

APPENDIX U:
ARCHAEOLOGICAL, HISTORIC, AND
ETHNOGRAPHIC CONTEXT

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The following are regional overviews for the Great Basin, Southwest, Plains, Plateau, California, and Northwest Coast cultural areas, which generally correspond to the major physiographic regions of the American West. The Native groups in each of these cultural areas had to adapt to the regional climate and environment in order to survive. As a result, there is a certain level of homogeneity within each region. Culture areas are based on the distribution of Native American Tribal groups at the time of Euro-American contact. They do not always correspond completely with prehistoric cultural areas. For example, the Colorado Plateau is considered with the Great Basin, because of linguistic and cultural ties between the Utes and Great Basin groups. However, in some prehistoric periods it was part of the greater Southwest. These overviews are intended to provide a basic historical chronology for each region and an understanding of the known types of cultural sites.

U.1¹ THE GREAT BASIN

America's Great Basin is a region of arid intermontane valleys and plateaus stretching from the Sierra Nevada and Cascade Range on the west to the Wasatch Mountains on the east, and from the edge of the Columbia River Drainage on the north to the Colorado River Drainage on the south (Figure U-1). It is an area

of internal drainage. All streams and rivers arising in the basin empty into lakes or sink into the ground, never reaching the ocean as surface water. The basin is characterized by long, narrow generally north-south valleys nestled between steep mountain ranges. Thirty-three of its ranges have peaks over 10,000 feet with valley floors often over 4,000 feet in elevation. Mountain slopes and higher elevations support pinyon and juniper woodlands, while lower elevations are characterized by sagebrush and shadscale vegetation communities (Grayson 1993). Game animals include pronghorn, deer, mountain sheep, and formerly bison, and there is a periodic abundance of smaller game, such as jack rabbits. Streams and marshes in valley bottoms yield fish and migratory birds. The pinyons provide an abundant if irregular crop of pine nuts. The Great Basin becomes less mountainous to the south where elevations are lower. There are areas of low desert, such as the Mojave Desert and Death Valley. Over time, the amount of precipitation within the Basin has varied significantly. In wet periods, large lakes form on valley floors; in drier times, they disappear, leaving behind only dry lakebeds, or playas.

The physiographic Great Basin forms the heart of the Great Basin cultural area. However, the Great Basin culture extends beyond the physiographic Great Basin and includes parts of the Columbia Plateau on the north, the Snake and Salmon River areas in Idaho, parts of western Wyoming, the Colorado Plateau of eastern Utah and western Colorado, and the northwestern corner of Arizona (d'Azevedo 1986; Jennings 1986). In general, these areas are not as arid as the heart of the Great Basin and include more elaborate river systems, mountainous regions, and high plateaus carved by deep canyons.

¹ Shaded text indicates portions of the document that underwent revision between the draft and the final PEIS in response to comments received during the public comment period as well as additional information provided by local federal land managers and resource specialists.

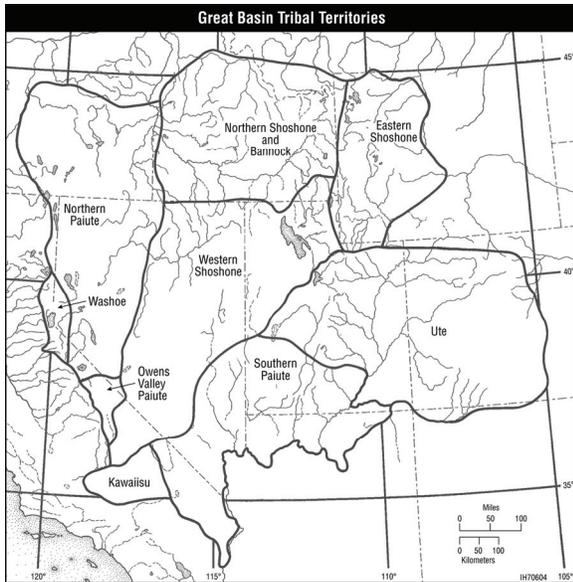


FIGURE U-1 Traditional Tribal Ranges in the Great Basin Cultural Area
(Source: d'Azevedo 1986)

U.1.1 Settlement Pattern

With some notable exceptions, the ways of life of Great Basin groups have remained remarkably similar for thousands of years. Small bands not much larger than a single nuclear family followed a seasonal round, making use of a variety of resources, each in its season. During those times of the year when resources were plentiful, bands joined together to gather pine nuts, hunt rabbits or pronghorn, socialize, and arrange marriages (Grayson 1993). During those times of the year when resources were scarce and dispersed, the bands likewise dispersed in small units.

The locations of temporary campsites and winter villages were constrained by access to water, food, and wood. Winter villages tended to cluster along the lower edges of pinyon and juniper woodlands. Pine nuts from an earlier harvest were stored here to provide food for the winter (Drews et al. 2004). Frequent winter temperature inversions in the intermontane valleys meant that these locations were often

15°F warmer than valley bottoms. They thus provided food, warmth, and shelter. Spring was the time for communal hunts that included jack rabbits and pronghorn.

Settlement patterns at other times of the year were determined by the presence and location of food resources. Streams and lakes provided fishing opportunities. Shallow lakes and marshes were particularly attractive to migrating birds and provided opportunities for communal hunting. Stream and lake shores were preferred locations for hunting camps or seasonal villages. Since these varied over time, evidence of past occupation is often associated with fossil lake shores. Human settlement shifted with these shifting resources; however, canyon mouths near fishing streams seem to have been favored (Grayson 1993). In some times and places, Great Basin peoples in contact with Southwestern groups have relied at least partly on horticulture for their subsistence. Year-round settlements developed in areas with sufficient water and irrigable fertile soil chiefly on the Colorado Plateau and the Lower Colorado River (Fowler and Madsen 1986).

The mountains and canyons of the Great Basin provided natural shelter in the form of caves and rockshelters. These dry, sheltered locations were attractive camping or dwelling spots over long periods of time when situated in proximity to subsistence resources, and have yielded long sequences of archeological data.

While Great Basin archaeological resources reflect broadly similar patterns, there are regional variations, and many local chronological sequences have been devised. The basin-wide correlating sequence followed here is based on that provided by Jesse Jennings in the *Handbook of North American Indians* (Jennings 1986). While broadly applicable, not all areas of the Great Basin followed the same developmental path, and the transition between these broad periods does not occur at the same time throughout the Basin.

U.1.2 Prehistoric Context

Pleistocene/Holocene Transition or Paleo-Archaic (12,000 BC–8000 BC). During the last Ice Age, the Great Basin was much cooler and wetter. Large freshwater lakes formed, and now-extinct animals roamed its basins. The earliest suggestion of human presence appears as the climate warmed and the lakes shrank (Mehringer 1986). Most artifacts attributed to this period are surface finds associated with lake terraces. Typical sites include scatters of chipped stone artifacts, such as crescents and graters, in association with large, bifacially flaked spear points. The remains of large extinct animals, such as mammoths, camels, and giant bison, have been found in similar locations, although their association with the artifacts is not always clear. The earliest inhabitants of the Great Basin seem to have followed a seasonal round, exploiting the plant and animal resources found near these shallow lakes, possibly hunting big game and probably exploiting upland resources as well (Bryan and Touhy 1999).

Early Archaic (8000 BC–2000 BC). Archaic peoples continued to follow a seasonal round of hunting and gathering, but subsisted on a wider variety of plants and animals. Their campsites often included dry caves and rockshelters where many perishable artifacts, including basketry and cordage nets, have been preserved (Cressman 1977). The atlatl, or spear thrower, came into use. Atlatl darts were tipped with side-notched, stemmed chipped-stone points. The increasing appearance of grinding stones reflects an increasing dependence on seed resources (Aikens et al. 1986). The beginning of this period was cooler and wetter than today; there were shallow lakes and marshes in areas that are now dry (Grayson 1993). These lacustrine areas were favored seasonal campsites. By 6000 BC, pinyon pine began to expand into the southern Great Basin, eventually providing an important upland food source. In the western Great Basin, the Western Pluvial Tradition emerged. Increasingly intense hunting

included small mammals, rabbits, mountain sheep, deer, and occasional bison. The shift to an Archaic way of life did not occur until about 5800 BC in southern Idaho (Butler 1986) and around 5000 BC in the southwestern Great Basin (Warren and Crabtree 1986).

From about 5500/5000 BC to 2000 BC, conditions were warmer than they are today. As lakes and marshes decreased, the Great Basin appears to have been less densely populated. The eruption of Mount Mazama (now Crater Lake) in 5050 BC had significant effects on the population of the northern Great Basin (Cressman 1986).

Middle Archaic (2000 BC–AD 500/750). During the Middle Archaic, climatic conditions in the area approximated current conditions. By 1500 BC, the lakes had returned and the population again increased. Lake margins were favored locations for open sites. Caves and rockshelters continued to be used for storage. Pinyon pine continued to spread northward and reached the Reno area by AD 400. The fundamental Archaic way of life was retained, but with an increased dependence on seeds for food. Family groups maintained a seasonal round. Artifacts include Elko series atlatl points, fishhooks, leisters, knives, scrapers, and bone awls, with fewer milling stones. There appears to have been an active trading network in sea shells and obsidian. A wide variety of resources continued to be exploited. Favored camping locations were used repeatedly. Clay-lined semisubterranean pithouses appeared in winter camps with facilities for storage and access to favored resources.

Late Archaic (AD 750–Contact). The Late Archaic begins between AD 500 and 750. It is marked by the introduction of the bow and arrow, which replaces the spear thrower, or atlatl. More elaborate plant processing tools indicate a continuing shift toward vegetal resources, although the basic Archaic way of life was retained. There was an increasing influence

from surrounding cultural areas. Horticulture appeared for a time in some areas, but for the most part did not last, giving way to a return to Archaic foraging. Desert side-notched arrow points are period markers, along with brownware pottery.

In some areas of the Great Basin culture, irrigation-based horticulture, permanent house structures, and pottery production were added to the Archaic tradition. The Fremont cultures spread over most of Utah north of the Colorado, Escalante, and Virgin Rivers and into adjacent portions of southern Idaho, eastern Nevada, and western Colorado from AD 400 to 1300 (Marwit 1986). The extent to which the Fremont groups depended on agriculture varied, with southern groups tending to be more dependent. Northern groups appear to have been less sedentary, and horticulture was only one segment of an Archaic seasonal round. Sites include semisubterranean dwellings and above-ground storage structures. Sites vary in size from individual farmsteads to hamlets and villages that include slab-lined pithouses and stone-and-adobe surface structures, some of which are multiroomed. Pottery includes a variety of gray wares — plain, corrugated, and painted — along with red-and-white wares.

To the south of the Fremont, pueblويد cultures based on horticulture developed, particularly along the Virgin and Muddy rivers. Ceramic parallels with the Kayenta Anasazi suggest dates of AD 400 to 1150. Initial small-scale sites, not unlike the Fremont sites, expanded during the Pueblo I phase and declined during Pueblo II. The largest sites appear to have been destroyed by 19th century Euro-American settlements, which were also dependent on permanent water. These sites may well have been way stations on the Old Mojave Trail, which linked the Kayenta Anasazi to turquoise mines in Nevada and coastal California (Fowler and Madsen 1986).

By 1300, the Fremont and the Virgin Anasazi had disappeared and were replaced by mobile Shoshonean groups who continued to

practice an essentially Archaic way of life until contact with European groups.

U.1.3 Protohistoric Context

Spain was the first European power to lay claim to the Great Basin, in part of the province of Alta California in New Spain. Spanish claims had little effect early on. However, horses did filter into the Great Basin through Ute escapees from Spanish New Mexico reaching the Utes and High Plains Shoshone, Bannock, and Northern Shoshone. Equestrian societies developed by the mid-1700s. They adopted Plains characteristics and hunted bison on the Plains (Shimkin 1986). These eastern groups developed more complex sociopolitical structures. Buffalo hunts and interactions with more complex Plains and Southwestern groups required the establishment of chiefs. These mounted groups preyed on the unmounted groups of the central Basin, taking captives and selling them as slaves to Europeans (Malouf and Findlay 1986).

The Basin remained largely unexplored by Europeans until 1776 and 1777, when Fathers Dominguez and Escalante traversed much of Utah and the Colorado Plateau. The area between Santa Fe and Utah Lake became well known to Spanish traders who entered the area without official sanction to trade and acquire slaves. Fur trader-trappers from the United States and Canada made their way to the Great Basin in the early 1800s, which gradually became known to Euro-Americans. Competition between fur trappers of different companies and nationalities often led them to attempt to trap out a valley before the competition arrived, leaving it devoid of beaver, with disastrous consequences for species such as beaver (Smith et al. 1983).

U.1.4 Historic Context

In 1776 and 1777, two expeditions attempted to find a route linking Santa Fe with

Monterey. Fathers Dominguez and Escalante crossed Utah and the Colorado Plateau. They did not reach California, but pioneered a stretch of the Old Spanish Trail, leaving most of the Great Basin undocumented. The unsanctioned Spanish traders did not record their journeys. In 1819, the Adams-Onís Treaty defined the boundary between New Spain and the United States and set the northern border of Alta California at the 42nd parallel, leaving the bulk of the Great Basin in New Spain, which became the Republic of Mexico in 1821 (Smith et al. 1983).

The 1840s brought an influx of American emigrants, most of whom were passing through. The Old Spanish Trail to southern California, the many-branched California Trail leading to Sacramento, and the Oregon Trail leading to the Northwest tended to funnel emigrant traffic. During the California Gold Rush of 1849 and 1850, tens of thousands of emigrants followed the California Trail along the Humboldt River through the Great Basin and across the mountains into California (Smith et al. 1983).

With the ratification of the Treaty of Hidalgo in 1848, the remainder of the Great Basin came under American control. In 1887, the first American settlers arrived in the Great Basin, among them Mormon immigrants under the leadership of Brigham Young, who settled in the Valley of the Great Salt Lake. They sought to bring the entire Great Basin under their control, establishing the independent State of Deseret. From its center in Salt Lake City, the church sent out colonizers to establish agricultural communities in surrounding valleys and missions to acquire natural resources such as minerals and timber. Relying on irrigation to support their farms, the Mormons often settled in the same places as the Fremont and Virgin Anasazi centuries before. The result was a scattering of planned agricultural communities from northern Arizona to southern Idaho and parts of Wyoming and Nevada. Much of this area was included in Utah Territory established by Congress in 1850 (Arrington 1958).

The discovery of mineral wealth in the Great Basin resulted in a new influx of settlers. The discovery of the Comstock Lode near Virginia City in the late 1850s and silver in the Humboldt Mountains in the 1860s brought miners to Nevada. Nevada territory was separated from Utah in 1861. Mining continued in a boom/bust cycle through the end of the 19th century, and continues to some extent today. Abandoned mining and prospecting equipment remains scattered throughout the Great Basin.

With the incorporation of California into the Union and the development of mineral wealth in the West, new, more efficient communication routes were sought. In 1859, a more direct southern route across the Great Basin was laid out, linking Salt Lake City to Carson City, Nevada. This route was followed by the Pony Express, the Overland Mail and Stage, and eventually Wells Fargo until the turn of the century. This remained the main communication route across the Great Basin until the coming of the railroad. In 1863, the Central Pacific Railroad began laying track eastward from Sacramento, eventually joining with the Union Pacific in 1869. The railroad increased access to the central Great Basin, and ethnic communities developed. Chinese laborers, first attracted by gold in California, found work building the railroad and ranching, establishing relatively short-lived communities.

Ranches, farms, and commercial centers grew up to support the miners, drawing on the region's limited water resources. The mines usually eventually gave out, but many of the ranches and farms remained. The Preemption Act of 1841 and the Homestead Act of 1861 allowed ranchers and farmers to acquire title to the land they had settled. Ranches and farms were located in close proximity to water. In 1877, the Desert Entry Act allowed claims of 640 acres of irrigable land, permitting homesteaders and ranchers to greatly increase their holdings. In addition, line cabins were built on grazing ranges. Sheep and cattle were raised in the Great Basin. Herding sheep provided a source of revenue for Basque immigrants who

established themselves in the Great Basin in the 1880s and 1890s. The Taylor Grazing Act of 1934 favored beef ranchers over sheep raisers, and eventually cattle ranching became dominant.

Much of the Great Basin remains empty and arid. Exactly these qualities attracted the development of military test ranges for aircraft and other weapons, and weapons storage. A bombing range was established at what is now Edwards Air Force Base (AFB) in 1933; Wendover Army Air Field was established as a bombing range in 1941. It has here that atomic bomb shapes were tested and the Enola Gay was prepared for its flight to Hiroshima. Such functions are continued at the Utah Test and Training Range now administered from Hill AFB. In 1943, the Naval Ordnance Test Station was established at China Lake, California, and a biological warfare testing station at Dugway Proving Grounds in Utah. The Army Air Corps Flexible Gunnery School was established at what is now the Nellis Bombing and Gunnery Range, in 1941, and the Nevada Test Site in Nye County, Nevada, was used for atmospheric and underground testing of nuclear weapons from 1951 to 1992.

U.1.5 Ethnohistoric Context

At the time of Euro-American contact, almost all of the Great Basin was inhabited by Paiute, Ute, and Shoshonean groups sharing a common way of life and speaking closely related languages of the Numic family. Only the Washoe, whose territory is centered on Lake Tahoe and who likely arrived in the Great Basin before the Numic speakers, speak an unrelated Hokan language (Jacobsen 1986). Numic speakers include the Northern Shoshone and Bannock, the Eastern Shoshone, the Western Shoshone, the Northern Paiute, the Southern Paiute, the Owens Valley Paiute, and the Kawaiisu (Miller 1986). With the exception of some southern groups who practiced horticulture and some eastern groups that gathered to hunt bison, Great Basin peoples lived a mobile transhumant lifestyle similar to that of their

Archaic predecessors. Taking advantage of variations in altitude and topography, small bands, usually no larger than a nuclear family, followed a seasonal pattern of hunting and gathering, sometimes forging beyond the Great Basin. As part of this seasonal round, groups came together for communal hunts or to gather pine nuts. Winter villages were located near permanent water and included storage features for seeds and roots. Plant resources tended to predominate. Basketry, sickles, seed beaters, nets, and weirs were common food procurement tools along with bows and arrows, clubs, and traps.

Native American groups in the Great Basin were among the last indigenous groups to come in contact with Euro-Americans. Although relations were initially friendly, Native American groups soon came into conflict with fur trappers over the scarce resources of the Great Basin. With water at a premium in the arid Basin, emigrant routes of necessity followed its few rivers, such as the Humboldt, disturbing favored Native American hunting, gathering, and fishing grounds. Fertile lands close to water attracted immigrants who displaced Native Americans and deprived them of their most important food resources. American farmers and ranchers displaced native groups from these areas. Livestock consumed seed crops important to Native Americans. The Native response to this loss of resources provoked violent responses from the emigrants (Smith et al. 1983).

Now fully engaged with an expanding United States, Great Basin Tribal groups felt the impact of the American move west, particularly along the main migration routes and in areas of mineral wealth. It was axiomatic to American thinking that the expansion of Euro-American civilization should not be prevented by thinly spread hunting societies (Prucha 1988). Native American populations were to be concentrated on reservations, "civilized," taught to farm, and eventually assimilated into American culture. Reservations began to be established in the Great Basin in 1855. While some groups did adopt agriculture, for the most part these efforts

did not achieve their goals. Until 1870, Tribal Nations were treated as sovereign entities to be dealt with by treaty. Agreements in which Tribes ceded land, reserved rights, and were promised annuities were made, but not always ratified and rarely fully respected. Under pressure from Euro-American expansion, Native American populations declined. Beginning in 1870, efforts began to eliminate reservations by allotting lands to individual reservation inhabitants. This effort intensified with the passage of the Dawes Severalty Act of 1887. Great Basin populations continued to diminish from 1887 to 1933 under the allotment policy. At the same time, new “Indian lands” were created when the Bureau of Indian Affairs (BIA) recognized “camps” or “colonies” of non-reservation Native Americans on the outskirts of towns and cities (Clemmer and Stewart 1988).

The Tribal Reorganization Act of 1934 began a period when attempts were made to reverse the effects of allotment, allow the expression of traditional Native American culture, and encourage indigenous customs and crafts and elected Tribal councils. At the end of World War II, emphasis returned to ending reservations through the termination program. BIA attempted to relocate Native Americans to the cities to end high rates of unemployment on the reservations. Mineral leasing increased after the war, so that by 1964 the status of Native American groups varied widely, ranging from wealthy income-producing reservations to terminated groups. Under the Indian Self-Determination Act of 1975, Tribal governments were given increased opportunities to administer programs on their own reservations, and Great Basin groups increasingly took advantage of them, beginning with those, such as the Utes (Simmons 2000), that had the most experience in administering large budgets (Clemmer and Stewart 1988). In the 1980s, the U.S. government officially propounded the doctrine of government-to-government dealings with Tribal Nations, a return to the recognition of Tribal sovereignty.

U.2 THE SOUTHWEST

Although the Southwest cultural area extends well into Mexico (Figure U-2), only the portions located in the southwestern United States are considered: Arizona, New Mexico, southwestern Colorado, southeastern Utah, and the southern tip of Nevada. The Southwest is arid to semiarid with extreme variation in elevation and topography and with few permanent rivers. As a result, plant and animal resources are often locally diverse.

U.2.1 Settlement Pattern

The physical landscape of the Southwest includes rugged mountains, mesas incised by deep canyons, and low-lying deserts. While predominantly arid, snows in the high mountains feed significant rivers: the Colorado, the San Juan and the Rio Grande. Indigenous peoples have adapted to the aridity and developed a way of life dependent on farming native American crops: corn, beans, and squash. They developed a variety of means of cultivating the soil and conserving moisture developing farmsteads and villages often dependent on irrigation (Kehoe 1981; Cordell 1997). As in any arid climate, access to water is a limiting factor in settlement patterns. Access to a variety of ecological niches and a broad spectrum of resources is another prime factor in site selection. Protected canyon heads with access to water, a variety of plants and animals at different elevations, and mineral sources were favored by hunting and gathering peoples. Fertile, irrigable soil and access to mountains for hunting and gathering were favored by agriculture peoples, as were in some periods defendable tops of mesas surrounded by vertical cliffs or shelters within the cliffs themselves.

U.2.2 Prehistoric Context

Cultural traits common to the area at the height of its prehistoric development include

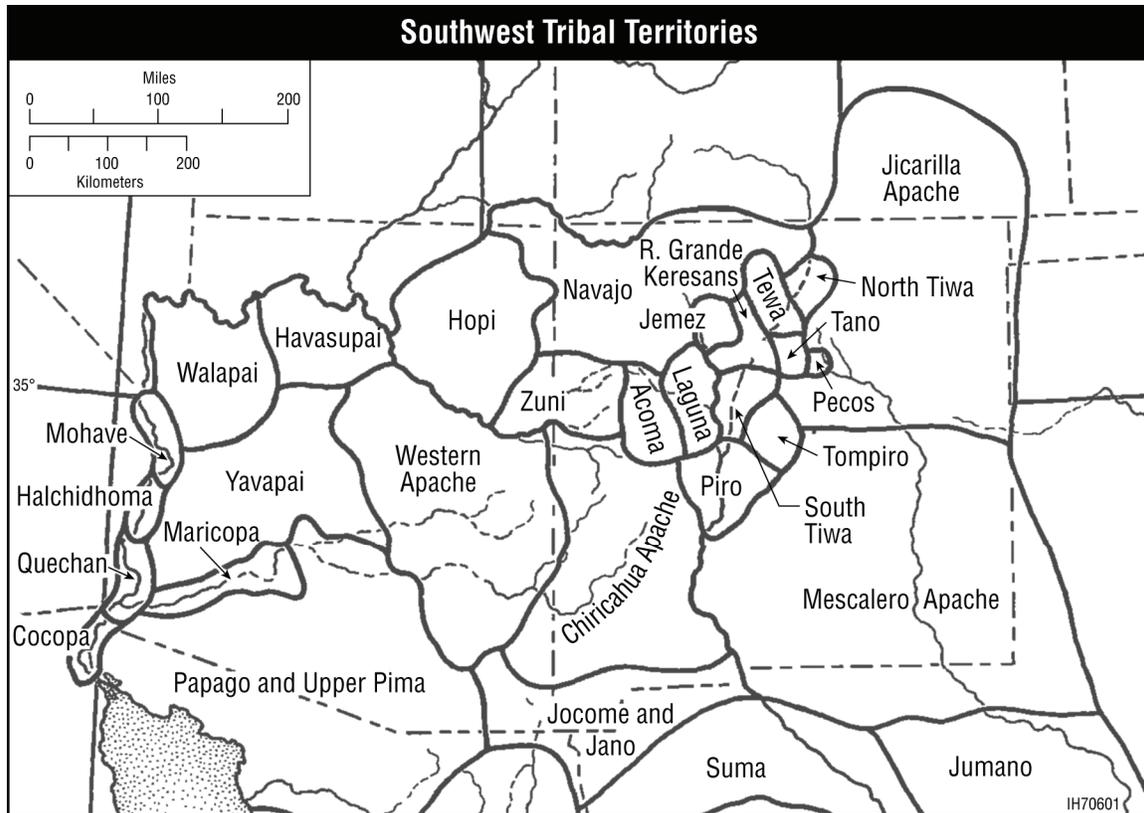


FIGURE U-2 Tribes of the Southwestern Cultural Area

permanent villages, agriculture, regionally variable architecture including adobe and stone masonry, patterned settlements, specialized religious structures, pottery, weaving, communal structures, weakly stratified societies, and strong continuity with preagricultural hunting and gathering techniques (Woodbury 1979). Its agriculturally based components may be seen as being derived from the more highly developed cultures of Mesoamerica.

Paleo-Indian (9500 BC–5500 BC). During Paleoindian times, rainfall was higher than today, and ponds and playas were full, as were rivers and the major arroyos. Grasslands supported herd animals that included now-extinct species, such as the mammoth and *Bison antiquus*, and no longer native species, such as camelids and the horse. The earliest cultural remains are those of small Paleoindian groups of the Clovis tradition (9500 BC–9000 BC), whose subsistence base included hunting or scavenging

large herd animals (Judge 1973). The classic diagnostic Clovis artifact is a large lanceolate point with a concave base, bifacially worked and fluted on one or both sides (Cordell 1979b). Paleoindian sites from the succeeding Folsom tradition (9000 BC–8000 BC) are more common. Folsom sites include base camps, “armament” sites, processing sites, and kill sites. All seem to be located with reference to water, hunting grounds, playas, the broad plains that surrounded them, and commanding views (Cordell 1979b).

Paleoindian sites have low visibility, and many may have been buried. Those that have been found tend to be in areas where erosional processes have deflated sites. Those without diagnostic artifacts look like lithic scatters from other periods.

Archaic Period (7000 BC–AD 400). The Archaic Period saw a change in subsistence strategy from big game hunting/scavenging to a more diversified subsistence base. It was characterized by small, mobile groups of hunters and gatherers subsisting to an equal extent on wild plants and relatively small game (deer, pronghorn, rabbits, etc.). In the later part of the period, maize agriculture was incorporated by some groups (Cordell 1979b). The Archaic tradition emerged earliest in the western part of the Southwest and may have radiated from core areas in southern California and northern Mexico. Archaic sites tend to be relatively ephemeral and are affected by geological processes. Archaic peoples often chose dunes or other geologically active surfaces for their campsites. Sites lacking diagnostic artifacts are difficult to distinguish from those of other periods and often yield small lithic assemblages (Cordell 1979a).

Early Archaic. The San Dieguito-Pinto Tradition, in which small groups followed a seasonal round of upland and lowland exploitation, appears in the West as early as 7000 BC. It spreads slowly eastward, filling the niche eventually vacated by Plains-based big game hunters. Archaic peoples preferred spring-fed canyon heads for base camps with access to a broad spectrum of resources. Smaller activity sites were located close to hunting, gathering, or quarrying resources (Irwin-Williams 1979). The south-central Southwest sites, which are characterized by thin flat milling stones and percussion-flaked chipped-stone tools, indicate a mixed hunting-gathering economy (Irwin-Williams 1979).

Middle Archaic. There are indications that the climate of the Southwest entered a moister phase around 3500 BC. It was a period of dune stabilization, soil formation, and increased spring reliability. The number, size, and density of sites increase, indicating a population increase. Camps become less ephemeral with indications of simple temporary structures. A

distinctively Southwest cultural area began to develop as cultures across the region interacted at a low level and shared subsistence patterns and stylistic traits (Irwin-Williams 1979).

In the West, surface finds of stone choppers, scrapers, grinding stones, and handstones indicate a mixed foraging economy. Lake-edge sites were preferred. In the north, canyon heads remained popular locations for base camps with extensive fire-cracked cobble-filled earth ovens. Faunal remains suggest that medium and small game animals were being exploited. A picture emerges of increasingly successful systematic, intensive, and inclusive exploitation of microenvironments over the whole annual cycle.

Late Archaic (2000 BC–AD 500). During this period, cultural influences reaching the Southwest from Mexico resulted in Archaic groups adding horticulture to their subsistence base. At first, raising crops became another element of the seasonal round, but by the end of the period, permanent villages had been established, irrigation had been introduced, and maize, beans, and squash, the staples of Native American agriculture, were being grown (Irwin-Williams 1979). Horticulture gradually became an increasingly important part of the subsistence base as the population of Archaic groups slowly increased. Some sites became more permanent and included cultic artifacts. Narrow canyon-floor floodplains near canyon heads seem to have been exploited for maize agriculture (Woodbury and Zubrow 1979).

The earliest permanent villages in the Southwest appeared along the Gila and Salt Rivers of southern Arizona about 300 BC. These sites were clearly peripheral outposts of Mesoamerican civilization. Large-scale irrigation appeared without local precursors. In the centuries before AD 500, village life became widespread, incorporating permanent architecture, constructed wells, irrigation systems, and storage pits. Pottery, also derived from Mexico, was widespread by the end of the period, and by AD 500, the bow and arrow had

replaced the atlatl, or spear thrower. The pattern of agriculturally based permanent settlements was established as a distinctive Southwestern cultural pattern, producing maize, beans, squash, cotton, and possibly tobacco, and having communal ritual areas (Woodbury and Zubrow 1979).

Hohokam. The initial incursion of settlements based on irrigation agriculture on the Gila and Salt rivers can be seen as the Pioneer Period of the Hohokam culture (100 BC–AD 500). The Hohokam were likely immigrants from Mexico, bringing with them Mesoamerican practices and technology. They occupied sites along perennial streams with access to mountain resources. Although they constructed elaborate irrigation systems, they also relied heavily on gathering such resources as saguaro fruit and mesquite beans. Pioneer settlements consisted of wood and brush structures built in shallow depressions clustered haphazardly near irrigation canals. Cremation was the typical mortuary practice. Typical artifacts include thin plain and redware pottery made using the paddle-and-anvil technique, ceramic figurines, worked shells, finely chipped stone artifacts, stone bowls, trough milling stones, and stone palettes. Shells were obtained primarily from the Gulf of California, either by trade or expedition.

In the succeeding Colonial Period (AD 550–900), the same patterns became elaborated and expanded as Hohokam culture spread to the north, west, and east. There were more and larger settlements. Irrigation systems expanded, suggesting inter-village cooperation. Ball courts and platform mounds showed increasing Mesoamerican connections as well as social, religious, and economic integration within the communities. There arose a new flamboyance in the arts, shown in ceramic decorations, ceramic figurines, more elaborate stone work, and worked shells.

Hohokam territory shifted slightly in the following Sedentary Period (AD 900–1100). In many areas, village locations shifted to the

floodplain or first terrace, while other dwellings shifted away from the rivers, although they were still connected by irrigation channels. Mesoamerican connections continue. By the end of the period, the roofs and walls of dwellings were being constructed of wattle and daub, or *jacal*.

In the following Classic Period (AD 1100–1450), the basic way of life remained the same, but there was a shift in settlement pattern and a contraction from frontier areas. Many Sedentary Period sites did not continue into the Classic Period. Sites became larger and moved farther from water. There is evidence for terrace farming, dry farming, and flood irrigation, as well as canal irrigation. Multistory buildings appear. The Hohokam culture comes to an end around AD 1450, perhaps under pressure from Athapaskan (Apache/Navajo) expansion or because of a loss of trade ties with Mesoamerica (Gumerman and Haury 1979).

Mogollon. A distinct agriculturally based culture also developed in the more mountainous regions east of the Hohokam. While broadly parallel to other Southwestern cultures, a distinct ecological context resulted in a distinct culture. The occupied area is dissected by high mountains and well-watered valleys. These narrow valleys were less than ideal for agriculture because of their narrowness, altitude, and short growing seasons. Early Mogollon (500 BC–AD 1000) settlements, which were often at least partially walled, tended to be located in easily defensible positions on high mesas, bluffs, or ridges well back from well-traveled routes. By AD 900–1000, sites were located on floodplains near irrigable land. Settlements consisted of from four or five to fifty pithouses. Each settlement had one or more large pithouses, or kivas, presumably for communal and/or ritual use.

Early Mogollon pottery were coiled, polished, uniformly shaped, plain brown and red wares, while painted wares appeared about AD 400 when red-on-brown and red-on-white

wares appeared. The chipped stone industry continued earlier Archaic forms and techniques, but there was a well-developed pecked and ground stone technology including functional forms such mortars, pestles, milling stones, and axes along with carved decorative pieces.

The Later Mogollon (AD 1000–1400) culture appears to have been influenced by the Anasazi to the north. The dominant site type is a surface pueblo of from four or five to 500 rooms. The tightly packed cells included living, storage, and work rooms. Each pueblo had one to six semisubterranean kivas. By the end of the period, much larger great kivas had appeared. Around AD 1250, there is a precipitous drop in the number of sites in some areas, while others increase in population. Later Mogollon pottery predominantly consisted of black-on-white wares decorated with exuberant geometric and figural designs. Over time, red-on-black wares and polished black wares increased. Metates, or milling stones, changed in form from basin to trough to tubular associated with milling bins (Martin 1979).

Ancient Puebloan (Anasazi²). The term Anasazi refers to the archaeologically known Puebloan cultures occupying the area north of the Mogollon and the Hohokam in an area stretching from southeastern Nevada to north-central New Mexico, but centered on the Four Corners area of the Colorado Plateau. This is an arid area of diverse topography including forested mountains, wooded mesa tops, broad and narrow canyons, and river valleys. Ecological diversity associated with variations in altitude, rainfall, and local topography made the area attractive to Archaic peoples. As in other

cultural areas, there is considerable variability, particularly between the eastern and western reaches of the area (Cordell 1979a; Plog 1979).

Basketmaker II³ (100 BC–AD 400). Sites first identified as Basketmaker were found in dry caves and rockshelters where basketry and woven fibers were preserved. Sites identified as Basketmaker II tend to be located in places that had access to diverse vegetal resources, such as rockshelters, on promontories or bluffs with good views, rims of deep canyons, and benches far from river bottoms. They consist of one or more pithouses and seem to have been occupied seasonally. The people used spear throwers to bring down game and processed plants with grinding stones. They planted and harvested maize, but only as part of their subsistence base. Rice grass and pinyon nuts provided important subsistence as well. Western Basketmaker II sites tend to have no pottery (Cordell 1997).

Basketmaker III (AD 400–700). The following period saw territorial expansion, population growth, increased trade, and increased dependence on agriculture, but hunting and gathering remained important. The fundamental Native American triad of beans, corn (maize), and squash appeared. New narrower, side-notched projectile points suggest that the bow and arrow replaced the spear thrower. Villages typically consisted of three to four structures, with one larger pithouse serving communal and ritual purposes. Villages included an increased number of storage pits, and grayware pottery appeared in the west. Village sites tended to be located on alluvial terraces and benches. The archaeological sites have low visibility. Alluvium conceals some, while pithouses often do not leave surface depressions and are discovered only in road cuts (Stewart and Gauthier 1981).

² The term Anasazi is derived from a Navajo word meaning “ancient enemy” or “ancient stranger” and is not preferred by modern Puebloan groups. However, since there seems to be no universally accepted alternative, it is retained here to distinguish the prehistoric Pueblo cultures of the northern Southwest from other prehistoric Pueblo cultures, such as the Hohokam and the Mogollon.

³ Basketmaker I was a theoretical construct that has never been isolated archaeologically.

Pueblo I (AD 700–900). Pueblo I sites are located much as the Basketmaker III sites had been, but show an increasing reliance on agriculture. Rectilinear surface storage structures appear. There is evidence of terracing and irrigation. Most sites appear to have been occupied by a single family for a single generation (Plog 1979). An increase in local varieties of widely traded painted pottery reflects the need to store and probably to exchange food in a somewhat drier environment where harvests were irregular and unpredictable (Cordell 1979a).

Pueblo II (AD 900–1100). By AD 1000, agriculture had become the dominant food source for the Anasazi. Marked by characteristic black-on-white or red-on-white pottery, village sites increased in size and were often associated with outliers. Canals, terraces, check dams, reservoirs, and grid systems developed. There were shifting patterns of abandonment and aggregation. Chaco Canyon emerged as a redistribution hub for the turquoise trade. Surface structures included living, storage, and work rooms, while kivas remained semisubterranean.

Pueblo III (AD 1100–1300). This period saw the abandonment of most of the northern tier of the Anasazi range and the aggregation of population in the southern areas. Dependence on agriculture became well established. Sites near water courses and arable land were favored. Cliff dwellings suggest a need for defense. Large pueblos developed, composed of rectangular cells and semisubterranean kivas grouped around courtyards. Chaco Canyon was the dominant center, at the nexus of a system of constructed roads and trails. Finds there include copper bells and macaw bones from Mexico.

Pueblo IV (AD 1300–1600). During Pueblo IV, the trend toward population concentration continued. The center of Anasazi development shifted from the San Juan Basin to

the Middle and Upper Rio Grande. Most historically known pueblos were founded at this time (Cordell 1979a). Large villages with hundreds of rooms built of stone or adobe were typical. Some were multistory with a central plaza and large kivas. Large sites developed in the Hopi and Zuni areas, and large pueblos appeared on the fertile alluvium along the Rio Grande. A long-distance trade network linked the Middle Rio Grande with the Hopi on the west and with Plains groups on the east (Cordell and Gumerman 1989).

Patayan. The Patayan were a pottery-making culture centered on the Lower Colorado River distinct from their Hohokam, Mogollon, and Anasazi neighbors. They occupied the mostly Basin and Range area between the coastal ranges of the Californias on the west, the Mogollon Rim of Arizona on the east, the southern tip of Nevada on the north, and the Gila River on the south (Schroeder 1979). They built small villages or pueblos associated with small farm plots. Sites are characterized by rock-lined *jacal* structures, rock and gravel alignments, and rock-filled and roasting pits. Their pottery was plain brownware related to Hohokam wares. Chipped-stone choppers characterized their stone toolkit.

The Patayan likely developed from the Archaic cultures of the Mojave Desert and had a way of life similar to the Yuman groups that inhabited the Lower Colorado at the time of European contact. A reliance on river floodwater farming, wild plant gathering, and hunting small game has been postulated, with exploitation of upland resources in times of crop failure. The Patayan appear to have been in the area by AD 700. Archaeological evidence is scant. Riverside sites were likely eroded, covered by alluvium, or drowned by modern reservoirs. Typical Patayan site types include artifact scatters (seasonal base camps, temporary camps, resource areas, lithic manufacturing, trade routes, rock rings, earth figures, and petroglyphs) (Stone 1991; Cordell 1997).

Apacheans. Five of the seven Southern Athapaskan societies currently reside in the Southwest: the Western Apache, Chiricahua, Mescalero, Jicarilla, and Navajo. From an original homeland in Canada's Mackenzie Basin, these groups are thought to have followed the Rocky Mountains south, arriving in the Southwest between AD 1000 and 1400. Primarily hunters and gatherers exploiting a wide range of resources in small mobile bands, they had practically surrounded the Pueblos by the time of the Spanish arrival in the 16th century, and had selectively adopted Puebloan cultural traits such as pottery production and limited agriculture. The interaction between Apacheans and Pueblos intensified under the pressure of Spanish expansion, particularly during the Pueblo Revolt of 1680, when the two groups made common cause against the Spanish and when Apacheans harbored Pueblo refugees from the Spanish reconquest (Brugge 1983; Opler 1983a).

U.2.3 Protohistoric Context

Spanish explorers entered the Southwest in 1540 following the Rio Grande to the Pueblos of what is now New Mexico. Disappointed at their failure to find the treasures of the Seven Cities of Cibola they returned without gold. At first, few followed in their footsteps. The reports of the few explorers and missionaries that made the trek indicate that the Pueblo culture was thriving. They described impressive mesa-top pueblo villages with plenty of food and enough cotton blankets to share with the Spaniards (Johansen 2005). All this would change with the onset of Spanish colonization, although Yuman and other western groups remained isolated from Hispanic populations.

U.2.4 Historic Context

Spanish Colonial and Mexican Period. Spanish colonization began in earnest in 1598, and in 1609 a capital of the now royal colony of

Nuevo Mexico was established, which nominally included Arizona, and a new capital at Santa Fe was founded. Pueblo villages came under the encomienda system and were required to provide tributes of grain, wood, and labor (Simmons 1979a). The arrival of the Spanish initiated a period of demographic crisis for indigenous Native Americans. New diseases reduced their numbers and perhaps their social complexity. Livestock changed the ecology of the area, competing for resources with the native fauna and consuming native grasses. The establishment of Spanish settlements and haciendas restricted the resources available to Pueblo groups and further complicated Pueblo relationships with the nonsedentary Native American groups that surrounded them (Cordell and Gumerman 1989). In 1680, the burden of the encomienda system and Spanish attempts to suppress native religious practices resulted in an explosion of violence. The usually independent Pueblos united and in alliance with the Navajo threw off Spanish rule. The Spanish reconquered the Rio Grande and Zuni pueblos in 1692. The Hopis were able to defeat the Spanish and remained independent throughout the 18th century. Refugees from the Rio Grande and Zuni pueblos sought refuge with the Hopi and in Navajo lands. At this time, elements of Pueblo and Apachean cultures merged into contemporary Navajo culture, with the Navajo adopting more permanent residences, agriculture, and sheep husbandry.

Spanish colonial law dictated that new towns, or villas, be laid out in a grid pattern around a central plaza (Simmons 1982). Grants for new settlements included a tract of communal land for grazing and the gathering of firewood, lumber, and other raw materials.

Archaeologically, domestic Spanish colonial sites have been little studied. Sites dating to before the Pueblo Revolt yield few manufactured goods, and ceramics are mostly the same as at Native American sites. At the smaller, more dispersed land holdings that characterize the 18th century, a similar pattern continues. Apart from the grid-plan plazas, sites

consist of plazuelas and single structures of herders with corrals and ramadas (Cordell 1979b). Spanish artifacts are rare and distinctive, including gun flints, chain mail, and Majolica ware pottery (Cordell 1979b).

Mexican independence in 1821 marked the beginning of a new era in the history of New Mexico. Government was now primarily a local affair, with little interference from Mexico City. With independence came more commercial freedom. Trade with its burgeoning northern neighbor, the United States, increased over the Santa Fe Trail, and New Mexico became increasingly dependent on American manufactured goods. While locally produced pottery did not disappear, an increasing amount of American cloth, crockery, milled lumber, and iron hardware made its way into the area after 1821 (Simmons 1979b).

U.S. Period. The U.S. Army entered New Mexico in August of 1846, during the Mexican War, and in a virtually bloodless action seized the territory for the United States. In 1848, under the terms of the Treaty of Guadalupe Hidalgo, New Mexico was ceded to the United States, and military posts and stage routes were established (Simmons 1982). New Mexico, accustomed to considerable local autonomy, convened a constitutional convention and applied for statehood in 1850, an action that was ignored by the U.S. Congress, which established New Mexico as a territory in the same year (Simmons 1979b). The Gadsden Purchase was ratified in 1854, adding 30,000 square miles to the Territory of New Mexico for the development of a transcontinental railroad. The establishment of the Territory of Nevada in 1861 removed all land west of the Colorado River from New Mexico. Arizona Territory was formed in 1864. In the same year, the United States began forcibly moving the Navajo from their traditional lands to Fort Sumner on the Pecos River. They were allowed to return to a reduced reservation in 1868.

The Southwest experienced many of the same kinds of economic development as the rest of the American West. Ranching, mining, lumbering, and railroad development were all important themes. Raising livestock had long been important to the local economy. The new domestic animals introduced by the Spanish — sheep, goat, cattle, and horses — were of economic importance to colonists and Native Americans alike. The Homestead Act of 1862 opened to homesteading public lands surveyed by the General Land Office. Lands near reliable surface water were among the first to be homesteaded. The presence and accessibility of water seem to have been important factors contributing to the establishment of homesteads. Improved roads and automobiles, along with better well-drilling technology, made many areas much more attractive to homesteaders after World War I.

Mining. Native Americans had been mining turquoise and coal before the arrival of the Spanish, and it was the lure of mineral wealth that first brought Spanish explorers up the Rio Grande. Spanish colonists using Native American labor began mining gold and perhaps copper ores before the Pueblo Revolt. These operations resumed after the revolt and continued through the Mexican period (Cordell 1979b). American settlers were not immune to the lure of bright metal. Although the lack of capital and transportation were initial hindrances, with the arrival of the railroad in 1880, both became available and mining activity increased.

Transportation. Mineral development in Colorado and the San Juan drainage of New Mexico attracted railroads to the Southwest, beginning in the 1870s. Phoenix and Albuquerque continued to develop as transportation hubs. East-west national highways, U.S. Route 66 and later Interstate 40, crossed the north-south routes following the Rio Grande Valley.

As in the Great Basin, the arid stretches of the Southwest were found suitable for the development and testing of weapons. The New Mexico Proving Ground was established south of Albuquerque in 1942, while the Manhattan Engineer District established a facility for developing atomic weapons at Los Alamos, New Mexico, resulting in the first successful test of an atomic weapon at Alamogordo in 1945. White Sands began testing missiles in 1945, Yuma Proving Ground opened in 1942, and the Goldwater Air Force Range opened in 1941.

U.2.5 Ethnohistoric Context

At contact, the Southwest was inhabited by a variety of Native American groups (Figure J-2), including Puebloans (Hopi, Zuni, Acoma, Laguna, Piro, Tiwa, Tewa, Jemez, Tompiro, Tano, Pecos, and Keresans), Apacheans (Western Apache, Chiricahua Apache, Mescalero Apache, Jicarilla Apache, and Navajo), the Pima-Papago, and the Yuman cultures (Cocopa, Quechan, Hsalichdohoma, Mohave, Maricopa, Walapai, and Havasupai). Yuman cultures vary between upland and river types. Those along the river practiced floodwater irrigation from earth-covered farmsteads, growing corn, beans, and squash; they also collected mesquite beans, hunted, and fished. Upland Yumans lived a hunting and gathering way of life that was similar to that of Great Basin groups. Some, such as the Havasupai, practiced irrigation agriculture part of the year. The Pima-Pago appear to be descendants of the Hohokam, and practiced irrigation agriculture in small villages.

Contemporary Pueblo groups speak a number of distinct languages, but share similar cultures. At the time of European contact, they included the Hopi, the Zuni, the Acoma, and numerous Rio Grande Puebloan groups who live in agriculturally based communities known for their distinctive architecture. Traditional pueblos consisted of one or more multistoried stone or adobe room blocks surrounding a central plaza, sometimes open on the south where ritual

structures or kivas were located. Because the pueblos were subject to frequent raids, there traditionally were no ground-level entrances; instead, access was through roof openings by retractable ladders. After contact, beehive ovens, along with metal tools and containers, were adopted from the Spanish (Schroeder 1979). However, Puebloan groups were not the only groups to inhabit the Southwest. The Pueblos and their Hispanic neighbors were involved in a trading and raiding relationship with the Navajo, Apache, and Comanche. This interaction resulted in the sharing of both trade goods and cultural traits among the communities.

Pueblo subsistence was based on irrigation agriculture, including traditional crops and stock: maize, beans, squash, turkeys, and crops and livestock introduced by the Spanish. Winter wheat was adopted, thus extending the growing season. Fruit trees and new vegetables were also adopted, along with horses, sheep, goats, and cattle. In addition, hunting and the gathering of traditional plant resources remained important for the Pueblos.

Active Spanish suppression of indigenous religious practices drove them underground, resulting in the secrecy that now surrounds them. Spanish missionaries succeeded in applying a Catholic overlay to Puebloan traditions, which the Pueblos have assimilated into their traditional beliefs.

Archaeologically, post-contact Pueblo sites show both Plains and European influences. Plains influences include striated culinary wares and bone talon points and gouges (Wendorf and Reed 1955). European influences on Puebloan material culture include the introduction of metal tools, new grains, and domestic animals. The introduction of the horse increased the Puebloan hunting range and allowed hunting parties to range onto the Plains in quest of bison (Wendorf and Reed 1955).

When United States officials arrived in the Southwest after the Mexican War, the Native American groups they encountered varied

widely in the extent of their previous exposure to Euro-Americans. Most of the agriculturally based Pueblos had been incorporated into the Spanish and Mexican legal systems and had received land grants (Egan and Padney 1979). More mobile Apachean groups had had mostly adversarial contact, raiding both Native American and colonial communities. Interior Yuman groups were isolated and had had almost no contact with people of European descent, while those on the Lower Colorado had been missionized by Spanish and Mexican clergy (Stewart 1983a). Initial contacts with American authorities were based on the pattern of negotiating treaties with sovereign entities; however, this pattern gave way in the 1870s.

Already compact, the pueblos and the agricultural Pima villages were not as susceptible to the American desire to concentrate and “civilize” indigenous groups and retained their own lands. They were not greatly affected by attempts at allotment under the Dawes Act of 1887 (Dockstander 1979). The Navajo and Apaches, on the other hand, although themselves subject to raids and slaving by settled populations, were seen as threatening groups blocking access to agricultural and mineral resources. It was felt that they needed to be controlled and pacified. These groups were subject to removal — the Navajo and Mescalera Apache to Fort Sumner in 1864 (Roessel 1983) and Chiricahua Apache to Florida in 1886 (Opler 1983b) — before eventually returning to the Southwest. Conflicts between historical enemies such as the Navajo and Hopi continued as the returning Navajo population grew and settlement expanded. The process of establishing reservations began in 1859 with the Pima and continued through the end of the nineteenth century and the beginning of the twentieth. The influx of Americans brought on by the construction of railroads and the development of agricultural and mineral resources brought Native American groups into increased contact with outsiders. Efforts to “civilize” and Americanize the Natives increased. However,

attempts at forced schooling met with only limited success. During the 1920s, the Metalliferous Minerals Act and the Indian Oil Act clarified Native American ownership of subsurface minerals. This brought a new source of wealth to some Tribes and encouraged the development of Tribal councils that could legally negotiate development rights (Shepardson 1883). This process continued with the establishment of Tribal councils and constitutions under the Indian Reorganization Act of 1934. Most Southwestern Tribes were able to retain a strong ethnic identity during this process and through their councils resisted attempts at reservation termination in the 1950s. This left them well positioned to take advantage of the Indian Self-determination Act of 1975 and the return to government-to-government relations with the federal government beginning in the 1980s (Clemmer 1979; Egan and Padney 1979; Ezell 1983; Fontana 1983; Harwell and Kelly 1983; Iverson 1983; Khera and Mariella 1983; McGuire 1983; Schwartz 1983; Stewart 1983b).

U.3 THE GREAT PLAINS

Montana, Wyoming, Colorado, and New Mexico straddle the western periphery of the Plains cultural area that extends from the Rocky Mountains to the Mississippi River and from the Saskatchewan River in southern Canada to the Rio Grande in Texas (Figure U-3). Grasslands dominate the landscape, with short-grass prairie toward the west, tall-grass prairie toward the east, and a mixed zone extending through portions of the Dakotas, Nebraska, Kansas, and Oklahoma. The Great Plains roughly includes the short-grass and mixed zones. Less than 1% of pre-European tall-grass prairie remains, and the mixed zone is greatly reduced. Declines in the short-grass prairie are less, but significant (USGS 2003). Time frames in the following are approximate and subject to regional differences and overlaps.

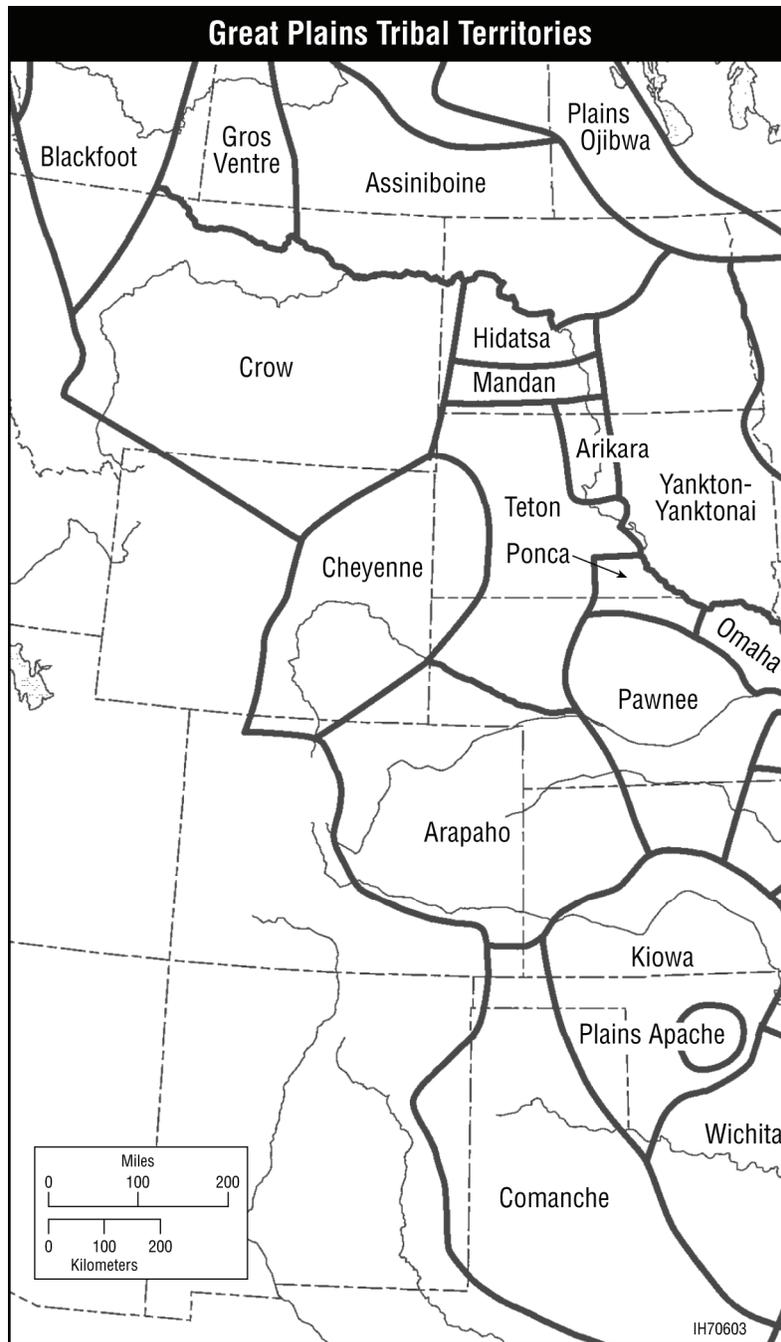


FIGURE U-3 Native Americans of the Great Plains
(Source: DeMallie 2001)

U.3.1 Settlement Pattern

Climatic changes throughout prehistory required constant modification of the subsistence strategies of the Plains. Early strategies involved

nomadic hunting of large game; however, as the climate warmed and dried, a focus solely on large game was no longer possible. Exploitation of floral resources increased during the Archaic Period. This resulted in a semi-nomadic

population that would engage in seasonal movements to exploit available resources. This pattern was followed by an increasing reliance on horticulture. Concurrently, habitat for the modern bison continued to improve, which allowed herds to swell to millions. The increases in game and plant resources allowed human populations to also expand. Villages become common by the end of the first millennium AD in some areas. The introduction of the horse significantly modified life on the Plains, with some groups becoming fully nomadic. These patterns continued until Euro-American populations began settling on the Plains.

U.3.2 Prehistoric Context

Paleo-Indian (10,000 BC–8000 BC). Though earlier dates have been proposed, the Plains were occupied by 12,000 years ago. Wetter and cooler than today, the climate supported a number of species that are now extinct. Three broad and successive complexes of large lanceolate projectile points, used with thrusting or throwing spears, were employed in taking large game. Fluted Clovis points are associated with mammoth and other Pleistocene and modern species. Folsom and later Plano points are associated with the hunting of *Bison antiquus*. This species was larger than, and ancestral to, modern bison (buffalo) and was extinct by 8000 BC. Remains representing the Paleo-Indian Tradition include kill sites, processing sites, special activity areas, and campsites. A Folsom campsite in Colorado contained scrapers, knives, engraved bone, bone needles, and remains of antelope, rabbit, fox, wolf, coyote, turtle, and bison. The importance of big game relative to other sources is a subject of debate. Paleo sites frequently appear in mountains, foothills, and plains along the western periphery (Cassells 1983; COAHP 2003).

Archaic (8000 BC–AD 1). The grazing capacity of short-grass prairie diminished with

the warming and drying that marked the end of the Pleistocene. Modern bison, replacing *B. antiquus*, were pursued when available. With climatic uncertainty came a shift toward smaller game and plant resources, a trend that started in the mountains and foothills on the western edge of the Plains. Material markers include better grinding tools (manos and slabs), basin-shaped fire pits with heating stones, and the appearance of notched points, which indicates atlatl use. Remains include cordage, fishhooks, sinkers, nets, and baskets. Early Archaic people sheltered in circular wattle-and-daub huts and rockshelters, probably making seasonal rounds of local resources. Early Archaic pit houses in the mountains in Colorado suggest semipermanence. Late Archaic stone circles occur on butte tops, rises, and river terraces in the northwestern Plains and adjacent mountains. These may represent tepees or other structures. Lines of cairns up to several kilometers long, of unknown function, may date to the late Archaic (Frison 2001).

Plains Woodland (500 BC–AD 900). By 500 BC, characteristics of the Eastern Woodlands Tradition began spreading up river systems along the eastern edge of the Plains. Traits defining the Plains Woodland Tradition initially included distinctive cord-marked pottery, mound burials, and limited horticulture. The bow and arrow appeared later. Crops including maize, beans, squash, and indigenous plants supplemented wild plant resources that were collected and processed. In most areas, people hunted bison, but focused on smaller game. Dogs, pulling and carrying loads, made long-distance seasonal hunts possible. The tradition is poorly represented on the western periphery. People living a basically Archaic lifestyle in Colorado, for example, grew a little maize in the summer and wintered in rockshelters or open camps in the mountains. Though Hopewellian-influenced populations in eastern Kansas lived in semipermanent settlements in AD 1–500, evidence suggests that horticulture was unimportant (Johnson 2001).

Plains Village (AD 900–1450). By AD 1000, population was growing and a less transient lifestyle, termed the Plains Village Tradition, was developing. Large semipermanent houses were clustered into villages above floodplains, often along major streams. Sizable cache pits became common. Bottomlands were more intensively gardened using stone, bone, and wooden tools. Improved maize was grown. Horticulture supplemented wild riverine, bottomland, and grassland resources. The balance between grown, gathered, and hunted foods, and between bison and other game, varied by region and through time. The same was true of house styles and settlement patterns. Climatic shifts influenced the subsistence mix and settlement pattern.

Fortified villages of up to 25 multifamily, rectangular lodges appeared on the periphery of the Plains along north drainage tributaries of the Missouri River in what are now northwestern Iowa and the corners of adjacent states (Henning 2001). These were followed by related settlements along the Middle Missouri River in South Dakota, and later upriver in the plains of North Dakota. Settlements in this regional expression, called the Middle Missouri Tradition, were located on high terrace rims along major streams with substantial bottomlands (Wood 2001). Rectangular pit houses with large storage pits were built in smaller, unfortified, and more dispersed villages on terraces and bluffs overlooking streams in the central Plains (Wedel 2001). Village Tradition sites along tributary streams in western Nebraska and Kansas, southeastern Colorado, and the Texas panhandle were situated on canyon rims or stream benches. The Apishapa in Colorado grew maize on canyon floors as a supplement to hunting and gathering, and built dirt-covered circular houses with stone-slab walls (Gunnerson 2001). There were also Pueblo horticultural villages at the mouths of canyons where permanent streams exited the mountains in New Mexico and Colorado (Bell and Brooks 2001). These villages were abandoned by the mid-15th century following centuries of frequent migrations and displacements. Central Plains

migrants to the abandoned Middle Missouri area later became culturally mixed with returning Middle Missouri Tribes. This population was ancestral to the historic Mandan and Hidatsa villagers (Krause 2001).

U.3.3 Protohistoric Context (AD 1500–1800)

The periphery of the western Plains is in the rain shadow of the Rocky Mountains and depends heavily upon moisture from the Gulf. Precipitation is low and unpredictable. A major drought in the 1400s depopulated the high Plains. A return to cooler and moister conditions in the 1500s improved the grass, and the bison herds multiplied. Villagers hunted there seasonally. Nomadic Apacheans traversed the southern Plains with large dog trains and traded prairie animal products to villagers for horticultural products and objects suitable for a settled life.

Trade networks were long established, as is known from the movements of exotic goods such as Gulf Coast shell, Yellowstone obsidian, Great Lakes copper, and Montana steatite. European wares, importantly including guns and more efficient tools, began moving through traditional trade networks when they became available. Spanish traded for skins and captives. Beaver-felt hats became popular in Europe around 1600, leading to the extinction of beaver there. The English and French competed for beaver and other pelts obtained initially through trade with Native Americans. Horses were acquired from the Spanish in the mid-17th century and spread throughout the Plains. Bison became easier to follow and kill and became increasingly important. With horses, many Tribes concentrated almost exclusively on bison. Some foot nomads became mounted nomads, and some groups abandoned horticulture to start following the herds. A fully mobile Plains lifestyle quickly evolved within many Tribes, featuring new social institutions, toolkits, and settlement patterns. Tribes typifying the new Plains culture included Blackfoot, Atsina, Assiniboin, Teton Dakota, Crow, Arapaho

Cheyenne, Kiowa, and Comanche (Turner 1979). Trade was often through Native intermediaries and many villages participated. In the 18th century, Mandan, Hidatsa, and Arikara formed a trading hub that warehoused merchandise and brokered the exchange of western Plains horses for European goods brought by eastern and northern Tribes. There was a ready market for furs and hides and, through time, greater access to European goods brought increased dependence upon them. Trade-related epidemics weakened populations (Swagerty 2001).

U.3.4 Historic Context

The earliest Spaniards on the Plains entered with Coronado (1540–1542) from the south and traversed what are now Arkansas, New Mexico, Colorado, Kansas, and Nebraska. Entering from the north, the French Verendres brothers (1742–1743) passed through North Dakota, Montana, and Wyoming. Following the purchase of the Louisiana Territory from France in 1803, Euro-Americans started exploring the potential of the Plains. The route of Lewis and Clark (1804–1806) included present-day Missouri, South Dakota, North Dakota, Montana, and points west. Other early American explorers and trailblazers included Pike (1806; Missouri, Kansas, Colorado, New Mexico), Hunt (1811; Missouri, Iowa, South Dakota, Colorado, and points west), Long (1819; Arkansas, Oklahoma, Kansas, Colorado, New Mexico), Becknell (1822; Kansas, Oklahoma, New Mexico), Bonneville (1832; Missouri, Nebraska, Wyoming, and points west), and Fremont (1843–1844; Kansas, Colorado, Utah, Wyoming, and points west) (Scott 1952; p. 362). Negative reporting by Pike and Long contributed to an early disinterest in the West. Overly optimistic reporting by Fremont would later fuel enthusiasm. Trappers meanwhile ranged throughout the plains and mountains as individuals or as company men, and trading posts were established. Euro-American fur trade prospered for the first several decades of the 19th century, before demand for and supply of

beaver diminished coincidentally to kill the enterprise.

The modern boundaries of the contiguous United States west of the Mississippi were attained through acquisition of additional lands in the period 1845 to 1853. The Homestead Act of 1862 offered free land to applicants meeting minimal registration requirements. Areas where public land was made available included all of the newly acquired territories except Texas, which retained its public lands under the terms of annexation. Applicants did need to be United States citizens or document their intent to become citizens. Especially after the Civil War, large numbers of homesteaders filed for land in the western Plains. Many of these were recent European immigrants. One result of the Act was that farming was attempted on marginal lands, often resulting in failure, especially during drought (NPS 2006).

The availability of windmills and improved drilling techniques expanded the areas suitable for farming. Barbed wire became available in the 1870s. Lumber and markets became available through the railroads. More suitable crop varieties, notably winter wheat, were introduced. Wheat remains the most important crop in the Great Plains and is grown mostly without irrigation. Sorghum is important in the southern Plains, as are barley and oats in the north. Irrigated crops include sugar beets and alfalfa. Mechanized farming has resulted in large farms (USDS 2006).

Seventy thousand members of the Church of Jesus Christ of Latter-day Saints moved along the Mormon Trail between 1846 and 1869. The trail connected Nauvoo, Illinois, with Salt Lake City, Utah. Mexico achieved independence in 1821 and became open to trade with the United States. The Santa Fe Trail opened in 1821 and accommodated merchants moving between Independence, Missouri, and Santa Fe in what was then Mexico. The trail was later linked to routes to the California gold fields. Passing through Nebraska and Wyoming, the Oregon Trail carried emigrant farmers to Oregon

Country in large numbers beginning about 1843. After 1848, California-bound miners used the trail as far as Fort Hall in Idaho (TNGen 2000).

The Union Pacific and Central Pacific lines met in 1869, linking Omaha to the Pacific Coast. By 1883, the Northern Pacific (St. Paul–Portland), Santa Fe (Chicago–Los Angeles), and the Southern Pacific (San Francisco–Los Angeles) were operating (Scott 1952; pp. 382–383). Railroad routes were a dominant factor in determining the course of Euro-American settlement.

Beef cattle were brought to Colonial Spain. At the close of the Civil War, the price of beef was high in the northern states as the Kansas Pacific completed a line to Abilene. Texans began making spring drives of free-range cattle to the railhead for live shipment east to slaughterhouses and to Midwestern stock raisers. The cattle industry prospered and spread rapidly north while constantly shifting west to stay ahead of homesteaders. Following a major loss of livestock to blizzards (1886–1887), an already stressed open-range system transitioned to fenced ranching (USDS 2006). Sheep and cattle ranching prospered, and ranching presently dominates land use in the western Plains.

Gold, silver, and copper mining were important through the Rocky Mountain states during the 19th century. Energy resources now dominate. Petroleum has been important in the southern Plains through most of the industry's history. The Panhandle Field presently leads the world in natural gas production. Wyoming today produces a quarter of the nation's coal output (USDS 2006).

U.3.5 Ethnohistoric Context

Bison-based nomadic or semi-nomadic and horse-mobile lifestyles dominated the Plains by the 1800s. Hunting styles varied. The Arapaho, for example, lived in large tipi villages that were moved in order to follow the herd movements through the birthing, grazing, and rutting

seasons. During winter, they split up into small camps in sheltered areas. In contrast, the Blackfoot would begin the year hunting in bands, come together as a Tribe in mid-summer for religious ceremonies and communal hunting, and return to smaller hunting units using jumps and pounds to take buffalo in the fall. Cheyenne bands were politically unified, with a formal system of delegates and advisors to regulate society, plan wars, conduct ceremonies, and enforce rules. This was not the general case, however, and most Tribes consisted of autonomous bands linked by kinship, religion, and language. The Sun Dance religions were widespread.

The Plains was largely avoided by Euro-Americans until the mid-19th century when the U.S. government entered into numerous treaties with Native Americans in the east. Most treaties resulted in a loss of territory for Natives. The Indian Removal Act (1830) resulted in the forced resettlement of a number of Tribes from the Northeast, Southeast, and Great Lakes regions into Indian Territory, now Oklahoma. Wagon trains started crossing the Great Plains in the 1840s taking settlers and miners to California. Traffic increased when gold was discovered in Colorado and the Montana Rockies in the 1850s.

The U.S. government purchased Fort Laramie from the American Fur Company in 1849, and a number of important treaties were later signed there. Fort Laramie Treaty of 1851, intended to insure peace on the Plains, was signed by representatives of the Lakota, Cheyenne, Arapaho, Crow, Arikara, Assiniboin, Mandan, Gros Ventres, and others. Land north of the Platte, south of the Missouri, and east of the Yellowstone Rivers were divided into tracts and assigned to Tribes who agreed to stop fighting each other and Euro-American migrants. The U.S. government would be allowed to build roads and outposts within their territories. For these and other considerations, the Tribes were granted possession forever (Mattes 1980).

Seeking California gold, about 50,000 miners passed Fort Laramie from 1850 to 1854 (Mattes 1980). The end of the Civil War brought increased numbers of miners, wagon trains, and settlers through the Plains, along with a military freed for activities in the West. Increases in population and settlement brought increased tensions between settlers and Tribes that resulted in treaty-breaking and punitive military actions. In 1865, the Southern Cheyenne ceded most of Colorado Territory to the United States by treaty. The Great Sioux Reservation was created in 1868.

The Union Pacific/Central Pacific railway linking Missouri to California was completed in 1869. Construction of a rapidly expanding rail system consumed land and local resources. Completed lines increased the flow of outsiders and provided easy transport of buffalo hides to distant markets. A new tanning method increased demand for hides. The Plains was flooded with hide hunters, and the remaining herds were destroyed.

The Indian Appropriation Act of March 3, 1871, contained an insert stating that Indian Nations and Tribes would no longer be recognized as independent powers with whom the United States could contract by treaty. Existing treaties were honored, though they proved subject to modification by congressional measures that encouraged settlement and exploitation of resources. A half-century of disease, treaties, military actions, and relocations ended with Tribes in reservations under United States supervision (Swagerty 2001). The Desert Land Act of February 28, 1877, effectively abrogated terms of earlier Ft. Laramie treaties and legitimized the movement of settlers into the Black Hills. (Kappler 1927). In 1889, the Great Sioux Reservation was broken into 6 small reservations and most of the original reservation was opened to settlement.

The Dawes Severalty Act (General Allotment Act) of 1887 reduced landholdings on reservations by allotting families 160 acres, individuals 80 acres, and opening the remainder

to settlement. Moreover, the sale of allotments was allowed. Nationally, Native holdings were reduced from 241 million acres in 1880 to 50 million in 1934 (Powers 1973). Government policy concerning Native Americans during most of the subsequent century either targeted or resulted in loss of Native culture. Recent years have seen policy shifts and a resurgence in interest in their heritage on the part of Native Americans (Fowler 2001).

Concerning states included in the western energy corridor that were part of the Plains Culture Area, all but one of the present-day reservations is in Montana. Light manufacturing, ranching, and farming contribute to the economy of the Blackfeet Reservation, which occupies 1.5 million acres in northwestern Montana on the eastern slopes of the Rockies. About half of the 15,560 enrolled Blackfoot Tribal members live on or near the reservation. Seventy-five percent of the Crow Tribe's 10,000 enrolled members live on or near the Crow Reservation bordering south-central Montana. The Tribe maintains a buffalo herd and operates a coal mine. 4,500 of about 7,000 enrolled members of the Confederated Salish and Kootenai Tribes live on or near the Flathead Indian Reservation in the mountains of western Montana. Timber, hydroelectric revenues, a resort and casino, and a Tribal enterprise corporation contribute to the economy. About 6,800 Assiniboine and Sioux live on the 2 million acre Fort Peck Reservation. The Fort Belknap Reservation belongs to the Assiniboine and Gros Ventre Tribes with a combined enrollment of about 4,000. Reservation and other Tribal lands together total 650,000 acres of plains and grassland in north-central Montana. The Tribes maintain a bison herd, and meat packing and tourism contribute to the economy. About 5,000 Northern Cheyenne and members of other Tribes and non-Native Americans live on the 445,000 acre Northern Cheyenne Reservation, which borders the Crow Reservation in southeastern Montana. Farming, ranching, and small businesses contribute to the reservation economy (State of Montana 2007).

The Wind River Reservation is comprised of Tribal, federal trust, and other lands totaling 2.2 million acres in west-central Wyoming. Reservation population includes 4,700 Arapaho and 2,650 Shoshone. Reservation economy includes ranching, construction, and gaming (U.S. Chamber of Commerce 2007).

U.4 THE PLATEAU

The Plateau region is a rugged area comprised of high mountains and intervening valleys (Figure U-4). The region is generally

divided into three main areas: Northern Plateau, Southern Plateau, and Eastern Plateau. The Northern Plateau is largely in Canada and is not discussed below. The Southern Plateau is bordered on the west by the Cascade Range, on the east by the Bitterroot Range, and on the north by the Okanagon Highlands near the Canadian border. The southern boundary is less well defined and follows the drainages for the Deschutes and John Day Rivers. The Eastern Plateau focuses on the Bitterroot Range of the Rocky Mountains and is largely within Montana. The southwestern portion of the Eastern Plateau is comprised of the Salmon and Clearwater

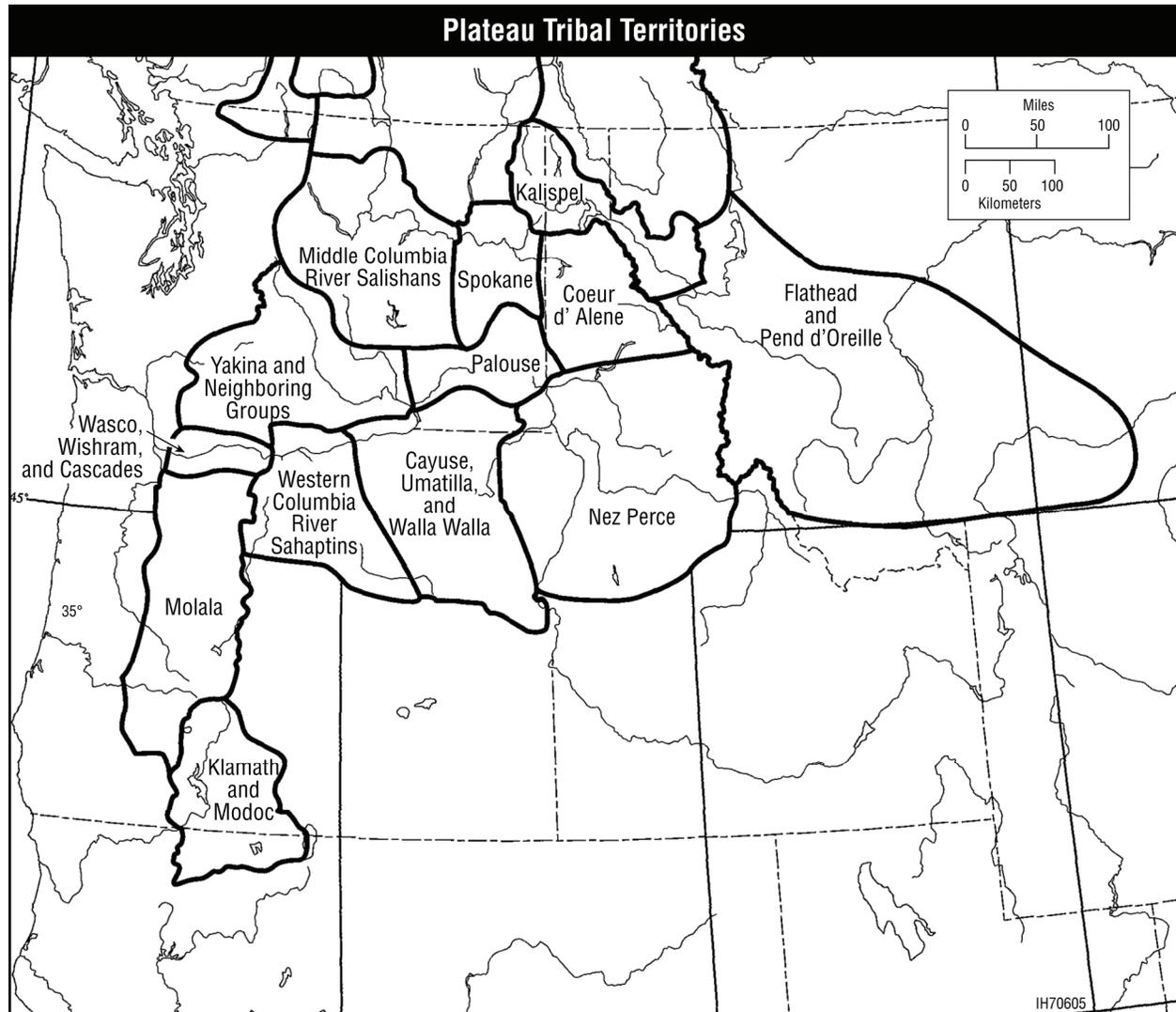


FIGURE U-4 Tribes of the Plateau Cultural Area (Walker 1998)

drainages, and the northern boundary includes the Kootenai and Pend Orielle drainages. All of the Plateau cultures were influenced by their access to salmon and anadromous river systems, roots, and large ungulates. The various cultural time periods applied to this region and the changes in material culture reflect the changes in access to the three main food sources. The later reintroduction of the horse in the contact period greatly altered the cultures of the Plateau region.

U.4.1 Settlement Pattern

The plateau is characterized by linear riverine settlement patterns reflecting reliance on a diverse subsistence base of anadromous fish and extensive game and root resources. The later reintroduction of the horse in the contact period greatly altered the cultures of the Plateau region. A village settlement pattern comprised of semipermanent long houses associated with temporary subsistence camps at higher elevations emerged about 2,000 years ago and remained basically intact until the adoption of the horse around 1700. Thereafter villages grew and locations where access to rivers combined with access to grasslands were favored, particularly in the southern portion of the region. Permanent winter villages had semisubterranean earth lodges located along the main rivers, while summer lodges were temporary mat-covered affairs located in higher elevations (Walker 1998)

U.4.2 Prehistoric Context

The cultural time periods for the Plateau are called the Early Paleo-Indian (9000 BC–6000 BC), the Middle Period (6000 BC–2000 BC), and the Late Period (2000 BC–AD 1000). These time periods are further subdivided according to the exact location within the Plateau region. As mentioned above, a general pattern depended primary on food sources such as salmon fisheries or ungulates such as bison that could provide relatively easy food sources. These primary food

sources were augmented with seasonal plant resources such as the camas root, which can be crushed and baked.

Paleo-Indian (9000 BC–6000 BC). The earliest known evidence for human beings in the Plateau date to the Paleo-Indian Period. This time period is very poorly represented in the archaeological record with only a few isolated sites. There is almost no evidence from this time period in the northern and eastern regions. The evidence in the southern region indicates that salmon were already present (Chatters and Pokotylo 1997). There is some evidence, such as fish net weights, that fish including possibly salmon were already a part of the diet. The tools found in this period consist primarily of microblades made of sharpened stone. These stones would be set in a wood shaft to form serrations. The scant evidence from this period suggests that people of this time lived in covered dwellings something like tepees.

Middle Period (6000 BC–2000 BC). The Middle Period was a time of climatic change from cold and dry to a more moderate and wet period. This period is divided into Early-Middle (6000 BC–3300 BC) and Late-Middle (3300 BC–2000 BC) halves at the regional scale. Some of the major changes that occur in the Middle Period include an expansion of salmon fisheries, the beginnings of reliance on bison in the Eastern Plateau, and the development of trade networks. During the Early-Middle Period, the microblade traditions of the northern areas continued along with the hunting and gathering strategies that persisted in the Paleo-Indian Period. The southern portions of the Plateau region show evidence of increased salmon habitat and increased reliance on salmon, resulting in larger more stable human populations. As the salmon habitat spread into the Plateau region, the cultures that had developed around salmon fisheries on the Pacific Coast also spread into the interior. The first mortars and pestles are found in the Early-Middle Period, implying a new reliance on roots

for food. A defining difference between the Early- and Late-Middle Periods is the first evidence of food storage, which allowed larger populations to exist and started the transition away from nomadic to more sedentary lifestyles. It is during the Late-Middle Period that the first semisubterranean houses were found in the Plateau, along with the first villages. The new adaptations were largely confined to the lowlands in the Southern Plateau during this period.

Late Period (2000 BC–AD 1720). The Late Period is subdivided into Early, Middle, and Late Periods. The Late Period was a time of continuous climatic changes and population growth. During the Early-Late Period (2000 BC–500 BC), the climate became much colder. Due to the new resources being exploited, populations continued to rise. The trade networks that had been developing since the Middle Periods went into decline, and overall tool quality decreased. There was greater exploitation of locally available lower quality raw materials. Field camps were near key resources. While semisubterranean dwellings continued to be used, they were dug deeper during this period. In the Eastern Plateau, there was an intensification of plant use for food. Also in the Eastern Plateau, there was the first widespread use of floodplain resources.

The climate improved considerably in the Middle-Late Period (500 BC–AD 500 to 1000). Warmer and wetter weather resulted in an expansion of food resources across the Plateau region during this time period. The first large villages appeared on the lower sections of rivers. These villages generally contained smaller and shallower semisubterranean houses than were seen previously. The trade networks that had been diminishing were revitalized. Evidence of the bow and arrow appeared in the Southern Plateau by 400 BC; it was not found in the Northern and Eastern Plateaus until AD 500. With the growth of populations, there was an apparent increase in social stratification. This is most clearly seen through the funerary items

found from this period. They range from simple burials with no materials at all to lavish burials with materials showing great artistic ability. It was during the Middle-Late Period that widespread social conflict first appeared.

The Late-Late Period (AD 500–1000 to 1720) is marked by a dramatic drop in population after AD 1000 in the Northern and Southern Plateau subregions (Chatters and Pokotylo 1997). Populations along the Columbia River increased at this time. The social stratification that developed in the Middle-Late Period seemed to stop. Other than these changes, many of the adaptive strategies from the Middle-Late Period continued.

U.4.3 Protohistoric Period (AD 1600–1750)

The Protohistoric Period was between the first exposure to European technology and actual contact with Europeans. The Tribes present during this period included the Flathead, Nez Perce, Coeur d'Alene, Cayuse, Umatilla, Walla Walla, Palouose, Spokane, Yakima, Middle Columbia River Salishans, Molala, Klamath, and Modoc. It is possible that some material goods from Russian and Spanish explorers reached the Plateau region early in this period, but the first large-scale impact was from epidemic illness. The first epidemics likely came from fur trappers moving up the Pacific Coast (Walker and Sprague 1997). It is difficult to get solid dates for these early epidemics. The first documented epidemic is in 1780. During the Protohistoric Period, it is possible that as much as half of the Plateau population died. Introduction of the horse was the second major change to affect the Plateau peoples' way of life. Horses were first evident in this region after the 1680 Pueblo uprising when large numbers of horses were released into the wild. The horse allowed for greater distances to be covered during seasonal rounds, which allowed populations to grow. While the horse did not change subsistence patterns, it greatly altered the social and political situation in the Plateau. Raiding and warfare grew in this period due to

the greater access to the peoples surrounding the Plateau, especially to the east and south. New large composite groups were formed to aid defense.

U.4.4 Historic Context

The Historic Period began when the British and Spanish started regularly visiting the northwest Pacific Coast. The first confirmed contact with United States representatives was in 1805 when the Lewis and Clark expedition stayed with the Nez Perce in what would become Idaho. After 1805, a steady stream of explorers and fur traders began to impact the lives of the Plateau cultures. The fur trade killed off most of the fur bearing animals in the region. Numerous epidemics reduced Native populations during this period. The period ended with the establishment of Oregon Territory in 1848. The Oregon Trail had been in use for over a decade by 1848, with the number of people using this route west growing steadily.

The American Period (1848 to Present) continued a process of native removal begun in the Historic Period. The U.S. military started constructing outposts shortly after creation of the territory. The new states of California, in 1850, and Oregon, in 1859, formalized American hold on the region. Natives were placed on reservations beginning in the 1850s. A large influx of miners began after gold deposits were discovered in 1854 near the Clark's Fork River. The bulk of the Plateau region was open to Euro-American settlement after 1859 treaties opened the area east of the Cascade Mountains. Once the settlers moved into the region, several gold strikes brought ever greater numbers into the Plateau. The salmon resources began dwindling in the 1860s when the first commercial canneries were constructed on the Columbia and Fraser rivers that fed the region. The Northern Pacific Railroad was completed in 1883, opening the area to extensive logging. Montana and Washington became states in 1889,

with Idaho becoming the last state in the region in 1890.

In the twentieth century, resource use in the region was dominated by logging, mining, farming, and ranching. The construction of the Grand Coulee and Bonneville Dams in the 1930s irrevocably altered the salmon fisheries on the Columbia River and opened new areas to irrigation farming, mainly for livestock feed.

U.4.5 Ethnohistoric Context

Plateau cultures have traditionally relied on a complex fishing technology similar to that found along the Northwest Coast. They depended on mutual cross-utilization of subsistence resources among the various groups in the area and the extension of kinship ties through extensive intermarriage throughout the area. There was limited political integration, primarily at the village and band levels, but trading relationships were extended throughout the area by means of institutionalized trading partnerships and regional trade fairs. Mythology and religious beliefs were widely shared, focusing mainly on the vision quest, shamanism, life-cycle observances, and seasonal celebrations in the subsistence cycle. Close relations were maintained with the Northwest Coast. After the introduction of the horse, there was greater contact with the Plains Tribes whom they supplied with horses (Walker 1998).

From the beginning of the nineteenth century, the Nez Perce, Cayuse, Walla Walla, and Flathead embraced equestrian culture, while the northwestern Salishan groups retained more of the pre-horse culture. Conditions changed in 1846 when Oregon Territory was partitioned between the United States and Canada. The Organic Act that established Oregon Territory in the United States affirmed the "rights of person or property" of Native Americans until they were extinguished by treaty (Beckham 1990). Washington Territory was created in 1853. The process of negotiating treaties with the United States began in 1855. Large reservations

were negotiated, and the Plateau peoples reserved rights to hunting and fishing areas beyond their reservations primarily in the southern portions of the Plateau.

Conflict with immigrants and miners resulted in the outbreak of violence during the mid-1850s that was brutally repressed. The end of hostilities began a period of removal and concentration on reservations, which were continually reduced. Tribes were financially impoverished, yet wealthy in horses. When Indian agents tried to Christianize Native populations, they responded with revitalization movements that stressed Native beliefs. Violence again erupted in the 1870s. During this time, the United States ceased negotiating treaties with Native American groups and encouraged more intense attempts at acculturation by the BIA. The passage of the Dawes Severalty Act of 1887 resulted in further reductions of reservation territory as Tribes sold “surplus” land to the government.

By the early twentieth century, most Plateau Native Americans resided on allotments often lacking sufficient water rights. The Indian Reorganization Act of 1934 curtailed allotments. In the 1950s, the Colville and Klamath Tribes, possessors of rich timber and range resources, were targets of termination legislation. The results of terminating trust responsibilities for the Klamath were devastating and partially led to the Indian Self-Determination Act of 1975. Thereafter Tribes began to assert more control over their own territories. Courts confirmed treaty rights to hunt and fish in usual and accustomed places. Tribes began to exploit the tourist potential of their lands, developing parks and casinos under the Indian Gaming Regulatory Act of 1988. In the 1980s, the affirmation of government-to-government consultation brought Native Americans on the Plateau full circle to a return of recognized sovereignty.

U.5 CALIFORNIA

The California cultural area does not correspond exactly with the boundaries of the modern state of California. The western edges of the Plateau, Great Basin, and Southwestern cultural areas extend into eastern California (Figure U-5). The central portions of the state are considered the most typically “Californian” (Heizer 1978a); however, the central area is mostly private land and is not considered in this PEIS. This section will discuss only those areas of California affected by the designation of energy corridors on federal lands. These are primarily mountainous areas adjoining the Central Valley.

U.5.1 Settlement Pattern

With the exception of the northwestern and southeastern portions of the area, which have unusually wet and dry climates, respectively, California has a predominantly Mediterranean climate. The hills and mountains that flank the Central Valley and the rivers that cut through them provide considerable variability and rich floral and faunal resources. For the last 4,000 years, the dominant floral staple has been generous acorn crops, which provide a rich supply of storable food. In addition, epos, or yampa root, was a staple in the northeast, as were seed grasses in the Central Valley and foothills. Deer remain plentiful throughout the state, except in the redwood forests; there are elk in the northern coastal range and antelope in the grasslands. The rivers of the Central Valley and northwest coast run with anadromous salmon and trout, and migratory birds use coastal and interior flyways (Baumhoff 1978). In the dry southeast, the periodic overflow of the Colorado River created Lake Cahuilla in the Salton Basin, providing resources that attracted settlement along its shores (Redlands Institute 2002).

The earliest Californians have left mostly surface remains and seem to have been drawn to the shores of shallow lakes, valleys, passes, and

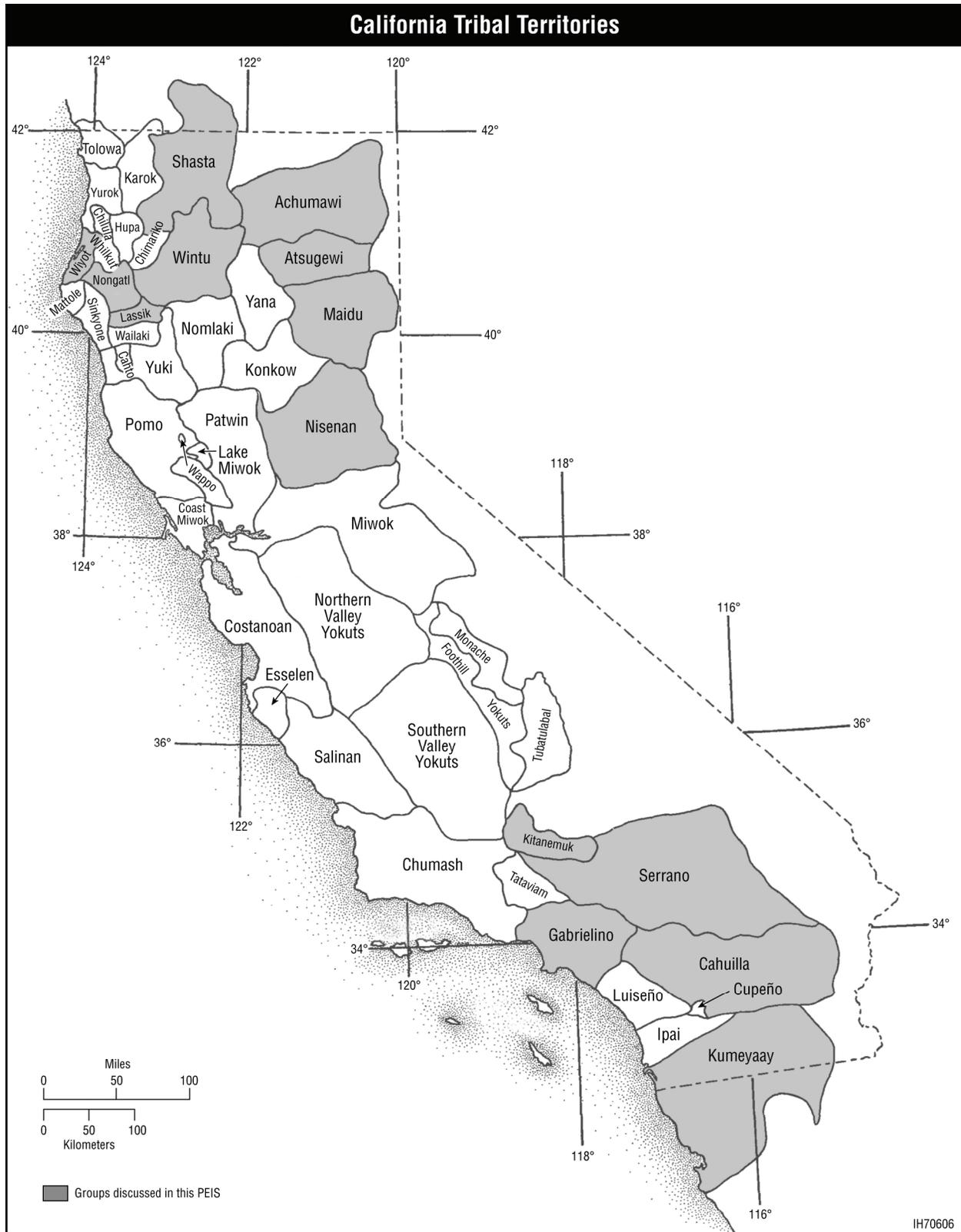


FIGURE U-5 Tribes of the California Cultural Area (Source: Heizer 1978b)

the coast. The pattern that emerges later is one supported by the abundance of resources available to indigenous California groups. A pattern of permanent winter villages associated with seasonal camps is common. In areas of greatest abundance, a settlement hierarchy emerges consisting of principal and secondary villages. Principal villages include semisubterranean ritual structures or dance houses that appear to have been political and ritual centers. Villages tend to be located along rivers and at lower elevations. They include house structures, deep middens, and often bedrock mortars. Seasonal campsites are more ephemeral, but repeated use has resulted in the formation of shallower middens and fewer bedrock mortars. Special activity sites, such as tool reduction sites, are located near the resource being exploited (Moratto 1984).

U.5.2 Prehistoric Context

Period I: Hunting: (10,000 BC–6000 BC). Moister conditions during this period created expanded lakes and marshes in the Central and Imperial Valleys that attracted game and early human populations. Archaeological finds consist of a scattering of mostly surface sites yielding bifacially flaked and fluted points similar to those associated with Paleoindian big game hunters further inland. There are similarities with Clovis and Folsom points. While no direct association has been found, it has been postulated that these points are associated with hunters of large game, possibly animals that are now extinct. The few known campsites include some grinding tools, supporting the notion that Period I peoples were primarily hunters, although it is likely that they exploited small as well as large game and also included vegetal resources in their subsistence base (Wallace 1978; Moratto 1984).

Period II: Collecting (6000 BC–3000 BC). There is an apparent shift in emphasis from hunting to collecting in Period II. The frequency

of food grinding implements from this period resulted in a milling stone horizon across the California cultural area. Sites are characterized by heavy deep-basin milling stones and handstones. Associated projectile points testify that hunting continued. While there is a heavier concentration of these sites in the south, they are represented in the northern and central parts of the area, as well. It is possible that the milling tradition arrived with seed-grinding peoples from the Great Basin where rainfall had become scarce and the intermontane lakes were drying up, causing part of the population to move westward (Wallace 1978).

Period III: Diversified Subsistence (3000 BC–2000 BC). In this period, a wider range of plant and animal species were used with increased efficiency. Specialized and selective exploitation of particular environments developed. Generally, there was dependence on hunting, fishing, and collecting, with one of these activities being emphasized based on local resources. Mortars and pestles were added to milling stones, and chipped-stone artifacts were more diverse and more skillfully made. There is an increase in bone and shell artifacts. Skillfully made biconcave charmstones appear. The Windmiller sites of the Sacramento Valley and Sierra foothills fit into this pattern. Sites include burial knolls. There are few burial sites with habitation debris (Wallace 1978).

Late Prehistoric (2000 BC–AD 1500). The Late Prehistoric Period has been divided into Early (2000 BC–1000 BC), Middle (1000 BC–AD 500), and Late horizons (AD 500–1500), based on central California sequences. Subsistence and settlement patterns remained relatively stable after the turn of the era. During this period, regional cultures developed with climax cultures in the Sacramento-San Joaquin delta and the Santa Barbara coast, with only indirect effects on the areas considered here. The development of hopper mortars, bowl mortars, and bedrock mortars indicate that methods for leaching tannin from acorn meal had been

developed and that California's abundant acorn crop had become fundamental to the food base throughout the area. The bow and arrow replaced the spear thrower sometime before AD 500. There is evidence for the widespread burning of grasslands, chaparrals, and forests to encourage the growth of preferred seed-bearing plants and to provide forage for deer. On California's northwest coast, societies exploiting sea mammals, mollusks, and fish developed villages concentrated mostly along river banks. Net shuttles, weights, and fishhooks are common artifacts. Oversized obsidian blades, slate animal-form clubs, and shell beads indicate status or wealth. There is evidence of trade with the upper Klamath and as far away as Vancouver Island. Farther inland, the Redding District cultures exhibit many of the same characteristics, including ritual obsidian blades, notched bone pendants, pine nut beads, charmstones, and desert side-notched points. A similar pattern appears in the South Cascades where milling stones and hopper, bowl, and bedrock mortars indicate a mixed dependence on acorns and seed crops. In the northern Sierra Nevada, a high-elevation seasonal hunting and seed gathering culture developed by 1000 BC characterized by manos and metates and basalt drills. By AD 800, a material culture appeared consistent with the ethnographically known Maidu (Elsasser 1978).

U.5.3 Protohistoric Period (AD 1500–1770)

California had the highest prequest population density in North America. There were about 300,000 Native Americans living in the California cultural area at the time of Spanish contact, speaking over 300 dialects and mostly living in political units of 50 to 500 members. Spanish explorers reached California in the early 16th century, but missions were not established until 1769. The period between first contact and European settlement is considered protohistoric. During this period, the distribution of beads — some used as a medium of exchange and others as indicators of social status — is among the most important indicators

of the organization of social behavior. Beads were traded from manufacturing centers on the Pacific Coast, the Coast Range, the Sierra foothills, and the Central Valley. In areas of abundance, a settlement hierarchy of large and small villages developed composed of pithouses with tule, brush, or wattle and daub superstructures. In some settlements, there were large specialized structures for ritual or social activities. Villages in the north tended to be seasonally occupied, while southern communities tended to be year-round. Large rectangular houses were common in the northwest, and smaller houses were typically found in the northern Coast Range, South Cascades, and the Sierra Nevada (King 1978; Schuyler 1978; Moratto 1984).

U.5.4 Historic Context

Spanish settlement of Alta California began in 1769 to counter British and Russian expansion from the north and to secure the area for the Manila Galleons trading between Mexico and the Spanish Philippines. Spanish colonists established a series of missions, forts, towns, and ranches stretching along the Pacific littoral from San Diego to north of San Francisco. Due to a relatively dense Native American population, most missions and ranches were built and operated with forced indigenous labor. Mexican independence in 1821 was followed by secularization of the missions in 1834. A pattern of large ranchos developed on former mission lands that spread to the interior. Non-Mexican immigrants from the United States and Europe continued the rancho pattern of enclosed, fortified, communal settlement units and expanded it into the foothills of the Sierra Nevada and northward toward Oregon, but never reached the Northwest Coast. The Mexican War and the Gold Rush of 1849 brought sudden changes. Practically overnight a new society transplanted into California including miners, farmers, merchants, and soldiers (Schuyler 1978).

With statehood in 1850, the process of industrialization began with the construction of railroads within California and across the mountains to the east. As in other western states, mining, lumbering, and ranching were important developments. American immigration continued through the 20th century. The areas considered in this PEIS are mainly in relatively remote mountainous and desert areas. They were mainly affected by logging, mining, ranching, and military development (Schuyler 1978).

U.5.5 Ethnohistoric Context

The energy corridors considered in this PEIS cross the traditional ranges of the Shasta, Wiyot, Nongatl, and Lassik in the northwest; the Achumawi and Atsugewi in the northeast; the Wintu in the northern Coast Range; the Maidu and the Nisenan in the Cascades and Sierra; and the Kitenamuk, Serrano, Gabrelino, Cahuilla, and Kumeyaay in the south. For the most part, these groups continued the patterns observed in the Late Prehistoric and Protohistoric Periods. Except for the Kumeyaay in the south, who had contact with Southwestern groups, they were nonagricultural. The environment was rich enough that large villages could be maintained, supported by fishing, hunting, and harvesting natural seed and nut crops. In areas of exceptional abundance, such as the Northwestern Coast, villages were occupied year-round. In other areas, there were substantial winter villages, but populations would disperse to take advantage of localized resources in the summer or fall. The vertical variation in climate in most areas allowed groups to summer in the mountains, taking advantage of seasonally available resources there, or to journey to preferred acorn groves. In most years, acorns provided a storable staple that could be used throughout the winter. Noted for their excellent basketry weaving, in most respects the material culture of the California Indians was relatively simple (Heizer 1978b).

Indigenous Californian groups were divided into small kin-based units, usually with a

hereditary headman as a leader. Independent villages formed the basis of the society. A main settlement and a few outlying smaller ones made up a triblet. The descendants of many of these groups have been displaced or reduced in number. Some joined with other groups when affiliated with a particular mission. While no longer occupying all of their traditional range, they still have ties to sacred or other culturally important sites in these areas, such as former village sites and specific plant and animal resources of traditional importance.

Change began to occur with the arrival of Spanish settlers moving up the coast from the south and Russian traders down the coast from the north. The establishment of the Franciscan missions and the spread of disease among the local population resulted in the abandonment of the coastal villages as Natives sought refuge in the foothills and highlands of the Sierra Nevada. Native populations were often forcibly assimilated into the missions and ranches, most of which were built and operated with forced indigenous labor. Diseases introduced by the Spanish and Russians spread through the Native population. The epidemic of 1833 substantially reduced the population of Native Americans throughout California. As Euro-American immigration continued, the pattern of large ranches dependent on indigenous labor expanded. For the most part, there was at least a modicum of coexistence between immigrant and indigenous populations until the Mexican War and Gold Rush of 1849 brought in waves of immigrants. There was little accommodation for indigenous populations by this flood of immigrants, which regarded them as a nuisance. Native Americans were enslaved, moved, or exterminated from areas of value to the American newcomers (Schuyler 1978; Moratto 1984). The new State of California permitted the taking and selling of Native Americans as “apprentices” or indentured servants (Johansen 2005).

The residents of the United States felt it was their “manifest destiny” to “civilize” the continent, and had often removed Native

American populations, forcing them farther west. In California, indigenous populations could not be displaced westward and in 1850 the Indian agents Redick McKee, George W. Barbour, and O.M. Wozencraft negotiated 18 treaties in which Native Americans ceded lands in return for protected reservations and some compensation. Most Californians felt the treaties too generous, and they were not ratified. A system of much smaller reservations on federal land where Native Americans could be concentrated and acculturated was begun, with little success. A policy of forcible concentration and elimination was followed in subsequent decades. By 1873, the indigenous population was so reduced that Euro-Americans no longer considered Native Americans a threat. The remaining Native populations were influenced by the revitalization movements such as the Ghost Dance. Additional small reserves began to be set aside in the 1870s, and by 1930 there were 36 small communities or “rancherias” in northern California. A quarter of existing Native American reserves were lost to allotments after 1887. The practice of allotment was ended in 1934 by the Indian Reorganization Act. Thereafter the federal government continued to add to Indian lands in California. By 1950, there were 117 mostly small Native American communities. Under changing government priorities, 36 Native American reserves were terminated in the 1950s with their lands divided among their members (Rawls 1984). Much of these lands were lost and most groups have now been reinstated. As the Native American population continues to expand and take control of their own resources, access to the power that could be provided through the proposed corridors will be of increasing importance to them.

U.6 NORTHWEST COAST

The traditional range of the Northwest Coast cultures is the Pacific Coast of North America from the Gulf of Alaska to northern California, and from the shoreline to the Cascade Mountains (Figure U-6). Only the southern part of the

Northwest Coast cultural area — the portion within the states of Oregon and Washington — would be affected by the actions considered in this PEIS. This region includes the Puget Sound Basin, the mouth of the Columbia River, the Willamette Valley, and the foothills of the Cascade Range. The climate along this coastal region is moderated by the Pacific Ocean, and the area is rich with a diversity of subsistence resources. While cultural differences do occur, basic subsistence patterns are very similar throughout the region. A strong reliance on fish and mammals predominates, complemented with nuts (i.e., hazelnuts), roots (i.e., camas), and berries.

U.6.1 Settlement Pattern

The cultures of the Northwest Coast are marked by a remarkable continuity of subsistence and settlement. Fishing, hunting, and gathering of shellfish persist throughout most of the area. Sea mammals were used as sources of both food and oil for fuel in much of the area, but to a less extent inland. Villages were concentrated in narrow lowland belts along the rivers, while seasonal sites and camps used for regional hunting and collecting were located at higher elevations. Inhabitants of the Puget Sound Basin exploited the resources of a wide variety of microenvironments found along a network of interconnecting fjords and channels, resulting in more than 1,000 miles of coastline in a relatively restricted area. Inland, open forests also yielded a wide variety of plant and animal resources. Because of the large supply of food, populations were generally large and socially stratified (Suttles 1989).

U.6.2 Prehistoric Context

Paleo-Indian. The early prehistory of low-lying areas in the Puget Sound Basin and Lower Columbia River is largely submerged. Sea levels began rising around 8000 BC and did not stabilize at their current levels until about

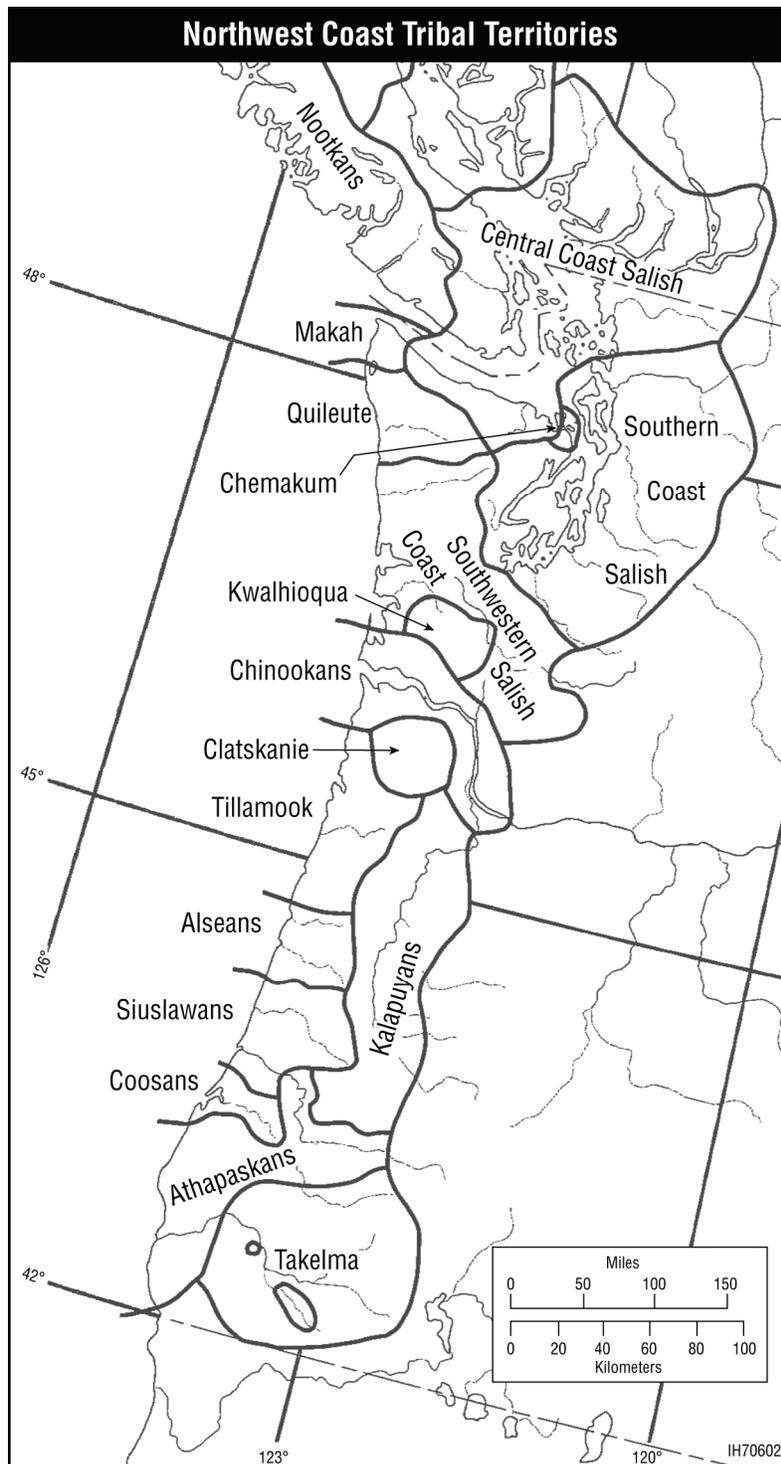


FIGURE U-6 Native Americans on the Northwest Coast
(Source: Suttles 1990)

3000 BC. However, evidence from surrounding uplands suggests that there was human occupation in these areas. Four tool traditions appear in the Northwest Coast before 7000 BC. The fluted and stemmed point traditions found throughout much of North America appear to have reached the Northwest Coast from the interior, expanding down the Columbia River between 9000 BC and 8000 BC. These traditions appear to be associated with hunting cultures, and are only weakly expressed on the coast.

While the fluted point tradition lacks continuity in the area, the stemmed point tradition appears throughout the traditional range of Chinookan speakers and may have been employed by an ancestral Chinookan population. The pebble tool and microblade traditions appear to have diffused southward along the coast between 8000 BC and 7000 BC. Unifacially flaked pebble tools associated early on with leaf-shaped bifaces are the markers of the pebble tool tradition. This coastal tradition may be of Asian origin. It included the exploitation of both land and sea mammals and the pursuit of anadromous fish, such as salmon. It appears to have spread upstream along the Fraser and Columbia Rivers following the spawning salmon. The bearers of the pebble tool tradition may be the ancestors of the Coast Salish. Small, parallel-sided blades struck from a prepared core are the markers of the microblade tradition. This Asian-derived tradition, although known early on in the north, did not arrive in the southern portion of the Northwest Coast until the Early Archaic phase (Carlson 1989).

Archaic. Early Archaic phase, based on hunting and gathering of a wide array of plant and animal resources, is thought to have commenced by 6000 BC. Upland finds of hunting and plant processing suggest the pattern of lowland villages and specialized upland camps. Many of the upland sites are surface finds from forested areas associated with willow leaf projective points and, in some cases, milling stones, mortars, and pestles. The Middle Archaic (4000 BC–AD 200) exhibits an intensification of

this pattern. Around 3000 BC, shell middens begin to appear, as mollusks were added to the Northwestern subsistence base. Sea levels stabilized, and the pattern present at historic contact was established by at least 1300 BC. Large riverside settlements suggest a strong riverine orientation. Net sinkers indicate an increased emphasis on fishing. Arrow points appear between 500 BC and 100 BC, indicating the addition of the bow and arrow to the Northwest Coast toolkit. It gradually supplanted the spear thrower, or atlatl, which did not go out of use until AD 700. Flaked cobbles and cobble celts suggest the beginnings of the Northwest Coast woodworking tradition by at least this time. Earthen ovens found in the Willamette Valley indicate the processing of acorns and camas roots (Nelson 1989; Pettigrew 1989). After 1000 BC, a more dispersed pattern was established in the southern Willamette Valley.

More archaeological sites are known from the Late Archaic (AD 200–1775); however, most of them are dated relatively late. The Lower Columbia Valley was scoured by a cataclysmic flood in the thirteenth century AD. In AD 1250, a major landslide on the Columbia River sealed off the upper river from the salmon runs and created a large lake. When the natural dam broke, it modified landforms, destroying much of the archaeological evidence from the lower portions of the river, at the same time creating the Cascades of the Columbia River, a favorite fishing venue for Native Americans. The riverside village pattern returns after the flood. Larger net sinkers suggest that sturgeon were added to the diet on the lower Columbia River (Pettigrew 1989).

Highly acidic soils in the Puget Sound Basin have resulted in poor preservation of organic materials at archaeological sites, except at some water-logged sites, rendering their interpretation difficult. It appears that the earliest sites were oriented to land resources including those found in the intertidal zone.

U.6.3 Protohistoric Context

European contact with the Northwest Coast began in 1774. Early explorers soon realized the profitability of trading otter pelts to China, and Spanish, Russian, British, and American fur traders all made their way to the Northwest Coast, as did Chinese and Hawaiian traders. Following the Lewis and Clark expedition, which reached the Pacific overland in 1805, an American trading post was established on the Columbia River in 1811, but the British Hudson's Bay Company dominated trade after 1821. While the introduction of Old World diseases as a result of these contacts had serious negative effects on Native American peoples, their lands and cultures were not compromised for the most part during the fur trading period. Native Americans, many of whom had acquired firearms before the arrival of the Europeans, were skilled traders and were able to hold their own and even dominate the mostly maritime trade. Trade with the outside world did not greatly alter Northwest Coast societies, but was easily accommodated in the existing complex culture (Ames and Maschner 1999). It was only with the establishment of agricultural settlements in the Willamette Valley in the 1830s that Euro-American cultural encroachment began in earnest (Cole and Darling 1990).

U.6.4 Historic Context

The Northwest Coast was the western edge of what was known to Europeans and Americans as Oregon Country. The northern boundary of New Spain was set in 1819, and in 1818, Great Britain and the United States agreed to joint control of the land between New Spain and Russian America (Alaska). Fur traders and trappers from the United States and Canada found new routes to the Pacific Coast, and by the 1840s, immigrant settlers were following the Oregon Trail to the Columbia River and Willamette Valley, or taking the more southerly Applegate Trail, which also served to link the Northwest to California's gold fields. In 1839,

the Cowlitz Trail connected the Willamette Valley with the Puget Sound Basin. In 1846, the United States and Great Britain agreed on a partition of Oregon Country, extending the existing border with Canada westward to the coast.

Oregon Territory was created in 1848. Settlers around Puget Sound and in the Willamette Valley filed land claims under the Oregon Donation Act of 1850. Few settlers were established north of the Columbia until 1851, when a saw mill was established near present-day Seattle, and lumbering became one of the area's major industries. Washington was created as a separate territory in 1853. The establishment of territorial governments marked the beginning of the removal of Native American groups from their traditional lands.

In Washington Territory, a series of treaties were negotiated by which Native American groups gave up most of their traditional territories in return for small reservations and the retention of traditional hunting, fishing, sealing, and whaling rights. In Oregon, a policy of removing Native Americans from the Willamette Valley was initiated. The Native Americans were first granted substantial land on the coast and a reservation at Grand Ronde, but then the initial reservation and trust lands were steadily diminished. The Oregon treaties did not always include traditional fishing and hunting rights (Beckham 1990; Marino 1990).

Traditionally timber, agriculture, and fishing have been the mainstays of the economy of the American Northwest. The forests of the Northwest Coast attracted lumbermen, and the discovery of gold in the Coast Range of Oregon attracted miners. Commercial fishing of the salmon runs began in the last quarter of the 19th century, and canneries sprang up along the Columbia.

Development of a transportation network in the rugged Northwest was difficult. Water traffic had been common since before European contact. Native American trails were developed

into roads. A system of ferries connecting those roads was developed in the 20th century. In 1873, the Northern Pacific Railroad chose Tacoma as a terminus, and in 1883, the Northwest was connected to Minnesota and the rest of the nation, facilitating immigration and the development of railroad communities. The completion of the railroad stimulated the growth of agriculture and the timber industry. Northwestern ports prospered from the discovery of gold in Alaska, and became jumping off points for miners headed north. In the 20th century, the development of the aircraft industry helped spur increased industrial diversification. As trade with the Pacific Rim increased the need for the ports of the Northwest, Portland and Seattle became increasingly important. The subsequent development of computer-related industries continued the growth.

U.6.5 Ethnohistoric Context

The proposed energy corridors evaluated in this PEIS would pass east of the Coast Range along the Willamette Valley and into the Puget Sound Basin, through the traditional territories of the Takelma, Upper Umpqua (Athapaskan), Kalapuyans, Clatskanie, Chinookans, Southwestern Coast Salish, and Southern Coast Salish (Figure U-6). These names represent linguistic groupings rather than social units, and although the linguistic affinities were recognized by group members themselves, the functional social and political unit was usually the village, not the larger group.

Despite speaking many different languages, Northwest Coast Native American groups had much in common. They all lived in rich environments that allowed for relatively permanent villages based on hunting and gathering. Most of the groups considered here did not live directly on the coast, yet fishing was a major source of food, especially the seasonal spawning runs of anadromous species such as salmon. Villages often had their own fishing territories where they constructed weirs, set fish

traps, and speared fish. Land mammals such as deer, elk, and the occasional bear were also important food resources. In the south, acorns were a staple. In the Willamette Valley, hazel nuts and camas roots were important. The open forests around Puget Sound were rich in a variety of berries. All of these resources were consumed fresh or dried and preserved for the winter season.

There was a pattern of regular seasonal movement from substantial winter villages built of rectangular, semisubterranean plank houses to less substantial camps or shelters, to exploit seasonal resources such as ripening plant resources or salmon runs. The northern groups built larger and more elaborate structures than southern ones — some houses sheltered 10 or more related families. Besides dwellings, villages typically included a sweat lodge for the men, and in the north, a potlatch house for the ritual display of wealth. These societies tended toward social stratification, with the northern groups being more stratified than the southern ones. Wealth and status were important virtues in all groups, but were more elaborated in the north. All groups had at least three divisions: headmen or chiefs, commoners, and slaves. The village headman position was often hereditary, but was based on the heritage of wealth, and had to be confirmed by conspicuous displays of wealth and redistribution. In the north, there were additional subdivisions among commoners based on wealth. Slaves were considered property and had no rights, although in the southern groups, they could regain nonslave status. Slave raiding and slave trading were common (Hajda 1989; Kendall 1989; Krauss 1989; Miller and Seaburg 1989; Silverstein 1989; Suttles and Lane 1989; Zenk 1989).

The Chinookans and the Coast Salish had first contact with European traders, and were the first to feel the impact of disease. Their numbers were reduced before the first Euro-American settlers arrived in the Willamette Valley in the 1830s and 1840s. The American administration pursued a policy of concentrating the indigenous population in a few reservations and moving

them east of the Cascades if possible. Remnants of once distinct and independent groups were placed together. In these circumstances, one group often came to dominate and the remnants of others were absorbed into the dominant culture, losing their cultural identities in the process. Some Native American groups refused to enter into treaty agreements and did not move to reservations. The descendants of these groups have less official standing when dealing with the government. When gold was found in the Rogue River drainage in 1852, the Takelma and the Upper Umpqua were decimated. No living speakers of these languages remain. Kalapuyans in the Willamette Valley occupied lands most desired by American settlers. Remnants of these groups went mostly to the Grand Ronde Reservation. The Chinookan groups went partly to Grand Ronde and were partly absorbed by the Salish. After 1871, the U.S. government ceased negotiating treaties with Native American Tribes, and in 1887 began a policy of eliminating reservations by allotting reservation lands to individual Native Americans. Allotment was ended in 1934, but in the mid-20th century, the U.S. government returned to a policy of termination, whereby reservations and Tribes were ended as official entities and assets were distributed to Tribal members. Some Northwestern groups were terminated, but have since been reinstated as officially recognized groups (Kendall 1989; Miller and Seaburg 1989). In the 1980s, the federal government returned to a policy of government-to-government consultations with Native American Tribes.

REFERENCES

- Aikens, C., M. Madsen, and D.B. Madsen, 1986, "Prehistory of the Eastern Area," in *Handbook of North American Indians: Vol. 11, Great Basin*, W.L. d'Azevedo (ed.), Smithsonian Institution, Washington, D.C.
- Ames, K.M., and H.D.G. Maschner, 1999, *Peoples of the Northwest Coast: Their Archaeology and Prehistory*, Thames and Hudson, London.
- Arrington, L.J., 1958, *Great Basin Kingdom: The Economic History of the Latter-day Saints 1830-1900*, University of Nebraska Press, Lincoln, Neb.
- Baumhoff, M.A., 1978, "Environmental Background," in *Handbook of North American Indians: Vol. 8, California*, R.F. Heizer (ed.), Smithsonian Institution, Washington, D.C.
- Beckham, S.D., 1990, "History of Western Oregon since 1846," in *Handbook of North American Indians, Vol. 7, Northwest Coast*, W. Suttles (ed.), Smithsonian Institution, Washington, D.C.
- Bell, R.E., and R.L. Brooks, 2001, "Plains Village Tradition: Southern," in *Handbook of North American Indians: Vol. 13, Plains*, J.J. DeMallie (ed.), Smithsonian Institution, Washington, D.C.
- Brugge, D.M., 1983, "Navajo Prehistory and History to 1850," in *Handbook of North American Indians: Vol. 10, Southwest*, A. Ortiz (ed.), Smithsonian Institution, Washington, D.C.
- Bryan, A.L., and D.R. Touhy, 1999, "Prehistory of the Great Basin/Snake River Plain to about 8,500 Years Ago," in *Ice Age Peoples of North America: Environments, Origins, and Adaptations of the First Americans*, R. Bonnicksen and K.L. Turnmire (eds.), Oregon State University Press, Corvallis, Ore.
- Butler, B.R., 1986, "Prehistory of the Snake and Salmon River Area," in *Handbook of North American Indians: Vol. 11, Great Basin*, W.L. d'Azevedo (ed.), Smithsonian Institution, Washington, D.C.

- Carlson, R.L., 1989, "Cultural Antecedents," in *Handbook of North American Indians, Vol. 7, Northwest Coast*, W. Suttles (ed.), Smithsonian Institution, Washington, D.C.
- Cassells, E.S., 1983, *The Archaeology of Colorado*, Johnson Publishing Company.
- Chatters, J.C., and D.L. Pokotylo, 1997, "Prehistory: Introduction," in *Handbook of North American Indians: Vol. 12, Plateau*, D.E. Walker, Jr (ed.), Smithsonian Institution, Washington, D.C.
- Clemmer, R.O., 1979, "Hopi History, 1940-1970," in *Handbook of North American Indians, Vol. 9, Southwest*, Alfonso Ortiz (ed.), Smithsonian Institution, Washington, D.C.
- Clemmer, R.O., and O.C. Stewart, 1986, "Treaties, Reservations, and Claims," in *Handbook of North American Indians: Vol. 11, Great Basin*, W.L. d'Azevedo (ed.), Smithsonian Institution, Washington, D.C.
- COAHP (Colorado Office of Archaeology and Historic Preservation), 2003, *A Profile of the Cultural Resources of Colorado*.
- Cole, D., and D. Darling, 1990, "History of the Early Period," in *Handbook of North American Indians, Vol. 7, Northwest Coast*, W. Suttles (ed.), Smithsonian Institution, Washington, D.C.
- Cordell, L.S., 1979a, "Prehistory: Eastern Anasazi," in *Handbook of North American Indians: Vol. 9, Southwest*, A. Ortiz (ed.), Smithsonian Institution, Washington, D.C.
- Cordell, L.S., 1979b, *A Cultural Resources Overview of the Middle Rio Grande Valley, New Mexico*, USDA Forest Service, Southwestern Region, Albuquerque, N.M., and Bureau of Land Management, New Mexico State Office, Santa Fe, N.M.
- Cordell, L., 1997, *Archaeology of the Southwest*, 2nd ed., Academic Press, San Diego, Calif.
- Cordell, L.S., and G.J. Gumerman, 1989, *Dynamics of Southwest Prehistory*, Smithsonian Press, Washington, D.C.
- Cressman, L.S., 1977, *Prehistory of the Far West: Home of Vanished Peoples*, University of Utah Press, Salt Lake City, Utah.
- Cressman, L.S., 1986, "Prehistory of the Northern Area," in *Handbook of North American Indians: Vol. 11, Great Basin*, W.L. d'Azevedo (ed.), Smithsonian Institution, Washington, D.C.
- d'Azevedo, W.L., 1986, "Introduction," in *Handbook of North American Indians: Vol. 11, Great Basin*, W.L. d'Azevedo (ed.), Smithsonian Institution, Washington, D.C.
- Dockstader, F.J., 1979, "Hopi History, 1850-1940," in *Handbook of North American Indians, Vol. 9, Southwest*, Alfonso Ortiz (ed.), Smithsonian Institution, Washington, D.C.
- Drews, M., E. Ingbar, and A. Branigan, 2004, *Great Basin Restoration Initiative: Cultural Resource Landscape Level Planning Model, Cultural Resource Series No. 14*, U.S. Department of the Interior, Bureau of Land Management, Nevada, Reno, Nev.
- Egan, F., and T.N. Padney, 1979, "Zuni History, 1850-1970," in *Handbook of North American Indians, Vol. 9, Southwest*, Alfonso Ortiz (ed.), Smithsonian Institution, Washington, D.C.
- Elsasser, A.B., 1978, "Post-Pleistocene Archaeology, 9000 to 2000 BC," in *Handbook of North American Indians: Vol. 8, California*, R.F. Heizer (ed.), Smithsonian Institution, Washington, D.C.
- Ezell, P.H., 1983, "History of the Pima," in *Handbook of North American Indians, Vol. 10, Southwest*, Alfonso Ortiz (ed.), Smithsonian Institution, Washington, D.C.

- Fontana, R.L., 1983, "History of the Papago," in *Handbook of North American Indians, Vol. 10, Southwest*, Alfonso Ortiz (ed.), Smithsonian Institution, Washington, D.C.
- Fowler, L., 2001, "History of the United States Plains since 1850," in *Handbook of North American Indians: Vol. 13, Plains*, J.J. DeMallie (ed.), Smithsonian Institution, Washington, D.C.
- Fowler, D.D., and D.B. Madsen, 1986, "Prehistory of the Southeastern Area," in *Handbook of North American Indians: Vol. 11, Great Basin*, W.L. d'Azevedo (ed.), Smithsonian Institution, Washington, D.C.
- Frison, G.C., 2001, "Hunting and Gathering Tradition: Northwestern and Central Plains," in *Handbook of North American Indians: Vol. 13, Plains*, J.J. DeMallie (ed.), Smithsonian Institution, Washington, D.C.
- Grayson, D.K., 1993, *The Desert's Past: A Natural Prehistory of the Great Basin*, Smithsonian Institution Press, Washington, D.C.
- Gumerman, G.J., and E.W. Haury, 1979, "Prehistory: Hohokam," in *Handbook of North American Indians: Vol. 9, Southwest*, A. Ortiz (ed.), Smithsonian Institution, Washington, D.C.
- Gunnerson, J.H., 2001, "Plains Village Tradition: Western Periphery," in *Handbook of North American Indians: Vol. 13, Plains*, J.J. DeMallie (ed.), Smithsonian Institution, Washington, D.C.
- Hajda, Y., 1989, "Southwestern Coast Salish," in *Handbook of North American Indians, Vol. 7, Northwest Coast*, W. Suttles (ed.), Smithsonian Institution, Washington, D.C.
- Harwell, H.O., and M.C.S. Kelly, 1983, "Maricopa," in *Handbook of North American Indians, Vol. 10, Southwest*, Alfonso Ortiz (ed.), Smithsonian Institution, Washington, D.C.
- Heizer, R.F. (ed.), 1978a, "Introduction," in *Handbook of North American Indians: Vol. 8, California*, Smithsonian Institution, Washington, D.C.
- Heizer, R.F. (ed.), 1978b, *Handbook of North American Indians: Vol. 8, California*, Smithsonian Institution, Washington, D.C.
- Henning, D.R., 2001, "Plains Village Tradition: Eastern Periphery and Oneota Tradition," in *Handbook of North American Indians: Vol. 13, Plains*, J.J. DeMallie (ed.), Smithsonian Institution, Washington, D.C.
- Irwin-Williams, C., 1979, "Post-Pleistocene Archaeology, 7000–2000 BC," in *Handbook of North American Indians: Vol. 9, Southwest*, A. Ortiz (ed.), Smithsonian Institution, Washington, D.C.
- Iverson, P., 1983, "The Emerging Navajo Nation," in *Handbook of North American Indians, Vol. 10, Southwest*, Alfonso Ortiz (ed.), Smithsonian Institution, Washington, D.C.
- Jacobsen, W.H., Jr., 1986, "Washoe Language," in *Handbook of North American Indians: Vol. 11, Great Basin*, W.L. d'Azevedo (ed.), Smithsonian Institution, Washington, D.C.
- Jennings, J.D., 1986, "Prehistory: Introduction," in *Handbook of North American Indians: Vol. 11, Great Basin*, W.L. d'Azevedo (ed.), Smithsonian Institution, Washington, D.C.
- Johansen, B.E., 2005, *The Native Peoples of North America: A History, Vol. I*, Praeger, Westport, Conn.
- Johnson, A.E., 2001, "Plains Woodland Tradition," in *Handbook of North American Indians: Vol. 13, Plains*, J.J. DeMallie (ed.), Smithsonian Institution, Washington, D.C.
- Judge, W.J., 1973, *Paleoindian Occupation of the Central Rio Grande Valley in New Mexico*, University of New Mexico Press, Albuquerque, N.M.

- Kappler, C., 1927, *Indian Affairs: Laws and Treaties, Vol. IV, Part VI*, Washington, Government Printing Office.
- Kehoe, A.B., 1981, *North American Indians: A Comprehensive Account*, Prentice-Hall, Englewood Cliffs, N.J.
- Kendall, D.L., 1989, "Takelma," in *Handbook of North American Indians, Vol. 7, Northwest Coast*, W. Suttles (ed.), Smithsonian Institution, Washington, D.C.
- Khera, S., and P.S. Mariella, 1983, "Yavapai," in *Handbook of North American Indians, Vol. 10, Southwest*, A. Ortiz (ed.), Smithsonian Institution, Washington, D.C.
- King, C., 1978, "Protohistoric and Historic Archaeology," in *Handbook of North American Indians: Vol. 8, California*, R.F. Heizer (ed.), Smithsonian Institution, Washington, D.C.
- Krause, R.A., 2001, "Plains Village Tradition: Coalescent," in *Handbook of North American Indians: Vol. 13, Plains*, J.J. DeMallie (ed.), Smithsonian Institution, Washington, D.C.
- Krauss, M.E., 1989, "Kwalhioqua and Clatskanie," in *Handbook of North American Indians, Vol. 7, Northwest Coast*, W. Suttles (ed.), Smithsonian Institution, Washington, D.C.
- Malouf, C.I., and J.M. Findlay, 1986, "Euro-American Impact before 1870," in *Handbook of North American Indians: Vol. 11, Great Basin*, W.L. d'Azevedo (ed.), Smithsonian Institution, Washington, D.C.
- Marino, C., 1990, "History of Western Washington since 1846," in *Handbook of North American Indians, Vol. 7, Northwest Coast*, W. Suttles (ed.), Smithsonian Institution, Washington, D.C.
- Martin, P.S., 1979, "Prehistory: Mogollon," in *Handbook of North American Indians: Vol. 9, Southwest*, A. Ortiz (ed.), Smithsonian Institution, Washington, D.C.
- Marwitt, J.P., 1986, "Fremont Cultures," in *Handbook of North American Indians: Vol. 11, Great Basin*, W.L. d'Azevedo (ed.), Smithsonian Institution, Washington, D.C.
- Mattes, M.J., 1980, *Fort Laramie Park History 1834-1977*, Rocky Mountain Regional Office NPS, U.S. Dept. of the Interior.
- McGuire, T.R., 1983, "Walapai," in *Handbook of North American Indians, Vol. 10, Southwest*, Alfonso Ortiz (ed.), Smithsonian Institution, Washington, D.C.
- Mehring, P.J., 1986, "Prehistoric Environments," in *Handbook of North American Indians: Vol. 11, Great Basin*, W.L. d'Azevedo (ed.), Smithsonian Institution, Washington, D.C.
- Miller, J., and W.R. Seaburg, 1989, "Athapaskans of Southwestern Oregon," in *Handbook of North American Indians, Vol. 7, Northwest Coast*, W. Suttles (ed.), Smithsonian Institution, Washington, D.C.
- Miller, W., 1986, "Numic Languages," in *Handbook of North American Indians, Vol. 11, Great Basin*, W.L. d'Azevedo (ed.), Smithsonian Institution, Washington, D.C.
- Moratto, M.J., 1984, *California Archaeology*, Academic Press, Orlando, Fla.
- Nelson, C.M., 1989, "Prehistory of the Puget Sound Region," in *Handbook of North American Indians, Vol. 7, Northwest Coast*, W. Suttles (ed.), Smithsonian Institution, Washington, D.C.
- NPS (National Park Service), 2006, "The Homestead Act," in Homestead National Monument of America web site. Available at www.nps.gov/home/homestead_act.html.
- Opler, M.E., 1983a, "The Apachean Culture Pattern and Its Origins," in *Handbook of North American Indians: Vol. 10, Southwest*, A. Ortiz (ed.), Smithsonian Institution, Washington, D.C.

Opler, M.E., 1983b, "Chiricahua Apache," in *Handbook of North American Indians, Vol. 10, Southwest*, Alfonso Ortiz (ed.), Smithsonian Institution, Washington, D.C.

Pettigrew, R.M., 1989, "Prehistory of the Lower Columbia and Willamette Valley," in *Handbook of North American Indians, Vol. 7, Northwest Coast*, W. Suttles (ed.), Smithsonian Institution, Washington, D.C.

Plog, F., 1979, "Prehistory: Western Anasazi," in *Handbook of North American Indians: Vol. 9, Southwest*, A. Ortiz (ed.), Smithsonian Institution, Washington, D.C.

Powers, W.K., 1973, *Indians of the Northern Plains*, Capricorn Books, New York.

Prucha, F.P., 1988, "United States Indian Policies, 1815–1860," in *Handbook of North American Indians: Vol. 4, History of Indian-White Relations*, W.L. d'Azevedo (ed.), Smithsonian Institution, Washington, D.C.

Rawls, J.B., 1984, *The Indians of California: The Changing Image*, University of Oklahoma Press, Norman, Okla.

Redlands Institute, 2002, *Salton Sea Atlas*, Environmental Systems Research Institute Press, Redlands, Calif.

Roessel, R., 1983, "Navajo History, 1850–1923," in *Handbook of North American Indians, Vol. 10, Southwest*, A. Ortiz (ed.), Smithsonian Institution, Washington, D.C.

Schroeder, A.H., 1979, "Pueblos Abandoned in Historic Times," in *Handbook of North American Indians: Vol. 9, Southwest*, A. Ortiz (ed.), Smithsonian Institution, Washington, D.C.

Schuyler, R.L., 1978, "Indian-Euro-American Interaction: Archeological Evidence from Non-Indian Sites," in *Handbook of North American Indians: Vol. 8, California*, R.F. Heizer (ed.), Smithsonian Institution, Washington, D.C.

Schwartz, D.W., 1983, "Havasupai," in *Handbook of North American Indians, Vol. 10, Southwest*, A. Ortiz (ed.), Smithsonian Institution, Washington, D.C.

Scott, W.D., 1952, "History of the United States," in *The American Peoples Encyclopedia: Vol. 19*, F. Meine (ed.), Spencer Press, Chicago, Ill.

Shepardson, M., 1883, "Development of Navajo Tribal Government," in *Handbook of North American Indians, Vol. 10, Southwest*, Alfonso Ortiz (ed.), Smithsonian Institution, Washington, D.C.

Shimkin, D.B., 1986, "The Introduction of the Horse," in *Handbook of North American Indians: Vol. 11, Great Basin*, W.L. d'Azevedo (ed.), Smithsonian Institution, Washington, D.C.

Silverstein, M., 1989, "Chinookans of the Lower Columbia," in *Handbook of North American Indians, Vol. 7, Northwest Coast*, W. Suttles (ed.), Smithsonian Institution, Washington, D.C.

Simmons, M., 1979a, "History of Pueblo-Spanish Relations to 1821," in *Handbook of North American Indians: Vol. 9, Southwest*, A. Ortiz (ed.), Smithsonian Institution, Washington, D.C.

Simmons, M., 1979b, "History of the Pueblos since 1821," in *Handbook of North American Indians: Vol. 9, Southwest*, A. Ortiz (ed.), Smithsonian Institution, Washington, D.C.

Simmons, M., 1982, *Albuquerque: A Narrative History*, University of New Mexico Press, Albuquerque, NM.

Simmons, V.M., 2000, *The Ute Indians of Utah, Colorado, and New Mexico*, University of Colorado Press, Boulder, Colo.

Smith, R.C., P.M. Jones, J.R. Roney, and K.E. Pedrick, 1983, *Prehistory and History of the Winnemucca District: A Cultural Resources Literature Overview, Cultural Resource Series No. 6*, U.S. Department of the Interior, Bureau of Land Management, Nevada, Reno, Nev.

State of Montana, 2007, Indian Nations of Montana website at <http://indiannations.visitmt.com>.

Stewart, D.E., and R.P. Gauthier, 1981, *Prehistoric New Mexico: Background for Survey*, University of New Mexico Press, Albuquerque, NM.

Stewart, K.M., 1983a, "Yumans: Introduction," in *Handbook of North American Indians, Vol. 10, Southwest*, A. Ortiz (ed.), Smithsonian Institution, Washington, D.C.

Stewart, K.M., 1983b, "Mohave," in *Handbook of North American Indians, Vol. 10, Southwest*, A. Ortiz (ed.), Smithsonian Institution, Washington, D.C.

Stone, C.L., 1991, *The Linear Oasis: Managing Cultural Resources along the Lower Colorado River, Cultural Resources Series Monograph No. 6*, U.S. Department of the Interior, Bureau of Land Management, Arizona, Phoenix, Ariz.

Suttles, W., 1989, "Introduction," in *Handbook of North American Indians, Vol. 7, Northwest Coast*, W. Suttles (ed.), Smithsonian Institution, Washington, D.C.

Suttles, W. (ed.), 1990, *Handbook of North American Indians, Vol. 7, Northwest Coast*, Smithsonian Institution, Washington, D.C.

Suttles, W., and B. Lane, 1989, "Southern Coast Salish," in *Handbook of North American Indians, Vol. 7, Northwest Coast*, W. Suttles (ed.), Smithsonian Institution, Washington, D.C.

Swagerty, W.R., 2001, "History of the United States Plains until 1850," in *Handbook of North American Indians: Vol. 13, Plains*, J.J. DeMallie (ed.), Smithsonian Institution, Washington, D.C.

TNGen, 2000, "Trails West: A Map of Early Western Migration Trails," TNGen, Inc. Web page. Available at www.tngenweb.org.

Turner, G., 1979, *Indians of North America*, pp. 51–52, Blandford Press Ltd, Dorset, UK.

U.S. Chamber of Commerce, 2007, Economic Development Administration electronic file "44Wyoming.pdf," Wind River Reservation.

USDS (U.S. Department of State), 2006, "The Great Plains and Prairies," in *An Outline of American Geography*, U.S. Dept. of State. Available at <http://usinfo.state.gov>.

USGS (U.S. Geological Survey), 2003, "PRAIRIEMAP: A GIS Database for Prairie Grassland Management in Western North America," USGS FS-057-03.

Walker, D.E., Jr. (ed.), 1998, *Handbook of North American Indians, Vol. 12 Plateau*, Smithsonian Institution, Washington, D.C.

Walker, D.E., Jr., and R. Sprague, 1997, "History until 1846," in *Handbook of North American Indians: Vol. 12, Plateau*, D.E. Walker, Jr. (ed.), Smithsonian Institution, Washington, D.C.

Wallace, W.J., 1978, "Post-Pleistocene Archaeology, 9000 to 2000 BC," in *Handbook of North American Indians: Vol. 8, California*, R.F. Heizer (ed.), Smithsonian Institution, Washington, D.C.

Warren, C.N., and R.H. Crabtree, 1986, "Prehistory of the Southwestern Area," in *Handbook of North American Indians: Vol. 11, Great Basin*, W.L. d'Azevedo (ed.), Smithsonian Institution, Washington, D.C.

Wedel, W.R., 2001, "Plains Village Tradition: Central," in *Handbook of North American Indians: Vol. 13, Plains*, J.J. DeMallie (ed.), Smithsonian Institution, Washington, D.C.

Wendorf, F., and E.K. Reed, 1955, "An Alternative Reconstruction of Northern Rio Grande Prehistory," *El Palacio* 65(5-6):131-173.

Wood, R.W., 2001, "Plains Village Tradition: Middle Missouri," in *Handbook of North American Indians: Vol. 13, Plains*, J.J. DeMallie (ed.), Smithsonian Institution, Washington, D.C.

Woodbury, R.B., 1979, "Prehistory: Introduction," in *Handbook of North American Indians: Vol. 9, Southwest*, A. Ortiz (ed.), Smithsonian Institution, Washington, D.C.

Woodbury, R.B., and E.B.W. Zubrow, 1979, "Agricultural Beginnings, 2000 BC-AD 500," in *Handbook of North American Indians: Vol. 9, Southwest*, A. Ortiz (ed.), Smithsonian Institution, Washington, D.C.

Zenk, H.B., 1989, "Kalapuyans," in *Handbook of North American Indians, Vol. 7, Northwest Coast*, W. Suttles (ed.), Smithsonian Institution, Washington, D.C.

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