region as goldseekers from around the world poured into the mountain West in search of precious metals.

Over the next three decades, the mining frontier quickly drew agriculture, industry, modem transportation, and government to the most remote comers of the West, with their consequent effects on the environment, its resources, and native inhabitants. By the mid-1880s, nearly all native tribes had been confined, by force or treaty or both, to reservations that represented mere fractions of their previous territories Native cultures were aggressively suppressed by government agents and missionaries. A transcontinental railroad had crossed the Northern Rockies during the 1880s, and would be followed by two others in the 1890s and early 1900s. Placer miners and boom camps had been overshadowed by industrial mining capable of altering the landscape of an entire watershed with water-power, explosives, heavy equipment, and world-class mills and smelters. The demand for logs and lumber by both railroads and mines led to the emergence of the western wood products industry. In some areas of the Mountain West, agriculture had expanded rapidly from a subsistence or localized commercial activity to a large-scale farming and ranching industry with major effects on land, vegetation, wildlife, and water resources. Largely as a result of such radical changes in western land and resource use during the late nineteenth century, federal and state governments became increasingly involved in land and resource management over the next hundred years. In addition to regulatory activities, government agencies played an expanding role in the Northern Rockies, fostering resource use through the establishment of national forests and parks, and the construction of massive reclamation and irrigation projects during the early decades of the twentieth century.

Upper Missouri River Watershed

During the prehistoric era (12,000 BP to 1500 A.D.), the Missouri River watershed from its headwaters downstream to its exit from the Rocky Mountains was a common hunting ground for both Plains and Columbia Plateau peoples, who pursued a seasonal round of hunting and gathering. As modem tribal cultures emerged, the Shoshone and Bannocks, Nez Perces, Salish, Pend d'Oreille, and other Plateau people hunted bison and other large game along the Missouri and Upper Yellowstone watershed. Of the Plains tribes, the Blackfeet from the North and the Crows from the East were also regular inhabitants of the area. During the Protohistoric era (1500 to 1800), both the Plains and Plateau tribes experienced the early effects of Euro-American cultural influences. The acquisition of horses and the decimation of tribal populations by European diseases transformed traditional subsistence and economic patterns, warfare, and intertribal relations, all of which affected their activities within the watershed.

During the preindustrial period (1775 to 1864), Euro-American trappers, traders, missionaries, miners, and emigrants entered the Rocky Mountain portion of the Upper Missouri watershed. The fur trade decimated fur-bearing animal populations -- especially beaver -- and introduced guns, trade goods, and alcohol to the tribes, thereby disrupting tribal culture and traditional resource use. The fur trade was also responsible for the devastating epidemics that decimated many Upper Missouri tribes, especially the Blackfeet, during the 1830s. In the early 1860s, tens of thousands of prospectors swarmed into the Missouri headwater country, drawn by the discovery of four of the West's greatest placer deposits there: Grasshopper Creek (1862), Alder Gulch (1863), Last Chance Gulch (1864), and Confederate Gulch (1864). The influx had tremendous effects on the watershed's resources as miners diverted and fouled streams, exterminated local game populations, and clearcut hillsides for miles around mining camps. These activities continued and intensified during the modem era (1864-1940), as placer and lode mining expanded throughout the region.

With the advance of the Northern Pacific Railroad in the early 1880s, industrial mining entered the watershed. Deep mines, mills, and smelters throughout the region released massive amounts of wastes into air, soil, and water. Large-scale placering employed hydraulic hoses, draglines, and dredges, releasing tons of sediments into waterways, excavating streambeds into small canyons, or burying them under mountains of tailings.
Industrial mining, both within the watershed and at Butte, led to the construction of major hydropower dams and reservoirs on the Missouri River near Helena.

The timber industry grew in response to mining and railroad expansion. Never of the

magnitude of lumber operations west of the Continental Divide, the local timber industry of the Rocky Mountain Upper Missouri contributed considerably to deforestation, erosion, and damage to streams and fisheries in logged areas. Agriculture began in the watershed in the 1850s, when traders drove herds from the Oregon Trail onto the ranges of the Beaverhead and Big Hole valleys. Stock-raising, both cattle and sheep, remained a major activity in the valleys throughout the late nineteenth and twentieth centuries. Large-scale crop agriculture began with the mining boom of the 1860s, particularly in the fertile Gallatin Valley where hay, grain, and vegetables flourished. With the expansion of irrigation systems during the 1890s and 1900s, numerous small tributaries of the Missouri were dammed or diverted onto crop and pastureland. The effects of modem agricultural and stock-raising practices on the lands of the Upper Missouri watershed included the introduction of nonnative species, overgrazing, destruction of wildlife habitat, eradication of predators, and irrigation-related erosion and dewatering of streams.

Upper Yellowstone River Watershed

During the Prehistoric era (12,000 BP to 1500 A.D.), nomadic big game hunters frequented the Upper Yellowstone River Basin. By 5,000 BP the people who entered the area had adopted a semi-nomadic seasonal lifestyle of hunting and gathering. Both Columbia Plateau and Plains peoples made use of the upper watershed. By the Protohistoric era (1500 to 1800), several Plateau peoples regularly visited the Upper Yellowstone. Of these, only the Mountain Sheepeater Shoshone, or Tukudika, established a permanent presence there. Other Shoshone and Bannock bands traveled through the area along the Bannock Trail from the Snake River headwaters to bison-hunting grounds on the Great Plains. The Salish, Pend d'Oreille, Nez Perces, and other Plateau tribes also followed traditional trails through the watershed to hunt buffalo. Among the Plains peoples who frequented the Upper Yellowstone were the Crow, who had migrated from the east by 1600, and the Blackfeet and Sioux who were regular visitors to the Upper Yellowstone by the first half of the eighteenth century. During this Protohistoric era, traditional tribal subsistence and economic patterns, warfare, and intertribal relations were transformed by the acquisition of horses and the depopulation of tribes by epidemics of Euro-American diseases.

During the preindustrial period (1775 to 1864), Euro-American trappers, traders, miners, and emigrants entered the Upper Yellowstone watershed. The fur trade decimated fur-bearing animal populations -- especially beaver -- and introduced guns, trade goods, and alcohol to the tribes, thereby disrupting tribal culture and traditional resource use. During the early 1860s, prospectors entered the Upper Yellowstone to search for gold, diverting and fouling streams, exterminating local game populations, and clearcutting hillsides in the vicinity of the mining camps. These activities continued and intensified during the modem era (1864 to 1940) with the discovery of gold lodes at Crevasse Creek and Bear Gulch in the 1870s and one development of coal mines at Aldridge and Electric by the 1890s.

Although coal-mining declined in the early 1900s, metals mining and milling activities have continued up to the present. Placer mining also occurred throughout the modem era, including hydraulicking and attempts at dredging on Emigrant Creek near Chico in the 1940s. Placering, particularly hydraulicking and dredging, discharged large amounts of sediment into streams and destroyed streambeds and banks. Hardrock mining and mineral processing, including the operation of an arsenic plant, released mine and mill wastes into streams and soil.

Supported first by the local mining population and later by tourist traffic and railroad access to more distant markets, agriculture in the Upper Yellowstone consisted primarily of

stock ranching and hay and grain crops, with a few small-scale irrigation projects in the watershed. With the creation of Yellowstone Park in 1872, a large portion of the Upper Yellowstone watershed was reserved from settlement. Attempts at managing the park's vegetation and wildlife resources during the modem era often created even more severe problems in terms of wildlife populations and range, and timber protection. Similar problems occurred on national forestlands within the watershed.

Clark Fork River Watershed

During the prehistoric era (12,000 BP to 1500 A.D.), inhabitants of the Interior Columbia River Basin subsisted through fishing, hunting, and gathering activities that eventually evolved into a semi-nomadic seasonal round. With some regional variations, this subsistence pattern and associated ways of life became common among all the people of the Columbia Plateau, including the Salish, Kootenai, and Pend d'Oreille tribes of the Clark Fork watershed. During the protohistoric era (1500 to 1800), the acquisition of horses and the depopulation of tribes by European diseases transformed traditional subsistence and economic patterns, warfare, and intertribal relations.

During the preindustrial period (1775 to 1864), Euro-American trappers, traders, missionaries, and miners entered the Clark Fork watershed. The fur trade decimated fur-bearing animal populations -- especially beaver -- and introduced guns, trade goods, and alcohol to the tribes, thereby disrupting tribal culture and traditional resource use. Christianity and the agrarian lifestyle advocated by missionaries (beginning in the 1840s) further altered traditional tribal ways of life.

In the early 1860s, thousands of prospectors entered the Clark Fork watershed diverting and fouling streams, exterminating local game populations, and clearcutting hillsides in the vicinity of the mining camps. These activities continued and intensified during the modem era (1864 to 1940), particularly at Butte, where one of the world's great hardrock mining districts emerged. Massive amounts of mine, mill, and smelter wastes, including toxic fumes, were released into the Upper Clark Fork watershed around Butte and Anaconda for nearly a century. Philipsburg was also an important mining district and, along with dozens of small but significant hardrock districts around the watershed, it discharged considerable quantities of mine and mill wastes. Large-scale placering occurred throughout the Clark Fork Basin where hydraulics, draglines, and dredges released tons of sediments into waterways and destroyed streambeds.

The clear-cutting and log-driving practices of the timber industry, particularly in the Blackfoot and Bitterroot drainages, and along the Lower Clark Fork, resulted in deforestation, erosion, and damage to streams and fisheries. Existing dams on the Clark Fork and the Blackfoot near Missoula were originally constructed for sawmills in the area. The Clark Fork was also dammed near Thompson Falls and the river's natural channel was otherwise altered by the roadbeds of two transcontinental rail lines. Large-scale commercial agriculture in the Deer Lodge, Flint Creek, and Bitterroot valleys led to the construction of numerous dams, reservoirs, and canals along tributaries of the Clark Fork.

Flathead River Watershed

During the prehistoric era (12,000 BP to 500 A.D.), inhabitants of the Interior Columbia River Basin subsisted through a combination of fishing, hunting, and gathering activities that eventually evolved into a semi-nomadic seasonal round. With some regional variations, this subsistence pattern and associated ways of life became common among all the people of the Columbia Plateau, including the Salish, Kootenai, and Pend d'Oreille tribes of the Flathead watershed. During the protohistoric era (1500 to 1800), the acquisition of horses and the depopulation of tribes by European diseases transformed traditional subsistence and economic patterns, warfare, and intertribal relations.

During the preindustrial period (1775 to 1864), Euro-American trappers, traders, missionaries, and prospectors entered the Flathead watershed. The fur trade decimated fur-bearing animal populations -- especially beaver -- and introduced guns, trade goods, and alcohol to the tribes, thereby disrupting tribal culture and traditional resource use. Christianity and the agrarian lifestyle advocated by missionaries (beginning in the 1840s) further altered traditional tribal ways of life.

Among the major effects of modem settlement in the Flathead watershed (1865 to 1900) were those caused by agriculture and the timber industry. Agricultural development of the Lower Flathead during the early 1900s led to the construction of the Flathead Irrigation Project, a major irrigation and power generation system. The project included a major hydropower dam on the Flathead River, a pumping station, and numerous storage dams, reservoirs, and canals serving an irrigated area of more than 100,000 acres. Operation of the irrigation system frequently caused dewatering, erosion, and sedimentation problems in streams. Other agricultural practices led to the introduction of nonnative plant species, overgrazing of some ranges, and alteration or destruction of wildlife habitat. During the 1890s to 1925 timber boom, large-scale clearcutting resulted in deforestation, erosion, and sedimentation of streams. Log-driving also damaged streams and rivers by scouring their beds and eroding banks. Sawdust wastes from mills damaged fisheries and aquatic habitat. Toxic substances used at the Somers tie-treatment plant escaped into the soil. That site is currently the subject of a major environmental remediation effort.

Kootenai River Watershed

During the prehistoric era (12,000 BP to 500 A.D.), inhabitants of the Interior Columbia River Basin subsisted through fishing, hunting, and gathering activities that eventually evolved into a semi-nomadic seasonal round. With some regional variations, this subsistence pattern and associated ways of life became common among all the people of the Columbia Plateau, including the Kootenai tribe who were the primary inhabitants of the Kootenai River watershed. During the protohistoric era (1500 to 1800), the acquisition of horses and the depopulation of tribes by European diseases transformed traditional subsistence and economic patterns, warfare, and intertribal relations.

During the preindustrial period (1775 to 1864), Euro-American trappers, traders, missionaries, and miners entered the Upper Snake watershed. The fur trade decimated fur-bearing animal populations -- especially beaver -- and introduced guns, trade goods, and alcohol to the tribes, thereby disrupting tribal culture and traditional resource use. Christianity and the agrarian lifestyle advocated by missionaries (beginning in the 1840s) further altered traditional tribal ways of life. During the late 1850s and early 1860s, hundreds of prospectors poured into the Upper Kootenai to mines on Wild Horse Creek, diverting and fouling streams, exterminating local game populations, and clearcutting hillsides in the vicinity of the mining camps. These activities continued and intensified during the modem era (1864-1940) with the discovery of important silver-lead-zinc deposits near Kootenay Lake in British Columbia.

A world-class hardrock mining district emerged where industrial mining and mineral processing released great quantities of mine, mill, and smelter wastes, including toxic smelter fumes, in the Lower Kootenai watershed. Several hydropower dams were constructed on the Kootenai River to provide power for the mining industry. Although no comparable mining operations existed in the American Kootenai, on a few tributaries high-volume hydraulic placers and dragline operations excavated streambeds, and mill tailings and hardrock mine wastes added to soil and water degradation.

The forests of the Kootenai watershed were subject to extensive lumbering from 1900 to 1925. Clear-cutting and log-driving practices resulted in deforestation, erosion, and damage to streams and fisheries. The Kootenai forests also were heavily damaged during the 1910 fires that burned through much of the watershed. Commercial agriculture in the Bonners Ferry and Lower Kootenai area led to the construction of a major reclamation project, involving 53 dikes to channel and control the Kootenai's waters.

Upper Snake River Watershed

During the prehistoric era (12,000 BP to 1500 A.D.), inhabitants of the interior Columbia River Basin subsisted through a combination of fishing, hunting, and gathering activities that eventually evolved into a semi-nomadic seasonal round. With some regional variations, this subsistence pattern and associated ways of life became common among all the people of the Columbia Plateau, including the Shoshone, Bannock, and Northern Paiute tribes of the Upper Snake River watershed. During the protohistoric era (1500 to 1800), the acquisition of horses and the depopulation of tribes by Euro-American diseases transformed traditional subsistence and economic patterns, warfare, and intertribal relations.

During the preindustrial period (1775 to 1864), Euro-American trappers, traders, missionaries, emigrants, and miners entered the Upper Snake watershed. The fur trade decimated fur-bearing animal populations -- especially beaver -- and introduced guns, trade goods, and alcohol to the tribes, thereby disrupting of tribal culture and traditional resource use. Christianity and the agrarian lifestyle advocated by missionaries (beginning in the 1840s) further altered traditional tribal ways of life. During the 1840s and 1850s, Oregon- and California-bound traffic on the emigrant trails consumed much of the vegetation and wildlife along the Upper Snake, in direct competition with tribal use of those resources.

In the early 1860s, thousands of prospectors poured into the Boise Basin and Owyhee Mountains, diverting and fouling streams, exterminating local game populations, and clearcutting hillsides in the vicinity of the mining camps. These activities continued and intensified during the modem era (1864-1940) as industrial mining took hold with the completion of railroads through the watershed. High-volume hydraulic placers and dredge operations destroyed entire streambeds. Mill tailings and hardrock mine wastes added to soil and water degradation in most mining districts, while smelters issued toxic air- and water-borne emissions in the Wood River Valley. The clear-cutting and log-driving practices of the timber industry in the Boise and Payette drainages, resulted in deforestation, erosion, and damage to streams and fisheries. Large-scale commercial agriculture spawned major dam and river diversion projects on the Upper Snake and its tributaries beginning in the late 1890s, altering the rivers' natural flows to irrigate hundreds of thousands of formerly arid acres. Extensive cultivation and stock-growing also destroyed native vegetation, introduced nonnative species, overgrazed ranges, and destroyed wildlife habitat and predator populations.

Salmon River Watershed

During the prehistoric era (12,000 BP to 1500 A.D.), inhabitants of the Interior Columbia River Basin subsisted through fishing, hunting, and gathering activities that eventually evolved into a semi-nomadic seasonal round. With some regional variations, this subsistence pattern and associated way of life became common among all the people of the Columbia Plateau, including the Lemhi Shoshone, Mountain Sheepeater Shoshone, and Nez Perces of the Salmon River watershed. During the protohistoric era (1500 to 1800), the acquisition of horses and the depopulation of tribes by European diseases transformed traditional subsistence and economic patterns, warfare, and intertribal relations.

During the preindustrial period (1775 to 1864), Euro-American trappers, traders, missionaries, and miners entered the rugged and remote Salmon River watershed. The fur trade decimated fur-bearing animal populations -- especially beaver -- and introduced guns, trade goods, and alcohol to the tribes, thereby disrupting tribal culture and traditional resource use. The religion and agrarian lifestyle advocated by missionaries (beginning in the 1840s) further altered traditional tribal ways of life. In the early 1860s, thousands of prospectors poured into the Salmon River country, diverting and fouling streams, exterminating local game populations, and clearcutting hillsides in the vicinity of the mining camps. These activities continued during the modem era (1864 to 1940) and intensified in some areas as industrial mining methods were introduced to the watershed. Where high-volume hydraulic placers and dredge operations were used, huge sediment loads were discharged into streams and entire streambeds excavated. Mill tailings and hardrock mine wastes added to soil and water degradation, particularly in the region between the Middle and South Forks. The only large-scale agriculture in the watershed occurred with the cultivation of lands below the Little Salmon and with ranching in the Lemhi Valley. Overgrazing occurred in the southern and eastern portions of the watershed and stock growers' concerns led to an aggressive predator control program after the turn of the century.

Clearwater River Watershed

During the prehistoric era (12,000 BP to 1500 A.D.), inhabitants of the Interior Columbia River Basin subsisted through fishing, hunting, and gathering activities that eventually evolved into a semi-nomadic seasonal round. With some regional variations, this subsistence pattern and associated ways of life became common among all the people of the Columbia Plateau, including the Nez Perces who were the primary inhabitants of the Clear-water River watershed. During the protohistoric era (1500 to 1800), the acquisition of horses and the depopulation of tribes by European diseases transformed traditional subsistence and economic patterns, warfare, and intertribal relations.

During the preindustrial period (1775 to 1864), Euro-American trappers, traders, missionaries, and miners entered the Clear-water watershed. The fur trade decimated fur-bearing animal populations -- especially beaver -- and introduced guns, trade goods, and alcohol to the tribes, thereby disrupting tribal culture and traditional resource use. Christianity and the agrarian lifestyle advocated by missionaries (beginning in the 1840s) further altered traditional tribal ways of life. In the early 1860s, thousands of prospectors poured into the Clear-water Valley, diverting and fouling streams, exterminating local game populations, and clearcutting hillsides in the vicinity of the mining camps.

These activities continued and intensified during the modern era (1864 to 1940), as industrial mining took hold. High-volume hydraulic placers and dredge operations destroyed entire streambeds. Mill tailings and hardrock mine wastes added to soil and water degradation in most mining districts. Major timber industry operations in the watershed -- including massive clear-cutting and log drives, and the construction of a hydropower dam on the river at Lewiston -- resulted in deforestation, erosion, channelization, and other damage to streams and fisheries. Watershed forests were also involved in the 1910 fires, which were particularly severe near Elk City and along the Lochsa River. Extensive cultivation and stock growing along the lower Clear-water damaged native vegetation, introduced nonnative species, and resulted in the overgrazing of some ranges.

Coeur d'Alene River Watershed

During the prehistoric era (12,000 BP to 1500 A.D.), inhabitants of the Interior Columbia River Basin subsisted through fishing, hunting, and gathering activities that eventually evolved into a semi-nomadic seasonal round. With some regional variations, this subsistence pattern and associated ways of life became common among all the people of the Columbia Plateau, including the Coeur d'Alene tribe who were the primary inhabitants of the Coeur d'Alene River watershed. During the protohistoric era (1500 to 1800), the acquisition of horses and the depopulation of tribes by European diseases transformed traditional subsistence and economic patterns, warfare, and intertribal relations.

During the preindustrial period (1775 to 1864), Euro-American trappers, traders, missionaries, emigrants, and miners entered the Upper Snake watershed. While the fur trade may not have eradicated the fur-bearing animal population of the Coeur d'Alene to the extent of other watersheds, the trade did have the same effects on the Coeur d'Alene tribe. It introduced guns, trade goods, and alcohol to them and caused disruption of their culture and traditional resource use. Christianity and the agrarian lifestyle advocated by missionaries (beginning in the 1840s) further altered traditional tribal ways of life. The construction of the Mullan Road through the watershed during 1859- 1860, its subsequent use by large numbers of prospectors and freighters during the Idaho and Montana gold rushes, and the settlement it attracted would have affected the vegetation and wildlife life along the route.

Although some mining occurred during the early 1860s, it was not until the modem era (1865-1940) that major mining activity transformed the watershed. In the early 1880s, thousands of prospectors poured into the Coeur d'Alene country, diverting and fouling streams, exterminating local game populations, and clearcutting hillsides in the vicinity of the mining camps. The placer camps played out by the mid-l 880s, to be replaced by one of the world's great hardrock mining districts, encompassing the South Fork of the watershed. Industrial mining and mineral processing released vast quantities of mine, mill, and smelter wastes, including toxic smelter fumes, along the South Fork of the Coeur d'Alene and its tributaries. Placer mining, including dredges and hydraulics, continued to discharge sediments and bury streambeds under tons of gravel and boulders. The construction of railroads along the Coeur d'Alene and St. Joe Rivers very likely involved the channelization of some watercourses.

The Coeur d'Alene and St. Joe drainages were also the scene of some of the country's largest timber harvesting and milling operations. Clear-cutting and log-driving in the Coeur d'Alene and St. Joe watersheds resulted in deforestation, erosion, channelization, and other

damage to streams and fisheries. The forests of the Coeur d'Alene were also heavily damaged during the 1910 fires, when large portions of the Coeur d'Alene and St. Joe National forests burned, particularly along the lower Coeur d'Alene River, the North Fork, and the headwaters area of the Coeur d'Alene and St. Joe rivers.

THE COLUMBIA PLATEAU

Bounded by the Cascade Mountains of Washington and Oregon states to the west, by the Rocky Mountains of Northern Idaho to the east, by the desert lands of the Nor-them Great Basin in southern Oregon to the south, and by the Okanogan Highlands in north and central Washington to the north, this vast area comprises what has been known for many years as the Columbia Plateau. This region was created through a combination of floods, glacier recession, and volcanic eruptions. The Cascade Mountains serve as a barrier to moisture for these lands which means that most of the water for this vast area comes from the melting snows of spring, leaving a parched desert look to the landscape by late summer.

People have lived on some part of the Columbia Plateau from 13,000 BP. Until about 10,000 BP, the climate of the area supported megafauna which the first plateau peoples hunted for a number of years. With climate stabilization that occurred on the plateau about 7,000 years ago, the large game disappeared with the culture of the people who lived there assuming a steady rhythm.

Plateau culture was generally uniform. Fishing, hunting, and gathering, not agriculture, sustained these people over the millennia. A discemable cycle pattern of life began to develop as of 3,000 to 2,000 BP. During the winter months, these people lived in pithouse villages in sheltered locations along the Columbia River and its tributaries, surviving on stored fish, roots, and berries as well as some meat. In the spring, the villages would break into small bands to trek to the rocky, arid uplands in the case of those living in the Scablands area and to the meadows in the forested areas of the Cascade, Blue, and Rocky mountains. In June with the start of the first of several salmon runs of the season some groups, mainly the men, would meet at sites along the Columbia River and its tributaries to harvest the salmon bounty from the river.

By the late eighteenth century this cycle of life had been drastically disrupted with the arrival of the horse, the rifle, and disease. The first two affected peoples' daily lives to be sure. But the greater attack on the social fabric and way of life for the Plateau peoples, however, was disease that Euro-Americans brought either personally or through other native peoples to the Columbia River Basin. It has been estimated that a smallpox epidemic in the 1780s halved the population of the native peoples on the Columbia Plateau. Such population decimation suggests that the units of people needed to gather, forage, fish, and hunt for survival had altered greatly by the beginning of the nineteenth century, an alteration that proved irreversible in the face of the coming of the Euro-American.

The nineteenth century began with the 1804-l 806 expedition of Lewis and Clark to the Pacific Northwest that introduced the region to the Americans who soon went in to competition with the Canadians and the English in the fur trade. This first wave of Euro-American presence was followed by Protestant and Catholic missionaries who seriously tried to farm in the region for the first time and also introduced sheep and cattle. When the Oregon Trail migrations began in the 1840s by people mostly from the Midwest, few settlers stayed east of the Cascades in this desert looking land for they were headed for the Willamette Valley, a place well watered and forested, more like the land that they had left.

With the settlement of most Native Americans who lived on the Columbia Plateau on to reserved lands by the 1860s along with the discovery of gold in Canada, northeastern Washington, Idaho, and the Blue Mountains in Oregon, thousands of people headed east of the Cascades, some to seek their fortunes in the gold camps, others to supply them by means of the cattle and sheep that also went east in vast numbers.

The mining enterprises that actually took place on the Columbia Plateau from the 1860s to 1940 were not the major industrial undertakings that occurred in this same period in Idaho and Montana. Those mining sites on the Columbia Plateau were mainly concentrated in the Blue Mountains in northeastern Oregon, in north central and northeastern Washington state in Okanogan, Stevens, Ferry, and Pend Oreille counties, and finally in the Cascade Mountains around the Blewett Pass area.

Ranching was much more widespread across eastern Oregon and Washington from the 1860s. The abundance of bunchgrass on public domain lands along with the demands of the mining camps encouraged the first stockmen. Between the 1860s and the 1880s, they grazed their animals relatively free from interference from either the government or from the farmer. Hundreds of cattle and sheep were especially prevalent on the ranges in the watersheds of eastern Oregon. There many thousands of these animals in eastern Washington, but the dominance of the stockman passed more quickly there with the coming of the homesteader than in eastern Oregon where in the cattle baron remained supreme well into the twentieth century.

Following the Civil War, the railroad companies became interested in the Northwest, built track by means of land grants from the public domain, and provided a means of transportation for people to settle. This new mode of transport along with the discovery in the late 1870s that the bunchgrass on the ranges of eastern Washington and Oregon grew in rich volcanic soil that seemed to yield endless bushels of wheat by the end of the nineteenth brought even more settlers, mainly from the Midwest, to settle the lands of the Palouse, Walla Walla, the Big Bend, and even Yakima Valley.

Everyone knew that major irrigation projects would be needed to take advantage of the potential of this land. Such endeavors did not occur until after the 1940s. There were a few projects down the Deschutes River near Prineville. However, most of the major irrigation undertakings that occurred before 1940 other than small private ditches took place in the Yakima and Okanogan valleys with Bureau of Reclamation projects. Some people reported that at least in the Yakima Valley the salmon migration was being affected by these irrigation ditches. But for the most part, it would not be until the construction of the dams after World War II that the farmer would truly thrive and the salmon would meet its demise.

Finally initial logging took place for basic homestead needs followed by the mines and railroad construction, the last of which consumed probably the most wood of any enterprise in the Pacific Northwest before World War II. Logging for profit began to take place in the late nineteenth century with the arrival of the railroad in northeastern Washington, down the Deschutes River and in the Blue Mountains.

Upper Columbia River

During the prehistoric era (12,000 BP to 1500 A.D.), inhabitants of the Upper Columbia River area (from the Canadian border south along both sides of the river through the Big Bend country to Priest Rapids) subsisted by means of a combination of fishing, hunting, and gathering on a seasonal-cyclical basis. This means of living became associated with the Kalispel, Pend Oreille, Wenatchi, and Columbia peoples who lived on this part of the Columbia Plateau.

Into the protohistoric period and by the middle of the eighteenth century, the horse and the rifle had been introduced to those people who lived in the eastern part of the region. All of these people who lived in the Upper Columbia River region met with great population decimation because of Euro-American disease, which altered their subsistence way of life.

During the preindustrial period (1775 to 1865), fur traders, missionaries, miners, and ranchers came to the Upper Columbia River. Most of the focus of the Euro-Americans' activities in trapping, mining, and missionary work was in the northeastern part of the area on the Colville River and near Kettle Falls while a few ranchers, former fur traders by the 1850s, began bringing stock to the southern part of Stevens County to supply to mines of Idaho. These activities brought the decimation of much of beaver in the area, the introduction of livestock and some farming around the trading posts and the missions at Kettle Falls as well as the influx of hundreds of people to the gold strikes at Colville on the Upper Columbia in the 1850s. The reduced Native American population experienced further alteration in culture with the introduction of the agrarian way of life at Christian missions in addition to increased smallpox and measles' epidemics across the Columbia Plateau in the 1830s, 1840s, and 1850s.

It was not until the industrial period (1865 to 1940) that more intensive land use occurred in this region. During this period, Americans came here for several reasons, namely ranching, mining, logging and farming. By the 1880s, most of the native peoples had been removed to the Colville Indian Reservation, which extended across both the Upper Columbia River region and the Okanogan River watershed. This meant that more lands were open for homesteading and ranching. The ranchers were the first to "settle" in any major way with their sheep and cattle herds that began grazing across the Big Bend country in the 1860s. Eventually, the stockmen would lose out to the homesteaders but not until the 1880s with the coming of the railroads.

Mining occurred in Ferry and Stevens counties starting in the late 1880s and continued into the twentieth century. More than just placer mining, the industrial undertakings here were never as massive as those in Idaho and Montana. However, dredging and logging to supply to mines would have altered the landscape. With the construction of railroads at the beginning of

the twentieth century, logging operations began to work more intensively, especially within the boundaries of the Colville Indian Reservation. Finally, railroad construction across the Big Bend country encouraged the migration of homesteaders -- mostly from the Midwest, a few from Russia and Germany -- to cultivate wheat and other cereal crops on the bunchgrass lands that the stockmen had taken advantage of in previous decades. While the agricultural potential of the area was realized from the very beginning through dry farming, everyone realized that irrigation on a massive scale would bring this country to life. The construction of the Grand Coulee Dam began in the 1930s. The dam would bring thousands more acres of land under cultivation.

Pend Oreille River Watershed

During the prehistoric era (12,000 BP to 1500 A.D.), inhabitants of the Pend Oreille River watershed in the northeastern section of the modem-day area of Pend Oreille County in Washington state subsisted by means of fishing, hunting, and gathering on a seasonal-cyclical basis. This means of living became associated with the Kalispel people who lived on this part of the Columbia Plateau.

Into the protohistoric period and by the middle of the eighteenth century, the horse and the rifle had been introduced to those people who lived in this region. By 1800 the population of all of these people who lived in the Pend Oreille River region had been greatly decimated because of Euro-American disease, which altered their subsistence way of life.

During the preindustrial period (1775 to 1865), fur traders, missionaries, and miners came to the Pend Oreille River watershed. Fur traders arrived. first, traversing the watershed until the 1840s. They were followed by the missionary Jesuits in the 1840s, who taught the Kalispel some farming methods. Finally, many more miners arrived in the late 1850s when gold was discovered in the Metaline Falls area. These activities brought the decimation of much of beaver in the area, some farming around the Jesuits' mission in the watershed, as well as the influx of hundreds of people to the gold strikes in Metaline Falls. The reduced Native American population experienced further alteration in culture with the introduction of the agrarian way of life at the missions in addition to increased smallpox and measles' epidemics across the Columbia Plateau in the 1830s, 1840s, and 1850s.

It was not until the industrial period (1865 to 1940) that more intensive land use occurred in this region largely due to the presence of the railroads. During this period, Americans came here for several reasons, namely for mining and logging. The Kalispel people continued to hunt, fish, and forage on the lands within the watershed never having signed a treaty with the U.S. government. Their freedom and their lands came to an end with the construction of the railroads into this watershed in the 1890s which encouraged those to migrate who were interested in mining as well as logging. Timber mills opened on both sides of the Pend Oreille River first from the south at Newport and then to the north at Ione to support the railroad. Support of railroad construction was followed by the coming of the timber industry at the turn of the twentieth century when more timber mills opened Ione, Dalkena, and Ruby. The mining districts at Metaline Falls and Newport produced lead and zinc on an annual basis from 1900 until after World War II, but they were never the vast, major industrial under&kings of the Idaho and Montana mines. There were flotation mills and concentration plants at these mines. The Bureau

of Indian Affairs along with the U.S. Forest Service provided a permanent federal government presence in the twentieth century.

Spokane River Watershed

During the prehistoric era (8,000 BP to 1500 A.D.), inhabitants of the Spokane River watershed subsisted by means of fishing, hunting, and gathering on a seasonal-cyclical basis. This means of living became associated with the Upper, Middle, and Lower Spokane peoples who lived on land in the area of the Idaho and Washington state border and on both sides of the Spokane River to its confluence with the Columbia.

Into the protohistoric period and by the middle of the eighteenth century, the horse and the rifle had been introduced to the people who lived in the Spokane River watershed. All of the Spokane people met with great population decimation by 1800 because of Euro-American disease, which altered their subsistence way of life.

During the preindustrial period (1775 to 1865), fur traders, missionaries, miners, and ranchers passed through and settled in the Spokane River watershed. Most of the Euro-Americans' activities focused on trapping, mining, missionary work, and ranching. The watershed never was a major habitat for fur-bearing mammals, but the Spokane House, located in this watershed from 18 10, proved to be a trading center for pelts from the mountains to the east as well as a site for some kitchen gardens. No mines were located within this watershed during this era. However, a few ranchers, former fur traders by the 1850s, began bringing stock to the watershed to supply mines in Idaho and those in the Colville area. Missionaries worked among the Spokane peoples as early as the 1830s, teaching these Native Americans farming techniques. These activities brought the introduction of livestock and some farming around the trading post and the mission as well as the influx of hundreds of people crossing the watershed on their way to the gold strikes in the 1850s at Colville on the Upper Columbia and to Idaho in the 1860s. The reduced Native American population experienced further alteration in culture with the introduction of the agrarian way of life at the missions in addition to increased smallpox and measles' epidemics across the Columbia Plateau in the 1830s, 1840s, and 1850s.

During the modem era (1865 to 1940) in the decades after the Civil War, fierce competition among railroad companies brought thousands of settlers to the Northwest, literally putting Spokane Falls on the map overnight. Just to the north of the Palouse and to the east of the Big Bend country with their bountiful wheat fields, Spokane became a major trading center for the Inland Empire by the close of the twentieth century. Within the watershed itself, some irrigation brought with it the successful cultivation and harvest of fruit in the early twentieth century from orchards located to the east of the city of Spokane and to the west along the Spokane River. A Presidential executive order in 1880 had created a reservation for the Spokane

people within the watershed. But ultimately, the Middle and Upper Spokane peoples left the area and moved to the lands in Idaho that had been removed for the Coeur d'Alene peoples while the Lower Spokane remained in the watershed. Farming on allotted lands was followed by the first of several large timber sales on the reservation in 1918.

Lower Okanogan River Watershed

During the prehistoric era (8,000 BP to 1500 A.D.), inhabitants of the Lower Okanogan River watershed subsisted by means of fishing, hunting, and gathering on a seasonal-cyclical basis. This means of living became associated with the Okanogan, Sanpoil, Colville, and Lake peoples who lived on the edge of the Columbia Plateau.

Into the protohistoric period and by the middle of the eighteenth century, the horse and the rifle had been introduced to those people who lived in the eastern and southeastern parts of the Columbia Plateau. The inhabitants of the Okanogan River watershed certainly knew of the existence of the horse and rifle, but these technological changes were not as much a part of their lives. But like all of the people who lived on the Columbia Plateau in the eighteenth century, those who lived in the Lower Okanogan River watershed met with great population decimation because of Euro-American disease, which altered their subsistence way of life.

During the preindustrial period (1775 to 1865), fur traders, missionaries, miners, and a few ranchers came to the Okanogan River watershed. While most of the focus of the Euro-Americans' activities in trapping, mining, and missionary work crossed the watershed on the Okanogan River between its mouth and the Canadian border, a few ranchers, former fur traders by the 1850s, began bringing stock to the southern part of Okanogan County to supply to mines on Fraser River in Canada, those in the Colville region, and in Idaho. Fort Okanogan became a trading center especially for pelts and skins from Canada, but also for the fur-bearing mammals within the watershed itself. The coming of the Euro-American brought the decimation of much of beaver in the area, the introduction of livestock and some farming around the trading posts and the missions near Fort Okanogan, as well as the influx of hundreds of people to the gold strikes in Canada and at Colville on the Upper Columbia in the 1850s. The reduced Native American population experienced further alteration in culture with the introduction of the agrarian way life at the missions in addition to increased smallpox and measles' epidemics across the Columbia Plateau in the 1830s, 1840s, and 1850s.

During the modem era (1865 to 1940), ranching, mining, logging, and farming were the chief land uses that occurred in this watershed. Much of the settlement and use of the lands here had to do with the determination of lands for the Okanogan people who lived within the watershed. Although executives orders in 1872 and 1879 created reserved lands, the pressure from potential American settlers prompted renegotiation and entry by the whites on to lands originally set aside for these Native Americans. Mining pressures prompted to first change in the boundaries as discoveries of silver and other minerals in the Conconully area in the 1880s

were made. The northern part of the reservation was also opened to white settlement when gold was discovered and prospected for in the Chesaw, Myers, and Mary Ann Creek areas. The Republic area became a mining center for a number of years.

Stockmen from the Yakima Valley had been grazing their sheep and especially their cattle across the southern part of the watershed since the 1870s. The lands on the southern part of the Colville Reservation were especially sought after by the sheepherder (lands in the Nespelem Valley) and by the cowboy (southwest of Omak Lake). However, severe winters in 1880-l 88 1 and 1889-l 890 resulted in such terrible losses in stock that many never really fully recovered.

Fruit orchards appeared by the end of the nineteenth century and a Bureau of Reclamation project aided in irrigating these arid lands. Finally, timber production began on an industrial scale in the early twentieth century with the arrival of the railroad. Major logging first occurred on Moses and Omak Mountains.

Wenatchee River Watershed

During the prehistoric era (11,000 BP to 1500 A.D.), inhabitants of the Wenatchee River watershed subsisted by means of a combination of fishing, hunting, and gathering on a seasonal-cyclical basis. This means of living became associated with the Wenatchi people who lived on the Columbia Plateau.

Into the protohistoric period and by the middle of the eighteenth century, the horse and the rifle had been introduced to those people who lived in the eastern and southeastern parts of the Columbia Plateau. The inhabitants of the Wenatchee River watershed knew of the existence of the horse and rifle, but these technological changes were not as much a part of their lives as others on the Plateau. But like all of the people who lived on the Columbia Plateau in the eighteenth century, those who lived in the Wenatchee River watershed met with great population decimation because of Euro-American disease, which altered their subsistence way of life.

During the preindustrial era (1775 to 1865), the fur traders, missionaries, ranchers, and miners passed by this watershed. Its location contributed to its isolation until the late nineteenth century. The Native Americans who lived here were not removed from their lands like other Plateau peoples were until well into the modem era.

The arrival of the Great Northern Railway in 1892 brought this watershed and its people into the mainstream for the coming decades. The city of Wenatchee became a trading center for trade goods from points north and east in Washington state. Supplies for the gold and silver mining camps in the Okanogan River watershed were shipped from this area. Most of the Wenatchi people eventually lost out to the many new settlers, mostly from the Midwest, but also from Italy, China, and Japan (the Asians worked the mines). The tribe moved to the Colville Indian Reservation with a few of the members remaining behind on allotted lands.

Irrigation in the early twentieth century encouraged fruit growers. Wenatchee apples became world famous.' Grapes were cultivated around Lake Chelan. Farming proved to be a more successful venture over the years than the efforts at mining. The Holden Mine finally produced ore in the late 1930s after over 40 years of development. Placer and quartz mining took place in the Blewett Pass area in the twentieth century as well. The logging that occurred prior to World War II was for local consumption and for boxes to pack fruit produced from orchards within the watershed.

Yakima River Watershed

During the prehistoric era (10,000 BP to 1500 A.D.), inhabitants of the Yakima River watershed subsisted by fishing, hunting, and gathering on a seasonal-cyclical basis. This means of living became associated with the Yakima people who lived on the Columbia Plateau.

Into the protohistoric period and by the middle of the eighteenth century, the horse and the rifle had been introduced to those people who lived in the eastern and southeastern parts of the Columbia Plateau. The inhabitants of the Yakima River watershed knew of the existence of the horse and rifle, but these technological changes were not as much a part of their lives as others on the Plateau. But like all of the people who lived on the Columbia Plateau in the eighteenth century, those who lived in the Yakima River watershed met with great population decimation because of Euro-American disease, which altered their subsistence way of life.

During the preindustrial era (1775 to 1865), fur traders and miners passed through this watershed, but it was the missionaries who first came to stay in the 1830s followed by the military in the 1850s and then the ranchers in the early 1860s. At the missions, some stock raising, farming, and irrigation took place on Ahtanum Creek. Following the 1855 treaty in which the Yakima people agreed to occupy reserved lands within the watershed, the Yakima War broke out because of, among other things, miners heading north who were trespassing on the tribe's lands. Following the end of the conflict, Ft. Simcoe was established in the Yakima Valley between Simcoe and Toppenish creeks. During and following the war, miners continued to cross the watershed as they headed north to the mining camps on Fraser River in British Columbia and in north central and northeastern Washington, and as they headed east to the Blue Mountains of Oregon and the Rocky Mountains of Idaho and Montana. In 1860 the first major herds of stock were introduced into the Yakima River watershed, most of which, both sheep and cattle, died in the severe winter of 1860- 186 1.

During the modem era (1865 to 1940), ranchers, miners, railroad companies, and farmers all occupied and used lands within the Yakima River watershed. Initially, the cattlemen dominated but were displaced by the sheepmen in the 1870s. The cattlemen moved their herds east across the Columbia River to the Big Bend country or north to the Okanogan River watershed. Between 1880 and the end of the century, hundreds of thousands of sheep grazed in the Yakima River watershed, so much so that their presence was one of the main reasons that the Mt. Ranier Forest Reserve was created in 1902. Competition between these stockmen and the farmer began with the arrival of the railroads in the watershed in the 1880s. New and better transport to market encouraged emigration of people, mainly from the Midwest, in these years.

Water for crops had always been a problem in this watershed. Private irrigation undertakings for the increasing number of apple orchards in the late nineteenth century turned into public projects in the twentieth century with the creation of the Bureau of Reclamation. In the Northwestern part of the watershed across the Kittitas Valley and even further north to Blewett Pass were gold discoveries and placer mining as early as the 1870s. By the end of the century, stamp mills had been set up in the Swauk, Cle Elum, and Peshastin mining districts. The discovery of coal in the Cle Elum area in the 1880s opened mines that operated steadily until the 1960s.

Lower Snake River Watershed

During the prehistoric era (11,000 BP to 1500 A.D.), inhabitants of the Lower Snake River watershed -- that part of the Snake River between Lewiston, Idaho, and its mouth at the Columbia River -- subsisted by means of fishing, hunting, and gathering on a seasonal-cyclical basis. This means of living became associated with the Nez Perces, Walla Walla, Umatilla, Wanapum, and Palouse peoples who lived in this watershed on the Columbia Plateau.

Into the protohistoric period and by the middle of the eighteenth century, these people were using the horse and the rifle because of their location on the eastern edge of the Columbia Plateau nearer the Great Plains, the source of the horse for these native peoples. By the late eighteenth century, many people who lived in this watershed traveled yearly to hunt bison on the Plains. Like all of the people who lived on the Columbia Plateau in the eighteenth century, however, those who lived in the Lower Snake River watershed met with great population decimation because of Euro-American disease, which altered their subsistence way of life.

During the preindustrial era (1775 to 1865), explorers, fur traders, missionaries, ranchers, the military, Oregon Trail emigrants, and miners passed through this watershed. With the exception of the explorers, emigrants, and miners, all of these groups stayed. At the mission near the modem-day city of Lewiston, Idaho, some stock raising, farming, as well as a bit of irrigation took place. While some trapping occurred in the Blue Mountains, most of this watershed essentially became a staging area from Ft. Nez Perces at its western edge for the fur trade in the Middle and Upper Snake River watersheds. Thousands of Oregon Trail emigrants passed through this watershed starting in the 1840s, but nearly all of them continued west to the Willamette Valley. With the mining strikes that occurred in northeastern Washington, northeastern Oregon, Idaho, and Montana in the later 1850s and 1860s, thousands of people stampeded through this watershed to the mining camps. One of the results of the opening of these camps was the arrival of the first stockmen in the Lower Snake River watershed to supply the camps. Following the 1855 treaty, the Nez Perces, Walla Walla, Umatilla, and Wanapum peoples agreed to remove to reserved lands within the Middle Snake River watershed (Nez Perces) and the Umatilla River watershed (Walla Walla, Umatilla, and Wanapum). The way was made clear for permanent settlement by Americans within the watershed.

During the modem era (1865 to 1940), ranchers, railroad companies, and farmers all occupied and used lands within the Lower Snake River watershed. Initially, the cattlemen dominated, but they were displaced by the sheepmen in the 1870s. Neither one of these groups

of ranchers could withstand the pressure from the homesteader who began arriving in the 1870s. At this time, they stockmen moved their herds north into the Big Bend country or south into the Blue Mountains. A fierce competition among railroad companies to expand into the Pacific Northwest in the years after the Civil War encouraged farmers, mainly from the Midwest, to settle in the Lower Snake River watershed. By the early 1870s, settlers began filling in the rich prairie lands of what today are Columbia, Garfield, and Asotin counties in the state of Washington. Later in that decade people began to realize that the soil of the Palouse and all across the watershed that supported the bunchgrass, which had attracted stockmen, could also produce wheat. More settlers came and crossed the Snake River to expand northeast into the Palouse country. The growth, success, and development of the land in this watershed as one of the richest wheat producing areas in the United States outline the land use history here to 1940.

Middle Snake River Watershed

During the prehistoric era (9,000 BP to 1500 A.D.), inhabitants of the Middle Snake River watershed, that part of the Snake River between Lewiston, Idaho, and Vale, Oregon, subsisted by fishing, hunting, and gathering on a seasonal-cyclical basis. This means of living became associated with the Cayuse and some of the Net Perces peoples who lived in the northern part of the watershed, and some of the Northern Paiute who resided in the southern region of the watershed on the Columbia Plateau.

Into the protohistoric period and by the middle of the eighteenth century, the Nez Perces and Cayuse peoples were using the horse and the rifle because of their location on the eastern edge of the Columbia Plateau nearer the Great Plains, the source of the horse and rifle for these native peoples. As a matter of fact, by the late eighteenth century, many people who lived in this watershed traveled yearly to hunt bison on the Plains. The Northern Paiute did not have the horse or the rifle until the middle of the nineteenth century. Like all of the people who lived on the Columbia Plateau in the eighteenth century, however, those who lived in the Middle Snake River watershed met with great population decimation because of Euro-American disease, which altered their subsistence way of life.

During the preindustrial era (1775 to 1865), explorers, fur traders, missionaries, ranchers, the military, Oregon Trail emigrants, and miners passed through this watershed. With the exception of the explorers, emigrants, and the military, all of the above groups stayed. At the mission near the modem-day city of Lewiston, Idaho, some stock raising, farming, as well as a bit of irrigation took place. While intensive trapping occurred in the Blue Mountains in northeastern Oregon, most trappers passed through this watershed on their way to the highly productive fur area in the mountains of the Upper Snake River watershed. Thousands of Oregon Trail emigrants passed through this watershed starting in the 1840s, but nearly all of them continued west to the Willamette Valley. Some of them travelers headed in a southwesterly direction when they reached modem-day Ontario, seeking a shorter route to the Willamette Valley.

With the mining strikes that occurred in the 1860s in the Blue Mountains within this watershed, thousands of people stampeded to this watershed to the mining camps. Placer mining, often using extensive ditches, began in this era near Auburn, Sumpter, Pocohontas, Sanger, and Rye Valley. Some lode mining occurred in the 1860s near Baker and south of the Powder River on Dixie Creek. One of the results of the opening of these camps was the arrival of the first stockmen in the Middle Snake River watershed to supply the camps. Stockmen

located initially in the Grande Ronde Valley and along the Burnt and Owyhee rivers. Following the 1855 treaty in which the Nez Perces and the Cayuse peoples agreed to move to reserved lands within this watershed (Nez Perces) and in the Umatilla River (Cay-use), the way was made clear for permanent settlement by Americans within the watershed.

During the modem era (1865 to 1940), ranchers, miners, railroad companies, loggers, and farmers all occupied and used lands within the Middle Snake River watershed. Initially, in the north, the cattlemen dominated but were displaced by the sheepmen in the 1870s. Severe winters of the 1860s and 1880s caused huge stock losses across the watershed with the northern part never really recovering. These groups of ranchers withstood the pressure from the homesteaders who began arriving in the Grande Ronde Valley in the 1870s but never had the huge herds that the ranches to the south had. Those stockmen who lived along the Burnt and Owhyee rivers thrived into the twentieth century. With a railhead at Winnemucca in Nevada and waiting markets in California, these ranchers had a rail means to market several decades before the ranchers in the northern part of the watershed. The arid nature of the lands in the south in addition to Native American unrest that did not end until the 1870s, discouraged homesteaders in the southern part of the watershed.

At the beginning of the twentieth century, irrigation projects had been started in the Malheur Valley, along the Owhyee River in the Mitchell Butte area. Mining operations continued with activity in the Elkhom Mountains and in the Bridgeport District along the Burnt River through Shasta Gap to Willow Creek. Major lode mining took place at the Virtue Mine north of Sumpter. And finally, the timber industry became important in the northern part of the watershed with the arrival of the Sumpter Valley Railroad in 1896. Timber mills opened in LaGrande, Elgin, and Perry.

Umatilla River Watershed

During the prehistoric era (9,000 BP to 1500 A.D.), inhabitants of the Umatilla River watershed subsisted by means of fishing, hunting, and gathering on a seasonal-cyclical basis. This means of living became associated with the Walla Walla, Umatilla, and Cayuse peoples who lived in this watershed on the Columbia Plateau.

Into the protohistoric period and by the middle of the eighteenth century, these people were using the horse and the rifle because of their location on the eastern edge of the Columbia Plateau nearer the Great Plains, the source of the horse for these native peoples. As a matter of fact, by the late eighteenth century, many people who lived in this watershed traveled yearly to hunt bison on the Plains. The Cayuse horses were considered by many to be among the best stock on the Columbia Plateau. Like all of the people who lived on the Columbia Plateau in the eighteenth century, however, those who lived in the Umatilla River watershed met with great population decimation because of Euro-American disease, which altered their subsistence way of life.

During the preindustrial era (1775 to 1865), explorers, fur traders, missionaries, ranchers, the military, Oregon Trail emigrants, and miners passed through this watershed. With the exception of the explorers, emigrants, and miners, all of the above groups stayed. At the mission established in the 1840s near the modem-day city of Pendleton, Oregon, some stock raising, farming, and irrigation took place. While some trapping occurred in the Blue Mountains, most of this watershed became a thoroughfare for the fur traders who trapped in the Middle and Upper Snake River watersheds. Thousands of Oregon Trail emigrants passed through starting in the late 1840s, but nearly all of them continued west to the Willamette Valley.

With the mining strikes that occurred in northeastern Washington, northeastern Oregon, Idaho, and Montana in the later 1850s and 1860s, thousands of people stampeded through this watershed to the mining camps. One of the results of the opening of these camps was the arrival of the first stockmen in the Umatilla River watershed to supply the camps. Following the 1855 treaty in which the Walla Walla, Umatilla, and Cayuse peoples agreed to move to reserved lands within the Umatilla River watershed, the way was made clear for ranchers and permanent settlement by American farmers, mainly from the Midwest, within the watershed.

During the modem era (1865 to 1940), ranchers, railroad companies, and farmers all occupied and used lands within the Umatilla River watershed. Initially the cattlemen dominated, but they were displaced by sheepmen in the 1870s. Sheep raising continued as the nineteenth century ended and the twentieth century began. Pendleton, Oregon, had become one of the

leading wool-processing plants in the United States by 1900. But extensive damage to the range by the 1890s led to the creation of forest reserves in the Blue Mountains from public domain lands in the watershed. Railroads brought settlers to this watershed beginning in the 1880s. Later in the decade people began to realize that the soil all across the watershed that supported the bunchgrass that had attracted the stockmen could also produce wheat. The growth, success, and development of the land in this watershed as a rich wheat-producing and stock-raising area in the United States outlines the land use history here to 1940.

John Day River Watershed

During the prehistoric era (9,000 BP to 1500 A.D.), inhabitants of the Umatilla River watershed subsisted by means of hunting, and gathering on a seasonal-cyclical basis. This means of living became associated with the Dockspus, Wasco, Tenino, and Umatilla peoples who lived in this watershed on the Columbia Plateau.

Into the protohistoric period and by the middle of the eighteenth century, the horse and the rifle had been introduced to those people who lived in the eastern and southeastern parts of the Columbia Plateau. The inhabitants of the John Day River watershed certainly knew of the existence of the horse and rifle but these technological changes were not as much a part of their lives as others on the Plateau. Like all of the people who lived on the Columbia Plateau in the eighteenth century, however, those who lived in the John Day River watershed met with great population decimation because of Euro-American disease, which altered their subsistence way of life.

During the preindustrial era (1775 to 1865), explorers, fur traders, missionaries, ranchers, the military, Oregon Trail emigrants, and miners passed through this watershed. Only the fur traders, miners, and ranchers stayed to make some use of the land. While some trapping occurred throughout the John Day River watershed, it did not receive the intensive focus from the fur traders that the Middle and Upper Snake River watersheds received. Thousands of Oregon Trail emigrants passed through the northern part of this watershed starting in the 1840s, but nearly all of them continued west to the Willamette Valley. The mining strikes that occurred in the Blue Mountains-within the watershed brought thousands of people in the 1860s who worked the John Day River and its tributaries mainly as placer miners. One of the results of the opening of these camps was the arrival of the first stockmen in the John Day River watershed to supply the miners. Following the 1855 treaty in which the Dockspus, Tenino, Tygh, Wasco, and Wishram peoples agreed to move to reserved lands that became known as the Warm Springs Reservation located in the Deschutes River watershed. Thus, the way was made clear for ranchers and permanent settlement by American farmers, mainly from the Midwest, in the watershed after the Civil War.

During the modem era (1865 to 1940), ranchers, miners, railroad companies, and loggers farmers all occupied and used lands within the John Day River watershed. Initially, the cattlemen dominated but were displaced by the sheepmen in the 1870s. Sheep raising continued as the nineteenth century ended and the twentieth century began. Pendleton, Oregon, had become one of the leading wool processing plants in the United States by 1900. Until well into

the twentieth century, stockmen who owned vast tracts of land prevailed over the homesteader in this watershed. To be sure, extensive damage to the range by the 1890s led to the creation of forest reserves in the Blue Mountains from public domain lands in the watershed. However, the contribution of wool and mutton to the Oregon economy only encouraged the ranchers. The presence of railroads in this watershed promoted greater exploitation of the minerals in the Blue Mountains from the 1880s into the twentieth century. Placer mining was succeeded by fluming and ground-sluicing in the area north of Canyon City while hydraulic mining took place on Deep Creek. Quartz mining occurred in the Susanville and Elk Creek districts as early as the 1860s with significant bucketline dredging along Canyon Creek as of 19 13. It was not until 1917 that any major logging happened and that was on the Middle Fork of the John Day River near Austin. Mining, ranching, and logging could well have altered the landscape of this watershed prior to 1940.

Deschutes River Watershed

During the prehistoric era (10,000 BP to 1500 A.D.), inhabitants of the Deschutes River watershed subsisted by means of fishing, hunting, and gathering on a seasonal-cyclical basis. This means of living became associated with the Tygh, Tenino, Wasco, and Wishram peoples who lived in this watershed on the Columbia Plateau.

Into the protohistoric period and by the middle of the eighteenth century, the horse and the rifle had been introduced to those people who lived in the eastern and southeastern parts of the Columbia Plateau. The inhabitants of the Deschutes River watershed certainly knew of the existence of the horse and rifle but these technological changes were not as much a part of their lives as others on the Plateau. Those who resided in this watershed were more river people, oriented to the salmon that migrated up the Columbia and its tributary, the Deschutes. Like all of the people who lived on the Columbia Plateau in the eighteenth century, however, those who lived in the Deschutes River watershed met with great population decimation because of Euro-American disease, which altered their subsistence way of life.

During the preindustrial era (1775 to 1865), explorers, fur traders, ranchers, the military, Oregon Trail emigrants, and miners passed through this watershed. Only the ranchers stayed. While some trapping occurred throughout the Deschutes River watershed, it did not receive the intensive focus from the fur traders that the Middle and Upper Snake River watersheds received. Thousands of Oregon Trail emigrants passed through the northern part of this watershed starting in the 1840s, but nearly all of them continued west to the Willamette Valley. The mining strikes that occurred in British Columbia, northeastern Oregon, north central and northeastern Washington, Idaho, and Montana brought thousands of people through the Deschutes River watershed in the 1860s. Following the 1855 treaty, the Dockspus, Tenino, Tygh, Wasco, and Wishram peoples moved to reserved lands in this watershed that became known as the Warm Springs Reservation, Thus, the way was made clear for ranchers and permanent settlement by American farmers, mainly from the Midwest, after the Civil War.

During the modem era (1865 to 1940), ranchers, railroad companies, loggers, and some farmers all occupied and used lands within the Deschutes River watershed. Initially, the cattlemen, who came to supply the mines in eastern Oregon, dominated land use here, especially the rangelands of northern Wasco and Sherman counties and by the 1870s the Ochoco Valley. Sheepmen began to arrive in the watershed in the 1870s, grazing in the lands of Fifteen Mile Valley and Crass Valley. The presence of the Wasco Woolen Manufacturing Corporation, started in 1864 at The Dalles, only encouraged sheep raising in this watershed as far south as

Crook County, activity that continued as the nineteenth century ended and the twentieth century began.

Until well into the twentieth century, stockmen who owned vast tracts of land prevailed over the homesteader in this watershed. The presence of railroads in this watershed at the beginning of the twentieth century promoted migration of homesteaders and a greater exploitation of timber from the forests near Bend. Irrigation projects in the twentieth century on the Warm Springs Reservation as well as near Prineville encouraged the farmer. Ranching, logging, irrigation, and railroad construction could well have altered the landscape of this watershed prior to 1940.

Middle Columbia River

During the prehistoric era (10,000 BP to 1500 A.D.), inhabitants on the Middle Columbia River -- the area from Vantage to The Dalles -- subsisted by means of fishing, hunting, and gathering on a seasonal-cyclical basis. This means of living became associated with the Yakima, Columbia, Walla Walla, Tygh, Tenino, Wasco, and Wishram peoples who lived on this part of the Columbia River on the Columbia Plateau.

Into the protohistoric period and by the middle of the eighteenth century, the horse and the rifle had been introduced to those who lived in the eastern and southeastern parts of the Columbia Plateau. The inhabitants of the Middle Columbia River watershed certainly knew of the existence of the horse and rifle, but these technological changes were not as much a part of their lives as others on the Plateau. Those who resided on this part of the Columbia River were more river people, oriented to the salmon that migrated up the Columbia and its tributaries, the Yakima, the Lower Snake, the Umatilla, the John Day, and the Deschutes rivers. Like all of the people who lived on the Columbia Plateau in the eighteenth century, however, those who lived on the Middle Columbia River met with great population decimation because of Euro-American disease, which altered their subsistence way of life.

During the preindustrial era (1775 to 1865), explorers, fur traders, missionaries, ranchers, the military, Oregon Trail emigrants, and miners passed through this part of the Columbia River. Only the missionaries and ranchers stayed. At the mission near Walla Walla, some farming, stock raising, and irrigation occurred as of the late 1830s. Thousands of Oregon Trail emigrants passed through the lands along the Middle Columbia River from its confluence with the Snake River to The Dalles starting in the 1840s, but nearly all of them continued west to the Willamette Valley. The mining strikes that occurred in British Columbia, northeastern Oregon, north central and northeastern Washington, Idaho, and Montana brought thousands of people down the Middle Columbia in the late 1850s and early 1860s. Steamboat and stagecoach travel aided those who stampeded to the mining camps in those years. Following the 1855 treaty, the Dockspus, Tenino, Tygh, Wasco, and Wishram peoples agreed to move to reserved lands that became known as the Warm Springs Reservation located on lands just to the south of the Middle Columbia River in the Deschutes River watershed. The way was made clear for ranchers and permanent settlement by American farmers, mainly from the Midwest, on the lands along the Middle Columbia River after the Civil War.

During the modem era (1865 to 1940), ranchers, railroad companies, and farmers all

occupied and used lands along the Middle Columbia River. Initially, the cattlemen dominated but were displaced by the sheepmen in the 1870s. Neither one of these groups of ranchers could withstand the pressure from the homesteader, however, who began arriving in the Walla Walla Valley in the 1870s. At this time, the stockmen moved their herds north into the Big Bend country or south into the Blue Mountains. A fierce competition among railroad companies to expand into the Pacific Northwest in the years after the Civil War encouraged farmers, mainly from the Midwest, to settle in the Walla Walla Valley. By the early 1870s, settlers began filling in the bottom lands across the Walla Walla Valley. By the end of the decade, the entire valley had been settled. The beginning of the wheat farms that would continue to be successful into the twentieth century had been made. Heading west on the Columbia River from Walla Walla to The Dalles, wheat farmers followed the stockmen into the lands across modem-day Umatilla, Morrow, Sherman, Gilliam, and Wasco counties in Oregon and Benton and Klickitat counties in Washington. Some Germans, Danes, and Swiss were among the first who settled Klickitat County. Competition among the railroads led to construction of track on both sides of the Columbia River to The Dalles and further west.

NORTHERN GREAT BASIN

People have been living in the Northern Great Basin watershed since 13000. Not always as dry as it is today, those who lived there in the earliest times had a difficult time finding a means of subsistence in these arid lands, roaming for many hundreds of miles just to find food. The land beneath the arc that is formed from the three forks of the Malheur River to the Nevada border is part of the Northern Great Basin watershed.

Not all of the people who lived in this eastern part of Oregon had such difficult lives. Going further west into southwestern Oregon and the southern Cascade Mountains is the Kalmath Basin watershed which is far better watered and forested than the lands to the east. Unlike those people who lived to the east, the early inhabitants of this watershed did not have to travel far to find food.

It was not until after the Civil War that many Euro-Americans came to live in this part of the country. Travelers to the Willamette Valley, 49ers to California, and miners to the camps in northern Oregon, Idaho, and Montana passed through bringing their diseases and some of their stock. But after the Civil War, cattlemen from California moved into the Hamey County valleys beginning the reign of cattle barons that would last for many decades.

When land disputes between the state of Oregon and private holding companies were settled in the late twentieth century, hopeful homesteaders came to the Kalmath Basin to settle. Promises of irrigation for this dry land brought many. But by the end of World War I with the lack of water and the fall in 'farm prices, many who had come by 19 10 abandoned their homesteads by the 1920s.

Those who pursued logging from the forests in the western part of the Klamath Basin watershed did better, especially with coming of the railroad and the improvement technology in the timber industry at the beginning of the twentieth century.

For a lasting affect on the landscape by the Euro-American, the degradation of the range due to overgrazing in the Northern Great Basin watershed and the logging of thousands of board feet in the Klamath Basin would have meant ecological change.

Klamath Basin Watershed

During the prehistoric era (7,000 BP to 1500 A.D.), inhabitants of the Klamath Basin watershed -- that area south of the Columbia Plateau from Warner Lakes west and southwest to the Cascade Mountains -- subsisted by hunting, fishing, and gathering on a seasonal-cyclical basis. This means of living became associated with the Klamath and Modoc peoples.

Into the protohistoric period and by the middle of the eighteenth century, the Klamath and Modoc peoples did not have the horse or the rifle and never really used either one. Like all of the people who lived on or near the Columbia Plateau in the eighteenth century, however, those who lived in the Klamath Basin watershed met with great population decimation because of Euro-American disease, which altered their subsistence way of life.

During the preindustrial era (1775 to 1865), explorers, fur traders, ranchers, the military, Oregon Trail emigrants, and miners passed through this watershed. While only the ranchers stayed, this watershed became a major thoroughfare for the miners headed south to the camps in California or northeast to Oregon, Washington, Idaho, and Montana as well as for the emigrants on the Applegate Trail headed for the Umpqua, Rogue River, or Willamette valleys. Coming east of the Cascades from the Willamette Valley as early as the 1850s were stockmen who grazed their herds initially between Keno and Klamath Falls to supply the mining camps of northern California. The establishment of Ft. Klamath in 1863, the first of several military posts across the Klamath and Northern Great Basin watersheds, and along with it the opening of more roads that headed in all directions from the fort, only encouraged more stockmen to come to the Klamath Basin watershed. In the years prior to the Civil War, the Klamath and Modoc peoples were removed to lands in the Williamson River watershed along the Sprague River.

During the modem era (1865 to 1940), the stockmen continued to do well in this watershed because of the presence of Ft. Klamath, and the railhead at Winnemucca helped them survive the tough economic times of the 1870s and 1890s. The tough arid nature of the area in conjunction with complicated land laws discouraged the homesteaders for a number of years. But by the end of the nineteenth century and into the twentieth, both private and public irrigation projects near Tule Lake, the Upper Klamath Valley, Lost River Valley, Lange11 Valley, and Poe Valley brought more settlers. Those settlers, mainly from the Midwest, who persisted through dry farming methods while awaiting the completion of the promised irrigation ditches, did well. The completion of a railroad to Klamath Falls in the early twentieth century encouraged the development of the timber industry in the western part of the watershed, especially on reservation lands.

Northern Great Basin Watershed

During the prehistoric era (12,000 BP to 1500 A.D.), inhabitants of the Northern Great Basin watershed -- the area south of the Columbia Plateau from the forks of the Malheur River west and southwest to Warner Lakes -- subsisted by means of hunting and gathering on a seasonal-cyclical basis. This means of living became associated with the Northern Paiute people.

Into the protohistoric period and by the middle of the eighteenth century, the Northern Paiute did not have the horse or the rifle until the middle of the nineteenth century. Like all of the people who lived on the Columbia Plateau in the eighteenth century, those who lived in the Northern Great Basin watershed met with great population decimation because of Euro-American disease, which altered their subsistence way of life.

During the preindustrial era (1775 to 1865), explorers, fur traders, ranchers, the military, Oregon Trail emigrants, and miners passed through this watershed. Only the ranchers stayed. Coming east of Cascades from the Willamette Valley as well as from California and Nevada to support the mining camps in eastern Oregon, Idaho, and Montana, those stockmen who came to the watershed prior to the Civil War settled in what today are eastern Lake, Hamey, and Malheur counties in eastern Oregon. With the mining strikes that occurred in the 1860s in the Blue Mountains, thousands of people stampeded through this watershed to the mining camps.

During the modem era (1865 to 1940); the stockmen continued to prevail in this watershed although a few homesteaders tried unsuccessfully to farm. With the settlement of the Northern Paiute on reserved lands by the 1880s, even more ranchers came with their cattle and sheep to graze on the bunchgrass that covered public domain lands. Some farmers came as well. The homesteaders, mainly from the Midwest, initially chose the north end of Hamey Valley while the ranchers claimed the lands in the southern part. Irrigation projects around Malheur Lake proved to be successful for the farmer while those near Donner and Blitzen River ultimately failed.