

Landscape History of Oregon White Oak Woodland East of the Cascades

A Preliminary Study with Proposals for Further Research

Timothy Babalis, Ph.D.
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INTRODUCTION

Statement of Purpose

This study was conducted to support the objectives of the East Cascade Oak Partnership (ECOP) as it develops effective conservation strategies to cooperatively manage Oregon white oak woodland in the study area. The present preliminary report provides a historical overview of the area from initial European contact and exploration through the period of early Euro-American settlement at the end of the nineteenth century. (If desired, a second volume might continue this overview through the twentieth century.) It seeks to provide a better understanding of the diverse cultures and land-use values associated with the study area during this approximately one hundred year period, and to identify the most salient environmental impacts that may have affected oaks and oak habitat within it. Based on this overview, several proposals for more fine-grained studies of historic activities affecting oak habitat are presented. These would constitute the next phase of research if this project continues. At the end of this report, a preliminary survey of primary documents supporting these research proposals is included as appendices. These are useful in their own right, but their inclusion is intended primarily to serve as an example of how subsequent research will proceed.

Study Area

The study area is defined by the activities of the ECOP, which serve nearly the full geography of Oregon white oak distribution in the East Cascades ecoregion, an area roughly bounded by the Yakama Nation Indian Reservation to the north, the Warm Springs Indian Reservation to the south, the Cascade Mountains to the west (but extending within the Columbia River Gorge west as far as Stevenson), and the shrub steppe of the Columbia Plateau to the east.

This area includes the counties of Wasco and portions of Hood River in Oregon; and the counties of Klickitat, Yakima, and southern Kittitas, as well as portions of eastern Skamania in Washington. It also includes the Yakama Indian Reservation, most of the Warm Springs Indian Reservation, and substantial portions of the Mt. Hood and the Gifford Pinchot National Forests.

Methodology

The present report consists primarily of a historical overview covering the late eighteenth and the nineteenth centuries. It is divided in two parts—"Observation and Description," and "The Beginnings of Change." The first part extends through the middle of the nineteenth century, when European and Euro-American activities in the study area were significant to this study primarily for the descriptions of the environment they produced (with a few important exceptions). The second part covers the period of American settlement, when economic development associated with a growing Euro-American population brought physical changes directly affecting oak habitat within the study area. These are artificial divisions, meant to help organize the study rather than to closely reflect historical reality, and the distinctions between these two periods is not always well defined.

The historical overview is further divided into several chapters according to subject and arranged chronologically. Each subject is defined by the principal activity, or activities, potentially affecting the study area during a given period of time. At the end of each chapter is a statement of significance explaining the relevance of the subject to the overall study—that is, how the activities described in the chapter may have affected Oregon white oak woodland in the study area. Also following each chapter is a list of the sources used in the chapter, and a separate list of primary documents that will be surveyed in subsequent research on the subject area. (The latter is a provisional list only and not intended to be exhaustive.)

The report concludes with proposals for further study. As mentioned above, these proposals identify several of the most significant historic activities that may have affected oak habitat in the study area and describe how further research might be conducted to investigate these activities and their effects. Finally, a preliminary survey of primary documents relating to these proposals is attached in appendices.

PART I: OBSERVATIONS AND DESCRIPTION (PRE-1850]

Indigenous Cultures

The study area includes a portion of the pre-contact cultural area known by anthropologists as the Columbia Plateau. North of the Columbia River were the Sahaptin speaking Yakama and closely related Kittitas (or upper Yakama) and Klickitat peoples. The Yakama were the most numerous of these groups and occupied lands along the lower Yakima River from Wenas Creek south and east to the Yakima's confluence with the Columbia. The Kittitas lived farther north along the upper Yakima River to its headwaters in the Wenatchee Range. The Klickitat occupied the region south and west of Yakama territory along the Klickitat and White Salmon watersheds.

Along the Columbia River itself were the Upper Chinookan or Kiksht speaking Wasco and Wishram. The Wasco lived along the southern shore of the river in the vicinity of The Dalles, while the Wishram lived along the northern shore. Closely related Kiksht speakers lived along the Columbia River west of the Wasco and Wishram around Hood River, White Salmon River and the Cascades.

Just east of the Wasco were other Sahaptin speaking peoples, often collectively called the Tenino, though this was actually the name of one of their villages. The territory of these Tenino Sahaptins extended up the Columbia River, on both shores, from just below Celilo Falls (where the village of Tenino was located) to the borders of Cayuse Territory east of the John Day River. Their territory extended into the interior south of the Columbia River as far as the present day Warm Springs Reservation. The only portion of this vast region relevant to the present study lies west of the Deschutes River, especially in the Tygh Valley, which takes its name from one of the principal villages of the Tenino Sahaptins that was located near the confluence of Tygh Creek and the White River.

All of the Indian peoples within the study area lived near enough to the Columbia River, or one of its major tributaries, for salmon to constitute a principal element of their diet. Salmon, however, was only one of many foods that they harvested from their environment. All of these Indian groups, regardless of other cultural differences, practiced very similar forms of what

anthropologists describe as the seasonal round. In this traditional system, people traveled from place to place within the boundaries of their territory to gather resources as they became available depending on the season. Although the timing might vary from one group to another, the seasonal round in this region typically began in late winter—at the end of February or in early March—when the first new vegetative growth began to appear. People left their winter villages in the lower elevations to harvest this early season food source. Soon afterward, the first salmon run of the year would reach the interior plateau, and fishing commenced on the Columbia River and its tributaries. This would continue through April, when the spring run began to diminish and people once again dispersed to the interior to gather plant foods, with attention now focused on roots. By late summer and early fall, as temperatures rose, foraging moved to higher elevations and began to concentrate on berries and nuts. Hunters were also active during this season, focusing on ungulates such as deer and elk. By fall, the people began returning to the river in order to take advantage of the salmon runs of that season but also to trade and prepare foods for the winter. Fall was a time of gathering along the river for all of the peoples of this region. At culturally significant locations such as Celilo Falls, people from the river and from the interior, as well as travelers from distant places, gathered every year for trade and entertainment. Low country products such as salmon and eel were exchanged for high country products like venison and huckleberries. And everybody exchanged gossip. After the fall harvest, the seasonal round concluded with a return to winter villages, the permanent home of each group. The year's harvest would sustain the people through the quiet seasons of cold, rain, and snow until the round began once more the following year.

* * *

The Treaty of 1855, negotiated by Washington governor Isaac Stevens, established the Yakima Indian Reservation comprising some 1,200,000 acres on the west side of the Yakima Valley. Members of fourteen distinct Indian groups were compelled to settle there, where they collectively formed the Confederated Tribes and Bands of the Yakama Nation. Included were all of the groups that had lived within the study area north of the Columbia River—the Kiksht speaking White Rivers and Wishram, and the Sahaptin speaking Klickitat, Yakama, and Kittitas.

Separate negotiations conducted by Oregon governor Joel Palmer in 1855 established the Warm Springs Reservation, where the Kiksht speakers of the southern shore of the Columbia River, the Tenino Sahaptins, and—later—members of the northern Paiute formed the Confederated Tribes of Warm Springs. All of the groups that had lived within the study area south of the Columbia River were compelled to settle on this reservation.

Significance of Indigenous Cultures

The indigenous peoples of the western Columbia Plateau are significant to this study because of the knowledge they had, and may still possess, of environmental conditions in the study area as they existed prior to changes introduced by Europeans and Euro-Americans during the recent historic era. Knowledge among these Indian cultures was not preserved in writing but instead passed down through oral traditions. Although much of this oral culture was lost in the sufferings associated with Euro-American settlement, much also survived. Elders living today are a potentially valuable source of information on the oak woodlands of the eastern Cascades from before Euro-American contact, provided they are willing to share this knowledge. Other potentially valuable sources are ethnographic studies that have documented indigenous oral traditions. Especially important are those that have preserved the knowledge of earlier generations. (See "Proposals for Further Study" below.)

Whether or not the indigenous cultures of this region directly influenced the character of oaks and oak woodland is not known. Since acorns probably never constituted an important food for the Indians of the western Columbia Plateau, these peoples would have had little reason to actively manage oaks, as Indians in many areas west of the Cascades and in California most likely did. It is possible that the Indians of the western Columbia Plateau manipulated their environment for other purposes that inadvertently affected oak woodland—for example, through burning—but this may be difficult to determine. See "Proposals for Further Study" below for a discussion of how this question might be considered as part of the larger context of researching fire history.

One traditional use of oaks is documented by contemporary Yakama elder Levina Wilkins. According to Ms. Wilkins, her people once used oaks to make grinding bowls (mortars) for

milling acorns and other seeds. She described how the children would go out to the oak woodlands and tie flexible young saplings into a knot. These trees would be allowed to grow for a hundred years, when the next generation would come back and harvest the knotted portion of the tree, which by this time had grown dense and solid. It would be cut and hollowed out by burning with a hot stone and then scraping to remove the charred wood. The resulting bowl was hard as rock and could be used for many generations. Although such bowls are no longer made, one artifact is preserved in the Heritage Museum on the Yakama Reservation. The number of trees affected by this practice was probably not enough to significantly alter the natural character of the woodland habitat. When asked whether the Yakama ever burned oak woodland, or did anything else to help maintain oaks, Ms. Wilkins said no, they just relied on nature to take care of itself.¹

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¹ Levina Wilkins, presentation before ECOP conference, "Cultural Resources and Human Interactions in Oak Woodlands," Hood River, OR, 30 October 2018.

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Early Encounters

The first European encounters with the Pacific Northwest were by sea and directly affected only the coastal zone, not the interior where the study area is located. The first European ships to touch the coast of this region were probably Spanish galleons, making their annual voyage east from Manila beginning in 1565. One is known to have wrecked at Nehalem Bay, a little south of the Columbia mouth, in 1693. The earliest intentional exploration was made in 1773 by Spanish mariner Juan Perez, who sailed from New Spain as far north as the Queen Charlotte Islands (but touched on shore only rarely). Perez was followed a few years later (in 1775) by Bruno Heceta and Bodega y Cuadra, who sailed even farther north, noting, among other things, the mouth of the Columbia River but not entering it. In 1778, the famous English mariner Captain James Cook sailed along the Pacific Northwest coast but, like Perez before him, saw little of the actual shore, his only landfall being at Nootka Sound in Alaska. Cook's visit was significant, however, for demonstrating the economic potential of a fur trade between the Pacific Northwest and China. By 1785, Nootka had become an important center of this trade, bringing increasing numbers of British mariners to the northwest coast. By 1786, Americans had joined in the fur trade as well.²

While none of this activity directly touched upon the country south of Alaska and north of California (an area that Europeans would vaguely call "Oregon"), the Europeans had significant indirect effects long before they entered the region. Horses introduced to New Spain as early as the sixteenth century reached the Columbia Plateau by about 1730, profoundly altering the

² Hubert Howe Bancroft, *History of the Northwest Coast: Volume I, 1543-1800* (New York: The Bancroft Co., 1884), pp. 137-203; and Cameron La Follette and Douglas Deur, "Views Across the Pacific: The Galleon Trade and Its Traces in Oregon," *Oregon Historical Quarterly* 119, no. 2 (2018): 160-191.

economies and social relations of the tribes that adopted them, most notably the Nez Perce, the Cayuse, and their close neighbors. The horse increased the mobility of these people, altering their diets by allowing them to hunt large mammals more effectively and increasing the extent of area they were able to exploit for resources. Epidemic diseases, beginning with small pox, were introduced to Pacific Northwest Indians about fifty years later, probably as a result of exposure to European mariners. The initial impact was limited to tribes west of the Cascades, especially those along the lower Columbia River, but would eventually be felt by the interior tribes when they were exposed to overland immigrants in the 1840s. European diseases would have a devastating effect on Native peoples, who had little natural resistance to the foreign pathogens. The worst effects would not be felt, however, until European occupation of the region was well-advanced by the 1830s.³

Europeans first reached the Columbia River basin in 1792 when the American fur trader Captain Robert Gray entered the mouth of the Columbia River in his ship, the *Columbia Rediviva* (after which he named the river). While Gray did not proceed up the river as far as the study area—or very far at all for that matter—his discovery brought the Columbia River to the attention of other European mariners, beginning with British Captain George Vancouver only a few months later. Vancouver, who was in the area at the time and wanted to assess Gray's discovery, sent his lieutenant, William Broughton, up the river in a small vessel. Broughton produced the first map to document any portion of the Columbia River, but his survey extended only a little way above the confluence of the Willamette River to Point Vancouver, where the present day city of that name is located. Alerted to the size of the this river and its potential significance to European interests by these early encounters, other explorers would soon penetrate much farther into the watershed, both from the coast and the interior.

One year after the lower Columbia was visited by Captain Robert Gray and Lieutenant William Broughton, a European first approached the Pacific Northwest from the interior. Scottish explorer Alexander Mackenzie, working for the British North West Company, reached the

³ Francis Haines, "The Northward Spread of Horses among the Plains Indians," *American Anthropologist* 40 (1938): 429-437; Francis Haines, "Nez Perce Horses: How They Changed the Indian Way of Life," *Idaho Yesterdays* 4 (1960): 8-11; Robert Boyd, "Smallpox in the Pacific Northwest: The First Epidemics," *BC Studies* 101 (1994): 5-40; and Robert Boyd, *The Coming of the Spirit of Pestilence: Introduced Infectious Diseases and Population Decline Among Northwest Coast Indians, 1774-1874* (Vancouver, BC: University of British Columbia Press, 1999).

Pacific coast at Bella Coola in present day British Columbia in July 1793 after traveling from the east side of the Rocky Mountains. In doing this, Mackenzie became the first European to cross the North American continent north of the Spanish colonial territories. Although Mackenzie's route lay well north of the Columbia River basin, his accomplishment would inspire other overland travelers who would soon explore that territory. More importantly, Mackenzie's favorable report of the fur trapping possibilities on the Pacific slope would encourage commercial enterprises like his own North West Company and its principal rival, the Hudson's Bay Company, to expand westward, leading eventually to the earliest European and Euro-American settlements on the Columbia River.

The first Europeans actually to enter the study area were the Americans Meriwether Lewis and William Clark with the U.S. Corps of Discovery in 1805-1806. President Thomas Jefferson, who arranged the expedition, was both inspired and alarmed by Alexander Mackenzie's report, which had been published in 1801. Jefferson feared that it might serve as a prelude to further British expansion in North America, competing with his own ambitions for U.S. expansion. Jefferson had just negotiated the Louisiana Purchase, acquiring a vast territory between the Mississippi River and the Continental Divide and was already looking beyond to the Pacific Coast. He wanted an accurate assessment of the new territory as well as the lands that lay west of the Rocky Mountains and charged Lewis and Clark with making an overland exploration to accomplish this. Organized as a scientific expedition but operating under the authority of the Department of War, the Corps of Discovery left St. Louis in late 1804 and spent the next twenty-eight months traveling more than 8000 miles to the mouth of the Columbia River and back. Lewis and Clark collected specimens and artifacts of numerous objects of interest and recorded detailed observations of the lands and people they encountered in written journals, landscape drawings, and maps. These observations constitute probably the most extensive early documentation of the interior and coastal Pacific Northwest. They are also the earliest written documentation of the study area, through which the Corps of Discovery passed on its way down the Columbia River in late October 1805 and again on its return journey in April 1806.⁴

⁴ There are numerous studies on the history and significance of the Lewis and Clark expedition. A recent example is, William L. Lang and Carl Abbott, *Two Centuries of Lewis and Clark: Reflections on the Voyage of Discovery* (Portland: Oregon Historical Society Press, 2004). The first official publication of Lewis and Clark's journals appeared in 1814, published in two volumes by Nicholas Biddle. The University of Nebraska published the

- See Appendix A2 for Lewis and Clark's description of landscape within the study area.

Inspired by news of the Lewis and Clark expedition, British explorer David Thompson made several expeditions through the upper reaches of the Columbia River watershed beginning in 1807. Like his fellow countryman Alexander Mackenzie, Thompson worked for the North West Company, and his purpose in exploring these regions was to expand the company's influence and resource base. He accordingly established several important fur posts, including Spokane House near the present day city of Spokane. Thompson's explorations culminated in his descent of the Columbia River to its mouth in 1811. This brought him directly through the study area, the second European expedition to make this transit since the Corps of Discovery five years earlier. Thompson kept a detailed journal of his travels, which should be consulted as a potential source of information about the study area.

Simon Fraser, another North West Company employee, conducted more extensive explorations of British Columbia in 1805-1806, even as the American Corps of Discovery was following the Columbia River farther south. In 1808, Fraser traced the route of the river that was subsequently named after him. Upon discovering that the Fraser River was too treacherous to provide a navigable route for fur traders, the North West Company would turn its attention south in order to take advantage of the Columbia River, which Lewis and Clark had shown to be easily navigable for most of its length. This would soon lead to extensive exploitation of the Columbia River basin and its tributaries by various fur trading interests.

Significance of Early Encounters

The early encounters of Europeans and Euro-American explorers are significant to this study as a source of descriptive information about oaks and oak habitat. Their early date provides evidence from before substantial changes to the environment were introduced by later immigrants. These transient events are not likely to have had any ecologically significant effect on oak habitat.

complete journals in twelve volumes between 1983 and 1999. [Gary E. Moulton, ed., *The Definitive Journals of Lewis and Clark* (Lincoln: University of Nebraska Press, 1983-1999)].

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The Fur Trade Era

Sometime near the beginning of the seventeenth century, beaver hats became fashionable in Europe. They were made by felting the shorn fur of the beaver pelt, resulting in a remarkably durable and waterproof material. The beaver hat would remain popular for more than two hundred years, superseded only in the mid-nineteenth century with the introduction of silk to the European and American markets. The fashion for beaver hats was the basis for a remarkably extensive and lucrative fur-trapping enterprise in North America, particularly after the European beaver (*Castor fiber*) had been hunted nearly to extinction. By the middle of the seventeenth century, hunters were exploiting the bounty offered by the plentiful American beaver (*Castor canadensis*), whose native range included nearly all of the forested parts of North America north of present day Mexico. Both independent fur trappers and large companies took part in the fur trade, moving west across the continent as eastern beaver populations were exhausted over the

course of the following century. The fur trade became the leading edge of both American and Canadian westward expansion.

One of the largest, and oldest, commercial enterprises engaged in the North American fur trade was the Hudson's Bay Company. It was incorporated by royal charter in 1670 and was originally centered around Hudson's Bay in the territory known as Ruperts Land (after Prince Rupert, the company's first governor). In 1783 the North West Company was incorporated with the merger of several smaller fur trading interests operating out of Montreal in eastern Canada. It quickly became the Hudson's Bay Company's chief rival.

The North West Company was the first enterprise to carry the beaver trade across the Rocky Mountains into the Pacific Northwest. The company began exploring this untrapped, and largely unknown, region as early as 1789 when company employee Alexander Mackenzie led several expeditions in search of a river outlet to the Pacific Ocean. His first attempt brought him down the Mackenzie River—named after him—to the Arctic Ocean, but a subsequent expedition in 1793 successfully brought him to the Pacific at the mouth of the Bella Coola River. In 1805, an expedition led by Simon Fraser and John Stuart established the company's first inland trading post west of the Rocky Mountains at Fort McLeod, and in 1808 Simon Fraser explored the Fraser River to its mouth. Additional trading posts were soon established throughout this country, and the North West Company began regular operations in what became known as the Department of New Caledonia (present day British Columbia).

The North West Company first became active in the Columbia River basin in 1807 when David Thompson established Kootenai House, a trading post on the upper reaches of the river near Windermere Lake in present day British Columbia. Four more posts were established on the Columbia River over the next few years, supporting the company's growing operations within this watershed, which became known as the Columbia Department. In 1811 David Thompson traveled the length of the Columbia River to its mouth at the Pacific Ocean, hoping to establish a post there as well.⁵ He was surprised to discover that a group of American fur traders were

⁵ On David Thompson, see Meinig, *Columbia Plain*, pp. 36-39. Meinig discusses primary sources available for Thompson in footnotes to this section.

already present and had built Fort Astoria, named after New York capitalist John Jacob Astor who had sent them. Astor had founded the Pacific Fur Company in 1810 and promptly dispatched two parties of men and supplies—one by land and one by sea—to the Columbia River, hoping to preempt British fur companies in that region and establish his own fur trading empire. The War of 1812 frustrated his ambitions, however, and allowed the North West Company to take possession of Astoria the following year. The English company renamed the post Fort George and made it the headquarters of its Columbia Department operations. Starting in 1816, trappers were regularly sent out from here in large groups known as fur brigades, traveling up the Columbia or down the Willamette to trap beavers. The Columbia Department fur brigades were traveling up the Snake River and its tributaries by 1818. These expeditions would have passed through the study area, and in some cases may have spent considerable time within it on Columbia tributaries such as the White Salmon, the Klickitat, and the Deschutes. They represent the first regular presence of Europeans within the study area and the first significant impact on its natural environment through the taking of beavers, though this impact probably had little direct effect on oak habitat which is largely non-riparian.

Although the North West Company developed extensive operations in its Columbia Department in the decade after David Thompson's initial findings, it failed to make them profitable. This would change after 1821 following the merging of the North West Company into the Hudson's Bay Company. Rivalry between the two companies had become so destructive and violent in their principal territories east of the Rockies that some such action had to be taken and was urged upon them by the British government. The consolidated Hudson's Bay Company that resulted was reorganized and a new governor, George Simpson, placed in charge of the region that included the former North West Company's New Caledonia and Columbia Departments. Hoping to improve the efficiency of this vast commercial empire, Simpson considered abandoning the unprofitable Columbia Department but chose instead to retain it as a buffer against the growing threat of American expansion. This rationale would have profound implications for the management of resources within the department resulting in profound impacts on the natural environment throughout the Columbia watershed. With no incentive to manage beaver populations on a sustainable basis, as the company tried to do elsewhere, Simpson urged his brigades to take as many beavers as possible before the opportunity was lost to American

competitors. By 1824, this had evolved into a declared policy known as the "fur desert," whereby Hudson's Bay Company trappers attempted to extirpate beaver from all of the contested Oregon territory, which at that time was shared by Great Britain and the United States. The territory included most of the Columbia River and its tributaries in the Columbia Department, as well as lands to the south.

Governor Simpson was preoccupied with responsibilities east of the Rockies for the first few years of his governorship, but in 1824 he traveled overland to the Columbia Department to become acquainted with the region and implement changes to improve the efficiency of its operations. He had already replaced some of the department's personnel with more vigorous men and was encouraging a more aggressive beaver harvest in anticipation of the company's fur desert policy. An important figure in these efforts was Peter Skene Ogden, who was sent out west in 1823 to take charge of the Snake River fur brigades that operated out of Spokane House. Located near the present day city of the same name, Spokane House was one of the department's principal inland trading posts. Ogden would travel extensively throughout Idaho, Oregon and northern California, bringing back prodigious numbers of pelts—nearly 5,000 in the summer of 1824 alone—in pursuit of the company's fur desert policy. Within less than a decade, the company would conclude that its efforts were largely successful, though they failed to prevent American expansion which had other incentives beyond the fur trade driving it.

Governor Simpson's overland journey from his headquarters at York Factory on Hudson's Bay to Fort George, headquarters of the Columbia Department, took place from 15 August to 8 November 1824. He remained at Fort George on the mouth of the Columbia River for four months and returned east the following spring. Since one of the purposes of Simpson's visit was to assess the character of the Columbia Department, his journal from this expedition contains descriptive observations and should be consulted as a potentially important primary source. Traveling with Simpson on this journey was John McLoughlin, a key player in the history of the Columbia Department over the next two decades. McLoughlin was appointed chief factor of the department and would be responsible for carrying out Simpson's policies there.

Simpson introduced numerous changes aimed at cutting costs in the Columbia Department, including reducing the number of employees, lowering wages, and consolidating posts. He also eliminated dependence on expensive, imported foods and other necessities by establishing agricultural operations at the company posts and encouraging small-scale industries to manufacture basic implements locally. These measures would eventually make the department largely self-sufficient and represented the beginning of both European-style agriculture and industry in the Pacific Northwest. By the time immigrants began to arrive in the Oregon Territory nearly two decades later, the Hudson's Bay Company posts were able to provide them with critical support from their surplus agricultural production and manufactured goods.

The most visible, and possibly the most significant change implemented by Governor Simpson during his four months sojourn in the Pacific Northwest was the establishment of Fort Vancouver and the transfer of departmental headquarters from Fort George to this new location eighty miles above the mouth of the Columbia River. The impetus for the relocation was the evolving diplomatic relations between the United States and Great Britain over the shared Oregon Territory. Both parties knew that the territory would eventually be divided, but the question of where remained in doubt. By 1824 it had become apparent to the British that the United States would occupy the region south of the Columbia River, but the British hoped to retain the country to the north (present day Washington state) and expected the international boundary to be established along the river itself. This remained a realistic possibility well into the 1840s. In anticipation of such a resolution, the Hudson's Bay Company chose to abandon all of its possessions south of the Columbia River, including departmental headquarters at Fort George, and move its assets to the northern shore. Rather than relocate Fort George to the other side of the Columbia estuary, however, Governor Simpson looked farther upstream, seeking a place more suitable to his proposal for agricultural development. Since self-sufficiency was more important to Governor Simpson than coastal access (especially since the Hudson's Bay Company relied more on inland canoe circulation than maritime shipping), the new site's upstream location presented no great obstacle. The reorganized Columbia Department's headquarters were soon established on a bluff overlooking the Jolie Prairie—they were later moved down to the prairie itself—with initial construction beginning in December 1824 or early January 1825. The post, christened Fort Vancouver in honor of Britain's pioneering maritime explorer, would remain the

center of a vast inland fur enterprise that would continue for the next two decades, diminishing in importance only in the late 1840s as beaver populations declined and the market for beaver pelts collapsed following the introduction of silk hats.⁶

During the heyday of the fur trade era, several American companies and individual entrepreneurs attempted to compete with the powerful British companies in the Columbia River basin. All of them failed economically, but they brought greater attention to the Pacific Northwest, increasing American interest in the region, and many of the men who traveled with these expeditions made observations of the western landscape that are a potentially valuable source for this study. The earliest of the American fur trading ventures was John Jacob Astor's Pacific Fur Company, mentioned above. Well-organized and funded, it probably had the best chance of becoming established and successfully competing with the British North West Company, but the venture suffered from bad timing with war between the United States and Great Britain breaking out only a year after the founding of Fort Astoria in 1811, and the company had to be abandoned. Several important accounts were made by members of the Pacific Fur Company, such as Alexander Ross, who would go on to work for the North West Company and later established Fort Okanogan; and Ross Cox, who came by sea on the *Tonquin* but later traveled into the interior.

A well-known but somewhat ambiguous attempt was made two decades later to establish an American business in the region by Captain Benjamin L. E. Bonneville. A French-born U.S. Army officer, Bonneville took leave from the Army in 1832, ostensibly to engage in the fur trade. Some historians now suspect this was a ruse to disguise his true purpose of surveying the country west of the Rockies for American interests. His wide-ranging travels over the next two years took him eventually to Fort Walla Walla and down the Columbia River in 1834. Bonneville aroused the suspicion of the Hudson's Bay Company, whose far-reaching influence prevented him from trading with Indians throughout the region or from doing business at any of the Company's posts. Unable to obtain supplies, Bonneville was forced to abandon his project—whatever, in fact, it was—and return east the following spring. Captain Bonneville kept notes

⁶ On Fort Vancouver and its place in the Hudson's Bay Company's Pacific Northwest empire see, Hubert Howe Bancroft, *History of Oregon: Volume I, 1834-1848* (San Francisco: The History Co., 1886), pp. 26-53; and John A. Hussey, *History of Fort Vancouver and Its Physical Structure* (Tacoma: Washington State Historical Society, 1957).

and maps of his journeys, which he turned over to author Washington Irving. Irving wrote a popular account based on them, *The Adventures of Captain Bonneville*, published in 1837.⁷

Traveling west at the same time as Captain Bonneville was Nathaniel J. Wyeth, an ice merchant from Boston who hoped to establish an American fur trading business on the Columbia River. Unlike Bonneville, Wyeth's motives were never in dispute. Much as John Jacob Astor had done in 1810, Wyeth arranged for a ship to bring supplies to the Columbia by sea while he traveled overland with a party of trappers. The ship foundered and sank enroute, while most of Wyeth's overland party, all of them inexperienced, failed to complete the journey. Those who did make it to Oregon abandoned Wyeth after learning of the loss of their supply ship. Wyeth himself wintered at Fort Vancouver, enjoying Chief Factor John McCloughlin's generous hospitality, before returning east the following year.

Wyeth's experience had shown him the impossibility of competing with the powerful Hudson's Bay Company in the fur trade, but he imagined there might be other opportunities for an ambitious entrepreneur and conceived the idea of supplying fur trappers in the interior. In 1834, he sent another ship loaded with general merchandise to the Columbia River while he himself made a second overland trip to Oregon. Wyeth hoped to sell this merchandise at the annual fur trappers' rendezvous, but he was pre-empted by a rival. Left with a large supply of unsold goods, Wyeth established the trading post of Fort Hall on the upper Snake River to unload them but was blocked by the Hudson's Bay Company, which opened a rival trading post downriver at Fort Boise and captured most of Wyeth's potential business. Wyeth was forced to concede defeat and returned east for good, selling Fort Hall and all his merchandise to the Hudson's Bay Company. Fort Hall would later become an important depot for overland immigrants on the Oregon Trail.⁸

While Nathaniel Wyeth proved unsuccessful in his business ventures, he did become familiar with much of the Pacific Northwest, including parts of the study area through which he passed. His notes and correspondence represent an important early source of information about the

⁷ Schwantes, *Pacific Northwest*, p. 115; and Josephy, *Nez Perce*, pp. 76-77, and 103-118.

⁸ Josephy, *Nez Perce*, pp. 103-119.

Oregon Territory. Traveling with Nathaniel Wyeth on his second overland journey in 1834 were botanist Thomas Nuttall and ornithologist John Kirk Townsend, both of whom would spend considerable time on the Columbia and elsewhere on the Pacific Coast. Townsend later published an account of his journeys. Also traveling west in 1834 with Wyeth was a small group of Methodist missionaries led by Jason Lee, the first Christian missionaries to venture to Oregon (discussed at greater length below).

Significance of the Fur Trade

Like the period of early explorers (many of whom were also associated with the fur trade), the fur trade era is significant to this study as a source of descriptive information about the landscape as it existed prior to the changes introduced by later immigrants. Primary sources include reports from fur trappers themselves but also first-hand accounts of scientists, artists, and other adventurers who sometimes traveled with the brigades.

The fur trading companies are responsible for introducing the earliest examples of European style agriculture and livestock grazing to the Pacific Northwest. Governor Simpson established farming and ranching operations at most of the Hudson's Bay Company posts. The most prominent example, however, was the Puget's Sound Agricultural Company, a subsidiary of the Hudson's Bay Company, which established two large farms on the Cowlitz River and at Fort Nisqually in 1839. These practices would later have profound consequences for the environment throughout the territory, including within the study area, but at the time they were limited in extent and not ecologically significant.

The fur trade was the cause of one very significant environmental change that may have affected oak habitat. This was the near-eradication of beaver (*Castor canadensis*) from most of its range throughout Oregon Territory. Beaver functions as a keystone species. Its removal from the streams and rivers where it was formerly common would have had profound ecological consequences. These consequences may have extended beyond the riparian zone most directly affected by beaver activities to adjacent flood plain meadows as well, resulting in lower water tables and diminished capacity for year-round water storage. Oaks growing in these meadow

environments may have been affected, though exactly how probably varied widely. Some woodland populations, for example, might have benefitted from an expansion of habitat with the reduction in perennially wet soils, while others might have dwindled from desiccation. The relation between beaver removal and environmental change in the study area is a subject that deserves further research and is discussed below in "Proposals for Further Study."

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Religious Missions

Even as the Hudson's Bay Company was establishing its commercial fur empire west of the Rockies during the early nineteenth century, Christian missionaries were also contemplating the evangelical possibilities of this region with its diverse and numerous indigenous populations, few of which had been exposed to Christian doctrine. The first missionaries to come to the Pacific Northwest were Methodists. Methodist interest in the region had been sparked by an article appearing in the March 1833 issue of the *Christian Advocate and Journal*, the leading Methodist periodical in the United States at that time, describing how four Nez Perce Indians had travelled to St. Louis in 1831 to meet with superintendent of Indian affairs William Clark (the same William Clark who had led the Corps of Discovery to Oregon with Meriwether Lewis in 1805). The Nez Perce delegation requested that Clark send representatives to teach the Nez Perce about the white man's religion. Various interpretations have been put forward to explain the motivation behind this request and the intent of the Indians who made it, but its powerful effect on Christians in the east is without dispute. The president of Wesleyan University published a call for missionaries and was deluged with volunteers. He nominated Jason Lee to head the effort, and in April 1834, Lee with a small group of fellow missionaries that included his nephew Daniel, joined Nathaniel Wyeth's overland party and journeyed west, reaching Oregon in

September. Lee established his first mission in the Willamette Valley, not far from the French-Canadian settlement of Champoege.

In 1836 the American Board of Commissioners for Foreign Missions (ABCFM), a joint body of the Presbyterian and Congregational Churches, also sent missionaries to the Pacific Northwest. The ABCFM had been eyeing the region since as early as 1829 and decided, in 1835, to concentrate its missionary efforts among the tribes of the Columbia River. The following year, Marcus Whitman and Henry Spalding, along with their wives, travelled up the Columbia River from Vancouver to establish two missions on the Columbia Plateau. The Whitmans settled among the Cayuse at Waiilatpu, near Walla Walla, while the Spaldings settled among the Nez Perce at Lapwai near the confluence of the Clearwater and Snake Rivers (just east of present day Lewiston).

Over the next few years the Methodist missions continued to expand, and the Methodist Missionary Society put out additional calls for volunteers. Among those who responded was Henry Perkins, who arrived in Oregon in 1837. Finding the Indians of the Willamette Valley diminished in number and demoralized by contact with European settlers, Perkins decided to head up the Columbia River to the interior in order to find better opportunities for evangelism. He was joined in this decision by Daniel Lee, and the two men with their assistants set out from the Willamette settlements on 14 March 1838. They reached The Dalles one week later, where they found a suitable location for a mission near the mouth of Mill Creek and established Wascopam Mission. The site lies within the study area and included oak woodland, making records associated with the establishment potentially significant sources of information about oak habitat and changes that have occurred since the early nineteenth century.

Wascopam Mission was located just below the first of The Dalles, or narrows, of the Columbia River (Three Mile Rapids) at the west end of the present day city of The Dalles. It lay in a broad meadow with a freshwater spring, good soil for agriculture, and a plentiful supply of nearby timber, including oak and Ponderosa pine. An Indian village was located there which Perkins called Wascopam, from which the mission took its name. It comprised about 150 inhabitants living in fifteen cedar plank houses. Apart from the native Indians, the site had been occupied

only once before—briefly—when the Hudson's Bay Company had maintained a trading post there in 1829-1830.

- *See Appendix A4 for a description of the study area in the vicinity of Wascopam Mission by Henry Perkins et al.*

By the spring of 1839, Daniel Lee and Henry Perkins had commenced agriculture by fencing and planting about twenty acres. Vegetables, especially potatoes, appear to have been the principal crop. Irrigation was obtained from the nearby spring. The following year, Wascopam Mission grew substantially with the arrival of three additional missionaries and their families. It soon became an important stopping point for travelers along the Columbia River and immigrants arriving from the east, but in 1843 its fortunes abruptly began to wane. Daniel Lee, frustrated by his apparent failure to convert the Indians, resigned and left. Later that year, the head of the Oregon missions, Jason Lee, was recalled by the Missionary Society and replaced by a new superintendent, Rev. George Gary, who began consolidating the Oregon missions and selling off assets in an attempt to rectify some of the Methodist Missionary Society's financial problems. In this demoralizing environment, Henry Perkins also resigned, leaving Oregon early in 1844. His replacement kept Wascopam Mission going for another three years, but in 1847 the Methodist Missionary Society sold Wascopam Mission to the ABCFM, who placed the property under the nominal authority of Marcus Whitman. Events that transpired later that year, however, prevented Whitman from doing anything further, and Wascopam Mission was effectively abandoned.

The Catholic Church also established missions in the Pacific Northwest during the same period that the Protestant missionary societies were active. Catholic clergy came to Oregon Territory in response to a request made in 1834 by French Canadian settlers of the Willamette Valley (most of whom were retired from the Hudson's Bay Company). Reverend Francis Norbert Blanchet and Reverend Modeste Demers, both from Montreal, were appointed to the task by the archbishop of Quebec and arrived in Oregon in 1838. At the request of the Hudson's Bay Company, Blanchet and Demers were initially restricted to the north side of the Columbia River. Here they established St. Francis Xavier on the Cowlitz plain, where HBC's Puget Sound Agricultural Company had one of its principal farms. As missionaries, they also served the

Cowlitz Indians of this region. Somewhat later, they were permitted south of the Columbia and established a second mission church among the French Canadian settlers in the Willamette Valley at Champoege.

In 1840, the Jesuit Fr. Pierre J. De Smet traveled west from the Missouri to missionize among the Flatheads on the upper Columbia watershed. His success in this evangelical endeavor piqued his interest in the Oregon Territory, and De Smet traveled down to Fort Vancouver to communicate with Blanchet and Demers about bringing more Catholic priests to the region. De Smet subsequently sailed to Europe to appeal for reinforcements. He returned with a small party of Catholic priests, lay brothers and sisters in 1844. That same year, Oregon was declared an apostolic vicariate, with Fr. Blanchet appointed archbishop, and more religious were sent from the archdiocese of Quebec. By 1847, the Catholic missionary population in Oregon Territory included three bishops, fourteen Jesuit priests, four Oblate priests, thirteen secular priests, and thirteen religious sisters. This infusion of Catholics resulted in the founding of numerous missions both among the established immigrant communities on the west side and throughout the interior.

Over the next few years at least four Catholic missions were established within the study area—Immaculate Conception, located on Manastash Creek in the Kittitas Valley west of present day Ellensburg; Saint Joseph's, located on Ahtanum Creek near Tappan in the Yakima Valley (now part of the Yakama Indian Reservation); Holy Cross, located on lower Ahtanum Creek near its confluence with the Yakima River at Union Gap; and Saint Peter's, located at The Dalles near the former Protestant mission of Wascopam. The first three were all established by the Oblates of Mary Immaculate (OMI). This group included Fr. Charles M. Pandosy, Fr. Eugene C. Chirouse, Br. Celestin Verney, and Br. George Blanchet. All three of these missions are located within or near oak woodland habitat and are thus significant for this study. Only Saint Joseph's, however, would persist in its original location beyond 1855 when all of the Catholic missions in this area were destroyed during the Yakama War. Another Oblate mission—Saint Rose—was established in 1847 at present day Wapato, just south of Yakima, but it was abandoned shortly after the Whitman massacre that same year. The mission was later re-established farther to the east in the Walla Walla Valley outside the study area. Any documents that may survive from its initial brief

period at Wapato would be of interest to this study, since the area around Wapato contains oak woodland habitat.

Saint Joseph's is probably the most significant of these interior missions for the present study. It was founded on 3 April 1852 by the French Oblates Fr. Louis Joseph D'herbomez and Fr. Charles M. Pandosy. The mission was located within Yakama territory on the site of a traditional summer camp and was established with the cooperation of Yakama Chief Kamiakin. The Oblate fathers introduced European-style agricultural methods to Kamiakin and his people, digging rudimentary irrigation ditches and planting crops that included wheat, corn (maize), pumpkins, melons, and potatoes. Kamiakin's garden thus became one of the first examples of western agriculture on the Columbia Plateau. When the Yakama went to war with the United States in 1855, the Catholic priests were caught in the middle. Their sympathy for the Indians, and widespread antipathy against Catholics in predominantly Protestant America, made their situation perilous. The priests were forced to flee the Yakima Valley before advancing U.S. troops, and their missions were burned. In the aftermath of the war, Chief Kamiakin was exiled, and the Yakama people were confined to their treaty-defined reservation. Although most of the Catholic missions were abandoned, Saint Joseph's was subsequently restored between 1868 and 1870 with the assistance of the Yakama—it was located within reservation boundaries—and staffed with Jesuit priests. In 1871, however, the Yakama reservation was placed under the sole authority of Methodist minister James H. Wilbur as a result of President Ulysses Grant's 1868 "Peace Policy." Wilbur opposed any Catholic activity on the reservation, and Saint Joseph's mission was forced to close, its church relocated to Yakima City. Early in the twentieth century, the mission buildings at the original site were restored by the Knights of Columbus (a Catholic fraternal society), and in 1970 the property was listed on the National Register. Catholic religious services have been held there since 2003.

The Catholic mission at The Dalles, known as Saint Peter's, was established on 16 May 1848 by Fr. L. Rosseau, an Italian priest who also came west in 1847. There is very little information concerning this mission, which may have been established to challenge the Protestant influence in the area, but its early development was largely arrested by the military conflict that ensued in the wake of the Whitman massacre. The U.S. Army described it as abandoned in 1850, though

Fr. Rosseau was still present and had erected two log structures, one serving as the church and the other as his residence. In 1851, Rosseau was replaced by Fr. Toussaint Mesplie, who improved the mission facilities by constructing at least one frame building. Although the missionary period had largely passed by the time Saint Peter's was established, the church itself would remain and is the foundation on which the present diocese of Saint Peter's in the city of The Dalles has grown.⁹

The missionary period in Oregon Territory ended abruptly, and violently, when Methodist missionaries Narcissa and Marcus Whitman and other white settlers at Waiilatpu were attacked and killed by a band of Cayuse Indians on 29 November 1847. The reasons for the attack are complex and continue to be discussed and debated by historians. The Cayuse were feeling threatened by increasing numbers of Euro-American immigrants passing through their territory, which lay directly in the path of the Oregon Trail. The flash point may have been an outbreak of measles, which some Cayuse leaders attributed to the Whitmans (or blamed the Whitmans for failing to prevent). For the purposes of this study, the attack on Whitman Mission is significant as a turning point in the patterns of occupation and use of the landscape. Although Whitman Mission was located east of the study area, and well beyond the range of Garry Oak habitat, the changes signified by the attack would have potential impacts throughout eastern Oregon and Washington.

Euro-American residents living in the Willamette Valley responded to the attack on the Whitman Mission by raising a volunteer militia that entered Cayuse territory the following spring. The resulting campaign, which lasted most of that summer, with sporadic skirmishes continuing for the next few years, was known as the Cayuse War. Protestant missions east of the Cascades were all abandoned, though Catholic missionaries remained active throughout the region. In 1850, hoping to bring the conflict to an end, Cayuse leaders handed over five of their members to be tried for the murder of the Whitmans. These individuals were convicted by a military commission and hung in Oregon City that June. The sacrifice did little to ease tensions between the Cayuse and Euro-American settlers. With more immigrants arriving on the Oregon Trail every year, the conflict did not really end until 1855 when the Cayuse were forced to cede most

⁹ Shaver, *History of Central Oregon*, pp. 101-102; Bancroft, *Oregon*, 1.741-742.

of their traditional territory to the United States and confined by treaty to a reservation at Umatilla. Later that same year, however, the Yakama and their allies would rise up to initiate their own war with the United States (discussed at greater length below).

Significance of the Missions

The missionary period overlaps with the latter part of the fur trade era, and its principal significance for this study is much the same—providing a source of descriptive information of the landscape prior to the substantial changes introduced by later immigrants. Like the fur trade companies, the missionaries also introduced European agricultural practices and livestock grazing, which they attempted to teach to the Indians, but also like the fur companies, these practices were not extensive enough to be ecologically significant. One noteworthy example, however, was the adoption of irrigated agriculture by the Yakama chief Kamiakin, who learned this practice from the Catholic Oblate missionaries at St. Josephs on Ahtanum Creek. Kamiakin's gardens are a historically interesting precursor of more extensive agricultural development that would occur in the Yakima Valley over the following century.

The conclusion of the missionary period at the outbreak of the Cayuse War represents a turning point in the environmental history of the study area. Up until this time, Euro-Americans had not begun to settle in any substantial numbers east of the Cascades. The immigrants who had been streaming into the territory over the Oregon Trail since 1843 were settling on the west side of the mountains, mostly in the Willamette Valley, though a few went north to the Cowlitz Plain and Puget Sound. The landscape of the study area continued to be occupied primarily by Indian peoples and was used or managed according to traditional practices that had been in place for generations, if not millennia. The attack on the Whitman Mission in 1847 set in motion events that soon changed this, ending Native American dominance in the interior (except on designated tribal reservations) and inaugurating a period of Euro-American settlement. Native land use practices would largely cease over the majority of the landscape, replaced by substantially different Euro-American practices that included agriculture, livestock grazing, and lumber harvesting.

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The Military, Miners, and Indian Wars

U.S. military activity in the Pacific Northwest began with exploratory expeditions intended to survey and acquire information about the region in anticipation of later settlement. The earliest of these was that of Lewis and Clark's Corps of Discovery, discussed above. Subsequent military expeditions that also reached the Pacific Northwest—and touched upon the study area—include that of Lt. Charles Wilkes and the U.S. Exploring Expedition in 1841, and Capt. John Charles Frémont's second expedition of 1843. (Captain B.L.E. Bonneville's ambiguous fur trading enterprise of 1832 may also have been military in nature, but that remains uncertain.)

The United States Exploring Expedition

The United States Exploring Expedition, known commonly as the U.S. Ex. Ex., originated with legislation introduced by the House of Representatives in 1828 and was the result of private lobbying from advocates for a U.S. role in the global scientific surveys being conducted by many European nations. Congress hesitated to approve the legislation for more than eight years, and it was not until 1836, with the support of President Andrew Jackson, that the U.S. Ex. Ex. was finally authorized. Commanded by Lt. Charles Wilkes, the expedition comprised a fleet of seven ships—the sloop-of-war *U.S.S. Vincennes* acting as flagship—and included a team of naturalists representing several scientific professions (botany being represented by William Rich and William Brackenridge). The principal object of the expedition was the exploration of the Pacific

Ocean, its numerous islands, and its extensive coastal territories. This would include the Oregon Territory and the Mexican province of Alta California.

The U.S. Ex. Ex. sailed from Hampton Roads in August 1838, rounded Cape Horn the following January, and spent the next three years in the Pacific Ocean, visiting in all some 280 islands. In April of 1841 the expedition reached the northwest coast of the present day United States, making landfall at the Columbia River mouth on the 28th. Lt. Wilkes proceeded immediately from there to the Straits of Juan de Fuca and began surveying Puget Sound, but he dispatched one of his officers—Lt. Johnson—on an overland expedition from Fort Nisqually east over the Cascade Mountains to the Hudson's Bay Company outposts at Okanogan and Colville, a journey that took him through the northern part of the study area. Members of the Wilkes Expedition later returned to the Columbia River, spending time at Fort Vancouver and traveling upriver as far as The Dalles, where they enter the study area and provide valuable descriptions of the area. Lt. Wilkes also dispatched an overland party south from Fort Vancouver to explore the Willamette Valley and continue into Alta California to New Helvetia (present day Sacramento) and San Francisco. Here this party rejoined the naval expedition which had sailed down the coast to meet them. These combined overland and coastal explorations provided data for one of the earliest definitive maps of present day western Oregon and northern California.

In October of 1841, the U.S. Ex. Ex. departed California. After crossing the Pacific Ocean for the third time, it completed a circumnavigation of the globe and returned to New York in June of 1842. Charles Wilkes would spend the next twenty years completing his narrative account of the voyage, which ultimately totaled five volumes comprising the official report of the expedition. Additional documents, prepared both by Wilkes and other authors, would bring the unofficial report to twenty-four volumes, though not all of these were published.¹⁰

- *See Appendices A5 and B1 for descriptions of the study area by the Wilkes Expedition.*

¹⁰ The complicated publication history of the Wilkes Expedition is described in Daniel C. Haskell, *The United States Exploring Expedition, 1838-1842, and its publications, 1844-1874: A Bibliography* (New York: The New York Public Library, 1942). See also the webpage of the Smithsonian Institution at: <<http://www.sil.si.edu/DigitalCollections/ussex/learn/Overstreet-01.htm>>

John Charles Frémont

John Charles Frémont, a young officer in the U.S. Topographical Corps, was one of the most energetic promoters of America's westward expansion. Married to the daughter of Thomas Hart Benton, the influential Missouri senator and popularizer of the doctrine of America's "manifest destiny" to possess the continent, Frémont had powerful allies in government. He used his position to organize and lead a series of exploratory and scientific expeditions west of the Rocky Mountains, a task for which he proved competent enough to earn the nickname 'Pathfinder.' Frémont's first expedition explored the Wind River Mountains in the northern Rockies in 1842 and provided an important early account of the eastern half of the Oregon Trail, printed widely in newspapers the following year. Bolstered by this popular success, Frémont returned to the northwest in the summer of 1843 to explore the remainder of the Oregon Trail, departing from Independence, Missouri with thirty-nine men and heading west to Fort Hall, across the Snake River plain, and down the Columbia River to Fort Vancouver. Backtracking to The Dalles, he then traveled south through eastern Oregon and California before turning west again to cross the Sierra Nevada Mountains, reaching New Helvetia (Sutter's Fort) in the Sacramento Valley in early 1844. This unplanned, and unauthorized, foray into Mexican territory would have significant consequences for the war that broke out between the United States and Mexico nearly two years later but does not concern this study. After returning to the United States by way of the Old Spanish Trail, Frémont prepared a report of his recent travels in the far west, which included a detailed map by Corps cartographer Charles Preuss. Copies were published by Congress in 1845 and widely distributed. The report provided valuable information to prospective travelers on the Oregon Trail and helped stimulate emigration to Oregon as well as Alta California (despite the latter still being a foreign country).¹¹ Although Frémont said little about his journey through the Columbia Gorge, which was relatively uneventful, his account includes a detailed description of a portion of the study area from The Dalles south through the Tygh Valley to the present day Warm Springs Indian Reservation.

- See Appendix A5 for an account of the study area south of The Dalles by John Charles Frémont.

¹¹ On John Charles Frémont and his western expeditions, apart from his own reports which have all been published, see Ferol Egan, *Frémont: Explorer for a Restless Nation* (Reno: University of Nevada Press, 1985).

Arrival of the U.S. Army

The U.S. military could not establish a permanent presence in the Pacific Northwest until after U.S. claims over the Oregon Territory were confirmed. Between 1818 and 1846 both the United States and Great Britain claimed possession of the region but neither could assert its preeminent right, nor could a mutually-acceptable border dividing British and American claims be agreed upon. An ambiguous compromise ensued for nearly twenty-five years during which both nations agreed to share the Oregon Territory. This arrangement would continue until 1846 when Britain finally agreed to a border at roughly 49 degrees north latitude—the present international boundary between the United States and Canada. Although this confirmed Oregon's future as part of the United States, Oregon did not officially become a U.S. territory until August 1848. In the interim, it was managed by a provisional government established by the Euro-American settlers of the Willamette Valley, the same government that had raised the militia to fight the Cayuse. The arrival of the U.S. military was delayed until after the conclusion of the Mexican-American War in the fall of that year. In November 1848 the first Army troops, comprising two companies of artillery, arrived by ship at Fort Vancouver and established a military garrison on part of the old Hudson's Bay Company settlement. Known first as the Columbia Barracks, but later renamed Vancouver Barracks, this would become the Army's principal base in the Pacific Northwest until replaced by Fort Lewis in the latter half of the twentieth century.

In 1849 five companies of mounted riflemen were assigned to Vancouver Barracks to supplement the artillery companies that were already there. The mounted riflemen departed from Fort Leavenworth, Kansas in May under the command of Colonel William W. Loring and reached their destination in early October. Both Col. Loring and fellow officer Major Osborne Cross kept detailed journals of their expedition which provide valuable landscape descriptions of the route. The expedition also included two artists, George Gibbs and William Henry Tappan, one or both of whom contributed drawings that were published as lithographs in Loring's final report. Like most overland immigrants, Loring's riflemen reached the Columbia River at The Dalles, where they arrived on 21 September. Here they divided into two groups, with Major Osborne Cross taking one group down the river in boats, while the other group, led by Colonel Loring, followed the Barlow Road over the southern shoulder of Mount Hood to the Willamette Valley. The entire expedition departed The Dalles on the 2nd of October. Major Cross and his

men reached Vancouver Barracks three days later, though they lost six men when their boat went down the Cascades. Colonel Loring and the rest of the expedition arrived somewhat later after coming north through Oregon City.

- *See Appendices A5 and B1 for descriptions of the study area in the vicinity of The Dalles by members of Colonel Loring's Mounted Riflemen.*

One of the chief responsibilities of the soldiers based at Vancouver Barracks was to protect immigrants coming west on the Oregon Trail, especially while the Cayuse War continued. Garrisons were established at key points along the way. For the purposes of this study, the most important of these was Fort Dalles, established in May of 1850 and placed under the command of Captain Claiborne and four other officers, including one surgeon. (It was originally known as Camp Drum, subsequently as Fort Drum, and finally—after 1853—as Fort Dalles.) It was located near the site of the original Wascopam Mission. This site had briefly been occupied by the Oregon volunteers, who christened it Fort Lee, but they had left it at the conclusion of their campaign season in 1848, and even the small Catholic mission of St. Peters, established by Reverend Rosseau in 1847, was no longer active when the Army arrived (though Rosseau himself was still present).¹² Fort Dalles was strategically located at the point where the Oregon Trail left the Columbia River to cross the Cascades Mountains south of Mount Hood on the Barlow Road. The location would grow in importance as it became the junction for other roads leading to the interior of Oregon and Washington.

Governor Isaac Stevens

In 1853 Washington Territory was established north of the Columbia River (formerly part of Oregon Territory). That year, Isaac Ingalls Stevens was appointed Governor of the new territory and Superintendent of Indian Affairs by recently-elected President Franklin Pierce. Stevens was a veteran of the Mexican-American War, during which he had served as an officer in the Army Corps of Engineers. While traveling to Washington Territory to assume his new duties, he put his engineering skills to use by leading a topographical survey for a proposed railroad through the Pacific Northwest, one of several transcontinental railroad surveys conducted by the Federal Government. George McClellan, also a veteran of the Mexican-American War, led a separate

¹² Bancroft, *Oregon*, II.91

survey for the western portion of this route over the Cascade Mountains from Puget Sound.¹³ (See "Transportation & Circulation" below for the significance of these surveys.)

The Treaties of 1854 and 1855

Almost immediately upon reaching Washington, Governor Isaac Stevens implemented a policy of treaty-making with the various Indian peoples of the territory in order to compel their pacification and to confine them to designated reservations, thereby opening the majority of territorial lands to Euro-American settlers. Stevens spent much of 1854 negotiating treaties with the numerous bands of coastal tribes, from which resulted many small reservations encompassing their traditional lands and fishing sites. Early the following year, Stevens ventured east to negotiate with the interior tribes of the Columbia plateau. With the cooperation of Joel Palmer, Superintendent of Indian Affairs for Oregon Territory, he convened a great council in May of that year at Walla Walla with all of the major tribes of the region, including the Nez Perces, Yakama, Walla Walla, Umatilla, and the Cayuse. Three separate treaties were concluded, establishing a reservation for the Nez Perces in a portion of their homeland on the eastern plateau, another for the Yakama on the western plateau, and a third reservation combining the Walla Walla, the Umatilla, and the Cayuse in the Umatilla country at the foot of the Blue Mountains in eastern Oregon. Shortly after the conclusion of the Walla Walla Council, Joel Palmer negotiated separately with the Upper Chinookan (Wascopam) and western Sahaptin tribes of Oregon for their removal from the Columbia River to the Warm Springs Reservation in the interior to the south.¹⁴

Gold and the Yakama War

Gold was a powerful force driving Euro-American immigration. It had already caused one of the largest mass movements of people in U.S. history with its discovery on California's American River in 1848. The discovery of gold in southern Oregon in 1853 brought immigration to that region and resulted in violent confrontations with the Takelma of the Rogue River country. Similar conflicts would soon play out farther north on the Columbia plateau and Snake River

¹³ Alvin M. Josephy, Jr., *The Nez Perce Indians and the Opening of the Northwest* (Boston, MA: Houghton Mifflin Co., 1997 [1965]), pp. 293-307. Note also discussion of wagon road being built through Naches Pass. This, too, would pass through study area in region of Yakima Valley.

¹⁴ Bancroft, *Oregon*, II.360-368; and Josephy, *Nez Perce*, pp. 314-337

basin, bringing a quick end to the peace that Governor Isaac Stevens and Superintendent Joel Palmer had achieved through treaties.

Gold was first discovered in the northern interior in 1855 on the Pend Oreille River near Fort Colville. Within weeks of the Walla Walla council, Euro-American prospectors were crossing Yakama territory. Not "over-scrupulous in regard to the rights and property of the Indians," as one observer noted, several of the miners were killed by the indignant Indians. When Indian agent Major Andrew J. Bolon, who was sent to investigate, was also killed, Euro-American reaction was immediate, and the region erupted in what became known as the Yakama War, lasting from 1855 to 1858.¹⁵

The initial response was made by U.S. Army regulars from Fort Dalles under the command of Major Granville Haller. At the time of the killings, Haller had been engaged in actions along the Snake River portion of the Oregon Trail and was forced to return as quickly as possible. On 3 October 1855 he left Fort Dalles with just over 100 infantrymen, headed north to the Yakima Valley. Another detachment of infantry set out simultaneously from Fort Steilacoom on the Naches Pass wagon road to meet Haller. Three days into his march, Haller was attacked by a Yakama force led by Chief Kamiakin at Toppenish Creek, south of the present day town of Yakima, and was forced to retreat. The troops from Fort Steilacoom, learning of Haller's defeat, also turned back. Later that season a much larger detachment of Army regulars and volunteer militia led by Major Gabriel Rains confronted Kamiakin at Union Gap on 9 November and routed the Yakama. During the remainder of the campaigning season the Army withdrew from the field, consolidating its forces to prepare a more effective response the following year. The militia, however, turned east to the Walla Walla Valley, assaulting every Indian they encountered before the approaching winter forced them to retreat to their homesteads in the west. These

¹⁵ Much has been written on the Yakama War. The following provide a good overview with interpretation of the event: Robert Carlton Clark, "Military History of Oregon, 1849-59," *Oregon Historical Quarterly* 36.1 (1935): 14-59; D.W. Meinig, *The Great Columbia Plain: A Historical Geography, 1805-1910* (Seattle: University of Washington Press, 1995 [1968]), pp. 156-168; Alvin M. Josephy, Jr., *The Nez Perce Indians and the Opening of the Northwest* (New York: Houghton Mifflin Co., 1997 [1965]), pp. 339-385; Heister Dean Guie, *Bugles in the Valley: Garnett's Fort Simcoe* (Portland, OR: Oregon Historical Society, 1977); and Hubert Howe Bancroft, *History of Washington, Idaho, and Montana* (San Francisco: The History Co., 1890), pp. 108-200. See also, Lucullus Virgil McWhorter, *Tragedy of the Wahn-shum...* (Yakima, WA: Priv. Pub. by L.V. McWhorter, 1937); and Heister Dean Guie, *Tribal Days of the Yakimas* (Yakima, WA: Republic Publ. Co., 1937).

independent actions enraged Army leadership and expanded the conflict to include the Cayuse and their allies.

The following spring, Army regulars under the command of Colonel George Wright headed east to secure the Walla Walla Valley. Believing the Yakama had been cowed by their defeat at Union Gap the previous fall, Wright turned all his attention on the Cayuse. As he marched east, he was surprised to learn of an assault on the strategic Cascades portage to his rear by a combined force of Yakama, Klickitat, and Wasco. Fearing that his supply lines would be cut off, Wright withdrew from the Walla Walla country and turned his attention toward the Yakima and Kittitas Valleys to the west. By mid-summer of that year he had chosen a site for a fort to control the region, and on 8 August 1856 established Fort Simcoe. It was located within a grove of oaks at the springs of Mool Mool, an ancient Yakama camping site on the western side of the Yakima Valley. A military road was also constructed over the Simcoe Mountains to the south, linking Fort Simcoe with Fort Dalles on the Columbia River.¹⁶ The presence of a strong Army garrison in the midst of the Yakama and Klickitat territories brought an end to fighting on the west side of the Columbia plateau (within the study area). Fort Simcoe would be maintained for the remainder of the war, which continued until 1858. It was abandoned by the Army in 1859 and turned over to the Yakama Indian Agency, which would use the facilities for a tribal school.

Confident that its rear was secure, the Army once more turned its attention to the east, where Lt. Col. Edward Steptoe established Fort Walla Walla to control that region. This garrison was located several miles east of the former Whitman Mission at Waiilatpu. Its establishment prevented any further conflict with the Cayuse or their allies.

The final chapter of the Yakama War occurred far beyond the study area but is mentioned in passing. The year 1857 passed peacefully, but in 1858 violence once again broke out between miners on their way to the Fort Colville gold fields and the Indians whose territory they crossed. This time the tribes involved were the Palouse, Spokane, and Coeur d'Alene, none of whom had yet signed treaties or been confined to reservations. Lt. Col. Steptoe led a detachment north from Fort Walla Walla to intervene and was overwhelmed by a much larger number of Indians at Pine

¹⁶ Meinig, *Columbia Plain*, p. 163.

Creek. He was forced to flee. In response to Steptoe's defeat, Colonel Wright led a much larger force north from Fort Dalles against the combined northern tribes. After routing them in the field, he destroyed their cattle, horses and food stores. Wright then compelled the desperate tribes to sign peace treaties on terms favorable to U.S. interests. This ended the Yakama War, but it was not the end of conflict between Euro-Americans and the Indian tribes east of the Cascades.

The Gold Rush of the 1860s

The Army had long hoped that Euro-American settlement would be confined west of the Cascades while the east side would remain largely Indian territory. This was the expressed policy of General John Ellis Wool, who commanded the Department of the Pacific from 1854 to 1857. Wool's policy was as much practical expedient as moral sentiment. He did not believe the Army had the resources to defend isolated settlements across the broad expanse of eastern Oregon and Washington. These views were not popular among territorial leaders, however, and they put pressure on the Army to have General Wool removed. Wool voluntarily resigned his Pacific command in 1857 and was reassigned to the east. Wool's reluctance to allow settlement of the interior probably would not have prevented it from happening even had he stayed. The forces drawing settlers east were much too strong. By the early 1860s, a new wave of immigration into the interior of Oregon, Washington and the Snake River country of Idaho had begun.¹⁷

In 1860, gold was discovered on the Clearwater River, a tributary of the Snake, resulting in the establishment of the town of Lewiston at the confluence of the two rivers. The Clearwater discoveries soon spread outward to other rivers and mining districts. By early 1862, a major new mining district opened on the lower Salmon River at Florence; discoveries were made in the Boise Basin in Idaho; and later that same year, gold was discovered in the John Day country at Canyon Creek and on the Powder River. The Clearwater gold fields lay within the boundaries of the Nez Perce reservation as established at Walla Walla in 1855. In order to protect the miners' interests, a new treaty was negotiated with members of the Nez Perce tribe in 1863, dramatically reducing the size of their reservation. Not all Nez Perce leaders agreed to this treaty, however,

¹⁷ Clark, "Military History of Oregon," esp. pp. 27-36.

and those bands who remained outside the new reservation would clash with the U.S. Army in the late 1870s in one of the final conflicts of the interior northwest. By the 1880s, all of the Indian tribes of this region had been confined to reservations, leaving the vast majority of the land open for Euro-American settlement.

Significance of the Military, etc.

The U.S. military is significant for this study primarily as a source of landscape description. This is especially true of military explorations and surveys, such as those carried out by John Charles Frémont, Charles Wilkes, and George McClellan, among others, whose express purpose was to make detailed observations of the landscape through which they passed. Incidental observations included in reports made for other purposes, such as surveys or inspections of military installations, may also be useful. Among the latter, documents relating to Fort Dalles and Fort Simcoe are especially important for this study, since both forts were located in the study area among oak woodland.

The U.S. Army's involvement in the Indian wars of the Pacific Northwest, especially the Yakima War between 1855 and 1858, may have little direct relevance to this study but had consequences that indirectly affected the study area. The conclusion of this war ended most Indian resistance to Euro-American encroachment on the western Columbia Plateau—including the study area—and marked the beginning of permanent settlement and the development of towns and counties. Subsequent campaigns against the Flatheads, Nez Perce and Bannock-Paiute helped open up the eastern plateau and accelerated settlement and economic development, with associated resource exploitation, throughout the interior region. Significant ecological change may have resulted both from the curtailment of traditional Indian land use practices and the introduction of novel European practices, including livestock grazing, agriculture, and timber harvesting.

The discovery of gold was in great part responsible for touching off these conflicts by encouraging Euro-American trespass over Indian lands in eastern Oregon and Washington. Although mining has a profound impact on the environment, none of the major mining fields that were developed in the 1850s and 1860s were actually located in, or even near, the study area.

The did, however, stimulate development there, especially around The Dalles. These developments included a burgeoning steamboat service on the Columbia River, the construction of overland roads, and the growth of livestock industries to feed the mining communities.

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¹⁸ For the latter see, U.S. Dept. of War, *Report of the Secretary of War, which accompanied the annual message of the President of the United States to both Houses of Congress* (Washington, DC: Dept. of War, var.). [Reports for the years 1848-1863 are available digitally at: <https://catalog.hathitrust.org/Record/008898704>.]

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Travel & Circulation

Travelers passing through the study area are a potentially valuable source of information from the observations they may have made. The roads they followed are therefore significant as indicators of where these travelers went and what they were describing. The roads themselves may have had some impact on the study area as well, particularly after steam was employed to drive riverboats and railroads. Roads were also the means for opening the country to economic development with mining, livestock grazing, agriculture, and other industries, all of which had their own impact on the environment.

Indian Trails

Long before Europeans arrived in the Pacific Northwest and began building their own roads and trails, the region was overlain with a network of Indian trails. Many of these traditional routes of travel were later used by Euro-American immigrants and are the predecessors of modern highways. For example, the Barlow Road, which brought overland migrants from The Dalles to

the Willamette Valley and now forms part of State Highway 26, began as an Indian trail, probably leading to seasonal berry-harvesting sites in the western Cascades.¹⁹ While Indian trails may be only indirectly relevant to this study, their historical significance should not be ignored.

The Columbia River

The most important road within the study area is easily overlooked. The Columbia River was a major highway for the native Chinookan peoples long before Europeans arrived. During the fur trade era, it was utilized by various trading companies—but especially the Hudson's Bay Company—to send their trapping brigades into the interior and to transport goods and supplies between the west coast and markets in the east. The journals of fur trappers and company administrators who utilized this riverine highway comprise a potentially valuable source of early descriptive data relating to the riparian landscape as it existed prior to significant Euro-American impacts.

The Columbia River would continue to play an important role as a transportation corridor connecting the coastal Pacific Northwest with the interior long after the fur trade era had ended. Its significance in subsequent eras is discussed below under separate themes (e.g., as a route for steamboat travel between 1860 and 1880, and as a corridor for railroad transit through the Cascade Range in subsequent decades). With the construction of locks and later dams beginning in the early twentieth century, the Columbia River once again became an important riverine highway for boats and barges and remains so to the present day.

Oregon Trail and Overland Migration

The overland route followed by the Oregon Trail dates back to the fur trading era though at that time it was not being used by immigrants. One of the earliest immigrant parties to travel this route was a group of eighteen men led by Thomas J. Farnham, who set out from Peoria, Illinois in 1839 with the intent of settling in Oregon Territory. Nine of the men, including Farnham,

¹⁹ Robert Boyd, *Wascopam Mission*, pp. 20, 236-237. On the subject of Indian trails in this region, see Helen H. Norton, Robert Boyd, and Eugene Hunn, "The Klickitat Trail of South-central Washington," in Robert Boyd, ed., *Indians, Fire, and the Land in the Pacific Northwest* (Corvallis, OR: Oregon State University Press, 1999).

actually arrived.²⁰ Farnham's party traveled by foot. The first wagons would not arrive until 1843 when the so-called Great Migration, comprising nearly a thousand individuals, reached The Dalles that fall. From here they were forced to continue by raft down the Columbia. Within another two years, however, it would be possible to travel all the way to the Willamette Valley by wagon. Large numbers of immigrants would continue to travel the Oregon Trail for the next few decades. The Oregon Donation Act, passed in 1850, was a strong encouragement to prospective and increased the westward migration to Oregon Territory. Although numbers began to decline after 1855, overland migration on the Oregon Trail continued to 1869, when the trail was superseded by the transcontinental railroad. In total, nearly half a million immigrants traveled the Oregon Trail during this period.

The Oregon Trail enters the study area after crossing the Deschutes River at its confluence with the Columbia. From here, it follows the Columbia to The Dalles, where immigrants either floated downstream—a risky venture—or turned south to follow the Barlow Road, established by Sam Barlow in 1845. The Barlow Road paralleled Highway 197 a little to the west of the present day alignment, passing through Dufur and then on to Tygh Valley, where the road turned west to pass over the south shoulder of Mt. Hood and down to the Willamette Valley. All of this segment—from the Mouth of the Deschutes, through The Dalles, to Tygh Valley—lies within the study area, and descriptive accounts are potentially valuable sources of information on the historic landscape. The Barlow Road may have followed a traditional route used by the Wascopam and other Native peoples to reach seasonal berry harvesting sites in the Cascade Mountains. The route was used by Methodist missionary Daniel Lee to obtain cattle for Wascopam Mission (at The Dalles) from the Willamette Valley settlements in 1838.²¹

²⁰ Thomas Farnham described his adventures in *Travels in the Great Western Prairies: The Anahuac and Rocky Mountains, and in the Oregon Territory* (New York: Greeley & McElrath, 1843).

²¹ Robert Boyd, *Wascopam Mission*, p. 20. Numerous histories address the subject of the Oregon Trail, and even more with the subject of westward migration broadly. A good general history of the westward migration is John D. Unruh, Jr., *The Plains Across: The Overland Emigrants and the Trans-Mississippi West, 1840-1860* (Urbana: University of Illinois Press, 1979). A good discussion of the final leg of the journey, where the trail passes through the study area, is given by G. Thomas Edwards, "The Oregon Trail in the Columbia Gorge, 1843-1855: The Final Ordeal," *Oregon Historical Quarterly* 97, no. 2 (1996): 134-175.

Military Roads

The Army began working to develop military roads in the Pacific Northwest almost as soon as it arrived. Captain Kearney, enroute from the Columbia (Vancouver) Barracks to California in 1851, was given the collateral duty of surveying a wagon route between California and Oregon. In 1853, the Army assisted Governor Isaac Stevens in his survey for a northern transcontinental railway. As part of this work, Captain George McClellan from Columbia Barracks was to develop a wagon road over the Washington Cascades by way of Naches Pass or similar route. Though McClellan's performance disappointed his superior officers, the survey itself provided valuable knowledge of the local terrain. In 1857, the Army considered a wagon road from Columbia Barracks to The Dalles, though quickly abandoned this idea as impracticable. It did, however, complete a military road from Columbia Barracks to the southern end of Puget Sound, where the Army had established a garrison at Fort Steilacoom in 1849. This difficult route would provide an important commercial link between the settlements of the Willamette Valley to the south and the Cowlitz Valley and Puget Sound area to the north. Probably the best-known of the Army's military roads was constructed under the direction of Lieutenant John Mullan between 1858 and 1860 connecting Fort Walla Walla on the Columbia River with Fort Benton on the upper Missouri east of the Continental Divide. Though used only once by the military itself, the Mullan Road was used by thousands of westering immigrants and would remain an important link between the Pacific Northwest and the upper Mississippi watershed until superseded by the railroad in 1883. Among the early roads built, or at least surveyed, by the military, the following are potentially relevant to the study area.

Unruh, John D., Jr. *The Plains Across: The Overland Emigrants and the Trans-Mississippi West, 1840-1860*. Urbana: University of Illinois Press, 1979.

The Naches Pass Wagon Road (1853)

This road led from Walla Walla to the early Euro-American settlements around Fort Steilacoom at the south end of Puget Sound, crossing the Cascade Mountains at Naches Pass nearly due east of Steilacoom. It followed the Yakima River before ascending the Naches River, a tributary of the Yakima, and thus passes through a substantial portion of the study area. The road was strongly desired by the early settlers of western Washington hoping to increase the Euro-American population of Washington Territory—established in 1853—by attracting immigrants

on the Oregon Trail who would otherwise conclude their journey in the Willamette Valley of Oregon. By providing an alternative at Walla Walla, overland immigrants could instead travel directly to Washington. The War Department, which supported these objectives but also wanted to have a good road connecting its posts in western Washington at Fort Steilacoom with those of the interior, directed Captain George McClellan, a member of Governor Isaac Stevens Northern Pacific Railroad Survey, to survey and, if possible, construct such a road as a collateral assignment to his principal task of locating a route over the mountains for the proposed railroad. He was instructed to be quick about it, since a party of immigrants was already enroute for Washington Territory that year (1853).

It is important that this road should be opened in season for the fall emigration; you will, therefore, use every exertion to do so. Should it be found impossible to accomplish this, you will, at least, endeavor to fix the line of the road, especially through the Cascade mountains, and to perform such work on the most difficult portions as will enable the emigrants to render the route practicable by their own exertions, detaching a suitable person as guide and director to meet them at Walla-Walla.²²

Captain McClellum failed miserably at this task, fulfilling none of his instructions. In desperation, a group of Washington settlers led by Edward J. Allen set out to construct the road on their own and completed the task by mid-October. In fairness, much of their accomplishment consisted only of blazes, but it was sufficient to bring the first immigrant wagon train over the mountains into western Washington. The following year, the task originally assigned to Capt. George McClellum was given to Lt. Richard Arnold, who successfully completed the survey of the road and made what improvements he could.

- *See Appendices A6 and B1 for descriptions of the study area in the vicinity of Naches Pass by members of the McClellan Survey.*

The Naches Pass Wagon Road was never very popular. (Lt. Arnold had nothing good to say about it.) It required crossing the Naches River sixty-eight times, and at one point on the west

²² Jefferson Davis, Secretary of War, to Brevet Captain George B. McClellan, Corps of Engineers, Washington, D.C., May 9, 1853, quoted in Oscar Osburn Winther, "Inland Transportation and Communication in Washington, 1844-1859," *The Pacific Northwest Quarterly* 30, no. 4 (1939): 375.

side of the pass wagons had to be lowered by ropes. Its greatest merit lay in providing the most direct route between Walla Walla and the early Washington settlements around Fort Steilacoom and Olympia. But as settlement began concentrating farther north around Seattle an alternative route over the less arduous Snoqualmie Pass soon replaced the Naches Pass route.²³

Columbia Barracks to Fort Dalles Military Road (1855)

In 1855 the Army appropriated funds to construct a wagon road between Columbia Barracks and Fort Dalles. Lt. George H. Derby of the U.S. Topographical Engineers commenced surveying along the north shore of the river, where the existing route—a simple trail—already ran from Columbia Barracks to Wind Mountain, then crossed to the south shore of the river by ferry and continued the rest of the way. Lt. Derby proceeded as far as Cape Horn, scarcely half-way to the Cascades, before reaching the conclusion that building a wagon road along this difficult route was impracticable. He also realized that it was unnecessary, since the river could provide a more efficient means of communication if the Cascades, the greatest obstacle to navigation lying between Columbia Barracks and Fort Dalles, was made more easily passable. Lt. Derby therefore decided to expend his funds entirely on improving the portage around the north side of these falls. The existing portage was owned at that time by Francis Chenowith, who had already built a rudimentary tramway over which he guided a mule-drawn cart. Derby proposed improving this system by constructing a high-standard wagon road paved with wooden punchards (cross-laid planks of wood). Work began soon after Derby completed his survey that year but was delayed by Indian attack the following spring and was not completed until mid-year 1857. The road proved nearly impossible to maintain from the very beginning owing to the instability of the terrain and was soon abandoned. The private portage railway, later acquired and greatly improved by the Oregon Steam Navigation Company, would continue to provide the principal means of circumnavigating the Cascades until locks were completed on the south shore of the river in 1896. Although Lt. Derby never completed a wagon road to The Dalles, as

²³ Oscar Osburn Winther, "Inland Transportation and Communication in Washington, 1844-1859," *The Pacific Northwest Quarterly* 30, no. 4 (1939): 374-377; Thomas W. Prosch, "The Military Roads of Washington Territory," *The Washington Historical Quarterly* 2, no. 2 (1908): 118-123; and Philip H. Overmeyer, "George B. McClellan and the the Pacific Northwest," *The Pacific Northwest Quarterly* 32, no. 1 (1941): 3-60.

originally proposed, his surveys and narrative reports provide an important early description of the central Columbia Gorge region, though their application to the study area is limited.²⁴

Fort Simcoe Military Road (1856)

Concurrent with the establishment of Fort Simcoe in 1856, a military road to provide access to the new post was established. The Fort Simcoe Military Road, laid out by Army engineer Lt. Frederick Dent, began at the ferry landing in Rockland (present day Dallesport), on the north shore of the Columbia River opposite Fort Dalles, and climbed, by a series of switchbacks, to the summit of the Columbia Hills. From there, it descended into the Klickitat Valley, heading in a northeasterly direction toward Blockhouse—the present site takes its name from a wooden blockhouse and stockade that were constructed to guard the road—then crossed the Simcoe Mountains just west of Potato Butte, continuing north over Toppenish Ridge before descending to Fort Simcoe on Agency Creek. This road passed through extensive oak woodland, especially north of the Simcoe Mountains, and landscape description associated with its construction and subsequent use may be relevant to this study. Lt. Derby's original survey and field notes should be consulted.²⁵

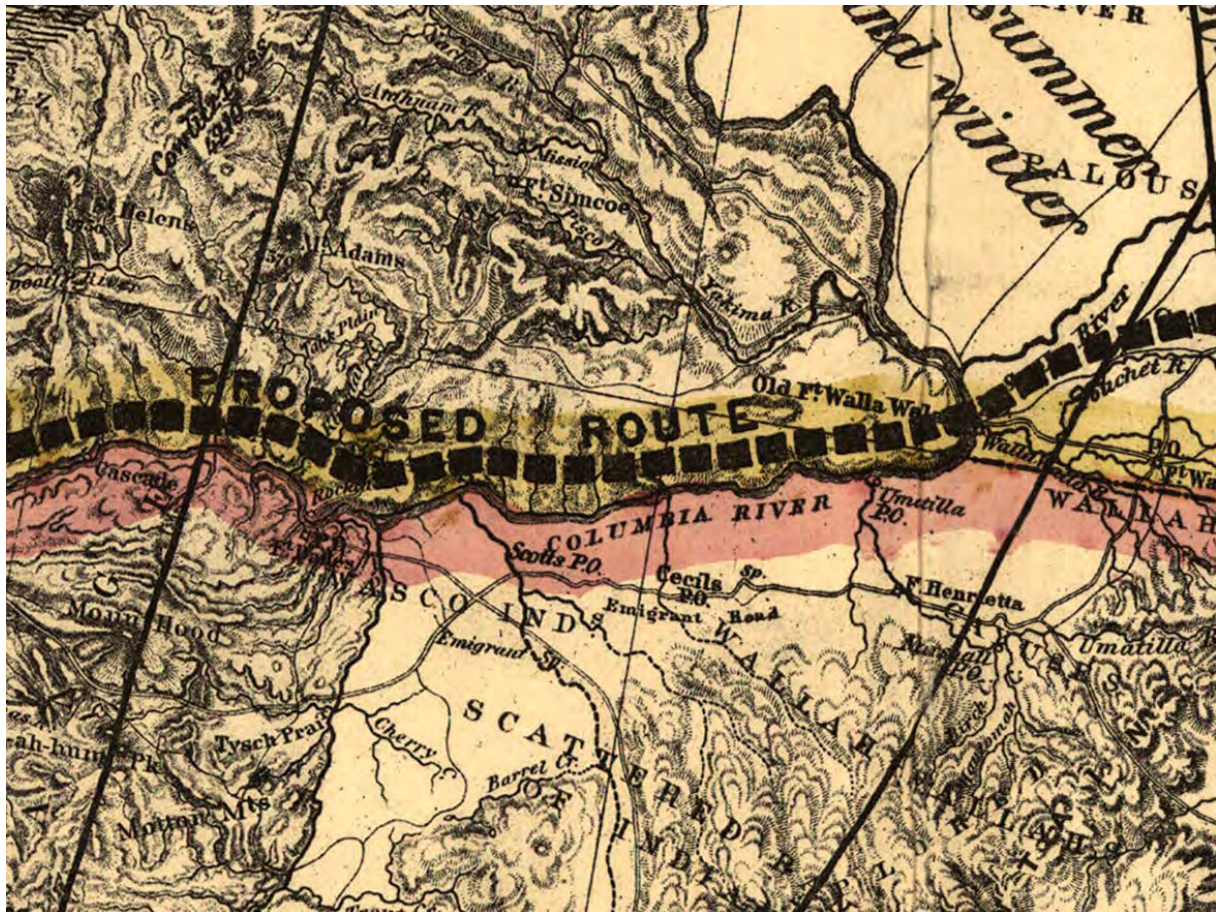
Other Wagons Roads

Although the U.S. Army was a prodigious builder of early roads in the Pacific Northwest, the majority of roads were probably built by private citizens for civilian purposes. Their construction was rarely documented to the extent of military projects, though the roads themselves might prove just as significant for local travel and commerce. Only the larger, more-frequently traveled roads make their way onto maps, however. An 1871 railroad map (derived from earlier military surveys) shows the principal wagon roads passing through the study area at that time. North of the Columbia River, the Naches Pass Wagon Road remained the most prominent route through the Yakima Valley, whence it continued east to Walla Walla and

²⁴ "Cascades to Vancouver, U.S. Military Road From The Dalles to Columbia Barracks, surveyed by Lieut. Geo. H. Derby, U.S. Topgl. Engineers, ... October, 1855," in Military Roads Collection, Mss. 1062, Oregon Historical Society Research Library, Portland, OR. See also Prosch, "Military Roads of Washington Territory," p. 123, who erroneously states that this road was built. Ironically, Prosch's description of the road is accurate but applies only to the portage road at the Cascades, the only section of road that Lt. Derby actually constructed.

²⁵ Michael McKenzie, "Lessons from an Old Road: Frederick Dent's Route from Fort Dalles to Fort Simcoe," *Columbia: The Magazine of Northwest History* 16, no. 3 (2002): 15-21.

beyond. By this time a northerly branch had also been built across the Cascade Mountains at Snoqualmie Pass. The Fort Simcoe Military Road was still present and continued to serve an important function, though the military had long since abandoned Fort Simcoe. South of the Columbia River, The Dalles remained the center of a network of roads radiating in all directions (including west, if the river is also considered).



[Knight, E. H., and Northern Pacific Railroad Company. *Map of the country tributary to the Northern Pacific Railroad*, compiled from English, Canadian, and American official sources and original surveys by Edward H. Knight, Jan. 1st. (N.P., 1871) Map. <https://www.loc.gov/item/98688747/>.] Although this map is not precise in its local geography, it does represent the principal wagon roads that existed within the study area at this time. The dotted black line labeled "Proposed Route" refers to the N.P.R.R. Company's original intention to run its mainline through the Columbia Gorge. Instead, between 1884 and 1890 the company would construct the final leg of its transcontinental line up the Yakima Valley and over the Cascade Mountains near Snoqualmie Pass to Tacoma.

Roads from The Dalles

Lying at the head of unnavigable rapids and the steep walls of the Columbia Gorge, The Dalles was an inevitable stopping point for travelers coming from the east. Here they were forced to

turn south in order to continue west. With the development of the interior by miners and later by ranchers and farmers, The Dalles became a natural starting point for numerous roads leading into central Oregon, as well as for the Barlow Road leading around the south slope of Mount Hood to the Willamette Valley. This strategic location made The Dalles one of the most important early cities in central Oregon.

Following the establishment of the U.S. Army post of Fort Dalles in 1850, an adjacent settlement had emerged but grew slowly over the subsequent decade. With the discovery of gold in the interior in 1860, The Dalles began to grow more rapidly. After 1862, when gold was found at Canyon City in the John Day country, The Dalles became a major center of trade and commerce. Both people and supplies embarked regularly from The Dalles for the interior mines, while much of the wealth that was taken out of those mines returned through The Dalles and contributed to the local economy. Even after the gold played out, The Dalles remained a major supply center for ranchers and farmers throughout central Oregon.

Most travelers heading to the interior from The Dalles, whether they were going south or southeast, had to get across the Deschutes River. One route crossed the Deschutes near its confluence with the Columbia River, either by ferry or on the Nix Bridge about four miles upstream. (This bridge was constructed by William Nix in 1862 but washed out in 1870 and was never restored.) The most popular route crossed at Sherars Bridge farther upstream. Travelers taking this route followed the Barlow Road south from The Dalles to Tygh Valley and then turned east toward the Deschutes, following the route of present day Highway 216. An alternative route continued southeast from Tygh Valley, following present day Highway 197 to cross the river at Maupin. Both of these roads—The Dalles to Sherars Bridge, and The Dalles to Maupin—lie within the study area. Another road continued south from Tygh Valley to the Warm Springs reservation. This too lay within the study area.²⁶

Sherars Bridge was located at a narrow passage in the Deschutes River where the water cascades over basaltic ledges. This was an important fishing and crossing point for local Indians. Hudson's Bay Company trapper Peter Skene Ogden crossed here in 1826. Joseph Meek's lost

²⁶ Nielsen, *Pioneer Roads*, pp. 14-20.

wagon train also used the crossing in 1845. It subsequently became an alternative route on the Oregon Trail, bypassing The Dalles to meet the Barlow Road in Tygh Valley. (See 1871 railroad map above.) Shortly after homesteaders began settling in Tygh Valley around 1855, the first bridge was built. The bridge would be rebuilt and improved several times over subsequent years. The crossing acquired its present name from Joseph Sherar, who settled on the site in 1871 and made his own improvements.²⁷

Steamboats on the Columbia

Overland travel had never been an easy or efficient means of circulation through the Columbia Gorge between western and eastern Oregon. The river was a much better way to go. This was understood by the Chinook, who relied on canoes for transportation, and by the European fur trappers, who used bateaux (a type of light-weight, wooden boat of traditional European design). Americans would come to the same conclusion as they sought to develop commercial ties between the coastal and interior parts of the state during the latter nineteenth century, using sailing scows and other small vessels to travel the river. But Americans would come to rely upon steam above all for river navigation.

Steamboats began operating on the lower Columbia River (downstream of the Cascades) during the 1850s. The first substantial vessel to navigate this reach was the *Lot Whitcomb*. Launched on the Willamette River at Milwaukie on Christmas Day, 1850, the *Lot Whitcomb* ran between Astoria and Oregon City, and points in between. She was captained by J.C. Ainsworth, a former Mississippi riverboat pilot who would play an important role in the subsequent development of Columbia River steamboat travel. Steamboating on the middle and upper river—that is, above the Cascades and Celilo Falls, respectively—would not begin for another few years and would not become routine until after 1860. The heyday of steamboat travel above the Cascades was between 1860 and the mid-1880s, after which the railroad became the dominant means of travel through the Columbia Gorge for the remainder of the century. (The river once again became an

²⁷ Nielsen, *Pioneer Roads*, p. 20.

important means of travel during the twentieth century after a system of locks and canals made the Gorge navigable for barge traffic.)²⁸

At least three small steamboats were operating on the middle river between the Cascades and The Dalles by 1855. (One of these, the *Mary*, played an important role in the Yakama War, helping to rescue besieged settlers on the north shore of the river in March 1856.) Portage railways were established around the Cascades on both the north and south shores. The northern portage was originally built by Francis Chenoweth and later operated by Daniel and Putnam Bradford of the Columbia River Navigation Company. The southern portage was built and operated by Joseph Ruckel and Harrison Olmstead of the rival Oregon Transportation Company. These railways were rudimentary affairs, consisting of mule-drawn carts pulled over wooden tramways, but they constituted the only effective means of getting around the Cascades, and competition between the two companies was fierce. In 1859, the *Colonel Wright*, built by Robert Thompson and Lawrence Coe, became the first steamboat to operate above Celilo Falls. Others soon followed. Steamboats operating on the middle and upper river may have had a significant impact on the study area, since they burned fuel wood cut and gathered from the nearby shore, much of which may have been oak.

In 1860 all of the major steamboat owners operating on the Columbia River organized themselves under a single company, which became known as the Oregon Steam Navigation Company (O.S.N.Co.), with Captain Ainsworth serving as president. Although Ruckels and the Bradfords were also partners, their respective portage tramways remained independent until 1863, when they too were finally absorbed by the company. The O.S.N.Co. became one of the early business monopolies in Oregon history, earning its owners enormous wealth and prestige (as well as resentment). Their fortunes and influence would significantly shape Portland during its first half-century of growth.²⁹

²⁸ Lyman, *History of the Yakima Valley*, p. 330; and Mills, *Stern-Wheelers*, pp. 17-21.

²⁹ The principal owners of the OSNCo. were, besides President John C. Ainsworth, Simeon G. Reed, William S. Ladd, and Robert R. Thompson. Steamboat owners Daniel Bradford, Joseph Ruckels, Jacob Kamm, and Benjamin Stark were also associated. On their place in Portland history, see E. Kimbark MacColl, *Merchants, Money, and Power: The Portland Establishment, 1843-1913* (Portland, OR: Georgian Press, 1988).

The phenomenal success of the O.S.N.Co. was closely related to the timing of its formation. Eighteen-sixty marked the beginning of the gold rush to Idaho and eastern Oregon, creating an enormous amount of traffic that had to be funneled through the narrow Columbia Gorge. Holding a virtual monopoly on bulk transit through this corridor, the O.S.N.Co. enjoyed a brisk business. Witnesses recalled freight wagons lined up for blocks in Portland, waiting all hours of the day and night to get on board a steamboat headed upriver. So many people were headed east during the early part of this decade, that few steamers ever left Portland with fewer than two hundred passengers, and profits were so high that the cost of a new boat could be paid off in a single trip.³⁰

All of these steamboats burned wood for fuel, and the steamboat companies often contracted with local suppliers along the river. Often these were homesteaders who took advantage of the opportunity to earn extra money, but the logging industry in Klickitat County, on the middle and upper river, originated with fuel wood production for the riverboats. Ponderosa pine was being harvested in the Simcoe Mountains and hauled down to a river landing at Columbus (Maryhill) as early as 1860, but oak was cut for this purpose as well.

³⁰ Lyman, *History of the Yakima Valley*, p. 332.



The O.S.N.Co. Steamship *Oneonta* at the upper Cascades landing (middle river), ca. 1867. In the background is the portage railway. [Oregon Historical Society, "Carleton E. Watkins photographs, 1861-1885"; Org. Lot 93; OrHi 1458]

The Railroads

Apart from a few local short lines, the history of railroading in the Pacific Northwest begins in 1853 when Congress authorized the survey of potential transcontinental rail lines at varying latitudes. This was followed in 1862 by the Pacific Railroad Act, which offered federal support to encourage the private construction of such railroads. Investors would receive financial subsidies and land grants to offset the extraordinary cost of building railroads through the rugged and sparsely-populated western United States.

In response to the 1853 authorization, five surveys were made by U.S. topographical engineers and published by Congress between 1855 and 1860. The northernmost survey, covering lands between the 47th and 49th parallels, was conducted under the direction of Isaac I. Stevens, the newly-appointed governor of Washington Territory, in 1853-54. Stevens himself led the principal survey, working west from St. Paul, Minnesota to the Columbia Plateau on the east side

of the Cascade Mountains, while Capt. George McClellan was responsible for finding a suitable pass through the Cascades from the Puget Sound region. McClellan was also given the collateral duty of locating a military wagon road. Working west to east, McClellan surveyed a route through the mountains at Naches Pass—on the headwaters of the Naches River—and thence down through the Yakima Valley to meet up with Stevens' survey on the upper Columbia River. While this route was ultimately rejected in favor of a more northerly crossing, McClellan's expedition provides one of the earliest detailed landscape descriptions of this region, including oak woodland in the eastern foothills of the Cascade Mountains.³¹ The route followed by McClellan over Naches Pass was also used by several immigrant wagon trains and was even improved to a wagon road in 1854 but was largely abandoned with the outbreak of the Yakama War the following year. Accounts by some of the early immigrants who followed this route should be consulted.³²

- See Appendices A6 and B1 for descriptions of the study area by members of the McClellan expedition.

The Northern Pacific Railroad, which would follow the Stevens route, was chartered by Congress in 1864. Construction did not begin, however, until 1870 when financier Jay Cooke took over the company. Track was laid as far west as the Missouri River by 1873 (as well as a short section between Kalama on the lower Columbia River and Puget Sound), when the financial panic of that year halted all further progress for the remainder of the decade. In the meantime, German émigré Henry Villard acquired the Oregon Steam Navigation Company from John Ainsworth in 1879. Combining it with his other transportation holdings in Oregon, Villard formed the Oregon Railway & Navigation Company (O.R.&N.Co.) The O.R.&N.Co. began laying track east from Portland along the south shore of the Columbia River in 1880. By 1882 this line, the first to pass through the Columbia Gorge, was completed to Walla Walla. (The rail line between Walla Walla and The Dalles had already been completed in 1881, ending regular steamboat traffic on the upper river that year.)

³¹ Especially useful is the account of the expedition's botanist. See J.G. Cooper, "Report upon the Botany of the Route," Part II, No. 1 of Stevens, *Narrative and Final Report*.

³² Lou Palmer, ed., "Narrative of James Longmire, a Pioneer of 1853," *Washington Historical Quarterly* 23, nos. 1-2 (1932): 47-60, 138-150; Karen L. Johnson, and Dennis M. Larsen. *A Yankee on Puget Sound: Pioneer Dispatches of Edward Jay Allen, 1852-1855* (Pullman, WA: Washington State University Press, 2013). Allen led the private effort by the settlers from Fort Steilacoom to construct the wagon road over Naches Pass.

In 1881, Henry Villard was able to acquire control of the Northern Pacific Railroad Company (N.P.R.R.Co.) and continued construction of Jay Cooke's stalled rail line west to Walla Walla. It connected with the O.R.&N. in 1883, creating the first transcontinental railroad to the Pacific Northwest. By year's end, however, Villard's finances were overextended, leading to the collapse of his transportation conglomerate. Villard was forced to resign, while the N.P.R.R.Co. and the O.R.&N.Co. continued under separate ownership and now became rivals. Deprived of a means to get through the Columbia Gorge, the N.P.R.R.Co. now sought an alternative route to the Pacific and began building northwest through the Yakima Valley, following the original Stevens-McClellan survey. Track was laid to a point just north of Yakima City—where the new town of North Yakima was established—and there halted for almost six years until a passage through the difficult Cascade Mountains could be completed. Transcontinental service to Tacoma, Washington commenced in 1890. The N.P.R.R. line to, and subsequently through, Yakima Valley would stimulate the development of the region's agriculture by providing a ready access to market. The railroad company even supported irrigation projects in the valley, increasing the extent of agricultural lands and augmenting their value.

The O.R.&N.Co., which controlled the rail line through the Columbia Gorge to Portland, had also lost access to transcontinental service following its separation from the N.P.R.R.Co. in 1883. It was able to recover this service by the end of the following year, however, when the Oregon Short Line, a subsidiary of the Union Pacific Railroad Company, laid track across southern Idaho, connecting the O.R.&N. line in eastern Oregon to the Union Pacific mainline in Wyoming. At first leased by the Union Pacific, the O.R.&N. was eventually absorbed by that company, which continues to operate the line on the southern shore of the Columbia River today.

A rail line was completed along the north shore of the Columbia River in 1908 by the Spokane, Portland & Seattle Railway (S.P.&S.). This company had been incorporated in 1905 (under the name Portland & Seattle Railway) as a co-owned subsidiary of the Northern Pacific Railway and the Great Northern Railway. (The Great Northern, founded by James J. Hill, had completed a transcontinental line from St. Paul to Seattle in 1893. This was the northernmost of all the transcontinental lines in the United States, and the only one that was not subsidized by the

Pacific Railroad Act.) The S.P.&S. became part of the Burlington Northern in 1970, now the B.N.&S.F., which still operates the rail lines along the northern shore of the Columbia River.³³

Soon after its completion through the Columbia Gorge, the S.P.&S. acquired the Columbia River & Northern Railway, a short line between Goldendale and Lyle in Klickitat County that had been constructed through local efforts in 1902. This now became known simply as the Goldendale Branch. It was used to transport agricultural goods from the Goldendale area and lumber products from the western part of the county. The latter became increasingly important following construction of the first lumber mill at the town of Klickitat (on the Klickitat River) in 1909. Eventually, some seventy miles of narrow gauge logging railway was constructed by the lumber company, connecting the surrounding Ponderosa pine forest with the Klickitat mills. Following the closure of the last lumber mill at Klickitat in 1990, the Goldendale Branch railway ceased to be profitable and was shut down two years later.³⁴

Portage Railways

Long before the transcontinental railroads began running through the Columbia Gorge in the mid-1880s, various short lines existed at the river portages to serve riverboat traffic. There were two principal obstructions to navigation on the Columbia River—the Cascades, located approximately forty miles east of Portland, midway through the Gorge; and The Dalles, located just beyond the eastern end of the Gorge. The latter was actually a series of three narrow rapids surmounted by a waterfall—Celilo Falls—several miles farther upstream near the mouth of the Deschutes River. Indians travelling the river in large canoes before the arrival of the Europeans had maintained portage trails around both obstacles. The fur brigades of the Hudson's Bay Company, as well as early explorers like Lewis and Clark, had used these same portages, often hiring local Indians to help them carry their equipment. After river traffic increased with the beginning of overland migration in 1843, a more efficient means of portaging, especially at the Cascades, became desirable.

³³ John T. Gaertner, *North Bank Road: The Spokane, Northern & Seattle Railway* (Pullman, WA: Washington State University Press, 1990).

³⁴ Robert Ballou, *Early Klickitat Valley Days*. Goldendale, WA: Goldendale Sentinel, 1938, pp. 298-316; and Selma M. Neils, *So This Is Klickitat* (Klickitat, WA: Klickitat Woman's Club, 1967).



The Cascades of the Columbia as they appeared prior to being inundated by twentieth century improvements. This dramatic picture illustrates the impossibility of navigating the river through this treacherous reach. [Oregon Historical Society, "Carleton E. Watkins photographs, 1861-1885"; Org. Lot 93; b3.f14; OrHi 71175]

The first improvement to these well-worn trails was made in 1851 when Francis A. Chenowith, a homesteader from the Willamette Valley, settled on the north shore of the Cascades and constructed a simple tramway, consisting of a wagon pulled over wooden tracks by a mule.³⁵ By this time the first steamboat, the *James P. Flint*, was operating on the middle river between the Cascades and The Dalles. Much of the *Flint's* business during these early years was provided by immigrants arriving on the Oregon Trail. When traffic on the river began to increase in 1855 with miners heading to Colville and the Army to the Cayuse War, the *Flint's* owners, Daniel and Putnam Bradford, bought out Chenowith and began improving the simple tramway, which they ambitiously christened the Cascade Railroad. (Despite improvements, it remained a mule-drawn wagon.) On the south side of the river, a similar portage road was constructed, named the Oregon Portage Railway by its owners, Joseph Ruckel and Harrison Olmstead.

³⁵ Francis Chenowith is better-known for his later role as one of the first supreme court judges of Washington Territory.



The tramway constructed by Joseph Ruckels and Harrison Olmstead at Tooth Rock on the south shore of the Cascades. This so-called railroad consisted of a simple wagon drawn by a mule. The tracks were wooden stringers with a strip of metal laid over the top. The original Cascades portage railway, constructed by Francis Chenoweth on the northern shore of the river, utilized similar technology. [Oregon Historical Society, "Carleton E. Watkins photographs, 1861-1885"; Org. Lot 93; OrHi 21575]

When the Oregon Steam Navigation Company was incorporated in 1860, the Bradfords, Ruckel, and Olmstead were all included, though their portage railways remained independent until 1863. Because good portages were essential to steamboat service, the O.S.N.Co. quickly began working to improve existing facilities. Efforts focused on the Oregon side of the Cascades first. In 1862 the company provided the Oregon Portage Railway with a steam locomotive, called the *Pony* for its diminutive size—its boiler was only three feet in diameter by five feet long. Though it continued to run on wooden rails, the *Pony* was the first steam locomotive to operate in the Columbia Gorge. The following year, the Cascade Railroad on the north side of the river was completely rebuilt and equipped with a full-size locomotive and rolling stock. That same year the O.S.N.Co. also completed a portage railway between The Dalles and Celilo. Both these short lines began operating in April 1863, after which the short-lived *Pony* was retired, and the portage on the Oregon side of the Cascades was no longer used.



The portage railroad established by the Oregon Steam Navigation Company on the north shore of the Cascades, ca. 1867. This scene shows the upper landing with the blockhouse constructed by the Army in 1856 (upper left corner of the photograph) in response to the Indian attack during the Yakima War. The portage train comprises two passenger cars as well as two freight cars, showing the importance of passenger traffic on the river at that time. The locomotive is a full-size model and includes a flared smokestack with spark arrester, indicating that it burned wood rather than coal or oil. ["Carleton E. Watkins photographs, 1861-1885"; Org. Lot 93; OrHi 21109]



The portage railroad at upper Cape Horn between The Dalles and Celilo Falls, ca. 1867. ["Carleton E. Watkins photographs, 1861-1885"; Org. Lot 93; OrHi 21585]

The Dalles-Celilo portage railway remained in continuous operation through 1880. By that time, the O.S.N.Co. had been absorbed by Henry Villard's Oregon Railway & Navigation Company, and the portage railway became part of a through line to Walulla, the port of Walla Walla. (Wallula had already been connected to Walla Walla by a local short line—probably the first in the region—in 1875.)³⁶ By 1882 this railway was extended all the way to Portland, and the following year it had become part of the Northern Pacific transcontinental railway, as discussed above.

³⁶ Carlos A. Schwantes, *The Pacific Northwest: An Interpretive History* (Lincoln: University of Nebraska Press, 1996), pp. 187-188.

The growth of a railroad network within the Columbia Gorge replaced most steamboat service on the middle and upper river by the 1880s, but in doing so created a monopoly that allowed the railroads to maintain high shipping rates. Resentful farmers and other regional producers called for improvements to river navigation in order to make river boats competitive with the railroad and provide an alternative means of shipping bulk goods at lower cost. The first major improvement came in 1896 when the Army Corps of Engineers completed the Cascade Locks on the Oregon side of the Cascades. For the first time, steamboats were able to travel the Columbia River between Portland and The Dalles without portaging. More than a decade later, work began on an even more ambitious project to circumvent The Dalles and Celilo Falls with a similar system of locks and canals. In 1915 the Celilo Canal was completed. This now made it possible to ship goods by boat all the way from Walulla to Portland, greatly stimulating the development of agriculture in eastern Oregon and Washington.

Significance of Travel & Circulation

Early routes of travel are significant for this study because they define where travelers went and the location of any observations they may have made. The Oregon Trail is a particularly good example of this, since it brought so many overland immigrants who penned written accounts of their journey. Some of these accounts include descriptions of the study area in the vicinity of The Dalles and south along the Barlow Road through Tygh Valley. Later improvements to early transportation routes with the construction of roads, railroads, etc. required formal surveys and often included reports of the work undertaken. These documents sometimes include landscape descriptions and may be relevant to this study. Military roads are an especially valuable source of information, because the officers engaged in their construction were required to submit detailed reports of their activities. These men were usually well-educated and could produce articulate accounts. Within the study area the Fort Simcoe Military Road is probably the most important example, since it passed through several oak woodland communities.

The development of steamboat travel on the Columbia River adds another level of significance to this genre. Not only did steamboats bring more people to the study area, creating more opportunities for descriptive accounts, but they introduced a significant impact on the

environment itself. Needing wood for fuel, steamboats created a demand that became the basis for the earliest industrial logging in the Columbia Gorge. Although later development of this industry favored Ponderosa pine, which is good for manufacturing and construction purposes, the steamboats used all types of wood and may have even preferred oak, which burns hotter than pine and makes a superior fuel. The large number of steamboats operating on the middle river—that is, between the Cascades and The Dalles—between 1855 and 1883, together with their prodigious consumption of fuel, makes the impact of this period on oak woodland within the Gorge and adjacent lands potentially considerable. It is possible that most of the readily-accessible oaks within this area were cut to meet the demands of the riverboats. Some of the early railroads in the Gorge—especially the portage railways—may have contributed to this demand for local fuel wood as well, but they represented a proportionately smaller impact than the steamboats.

Railroad history is significant to this study both as a source of information about the early landscape and because of the impact railroads themselves have had on the environment. Surveys of projected railroad lines provide potentially valuable landscape description. The Pacific Railroad surveys include some of the most detailed early accounts of the far west. The Stevens survey, especially that portion of it covered by George McClellan's party, is directly relevant to this study and is discussed in Appendices A6 and B1. Later railroad surveys may also be valuable and should be consulted. Of particular interest for the study area are the several surveys that preceded construction of the Columbia River & Northern Railway through the Klickitat Valley.

The actual development of the railroads, as well as later improvements in river navigation with the construction of canals and locks, would have only indirect effects on the oaks of the study area, but these effects may have been profound nonetheless. The railroad opened up vast new areas to agriculture by providing an economical means of transporting goods to market. Improved river transportation in the early twentieth century extended this effect by lowering transit rates through increased competition and by reaching even more agriculturalists. One observer from The Dalles noted in 1915,

Unused land that has been in pasturage for years is now being farmed since the boats have given the purchaser means of transportation. A number of new towns have been started along the banks of the river at points where wagon roads reach out to the farm lands of the interior. Old towns that have been retrograded since the early steamboat days have been inspired with a new lease of life.³⁷

The change from pastoralism to agriculture represents an intensification of land use practices with potentially greater impacts on native habitats. The railroad and associated transportation systems were significant drivers of these changes, and the history of their development provides a perspective on the extent of the changes themselves.

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PART II: THE BEGINNINGS OF CHANGE [1850-1910]

The Development of Early Counties and Reservations

The Dalles and Wasco County

Settlement of eastern Oregon and Washington by Euro-Americans following the Indian wars of the 1850s led to the establishment of local governments and the formation of counties by the end of the decade. Early county boundaries were often vaguely-defined and extensive, incorporating vast territories that reflected the sparse population of Euro-American settlers and their wide geographical distribution. As these immigrant populations increased and became more concentrated over the course of the century, counties became better-defined and smaller in extent, while the overall number of counties increased as the original counties divided into smaller units. Wasco County, for example (founded in 1854), originally comprised all of Oregon Territory east of the Cascade Mountains to the Continental Divide in western Montana and south to the California border. It was at that time the largest county in the United States. By the start of the twentieth century, it had diminished to nearly its present extent, comprising only the eastern slope of the Cascades to the Deschutes River and south to present day Jefferson County (then part of Crook County). In 1908 it was finally reduced to its present size with the establishment of Hood River County to the west.³⁸ A similar evolution was experienced by other east side counties. In the following narrative, the discussion is simplified by referring to geographical areas according to their modern county names and boundaries rather than the boundaries that may have existed at a particular time in history.

* * *

³⁸ Shaver, *Illustrated History of Central Oregon*, pp. 106-116; and McNeal, *History of Wasco County*, p. 24. In his section on Wasco County history, McNeal erroneously describes Jefferson and Deschutes Counties being created by subdivision from Wasco County in 1916. In fact, these two counties were subdivisions of Crook County, which was subdivided from Wasco County in 1882.

Lying directly astride the Oregon Trail and situated at an important crossroads for travel to the interior, The Dalles became one of the earliest places east of the Cascades to be settled by Euro-Americans. Its fate was closely tied to developments in transportation, both on the river and overland. Ephemeral homesteads were made in the vicinity of The Dalles as early as the mid-1840s. Nathan Olney, who came in 1847, was considered the first permanent Euro-American settler. Though he left the following year for the California gold rush, he returned in 1853 and stayed for good. Following the conclusion of the Cayuse War, other settlers began to arrive as well.³⁹ Many were encouraged by the Oregon Donation Land Act, which was passed in September 1850 and would remain in effect through the end of 1855. This act granted title to a full section—640 acres—to any married couple willing to live on the land and cultivate it for four years. (Single claimants were allowed 320 acres.) The Oregon Donation Act was a precedent for the later Homestead Act of 1862, which was applied more broadly throughout the western states and territories.⁴⁰

The initial wave of settlement at The Dalles during the early 1850s inspired the Oregon territorial legislature to establish Wasco County in January 1854. Eastern Oregon was still so sparsely settled by Euro-Americans, however, that the original county comprised approximately 130,000 square miles. Most of this population was concentrated around The Dalles and grew slowly for the duration of the 1850s. During this same period the Indian population here declined with the removal of the native Wasco and Sahaptins to Warm Springs after 1855. The outbreak of war later that same year increased traffic on the river as the Army contracted to ship supplies and personnel east. This had some effect on the growth of The Dalles, but it was not until 1860 that the region experienced its first and most dramatic boom. That year gold was discovered on the Clearwater River in Idaho, then on the lower Salmon and the Boise Basin, followed soon afterwards by discoveries in the John Day country and the Powder River in eastern Oregon. The excitement created an unprecedented surge in travel eastward, and The Dalles lay at the center of much of this activity. Not only was it situated at a critical portage between the middle and upper river, it was at the head of several roads leading to the interior. This strategic position made The

³⁹ The experiences of one of these early settlers, William C. Laughlin, were described by his daughter and later published—Elizabeth Lord, *Reminiscences of Eastern Oregon* (1903).

⁴⁰ Shaver, *Illustrated History of Central Oregon*, pp. 106-116.

Dalles a natural source for outfitting and supplying the remote mining camps and quickly transformed the once sparsely populated settlement into a bustling center of commerce.⁴¹

Among other consequences, the development of the eastern mines created a strong demand for livestock, especially cattle and sheep for meat but also horses and mules for transportation. This became the basis for a thriving stock industry that originally centered around The Dalles. Ranchers began taking up rangeland south and east of the city and grazing large herds of stock on the native bunch grass of the western plateau. Apart from commerce at The Dalles itself, this became the first major industry of Wasco County. Agriculture would not become important until the 1870s but thereafter increased rapidly, with dry-land farming of cereal grains predominating.⁴²

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The Warm Springs Indian Reservation

This reservation was established by treaty in 1855 for the resettlement of the Kiksht speaking Wasco, Hood River, and Cascades Indians from the southern shore of the Columbia River, and the western Columbia River Sahaptin speaking peoples, commonly referred to as the Teninos.

⁴¹ Shaver, *Illustrated History of Central Oregon*, pp. 106-116

⁴² Ibid.

Later, members of the northern Paiute were also resettled on the Warm Springs Reservation. These three groups constitute the Confederated Tribes of Warm Springs (represented by three stylized teepees on tribal insignia).

The Warm Springs Reservation encompasses major portions of the study area and includes oak woodland habitat. Its relationship to this resource developed differently than the surrounding Euro-American communities, and this history needs to be documented separately. This remains to be done.

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Klickitat County

The north side of the Columbia River, in present day Klickitat County, was not settled by Euro-Americans as early as the south shore. During the 1850s, some residents of The Dalles occasionally crossed to the north shore at Rockland (present day Dallesport), mostly to graze livestock, but they did not live there on a permanent basis. Ben Snipes, who later became one of the largest cattlemen in the Pacific Northwest, came over around this time, bringing a herd to the

Klickitat Valley in 1855. He would later make this a permanent base for his growing outfit.⁴³ One of the few permanent settlers was Erastus Joslyn, who built a homestead near present day White Salmon in 1852, but he was driven out by the war that began in 1855. Hostile Indians burned down his homestead and forced Joslyn to flee across the river.

The first substantial development in Klickitat County was a military road constructed in 1856 to reach Fort Simcoe, also established that year on the west side of the Yakima Valley. The Simcoe military road ran from the north shore of the Columbia river opposite The Dalles, over the Columbia Hills to the Klickitat Valley, and thence over the Simcoe Mountains and Toppenish Ridge to the Yakima Valley.⁴⁴ A small garrison, consisting of a log blockhouse and stockade, was established along the route a few miles west of present day Goldendale to protect the road, but this was abandoned at the end of the war. (The site, which later became a mineral springs resort, is still known as Blockhouse.)

Apart from the Military, Euro-Americans did not settle permanently on the north side of the river until the end of the decade, shortly after the Yakama War had ended. L. Mortimer Thorp was one of the first, settling in 1858 or 1859 at the site of present day Goldendale, but he soon moved on to the Yakima Valley, becoming the first permanent Euro-American settler in that region. Other families came to Klickitat around the same time. Most settled along the well-watered soils of Swale Creek within the Klickitat Valley. The earliest of these was John Golden, after whom the town of Goldendale was later named. He arrived in 1859.⁴⁵ Many settlers brought herds of cattle—as many as 150—to graze on the native bunch grass which was abundant here, as one early history records,

⁴³ Bruns and Barron, *Bluelight to Pucker Huddle*, p. 31; and Roscoe Sheller, *Ben Snipes: Northwest Cattle King* (Portland, OR: Binfords & Mort, 1957).

⁴⁴ For a detailed description of the route and its history see, Michael McKenzie, "Lessons From an Old Road: Frederick Dent's Route from Fort Dalles to Fort Simcoe," *Columbia, The Magazine of Northwest History* 16, no. 3 (2002). Note that the road passes through oak woodland after crossing to the north side of the Simcoes. Any accounts of traveling this road might therefore be useful. Note also that the road remained popular long after the military abandoned Fort Simcoe. During the 1890s the route through Satus Pass, followed by present day Highway 97, was opened. This apparently replaced the Simcoe Road. [Bruns and Barron, *Bluelight to Pucker Huddle*, p. 82.]

⁴⁵ John Golden bought this claim from another homesteader in 1871, and the following year platted the town of Goldendale on it. It became the county seat in 1878.

It was a beautiful country then, covered everywhere with rich, luxuriant bunch grass, a cattleman's paradise. From the hills of the Columbia to the foot of the timber-covered Simcoe range stretched one immense undivided pasture field.⁴⁶

"Swale Creek," according to another source, "meandered across the valley floor and, in a wet season, rose to cover a thousand acres. Natural reservoirs held the water and allowed it to soak slowly into the clay soil, sustaining the grass and refreshing the aquifer below." This same source recalled that, during the 1930s, the Soil Conservation Service (a predecessor of the Natural Resources Conservation Service) straightened these meanders and deepened the channel, eliminating much of the system's ability to conserve water.⁴⁷ Cattle and sheep grazing was the first economic use made of the Klickitat Valley by Euro-Americans, and these industries would remain important for much of Klickitat County's history. Cattle ranching still comprises one of the principal industries of the region.

Another economic activity of the early Klickitat settlers was supplying fuel wood for the steamboats that were just beginning to operate on the upper Columbia River. Wood was hauled to a landing known as Columbus (later renamed Maryhill). So important was this activity that the second road to be constructed in the county, after the Fort Simcoe military road, ran from Columbus to the foot of the Simcoe Mountains, where the wood was cut. It was completed by private conscription in 1860.⁴⁸

By the end of 1859 there were about fifteen homesteads in the Klickitat Valley, which was considered sufficient for organizing a county. An act to this effect was therefore passed by the territorial government—Washington did not become a state until 1889—on 20 December of that year. The resulting Klickitat County comprised much of the lower watershed of the Klickitat River from the ridge of the Simcoe Mountains to the Columbia River as well as eastern portions of the White Salmon watershed. Although the boundaries would vary over time—sometimes dramatically—this area defines the nucleus of the county that has come down to the present day.

⁴⁶ Interstate, *Illustrated History of Klickitat, Yakima and Kittitas Counties*, p. 91.

⁴⁷ Teddy Cole, "The Swale," in Bruns and Barron, *Blue Light to Pucker Huddle*, p. 285.

⁴⁸ Bruns and Barron, *Blue Light to Pucker Huddle*, p. 82

Stock raising and fuelwood production would remain the only significant economic activities during the first few years of Klickitat County's existence. To the extent that any agriculture was practiced, it was limited to subsistence crops on homesteads. In 1861, however, the entire Pacific coast experienced an unusually severe winter. In Klickitat County deep snows followed by freezing rains made winter forage inaccessible to livestock. Ranchers were devastated, some losing as much as 90 percent of their herds. Although many eventually recovered, one consequence of this tragedy was the encouragement of agriculture, at first simply to raise winter forage in case similar conditions were repeated. This proved to be a mixed blessing for ranchers. While stored hay provided a more dependable source of feed, agriculture destroyed the bunch grass prairie of the valley bottomlands, which stockmen regarded as some of the highest quality forage available. The success of cultivating hay also proved that other, more lucrative crops, such as cereal grains, might succeed as well. This was the beginning of agricultural development in the Klickitat Valley. Agriculture would eventually become the leading economic activity in the county, though it would be decades before it surpassed livestock grazing in importance.⁴⁹

Despite suffering a set-back during the winter of 1861-62, Klickitat ranchers, like ranchers south of the river in neighboring Wasco County, flourished over the following years as a result of high demand for beef and pack animals from the miners in eastern Washington and Idaho. Cattlemen like Ben Snipes wintered their animals in the valley bottoms, then trailed them to high elevation pastures during the summer in the Simcoe Mountains and on the slopes of Mount Adams. Sheepmen did the same with their flocks. By the late 1870s the principal valleys of the county were being fenced and planted to crops, making them increasingly unavailable to stockmen, but livestock grazing continued on agriculturally marginal lands, such as the high prairies and forest lands at the west side of the Klickitat Valley. Sheep were grazed in the dry plateau country at the east end of the county.⁵⁰ During the latter third of the century, sheep became the most important livestock animal in Klickitat County, far outnumbering cattle. The county assessor's report for 1890, for example, counted more than 32,000 sheep but less than 10,000 cattle. Nonetheless, sheep raising was on the decline by this time, while cattle would continue to play an important

⁴⁹ Interstate, *Illustrated History of Klickitat, Yakima and Kittitas Counties*, p. 335; and May, *History of Klickitat County*, p. 452.

⁵⁰ May, *History of Klickitat County*, p. 454.

role in the local economy.⁵¹ In the vicinity of Trout Lake, dairy ranching became a locally important industry.⁵² At the start of the present century there were approximately 30,000 cattle in Klickitat County.⁵³

Logging was another industry that got an early start in Klickitat County. The first logging—already noted—was done for fuel wood to supply the steamboats on the Columbia River. Ponderosa pine was being cut in the Simcoe Mountains and hauled down to the steamer landing at Columbus (Maryhill) as early as 1860. Oak may have been cut for this purpose as well, since oak is denser and burns hotter than pine, making a superior fuel wood. It is very likely that much of the oak woodland lying close to the Columbia River was cut over between the 1860s and the 1880s during the height of the steamboat era, but records to corroborate this assumption should be sought.

Logging for lumber got nearly as early a start in Klickitat County—the earliest sawmill was also established in 1860—but was probably hampered by the lack of good transportation to reach outside markets. Nonetheless, there were five sawmills in the county by 1884, each producing from 12,000 to 15,000 board feet per day, as well as three shingle mills, each producing up to 10,000 shingles per day.⁵⁴ By this time, rail lines ran to the Yakima Valley north of the Simcoes and along the south shore of the Columbia River providing direct access to Portland. The greatest challenge was getting the timber out of the interior forests and to a railhead or steamer landing, a problem that would not be solved until early in the following century with the construction of a short line railroad between Lyle and Goldendale. Despite these challenges, the lumber industry continued to grow rapidly. Only eight years later there were thirteen companies producing a total of just under 10 million board feet of milled lumber a year and more than 8 million shingles. All of this was produced from Ponderosa pine, known locally as Klickitat pine.

⁵¹ Interstate, *Illustrated History of Klickitat, Yakima and Kittitas Counties*, pp. 107, 111, and 119; and May, *History of Klickitat County*, p. 452.

⁵² May, *History of Klickitat County*, pp. 455-457

⁵³ Bruns and Barron, *Bluelight to Pucker Huddle*, p. 30.

⁵⁴ Interstate, *Illustrated History of Klickitat, Yakima and Kittitas Counties*, p. 106.

It is very unlikely that Garry oak was ever harvested for lumber in Klickitat County since it would have had little commercial value for this purpose.⁵⁵

As already noted, agriculture in Klickitat County began as an adjunct of the livestock industry in order to raise hay for winter forage. In 1870 one of the early settlers—John Burgen—experimented with a small crop of wheat. Having great success, Burgen's example was soon emulated by other farmers, mostly along Swale Creek in the central Klickitat Valley, where simple dry farming produced up to forty bushels an acre. About the same time, the first orchards were also planted, but orchards would not prove economically successful in Klickitat County except in a few places along the Columbia River—at Maryhill for example. The amount of acreage planted to wheat (and other small grains) increased rapidly after Burgen's initial experiment, and by 1878 there was enough grain being produced in the local area to justify building two grist mills, both located in Goldendale (Klickitat Mill and Goldendale Mills). In 1876, the first wheat exports were made from the county, totaling about one thousand bushels. In 1877, fourteen thousand bushels were exported; in 1878, forty-six thousand; and in 1879, one hundred thousand. This last sum represented more than 5 percent of the wheat produced throughout the entire Washington Territory.

By 1880, agriculture had become the most important economic activity of Klickitat County, with nearly all of the broad valley land lying between the Columbia Hills and the Simcoe Mountains given over to farming. This included even some of the drier plateau country east of Rock Creek, which only began to be settled in the mid-1870s. Nearly all of this was dry-farmed wheat with some oats and barley.⁵⁶ Agricultural surplus and the growing market for export products—primarily wheat—created a strong need for improved transportation to bring goods out from the principal growing areas of the interior to the Columbia River, where they could be loaded on steamboats or ferried over to the Oregon side for shipment on the O.R. & N. Local businessmen began calling for a short line railroad by the late 1880s to accomplish this. As already noted, such a rail line was also desired by the emerging lumber industry.⁵⁷

⁵⁵ Interstate, *Illustrated History of Klickitat, Yakima and Kittitas Counties*, p. 113; and May, *History of Klickitat County*, pp. 466-468.

⁵⁶ Interstate, *Illustrated History of Klickitat, Yakima and Kittitas Counties*, pp. 104-106.

⁵⁷ *Ibid.*, p. 105.



Wheat awaiting transport from Columbus, ca. 1900. Prior to the Columbia River & Northern Railway, sacks of wheat were conveyed by wagon from the interior to the shore of the Columbia River, where they would be ferried across to an O.R. & N. railhead, or shipped by steamboat down to Portland. [Reproduced from Pete May, *History of Klickitat County*, p. 475.]

In 1889, Klickitat County citizens incorporated the Columbia Valley & Goldendale Railway. A route was surveyed from Goldendale to Lyle along the Klickitat River, but the venture went no further before failing from insolvency. After other abortive starts, the project was finally taken up by a group of Portland investors in 1902. They organized the Columbia River & Northern Railway, which was constructed along the previously-surveyed route and began operating in May 1903. Because no trunk line yet ran along the north shore of the Columbia River—the Spokane, Portland & Seattle would not be completed for another five years—goods were transferred to steamboats at Lyle for transshipment to Portland.⁵⁸

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Bruns, Ruth Miles, and Nancy Barron, eds. *Bluelight to Pucker Huddle: Discovering Klickitat County*. Goldendale, WA: Friends of the Goldendale Community Library, 2005.

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⁵⁸ Interstate, *An Illustrated History of Klickitat, Yakima and Kittitas Counties*, pp. 109, 120-121. See also May, *History of Klickitat County*, pp. 452-453; and Bruns and Barron, *Bluelight to Pucker Huddle*, pp. 1, 234, 283, 285, and 324.

The Yakima and Kittitas Valleys

The earliest Euro-American settlement in the Yakima Valley was St. Joseph's Mission on Ahtanum Creek, dating from 1852 and discussed previously. The valley first drew the attention of immigrants in 1853. That year George McLellan, as part of the Pacific Railroad Survey being conducted by Governor Isaac Stevens, investigated a potential route through the Cascade Mountains over Naches Pass. During the same year work also began on a wagon road over Naches Pass from the settlements on Puget Sound. Before this road had even reached the pass, however, the first immigrant wagon train successfully followed the proposed route from the east, leaving the main Oregon Trail at Wallula (near Walla Walla) and crossing the northern Yakima Valley to Wenas Valley, and thence to the Naches River, over the pass, and down to Fort Steilacoom. Among the members of this immigrant train was David Longmire, who would later return and settle in the Yakima Valley. As Longmire recalled, when his wagon train came through the only Euro-Americans living in the region were two Catholic priests, one at Tampico (at St. Joseph's on Ahtanum Creek) and the other near Selah (possibly at Holy Cross Mission).

Euro-American stockmen began grazing cattle in the Yakima Valley on an itinerant basis as early as 1859. Men like Ben Snipes came over the Simcoe Mountains from the Klickitat Valley to take advantage of the fine bunchgrass growing in the Yakima country. One early homesteader later recalled the richness of these grasslands, describing the Moxee Valley where his family settled: "there was rye grass in the bottom as high as a man's shoulders on horseback, so that the stock were fairly swallowed up in it. Though the plains were mainly covered with sagebrush there was mixed with it, and yet more in the hills, the most luxurious bunchgrass."⁵⁹

The first permanent Euro-American settlers in Yakima County (apart from the Catholic missionaries) were F. Mortimer Thorp and his large family. Thorp first located in present Klickitat County at the future site of Goldendale. Early in 1861, however, he relocated to the Yakima Valley, settling in the Moxee Valley—a part of the Yakima Valley—on the east bank of the Yakima River opposite the mouth of Ahtanum Creek. He brought with him more than 250

⁵⁹ Splawn, *Ka-mi-akin*, pp. 143, 259; and Drennan, *Agricultural History*, p. 2. Quote is from Mortimer Thorp's son Leonard, in Interstate, *An Illustrated History of Klickitat, Yakima and Kittitas Counties*, p. 152.

Durham cattle as well as some horses. In addition to raising these livestock, he also cleared and planted several acres of bottom land, growing vegetables on a subsistence basis.

Soon after Thorp came to Moxee, other settlers arrived, some following him from the Klickitat country. Their numbers were not great, but they formed the nucleus of a small community centered around Union Gap and the Moxee Valley. Among these early settlers were the Splawn brothers, one of whom—A.J. Splawn—would write an important history of the region.⁶⁰ Along with Ben Snipes, he became one of the leading cattlemen of the Pacific Northwest, and his experiences are recounted in this book.

As already discussed, the winter of 1861-62 was devastating for early cattlemen, but those who managed to salvage some of their stock were compensated with high prices and growing demand from the miners in the gold fields to the east. In only a few years, the cattle industry had not only recovered but was booming. The first large herds of cattle were brought into the Yakima Valley in the fall of 1864. They came up from southern Oregon through The Dalles and thence were ferried across the Columbia to Klickitat County and over the Simcoe Mountains, probably following the old military road. These pioneering herds were turned out in the Wenas Valley and were the first cattle to graze that range. The following year (1865) Augustus Cleman brought the first sheep into the Yakima country. Cleman Mountain, which separates Wenas Valley from Naches Valley, is named after him.⁶¹

In 1867 the first permanent Euro-American settlers came to the Kittitas Valley just north of the Yakima Valley. Two years later, Mortimer Thorp, always restless, left his homestead in the Moxee Valley and settled in the Kittitas, where he remained till death. Although Kittitas County lies beyond the present study area, it contains the northernmost population of Garry oak east of the Cascades, with scattered woodland occurring at the southern end of the Kittitas Valley.

⁶⁰ A.J. Splawn, *Ka-mi-akin, the Last Hero of the Yakimas* (Caldwell, ID: Caxton Printers, 1980). Despite the title, most of this book deals with the early progress of Euro-American settlement, especially the cattle business that Splawn himself knew well.

⁶¹ Interstate, *An Illustrated History of Klickitat, Yakima and Kittitas Counties*, p. 295

The turning point for Euro-American settlement of Yakima Valley was 1870. From that year forward, immigration quickened dramatically. Reflecting this growing population, a second store opened in the Union Gap area that year, and the name Yakima City began to be used for this small community. Even more propitious was the introduction of irrigation to support the local agriculture, with the first small canal opened in 1866. It was used to water a small crop of wheat. The success of the experiment helped overcome the prevailing assumption that Yakima Valley was useful only for stock grazing. Other private irrigation projects soon followed.⁶²

Yakima County was officially established 21 January 1865, well before the permanent Euro-American population seemed to merit such organization. (Its population was only 432 as of the decennial U.S. census, taken four years later.) It originally included present day Kittitas County (established 1883) and Benton County (established 1905). It also included the Yakama Indian Reservation (established by the Treaty of 1855), which comprises 36 percent of the present county's total area.⁶³

Pastoralism remained the dominant economic activity from 1860 to about 1880. By the latter year, the high-point of the livestock industry in Yakima County, there were an estimated 200,000 cattle, 350,000 sheep, and 125,000 horses. Ben Snipes had become one of the largest cattlemen in the region by this time, having bought out many of his competitors and acquired their stock. In 1880, his herds numbered between 40,000 and 50,000 head.⁶⁴

During the same period, however, agriculture was growing steadily in importance and finally surpassed livestock grazing by the end of the century. Two principal factors contributed to its success: irrigation and the railroad. The soils of the Yakima Valley are generally fertile but were too dry in their natural state to grow crops. Water, however, was near at hand with the Yakima and Naches Rivers and Ahtanum Creek. By the 1870s, irrigation was being used to grow a wide variety of crops, from wheat and alfalfa to orchard fruit (especially apples). Over the following two decades, numerous private irrigation companies were established, and by the end of the century more than fifty different irrigation systems, comprising several hundred miles

⁶² Ibid., pp. 276-277.

⁶³ Ibid., p. 284.

⁶⁴ Drennan, *Agricultural History*, p. 2; Splawn, *Ka-mi-akin*, p. 319

of canals and laterals, were diverting water from the Yakima and Naches Rivers. Although agriculture flourished, in-stream flows of these rivers declined substantially, suggesting that the impact from water diversions on natural systems may have been profound. At the time it was taken to mean that additional measures were necessary in order to support continued agricultural development.⁶⁵

The second factor stimulating agriculture in the Yakima Valley was improvement in transportation, essential for marketing agricultural goods profitably. The Northern Pacific Railroad Company built its transcontinental line directly into the Yakima Valley in 1884 in order to circumvent competition from rival railroad companies in the Columbia Gorge. Its terminus would remain here for the next six years while the final leg of its transcontinental route was completed through the Cascade Mountains to Tacoma. The Northern Pacific established the new town of North Yakima for its principal Yakima Valley station, bypassing the existing settlement of Yakima City. The latter eventually changed its name to Union Gap while North Yakima became the present city of Yakima.

The Northern Pacific Railway provided agriculturalists an efficient means of getting bulky commodities to market, as well as obtaining supplies and equipment necessary for production. This gave them a competitive advantage over pastoralists, with agricultural goods now enjoying greater market value than livestock. The Northern Pacific even helped to develop many of the irrigation schemes that made intensive agriculture possible during the 1880s, both to increase the value of its own grant lands within Yakima Valley and to increase agricultural traffic—and therefore revenue—on its trains. Short lines were also developed connecting outlying farming districts to town centers and to the railroad trunk line for transshipment. In 1905, the North Yakima & Valley Railway Company was incorporated. (It was later sold to the Northern Pacific Railway). And in 1907 the Yakima Valley Transportation Company was incorporated. (It was later sold to the Union Pacific Railroad.)⁶⁶

⁶⁵ Drennan, *Agricultural History*, pp. 3-5

⁶⁶ *Ibid.*, p. 4

By the beginning of the twentieth century, agriculture had largely replaced livestock grazing throughout the Yakima Valley bottomlands. Pastoralism would remain an important economic activity in Yakima County but only on marginal lands that did not permit capital-intensive agricultural development. Although livestock grazing provides lower value per unit of land than agriculture, it does not require ready access to transportation, since animals can be driven to market on the hoof. Ranching was therefore able to persist in remote areas far from the railroad or other transportation improvements.⁶⁷

In 1905 the U.S. Bureau of Reclamation (then known as the U.S. Reclamation Service) selected Yakima Valley as one of its first projects. The Reclamation Service had been established only three years earlier to promote agricultural development in the arid west by creating water storage and irrigation systems. Development of the Yakima Project took place over more than five decades—from 1905 to 1958—though most work was completed by the end of the 1930s. The Yakima Project included six major dams for water storage, as well as smaller diversion dams, canals and other infrastructure, providing irrigation for more than 400,000 acres of the Yakima Valley. After World War II the project was extended upstream to the Kittitas Valley and later downstream to include the Kennewick Division near the confluence of the Yakima and the Columbia Rivers, bringing the total irrigable area to more than 464,000 acres by 1958.

The portion of the project with the greatest potential impact on the west side of the valley, where the majority of oak habitat occurs, is the Tieton Division. Construction of a diversion canal from the Tieton River began in 1907, and by 1911 it was providing water to irrigate more than 27,000 acres west of the city of Yakima. In 1914 the capacity was increased to more than 32,000 irrigable acres. Not long afterward, the Wapato Division was established to irrigate agricultural lands on the Yakama Indian Reservation. Original plans called for a storage dam on upper Simcoe Creek, which would have directly affected oak woodland around Fort Simcoe. This was subsequently changed to a diversion dam on the Yakima River just below Union Gap. The Wapato diversion eventually irrigated more than 120,000 acres of reservation lands along the west shore of the river between Wapato and Toppenish. The Wapato Division includes oak

⁶⁷ Ibid., p. 4

woodland along the Yakima River corridor as well as scattered oaks and oak woodland growing in the upland to the west.⁶⁸

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The Yakama Indian Reservation

This reservation was established by treaty in 1855 for the resettlement of the Yakama and other Sahaptin speaking peoples of the western plateau, as well as the Kiksht speaking Wishram, White Salmon, and Cascades Indians from the north shore of the Columbia River. Fourteen distinct groups of native people were ultimately resettled onto the Yakama Reservation. They constitute the Confederated Tribes and Bands of the Yakama Nation.

The Yakama Indian Reservation lies within the study area and includes significant stands of oak woodland. Its relationship to these resources developed differently than the surroundings Euro-

⁶⁸ Drennan, *Agricultural History*, pp. 5-6; and U.S. Dept. of the Interior, *The Story of the Yakima Project, Washington* (Yakima, WA: Bureau of Reclamation, Yakima Field Office, 2011).

American communities, and this history needs to be documented separately. This remains to be done.

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Significance of Early County and Reservation Development

With the conclusion of the Indian wars and the resettlement of the Indians on reservations, the growth of Euro-American communities in the interior progressed rapidly. This growth affected

the study area through various economic activities that accompanied it, beginning with livestock grazing. This was followed in the 1870s by the introduction of extensive, dry-land farming, and in some places, particularly the Yakima Valley, by the introduction of irrigation. Intensive, irrigated agriculture would become the prevailing practice in the Yakima Valley by the end of the century. In other parts of the study area irrigation developed only sporadically—e.g., within the Klickitat Valley. Other activities such as timber harvesting also grew into major industries by the end of the century. (On the Columbia River, salmon fishing and canning also became important industries, but these are not relevant to the present study, as they would not have had an effect on oak habitat.) All of these practices contributed to environmental change within the study area, potentially affecting oaks and oak woodland. The continued growth of the Euro-American population and economy in the study area would intensify these impacts through the end of the nineteenth century, though the fundamental nature of these impacts would not begin to change until the following century.

Both the Warm Springs and Yakama Indian Reservations encompass major portions of the study area and include significant stands of oak woodland. Resource development and land use practices on the reservations differed from the surrounding Euro-American communities, and their histories need to be documented separately. This remains to be done.

PROPOSALS FOR FURTHER STUDY

Landscape Description

Problem Statement

This project would survey available first-hand accounts describing or depicting the past landscape of the study area, especially those areas containing oaks or oak woodland. Emphasis would be on early accounts representing the landscape as it existed prior to changes resulting from Euro-American settlement and subsequent development. Accounts showing early stages of such changes may also be useful (and will probably constitute the majority of source material). The object of this study will be to develop a baseline description of oak habitat in the east Cascades study area against which modern (i.e., <200 yrs.) changes in the environment can be compared and better understood. Source material will include written narratives (personal diaries and memoirs, official reports, etc.) as well as visual representations (maps, drawings and paintings, and photographs). Oral traditions from Indian elders and family descendants of Euro-American settlers should also be considered, but, owing to inherent challenges, this research would be better done as a separate, follow-on project. The final product will be an annotated compilation of primary documents, or excerpts from these documents, organized by geography. A partial example appears in the Appendices of this report. The proposed project would expand on that precedent.

Research Plan

Many of the early accounts from well-known expeditions, such as that of Lewis and Clark, have been published and are readily available through libraries. These sources should be surveyed first. Other accounts can be found only in archival collections and may require visiting the institutions where they reside.

The principal repository for the records of the Hudson's Bay Company is in Winnipeg, Canada, but copies of many relevant documents are also held in local collections (for example, at Fort Vancouver National Historic Site).

Many records pertaining to the missionary period are held in Pacific Northwest collections, such as the Oregon Historical Society in Portland, the University of Washington in Seattle, and state archives in Salem, Oregon and Olympia, Washington. Records associated with Catholic missionary activities can be found in the archives of the Archdiocese of Portland and the Archdiocese of Seattle.

Official documents associated with the U.S. military's activities in the Pacific Northwest are held by the National Archives and Records Administration (NARA). Although annual reports of the War Department (predecessor of the Department of Defense) have all been digitized and are readily-accessible online, these are too generalized to be useful for this study. The detailed information found in personal correspondence and individual reports may require visiting one of the NARA repositories in Washington, DC, College Park, MD, or Seattle, WA.

Probably the greatest number of first-hand accounts are represented by the journals and memoirs written by early immigrants to Oregon and Washington. Many of these are held in local collections, making them relatively accessible for research.

How Long

An exhaustive survey of primary documents containing early landscape descriptions of the study area would take a very long time—as much as a year or more. A more practical approach would be to survey published sources and archival sources held in major regional collections, such as the Oregon Historical Society and selected local repositories within the study area. With these limitations, a comprehensive product could be prepared in approximately four months.

Fire

Problem Statement

This project would survey historical and ethnographic data for evidence of anthropogenic burning on the east side of the Cascades prior to European contact. Such evidence might include post-contact burns up to, and possibly beyond, the period of reservation settlement if they represent the continuation of traditional practices. Burning west of the Cascades by American

Indians is well-documented, but the extension of this practice to the east side of the mountains should not be assumed without the support of evidence, given the substantial differences both in natural environment and human culture.⁶⁹ Anthropogenic burning on the east side, if it occurred, may have had a significant effect on oak habitat, whether the practice was actually targeted at oaks or done for some other purpose (for example, to maintain camas prairies where oak woodland was also present). Additionally, anthropogenic fire suppression may have had widespread impacts on the extent and quality of oak systems.

Research Plan

Among the sources consulted for this study would be early landscape descriptions in published reports and journals—for example, the Wilkes expedition from 1841; Osborne Cross's report of the mounted riflemen from 1849; and George McClellan's survey for the Northern Pacific Railroad in 1853. (All of these examples are represented in the Appendices of this report.) The diaries and personal memoirs of early immigrants on the Oregon Trail should also be consulted.

Ethnographic sources would include published anthropological studies of Indian groups native to the study area, as well as oral traditions of elders from the Warm Springs and Yakama reservations where these groups were resettled after 1855. Historical documents from both reservations should also be consulted for information on post-treaty resource management practices.

How Long

A written report based on a comprehensive survey of published sources could be completed in approximately two months. Consulting with tribal members would require more time, though exactly how much is difficult to know.

⁶⁹ Good overviews of the subject appear in the following: Cathy Whitlock and Margaret A. Knox, "Prehistoric Burning in the Pacific Northwest: Human versus Climatic Influences," pp. 195-231, in Thomas R. Vale, ed., *Fire, Native Peoples, and the Natural Landscape* (Washington, DC: Island Press, 2002); and Robert Boyd, ed. *Indians, Fire, and the Land in the Pacific Northwest* (Corvallis, OR: Oregon State University Press, 1999).

Beavers

Problem Statement

This project will attempt to quantify the number of beavers (*Castor canadensis*) that may have existed in the study area prior to the fur trade era, when they were nearly eradicated throughout Oregon Territory by the Hudson's Bay Company's "fur desert policy."⁷⁰ This estimate will be used to assess the likely environmental changes that occurred as a result, as well as their geographical distribution. The beaver is a keystone species of riparian ecosystems. Its dam-building activities fundamentally structure habitats in ways that support or significantly affect numerous other species and natural processes.⁷¹ When the beaver is removed, these structures collapse, and the ecosystem is altered. The magnitude of these changes may have been compounded during the early historic period by the introduction of other novel impacts, such as livestock grazing and agriculture.

Environmental changes associated with beaver removal may have affected oaks and oak habitat in the study area but only in locations where three factors coincide: areas that supported beavers; areas that supported oaks or oak woodland; and areas where beaver activities might have significantly affected oak woodland. The last criterion is especially important to note, because oaks frequently grow on the steep slopes of narrow, vee-shaped river canyons where beavers may have been present but their activities would have had little or no effect on the oaks. Only in places where oaks grow in flood plain meadows adjacent to riparian corridors would the dam-building activities of beavers have been relevant to this study. This project will attempt to identify these places in addition to estimating the number of beavers that may have been removed from them. The results of this study should be considered in relation to other

⁷⁰ Jennifer Ott, "'Ruining' the Rivers in the Snake Country: The Hudson's Bay Company's Fur Desert Policy," *Oregon Historical Quarterly* 104, no. 2 (2003): 166-195.

⁷¹ Sources on beavers and their ecological impacts include the following: Dietland Muller-Schwarze, *The Beaver: Its Life and Impact*. Ithaca, NY: Comstock Pub. Assoc., 2011; Justin P. Wright, Clive G. Jones, and Alexander S. Flecker, "An Ecosystem Engineer: The Beaver Increases Species Richness at the Landscape Scale," *Oecologia* 132, no. 1 (2002): 96-101; Isaac J. Schlosser, and Larry W. Kallemeyn, "Spatial Variation in Fish Assemblages Across a Beaver-Influenced Successional Landscape," *Ecology* 81, no. 5 (2000): 1371-1382; Charlie Clements, "Beavers and Riparian Ecosystems," *Rangelands* 13, no. 6 (1991): 277-279; Robert J. Naiman, Carol A. Johnston, and James C. Kelley, "Alternation of North American Streams by Beaver," *BioScience* 38, no. 11 (1988): 753-762; and Don J. Neff, "Ecological Effects of Beaver Habitat Abandonment in the Colorado Rockies," *The Journal of Wildlife Management* 21, no. 1 (1957): 80-84.

environmental impacts associated with the early historical period, such as livestock grazing and agricultural development.

Research Plan

It should be possible to estimate the number of beavers that were present in the study area from the number that were taken out during the fur trade era. These data were recorded in the Hudson's Bay Company's fur brigade returns, original copies of which reside in the Provincial Archives of Manitoba in Winnipeg. These primary sources should be consulted, though it may be possible to do so remotely with the assistance of museum staff.

The ecological significance of beavers to riparian ecosystems has been studied by ecologists and conservation biologists in recent years. The published literature on this subject should be surveyed. At least one environmental history considers the relationship between beaver removal and livestock introduction in historical context.⁷² This may serve as a useful model for understanding analogous ecosystems within the study area. If similar studies exist, they should also be consulted.

How Long

This research question is well-defined, and its geographical scope is limited to those places within the study area where potential beaver habitat and oak woodland overlap—for example, the western tributaries of the Yakima River, such as Ahtanum Creek, Naches River, and Wenas Creek; the lower Klickitat and White Salmon River watersheds; Mill Creek, Eightmile Creek, and other Columbia River tributaries in the vicinity of The Dalles; and the western tributaries of the Deschutes River, especially those running through Tygh Valley (Tygh Creek and White River). While these limitations in the scope of the research will expedite work, challenges in obtaining essential source material will complicate it. It may be necessary, for example, to visit Hudson's Bay Company archives in Winnipeg. Given these challenges, this project will require approximately three months to complete, with an estimated two weeks travel to Winnipeg.

⁷² Geoffrey L. Buckley, "Desertification of the Camp Creek Drainage in Central Oregon," *Yearbook of the Association of Pacific Coast Geographers* 55 (1993): 97-126.

Steamboats and Railroads

Problem Statement

This project would attempt to quantify the impact that steamboats may have had on the middle river region of the Columbia Gorge—that is, between the Cascades and The Dalles. Steamboats were the principal means of travel on the Columbia River from their introduction in about 1855 until they were superseded by the railroad in the 1880s. During this period large numbers of people and goods began moving into eastern Oregon and Washington, attracted by the gold discoveries in eastern Washington, Idaho, and eastern Oregon. Even after the gold began to play out by the late 1860s, the rapid growth of ranching and agriculture throughout much of the region maintained a steady flow of traffic on the river. This traffic required a large fleet of riverboats, all of which burned wood for fuel. Most of this was obtained locally, and steamboats consumed enormous quantities of it—one source claimed that forty cords were burned on a single journey. Oak makes an exceptionally good fuel, burning very hot, and is relatively common along both shores of the river between the Cascades and The Dalles. It is reasonable to assume, therefore, that it was used to fire the steamboat boilers. This is supported by one 1867 photograph showing stacked cords of oak at the Oregon Steam Navigation Company's wharfs at The Dalles.

It should be possible to estimate how much wood was cut to supply the steamboats from the number of boats operating on the river during this period and the amount of fuel each one needed. This can be determined from existing records. These records may not distinguish how much oak was burned versus other species—Ponderosa pine was commonly used—but they should provide a sense for the scale of the overall impact to near-shore oak woodland as well as its timing.

Early railroad locomotives also burned wood for fuel, and short lines such as The Dalles-Celilo Portage Railway (1863-1880) probably relied on local sources including oak. Railroad records should also be consulted in order to estimate their contribution to the overall impact on oak woodland. Eventually coal, and later oil, were adopted by the railroads as fuel, eliminating the demand for wood. Since Garry oak had little other economic value (except as firewood for home

consumption), this transition may be reflected in the emergence of single-aged stands after large-scale harvesting for transportation purposes ceased.

Research Plan

Most of the primary sources needed for this study should be available locally. The Oregon Steam Navigation Company, which monopolized steamboat service on the Columbia River during its heyday, was based in Portland, and its records, as well as those of its principal directors, all reside in local repositories (such as Reed College and the Oregon Historical Society). Much of the primary data relating to steamboat activity on the Columbia River has already been collected and discussed in Randall Mill's useful and well-written *Steamboats on the Columbia*, and his references should be consulted closely. Additional support can probably be obtained through the Portland Maritime Museum (in Portland, OR) and the Columbia River Maritime Museum (in Astoria, OR).

Not all sources for railroad history will be found in local repositories, but support for research on this subject may be obtained from the Pacific Northwest Railroad Archive, located in Burien, WA, and the Pacific Northwest Chapter of the National Railway Historical Society, located in Portland, OR.

How Long

Although challenging, this is a narrowly-defined research question, and most source material is available locally. It should be possible to complete this project in approximately six weeks.

Livestock Grazing

Problem Statement

This project would quantify the extent of early livestock grazing throughout the study area and assess its potential impact on oak habitat. Livestock such as cattle, sheep, and pigs were brought to the Pacific Northwest by the Hudson's Bay Company early in the nineteenth century. (Horses are a separate story, introduced by Indian traders from the south nearly a century earlier.) In the 1830s, cattle were introduced to the east side of the Cascades at Wascopam Mission (and

probably other missions as well), and by the 1850s small herds were being raised in the study area by the earliest Euro-American settlers. Other livestock had probably been introduced by this time as well. Demand for meat with the gold rushes of the 1860s stimulated interest in livestock raising and led to the rapid growth of herds, especially cattle. This was the first major industry to develop east of the Cascades. Demand for wool led to even greater growth in sheep raising. The environmental effects of introducing such large herds of exotic animals were likely very significant, especially when coupled with other recent environmental impacts, such as the widespread eradication of beavers from riparian habitats, but the nature of these effects and their relative intensity may have varied from one place to another. An accurate estimation of how many livestock were present over a given period of time, what kind they were, and how they were distributed is necessary to understand the potential impact of these practices on oak habitat within the study area.

Research Plan

The historical context of livestock grazing in eastern Oregon and Washington is well-represented in published secondary literature.⁷³ These sources—many of which are referenced in this report—should be surveyed and summarized. Quantitative data for livestock numbers and distribution over time will be found in official records such as agricultural census returns and tax assessment rolls. This data may be supplemented with information from local newspapers, farm bureau reports, etc. Finally, biographies of prominent ranchers (e.g., Ben Snipes), personal memoirs and correspondence, and other private papers held in local archives may be consulted.

How Long

A coarse overview of early livestock grazing patterns can be developed in relatively little time using census and tax assessment data. More fine-grained results may be needed, however, to draw useful conclusions about local environmental effects. This will depend on less predictable,

⁷³ For example, Frederick V. Coville, "Sheep-Grazing in the Cascade Forest Reserve in Oregon," in U.S. Senate, 55th Cong., 2d Sess., Doc. 189 (15 March 1898); Kathleen A. Dwire, Bruce A. McIntosh, and J. Boone Kauffman, "Ecological Influences of the Introduction of Livestock on Pacific Northwest Ecosystems," in Dale D. Goble and Paul W. Hirt, eds. *Northwest Lands, Northwest Peoples: Readings in Environmental History*. (Seattle: University of Washington Press, 1999); George E. Carter, "The Cattle Industry of Eastern Oregon, 1880-90," *Oregon Historical Quarterly* 67, no. 2 (1966): 139-159; Peter A. Shroyer, "Oregon Sheep, Wool and Woolens Industries," *Oregon Historical Quarterly* 67, no. 2 (1966): 124-138; and Interstate Publishing Company. *An Illustrated History of Klickitat, Yakima and Kittitas Counties; with an Outline of the Early History of the State of Washington*. Chicago, IL: Interstate Publishing Co., 1904, pp. 315, 324-325, and 335.

and possibly less accessible, source material. Allowing for these challenges, it may be possible to complete this project, or a meaningful portion of it, in approximately three months.

Other Areas

Further research may reveal additional historical activities that deserve study because of their impact on oaks and oak habitat. The following areas are mentioned in passing as potentially significant. Others may become evident with time:

Logging. Within the study area, most industrial logging was confined to Ponderosa pine (with the exception of fuel wood harvesting during the steamboat era). Since Ponderosa pine and Garry oak intermingle at lower elevations, the pine harvest may have had some effect on oak populations and habitat. In mesic oak woodlands in the western extent of the study area, the active replacement of oak with more commercially-valuable conifer species may have impacted the extent and condition of oak woodlands as well.

Agriculture. Farming has a profound impact on the land it directly affects, completely replacing native plant communities with exotic ones. Woodland and forest are often cut to facilitate agricultural development. During the early period of Euro-American settlement in the study area, these impacts were limited to the handful of acres a homesteader was able to plow. Where agriculture evolved to a more industrial scale, as in the Yakima Valley, it had more far-reaching impacts, especially after irrigation was introduced, affecting hydrologic processes over a wide area.

CONCLUSION

This preliminary report is intended to be a foundation for further study. It provides historical context for understanding the early period of Euro-American exploration and settlement of the study area. During this period, Euro-Americans encountered a landscape that was predominantly natural, though influenced in important ways by long-standing Native American land use practices. By the end of the period, Euro-American immigrants had introduced new practices that were beginning to significantly transform this landscape. Understanding the nature of these

practices, and the extent of their potential impact on oak woodland, is the object of the next phase of research, outlined in "Proposals for Further Study." This research would begin by assembling observations of the landscape prior to historic change in order to establish a baseline description of that landscape, then move on to collect information about the factors most likely to have contributed to those changes—modified fire regime, removal of a keystone species (beaver), large-scale harvesting of timber for fuel, and livestock grazing. All of these further studies rely on primary documents as much as possible to provide first-hand accounts of the landscape and the historic activities that affected it. A comprehensive survey and assessment of these factors, combined with the historical overview developed in the present report, would conclude this study up through the beginning of the twentieth century. (If desired, this study might continue in a second part that would extend the historic context from the end of the early settlement period up through the subsequent century when large-scale development and population growth resulted in even greater impacts to the study area. The same research model would be used, beginning with a broad historic overview from which proposals for fine-grained investigations of primary documents would be developed.)

APPENDICES: PRIMARY DOCUMENTS

[See separate attachment]

APPENDIX A: PRIMARY DOCUMENTS BY CHAPTER

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- A2. Early Encounters
- A3. The Fur Trade Era
- A4. Religious Missions
- A5. The Military, etc.
- A6. Travel & Circulation
- A7. The Dalles and Wasco County
- A8. The Warm Springs Indian Reservation
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- A10. The Yakima and Kittitas Valleys
- A11. The Yakama Indian Reservation

APPENDIX B: PRIMARY DOCUMENTS BY SUBJECT

- B1. Fire
- B2. Beavers
- B3. Steamboats and Railroads
- B4. Livestock Grazing

APPENDICES: PRIMARY DOCUMENTS

This document accompanies "Landscape History of Oregon White Oak Woodland East of the Cascades: A Preliminary Study with Proposals for Further Research," prepared by Timothy Babalis for Columbia Land Trust, 15 January 2019.

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APPENDIX A

PRIMARY DOCUMENTS BY CHAPTER

This appendix is meant to be dynamic, growing and changing as new information is found and added to it. It reproduces the organization of the "Landscape History" report, serving as a place to put primary data that supports that document. Permissions have not been obtained for the reproduction of images and narrative excerpts in this appendix. Fair use allows reproduction for research purposes, as in this instance, but not for publication. Where copyrights exist, copyright owners must be consulted prior to publication. In all cases, source repositories should be credited.

A1. Indigenous Cultures

* * *

A2. Early Encounters

Meriwether Lewis & William Clark (1805-1806)

Lewis and Clark and the Corps of Discovery provide the earliest documented description of the study area by Euro-Americans. The excerpts here are from the Nebraska edition, edited by Gary Moulton.¹

On 21 October 1805, Lewis & Clark, descending the Columbia River in canoes, neared the eastern boundary of the study area. There were no trees in the country through which they had been passing, and the expedition had been eating cold food for days owing to the lack of wood for camp fires. Only willow could be found, and even this was scarce. When they reached the confluence of the John Day River, they came upon the first indication that the country might soon be changing. Here they met Indians who traded with villages farther down river in the Columbia Gorge. "We got from those people a few pounded rotes fish and Acorns of the white oakes, those Acorns they make use of as food [raw & roasted], and inform us they procure them of the natives who live near the falls below [,] which place the all discribe by the term Timm..." Timm was the upper Chinookan (kiksht) word for a falls, and here meant Celilo Falls, which the Corps of Discovery would soon encounter. The acorn meal that the Corps members enjoyed was an early indication that they were approaching the study area. It is also suggest that oaks played a role in the local diet. Their importance, however, may have been largely seasonal, since acorns would have been abundant at that time of year.

On the following day (22 October), the expedition reached the confluence of the Deschutes River, which Clark called Towarnihooks—based on his understanding of the Indian name. Clark observed that most of the river people the expedition encountered thought of the Deschutes simply as "the river of their enemy," that is, the river of the northern Paiute, with whom the local river people were at war. Lewis and Clark noted that most of the numerous river people were then residing on the northern shore of the Columbia and explained that this was due to the Paiutes' ready access to the southern shore. Clark also described, in great detail, the process of preserving the salmon which had recently been harvested from the river. This complex process, he was informed, could keep the salmon "sound and sweet" for several years. Clark was astounded by the quantities of salmon that were thus preserved in immense stacks at the Indian processing sites. The processed salmon was traded by the river people to Indians and Europeans throughout the region.

A few miles farther downriver, the expedition approached Celilo Falls. They left their boats to reconnoiter. "we landed and walked down accompanied by an old man to view the falls, and the best rout for to make a portage which we Soon discovered was much nearest on the Stard. Side [starboard side. In this case, the northern shore of the river], and the distance 1200 yards one third of the way on a rock, about 200 yards over loose Sand collected in a hollar blown by the winds from the bottoms below which was disagreeable to pass, as it was Steep and loose. at the lower part of those rapids we arrived at 5 Large Lodges of natives drying and prepareing fish for market[. T]hey gave us Philberts [hazelnuts], and berries to eate[. W]e returned[,] dropped down to the head of the rapids and took every article except the Canoes across the portage where I had formed a camp on ellegable Situation for the protection of

¹ Gary E. Moulton, ed. *The Definitive Journals of Lewis & Clark: Through the Rockies to the Cascades: Volume 5, July 28 - November 1, 1805* (Lincoln: University of Nebraska Press, 1988), pp. 314-381.

our Stores from Theft, which we were more fearfull of than their arrows. we despatched two men to examine the river on the opposit Side, and reported that the Canoes could be taken down a narrow Chanel on the opposit Side after a Short portage at the head of the falls, at which place the Indians take over their Canoes. Indians assisted us oer the portage with our heavy articles on their horses[. T]waters is divided into Several arrow chanel which pass through a hard black rock forming Islands of rocks at this Stage of the water[. O]n those Islands of rocks as well as at and about their Lodges I observe great numbers of Stacks of pounded Salmon neetly preserved in the following manner..." *Clark goes on to describe in detail how the Indians preserved and stored their salmon.*



Fig. A2.1. View of Celilo Falls from below, ca. 1880. Photograph by Benjamin Gifford. When the Corps of Discovery first encountered Celilo Falls in late October, fishing had ended for the season, but the falls would have looked very similar to this scene from nearly eighty years later.²

After portaging around Celilo Falls, the expedition continued downriver to the head of The Dalles, where the river is confined between narrow bluffs of volcanic basalt, the Short Narrows followed by the Long Narrows. (Both are now inundated by The Dalles dam.) Even before seeing these rapids, they could hear them in the distance. "I heard a great roreing. I landed at the Lodges and the natives went with me to the top of this rock which makes from the Stard. Side; from the top of which I could See the dificulities we had to pass for Several miles below; at this place the water of this great river is compressed into a Chanel between two rocks not exceeding forty five yards wide and continues this width for about 2 mles when it is again intersepted by rocks. This obstruction in the river accounts for the water in high floods riseing to Such a hite at the last falls [Celilo Falls]. The whole of the Current of this great river must at all Stages pass thro' this narrow chanel of 45 yards wide. as the portage of our canoes over this high rock would be impossible with our Strength, and the only danger in passing thro those narrows was the whorls and Swills arriseing from the Compression of the water, and which I thought (as also our principal watermen Peter Crusat) by good Stearing we could pass down Safe, accordingly I deturmined to pass through this place notwithstanding the horrid appearance of this agitated gut Swelling, boiling & whorling in every direction (which from the top of the rock did not appear as bad as when I was in it; however we passed Safe to the astonishment of all the Inds. of the last Lodges who viewed us from the top of the rock." [Moulton (1988), pp. 331-333]

² Columbia Gorge Discovery Center Photo Archive (WCPA 44-16). Copy available through online digital collections: <https://www.gorgediscovery.org/discover/area-history-research/photo-archive>.



Fig. A2.2. Looking southwest (downriver) from the head of the Dalles through the Long Narrows, ca. 1867. Photograph by Carleton E. Watkins. Although this photograph was taken in 1867, it shows the Dalles of the Columbia much as it would have appeared to the Corps of Discovery six decades earlier. No modification of the river had yet been made.³

Friday, 25 October 1805.

After successfully navigating the Long Narrows on their canoes (and passing great numbers of seals both above and below these rapids), the expedition reached calm water and found a campsite at the mouth of Mill Creek. Clark wrote in his journal, "We came too, under a high point of rocks on the Lard. side [larboard or left. In this case, the southern shore of the river] below a creek of 20 yards wide and much water[. As it was necesssary to make Some Selestial observations we formed our Camp on the top of a high of rocks, which forms a kind of fortification in the Point between the river & Creek, with a boat guard[. T]his Situation we Concieve well Calculated for defence, and Convenient to hunt under the foot of the mountian to the West & S.W. where timber of different kinds grows, and appears to be handsom Coverts for the Deer, in oke woods[.] Sent out hunters to examine for game ... This little Creek heads in the range of mountains which run S S W & N W for a long distance on which is Scattering pine white Oake &c. The Pinical of the round topped mountain which we Saw a Short distance below the forks of this river is S. 43° W. of us and abt 37 miles[. I]t is at this time topped with Snow[. W]e called this the falls mountain or Timm mountain. [Mount Hood]. The Face of the Countrey, on both Side of the river above and about the falls, is Steep rugged and rocky open and contain but a Small preportion of erbage, no timber a few bushes excepted. ... at the mouth of this creek Saw Some beaver Sign, and a Small wolf in a Snare Set in the willows. ..." [Moulton (1988), pp. 339-340]

The creek where they landed is Mill Creek, named by the expedition Que-nett Creek. Lewis and Clark would call this campsite "Fort Rock Camp" for its naturally-defensible character. They would stay in the same place on their

³ Carleton E. Watkins, "Mt. Hood from the Head of the Dalles" (O 39), 1867 [Identifier: bb000032], Oregon Historical Society, Carleton E. Watkins photographs, 1861-1885; Org. Lot 93; OrHi 21646. Copy available through online digital collections: <https://digitalcollections.ohs.org>

return journey the following April. This site is not far from where Daniel Lee and Henry Perkins would establish Wascopam Mission in 1838, also on Mill Creek.

On the following day, as the expedition continued down the river, Clark wrote, "Great numbers of white Crain flying in different Directions verry high— The river rose 8 inches to day from what cause I cannot Say certainly, as the tides cannot effect the river here as there is a falls below[.] I conjecture that the rise is owing to the winds which has Set up the river for 24 hours past. our hunters inform that the country back is broken, Stoney and thinly timbered with pine and White Oake. They saw Elk & Bear Sign in the mountains. ..." [Moulton (1988), p. 343]

On 29 October, the expedition continued downriver past the Klickitat to a few miles below the White Salmon River. Describing the country just upstream of the Klickitat River, Clark wrote, "the mountains are high on each Side, containing Scattering pine white oake & under groth, hill Sides Steep and rocky; at 4 miles lower we observed a Small river [Klickitat] falling in with great rapidity on the Stard. Side [Starboard—the right hand or northern shore] below which is a village of 11 houses[.] H]ere we landed to Smoke a pipe with the natives and examine the mouth of the river, which I found to be 60 yards wide rapid and deep, The inhabitants of the village are friendly and Chearfull; those people inform us [.] also those at the last village[.] that this little river is long and full of falls, no Salmon pass up it, it runs from N.N.E. that ten nations live on this river and its waters, on buries [berries], and what game they Can kill with their Bow & arrows." [Moulton (1988), p. 351]

After trading with the inhabitants of this village for provisions, the expedition proceeded on, and Clark continued: "The Country on each side begin to be thicker timbered with Pine and low white Oake; verry rocky and broken. passed three large rocks in The river. the middle rock is large long and has Several Squar vaults on it. we call this roceky Island the Sepulchar— The last river we passed [Klickitat] we Shall Call the Cataract River from the number of falls which the Indians say is on it— passed 2 Lodges of Indians a Short distance below the Sepulchar Island on the Stard. Side river wide[.] A]t 4 mile passed 2 houses on the Stard. Side, Six miles lower passed 4 houses above the mouth of a Small river 40 yards wide on the Lard. Side. [Hood River] a thick timbered bottom above & back of those houses; those are the first houses which we have Seen on the South Side of the Columbia River, (and the axess to those difiue) for fear of the approach of their common enemies the Snake [northern Paiute] Indians. passed 14 houses on the Std. Side Scattered on the bank— from the mouth of this little river which we shall Call Labeasche River [Hood River], the falls mountain [Mount Hood] is South and the top is covered with Snow. one mile below pass the mouth of a large rapid Stream on the Stard. Side, opposit to a large Sand bar [White Salmon River] in this creek the Indians above take their fish[.] H]ere we Saw Several canoes, which induced us to call this Canoe Creek[.] I]t is 28 yards wide[.] A]bout 4 miles lower and below the Sand bar is a butifull cascade falling over a rock of about 100 feet[.] A] Short distance lower passed 4 Indian houses on the Lard. Side in a timbered bottom[.] A] fiew miles further we came too at 3 houses on Stard. Side, back of which is a pond in which I Saw Great numbers of Small Swan. ... Here the mountains are high on each Side, those to the Lard. Side has Some Snow on them at this time, more timber than above [i.e., upstream] and of greater variety." [Moulton (1988), pp. 352-353] From this point, the expedition moves beyond the study area.

A3. The Fur Trade Era

* * *

A4. Religious Missions

Henry Perkins (1838)

The following is an excerpt from Henry Perkins' description of the site of Wascopam Mission, located on Mill Creek at the western end of the present city of The Dalles. This account was written the day of his arrival there on 21 March 1838 in a letter to his wife Elvira, who remained in the Willamette Valley. The quoted passage is taken from Robert Boyd. I have used the fuller version of the document based on the 1952 version of Henry Perkins' granddaughter, Grace Albee (as explained in Boyd's Introduction).⁴

⁴ Robert Boyd, *People of The Dalles: The Indians of Wascopam Mission* (Lincoln: University of Nebraska Press, 1996).

Perkins' account begins with his party's departure from Fort Vancouver on Saturday evening (17 March 1838). I take it up at the point where he enters the study area somewhere near the present western boundary of Klickitat County. "This morning [Wednesday, 21 March 1838] we had to ply our paddles, there being no wind, and we were threatened by rain, but after a while the clouds broke away, and we had a good day. The land we passed to-day has not been so barren as formerly. It has been very broken, but covered with verdure, just high enough for grazing. We passed one beautiful spot by the name of Claticut [Klickitat] on the north side of the river where was quite a village of Indians and plenty of horses grazing. It only wanted a few English houses to make it an enchanting spot. As we sailed along the country became more pleasant, and Indian encampments more numerous. We at length arrived at this place, the name of which I have placed at the head of this letter [Wascopam Village].

"We are encamped by the side of a good stream of water [Mill Creek], which is large enough for a good mill or two, and which divides in two a good intervalle, extending from here to the Dalles [the Long Narrows], about one mile, and down the river about the same, and varying from half a mile to a quarter in width, according to the winding of the river, and with soil like your richest prairies.

"A few rods distant, on the stream before mentioned, is Wascopam village, containing fifteen good houses, built of boards and mats, the best I have seen, containing, I suppose, from a hundred to a hundred and fifty inhabitants, who are permanent residents. They are good looking, and the adults very well clothed for Indians. All along the prairie the Indians congregate in the salmon season from other parts, so we shall have an abundance of company. They have plenty of dried salmon, and catch, at present plenty of excellent trout in the stream, besides. ...

"Just above the intervalle where we and the Indians are there is a fine table land which is about a hundred feet high, and extends from the stream of water to the Dalles, parallel with the intervalle, and extending to the hills which bound it on the east, from a hundred to a hundred and fifty rods, probably of very rich soil. On the border which overlooks the low intervalle and river, we have concluded to build. This tableland is bounded on the back by hills resembling those opposite the mission house at Willamette, only some of them are well wooded with oak and pine. Pine on their tops, and oak on their sides and in the vales. About a hundred and fifty rods from where we intend to build there is the finest grove of oaks I have seen in the country. I mean their picturesque beauty. There are, I should think, some five hundred of them, in fine rich soil, where the grass is three or four feet high, and the ground is covered with acorns, which the Indians eat or trade. This grove is at the extreme end of the wooded land. All beyond is grazing land, which at present is beautifully green. ..."

Perkins and his companions apparently spent the following day (Thursday) exploring the land around Wascopam village, traveling up the valley down which Mill Creek flowed. His letter continued that night, "We have returned from our excursion, and are prepared to speak of the country for several miles around. We traced the stream of water which flows up by us among the hills, and find it comes from Mt. Hood. From the hills above us we have a full view of that mountain, and also on the north side of the Columbia of Mt. Helena [Saint Helens], and also a good view of the country north and east for about fifty miles. The country back of us towards Mt. Hood is well wooded with pine and oak equally intermixed. Mt. Hood lies to the southwest a distance of about thirty or forty miles, in a direct line to Willamette.

"From a view of the country I should think that the journey might be made by land very easily in three days with horses. The country abounds with grass and the horses are very fat. If we only had oxen we could begin to plough at once, but as it is we can make only a small garden, which we intend to commence at once, as our seed was wet by the filling of the canoes, and we fear it will spoil if not planted.

"We shall always have wood enough at hand for building, fencing and burning; the pine, however, is nearly all small, from a foot to fifteen inches in diameter, the oak the same."

Comments

- *Perkins found the country increasingly more pleasant as he left the densely-forested west side and traveled farther east. Perkins was traveling during the early spring, when the soil was still moist and new grass was emerging. His reaction might have been very different a few months later when the landscape would have appeared brown and sere.*

- While still traveling upriver, Perkins passed a party of Indians—presumably Wascopam—headed to Vancouver with a load of dried salmon and acorns to trade. After reaching Mill Creek, Perkins again mentions acorns, which the Indians harvest for food and trade. Oaks were, then, an important resource for the Indians, though this may have been only a local phenomenon.

- Oak and pine (*Ponderosa pine*) are intermingled throughout the country Perkins describes. Note his observation about the diminutive size of the pines and oak in the vicinity of the future mission. What accounted for this?

Thomas Jefferson Farnham (1839)

Passing down the Columbia Gorge in 1839 with a group of men from Peoria, Illinois, Farnham made the following observations of Wascopam Mission at The Dalles.⁵ His description largely support Perkins' own account of this landscape. Farnham was given to florid language and had strong views regarding Anglo-American superiority (not uncommon for the time). "I spent a week at the Dalles mission, eating salmon and growing fat; an event that had not lately occurred in the republic of the members of my mortal confederacy [*i.e., his traveling companions from Peoria*] ...

"Messrs. Lee and Perkins were formerly connected with the mission on the Willamette. Eighteen months before I had the happiness of enjoying their hospitality, they came to this spot with axes on their shoulders, felled trees, ploughed, fenced, and planted 20 acres of land with their own hands, and erected these habitations of civilization and christianity on the bosom of the howling wilderness. Their premises are situated on elevated ground, about a mile southwest from the river. Immediately back is a grove of small white oaks and yellow pines; a little north, is a sweet spring bursting from a ledge of rocks which supplies water for house use, and moistens about an acre of rich soil. About a mile to the south, are two or three hundred acres of fine land, with groves of oaks around, and an abundant supply of excellent water. Here it was the intention of the mission to open a farm under the care of a layman from the States. A mile and a half to the north, is a tract of about 200 acres, susceptible of being plentifully irrigated by a number of large streams that pour down upon it from the western mountains. Here, too, they intended to locate laymen to open farms, and extract from the idle earth the means of feeding themselves, the Indians, and the wayworn white man from the burnt solitudes of the mountains. No location, not even the sacred precincts of St. Bernard, on the snows of the Alps, could be better chosen for the operations of a holy benevolence. The Indians from many quarters flock to the Dalles and the Shutes [*Celilo Falls*] in the spring, and autumn and winter to purchase salmon; the commercial movements between the States and the Pacific, will pass their door; and there, in after days, the sturdy emigrants from the States will stop, as did the pilgrims on Plymouth rock, to give grateful praise to Him who stood forth in their aid, not indeed while struggling on the foamy billow, but on the burning plain and the icy cliff, and in the deadly turmoil of Indian battles on the way, and seek food and rest for their emaciated frames, before entering the woody glens and flowering everglades of Lower Oregon.

"A saw-mill, grist-mill, and other machinery necessary to carry out a liberal plan of operations, are in contemplation. The fruit of the oak, it is supposed, will support 1,000 hogs from the middle of August to the middle of April. The products of the arable soil, will suffice to make that number into marketable pork. And as the grasses and other vegetation grow there during the winter months, twenty-five or thirty square miles of pasturage around about, will enable them to raise, at a trifling expense, immense numbers of sheep, horses, and cattle. Five acres of ground cultivated in 1839, produced 25 bushels of the small grains, 75 bushels of potatoes, and considerable quantities of other vegetables. This was an experiment only on soil not irrigated. Gentlemen suppose it capable of producing double that amount, if irrigated. The season, too, was unusually dry."

Comments

- Note the reference to swine consuming the "fruit of the oaks" (mast or acorns). Allowing swine to roam freely was common practice at that time and may have had a significant impact on the ability of native oaks to recruit new growth, particularly as settlement expanded and the number of free-ranging swine increased.

⁵ Thomas J. Farnham, *Travels in the Great Western Prairies: The Anahuac and Rocky Mountains, and in the Oregon Territory* (New York: Greeley & McElrath, 1843), pp. 161-162.

- The allusion to "immense numbers of sheep, horses, and cattle" would prove prophetic.
- Note the observations about productivity of the soil. This was a frequent comment by early Euro-American settlers throughout much of the American west. Where it was not simply an exaggeration, it reflected the accumulated fertility of the untilled native soils. This fertility often allowed the first generation of settlers to derive enormous wealth from the land before it was exhausted.

Mr. Drayton, U.S. Exploring Expedition (1841)

In late June of 1841, Mr. Drayton of Lt. Charles Wilkes' U.S. Exploring Expedition joined Peter Skene Ogden of the Hudson's Bay Company on a journey up the Columbia River from Fort Vancouver.⁶ Drayton planned to continue as far as Walla Walla, making observations of the country and native peoples before returning to Vancouver. Ogden would continue east. On their way up the river, the party stopped at The Dalles, visiting Wascopam Mission, and Drayton made the following observations. This was probably the high point of the mission, which would go into decline two years later following the departure of both Henry Perkins and Daniel Lee. "At this station there are three families, those of the Rev. Mr. Lee, Mr. Perkins, and a lay member, who is a farmer. Their reception of Mr. Drayton was exceedingly kind.

"The mission consists of two log and board houses, hewn, sawed, and built by themselves, with a small barn, and several out-houses. The buildings are situated on high ground, among scattered oaks, and immediately in the rear is an extensive wood of oaks and pines, with numerous sharp and jagged knolls and obelisk-looking pillars of conglomerate, interspersed among basaltic rocks: in front is an alluvial plain, having a gradual descent towards the river, and extending to the right and left. This contains about two thousand acres of good land, well supplied with springs, with Little river [Mill Creek], and other smaller streams passing through it. The soil is made up of decomposed conglomerate, and in places shows a deep black loam. Around this tract the land is high, devoid of moisture, and covered with basaltic rocks or sand.

"They here raise wheat and potatoes by irrigation: the latter grow in great perfection, and wheat yields twenty to thirty bushels to the acre. They had just gathered a crop of two hundred bushels from land which they irrigate by means of several fine streams near their houses. They might raise much more, if they were disposed. ..." [Wilkes (1843), pp. 408-409]

Mr. Drayton went on to describe in some detail the Wasco Indians of the region but also included some description of the surrounding landscape. "From the high hills on the southern bank of the river, there is an extensive view of the country to the south. The distant part of this prospect was made up of rolling, barren, and arid hills. These hills, as well as the country nearer at hand, were covered with a natural hay or bunch-grass, which affords very nutritious food for cattle. ..." [Wilkes (1843), p. 412]

"The country about the Dalles is broken, and the missionaries report that this is the case for some miles around. There are, however, also some plains and table-lands, which are considered as very valuable, being well watered with springs and small streams; excellent for grazing, and well supplied with timber—oak and pine. The soil varies in quality, and portions of it are very rich. Garden vegetables succeed, but require irrigation. Potatoes also must be watered, by which mode of culture they succeed well. Corn and peas can be raised in sufficient quantities. Wheat produces about twenty-five bushels to the acre: this is not, however, on the best land. ..." [Wilkes (1843), p. 413]

"After passing the Dalles, an entirely new description of country is entered, for the line of woods extends no farther. The last tree stands on the south side of the river, and is name Ogden's Tree on our map: it is about six miles above the Dalles. The woods terminate at about the same distance from the coast in all parts of this region south of the parallel of 48° N." [Wilkes (1843), p. 414] See Fig. A5.2 below for Ogden's Tree. What species of tree this was is never revealed.

⁶ See section A5 below for the Wilkes Expedition. Excerpts are taken from: Charles Wilkes, *Narrative of the United States Exploring Expedition. During the Years 1838, 1839, 1840, 1841, 1842; Vol. IV* (Philadelphia, Penn.: C. Sherman, 1844), pp. 408-414. Copy at Oregon Historical Society Research Library.

Comments

• Mr. Drayton's account adds little to earlier accounts of the landscape around The Dalles but is useful for confirming those accounts. He also describes extensive oak and pine woodland in the area. Note his observation that the surrounding hills were covered in bunch grass.

A5. The Military, etc.

Charles Wilkes, U.S. Exploring Expedition (1841)

On 19 May 1841, Lt. Johnson of the Wilkes Expedition departed from the Hudson's Bay Company's Fort Nisqually (one of the farms operated by its subsidiary, the Puget's Sound Agricultural Company), located at the southern end of Puget Sound.⁷ Lt. Johnson, with a small party of fellow sailors and guides, was headed east over the Cascades on a reconnaissance expedition. He followed an old Indian trail along the Smalocho River (the Greenwater and White Rivers) through Naches Pass and thence across the Wenas Valley to the Yakima River. As they approached the summit from the west, the expedition came upon a conspicuous peak known as La Tete (for a rock formation that resembled a man's head). Lt. Johnson noted that, "This mountain [La Tete] was entirely destitute of wood; but, having been burnt over, was found strewn with huge charred trunks, and the whole ground covered with ashes. ... The country around seemed one continued series of hills, and like La Tete had suffered from the fire. According to the natives, although the wood on the mountains was destroyed many years since, yet it was still observed to be on fire, in some places, about two years ago." Other mountains in the vicinity were similarly fire-scarred. As these observations suggest, large fires in this heavily-forested landscape were capable of burning for many years and may have carried great distances, possibly even to the east side if summer winds pushed them over the ridge.

Soon after passing La Tete, the expedition reached the summit at Naches Pass, where the character of the forest changes markedly. "On the western ascent of this mountain, the pines were scrubby; but at the summit, which was a plain, about a mile in length by half a mile wide, they were straight and towering, about eighty feet in height, without any limbs or foliage, except at the top. The distance travelled over the top was about five miles. On descending the east side, the snow was much deeper, and softer, but the horses managed to get along well, and without accident. ..."

"The banks of the small streams on the eastern side of the mountain were bordered with the greatest variety of trees and shrubs, consisting of poplars, buckthorn fifty feet high, dogwood thirty to forty feet high, several species of willow, alder, two species of maple, and occasionally a yew. The undergrowth was composed of Hazel, Vaccinium, Gaultheria, and a prickly species of Aralia [devil's club]. The herbaceous shrubs were Goodyera, Neottia, Viola, Claytonia, Corallorrhiza. The latter, however, were not in flower. ..."

The expedition descended the east side along the Naches River, which Johnson called the Spipen. "The country about the Spipen is mountainous and woody, with a narrow strip of meadow-land along its banks. ... On the 30th [of May], they proceeded down the Spipen, making a journey of eighteen miles, and passed another branch of the river [possibly the Tieton, which Johnson referred to as the Shanwappum], the junction of which augmented its size very considerably. Its banks, too, became perpendicular and rocky, with a current flowing between them at the rate of six or seven miles an hour. After the junction, the stream was about one hundred feet broad, and its course was east-southeast...."

"The vegetation on the east side of the mountains was decidedly more advanced than that to the west, and several very interesting species of plants were met with by the botanists, on the banks of the streams: among them were Paeonia brownii, Cypripedium oregonium, Pentstemon, Ipomopsis elegans, and several Compositae, and a very handsome flowering shrub, Purshia tridentata...."

"On the 31st, they continued their route over a rough country, in some places almost impassable for a horse from its steepness, and in others so marshy as to require much caution to prevent being mired...."

⁷ Charles Wilkes, *Narrative of the United States Exploring Expedition. During the Years 1838, 1839, 1840, 1841, 1842; Vol. IV* (Philadelphia, Penn.: C. Sherman, 1844), pp. 449-455. Copy at Oregon Historical Society Research Library.

"During the morning, they met two Indians, who informed them that the chief of the Yakima tribe was a short distance in advance, waiting to meet them, and that he had several horses. At noon they reached a small prairie on the banks of the river, where old Tidas, the chief [father-in-law of Kamiakin], was seated in state to receive Lieutenant Johnson; ... This tribe [the Yakama] subsist chiefly upon salmon and the cammass-root: game is very scarce, and the beaver have all disappeared. The cammass-root is pounded and made into a sort of cake, which is not unpleasant, having a sweetish taste, but it is very dry, although some of the party took a fancy to it."

After bargaining with Tidas for fresh horses, the expedition left the Wenas Valley and headed in a northerly direction, passing out of the study area.



Fig. A5.1. Detail of Charles Wilkes, "Map of the Oregon Territory by the U.S. Ex. Ex.," 1841, showing area along the Columbia River immediately east of the Cascades.⁸ Established trails or routes are indicated by dotted lines. Lt. Johnson's route from Fort Nisqually is not marked but can be followed on this map. Naches Pass lies due east of Fort Nisqually, just north of Mt. Rainier. The Naches River—here marked as the Spigen River—originates on the east side of the pass. The Shanwappum River, which joins the Spigen, is probably the Tieton River. The Cathlamet River is the Klickitat River. Crossing it is the old Klickitat trail. Note the trails leading south from The Dalles. One turns west over the Cascade Mountains to the Willamette Valley settlements, following the route that would later become the Barlow Road. The other continues south along the west side of the Deschutes River. This route would be followed by John Charles Frémont two years later.

⁸ Charles Wilkes, *Atlas. Narrative of the United States Exploring Expedition. During the Years 1838, 1839, 1840, 1841, 1842* (Philadelphia, Penn.: Lea & Blanchard, 1845). [Copy available at the Davies Family Research Library, Oregon Historical Society, Portland, OR.]

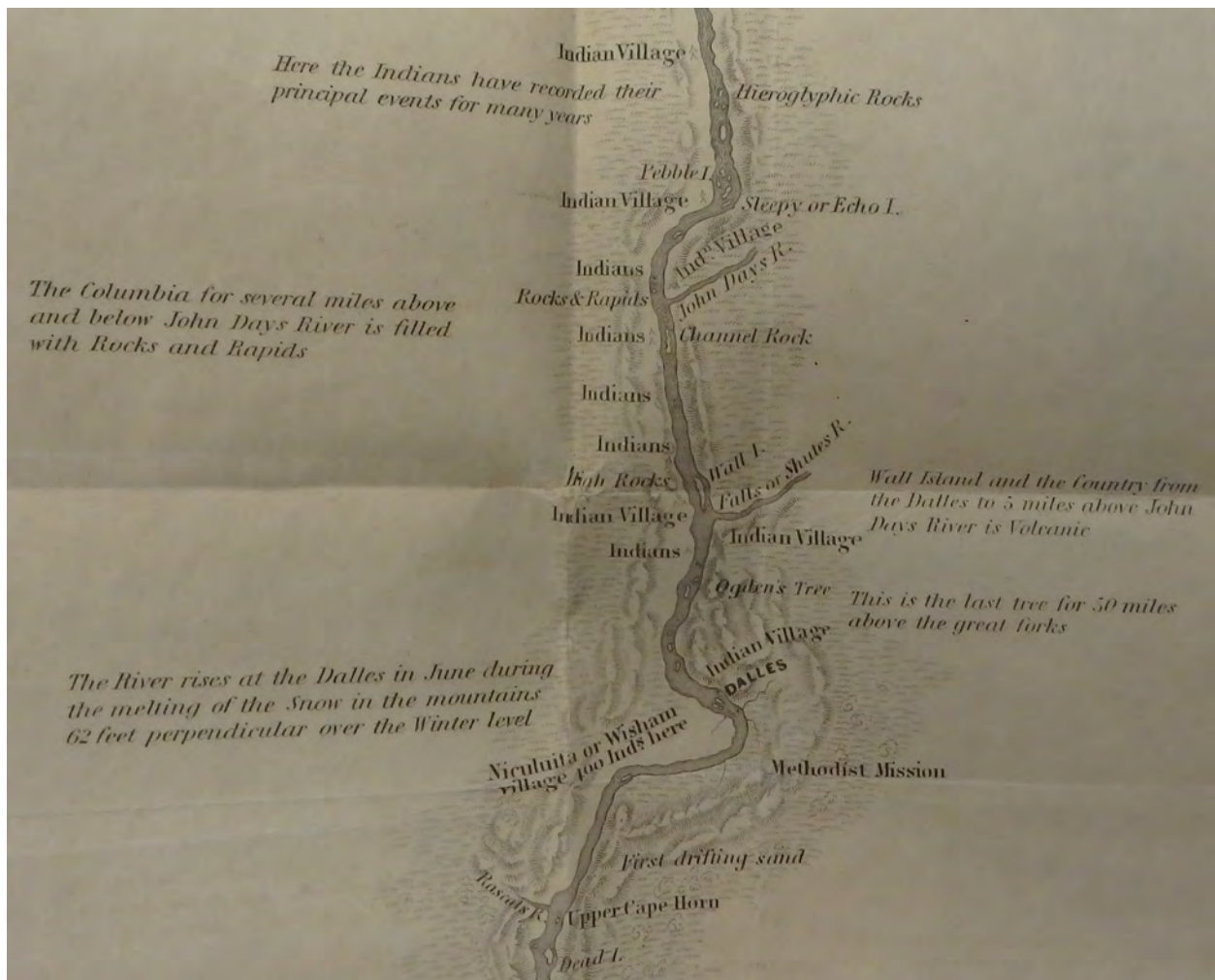


Fig. A5.2. Sidebar detail from Charles Wilkes, "Map of the Oregon Territory by the U.S. Ex. Ex. . . .," 1841.⁹ Among the other details represented is "Ogden's Tree." This was the last tree growing along the Columbia River east of the Cascades. Unfortunately, the Wilkes Narrative does not identify what type of tree it was.

Comments

- This account of Lt. Johnson's expedition over Naches Pass represents one of the earliest Euro-American descriptions of the study area in the Yakima Valley area. Oaks are not mentioned, though other vegetation is described.
- Note the description of fire scars on the west side of the pass. As these observations suggest, large fires in this heavily-forested landscape were capable of burning for many years and may have carried great distances, possibly even to the east side if summer winds pushed them over the ridge.

John Charles Frémont. Second Expedition, Oregon, et al., 1843-44.

The principal purpose of Frémont's second expedition in 1843 was to complete his survey of the Oregon Trail, begun the previous year when he had made it as far as South Pass on the Continental Divide. After reaching The Dalles in early November, he considered his task complete, since the remaining distance to the settlements in western Oregon had already been documented by the Wilkes expedition two years earlier. After a brief excursion

⁹ Wilkes, *Atlas* (1845).

down the Columbia Gorge to Fort Vancouver for supplies, Frémont then headed south from The Dalles, pursuing a secondary—and perhaps wholly personal—interest by visiting the Mexican province of Alta California before returning east to the United States. This detour south resulted in one of the earliest Euro-American descriptions of the southern part of the study area and is reproduced here, along with Frémont's brief description of Wascopam Mission and the Dalles, or narrows, of the Columbia. The account is taken from an edited collection of Frémont's writings published by the University of Illinois Press in 1970.¹⁰

After reaching the Columbia River at Celilo Falls, Frémont and his party approached Wascopam Mission, which they see from a distance, on 4 November 1843. "The road in about half an hour passed near an elevated point, from which we overlooked the valley of the Columbia for many miles, and saw in the distance several houses surrounded by fields, which a chief, who had accompanied us from the village [at Celilo], pointed out to us as the Methodist missionary station." [Jackson and Spence (1970), p. 560]

Continuing in the direction of the mission, the expedition passed alongside the Dalles, or narrows, of the Columbia River. "In a few miles we descended to the river, which we reached at one of its remarkably interesting features, known as the Dalles of the Columbia. The whole volume of the river at this place passed between the walls of a chasm, which has the appearance of having been rent through the basaltic strata which form the valley rock of the region. At the narrowest place we found the breadth, by measurement, 58 yards, and the average height of the walls above the water 25 feet; forming a trough between the rocks—whence the name, probably applied by a Canadian voyageur. The mass of water, in the present low state of the river, passed swiftly between, deep and black, and curled into many small whirlpools and counter currents, but unbroken by foam, and so still that scarcely the sound of a ripple was heard. The rock, for a considerable distance from the river, was worn over a large portion of its surface into circular holes and well-like cavities, by the abrasion of the river, which, at the season of high waters, is spread out over the adjoining bottoms." [Jackson and Spence (1970), p. 560]

From here they came to Wascopam Mission, where most of the expedition would spend the next two and a half weeks. "Two good-looking wooden dwelling houses, and a large school house, with stables, barn, and garden, and large cleared fields between the houses and the river bank, on which are scattered the wooden huts of an Indian village, gave to the valley the cheerful and busy air of civilization, and had in our eyes an appearance of abundant and enviable comfort." [Jackson and Spence (1970), p. 561]

Frémont himself left the majority of his party at Wascopam Mission and continued downriver by canoe, accompanied by a handful of companions and three Indian guides, in order to obtain supplies at the Hudson's Bay Company's Fort Vancouver. He made only cursory observations along the way, since he felt that this landscape had already been sufficiently documented by others (including Charles Wilkes the previous year). He did notice immigrants camped along the shores below the portage of the Cascades, waiting for companions to catch up. These were the stragglers from that year's overland migration on the Oregon Trail, and the beginning of what would become known as the Great Migration.

By the 10th of November, Frémont was on his way back up river, returning to Wascopam Mission on the 18th. After completing preparations, the entire expedition then set out on 25 November. Frémont's intention was to explore the far western edge of the Great Basin down to Klamath Lake (Tlamath, as he spelled it), which had not yet been documented. From there, he would turn east and head back to the United States.

Leaving the mission, the expedition headed south. "We started about noon, when the weather had become disagreeably cold, with flurries of snow. Our friend Mr. Perkins [the Methodist missionary], whose kindness had been active and efficient during our stay, accompanied us several miles on our road; when he bade us farewell, and consigned us to the care of our guides. Ascending to the uplands beyond the southern fork of the Tinanens creek [present day Fifteenmile Creek], we found the snow lying on the ground in frequent patches, although the pasture appeared good and the new short grass was fresh and green. We travelled over high, hilly land, and encamped on a little branch of Tinanens creek [possibly Eightmile Creek], where there were grass and timber. The southern bank was covered with snow, which was scattered over the bottom; and the little creek, its borders lined with ice, had a chilly and wintry look..." [Jackson and Spence (1970), p. 577]

¹⁰ Donald Jackson, and Mary Lee Spence, eds., *The Expeditions of John Charles Frémont: Volume I, Travels from 1838 to 1844* (Urbana: University of Illinois Press, 1970).

The morning of 26 November "was cloudy and misty, and but a few stars visible. During the night water froze in the tents, and at sunrise the thermometer was at 20°. Left camp at 10 o'clock, the road leading along tributaries of the Tinianens, and being, so far, very good. We turned to the right at the fork of the trail, ascending by a steep ascent along a spur to the dividing grounds between this stream and the waters of Fall river. [*The expedition climbs to the top of Tygh Ridge, which divides the watershed of Fifteenmile Creek from that of the Deschutes River, Fremont's Fall River.*] The creeks we had passed were timbered principally with oak and other deciduous trees. Snow lies every where here on the ground, and we had a slight fall during the morning; but towards noon the gray sky yielded to a bright sun. This morning we had a grand view of St. Helens and Regnier: the latter appeared of a conical form, and very lofty, leading the eye far up into the sky. The line of the timbered country is very distinctly marked here, the bare hills making with it a remarkable contrast. The summit of the ridge commanded a fine view of the Taih prairie, and the stream running through it, which is a tributary to the Fall river, the chasm of which is visible to the right. [*Fremont here describes the White River, the chasm through which it descends Mt. Hood, and the Tygh Valley below.*] A steep descent of a mountain hill brought us down into the valley, and we encamped on the stream after dark, guided by the light of fires, which some naked Indians belonging to a village on the opposite side were inkling for us on the bank. This is a large branch [*White River*] of the Fall river. There was a broad band of thick ice some fifteen feet wide on either bank, and the river current is swift and bold. The night was cold and clear, and we made our astronomical observation this evening with the thermometer at 20°...." [Jackson and Spence (1970), pp. 577-578]

The following morning, "Stiletsi and the White Crane, two Indian chiefs who had accompanied us thus far, took their leave, and we resumed our journey at 10 o'clock. We ascended by a steep hill from the river bottom, which is sandy, to a volcanic plain, around which lofty hills sweep in a regular form. It is cut up by gullies of basaltic rock, escarpments of which appear every where in the hills. This plain is called the Taih prairie [*probably Juniper Flat, which forms the southern extension of Tygh Valley*], and is sprinkled with some scattered pines. The country is now far more interesting to a traveller than the route along the Snake and Columbia rivers. To our right we had always the mountains, from the midst of whose dark pine forests the isolated snowy peaks were looking out like giants. They served us for grand beacons to show the rate at which we advanced in our journey. Mount Hood was already becoming an old acquaintance, and, when we ascended the prairie, we obtained a bearing to Mount Jefferson, S. 23° W. The Indian superstition has peopled these lofty peaks with evil spirits, and they have never yet known the tread of a human foot. Sternly drawn against the sky, they look so high and steep, so snowy and rocky, that it would appear almost impossible to climb them; but still a trial would have its attractions for the adventurous traveller. A small trail takes off through the prairie, towards a low point in the range, and perhaps there is here a pass into the Walahmette valley. [*This was, in fact, the route later followed by the Barlow Road.*] Crossing the plain, we descended by a rocky hill into the bed of a tributary [*Nena Creek*] of Fall river, and made an early encampment. The water was in holes, and frozen over, and we were obliged to cut through the ice for the animals to drink. An ox, which was rather troublesome to drive, was killed here for food...." [Jackson and Spence (1970), pp. 578-579]

The following morning, 28 November, as the weather began to snow, "we traversed a broken high country, partly timbered with pine, and about noon crossed a mountainous ridge, in which, from the rock occasionally displayed, the formation consists of compact lava. [*This would be the Mutton Mountains.*] Frequent tracks of elk were visible in the snow. On our right, in the afternoon, a high plain, partially covered with pine, extended about ten miles, to the foot of the Cascade mountains.

"At evening we encamped in a basin narrowly surrounded by rocky hills, after a day's journey of 21 miles. The surrounding rocks are either volcanic products, or highly altered by volcanic action, consisting of quartz and reddish-colored siliceous masses." [Jackson and Spence (1970), p. 579]

[*On 29 November*] "We emerged from the basin, by a narrow pass, upon a considerable branch of Fall river, running to the eastward through a narrow valley. [*This is Warm Springs River, which they have come to a little ways above the present day Kah-Nee-Ta resort.*] The trail, descending this stream, brought us to a locality of hot springs, which were on either bank. Those on the left, which were formed into deep handsome basins, would have been delightful baths, if the outer air had not been so keen, the thermometer in these being at 89°. There were others, on the opposite side, at the foot of an escarpment, in which the temperature of the water was 134°. These waters deposited around the spring a brecciated mass of quartz and feldspar, much of it of a reddish color.

"We crossed the stream here, and ascended again to a high plain, from an elevated point of which we obtained a view of six of the great peaks—Mount Jefferson, followed to the southward by two others of the same class; and succeeding, at a still greater distance to the southward, were three other lower peaks, clustering together in a branch ridge. These, like the great peaks, were snowy masses, secondary only to them; and, from the best examination our time permitted, we are inclined to believe that the range to which they belong is a branch from the great chain which here bears to the westward. The trail during the remainder of the day followed near to the large stream on the left, which was continuously walled in between high rocky banks. We halted for the night on a little bystream." [Jackson and Spence (1970), pp. 579-580]

[*On 30 November*] "Our journey to-day was short. Passing over a high plain, on which were scattered cedars [*junipers*], with frequent beds of volcanic rock in fragments interspersed among the grassy grounds, we arrived suddenly on the verge of the steep and rocky descent to the valley of the stream we had been following, and which here ran directly across our path, emerging from the mountains on the right. You will remark that the country is abundantly watered with large streams, which pour down from the neighboring range.

"These streams are characterized by the narrow and chasm-like valleys in which they run, generally sunk a thousand feet below the plain. At the verge of this plain, they frequently commence in vertical precipices of basaltic rock, and which leave only casual places at which they can be entered by horses. The road across the country, which would otherwise be very good, is rendered impracticable for wagons by these streams. There is another trail among the mountains, usually followed in the summer, which the snows now compelled us to avoid; and I have reason to believe that this, passing nearer the heads of these streams, would afford a much better road." [Jackson and Spence (1970), p. 580] *Fremont here refers to the trail the expedition passed on the 27th November in Tygh Valley, which would later become the Barlow Road.*

Continuing south, the expedition left the boundaries of the study area.

Major Osborne Cross, U.S. Army, Mounted Riflemen (1849)

In 1846, a regiment of mounted riflemen was established by the U.S. Army, under the command of Col. Persifor Smith, to patrol the Oregon Trail. Before the regiment was able to discharge this duty, it was reassigned to fight in the Mexican-American War. Following the conclusion of the war in 1848, the mounted riflemen returned to Jefferson Barracks in St. Louis, where they had originally organized, and began making preparations to march west along the Oregon Trail to the Army's recently-established Columbia Barracks, located at the Hudson's Bay Company's Fort Vancouver, to fulfill their original mission. The regiment, now under the command of Col. William W. Loring, departed in May 1849, arriving at Vancouver the following October. Col. Loring prepared the official report documenting the riflemen's march, but the most extensive account was made by his subordinate officer Major Osborne Cross. The expedition included two artists—George Gibbs, and William Henry Tappan—one or both of whose sketches were made into lithographs and incorporated into the final report. In 1940, the journal of Major Osborne Cross was published by Raymond Settle in one volume with Col. Loring's official report and a short journal by artist George Gibbs. This was reprinted in 1989 by University of Nebraska Press.¹¹

The mounted riflemen entered the study area when they reached The Dalles on 21 September 1849. Here they camped near the old Wascopam Mission (now abandoned) until 2 October. Although Cross described the Narrows of the Columbia, he had little to say about the surrounding landscape, referring instead to the sketches made by the expeditions' artists (copied below). His reticence was, in part, due to fire smoke that obscured visibility. Three days later, after the wind shifted and cleared the smoke away, Cross wrote, "Mount St. Helens was very plainly seen for the first time this morning to the north, though much hidden by mountains in that direction. Since my arrival the smoke has been so dense as to exclude the scenery in the immediate vicinity, but the top of this mountain, rising over the neighboring mountains, could now be plainly seen capped with snow. This view, with that of Mount Hood to the west, the mountains covered with pine around us, and the hills to the east destitute of wood, gave us a new

¹¹ Raymond W. Settle, ed. *The March of the Mounted Riflemen: first United States military expedition to travel the full length of the Oregon Trail from Fort Leavenworth to Fort Vancouver, May to October, 1849: as recorded in the journals of Major Osborne Cross and George Gibbs and the official report of Colonel Loring* (Lincoln: University of Nebraska Press, 1989 [1940]).

picture, much more agreeable than the monotonous scenes so constantly presented to our view on our march. The whole landscape reminded me very often of the scenery in Mexico ..." [Settle (1989), p. 249]



Fig. A5.3. "The Columbia River, Below The Dalles." One of the lithographs included in Col. Loring's report. The drawing shows a clear sky with Mt. Saint Helens visible in the distance and seems to illustrate the scene described by Maj. Osborne Cross on the morning of 24 September after the winds shifted and blew away the fire smoke. The trees appear to be pines. Note the diminutive size of those on the foreground plain, as indicated by the figure standing near them.¹²

The expedition divided into three groups at The Dalles before continuing west. About one hundred men followed the trail along the northern shore of the Columbia, traveling quickly and reaching Vancouver first. The expedition's baggage was sent down the Columbia by boat and arrived later. The bulk of the expedition, with livestock and wagons, traveled over the Cascades, apparently following the Barlow Road. Col. Loring accompanied the last group, and his report includes a brief description of this passage: "In crossing the Cascade mountains every exertion was made to get through safely. It will be recollected that this is the most difficult range of the whole route. Besides the natural obstructions of a mountainous road, only passed with great labor, the mountains had been for days enveloped in a dense smoke. Fires were still burning, falling trees [were] blocking up the road and impeding the movement of the train. In consequence of the density of the smoke and scarcity of pasturage (there being little or no grass for four days) numbers of the animals were lost." [Settle (1989), pp. 340-341.]

Major Osborne Cross accompanied the party that descended the Columbia River by boat with the expedition's baggage. After leaving the old mission at The Dalles on 2 October, they crossed to the north side of the river and began their descent. Cross described the landscape a short distance below The Dalles: "The bold mountain scenery soon commenced on both sides of the river, rising gradually in some places from the water's edge. [It was] covered with pine and capped with scrub oak only fit for fuel. Other parts of the mountains presented steep, rugged cliffs, sometimes rising perpendicularly from the water and in many places broken into rugged and steep cliffs ... the ravines or deep gorges run far back in the mountains and are covered with pine and oak. The scenery, altogether thus far, was very picturesque." [Settle (1989), pp. 254-255]

Nearing the mouth of the Klickitat River, Cross commented, "I may remark here that since starting from the Dalles the timber on both sides of the river has appeared very small, with but few exceptions." [Settle (1989), p. 255]

¹² Copied from Settle (1989), p. 246.



Fig. A5.4. "The Columbia River, Near The Dalles." One of the lithographs included in Col. Loring's report. The scrub-like trees appear to be oaks, though the artist has not provided enough detail to be certain. The distant mountains are obscured by what may be fire smoke, based on the description in the accompanying text.¹³

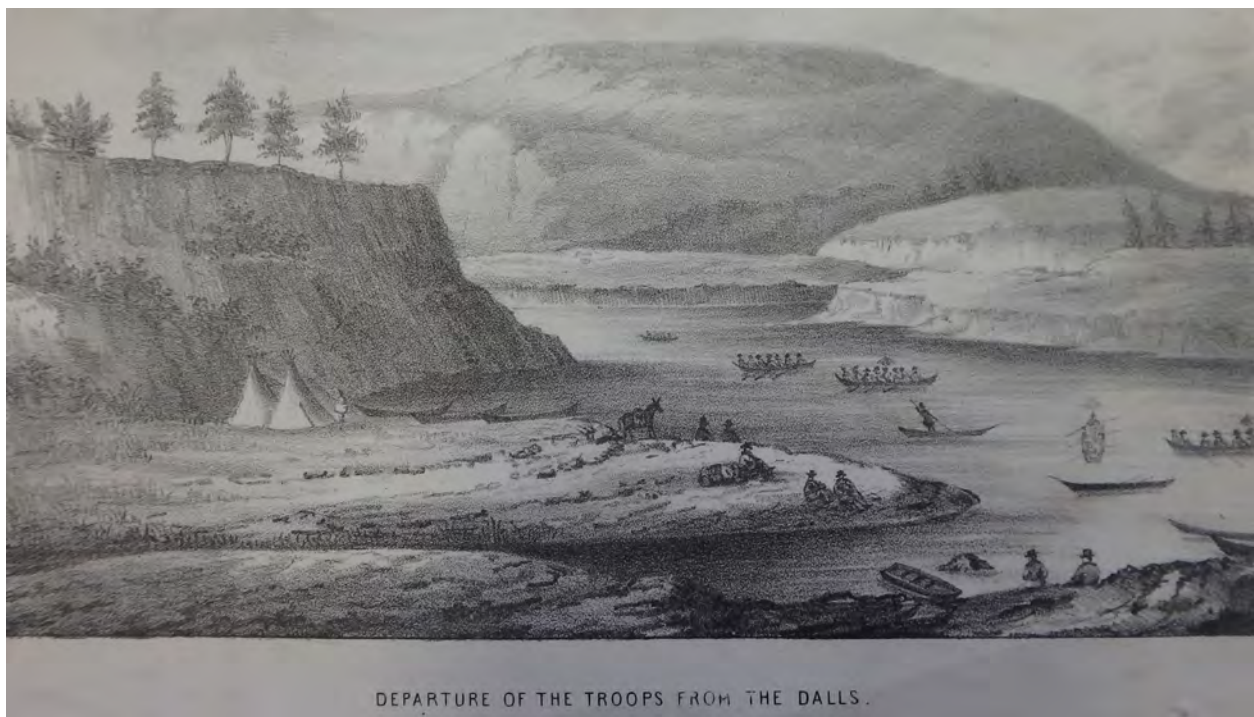


Fig. A5.5. "Departure Of The Troops From The Dalles." One of the lithographs in Col. Loring's report. The location appears to be the bay at the mouth of Mill Creek. Pines are visible on the crest of the bluff to the left and in the distance on the north side of the river. The smaller, scrub-like trees on the face of the bluff may be oaks.¹⁴

¹³ Copied from Settle (1989), p. 245.

¹⁴ Original lithograph from "A Report: in the Form of a Journal," Mss. 5376, Oregon Historical Society Research Library, Portland, OR. [The lithographs shown in figures A5.3 and A5.4 were not included in this file, which is a partial collection only.]

Fort Simcoe

Fort Simcoe was established by the U.S. Army in 1856 during the Yakima Indian War. It was located at the foot of the Simcoe Mountains at a spring known by the Yakama as Mool Mool. The site was used by the Yakama as a campsite on their way to and from the seasonal berry harvest in the high mountains to the west. Many large oaks grew here in extensive woodland that continued along the shores of the streams fed by the springs.

The Army abandoned Fort Simcoe in 1858 at the conclusion of the war. The site was then used as the headquarters for the Yakima Indian Agency and subsequently as an Indian school. It is now a state park. The following illustrations represent each of these various stages of development, with oaks appearing prominently.



Fig. A5.6. Sketch of Fort Simcoe made in June 1857 by Capt. Anthony Heger, who was duty-stationed there. The fort was located at the springs of Mool Mool, a traditional campsite of the Yakama. The trees in the sketch are oaks. Their size can be judged by the adjacent buildings, some of which are two stories.¹⁵

¹⁵ Copied from Heister Dean Guie, *Bugles in the Valley: Garnett's Fort Simcoe* (Portland, OR: Oregon Historical Society, 1977), p. 78. [Guie acknowledges a Heger family descendent as the source of this sketch. Consult with Washington State Parks, the current owner of Fort Simcoe, about obtaining copies and permission to use as well as other sources relating to Fort Simcoe. What became of Heister Guie's own collection?]



Fig. A5.7. Capt. M.W. Priestley with family and employees at Fort Simcoe in about 1888 or 1889. Priestley was Indian agent for the Yakima Reservation. He was stationed at Fort Simcoe, which became the agency headquarters following the departure of the military after 1858.¹⁶

¹⁶ M. W. Priestley Collection of Photographs of Fort Simcoe, PH Coll 1464, Neg. NA4115, University of Washington Libraries, Special Collections, Seattle, WA. [For higher quality reproductions and permission to use, see: <http://www.lib.washington.edu/specialcollections/services/reproduction/reproduction>]



Fig. A5.8. Yakima Indian agent Captain Priestley with employees at Fort Simcoe, Washington, 1889.¹⁷

¹⁷ M. W. Priestley Collection of Photographs of Fort Simcoe, PH Coll 1464, Neg. NA4114, University of Washington Libraries, Special Collections, Seattle, WA. [For higher quality reproductions and permission to use, see: <http://www.lib.washington.edu/specialcollections/services/reproduction/reproduction>]



Fig. A5.9. Scene from hills overlooking Fort Simcoe, July 1935. The extent of the oak woodland around the fort and along Agency Creek in the background is evident. This photograph was probably taken in conjunction with Civilian Conservation Corps work being done at that time.¹⁸

A6. Transportation (Trails & Roads)

Governor Isaac I. Stevens' Pacific Railroad Survey (1853)

Captain George McClellan's survey for a pass over the Cascade Mountains was summarized in the general narrative for the Pacific Railroad survey written by Governor Isaac Stevens.¹⁹ McClellan departed from Vancouver with a large party of specialists on 18 July 1853. The expedition, deciding to conduct its exploration from the east side of the mountains, had first to reach that side, and decided to follow the ancient Klickitat Trail, which took them up the Cathlapootle River (present day Lewis River) and over the summit of the mountains just north of Mount Adams. "This trail [the Klickitat] being but little used, and much obstructed by brush and fallen timber which required cutting, the party made slow progress at first, and reached the summit of the mountains on the 5th August, having made only seventy-eight and three quarters miles in twelve days' travelling. The route up the western slope was through a densely timbered country, some small prairies occurring at intervals in the valley of the Cathlapootle and its branches. These became fewer, and grass was scarce, as the train progressed, so that the animals suffered severely, while, from the flooded state of the valleys, or the ignorance of the guides, [McClellan] was led over some very rough mountain spurs, among which one of the best mules got killed by rolling down a precipice. On the mountain summit excellent pasture was found, though timber of immense size still covered all but the highest peaks, up to an elevation of 4,500 feet more. ...

¹⁸ Item No. AR-08503003-ph1000017, State Parks and Recreation Commission, Photographs of Park Development, 1933-1938, Washington State Archives, Digital Archives, <http://www.digitalarchives.wa.gov> [accessed 6 Nov. 2018].

¹⁹ Isaac I. Stevens, "Narrative and Field Report of Exploration for a Pacific Railroad near the Forty-seventh and Forty-ninth Parallels of North Latitude from St. Paul to Puget Sound in 1855," Volume XII, Book 1 of *Reports of Explorations and Surveys, To Ascertain the Most Practicable and Economical Route for a Railroad from the Mississippi River to the Pacific Ocean* [36th Cong., 1st sess., H. Exec. Doc. 11; and S. Exec. Doc. 78] (Washington, DC: Thomas H. Ford, 1860). Copy at Multnomah County Central Library.

"On August 11 [McClellan] commenced the descent of the eastern slopes, and at once found the forest more open and traversable, consisting of yellow pine, with little undergrowth, and generally a grassy sward beneath. After five days' journey through this he entered the open central plains, then very dry and barren in appearance, the tops of the ridges near the mountains being rocky and almost destitute of vegetation. The small valleys on the branches of the Yakima showed, however, by the height of the grass, although as brown and dead as in winter, that they were capable of cultivation earlier in the year. Near the Atahnane [*Ahtanum*] Mission the priests and Indians raise very fine potatoes, besides melons and squashes."

* * *

After camping in the Wenas Valley for two weeks, Capt. McClellan led his expedition up the Naches River to explore the old Indian trail over the mountains at Naches Pass to see whether it would make a practicable road to Fort Steilacoom on Puget Sound. "Going up Nachess river, which is a large branch of the Yakima, at the distance of twelve miles from its junction with the Yakima, the character of its valley undergoes an entire change. The hills by this time become mountains, close in upon the streams, so that the valley from here to the head is reduced to a mere cañon, occasionally widening out for short distances. The stream winds with very sharp curves; the cañons are often, for a mile or two in length, occupied to their whole width by the stream. The walls of these cañons frequently rise vertically to the height of 400 feet, the mountains coming boldly down to their edges, the wall being of solid rock, generally trap or a compact igneous rock. The Indian trail is a very bad one, avoiding the valley and keeping to the mountains sides, where the ground is very strong, the ascent and descent long and steep...

"The timber (yellow pine) commences in the valley, about eighteen miles from its mouth; for some distance it is open, and with the undergrowth only thick in places. The nearer the divide is approached the thicker the growth becomes, the underbrush and logs more troublesome, and the yellow pine gradually gives place to the white spruce, balsam, fir, &c., until near the summit it disappears. In all the openings of the valley the grass is good, and some fifteen miles east of the summit there is a chain of small marshy prairies, with excellent grass, while upon the mountains immediately south of the pass are some five or six prairies of large size and similar nature, through which the trail passes. ...

"Proceeding westward the trail soon descends, by a very precipitous route, into the valley of Green river ..." *The account continues but now leaves the boundaries of the study area.*

* * *

The expedition's naturalist, Dr. J.G. Cooper, M.D., prepared a botanical report on the exploration of the Naches Pass route, which was included as Part II, No. 1, "Report upon the Botany of the Route," of Isaac Stevens, Narrative and Final Report. The following excerpts, found on pages 13-15 of Cooper's report, describe the portions of the route lying within the study area.²⁰ "At an elevation of 5,000 feet above the ocean we found the vegetation and animals *subalpine* in character, but still with a preponderance of those belonging to the lower country. On the hills, there but partially covered with forests, we found, during our visit in the first week of August, a profusion of berries of several kinds, which the Indians were engaged in collecting. Among them was a huckleberry not before seen, (*V. myrtilloides?* Michx.) with fruit nearly as large and as finely flavored as a grape. Two kinds of pine, (*P. monticola*, Dougl.) resembling the white pine, and (*P. ponderosa*, Dougl.) with a magnificent species of mountain spruce, (*A. nobilis*, Dougl.) were the characteristic trees, replacing, to some extent, those of the lower regions. Blue, purple, red, yellow, and white flowers, in rich profusion, ornamented the surface; and the whole region looked more like a garden than a wild mountain summit, covered for early half the year with snow.

"On the morning of August 9, a rain having extinguished the burning of the forest below us, and cleared away the smoke which had for several days obscured the view, there was revealed to us a scene probably unsurpassed in

²⁰ J.G. Cooper, "Report upon the Botany of the Route," Part II, No. 1 of Isaac I. Stevens, "Narrative and Field Report of Exploration for a Pacific Railroad near the Forty-seventh and Forty-ninth Parallels of North Latitude from St. Paul to Puget Sound in 1855," Volume XII, Book 1 of *Reports of Explorations and Surveys, To Ascertain the Most Practicable and Economical Route for a Railroad from the Mississippi River to the Pacific Ocean* [36th Cong., 1st sess., H. Exec. Doc. 11; and S. Exec. Doc. 78] (Washington, DC: Thomas H. Ford, 1860), pp. 13-15.

magnificence by any in American. Five snowy peaks surrounded us, rising many thousand feet above our camp; and we found that we were still far below the limits of perpetual snow. ...

"On the 11th of August we commenced to descend the eastern slopes of the Cascade range near the base of Mount Adams, and at once found ourselves in quite a different natural region from any before seen. Although forests continue as on the western slopes, they are composed of entirely distinct species of trees, and have a very different appearance. Instead of spruces, one pine almost exclusively prevails, (*P. ponderosa*, called "Yellow Pine,") growing usually over a hundred feet high, with a straight clear trunk three to five feet thick, branching at the height of about forty feet. Its bark is thick, reddish, and deeply furrowed, like that of the chestnut. The wood is said to be unusually heavy and useful for many purposes, besides being excellent fuel. A few of the smaller "White Pine" and stunted larches are mixed with this on the higher parts of the slope, and descending below, about the elevation of 3,500 feet, the oak began to reappear.

"There is so little underbrush in these forests that a wagon may be drawn through them without difficulty, forming a striking contrast to the dense thickets of the western slopes, to be hereafter described. The level terraces, covered everywhere with good grass and shaded by fine symmetrical trees of great size, through whose open light foliage the sun's rays penetrate with agreeable mildness, give to these forests the appearance of an immense ornamental park. Almost the only shrub is a *Ceanothus*, (*C. velutinus*, *Dougl.*) with beautiful shining foliage and a strong aromatic odor something like cinnamon, growing in scattered thickets.

"This beautiful forest continued for about twelve miles eastward from Mount Adams. It occupies a zone along the eastern side of the mountains between the heights of 2,500 and 5,000 feet at the Columbia river, and becoming lower as we go northward, until at fort Colville and on the Okanogan river, at latitude 49°, it extends quite down to the level of the rivers, occupying all the surface except some small prairies in the valleys.

"At the mountain gaps of the Columbia and Yakima rivers trees also extend further down along the streams, but in small numbers. The well marked and usually abrupt lower limit of these forests evidently corresponds to the degree of moisture derived either from the rains of the mountain summits, or from the rivers. The moist winds from the ocean, intercepted by the highest ridges, pass through the two gaps above mentioned, and to a small extent favor the growth of trees lower down. Doubtless the cessation of fires on the dry plains will be followed by a further increase of forests in such places."

* * *

Lieutenant S. Mowry, the expedition meteorologist, following a brief errand to Fort Dalles, rejoined the main party encamped in the Yakima Valley on 10 September 1853. Isaac Stevens included a summary based on Lt. Mowry's description of this landscape, all of which lies within the study area. "The country between the great bend of the Columbia and the Cascade mountains has the general character of the great plains, except that it is more undulating and even mountainous, a ridge of considerable elevation rising from the level of the Columbia, both north and south of the mouth of the Yakima, gradually towards the commencement of the wooded slopes, to from about four hundred to fifteen hundred feet above the sea. The lower part of the Yakima valley is less fit for cultivation than higher up, but contains much good grass land.

"It is wide, open, and destitute of timber, except in the bottom lands, and even there few trees are found for forty miles up. Fifty-five miles up, on the branch called Atahnam, occurs the first oaks met with west of the Missouri river at Fort Union.

"Upon the immediate banks of the river and its branches, where there is sufficient moisture in the soil, the land produces well. The potatoes raised by the Indians are very fine; but melons and squashes, which they also raise, do not succeed well, perhaps on account of the seed being poor; and corn does not thrive at all.

"The valleys of the various streams tributary to the Yakima vary from half a mile to three miles in width, and are bordered with terraces, which decrease in productiveness with their elevation above the water, becoming more gravelly, and, finally, like the intermediate ridges, almost destitute of vegetation.

"The average width of the main stream [i.e., the valley bottom] is five or six miles, becoming, at ninety miles up, reduced to one or two miles, and the extent of cultivable land is proportionately greater than on its branches.

"The ridges between the different branches of the Yakima, and separating it from the Columbia north and south, are chiefly composed of basaltic rock, generally columnar, and more or less covered with gravelly and sandy detritus. On many parts of the highest ridges the basalt has been entirely denuded, leaving nothing but angular fragments of rock, and supporting no vegetation of any value. Wherever covered with earthy materials there is a good growth of grass, and probably the allied cereal grains might be produced, particularly the winter kind. Towards the base of the mountains the valleys, both of the main Yakima and of its branches, improve much in appearance and agricultural capacity. Yellow pine appears, and gradually increases in amount on the banks of the streams, and about ninety miles from its mouth begins to appear on the mountain slopes, marking with rather a sudden and sharp line the border of the unwooded plains.

"Going southward from the Yakima to the Dalles in September, Lieutenant Mowry followed a trail leading through the outskirts of the pine forest and over the ridge south of the Yakima, where it is about fifteen hundred feet high. [The Simcoe Range] He met with three extensive and rich prairies, and several smaller ones, and many parts of the ridges were covered with good bunch grass. The poorest part of the whole is the descent of the high slope to the Columbia, opposite the Dalles, which is forty miles directly south of the most southerly branch of the Yakima."

* * *

At the conclusion of his sojourn in the Yakima Valley and vicinity, Capt. McClellan provided a brief description of the general character of the country, which Stevens summarized in his narrative report. "In taking a general view ... we find that the eastern slopes of the Cascade mountains are wooded with open forest from the elevation of about 2,000 feet up, nearly to the limit of perpetual snow. The trees are chiefly the large western yellow pine [Ponderosa pine], which is the most abundant, and extends the lowest; north of the Yakima the western larch, of equal size, becomes mixed with it, and finally more abundant in many places. Besides these, the scrub pine occurs in spots of sandy soil, and a few trees of other pines, supposed to be the red, and short-leaved or Bank's pine, (cypress of the voyageurs) occur northward. On the higher and more northern mountains there is also a small kind of white pine, and two or three kinds of spruce, small, and of little value comparatively.

"Oak grows near the Dalles and along the skirt of the forest as far north as the Yakima. Cotton-wood and aspen usually line the streams, and the paper birch and a kind of cedar (juniper) grow near Fort Colville. The white cedar, or arbor-vitae, so important west of the mountains, is not common on their eastern slope, though apparently more so on the western slope of the Bitter Root range. Among these forests of the eastern slopes there are found at intervals prairies, which are superior in character of soil to those near the Great Plain. Such is Tahk Plain, ten miles long, and from one to three wide, lying southeast of Mount Adams, and at the bank of Klickitat river, fifteen miles north of the Columbia, which has a lake in its centre, and is covered with luxuriant grass.

"Among the pine forests there is almost everywhere a fine growth of grass, remaining green and fresh much later than on the lower plains and in the vallies. On the highest portion of the mountains extensive prairies are covered with the richest pasture when nearly all below is dried up, presenting the finest grazing tracts, even when too elevated for cultivation. Chequoss prairie, 4,000 feet above the sea, is one of this kind, and there are others of much less elevation in the passes at the head of the Yakima and its branches."

John Mullan, *Military Reconnaissance* (1858)



Fig. A6.1. Detail of military survey made in 1858...²¹ The asterisk-like symbols represent pines, while the closed circles along the streams are cottonwoods. The hatched lines on the plain above Fort Dalles represent cultivated farm land. Dashed lines are trails.

²¹ John Mullan, A.A. Humphreys, Theodore Kolecki, and Gustave Sohon. *Map of military reconnaissance from Fort Dalles, Oregon, via Fort Wallah-Wallah, to Fort Taylor, Washington Territory; made under direction of Capt. A.A. Humphreys, U.S. Topl. Engrs., by Lieut. John Mullan, U.S. Army; assisted by Theodore Kolecki and Gustavus Sohon, civil engrs., while attached to the military expedition under Col. Geo. Wright, 9th Infantry, in 1858* (Washington, D.C.: U.S. War Dept. Office of Explorations and Surveys, 1883). [Originally published as Senate Ex. Doc. no. 43, 47th Cong., 3d Sess.] Copy of original print at Oregon Historical Society Research Library (G4291. R1 1858 .M54).

A7. The Dalles and Wasco County



Fig. A7.1. Photograph from 1867 by Carleton Watkins, looking northwest across the Columbia River toward Mt. Adams. City of The Dalles to the right. (A church, possibly St. Peters, is just visible near the right edge of the photograph.) Woody vegetation is both oaks and Ponderosa pine.²²

²² Carleton E. Watkins, "Mt. Adams from Sunset Hill. Dalles City" (Mammoth 452), 1867 [Identifier: bb000989], Oregon Historical Society, Carleton E. Watkins photographs, 1861-1885; Org. Lot 93; OrHi 21581. Copy available through online digital collections: <https://digitalcollections.ohs.org>.



Fig. A7.1a. Detail from left side of Fig. A7.1.



Fig. A7.2. Photograph from 1867 by Carleton Watkins, looking north across the Columbia River. City of The Dalles is in the center of the photograph along the southern shore of the river. This view is just east of that in Fig. A7.1. The church visible at the right edge of that photograph is visible here just left of center.²³

²³ Carleton E. Watkins, "Dalles City from Sunset Hill. Dalles City. Columbia River" (Mammoth 450), 1867 [Identifier: bb000987], Oregon Historical Society, Carleton E. Watkins photographs, 1861-1885; Org. Lot 93; OrHi 21579. Copy available through online digital collections: <https://digitalcollections.ohs.org>.



Fig. A7.2a. Detail from the center of Fig. A7.2 showing the southern edge of town development where the hills begin to rise and the Ponderosa pine-oak woodland starts. Note the numerous small trees, both pine and oak, in addition to several mature Ponderosa pines.



Fig. A7.3. Photograph from 1867 by Carleton Watkins, looking southwest toward Mt. Hood from The Dalles. In the details below, note the many stumps as well as young trees, indicating that cutting has occurred.²⁴

²⁴ Carleton E. Watkins, "Mt. Hood from Sunset Hill. Dalles City. Columbia River" (Mammoth 451), 1867 [Identifier: bb000988], Oregon Historical Society, Carleton E. Watkins photographs, 1861-1885; Org. Lot 93; OrHi 21580. Copy available through online digital collections: <https://digitalcollections.ohs.org>.



Fig. A7.3b. Detail from upper right of Fig. A7.3.



Fig. A7.3a. Detail from lower left of Fig. A7.3.



Fig. A7.4. Photograph from 1867 by Carleton Watkins, looking west across the city of The Dalles. Brewer's grade is in the left foreground, while the Columbia River is to the right.²⁵



Fig. A7.4a. Detail from lower left of Fig. A7.4 showing oaks adjacent to building cluster. Note the large stacks of cordwood just behind the trees.

²⁵ Carleton E. Watkins, "Dalles City, view from the east" (Mammoth 449), 1867 [Identifier: bb000986], Oregon Historical Society, Carleton E. Watkins photographs, 1861-1885; Org. Lot 93; OrHi 21577. Copy available through online digital collections: <https://digitalcollections.ohs.org>.



Fig. A7.5. Photograph from 1867 by Carleton Watkins, looking south across the Columbia River toward The Dalles from present day Dallesport. This area was then known as Rockland. Steamboats can be seen moored along the river to the right at the Oregon Steam Navigation Company wharf.²⁶



Fig. A7.5a. Detail from upper center of Fig. A7.5.

²⁶ Carleton E. Watkins, "Dalles City from Rockland, W.T., Columbia River" (Mammoth 448), 1867 [Identifier: bb000985], Oregon Historical Society, Carleton E. Watkins photographs, 1861-1885; Org. Lot 93; OrHi 21577. Copy available through online digital collections: <https://digitalcollections.ohs.org>.



Fig. A7.6. Unidentified landscape by photographer Benjamin A. Gifford taken sometime toward the end of the nineteenth century. The location is probably near The Dalles, where Gifford resided.²⁷

²⁷ Benjamin A. Gifford Photographs, ca.1885 - ca.1920 (P 218-SG 5014), Oregon State University Special Collections & Archives Research Center, Eugene, OR. [Copy available through online digital collections: <https://oregondigital.org/catalog>.]



Fig. A7.7. "Rolling hills, pastures, and farmsteads." Unidentified landscape by photographer Benjamin A. Gifford taken sometime toward the end of the nineteenth century. The location is probably near The Dalles, where Gifford resided.²⁸

²⁸ Benjamin A. Gifford Photographs, ca.1885 - ca.1920 (P 218-SG 5015), Oregon State University Special Collections & Archives Research Center, Eugene, OR. [Copy available through online digital collections: <https://oregondigital.org/catalog>.]



Fig. A7.8. "Trees and pastures." Unidentified landscape by photographer Benjamin A. Gifford taken sometime toward the end of the nineteenth century. The location is probably near The Dalles, where Gifford resided.²⁹

A8. The Warm Springs Reservation

* * *

A9. Klickitat County

* * *

A10. The Yakima and Kittitas Valleys

* * *

A11. The Yakama Indian Reservation

* * *

²⁹ Benjamin A. Gifford Photographs, ca.1885 - ca.1920 (P 218-SG 5102), Oregon State University Special Collections & Archives Research Center, Eugene, OR. [Copy available through online digital collections: <https://oregondigital.org/catalog.>]

APPENDIX B

PRIMARY DOCUMENTS BY SUBJECT

Each of the following sections represents an area for further study, as described in "Proposals for Further Study" of the "Landscape History" report. Information relating to each subject will be entered in list form as a bulleted item. The source for each item will be referenced by footnote.

B1. Fire

- *1841, Wilkes Expedition.* Lt. Johnson of Charles Wilkes' U.S. Ex. Ex. led an expedition from Fort Nisqually over Naches Pass and through the Yakima Valley. He observed extensive evidence of recent fires on the west side of the ridge near the summit. "This mountain [La Tete] was entirely destitute of wood; but, having been burnt over, was found strewn with huge charred trunks, and the whole ground covered with ashes. ... The country around seemed one continued series of hills, and like La Tete had suffered from the fire. According to the natives, although the wood on the mountains was destroyed many years since, yet it was still observed to be on fire, in some places, about two years ago." Other mountains in the vicinity were similarly fire-scarred. As these observations suggest, large fires in this heavily-forested landscape were capable of burning for many years and may have carried great distances, possibly even to the east side if summer winds pushed them over the ridge.³⁰ The time of year was late May.

- *1849, Col. Loring's Mounted Riflemen.* In his official report, Col. Loring describes active fires in the Cascades along the route of the Barlow Road. Smoke from these fires filled the Columbia Gorge around The Dalles, but later cleared when the wind shifted to the east. "Besides the natural obstructions of a mountainous road, only passed with great labor, the mountains had been for days enveloped in a dense smoke. Fires were still burning, falling trees [were] blocking up the road and impeding the movement of the train. In consequence of the density of the smoke and scarcity of pasturage (there being little or no grass for four days) numbers of the animals were lost."³¹ The time of year was early October.

- *1853, Stevens-McClellan Railroad Survey.* The expedition naturalist, Dr. J.G. Cooper, described the Ponderosa pine forest on the east side of Naches Pass above the Yakima Valley. The openness of the understory, as well as the presence of *Ceanothus* as the dominant shrub, seem to suggest the influence of fire. "There is so little underbrush in these forests that a wagon may be drawn through them without difficulty, forming a striking contrast to the dense thickets of the western slopes, to be hereafter described. The level terraces, covered everywhere with good grass and shaded by fine symmetrical trees of great size, through whose open light foliage the sun's rays penetrate with agreeable mildness, give to these forests the appearance of an immense ornamental park. Almost the only shrub is a *Ceanothus*, (*C. velutinus*, Dougl.), with beautiful shining foliage and a strong aromatic odor something like cinnamon, growing in scattered thickets." Cooper also believed that fires on the Columbia Plain prevented the extension of the forest line below the hills. "Doubtless the cessation of fires on the dry plains will be followed by a further increase of forests in such places."³² The time of year was mid-August.

³⁰ Charles Wilkes, *Narrative of the United States Exploring Expedition. During the Years 1838, 1839, 1840, 1841, 1842; Vol. IV* (Philadelphia, Penn.: C. Sherman, 1844), p. 449.

³¹ Raymond W. Settle, ed. *The March of the Mounted Riflemen: first United States military expedition to travel the full length of the Oregon Trail from Fort Leavenworth to For Vancouver, May to October, 1849: as recorded in the journals of Major Osborne Cross and George Gibbs and the official report of Colonel Loring* (Lincoln: University of Nebraska Press, 1989 [1940]), pp. 340-341.

³² J.G. Cooper, "Report upon the Botany of the Route," Part II, No. 1 of Isaac I. Stevens, "Narrative and Field Report of Exploration for a Pacific Railroad near the Forty-seventh and Forty-ninth Parallels of North Latitude from St. Paul to Puget Sound in 1855," Volume XII, Book 1 of *Reports of Explorations and Surveys, To Ascertain the Most Practicable and Economical Route for a Railroad from the Mississippi River to the Pacific Ocean* [36th Cong., 1st sess., H. Exec. Doc. 11; and S. Exec. Doc. 78] (Washington, DC: Thomas H. Ford, 1860), pp. 13-15.

B2. Beavers

- 1805, *Lewis & Clark*. After descending the Dalles of the Columbia, the expedition makes camp near Mill Creek. At the mouth of this creek they observe evidence of beaver. "... at the mouth of this creek Saw Some beaver Sign, and a Small wolf in a Snare Set in the willows. ..." ³³ The date was 25 October 1805.

- 1841, *Wilkes Expedition*. Lt. Johnson of Charles Wilkes' U.S. Ex. Ex. led an expedition from Fort Nisqually over Naches Pass and through the Yakima Valley in May of this year. After meeting some of the Yakama people in the Wenas Valley, he commented, "This tribe subsist chiefly upon salmon and the cammass-root: game is very scarce, and the beaver have all disappeared." ³⁴

B3. Steamboats and Railroads

- Carleton E. Watkins, 1867.



Fig. B3.1. Photograph from 1867 by Carleton Watkins looking west (downstream) at The Dalles. The Oregon Steam Navigation Company's machine shops and wharf are visible in the center of the picture. In the left foreground is a fenced enclosure with stacked cordwood. ³⁵

³³ Gary E. Moulton, ed. *The Definitive Journals of Lewis & Clark: Through the Rockies to the Cascades: Volume 5, July 28 - November 1, 1805* (Lincoln: University of Nebraska Press, 1988), p. 340.

³⁴ Charles Wilkes, *Narrative of the United States Exploring Expedition. During the Years 1838, 1839, 1840, 1841, 1842; Vol. IV* (Philadelphia, Penn.: C. Sherman, 1844), p. 454.

³⁵ Carleton E. Watkins, "O.S.N. Co's Works Dalles City" (Mammoth 447), 1867 [Identifier: bb000984], Oregon Historical Society, Carleton E. Watkins photographs, 1861-1885; Org. Lot 93; OrHi 21576. Copy available through online digital collections: <https://digitalcollections.ohs.org>.



Fig. B3.1a. Detail from lower left of Fig. B3.1 showing wood pile below steamboat wharf. The wood appears to be oak, comprising mostly smaller diameter limbs.

• *Carleton E. Watkins, 1867.*



Fig. B3.2. Photograph from 1867 by Carleton Watkins of the Oregon Steam Navigation Company's portage railway between The Dalles and Celilo. Pictured is upper Cape Horn along the southern shore of the river. Like the steamboats on the river, this locomotive burned wood for fuel.³⁶

³⁶ Carleton E. Watkins, "Cape Horn near Celilo Columbia River" (Mammoth 457), 1867 [Identifier: ba017857], Oregon Historical Society, Carleton E. Watkins photographs, 1861-1885; Org. Lot 93; OrHi 21585. Copy available through online digital collections: <https://digitalcollections.ohs.org>.

- *Carleton E. Watkins, 1867.*



Fig. B3.3. Photograph from 1867 by Carleton Watkins showing the Oregon Steam Navigation Company's portage railway and warehouses at Celilo on the southern shore of the Columbia River. In the detail below, note the extensive stacks of cordwood along the shore side of the long warehouse (which appears to be flooded). Note also the absence of any trees here. Wood had to be cut elsewhere and transported to this location.³⁷



Fig. B3.3a. Detail from center of Fig. B3.3.

³⁷ Carleton E. Watkins, "Celilo, Columbia River" (Mammoth 459), 1867 [Identifier: bb000994], Oregon Historical Society, Carleton E. Watkins photographs, 1861-1885; Org. Lot 93; OrHi 21587. Copy available through online digital collections: <https://digitalcollections.ohs.org>.

• Benjamin A. Gifford, ca. 1900.

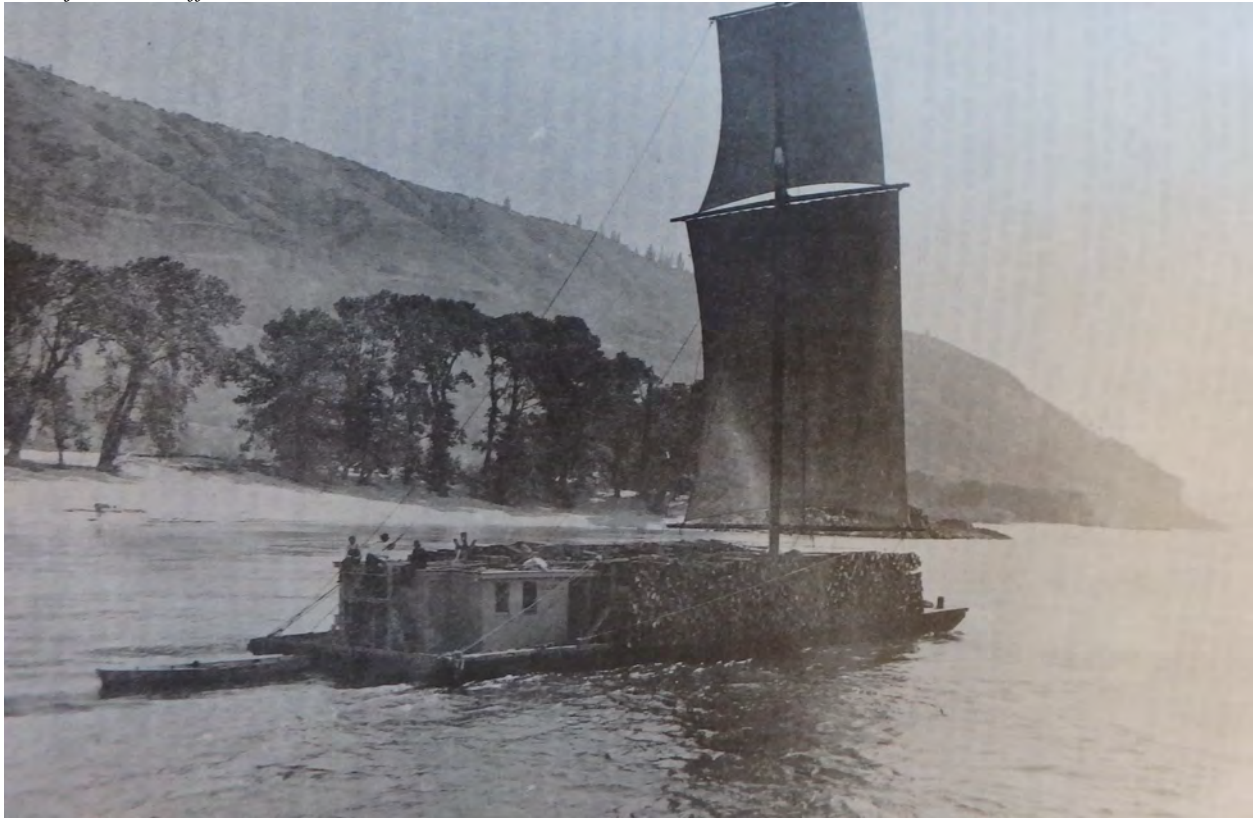


Fig. B3.3. Photograph taken about 1900—but not before 1885—by Benjamin A. Gifford of sailing scow "Reliance" opposite White Salmon landing enroute to The Dalles. The scow is carrying a full cargo of firewood, though it is not possible to say what species. Visible in the background are many large oaks growing close to the water along what appears to be sandy beach. This shows that at least some oaks escaped being cut down for fuel during the steamboat heyday (1860 to 1880). All of this shoreside habitat has since been inundated by the construction of dams in the twentieth century.³⁸

³⁸ Photo copied from Interstate Publishing Company, *An Illustrated History of Klickitat, Yakima and Kittitas Counties; with an Outline of the Early History of the State of Washington* (Chicago, IL: Interstate Publishing Co., 1904), facing page 126.

• H.G. Miller, ca. 1915.



Fig. B3.5. Photograph by H.G. Miller from about 1915 of the river steamboat "Bailey Gatzert" in the vicinity of The Dalles. The "Bailey Gatzert" made regular runs between Portland and The Dalles from 1900 to 1917. The Cascade Locks, completed in 1896, made it possible for vessels to travel up the Columbia River as far as The Dalles without portaging. Note wood stacked on the beach awaiting shipment. Pieces are relatively short and have been split rather than cut, suggesting they are intended as firewood. It is impossible to say from this photograph whether the wood is pine or oak.³⁹

³⁹ Photo copied from Interstate Publishing Company, *An Illustrated History of Klickitat, Yakima and Kittitas Counties; with an Outline of the Early History of the State of Washington* (Chicago, IL: Interstate Publishing Co., 1904), facing page 128.

B4. Livestock Grazing

• *Wilkes Expedition, 1841.* Mr. Drayton of Charles Wilkes' U.S. Ex. Ex. accompanied Hudson's Bay Company employee Peter Skene Ogden from Fort Vancouver as far as Walla Walla in June 1841 to explore the interior. Describing the ABCFM missions at Waiilatpu and Lapwai, he wrote, "These missionaries have quite a number of cattle and horses, which require little or no attention, there being an abundance of hay and grass. The price of a good horse is twenty dollars. This district is capable of supporting a vast number of cattle. One Cayuse chief has more than a thousand horses on these feeding grounds."⁴⁰

• *Benjamin A. Gifford, 1905.*



Fig. B4.1. Sheep on hillside. Photograph by Benjamin A. Gifford, 1905. Location is probably not far from The Dalles where Gifford resided.⁴¹

⁴⁰ Charles Wilkes, "Chp. XI" in *Narrative of the United States Exploring Expedition. During the Years 1838, 1839, 1840, 1841, 1842; Vol. IV* (Philadelphia, Penn.: C. Sherman, 1844), pp. 403ff.

⁴¹ Benjamin A. Gifford Photographs, ca.1885 - ca.1920 (P 218-SG 23 12), Oregon State University Special Collections & Archives Research Center, Eugene, OR. [Copy available through online digital collections: <https://oregondigital.org/catalog>.]

- *Benjamin A. Gifford, 1908.*

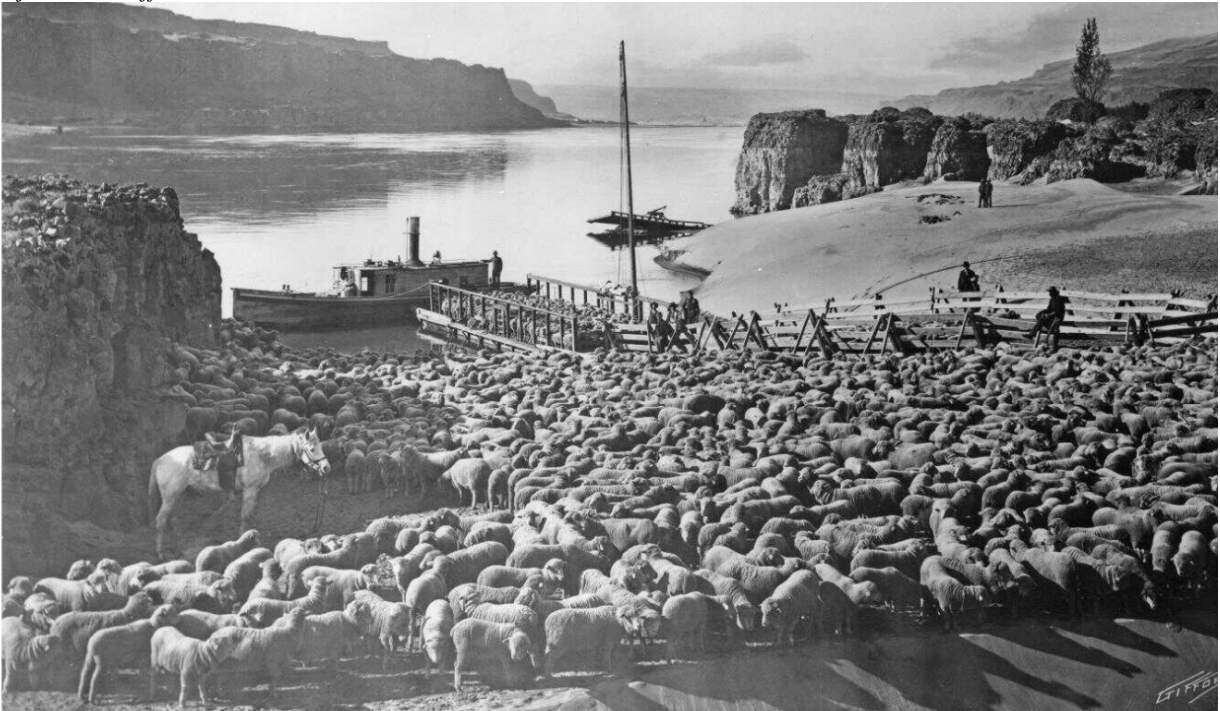


Fig. B4.2. Photograph from 1908 by Benjamin A. Gifford showing sheep at ferry crossing near Maryhill, on the north shore of the Columbia River.⁴²

⁴² Benjamin A. Gifford Photographs, ca.1885 - ca.1920 (P 218-SG1 01), Oregon State University Special Collections & Archives Research Center, Eugene, OR. [Copy available through online digital collections: <https://oregondigital.org/catalog>]