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THE HISTORY OF THE LUMBER INDUSTRY IN OREGON'S DOUGLAS
FIR REGION: AN EXAMINATION OF HISTORIC
ARCHITECTURE IN FIVE MILL TOWNS

by
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A THESIS

Presented to the Interdisciplinary Studies Program:
Historic Preservation
and the Graduate School of the University of Oregon
in partial fulfillment of the requirements
for the degree of
Master of Science

December 1992

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APPROVED:



Leland M. Roth, Chair

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Joan Mary Kelley for the degree of Master of Science
in the Interdisciplinary Studies Program:
Historic Preservation

to be taken December 1992

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The lumber industry in western Oregon's Douglas fir region flourished between 1900 and 1940, a time known as the "Rail Trade Era." Prior to 1900, only a limited lumber industry existed, focusing mainly on local demand. Oregon's rugged coastline prompted ocean-going vessels to seek more favorable ports.

At the turn of the century, with technological advancements, organization of large corporations, and an increasing national and local population, the industry entered a new age. Such expansion brought an increase of lumbering activity to Oregon's dense inland conifer forests.

Small towns located in isolated places near the timber supply provided the forces to manufacture the natural resource into sawn lumber. Though the large mill complexes are gone, historical resources from that era remain. Along with the industry's history, this thesis examines five mill towns scattered throughout Oregon's Douglas fir region for extant resources. Log ponds, company housing, spatial arrangements, and industrial artifacts were found.

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Kelley, Joan M. "Booth-Kelly Lumber Company: An Empire in the Douglas Fir Country." In Lane County Historian: The Way It Was, edited by Lois Barton, 55-59. Eugene, Ore.: Lane County Historical Society, Fall 1990.

ACKNOWLEDGMENTS

I would like to express my sincere gratitude to Leland Roth, for his encouragement to pursue my interests and his support and assistance along the way. Kenneth Helphand, for his excellent advice and motivation to look at the larger picture. Professor Emeritus Bingham, for not only his reassurance and vigilant editing, but his extension of friendship as well.

I wish to acknowledge the librarians at the Oregon Historical Society, especially the photograph department, and the staff of Special Collections at the University of Oregon's Knight Library. I found amazing books "in that back room."

Any study involving community history includes many people, from city clerks to school children. To all of you, thank you. Of those community people, particular appreciation goes to curator, local historian of Vernonia's Columbia County Historical Museum, Robb Wilson. Such work gets final touches, and that recognition goes to editor and technical advisor, Carol Roth.

Finally, a special thanks to David Moon, my husband, for his generous help in all aspects of my graduate years,

and who has taken pride in this thesis and came to know the mill towns and back roads with me.

DEDICATION

To David

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INTRODUCTION

This study begins with an historical overview of the lumber industry in Oregon's Douglas fir region between Euro-American settlement and 1940. It was not until the turn of the century that the industry came, in earnest, to the forests of the Pacific Northwest where western Oregon's Fir Belt is located. After successive moves through North America's regional forests to the east and south, the industry came to the last forested frontier in the "Far Northwest Corner." Here, the industry had the benefit of knowledge that had been accumulated from regions previously logged, a growing demand from an expanding population, and the latest in industrial technology to cut, carry, manufacture and export the lumber.

Within the Pacific Northwest region, Oregon was a late entry into the lumber industry. Her rocky, inhospitable coastline resulted in the early shipping trade seeking more favorable harbors to the north at Puget Sound or south at San Francisco Bay. It was not until the twenties and thirties that heightened lumber activity began to occur in Oregon, although earlier enterprises clearly pointed the way.

This thesis concentrates on the span from 1900 to 1940, a period known as the "Rail Era." This was an interval when rail transport dominated the hauling of raw logs to mills and sawn lumber to markets, and corporations held large tracts of timber while managing a work force to log, transport and mill their raw material. This was before society became reliant on automobiles and "commuting" meant a quarter mile walk to the mill complex for shift work, while residents kept time by the mill whistle. Daily living circulated around these large mills with the noise of the saws and smoke from the burning wood waste and steam locomotives, commonplace in any bustling mill town.

Oregon's Douglas fir region is only part of the state's lumber history and a mere fraction of this expansive industry in North America. Regional differences exist in each part of the country's forests as well as between eastern and western Oregon. Climatic and topographic conditions produced a tree type and geography in eastern Oregon that creates a different lumber history.

Although the Douglas fir region extends from northern California to British Columbia, the spatial boundaries of this study are limited to the state of Oregon. The Columbia River is the northern boundary, with the California state line to the south, the Pacific Ocean on the west and the summit of the Cascades on the east (see figure 1).

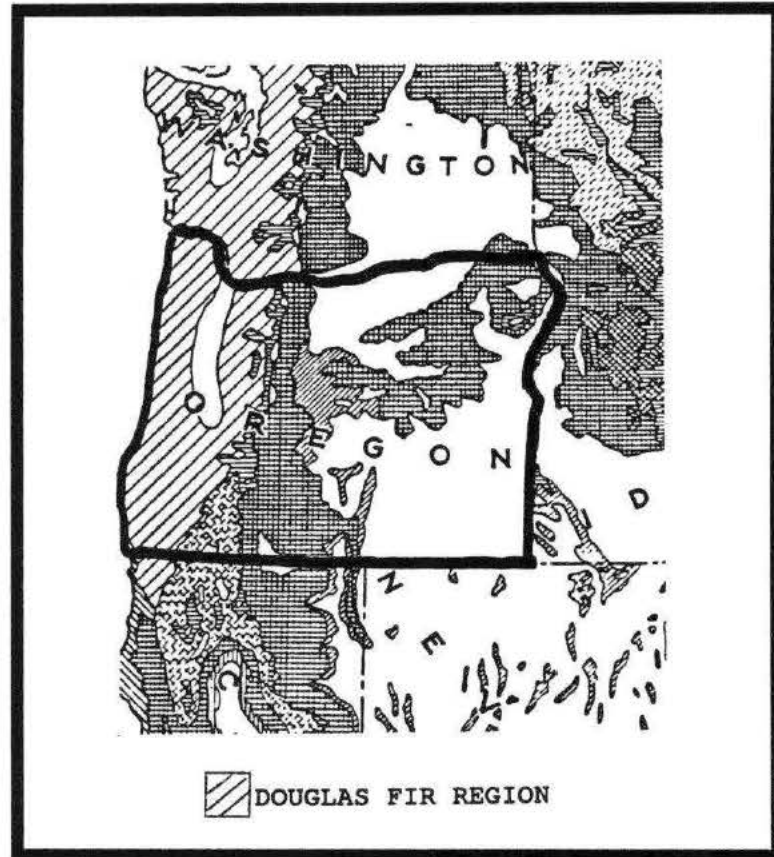


Figure 1. Douglas Fir Region of Oregon.
Source: Author.

The lumber industry is indeed a vast subject; therefore, this study has narrowed the topic. It focuses on the sawmilling or manufacturing aspect of this mighty industry. This study opens with an overview of the industry itself and then concentrates on mill towns and the manufacturing that occurred there.

This paper does not deal with logging camps or logging railroads; economic issues such as freight wars, grading standards or public land; the subject of forestry regarding old-growth or reforestation; wood-related industries such as pulp and paper; or ecological debates or United States Forest Service philosophies of conservation or fire prevention. It differentiates between a logging camp and a mill town. A logging camp was established solely for the purpose of cutting timber, building the necessary structures to accomplish that feat, and transporting the raw log to the mill site or open market. Not built for permanence, these communities moved closer to the timber supply when the surrounding trees had been cut out. Many of the buildings were constructed on skids or rail beds to accommodate frequent moves.

A mill town, on the other hand, has the presence of the dominating sawmill or mills that identify it as a lumber town. The settlement may have been initiated by a lumber corporation or perhaps was an existing town site where a large corporation built a mill complex. The mill had a monopolizing presence, both physical and economic, for the members of the communities. These mill towns had a

permanence, unlike the logging camps that could be readily moved or dismantled.¹

It is necessary to distinguish between logging and sawmilling. Logging is the cutting and hauling of the raw material to the manufacturing site. Such activity moved inland away from the stationary mill site as the supply diminished. The sawmilling complex was located near a stable work force and included a log storage area, the log pond. At the mill complex, lumber was produced; lumber is the product of timber sawn or split for use in construction.

From the log pond, logs were hauled into the milling complex to be sawed, shaped, or trimmed into desired dimensions. The mill site was fixed near a "wet-point" location.² Either a river, a bay, or an estuary provided the operations with a water source. Water served several important functions for the mill. Although primarily a storage place for the logs, the water also made it easier to sort and handle the logs, served to clean the logs of grit and gravel that would dull the saws, and acted as a fire

¹Logging camps have become towns; however, their morphology is different without the centralizing sawmill. Powers, Oregon, has a history of a logging camp that developed into a permanent community. See Kenneth A. Erickson, "The Morphology of Lumber Settlements in Western Oregon and Western Washington" (Ph.D. diss., University of California, Berkeley, 1965), 328-330.

²Erickson, 372-373.

deterrent. Prior to summer's dry months when loggers were banned from the forest, the log ponds could be filled with enough raw material so the mill had a steady supply through those dry periods. An additional benefit of water storage was the decreased concern of fire danger and the preservative effect on logs.³

The sources used for the historical overview were mainly secondary. Books, newspapers, periodicals, information published by the regional lumber associations, and local museums provided the data. While researching the case studies, secondary sources were augmented with personal interviews and site visits.⁴ Throughout this project, historical photographs were continuously used; fortunately, this history has been well documented with pictures. The Oregon Historical Society has the photographic collection from The Timberman, a monthly trade journal published in Portland from 1899 through 1957. This remarkable photo collection plus other photographs proved invaluable in this work.

The magazine itself, located in the Knight Library, offered insight into Oregon's lumber industry. The

³H. B. Oakleaf, Lumber Manufacture in the Douglas Fir Region (Chicago: Commercial Journal Co., 1920), 17; and Erickson, 373.

⁴The site visit was a cursory survey completed within one-half mile from the mill complex.

Timberman, originally called The Columbia River and Oregon Timberman, covered all aspects of the industry from logging operations, to activities of a fraternal lumbermen's club, to what mills had installed new equipment, to forestry issues. Those volumes were an extremely helpful resource for this thesis.

Chapter I of this thesis documents the historical context of the region's lumber industry. It begins with a description of the physical landscape and how densely forested North America appeared to the Indians, early settlers, and timber barons. The massiveness of the firs in the Pacific Northwest shaped the industry to come. The Douglas fir region in Oregon is geographically divided in this study into six regions or lumbering locations for a better understanding of how geography affected the industry's development. After examining the influence of climate and terrain, the development of the lumber industry is examined. Lumber undertakings accelerated with industrial innovations of the time and the ever-increasing demand from an expanding population. The layout of a mill plant was also investigated for its function in order to visualize its presence in Oregon's landscape prior to 1940.

Chapter II investigates a mill town from five of the six regions, to identify and isolate historical resources pertinent to the lumber industry. Here lies one of the

objectives of this thesis: to identify pre-1940, lumber resources. To locate the resources, research was conducted by a methodology referred to as the "sawmill nucleus." This formula was derived by ascertaining the most productive mill between 1920 and 1930 in each particular town and determining the mill site. From that site, a one-half mile radius was established; that distance was basically the walking range to work at the mill.⁵

Within that circle, a survey for extant lumber resources was completed. The town's lumber history, wet-point location, mill site in relationship to the town, and spatial arrangements were researched. Chapter III defines each resource. A description or explanation of the cultural resource's function is given as well as a statement of significance.

Chapter IV of the study concludes with recommendations for these resources. This section addresses how they can be preserved and incorporated into local planning.

Such a powerful history is not without its distinct images. Just as the axe was the symbol of pioneer lumbering, waste burners, also known as teepees or haystacks, are representative of this industrial heyday from 1900 to 1940. Refuse burners were essential to any milling complex, and

⁵Erickson, 374.

they dotted the countryside wherever there was a sawmill.⁶ This common sight remained well into the 1970s, when environmental concerns about air pollution diminished their use. They came in a variety of shapes from cylindrical to conical "wigwam burners," yet their functions are all the same. It was in the twenties and thirties that the sawmill communities lived within their presence, accepting the cinders, smoke, and glow as an everyday occurrence (see figure 2).

None of the big mills researched exist today. Built mainly of wood and housing outdated machinery, the mill complexes were either torn down, burned, or left to deteriorate. In the town of Cottage Grove, located in the upper Willamette Valley, the mill site is still in active use, although the mill has been totally revamped for high-tech production. The mill town of Vernonia located in the northwest corner of the Coast Range had the most unique way of leveling their mill complex. It went up in flames for the great inferno in the 1961 movie, "The Ring of Fire."⁷

What remains of the built environment from the pre-1940 lumber industry is the focus of this thesis. Fragments appear in the form of mill company housing, mill offices, log ponds, spatial arrangements and industrial artifacts.

⁶During black-out periods throughout World War II, they were a problematic light source.

⁷Ring of Fire, Andrew L. Stone, dir., 1961, film.

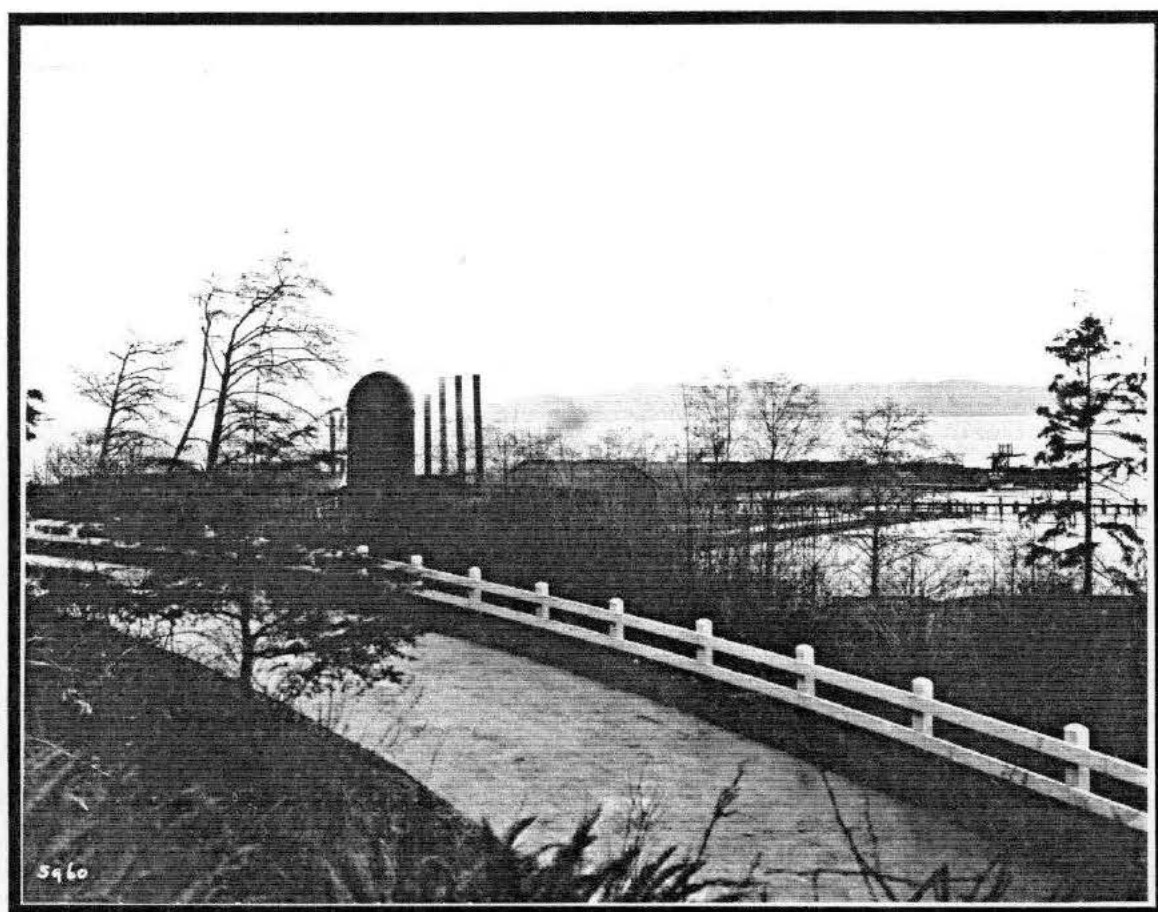


Figure 2. Hammond Mill, Taken from the Lower Columbia River Highway, date unknown. Source: Oregon Historical Society (hereafter, OHS).

CHAPTER I

HISTORICAL CONTEXT

Physical Landscape

"What better thing than a tree to portray the wealth of our county?" Joseph Jenks, designer of an early American coin, the pine shilling of Massachusetts.¹

The original forests of the United States stretched from the Atlantic Ocean to the treeless prairies of the Midwest, appeared again on the slopes of the Rocky Mountains and terminated in the Pacific Northwest. Roughly half of the 48 contiguous states were originally timbered; however, it can only be estimated how extensive these forests were because of the cutting that occurred.²

¹W. G. Youngquist and H. O. Fleischer, Wood in American Life, 1776-2076 (Madison, Wisc.: Forest Products Research Society, 1977), 59. A series of "Tree" coins, minted in Massachusetts beginning in 1652, became the standard coinage for the early colonists.

²William G. Robbins, Lumberjacks and Legislation: Political Economy of the U.S. Lumber Industry, 1890-1941 (College Station: Texas A&M University Press, 1982), 3-4; Michael Williams, Americans and Their Forests: A Historical Geography (New York: Cambridge University Press, 1989), 3-4, 25-32; and Edmond S. Meany, Jr., "The History of the Lumber Industry in the Pacific Northwest to 1917" (Ph.D. diss., Harvard University, 1935), 1-9.

The forests played a central role in America's early pioneer settlement. Wood was used for fuel, building shelters and to make farm implements in the pioneer's pursuit for subsistence living. It was, indeed, a "wooden culture." Clearing the forests for the land to establish an agricultural livelihood consumed a great deal of the trees.³

Each major lumber region--the Northeast, Great Lake States, South and the Pacific Northwest--has a lumber history specific to its geographical features, tree type, and technology existing during the time of exploitation. In the 1830s, the rivers of Maine were used to transport logs to the sawmills at Bangor and Gardiner. That river system provided a swift route after the spring thaw in those pre-railroad lumbering days. The industry later moved on to the states of Michigan and Wisconsin. Offering few obstacles, the rolling terrain was advantageous to the movement of logs. Nature's design in the Lake States funnelled Michigan's and Wisconsin's white pine into Lake Michigan for distribution in the metropolis of Chicago. By 1900, railroad logging and the invention of donkey engines were proving to be superior methods in the assistance of cutting the timber supply and getting it to the mill. The steep rivers

³Williams, Americans and Their Forests, 3-9; and Brooke Hindle, ed., America's Wooden Age: Aspects of Its Early Technology (Tarrytown, N.Y.: Sleepy Hollow Press, 1975), 1-12.

in the Pacific Northwest were less conducive to log transportation than the rivers in the Great Lakes or the Northeast.⁴

Eventually, a lumber industry took hold on the western slopes in the Pacific Northwest, where the region was renowned for a coniferous forest unlike anywhere else in the world. The outstanding forest zone in the United States and perhaps the world is located in the Pacific Coast states. Although there are a variety of trees in this zone, it is largely a coniferous forest with only 6 percent deciduous trees. The Douglas fir is the monarch, and the area is suitably known as the Douglas fir region.⁵

In 1940, in his book, This Fascinating Lumber Business, Stanley Horn described the spirit of the area:

The outstanding characteristic of the western lumber industry is bigness. Trees grow bigger there than they do anywhere else on the face of the earth. Sawmills are bigger, the biggest mill in the world is the Weyerhaeuser mill in Longview, Washington. The Western manufacturers carry bigger stocks of lumber in bigger sheds, the logging operators use the biggest and heaviest tractors and trucks and the thickest wire rope. Everything they do is done in a big way.⁶

⁴William Cronon, Nature's Metropolis: Chicago and the Great West (New York: W. W. Norton, 1991), 148-200; and Williams, Americans and Their Forests, 160, 198-201.

⁵A. W. Küchler, "The Broadleaf Deciduous Forests of the Pacific Northwest," Annals of the Association of American Geographers 36 (June 1946): 122-147.

⁶Stanley F. Horn, This Fascinating Lumber Business (Indianapolis: Bobbs-Merrill, 1943), 69.

Fronting the Pacific and backed by the Cascades, the Douglas fir region in Washington and Oregon is a belt of timber approximately 100 to 150 miles wide and 480 miles long. It is the habitat of Douglas fir (Pseudotsuga taxifolia), mixed with Sitka spruce (Picea stichensis), western red cedar (Thuja plicata), western hemlock (Tsuga heterophylla), and Port Orford cedar (Chamaecyparis lawsoniana). Douglas fir is the principal species in quantity, size, and quality of wood.⁷

The forests of the Pacific Northwest had long been known for their magnificent trees, and journals of early explorers tell of the dense forests in this region. Captains Lewis and Clark wrote: "The whole neighborhood of the coast is supplied with quantities of excellent timber."⁸ David Douglas, an early Scottish botanist, wrote during his visit in 1824: "Both [tree species] far exceed those on the Atlantic side in size."⁹ On his journey up the Columbia River in 1826, he noted that "the scenery at this place [Fort Vancouver] is romantically wild, with high mountains

⁷Horn, 70-71; and Edward John Hanzlik, Trees and Forests of the Western United States (Portland, Oreg.: Dunham Printing Co., 1928), 23.

⁸Lewis and Clark, cited in Horn, 69.

⁹David Douglas, Journal Kept by David Douglas During His Travels in North America, 1823-1827 (London: William Wesley, and the Royal Horticulture Society, 1914), 120.

on each side clothed with timber of immense size."¹⁰ Eventually Douglas's own name would be used to identify the trees he described. This forested area responded to the presence of moisture and a moderate climate, with the trees growing thick and tall along the coastline and mountain slopes. Trappers and early settlers, like the Indians before them, preferred to travel the rivers, since cutting their way through the forests was a difficult if not impossible undertaking (see figure 3).

More than any other species, the Douglas fir is responsible for the fame that the forests of the Pacific Northwest have attained. The tree was formerly known as yellow fir, red fir, or "Oregon Pine," a commonplace trade name used by early pioneers. Before "Douglas fir" became accepted in the industry, both Oregon Pine and Douglas fir were used interchangeably well into the 1920s. It was the first species cut and exported from the Columbia River region by the Hudson's Bay Company at Fort Vancouver; not knowing what to call Douglas fir, it was shipped simply as "Oregon pine."¹¹

¹⁰Ibid., 57.

¹¹Dorothy Marie Sherman, "A Brief History of the Lumber Industry in the Fir Belt of Oregon" (Master's thesis, University of Oregon, Eugene, 1934), 6-7.

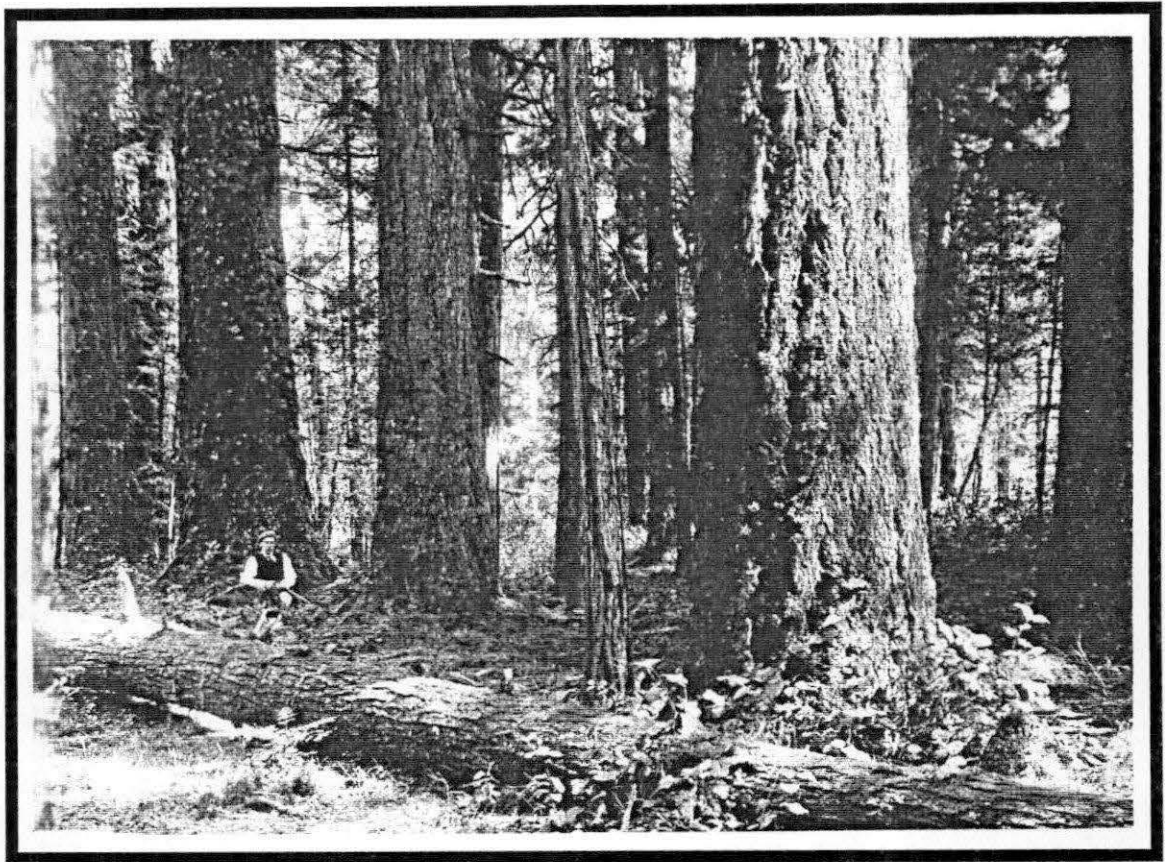


Figure 3. Pioneers Called the Forest "The Green Desert," date unknown. Source: OHS.

The reference to the Douglas fir as yellow or red was explained in 1940 by E. G. Mason, assistant dean to the Forestry School at Oregon State College:

The old virgin trees are called old growth and produce the high grade yellow fir lumber. The young trees which have grown up in the last century [are] known as second growth or red fir. Second-growth trees produce

a coarse-grained wood that is hard and rough in texture and of a reddish color. The principal uses of second-growth fir are fuel, pilings, ties and common grades of lumber. The young trees are used exclusively for Christmas trees. Old growth or yellow fir produces all grades of lumber. It is particularly prized for long, clear, straight-grained timbers for structural use in bridges and general construction work.¹²

In the forest, the tree commonly reaches heights of 200 feet and a diameter of five to six feet. Douglas fir, due to its intolerance to shade and preference for dense stands, has fully one-half to two-thirds of its length free of branches; the trees tower straight, growing 4 to 10 feet from one another. In selected areas, Douglas fir frequently reaches 300 feet in height and 10 feet in diameter. The stands of fir that compose the bulk of the forest in the Douglas fir region ranged from four hundred to six hundred years old. All mature trees were immense (see figure 4).¹³

During the boom of the western Oregon lumber industry from 1900 to 1940, Douglas fir was manufactured into almost every form known to sawmill operators. There were lumber needs for homes, hotels, outbuildings, and opera houses.

¹²E. G. Mason, "The Lumber Industry," in Physical and Economic Geography of Oregon, ed. Warren DuPre Smith, The Commonwealth Review of the University of Oregon (Eugene: University of Oregon Press, 1940), VII:222 (Special Collections, Knight Library, University of Oregon, Eugene).

¹³Richard White, Land Use, Environment, and Social Change (Seattle: University of Washington Press, 1980), 78; and Erickson, 78.



Figure 4. Douglas Fir Near St. Helens, date unknown. It is hard to imagine today just how big these trees were. Source: Ralph W. Andrews, Timber! (Seattle, Wash.: Superior, 1968), 45.

The tree was used in its raw form for pilings, poles, mine timbers, and railroad ties.¹⁴ The strength and rigidity of Douglas fir contributed to its popularity for early infrastructures, such as bridges and wood stave pipes for city water systems.

Another tree in the region used for commercial purposes is the western red cedar, known for its resistance to decay even in the mild, damp coastal climate. It even exceeded the Douglas fir in sheer bulk. Diameters frequently reached 15 feet, but the tree seldom reached 200 feet in height. Western red cedar is found chiefly in areas with fairly high precipitation and at lower altitudes, rarely occurring above 3,500 feet in elevation. Unlike the Douglas fir, it did not grow in pure stands and often was found rooted among spruce and hemlock in the foggy forests of the coast. This easily worked wood was used by Indians for their dugout canoes, wood carvings, and siding on their lodges; hence the pioneer's called it "canoe cedar."¹⁵ Early Oregon pioneers favored the wood for shingles because of its easy splitting quality and endurance; old growth shingles lasted as long as 60 years. Shingle mills were common sights during the

¹⁴Hanzlik, 33-36, 48; and Forever . . . West Coast Woods (Portland, Oreg.: West Coast Lumberman's Association, 1930), 5-10.

¹⁵Meany, 25.

industrial heyday; however, they closed when the old-growth cedar became depleted.¹⁶

West Coast hemlock, found only in the Pacific Northwest, reaches a height of 150 feet and four to five feet in diameter. This tree commonly grew in association with Douglas fir, western red cedar, and Sitka spruce under conditions that satisfied its tolerance for shade and moisture. A 1930s promotional booklet of the West Coast Lumbermen's Association boasted of its quality, for it was once an ignored tree. It was suggested for gymnasium floors. The Association claimed that the wood "is rapidly becoming a favorite among architects for interior woodwork and finish" and "confidently recommended [it] as a moderately priced wood for all features of interior finish and trim, for panels, wainscoting, casing, base, molding, colonnades, newels and turned stock."¹⁷ Its principal range is on moist and cool western slopes of the Coast range; it grows best where precipitation is not less than 70 inches a year, with a great deal of this coming in the form of heavy fog and mist.¹⁸

¹⁶Hanzlik, 33-36; and Erickson, 79.

¹⁷Forever . . ., 12-14.

¹⁸Ibid.

Sitka spruce, one of seven species of spruce found in the United States, is also called tidewater spruce. It grows only in the northwest Coast Range under extremely moist conditions. This tree was of special interest to the United States Army during the First World War for aircraft structures.¹⁹

Port Orford cedar, confined to the lower foothills of the Siskiyou Mountains in southwestern Oregon, is an exclusive wood of extremely high value. Found in the southern end of the Douglas fir region in Coos and Curry counties, it was usually found not over 40 miles from the coast. It is a moisture-loving tree, requiring plenty of atmospheric mist. This cedar has a distinct, aromatic odor which is offensive to certain insects.²⁰

The swath of timberland that makes up the Douglas fir region had large, closely spaced trees throughout. At one time, the Douglas fir forest was the most outstanding in the world. Its very existence may simply have been a happenstance of nature. Under similar conditions, this marine-coast climate elsewhere on the globe would have produced a broadleaf deciduous forest, rather than one composed almost solely of coniferous trees. The Willamette Valley

¹⁹Ibid., 74-79; and Mason, 223.

²⁰Forever . . ., 88, 122.

lies within this timberland and is essentially encircled by trees. The lack of coniferous forest in the valley proper was due to frequent burning by the Indians.

It is not definitely known why there is an absence of a widespread deciduous forest; however, there are some theories of the cause for this rare occurrence. The on-shore winds from the Pacific Ocean plus the relief features of the region helped contribute to such a fir forest. The fact that Douglas fir profits from occasional forest fires may have led to its inevitable dominance. The region might well have become a forest of cedar and hemlock had the fires not kept the Douglas fir sovereign. What caused this "accident" of nature in the Pacific Northwest forest is unknown, but what did emerge was a dominant species that attained a size and longevity unknown in the world.²¹

The tree had an influence on the lumber industry and the technology used. Such a quality and quantity of timber made Oregon depend on the lumber industry for economic growth. However, it was not the tree alone that propelled Oregon to lead the nation in lumber production in 1936. The industrial era of railroad technology, improved sawmilling techniques to handle these huge trees, greater profits for the corporations, and a growing population in Oregon and the

²¹White, 7-11; and Küchler, 122-147.

rest of the nation pushed the lumber industry into larger and larger production (see figure 5).

Lumbering Locations in the Douglas Fir Region

The Douglas fir region is divided into six lumbering locations. Although the entire region has similar characteristics that give it the deserving nickname "the great raincoast," and common resources to make it a "lumber kingdom,"²² a more detailed geographic division is helpful.

The high bluffs of the Lower Columbia River, steep slopes of the Coast Range, alluvial lands of the Willamette Valley, bays and inlets along tidewater, and the steepness of the Cascades are all part of the Douglas fir region. Such differences in geography have resulted in a distinct lumber history for each division (see figure 6).

The Coast Range lies between the Willamette Valley and the Pacific Ocean, with the southern boundary not easily defined. For this study, the Middle Fork of the Coquille River was chosen as the southern boundary. South of this river is the Coast section of the Klamath Mountains, where the formations and lumber history are quite different from

²²Richard Maxwell Brown, "The Great Raincoast of North America: Toward a New Regional History of the Pacific Northwest," in The Changing Pacific Northwest: Interpreting Its Past, ed. David H. Straiton and George A. Frykman (Pullman: Washington State University, 1988), 50-53.

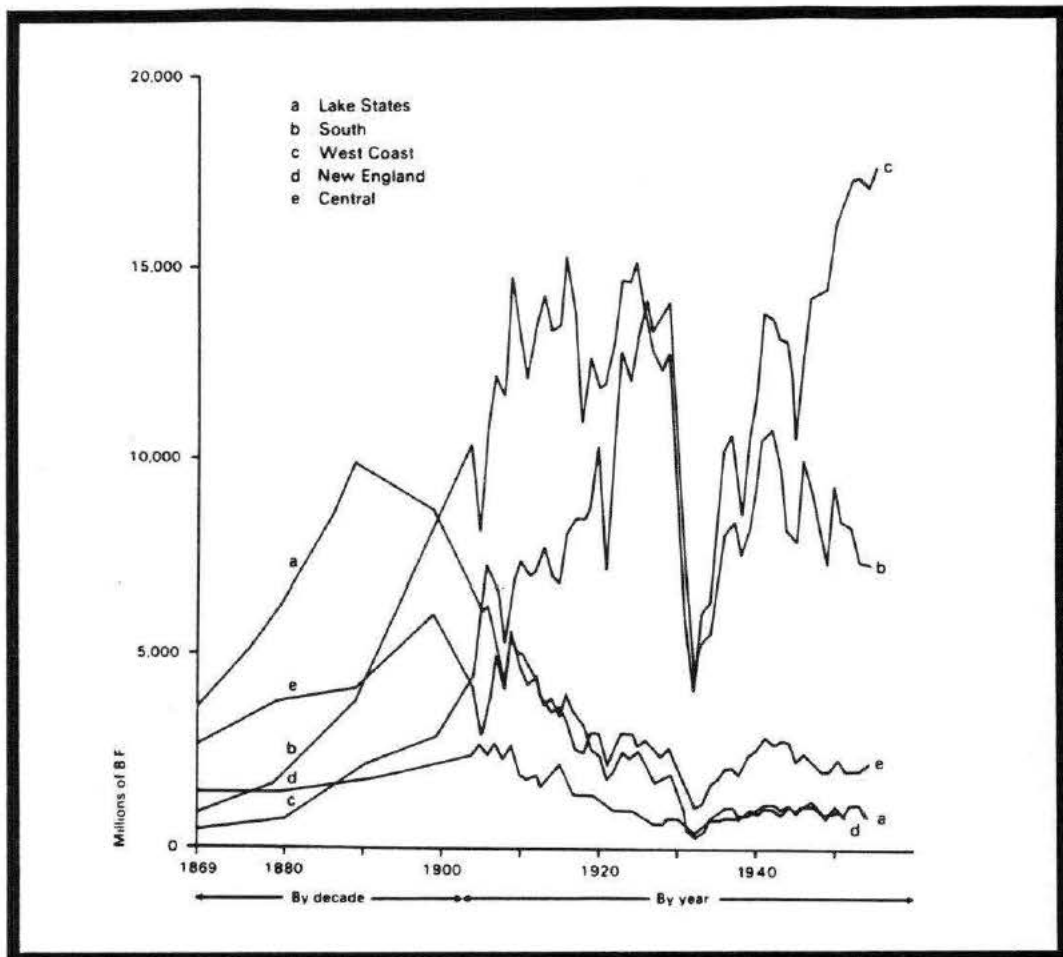


Figure 5. Production of Lumber by Major Regions of the United States. Source: Williams, Americans and Their Forests, 197.

that of the coast mountains farther north. From the Columbia River to the Coquille River, the Coast Range is the broadest at the ends and narrows in the middle. The dominant resource is timber.

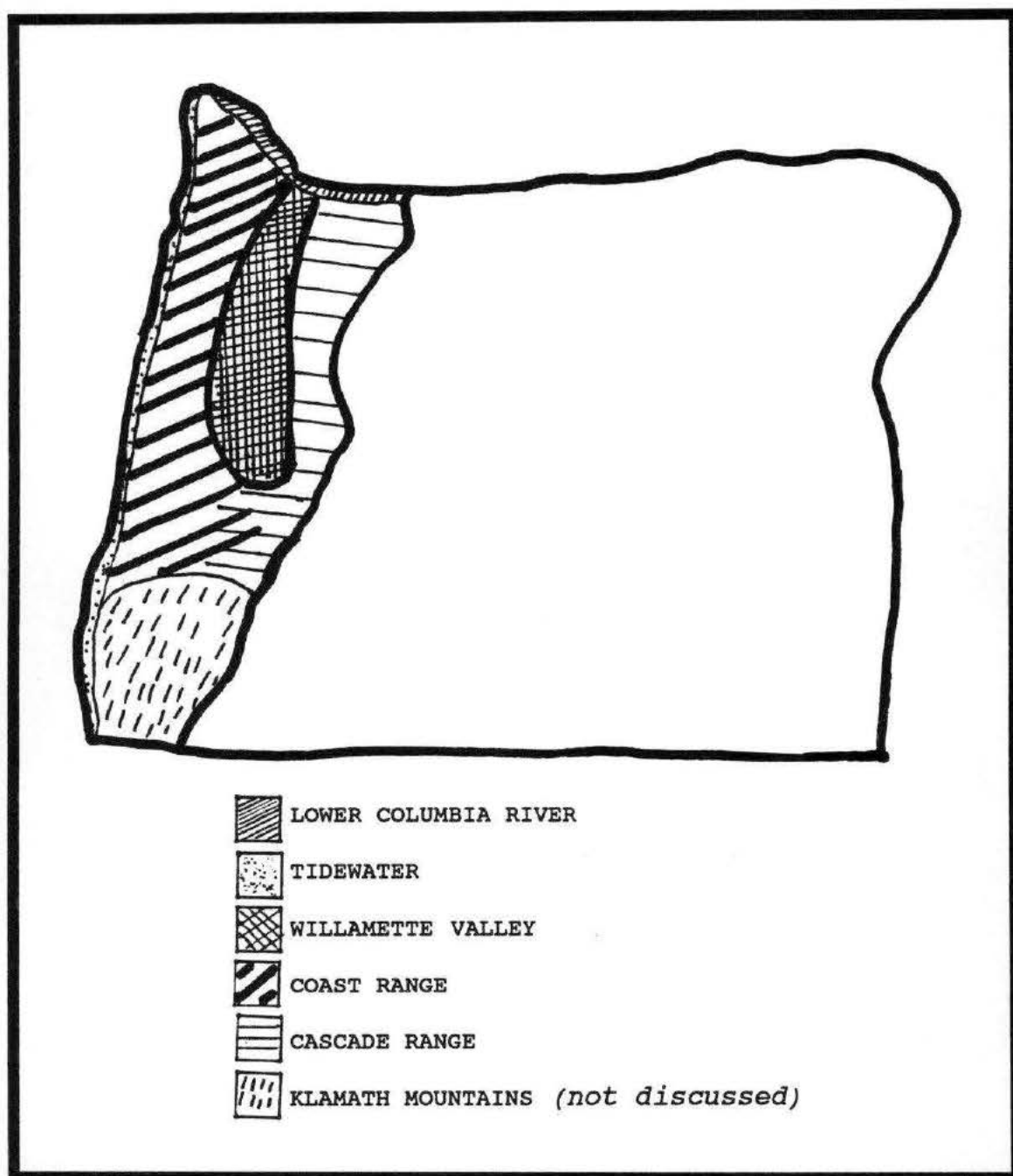


Figure 6. Lumbering Locations in the Douglas Fir Region. Source: Author.

The climate, under the influence of the sea and especially the winds which blow from the sea, is mild, with calm rainy winters and cool summers with less precipitation. More significant than the total amount of rain is the fact that winters have the heaviest rain while summers are comparatively dry.²³

The Willamette Valley, whose main feature is the Willamette River, serves as the principal corridor for transportation routes in Oregon. This humid lowland is bordered by the Coast and Cascade Ranges. Moderate rainfall and good soils made it highly favorable for farming communities during the early settlement years. Towns along the streams had small operating sawmills serving local markets within these farming communities. In this valley, the agricultural economy helped to feed workers in the surrounding region, and the lumber industry developed secondary to farming. Here, an early pattern of small numerous mills with a moderate production capacity, compared to areas nearby, remained throughout the Rail Era.²⁴

²³Samuel N. Dicken, Oregon Geography (Ann Arbor, Mich.: Edwards Brothers, 1950), 14, 23-40; and Warren DuPre Smith, ed., "The Willamette Valley Province," in The Physical and Economic Geography of Oregon (Salem: Oregon State Board of Higher Education, 1940), 25 (Special Collections, Knight Library, University of Oregon, Eugene).

²⁴Smith, Physical and Economic Geography of Oregon, 1940, 32-40.

The Cascade Range is different on its east and west slopes, with the rugged west side having heavy precipitation and a dense forest, whereas the eastern slope is in the rain shadow with a corresponding change in vegetation. In the western Cascades, the principal tree is, of course, the Douglas fir, while on the east slope, ponderosa pine is the most prevalent. Similar to the Coast Range, the Cascades had ample streams and rivers that were used for log storage.²⁵

The Coast Range, the Willamette Valley, and the Cascades are all bordered on the north by the Columbia River. For the purpose of this study, that area has been separated into the Lower Columbia River and is defined as the area from the summit of the Cascades to the mouth of the river. An early trade route, this "River of the West" naturally stimulated an early lumber industry by the Hudson's Bay Company. Swift currents at the mouth of the river result in shifting sand bars, making it difficult for ships to enter, and captains therefore looked to other ports. Quality timber was located on the high cliffs, but until improved technology could tap these resources, the export industry

²⁵Dicken, 52-60; and Smith, Physical and Economic Geography of Oregon, 1940, 41, 46-49.

languished and the local lumber economy diversified to meet its own needs.²⁶

Between the Coast Range and the sea lies a coastal fringe, where explorers first came into contact with Oregon's timber resources. The fifth lumber location within the Douglas fir region is denominated tidewater. Although the timber supply comes from the geographic region of the Coast Range, the lumber history and the towns along this coastal ribbon differ from the history within the range itself. The industry flourished in the Rail Era using both rail and ocean-going vessels to export the lumber. Coos Bay is undoubtedly the best known lumber center along this coastal fringe. Bays and inlets stimulated an industry specific to the tidewater location along the Pacific Ocean.

Oregon's inaccessible coast line, lacking natural harbors, was the reason Oregon had less to offer the lumber export market than did Puget Sound to the north or San Francisco Bay to the south during the nineteenth century. Oregon's timberlands remained essentially untouched during the Cargo Trade Period. Prior to 1900, commerce centered around Washington's protected harbor with its surrounding accessible timber, financed by California capital. It took engineering feats to eventually tap the steep mountain slopes of

²⁶Thomas R. Cox, "Lower Columbia Lumber Industry, 1880-93," Oregon Historical Quarterly 47 (June 1966): 161-162.

the Coast and Cascade Ranges and the Columbia River's cliffs, though industrial accomplishments alone did not overcome these geographic challenges. It required the depletion of forests in the Lake States and timber barons eager for another investment before Oregon's Douglas fir region developed a vital lumber industry.

Development of the Lumber Industry

A sawmill was essential to pioneer life, and soon after a settlement was established, the ability to saw timber into lumber became a necessity. Any lumber produced by the local sawmill was quickly utilized by the burgeoning agricultural communities. With a small population, this sawmill settlement pattern was not really an industry, nor did it supply or even look to distant markets.²⁷

The development of lumber production in North America during the earliest days was along local lines. The manufactured material was largely consumed within a narrow radius of the point of manufacturing and was generally cut to order. There were individuals in scattered towns who served their neighbors by providing them with economical building material. If the mill happened to be favorably located at a seaport or on a large stream, some of its production might

²⁷Williams, Americans and Their Forests, 95-96, 163-167.

be floated down the river to a nearby town or even shipped by sailing vessels to a foreign market. There was no "lumber industry" as such in those days.²⁸

By the nineteenth century on the northeast coast, Americans were shifting from local lumber production to one of increased commercial activity with a degree of specialization. As the population increased, manufacturing and urban centers expanded and a need arose to supply broader markets. The first large sawmill in the United States was constructed in 1838 in Williamsport, Pennsylvania. The number of sawmills increased, as well as production, due to accompanying inventions and various improvements to existing machinery.²⁹

The early industry that had begun in Maine was soon eclipsed by New York and then Pennsylvania. By 1870, the Great Lake States dominated lumber production in the United States. Following timber depletion in the Midwest, the industrial migration bifurcated to the Pacific Northwest and the South. After several decades, many Southern companies relocated to the Pacific Coast, where the heaviest stands

²⁸Horn, 21-22.

²⁹Williams, Americans and Their Forests, 163-167; and Erickson, 13.

remained and trees were renowned for their extremely large size (see figure 7).³⁰

In 1788, Captain John Meares, a British sea captain, departed with his ship from the Pacific Coast loaded with "fine spars, fir for topmasts" for the Chinese market. Although a storm compelled Meares to jettison his cargo at sea, his effort is identified as the prologue to the lumber industry in the Pacific Northwest.³¹

The first sawmill in the Pacific Northwest was a water-driven mill on the Columbia River near Fort Vancouver, built by John McLoughlin, circa 1827. Milling activity was limited and small scale, but like that of Captain Meares, it was the harbinger of the developing industry.³²

The migration to the Oregon Territory in the 1840s quickly gave rise to sawmills to facilitate settlement and, thus, the first industrial structures in this densely forested region were sawmills. By 1844, Hunt's water-powered mill on the south side of the Columbia River at Cathlamet Head began marketing lumber in Oregon City. It had a

³⁰Horn, 17-33; and Erickson, 9-14.

³¹Charles H. Carey, General History of Oregon (Portland, Oreg.: Binford & Mort, 1923), 61.

³²Sherman, 5-9; Ellis Lucia, Head Rig: Story of the West Coast Lumber Industry (Portland, Oreg.: Overland Press, 1965), 13-14; and Thomas R. Cox, Mills and Markets: A History of the Pacific Coast Lumber Industry to 1900 (Seattle: University of Washington Press, 1974), 9-28.

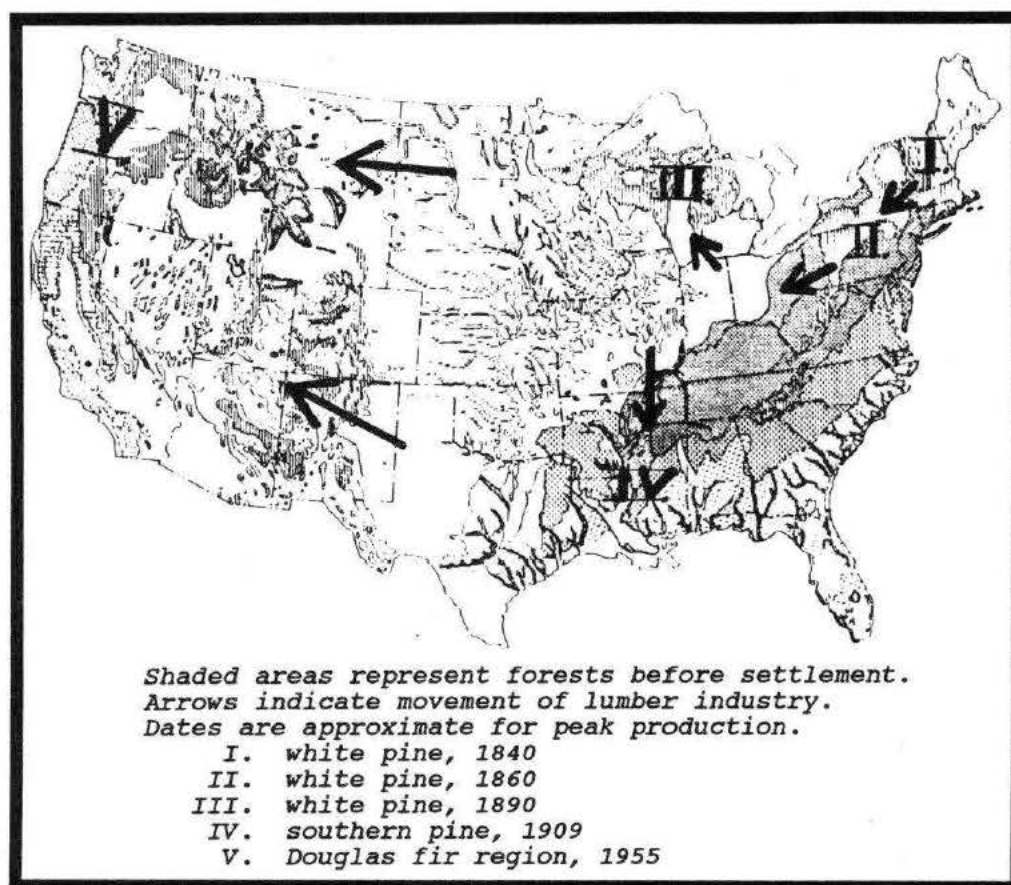


Figure 7. Progressive Movement of Lumber Industry in United States. Source: Modified from Cox, This Well-Wooded Land, 4.

capacity of 3000 to 5000 board feet of lumber per day.³³

Five years later, there were thirty sawmills in the

³³ "Board feet" is the basic unit of measure in the lumber trade. It is a piece of wood of the nominal dimensions of one inch thick and one foot square.

territory.³⁴ In 1846, John Waymire started a hand sawmill on the Willamette River in Portland.³⁵

In 1850, the first steam sawmill in the Pacific Northwest was constructed on the lower Willamette River in Portland. The nearby lowlands along the Lower Columbia River was also an active area for the nascent lumber industry during the Cargo Era. Here, timber close to the water's edge and inlets was cut, but the better quality timber located above the river on the bluffs was difficult to transport to the sawmills. This area had to wait for transportation improvements in the forms of V-flumes, logging spurs, and railroad companies.

When the California Gold Rush arose in 1849, these small sawmills serving agricultural communities could not meet the demand of sawn lumber for the many frame and plank structures being built in California. Although areas of existing lumber activity responded to the California demand, the increased pressure did not result in the logging of forested terrain where water transportation was unavailable, as

³⁴Emma Gene Miller, Clatsop County, Oregon: Its History, Legends and Industries (Portland, Oreg.: Binford & Mort, 1958), 213-214; Thomas Richard Cox, "Sails and Sawmills: The Pacific Lumber Trade to 1900" (Ph.D. diss., University of Oregon, Eugene, 1969), 34; and Robert W. Vinnege, "The Pacific Northwest Lumber Industry and Its Development," address presented at Yale University, New Haven, Connecticut, December 18, 1923.

³⁵Erickson, 110.

in the slopes of the Coast and Cascade Ranges or on the cliffs above the Lower Columbia River. It was the stimulus of the Gold Rush, however, that did catapult the lumber industry into becoming the mainstay of western Oregon's economy.³⁶

The embryonic lumber industry of the Pacific Northwest in the nineteenth century was dominated by California capital, operated by New England lumbermen and dependent on water transport. This is referred to as the Cargo Era, when steam powered sawmills dominated production and sailing ships carried export lumber to San Francisco and to ports on the southern and western Pacific Ocean.³⁷

A cargo trade did exist, however limited, in Oregon along the Lower Columbia and in a few bays on the Pacific coast. In 1887, Hobsonville, on the northeast rim of Tillamook Bay, had a steam-driven lumber mill. Coos Bay had an active lumber trade with California in the 1850s. A relatively safe harbor and proximity to California were reasons for its early activity, along with an accessible supply of

³⁶Ibid., 5, 111-112; and Cox, "Sails and Sawmills," 63-104.

³⁷Williams, Americans and Their Forests, 299; and Erickson, 55-56.

Douglas fir and Port Orford cedar that grew in pure stands right down to the coast.³⁸

Early-day lumbering on the coastal fringe was described in Green Tie.³⁹ Its editor, Daniel Strite, also wrote:

The three pioneer sawmills in Tillamook County were all operated by water wheels and were run solely for the purpose of filling local building requirements. One man operated each mill, cutting about 2,000 board feet daily. Logs sufficient to operate the mills throughout the winter were gotten out of the surrounding timber by means of oxen during the summer or early autumn. At this time standing timber had little or no value. It was generally thought of as a public nuisance and forest fires were welcomed as land-clearing agents. As soon as the fall rains had swollen the small streams the sawmills began to cut.⁴⁰

With a steady influx of settlers into the agricultural lands of the Willamette Valley, a supply of sawn timber was needed for the building of local communities and farms. With no access to cargo trade, the industry served local needs, using small water-powered mills. During the Cargo Trade period, the Willamette Valley had established a well-

³⁸William G. Robbins, Hard Times in Paradise: Coos Bay, Oregon, 1850-1986 (Seattle: University of Washington Press, 1988), 12-19; Ada M. Orcutt, Tillamook: Land of Many Waters (Portland, Oreg.: Binford & Mort, 1951), 222-226; and Erickson, 123-124.

³⁹Green Tie, written by Daniel Strite, was published monthly from December 1925 through March 1927. Named for the green twine used to tie bundles of products produced by the planing mill, it was the Whitney Company's newspaper and included articles about lumbering and logging in the Tillamook area.

⁴⁰Daniel D. Strite, "Up the Kilchis, Part IV," Oregon Historical Quarterly 73 (September 1972): 226.

structured domestic lumber industry. By the time the lumber industry became a major part of the Valley's economy in the 1920s, the towns were already well-established as agricultural centers and the mills had long been supplying local demands.

Another trend which has given Oregon a distinct regional lumber history was the transference of public land to private ownership. Federal and state land policies allowed the acquisition of public lands by private lumber interests, resulting in a few companies owning huge, concentrated tracts of land. A momentous result of this ownership pattern was the establishment of towns and rural communities entirely dependent on the lumber industry.⁴¹

Mechanized and industrial innovations brought alterations to the industry beginning in the 1880s and 1890s. The market had changed from one of local demand to widespread national markets with an increasing population and transcontinental railroads. Manufacturing increased its production by replacing water power with steam, and, shortly thereafter, to electricity.

Bridal Veil Lumber Company, located 28 miles east of Portland near Bridal Veil Falls, employed innovative

⁴¹William G. Robbins, Land: Its Use and Abuse in Oregon, 1848-1910 (Corvallis: Oregon State University Press, 1974), 4-22; Erickson, 14-21; and Williams, Americans and Their Forests, 309-315.

techniques to unite its timber supply and transportation artery. In 1886, the Company built a sawmill in the midst of a vast timber supply on the bluffs overlooking the Columbia River. The rough topography required one sawmill community above, Palmer, and one below, Bridal Veil, with a flume connecting the two. In 1879, the Oregon Railway and Navigation Company brought rail transportation to the lowland sawmill community (Bridal Veil). A V-shaped flume, supported by trestles and, in one place, a huge bridge, descended 1,200 feet within a two-mile stretch joining these two enterprises (see figure 8).⁴²

In the manufacturing of logs into lumber, there was an evolution of saws from the primitive sash and muley to circular saws, a principal of continuous motion utilized in America during the 1820s and 1830s. By the 1880s, the band-saw superseded the circular saw and was widely used in the Michigan pineries. Not only did this new elaborate type of manufacturing significantly raise production, it also

⁴²Lucia, 44-45; Elizabeth Hagen, "Bridal Veil Joins the Past," The Timberman 37 (January 1937) (Knight Library, University of Oregon, Eugene): 12-16, 58-60; Erickson, fn. 46.

required the large investment of a substantial building and a steady supply of timber.⁴³

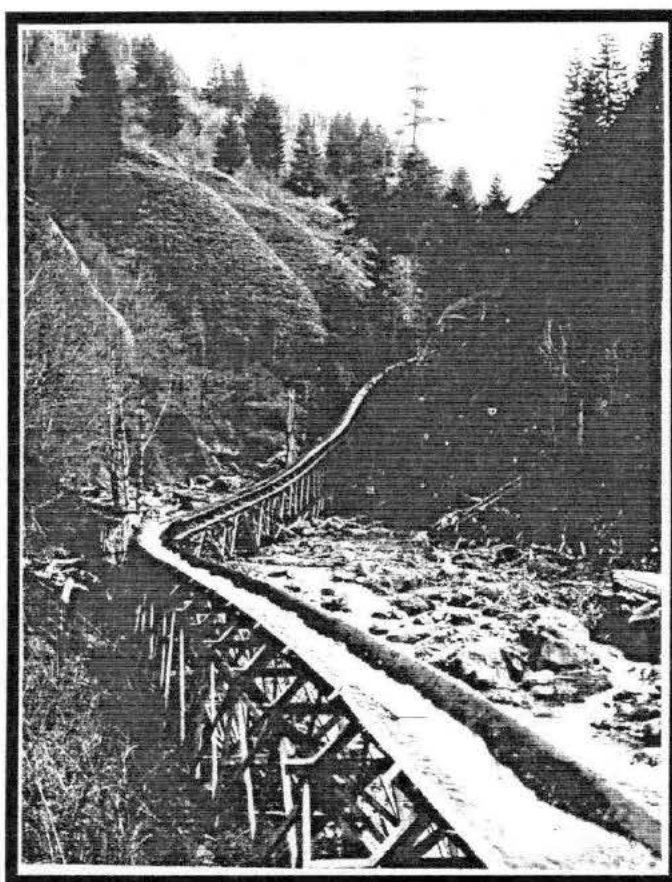


Figure 8. Bridal Veil Flume, date unknown.
Source: Special Collections, Knight Library,
University of Oregon, Eugene.

⁴³Horn, 136-141; Thomas Richard Cox, Robert S. Maxwell, Philip Drennon Thomas, and Joseph J. Malone, This Well-Wooded Land: Americans and Their Forests, from Colonial Times to the Present (Lincoln: University of Nebraska Press, 1985), 158; and Robert C. Loehr, "Saving the Kerf: Introduction of the Band Saw Mill," Agricultural History 23 (1949): 168-172.

During the Oregon lumber boom of 1900 to 1940, both the band and circular saws were used in lumbering, although the bandsaw mill meant a larger complex, employing more workers and yielding higher production than the circular sawmill plants. These dominating two-story structures exceeded the height of any building in town and were a sharp contrast to the small worker housing provided by the company. These huge facilities handled the heavier, larger trees previously too massive for many of the circular sawmills.⁴⁴

Just as steam had met the demands during the early days of lumbering, these "mammoth production units" powered by electricity became "the largest in the world lumber industry" and responded to the demanding markets of the time. Between 1910 and 1930, when many of these mills were established, four components were essential for any timber corporation: a fixed location, considerable capital, a sizable labor force, and a constant timber supply.⁴⁵

In 1899, a lumber trade magazine, The Columbia River and Oregon Timberman, was founded by Portlander George M. Cornwall; at this time there were two trade publications issued in Tacoma and Seattle, and another in Chicago. The journal was devoted to the "lumber interests of Oregon."

⁴⁴Horn, 142-143.

⁴⁵Erickson, 50.

The name was shortened to The Timberman in January, 1905, and the geographical focus expanded to encompass the entire Pacific Northwest.⁴⁶

The arduous terrain of the Douglas fir region required more aggressive logging and sawmilling technology. Such methodology came into practice in the last decades of the nineteenth century. Moving up the steep slopes of the mountains became possible with the intensive equipment of rail milling. Such development required large amounts of financing, most of which came from outside the state, largely from the Lake States.

Development of the lumber industry required technological improvements in transportation to link forests and markets. The exhaustion of timber on easily accessible land and changing technology were instrumental in causing a shift in the location of the Pacific Northwest timber supply. Not only was there a shift from tidewater to inland forests, but also from Washington to Oregon. However, it was not until 1936 that Oregon out-produced Washington in lumber production.⁴⁷

⁴⁶Gage McKinney, "A Man Among You, Taking Notes: George M. Cornwall and the Timberman," Journal of Forest History 26 (April 1982): 76-83.

⁴⁷Williams, Americans and Their Forests, 326-328.

The lumber industry did not take hold until 1900 in Oregon, and it was not until 1913-14 that the Gazetteer, a regional business directory, recognized that the Oregon lumber trade "had become a great industry . . . with ports laden with lumber for foreign ports," and stated that "shingle making and railroad ties are important industries."⁴⁸ Viewing population as an indication of economic growth, St. Helens, a town on the lower Columbia, climbed 34 percent between 1910 and 1920, and the tidewater town of Garibaldi on Tillamook Bay swelled in the mid-1920s.⁴⁹

From isolated beginnings in the pioneer days to the giant bandsaw mills at the turn of the century, Oregon's lumber development revolved around her geography. Small, poorly located sawmills gave way to large corporations when rail milling came into the picture, along with a large labor force and capital to finance the latest technology for the mill and logging operations. Western Oregon's lumber industry did not flourish during the Cargo Trade period, but gained momentum when the Lake States timber became depleted and land speculators looked to the Pacific Northwest for a

⁴⁸State Gazetteer and Business Directory, Polk's Washington and Oregon (Kansas City, MO: R. L. Polk, 1913-1914) (Special Collections, Knight Library, University of Oregon, Eugene); hereafter, title only, with dates.

⁴⁹State Gazetteer and Business Directory, 1919-1920.

new supply. In the Rail Era, new forms of transportation, mills, and markets activated a boom that lasted until 1940.

In a 1949 editorial in The Timberman, George F. Cornwall reflected on the time:

The dawn of the twentieth century marked the beginning of a great migration of lumbermen from the Lake States to the timbered regions beyond the Rockies, where millions of acres of virgin timber lands were to be had at bargain prices, where mills could be set up with vast supplies of raw material near at hand. It was a lush era of buying and building.⁵⁰

Layout and Function of the Sawmill

Manuals, trade journals, and publications were available to assist lumber men in planning the layout of the mill complex. Even suggestions regarding work ethic and practical organization were included: "Plan each day's work so that the lumber is always on hand at the machine, full loads are removed promptly and other transportation duties are performed in time to forestall unnecessary crew idleness."⁵¹

After the turn of the century, mills became larger in size for several reasons. Rail trade rather than cargo

⁵⁰George F. Cornwall, "Thoughts on Becoming Fifty," The Timberman 50 (October 1949): 47 (Knight Library, University of Oregon, Eugene).

⁵¹Vern Johnson, Sawmill Practices Manual for the Western Pine Region (Portland, Oreg.: Western Pine Association, ca. 1925), 38.

shipping required a larger mill site because lumber shipped by rail was based on weight rather than volume. Therefore, large yards were necessary to store the lumber until excess moisture disappeared. After the lumber was dry, subsequently lighter in weight, it was shipped by rail. Larger mills needed greater organizational skills to accompany the maximum capital return.

The tendency now (1920) is to build very large plants equipped elaborately for the twofold purpose of securing profits from the more finished products and of manufacturing into by-products raw material that would otherwise have to be thrown away or burned. Such plants may include planing mills, box factories, etc., and be equipped with machinery for turning slabs and other "waste" into lath.⁵²

The tree was the influence in this trend toward greater mills after the turn of the century:

The necessity for giant machines with commensurate power requirements in the fir mill are better appreciated when it is understood that the massive logs, each weighing from three to five tons, are elevated from 30 to 40 feet, reduced to huge cants by being shot back and forth against the main saw at from 300 to 500 feet per minute; that each of these cants from 4 to 12 inches thick from 24 to 60 inches wide is cut to widths at a feed of from 200 to 300 feet and that the resulting numerous pieces are trimmed to lengths and deposited on a sorting table all in the course of five or six minutes. During the same period from one to three tons of sawdust, slabs and waste wood and bark are mechanically conveyed to the boiler plant, lath mill and refuse burner respectively.⁵³

⁵²H. B. Oakleaf, Lumber Manufacture in the Douglas Fir Region (Chicago: Commercial Journal Co., 1920), 3.

⁵³Ibid., 5.

Along with the massive mill complex came the need for a large reliable work force. Advisory guidebooks recommended the hiring of married men. Each position now required more specialization and skilled laborers, such as saw filing, millwrighting, engineers, in addition to numerous superintendents and foremen of the various departments.

The efficiency of the plant relied on the interrelationship of multiple functions that included log storage, sawmill proper, sorting and grading tables, transportation equipment for moving the products around the plant, dry kilns, storage and seasoning yards, a rough lumber shed, planing mill, dressed lumber storage, shipping spurs, a power plant, a refuse burner, and machine and a blacksmith shop. It was necessary for all these functions to operate as one unit and produce lumber from the log.⁵⁴

Beginning in the 1920s, advertisements appeared in The Timberman for designing a mill layout by specialists. Such an advertisement from the 1923 journal read, "Twenty-five years' practical experience in designing and building sawmills," along with a picture of a tidy sawmill complex and all the components. A lithograph from that era also illustrates how a common lumber mill complex would be efficiently laid out (see figures 9 and 10).

⁵⁴Ibid., 17.

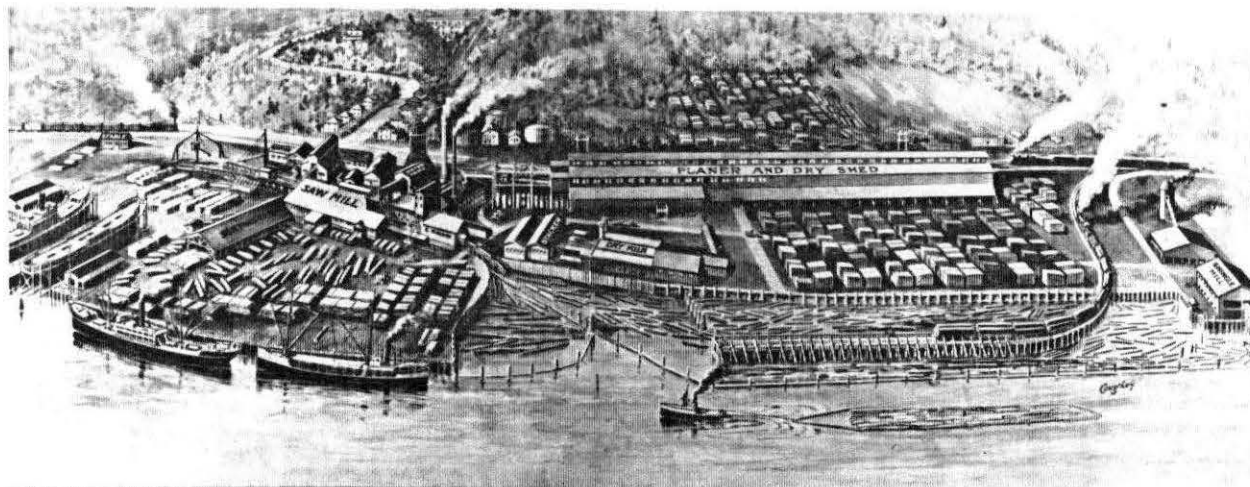


Figure 9. Proposed Site Plan for Mill Complex. Source: Oregon Historical Society.

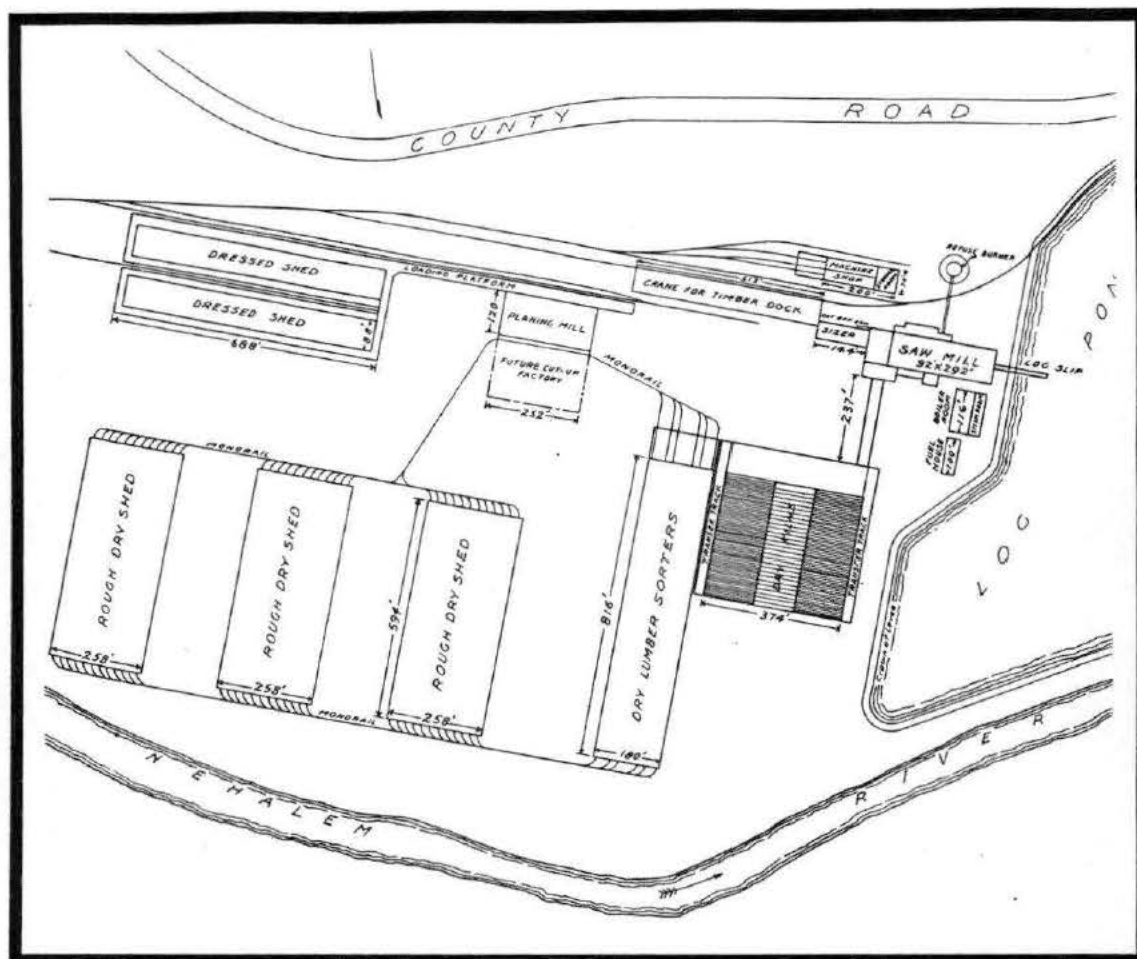


Figure 10. Layout of O-A Mill Complex in Vernonia. Shown without yard. Source: "Oregon-American Lumber Company Begins Construction," The Timberman 23 (April 1923): 37 (Knight Library, University of Oregon, Eugene).

CHAPTER II

LUMBERING LOCATIONS

Early traders and explorers investigating the coastal waters were among the first to fell some of these magnificent spires that grew straight as a ship's mast and so tall that their tops were often hidden from view by low hanging mists.¹

The Douglas fir region is divided into six lumbering areas. Within five, a small town was selected for this study, described, and then researched for its lumber resources. In the Lower Columbia region, St. Helens is a representative town for that lumbering location. It was an important river town with the early activity of a lumbering cargo trade. St. Helens had mills, shipyards, and a steamer landing; later, rail transport was added. Along the tidewater, Garibaldi, located on the northern edge of Tillamook Bay, was a small settlement prior to becoming a mill town in the 1920s. The location made it possible to export lumber by ocean vessels and the railroad, although the operations was totally dependent on rail for their logging supply.

The Coast Range area is represented by the mill town of Vernonia. Sheltered in the midst of a dense forest, it was

¹Sam Churchill, Big Sam (Portland, Oreg.: Binford & Mort, 1965), 115.

a mere agricultural hamlet prior to the introduction of rail lumbering. It became a boom town after the Oregon-American Lumber Company from Kansas City, Missouri, built a large mill complex in the mid-1920s to log their timberland deep in the mountains.

The Willamette Valley itself had no timber supply, but did have level land for a mill site and a steady labor supply for its mills. How agricultural-based towns became mill towns and developed a morphology specific to their location is shown by Cottage Grove, on the upper end of the Valley.

Within the Cascade Range is the former company town of Westfir,² where a railroad, river, timber supply, and a lumber man created this village in the woods. Void of the mill presence today, it is more like a mountain resort (see figure 11).

Lower Columbia and the Mill Town of St. Helens

The Lower Columbia River was one of the first lumbering areas in all the Pacific Northwest. The Hudson's Bay

²A company lumber town is a settlement where a large sawmill (usually over 100M), townsite, utilities, and three-quarters of the structures are owned by the company. Erickson, 346; see also James B. Allen, The Company Town in the American West (Norman: University of Oklahoma Press, 1966).

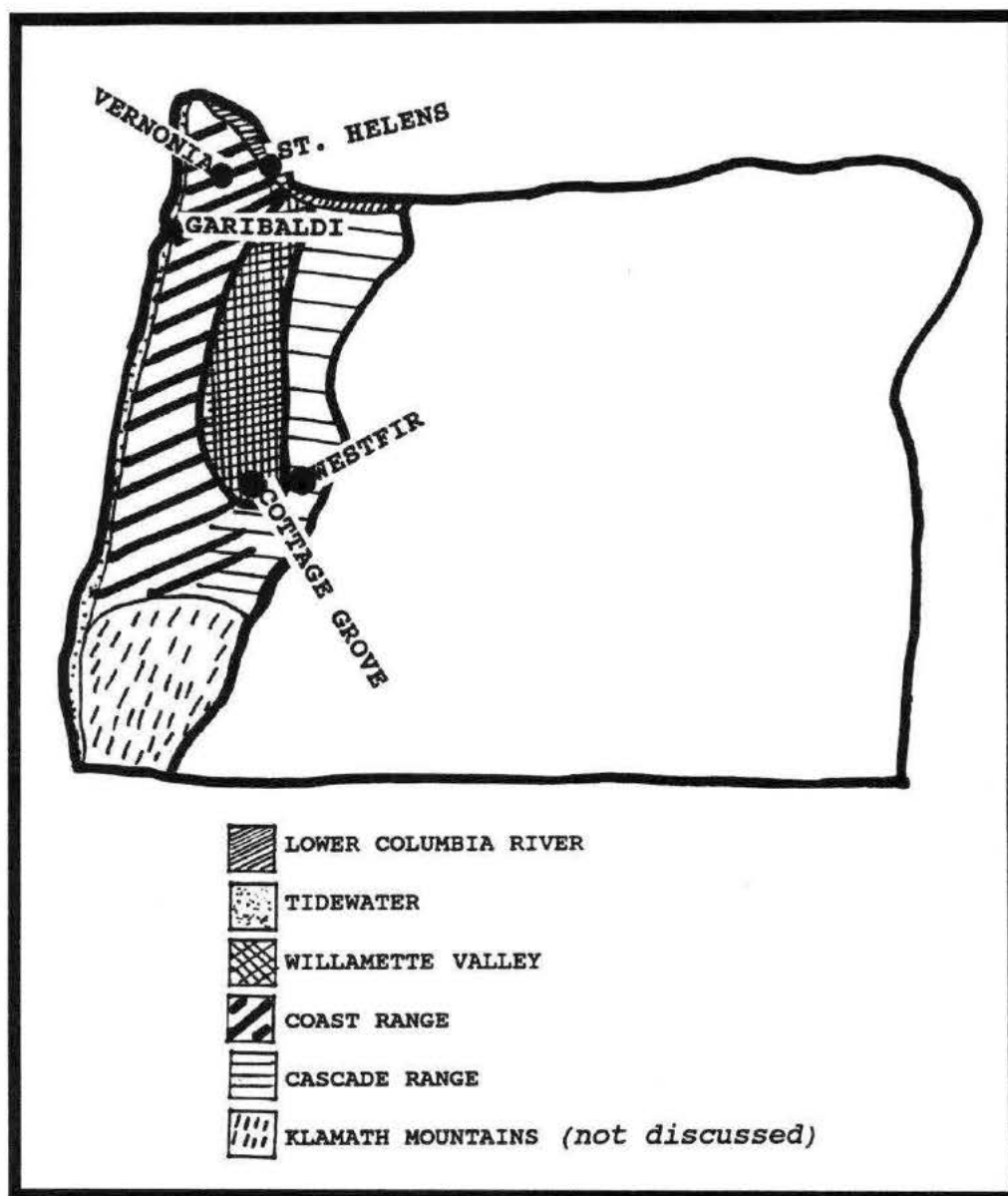


Figure 11. Douglas Fir Region and Town Locations. Source: Author.

Company made a pioneering attempt at an industry about 1827. It was also on this river that Hunt's mill was established in 1844, about 30 miles upstream from Astoria. The mill was built for export trade with the Hawaiian Islands and China. It was difficult to get vessels to carry lumber from the treacherous and then seldom-used Columbia River. The mill prospered for several years, but the navigability of the river proved too precarious for market transport.³

The lower Columbia River was confined mainly to logging operations, with the exception of some milling focal points at Astoria, Rainier, and St. Helens. There were other small, singular mill sites operating along the river and on the Washington side, but they were not as enduring. Logging camps floated their logs to mills at these already established centers.⁴

Even with the establishment of mills and logging activity in the area, many lumber dealers and sea captains began to look for other sources of supply. This was partly due to the nature of the Columbia River. Though Oregonians protested that the river was not a graveyard of ships, the fact remained many vessels went aground there, and other ships waited for days, or even weeks, to cross the bar. The

³Cox, Mills and Markets, 25-26.

⁴Sherman, 13; and Erickson, 243-245.

voyage upstream against the current was time-consuming, costly, and also hazardous due to the river's shifting shoals. Lumbermen looked to other areas, such as the Puget Sound and the redwood coast of California. Lumber development along the Columbia followed a different course; compared to northern ports, production fell behind in the 1860s.⁵

In 1880, the active lumber areas in the Pacific Northwest--Puget Sound, Gray's Harbor, Coos Bay, and the Lower Columbia River--had patterns of production that varied widely. Within the Lower Columbia, mills were expanding, due in part to the building of the Oregon Central and the Oregon and California Railroads during the 1860s. The state itself was experiencing economic growth that stimulated the lumber industry. The mills in the area were smaller than the ones that dominated the Puget Sound area, and were less dependent on outside capital. Though the mills were small, vessels were carrying lumber from the area to distant markets. These mills, generally financed by local money, also had a regional market for their lumber. The broad business base of the Lower Columbia lumber industry was one of its main characteristics.⁶

⁵Cox, Mills and Markets, 56, 138.

⁶Ibid., 158-160; and Cox, "The Lower Columbia Lumber Industry," 160-162.

It was not until the 1920s that "the river was lined with sawmills and active towns, beginning with the water-front milling complex in Portland and moving downstream."⁷ The activity along the lower river was not only sawmills and lumbering, but, like the previous era, there were log dumps, booming grounds, and logging centers. Sam Churchill wrote this description of the scene from the deck of a steamer heading from Astoria to Portland in the 1920s:

Log rafts by the dozen, guided by sturdy little tugs, nosed from secluded sloughs and other convenient logging railroad unloading sites and headed for the never silent mills that stood almost within sight of each other along the Oregon and Washington shores.

Smoke from the stacks of these mills sometimes clung to the shoreline for a hundred miles. On the night trips up the river the glow of their waste burners and dock lights outshone the feeble efforts of the towns of which the mills were supposedly only a part.⁸

The town of St. Helens is situated along the Lower Columbia River 20 miles downstream from Portland.⁹ Bartholomew White had a sawmill and a grist mill that were erected in 1844 in the area now known as St. Helens. In 1845, Captain H. M. Knighton settled on the site as his donation land claim. He laid out the town in 1847,

⁷Erickson, 243.

⁸Churchill, 115.

⁹St. Helens is two towns: the old St. Helens faces the river; about a mile away, along the highway strip, is the new St. Helens, formerly called Houlton. The old town with the river setting is the focus of this study.

intending that it be a competitor to Portland by claiming the location to have deep-sea navigability (see figure 12)¹⁰.

In the 1870s, the Muckle brothers, Charles and John, purchased the mill site on the St. Helens waterfront. A lithograph of their mill illustrates the steamers during the Cargo Era, and the town laid out behind the river front and mill site (see figure 13).

In 1904, a fire destroyed the Muckle brothers' mill and many of the surrounding buildings. Four years later, Charles and Hamlin McCormick purchased the burned mill site and made plans to reconstruct it for their own lumber endeavor. The two brothers had ventured west from their native Michigan, where the older of the two, Charles, had been employed in lumbering. Prior to arriving in St. Helens, the brothers were both engaged in lumber sales in San Francisco. Realizing that the Pacific Northwest had a promising future in the lumber industry, they sought a place within the region to establish a business. For a while, Hamlin McCormick had a sawmill in the upper Willamette Valley near Cottage Grove, but he finally chose a site on the Columbia River because of the waterfront location, deep harbor, and available

¹⁰Lewis A. McArthur Oregon Geographic Names (Portland: Oregon Historical Society Press, 1992), 732-733.

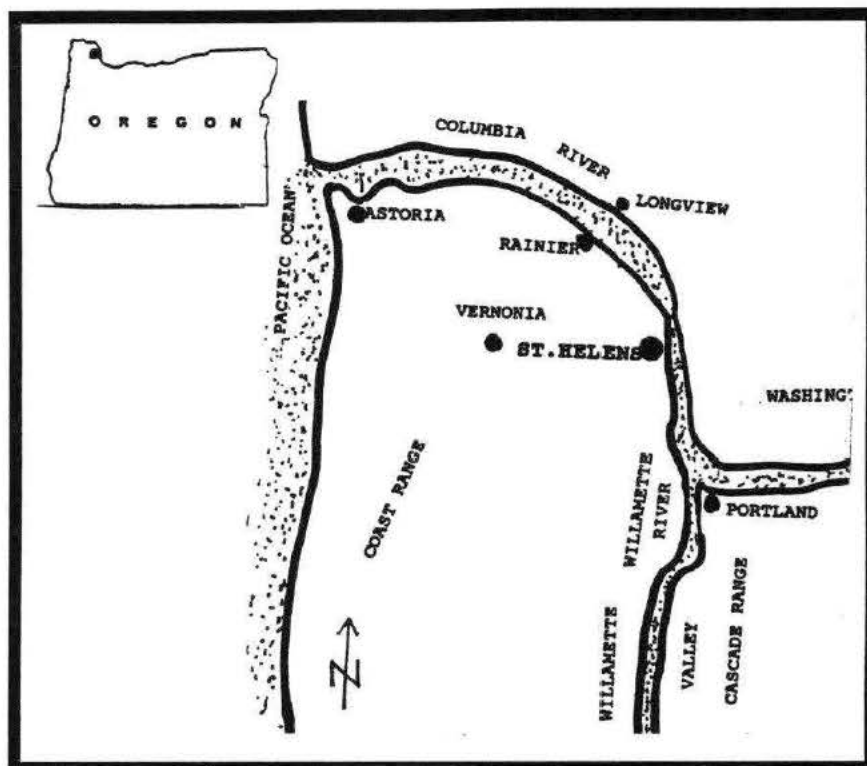


Figure 12. Regional Map of St. Helens.
Source: Author.

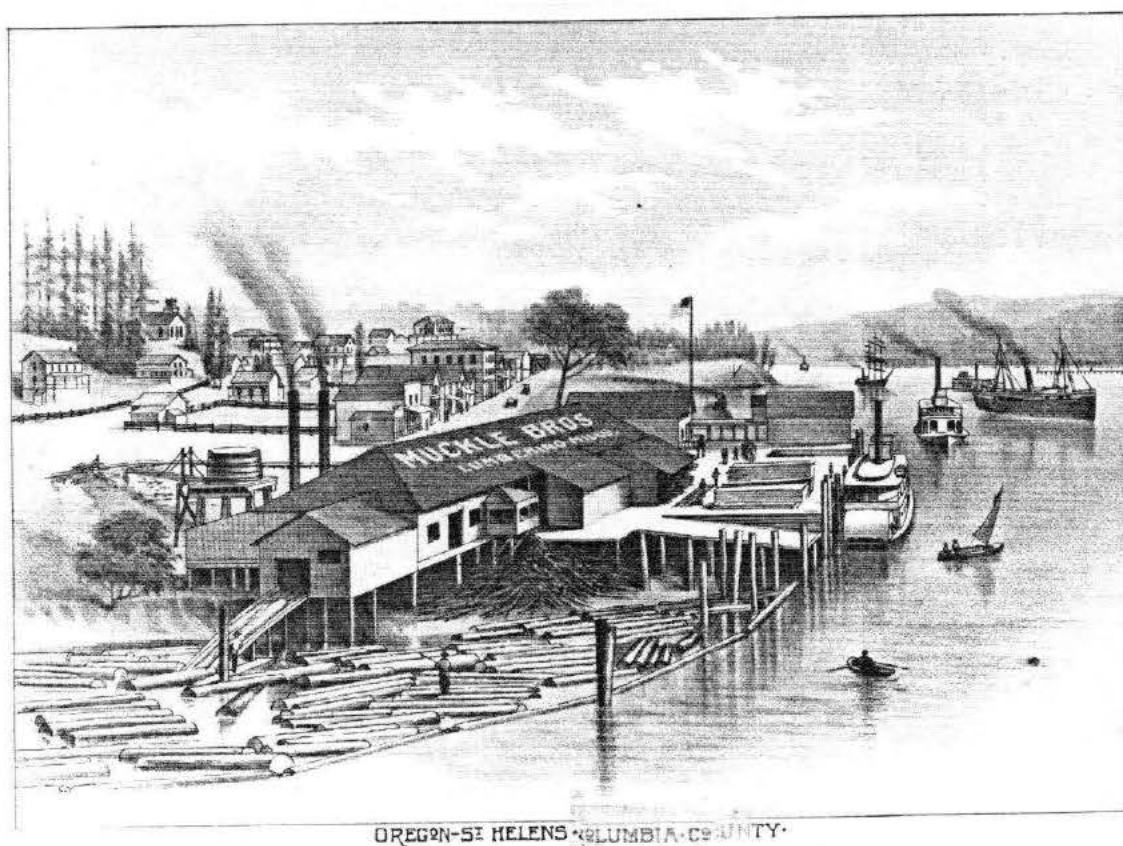


Figure 13. Lithograph of Muckle Brothers Mill, St. Helens, date unknown. Mill burned in 1904. Source: OHS.

rail service. The railroad's main line ran 5 miles to the northeast at Goble.¹¹

Construction of the McCormick's enterprise, the St. Helens Lumber Company, was completed in 1911. The lumber produced was not shipped by rail until 1919, when a rail spur was laid from the main line. When the brothers discovered there were not enough commercial ships available, they launched the St. Helens Shipbuilding Company and built their own vessels (see figure 14). Hamlin "Ham" McCormick, always concerned about waste at the sawmill, started St. Helens Wood Products in 1923 to manufacture broom and mop handles from the refuse.¹²

In 1916, Charles R. McCormick and Company ran advertisements in The Timberman for both wholesale lumber and ocean-going wooden vessels. The ad for lumber stated it was shipped by both rail and ships, although some sources state rail shipping did not come until several years later. The fleet of steamers carried lumber to his lumberyard in San Diego, California. The main office was in San Francisco, with a branch office in Portland (see figures 15 and 16).

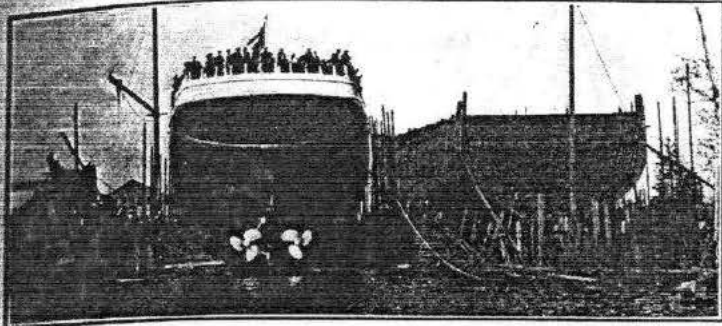
¹¹Pearl Becker, "H. F. McCormick," Columbia County History 4 (1965): 33 (Special Collection, Knight Library, University of Oregon, Eugene).

¹²Richard Spiro, "McCormick Name Synonymous With City's Early Industry" The Chronicle, March 1, 1989, 5 (Columbia County Historical Museum, St. Helens, Oregon); and Becker, 33.



Figure 14. Sailing Vessels at McCormick Dock, date unknown. St. Helens Mill Company was also known as Chas. R. McCormick and Company. Source: OHS.

St. Helens Shipbuilding Co.
PLANT: ST. HELENS, OREGON



SCENE IN SHIPBUILDING YARDS AT ST. HELENS, OREGON.
(COLUMBIA RIVER)

We build vessels with large Douglas Fir (Oregon Pine) Timbers, running up to 150 feet in length.

*Our Vessels are Classified in the
Bureau Veritas*

Builders of Large Ocean-Going Wooden Vessels

With the present price of steel vessels, now is the time to take advantage of wooden construction.

***Wooden Vessels Coming Back
to Their Own***

WRITE FOR INFORMATION

CHAS. R. McCORMICK & CO.

AGENTS

800 FIFE BUILDING, SAN FRANCISCO, CALIFORNIA

Figure 15. Advertisement for St. Helens Shipbuilding Company. Note use of "Douglas Fir (Oregon Pine)" designation. Source: Advertisement, The Timberman 18 (December, 1916): 3; OHS.

Chas. R. McCormick & Co.

CHAS. R. MCCORMICK, President SIDNEY M. HAUPTMAN, Sec'y-Treas.

WHOLESALE LUMBER

MANUFACTURERS AND RAIL
AND CARGO SHIPPERS OF

Creosoted Piling **Douglas Fir** Ties and Lumber

Annual Shipments 225,000,000 feet

MILLS AT ST. HELENS, OREGON
H. F. MCCORMICK, Manager

Branch Offices:
PORTLAND, ORE., E. H. MEYER, Manager
LOS ANGELES, CAL., JOHN OLSON, Manager
NEW YORK, N. Y., 17 Battery Place, E. D. KEEVENY, Agent

CREOSOTING PLANT, ST. HELENS, OREGON
W. B. WIGGINS, Manager

YARDS AT SAN DIEGO, CALIFORNIA
F. J. GARLAND, Manager

STEAMERS			
"KLAMATH"	"WILLAMETTE"	"YOSEMITE"	"MULTNOMAH"
"CELILO"		"WAPAMA"	
BUILDING 1,000,000 ft. Capacity		BUILDING 1,000,000 ft. Capacity	

AUXILIARY SCHOONERS	
BUILDING 2,000,000 ft. Capacity	BUILDING 2,000,000 ft. Capacity
BUILDING 2,000,000 feet Capacity	

MAIN OFFICE: 800 FIFE BUILDING, SAN FRANCISCO, CALIFORNIA

Figure 16. Advertisement for Chas. R. McCormick & Co. Note branch and main office locations. Source: Advertisement, The Timberman 18 (December 1916), 3; OHS.

Hamlin McCormick was somewhat of a folk hero within the community and resided in the town, whereas his brother, Charles, president of the Company, had a residence and office responsibilities elsewhere. Hamlin McCormick's fine Craftsmen home remains on Second Street today, facing the river overlooking the mill site. He was referred to as the "leader of the industrial life of the city."¹³

The 1922 Abbey's Register, a directory of Pacific Northwest sawmills, logging companies, and lumber manufacturing, listed St. Helens as having four sawmilling enterprises, all under the McCormick management. By the 1920s, "St. Helens was quintessential mill town."¹⁴

Although mill ownership changed in 1926, the name remained the Charles McCormick Lumber Company. In the 1926 Abbey's Register, a cedar pole and piling company and

¹³Becker, 33, 34; and "St. Helens Downtown Historic District," National Register of Historic Places Inventory: Nomination Form (Washington, D.C.: United States Department of the Interior, National Park Service, 1984), item 7, p. 75.

¹⁴Abbey's Register and Year Book of the Western Logging, Lumber and Wood Using Industries (Portland, Oreg.: The Industrial Service Co., 1922) 93, 95 (hereafter Abbey's Register, with appropriate date); "St. Helens," The (Scapose, Oregon) Spotlight, February 22, 1989, B-5 (Archive, St. Helens Public Library); and Erickson, 152.

another mill were listed for St. Helens. The other sawmill had a 60M capacity, compared to McCormick's 250M.¹⁵

The mill site is located at the edge of the Multnomah Channel, a slough of the Columbia River. This wet-point location gave the milling complex access to water for shipping and log storage. The mill had steam fuel and supplied the town with lights. Today, the mill site is fenced off; on the south end, Boise-Cascade occupies a plant. A few deteriorating pilings in the channel suggest the location of the former log storage (see figure 17)¹⁶.

A cursory survey of the residential buildings around the McCormick mill site reveals housing of the popular Bungalow and Craftsman styles. It is difficult at this level of research to determine precisely how much housing was developed by the McCormick Company. The 1984 Historic District Statement noted, in regards to the modest bungalows: "It appears that some of these may have been built by the McCormick's for mill employees" (see figure 18).¹⁷

¹⁵Spiro, 5; and Abbey's Register, 1926, 127. "M" designates board feet of lumber per day.

¹⁶Sanborn Insurance Fire Map, "St. Helens, 1921" (Archives, Kerr Library, Oregon State University, Corvallis). This housing was not mapped on the 1916 map; however, it is shown on the 1921 map.

¹⁷"St. Helens Downtown Historic District," item 8, p. 3.

Within the McCormick sawmill nucleus, a worker housing cluster was identified. Not located on the cliffs (where prominent residents lived), but below a bluff without a view of the waterfront, between Fourth (formerly known as "Winter") and Fifth ("Summer") streets, it is still referred to as "Bungalow Flats."



Figure 17. Aerial View of St. Helens Lumber Company. The mill across the water is the Island Lumber Company, one of the four plants operated by the McCormick in St. Helens. Drying lumber was shipped by rail. Source: Aerial View: Sidebar, The Timberman 23 (July 1922), 62; OHS.



Figure 18. St. Helens Sawmill Nucleus. Square indicates location of "Bungalow Flats." Source: Author.

On the 1921 Sanborn Map, a planked curved road dissects the usual rectangular grid. On the 1921 map, Cowlitz was a through-street. A tennis court, with a wooden surface, was located at the corner of the block, no doubt built as

recreation for the mill workers. Some houses face Fourth Street while others face the supplementary wooden road, giving the one-block arrangement a clustered appearance.¹⁸

Four uniform, wooden houses of simple, one-story rectangular construction with a low-pitch, gable roof face Fourth Street. The porch and its roof are supported by plain posts and cover only the front entrance door. There is only a slight variation in their outside appearance. The remaining houses in this group have more variation, yet are modest and one story (see figure 19).

From its early beginnings as a cargo lumber town to the introduction of rails, St. Helens' development was based on the lumber industry. During the McCormick's ownership of the mills, the town's population increased 34 percent (between 1910 and 1920). The revitalization of the commercial core was related to the lumber activity. The name McCormick is well remembered; a recent article in the local newspaper summed it up in the title, "McCormick Name Synonymous With City's Early Industry."¹⁹

¹⁸Sanborn Insurance Fire Map, "St. Helens, 1916" (Archives, Kerr Library, Oregon State University, Corvallis).

¹⁹Spiro.

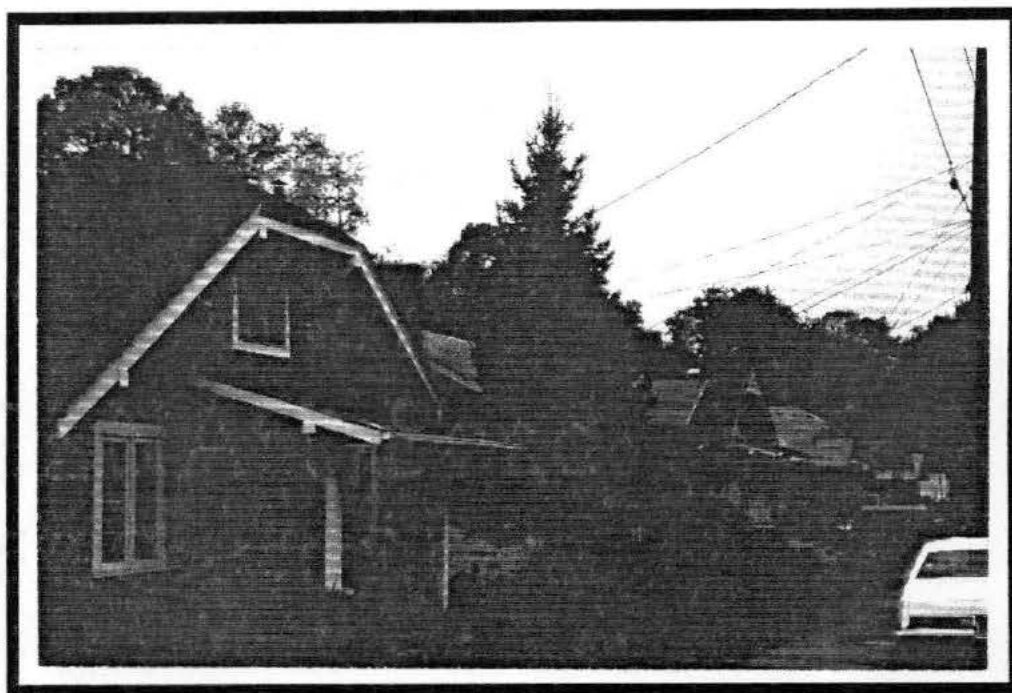


Figure 19. Four Houses in "Bungalow Flats" on Fourth Street, 1992. Source: Author.

Tidewater and the Town
of Garibaldi

The coastal fringe or tidewater is a narrow strip between the Pacific Ocean and the Coast Range. Lumber activity along this coastline has a varied lumber history, beginning with small sailing ships exporting lumber to China and the Sandwich Islands. The mill towns along this coastal ribbon of land vary greatly, from the former mill town of

Garibaldi in Tillamook Bay to the well known and still active town of Coos Bay in the bay of the same name. Some towns no longer exist, such as Hobsonville, and others have changed from their bygone lumbering days, such as Florence, Lincoln City, Gardiner, or Bay City.²⁰

Oregon's forbidding coastline was a deterrent for ocean-going vessels. The timber supply of the Coast Range was notably extensive, but the unfriendly rugged coast did not allow ships a good harbor and therefore the timber supply remained unapproachable. There was some activity in the bays or bar harbors.²¹ On Winchester Bay at the mouth of the Umpqua River was the Gardiner Mill Company. This bay was not without a sand bar causing the usual expected problems for shipping vessels. The Company's central office was in San Francisco.²²

Coos Bay, formerly Marshfield, was an early sprawling lumber town along the bay. In the mid 1870s, there were four sawmills in operation in the area.²³

²⁰The transference of names from one lumbering region to another was common. Gardiner, Oregon, was named after Gardiner, Maine; Bay City, Oregon, for Bay City, Michigan.

²¹A bar harbor is difficult to enter because the bay's entrance is clogged by sand deposits from ocean currents.

²²Cox, Mill and Markets, 165.

²³Ibid., 191.

To the north, Tillamook Bay also had a budding port town of Hobsonville. A bayside lumber mill was constructed there in 1883. This steam-driven sawmill was accompanied by mess halls, a company hotel, and worker housing. The mill shipped lumber south to California by schooners. At the peak of production, it employed 40 men. After closing in 1907, it never reopened and the buildings fell into ruin (see figure 20).²⁴

Interest in lumbering along Tillamook Bay was not rekindled until the First World War when the United States Army organized the Spruce Production Division to build and man new sawmills on the West Coast. Sitka spruce was particularly in demand for airplane construction. A southern company, Cummings-Moberly, started building the Garibaldi mill in 1917, with civilian engineers and soldiers as laborers.²⁵

Sam Churchill witnessed the army's involvement at one of their logging camps and gave this account:

Camp 7 was a Spruce Division camp supervised by the Spruce Production Corporation set up by the War Department to log spruce timber used in airplanes. Millions of board feet of spruce from the Pacific Northwest took to the air in World War I as wing frames and fuselages of Allied warplanes. There were about three hundred

²⁴Daniel D. Strite, "Hurrah for Garibaldi," Oregon Historical Quarterly 77 (September 1976): 222; Orcutt, 222-226; and Erickson, 157.

²⁵Strite, "Hurrah for Garibaldi," 213.



HOBSONVILLE, 1890.

This mill built in the 1880's in spite of great odds grew to be the largest, most important mill in the county, and then dropped into disuse and decay.

Figure 20. Hobsonville, Oregon, 1890. Mill operated from 1883 to 1907. Source: Ada M. Orcutt, Tillamook: Land of Many Waters (Portland, Oreg.: Binford & Mort, 1951), 118f.

and fifty men at Camp 7, all of them in the Army. They had their rifles and ammunition with them at the camp even though the nearest fighting trench was some seven thousand miles east in a land I knew only by name, France.²⁶

The Coastal town of Garibaldi is located on the northern edge of Tillamook Bay, across Miami Cove from the former

²⁶Churchill, 123.

lumber town of Hobsonville. Tillamook Bay is formed by the estuaries of the Tillamook and Wilson rivers. Situated in the sheltered Miami Cove, this location offered an ideal mill site location because the bay provided both log storage and ship docking. Ships of medium draft could enter the two-mile-wide bay. There was accessible rail transportation for rail shipments, as well as level ground large enough for milling operations and a lumber storage yard. The adjacent hillside was suitable for housing (see figure 21).²⁷

The timber source for the Cummings-Moberly mill was to be supplied by the Whitney Company. Whitney had purchased timberlands up the Kilchis River drainage. The Whitney family had been in the lumber business since approximately 1850 in Massachusetts and New York. After the depletion of the eastern forest, they moved their business to Detroit, Michigan. When the Lake States forests were cut out, they bought heavily from 1900 to 1904 in Oregon and Washington.²⁸

The critical demand for airplane spruce was probably an incentive for Whitney to open his timberland up the Kilchis River, where heavy stands of gigantic spruce grew on the

²⁷E. R. Huckleberry, M.D., The Adventures of Dr. Huckleberry: Tillamook County, Oregon (Portland: Oregon Historical Society, 1970), 21; and Dicken, 33.

²⁸Daniel D. Strite, "Up the Kilchis, Part I," Oregon Historical Quarterly 72 (December 1971): 300.

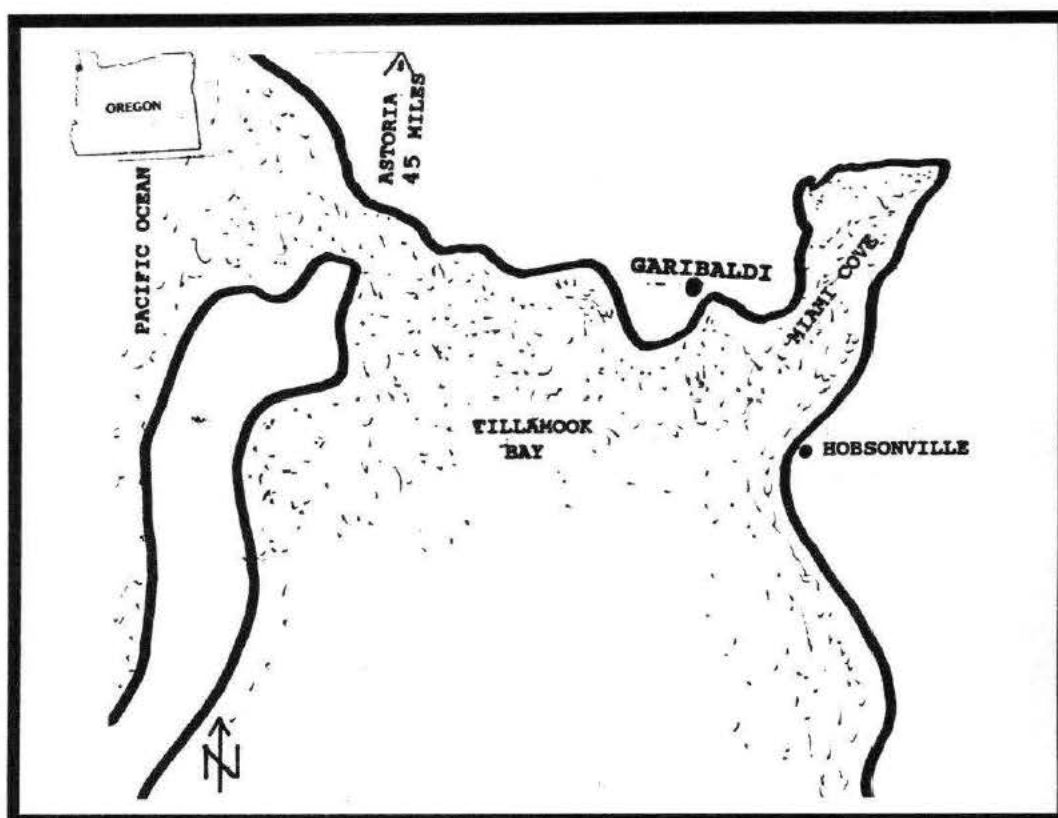


Figure 21. Regional Map of Garibaldi.
Source: Author.

river flats. An engineering crew made plans for a logging railroad and accompanying necessities for this logging activity (see figure 22).²⁹

The mill of Cummings-Moberly was under construction until 1919, when one of the partners died and further

²⁹Ibid., 308.

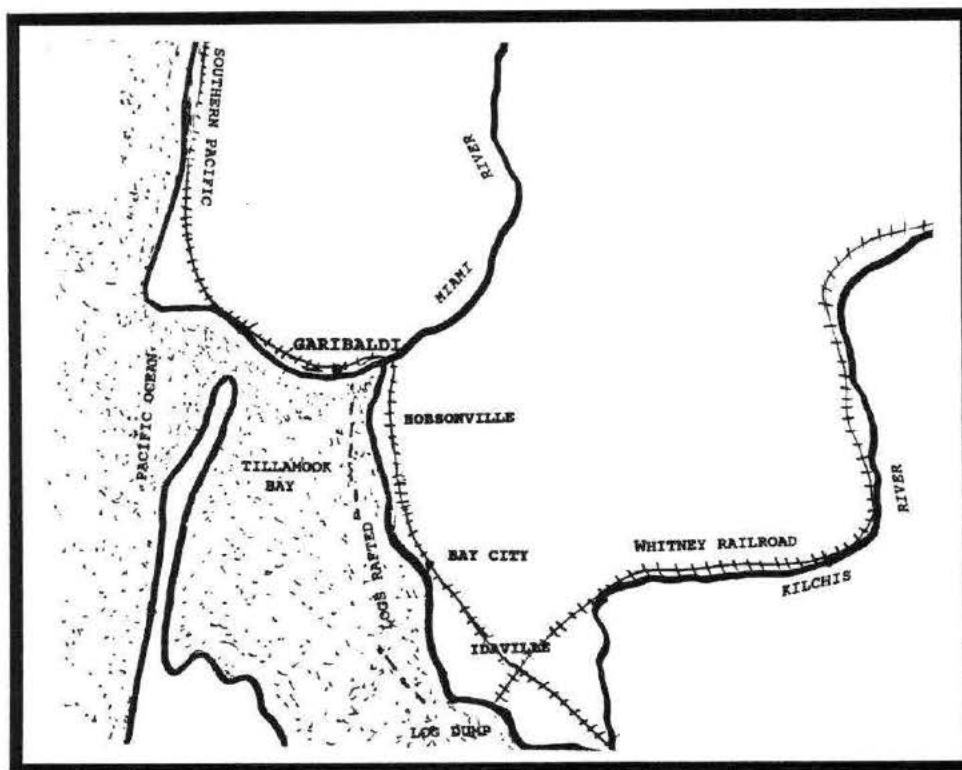


Figure 22. Whitney's Logging System.
Source: Author.

construction was halted. After Whitney's logging operation was completed in late 1921, the unfinished Cummings-Moberly mill was purchased by Whitney in order to have an outlet for his timber. The unfinished mill had been designed by a Southerner who was not familiar with how large the trees of the Pacific Coast were compared to the southern yellow pine. The mill therefore had to be redesigned to handle the huge

Douglas fir, cedar, and spruce that ranged up to 12 feet in diameter. The Whitney mill began the manufacturing of timber in summer 1922, with the timber supply being rafted down from Idaville (see figure 23).³⁰

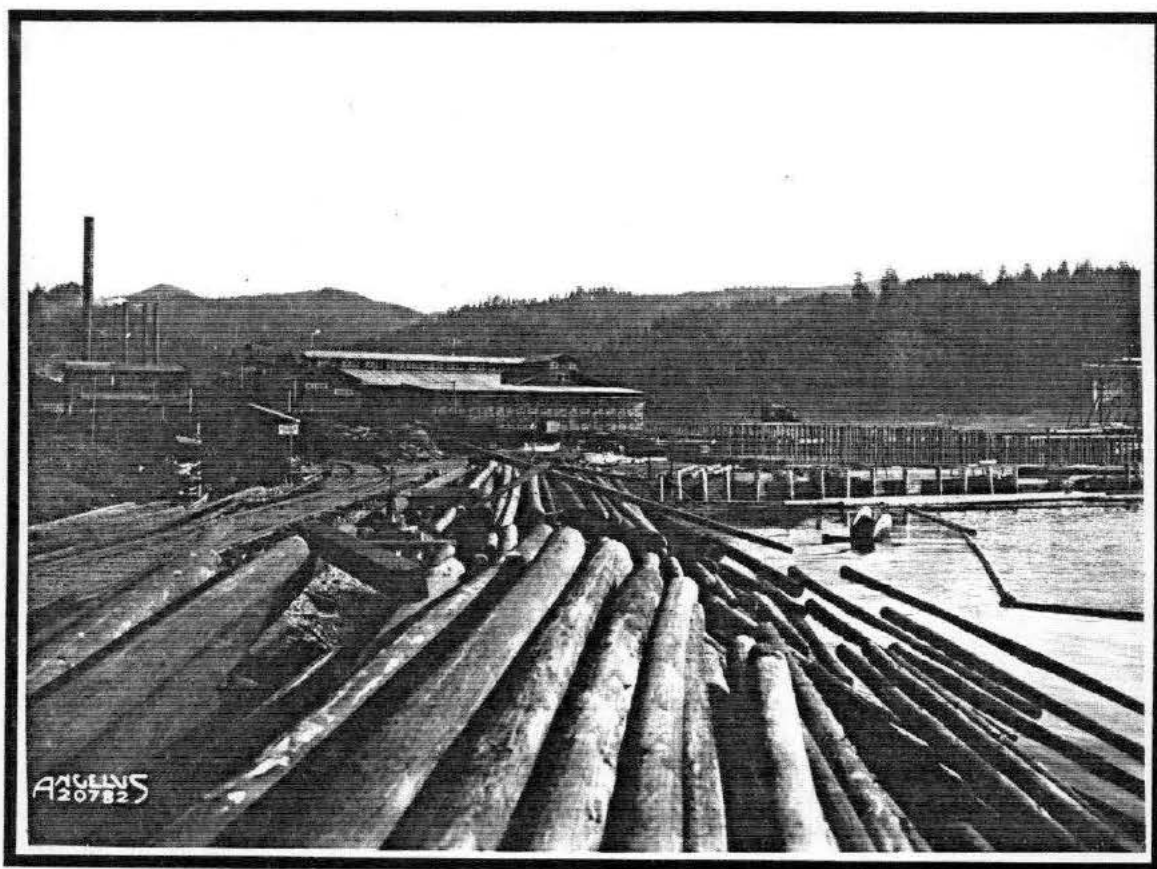


Figure 23. Whitney Mill Under Construction, ca. 1921. Source: OHS.

³⁰Strite, "Hurrah for Garibaldi," 213-214.

Construction of the 50-acre mill site included the dredging of mud and sand to form a ship channel and prepare a level building site. The building of the mill was not the only preparation needed to establish a lumber operation. Gathering a dependable work force was equally important. A convenient physician who could attend to the many industrial accidents helped to entice workers to the area; on a contract basis Dr. Huckleberry became the available physician who saw to the workers needs. In his remembrances, he recalled the mill's advanced planning:

To attract a permanent crew, the company had laid out a townsite and sold lots to employees for a low price. They also allowed the men to buy lumber, to be paid for by monthly payroll deductions. The power plant was built large enough to supply juice to the town as well as the mill. When we got there, the only completed houses belonged to some of the original fishermen or Indian families, but all over the place people were building their own homes.³¹

The first log at the newly constructed mill was sawed in June 1922, and the plant was described as "one of the largest in the entire country." It was the largest single bandsaw mill on the Oregon coast at the time. Whitney had a branch office in Portland and his main office in Detroit,

³¹Huckleberry, 21.

Michigan. Interestingly, no ads for the Whitney Company were carried in the local trade journal, The Timberman.³²

In 1927, Whitney merged with A. B. Hammond, another lumber baron whose general office was in San Francisco and who had mills in Mill City and Astoria, Oregon, and San Pedro, California. The name changed to the Hammond-Tillamook Lumber Company. Hammond needed cargo lumber for his distribution yard in California, so the acquisition of the Garibaldi mill was a welcome addition. After Hammond became the major shareholder, logging on the Kilchis River was discontinued.³³

Economic hardships came to the mill at Garibaldi, as it did to the rest of the United States in the 1930s. The depression, plus the disastrous Tillamook fire of 1933, caused the mill's production and labor force to diminish.³⁴ In April 1935, the mill closed after the death of Hammond and remained closed for eight years. In 1943, the Oceanside Lumber Company was established in its place, and in 1944 a plywood plant opened. In 1974, that plywood operation closed and the machinery and equipment were sold at auction

³²Strite, "Hurrah for Garibaldi," 214-216; and "Garibaldi Lumber Plant One of Most Modern in Country," Sunday (Portland) Oregonian, August 20, 1922, sec. 4, p. 6 (Special Collections, Knight Library, University of Oregon, Eugene).

³³Strite, "Up the Kilchis, Part IV," 222-223.

³⁴Orcutt, 141-144.

the following year. The mill structures slowly deteriorated over the years and were torn down in the mid 1980s.³⁵

The mill site located on the water front had the advantage of both rail and water for export markets. On the 1929 Sanborn map, the mill layout included the ship dock and a large yard for drying lumber that would be shipped by rail. The wet-point location of the bay also allowed for ample log storage. Visually, the mill dominated the waterfront for both the residences and the townsite across the cove (see figures 24 and 25).

Garibaldi was not a company town, although it so nearly appeared to be one that this explanation appeared in the Oregonian for clarification:

A new town is being developed at Garibaldi. It is not to be a mill town in the sense that the company is to own and control the activities of the community. Lots are being sold at reasonable rates to employees. Homes will be built by the purchaser and in time the little city will be incorporated. Its citizens will elect their own officers. The mill owners will take no more part in the administration of the city's affairs than will their employees.³⁶

On the city map, the street pattern is different from the grid formations to the north. Within the sawmill

³⁵Jack Graves, interview with author, Garibaldi, Oregon, April 22, 1992; and Daniel D. Strite, "Hurrah for Garibaldi, Part II," Oregon Historical Quarterly 73 (March 1972): 365-368.

³⁶"Garibaldi Lumber Plant One of Most Modern," (Portland Oregonian, August 20, 1922, sec. 4, p. 6 (Special Collections, Knight Library, University of Oregon, Eugene)).



Figure 24. Hammond-Tillamook Lumber Mill, ca. 1930. Source: OHS.

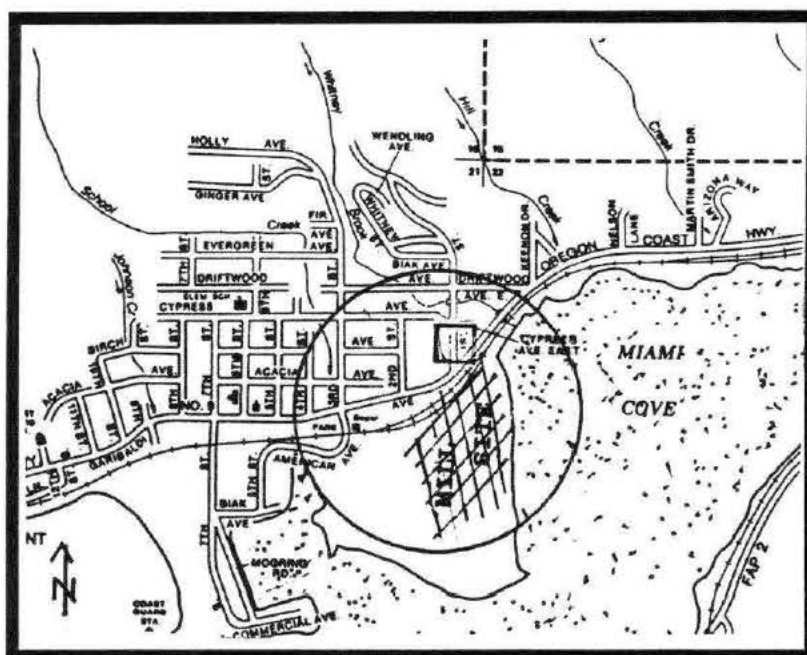


Figure 25. Garibaldi Sawmill Nucleus, detail.
Source: Derived from Garibaldi City Map, Tillamook County (Salem: Oregon Department of Transportation).

nucleus itself, a parallel row of worker housing was located just northeast of the mill complex across the highway. These houses were used by the foremen or supervisors of the plant and built by the company; the street was tagged "Mill Row." On the 1929 Sanborn map, near the Whitney Hotel there was a tennis court. In 1925, Dan Strite saw Garibaldi for the first time and recalled seeing "the double row of

company housings lining the plank road leading from the Coast Highway to the Whitney Inn" (see figure 26).³⁷

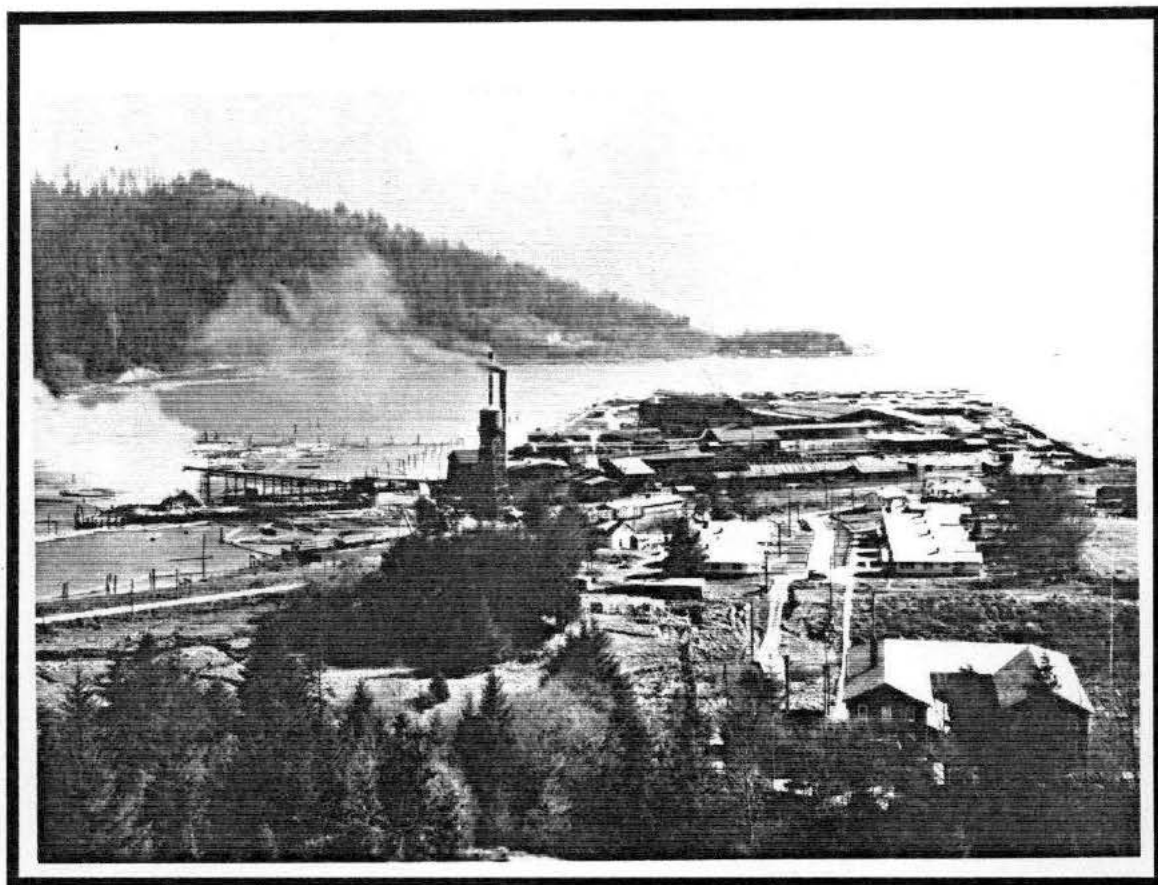


Figure 26. Company Housing and Garibaldi Mill, ca. 1925. Note planked road between houses and Whitney Inn in the foreground. Source: OHS.

³⁷Strite, "Hurrah for Garibaldi, Part II," 356; Jack Graves, interview with author, April 22, 1992; and Sanborn Insurance Fire Map, "Garibaldi, 1929" (Archives, Kerr Library, Oregon State University, Corvallis).

The houses are uniform in age, closely-spaced, without garages, and have only slight modifications in porch design. Built for management workers, they were within easy walking distance from the mill. Lining both sides of the street these one-story bungalows with low gable roofs were built in 1921 and remain today (see figures 27).

All that remains of the mill complex from its industrial golden age is the concrete smoke stack and the rapidly deteriorating planing mill. These two industrial artifacts are a mere segment of the mill unit that had a milling capacity of 250M, or 250,000 board feet of lumber per day.

The impact of the Whitney Company and later the Hammond-Tillamook Lumber Company brought tremendous growth to this coastal town. From a population of 400 in 1923, the town increased to 1,200 by 1925. The lone smoke stack has now become a milestone for passing tourists along the Coast Highway. It is a reminder of a previous lumbering era.

The Coast Range and the Town of Vernonia

A dense forest of large old-growth firs was located in the northern end of the Coast Range. The terrain is rough and in places steeply mountainous, making the timber inaccessible by the early logging methods of the axe and oxen. By the 1890s, throughout the Pacific Northwest, steam donkey

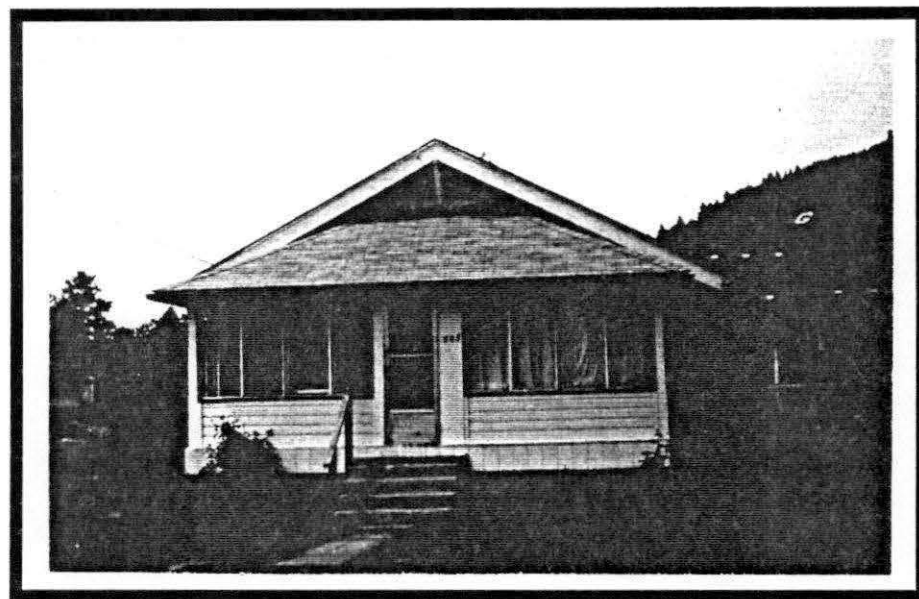
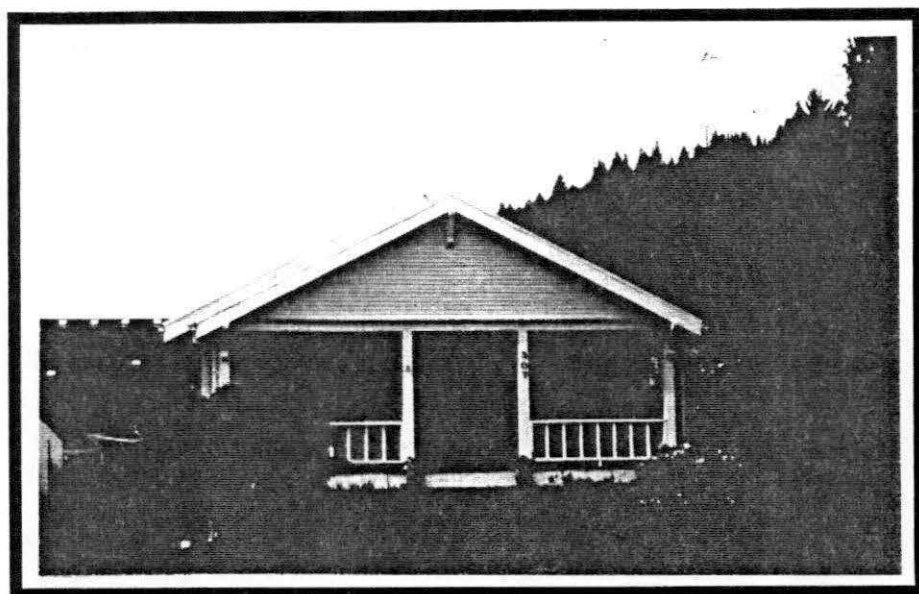


Figure 27. Porch Variations, Garibaldi Company Housing, 1992. Source: Author.

engines and railroads were giving loggers entrance to these outlying timber supplies. With access into these remote regions, large industrial complexes followed to manufacture the timber into lumber.

The initial activity in this wilderness came at the turn of the century, when timber barons began to speculate on the land. A decade or two later, loggers arrived in these unbroken forests. The area appeared to have enough trees to cut for "a thousand years."³⁸ Within this rugged interior, heavy rainfall and a mild climate produced some of the biggest trees in the entire Douglas fir region.

In the midst of these trees was the Nehalem Valley, named after the Nehalem Indians from the Salish tribe. The town of Vernonia is located on the Nehalem River 30 miles west of St. Helens and 45 miles northwest of Portland (see figure 28).³⁹

In 1876, settlement began in the area of Vernonia. Pioneers purchased land from the federal government and cleared it for farming. Vernonia was an isolated agricultural village where a sawmill was a necessity for the general building needs: "About 1880, or a little later, Sam Lowell built a small sawmill on his place about a quarter of

³⁸Churchill, 7.

³⁹McArthur, 867.

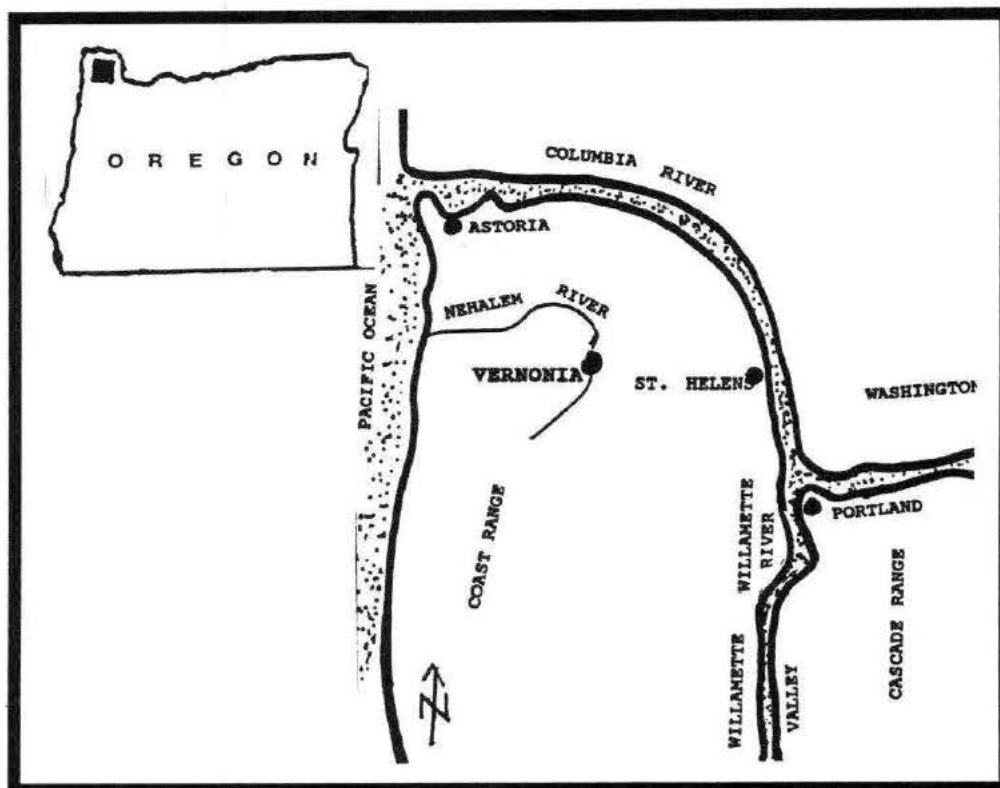


Figure 28. Regional Map of Vernonia.
Source: Author.

a mile from the mouth of Beaver Creek and when someone wanted lumber they helped saw it. Sometimes Sam had only one helper."⁴⁰

The town was incorporated in 1891, and locals looked for ways to advance their economy. At the time, the

⁴⁰"Last Load Ends Era," Vernonia (Oregon) Eagle, July 28, 1966, n.p.

railroad was anticipated as the answer to ease their isolation. Ever since the narrow gauge line from Astoria to Seaside was laid in 1886, there were attempts to project a rail line into the timber-rich northwest coast country. A railroad was laid down the Nehalem River in 1911 through the settlements of Banks and Timber, but it bypassed Vernonia.⁴¹

Lacking a good transportation route, Vernonia remained outside a trading network. All that began to change in 1922, when land to the east of the community was being cleared by the Oregon-American Lumber Company (commonly, referred to as "O-A"). Vernonia was chosen as a base for the Company because of level land for the large milling plant and the proximity to their timber source, and the small community was perceived as a foundation for dependable workers.

Initially, a logging camp was established to ensure the supply of raw logs. The camp was set up in 1922, and for two years logs were hauled by rail to the Columbia River, where they were sold on the open market. The mill was completed in 1924, and all the logs were then sent to the mill in Vernonia.⁴²

⁴¹Howard McKinley Corning, ed., Dictionary of Oregon History (Portland, Oreg.: Binford & Mort, 1989), 174.

⁴²"Last Load Ends Era."

While the mill complex was being built, there was great anticipation of the town's economic future. The 1923, Columbia County Chamber of Commerce promoted Vernonia as the "center of important new industrial development."⁴³

The Oregon-American Lumber Company had been organized by Central Coal and Coke Company from Kansas City, Missouri. In 1923, a spokesman for the company gave an address in Portland, entitled "Lumber Production of the West and South." In his talk, he stated there was a "serious depletion of lumber production in the South," adding that "our next source of timber supply is the West Coast." The entire speech was printed in The Timberman with a following article, "Oregon-American Lumber Co. Begins Construction," giving the dimensions of all the buildings as well as a diagram of the mill layout. It showed the mill site situated between the rail spur and the Nehalem River and abutting the log pond. The monorail track illustrated the movement of the lumber from the dry storage shed to the planing mill (see figure 29).⁴⁴

⁴³"An Invitation To Visit and Make a Home in Columbia County" (Columbia County [Oregon] Court and Chamber of Commerce, 1923), 27 (Special Collection, Knight Library, University of Oregon, Eugene).

⁴⁴Charles S. Keith, "Lumber Production of the West and South" The Timberman 24 (April 1923): 36-37 (Knight Library, University of Oregon, Eugene).

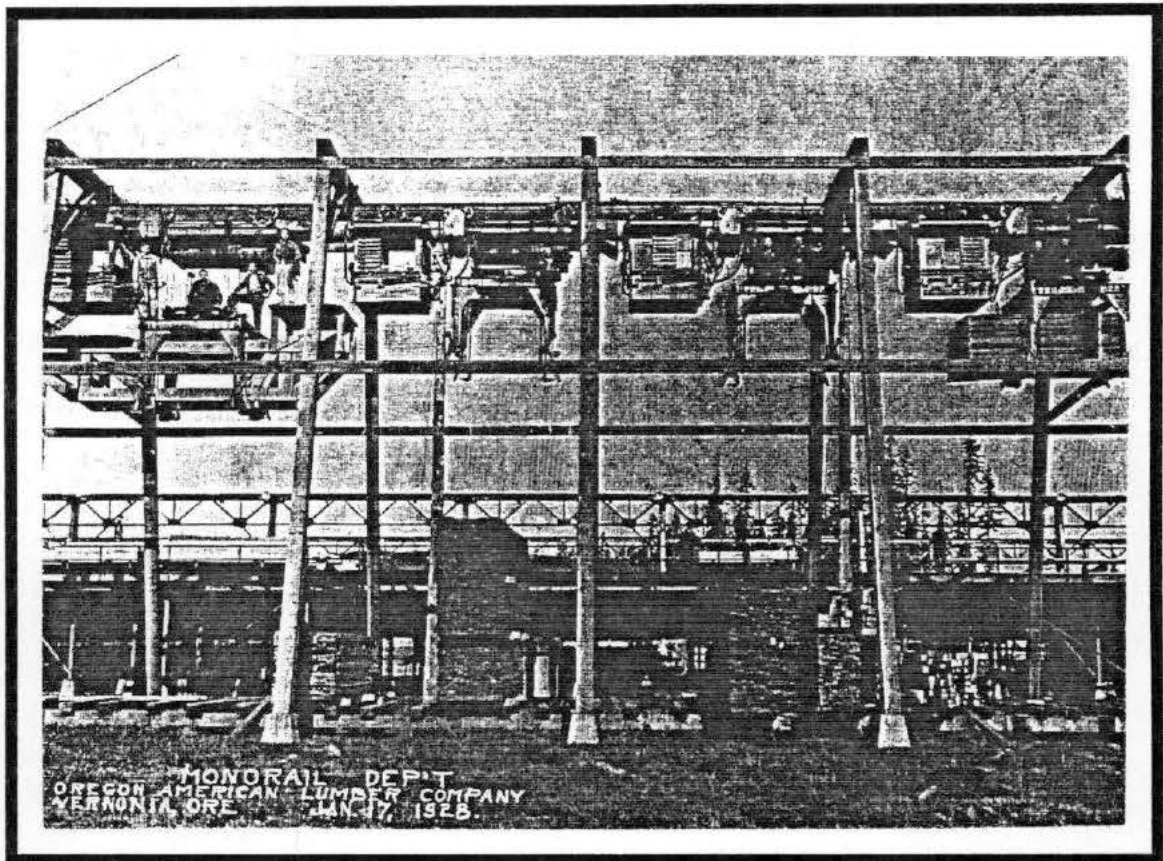


Figure 29. Monorail at O-A Mill, Vernonia, 1928.
Source: Lumber Industry and Trade, A4263, Special
Collections, University of Oregon, Eugene.

Construction of the mill site, mill office, and worker housing began in 1923 and was completed the following year. When the mill opened, there was not enough housing available for the workers. A tent city was established where the Washington School is now located. Many of these workers had

migrated from southern states. In 1925, the mill employed 750 men operating two shifts: Vernonia became a "boom" town in the Coast Range. O-A developed 175 acres, with the log pond alone being approximately 42 acres. The Nehalem river was the water source for the log pond.⁴⁵

Company housing built by O-A was located on the near-by hill and on both sides of Bridge Street. All houses were an easy walk to the mill for shift work. They were simple, one-story rectangular cottages with a low-pitched gable roof. The uniform style had slight modifications in the roof and porch. Every house had a detached single car garage located behind the house at the end of a spacious back yard. Attached to the garage was a narrow wood shed. An employee from the mill traveled the alleys and kept the sheds stocked with slabwood from the mill. The road pattern on the hillside is a web of alleys and streets that hug the slope. The names of the streets--Louisiana, Arkansas, and Mississippi--reflect the owners' southern roots (see figures 30 and 31).

On the hillside, there is a visible ranking of housing. At the base of each street is a palatial home for the president, vice-president, and supervisor, obviously much larger

⁴⁵Robb Wilson, interview with author, Vernonia, Oregon, April 10, 1992; untitled article, Vernonia (Oregon) Eagle, July 29, 1966, n.p. (Archives, Columbia County Historical Museum, Vernonia, Oregon); and Keith, 37.

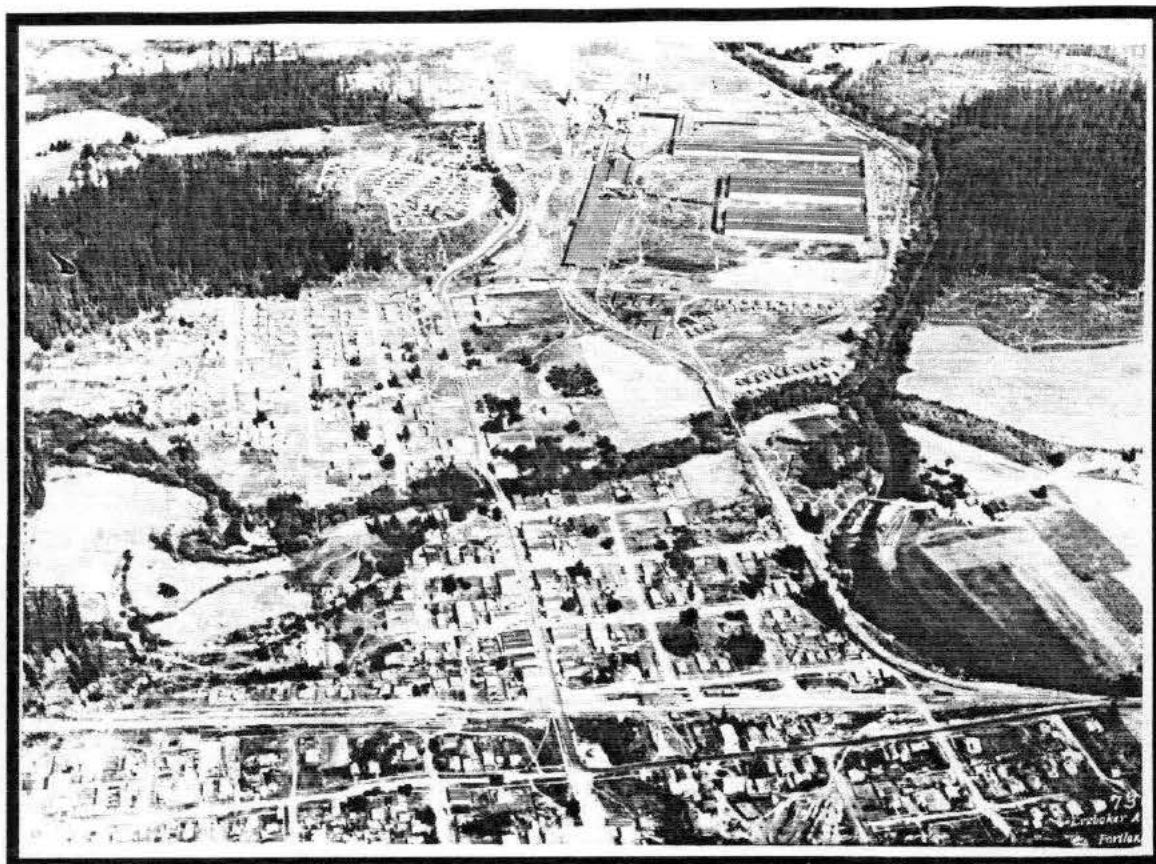


Figure 30. Aerial View of O-A Mill, date unknown. Note street pattern on hill across from mill complex. Source: OHS.

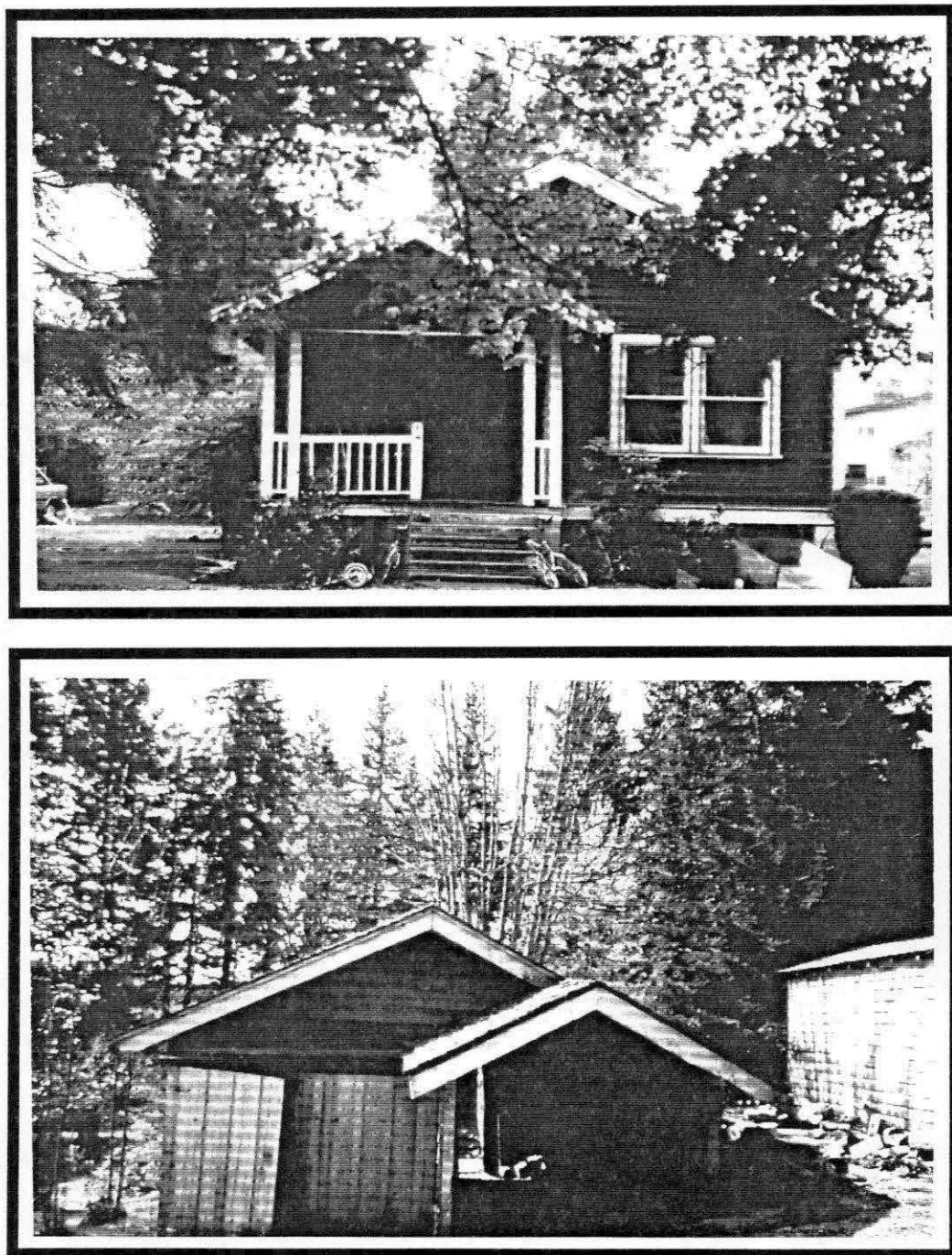


Figure 31. Top View: O-A Company House, Vernonia, front view, 1992. Bottom View: O-A Company House and Alley Garage, Vernonia, rear view, 1992. Source: Author.

than the workers' cottages. The Company did not build a general store, so the workers purchased necessary supplies at the retail businesses in Vernonia. The decision not to compete with the local merchants was considered a good-faith gesture by the locals.⁴⁶

Within the sawmill nucleus is the mill office facing Bridge Street at the very base of the hillside housing (see figure 32). The one-story wooden frame office housed up to a dozen office workers overseeing bookkeeping, shipping, and correspondence. Workers picked up their checks in the front room, entering from a door off the front porch. Today, the imprints from their calk boots are obvious.

The small inland valley town of Vernonia had a population of 125 in 1920 and was transformed into an active industrial town after O-A opened its large mill to log its 27,000 acres of timber. By 1930, the population had grown to 1,625. In 1954, O-A sold to Long-Bell, and in 1957 the mill closed because the timber was exhausted.

Beginning as a community with pioneers seeking land for farming, Vernonia became a bustling mill town after O-A developed 175 acres into company housing, a log pond, mill office, and a manufacturing plant. Although the name of the log pond was changed to Vernonia Lake in the mid-1980s, many

⁴⁶Wilson, interview with author.

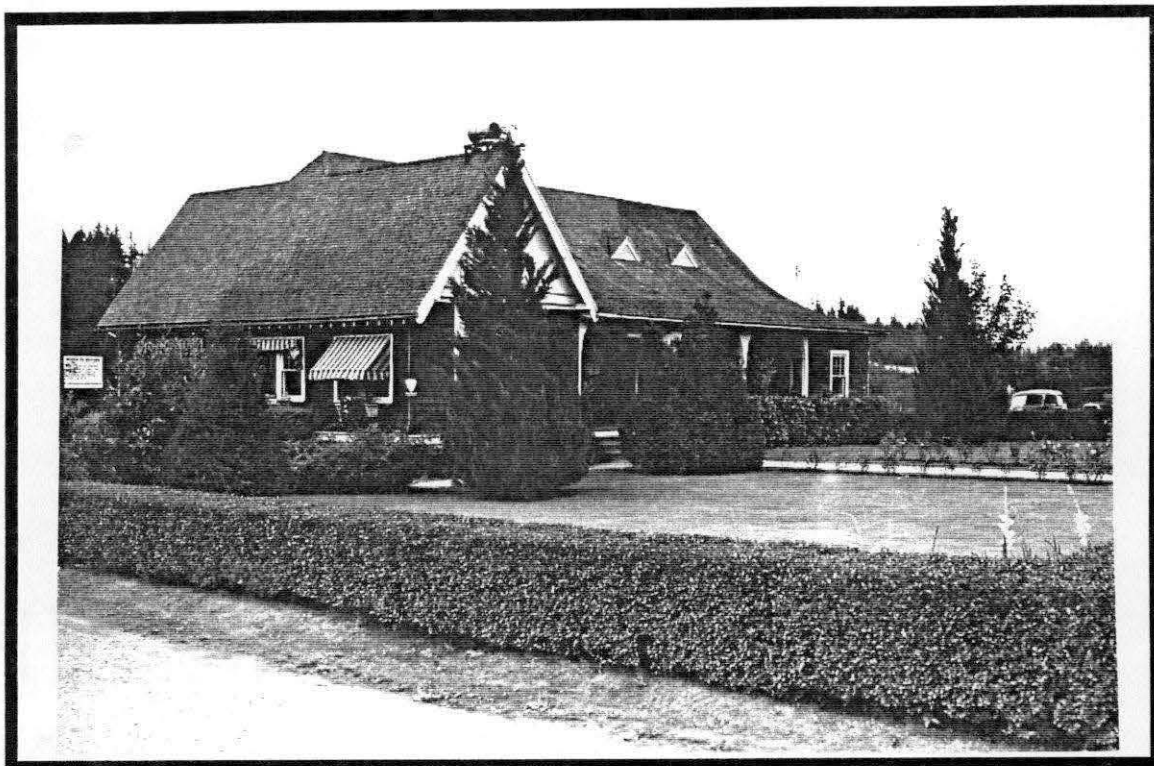


Figure 32. O-A Mill, ca. 1930. Source: General Lumber Industry and Trade, A4272, Special Collections, University of Oregon, Eugene.

of the local residents still refer to it as "the Mill Pond." Today, it sports lily pads, ducks, cattails, and rowboats. The rail spur that hauled millions of board feet of lumber is a walking path, and only the concrete foundation remains from the waste burner (see figure 33).

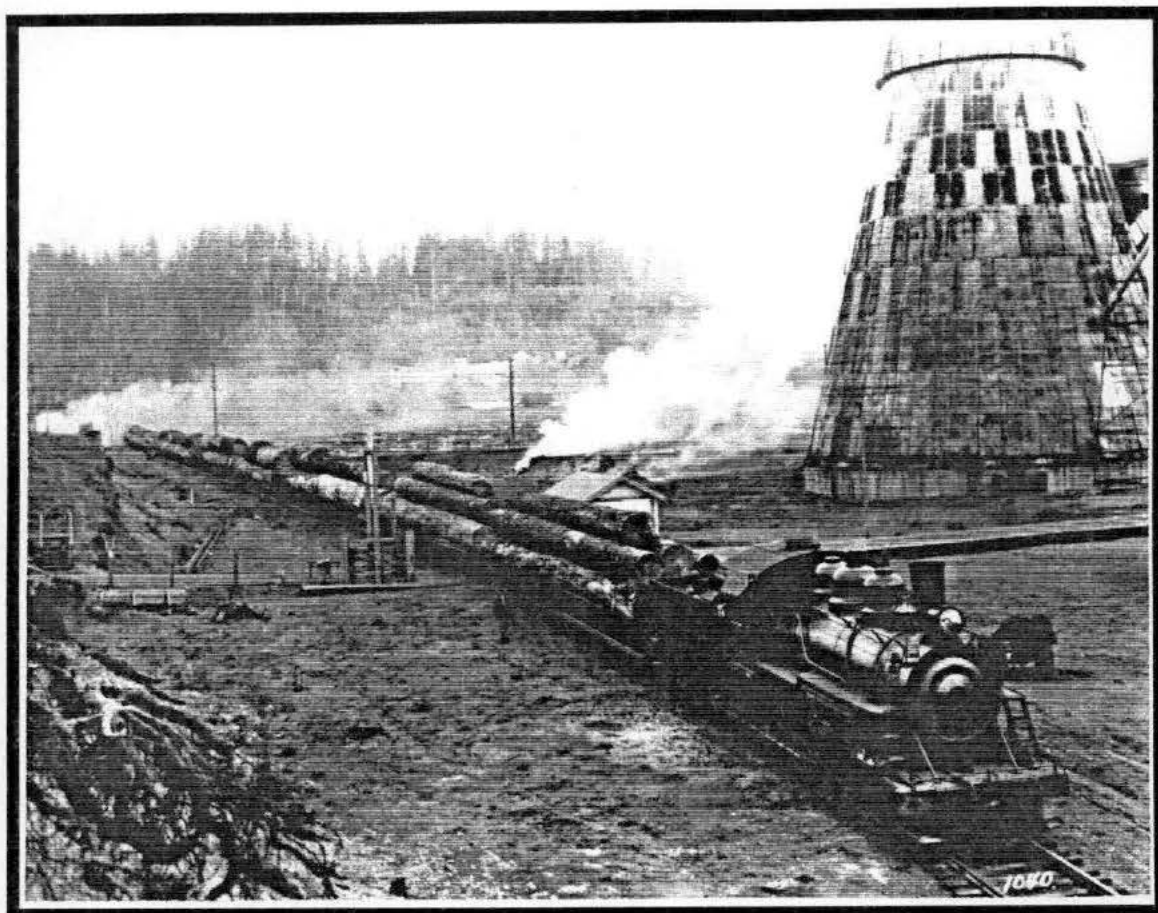


Figure 33. O-A Logging Locomotive and Waste Burner, date unknown. Only the concrete foundation of the waste burner remains. Source: General Lumber Industry and Trade, A4243, Special Collections, University of Oregon, Eugene.

The Willamette Valley and the
Town of Cottage Grove

The Willamette Valley is a level fertile lowland separated from the Pacific Coast by the Coast Range and bordered on the east by the Cascades. The valley floor, void of any conifer forests like the surrounding foothills, always supported lumbering activity once the pioneers arrived. Its proximity to timber sources was an asset for early settlers and the succeeding twentieth-century lumber barons.

Portland, Oregon's metropolis since the 1850s, is located at the northern end of the Willamette River basin and became the railroad hub and network base for the lumber industry. In 1930, over 60 lumber companies had business offices in the downtown core, and it was commonly the Yeon Building where these company presidents occupied offices. Both the Charles McCormick and Central Coal and Coke Company (O-A) had a branch in the Yeon Building.⁴⁷

Isolated from a navigable waterway during the industry's infancy, Willamette Valley lumber was marketed locally. The arrival of rail, however, opened up a route for a broader trading base. In the early twentieth century, the valley was viewed as a opportune place for a sawmill because the level valley offered suitable ground for a sawmill plant

⁴⁷Abbey's Register, 1930, 136-145.

with a favorable railroad grade. Naturally, there was a downward gradient for the logging railroad on its way to the log pond. Secondly, there were established towns with fixed populations that could provide plenty of dependable workers. Finally, the drainage basin of the Willamette River furnished numerous wet-point locations for log storage and fire prevention (see figure 34).

Cottage Grove, found in the upper valley (southern Lane County), is an example of a mill town within this lumbering location. The Coast Fork of the Middle Fork of the Willamette River flows through this basin town, resulting in it being an early agricultural trading center. Sawmills were small though abundant in this settlement, and lumber was sawn for local demand. The first known sawmill was built by Harvey Hazelton on Silk Creek in 1857. These early mills were little operations, and an owner often logged as well as retailed the lumber (see figure 35).⁴⁸

The discovery of gold in California and later the Bohemian mine near Cottage Grove stimulated the fundamental lumber industry, but lack of transportation kept the industry from developing further. The industry languished until a transportation route was established.

⁴⁸Janetta Overholser, "Lumber Mills: Past and Present," in Golden Was the Past 1850-1970, ed. The Writer's Discussion Group (Cottage Grove, Oreg.: The Sentinel Print Shop 1970), 180-181.

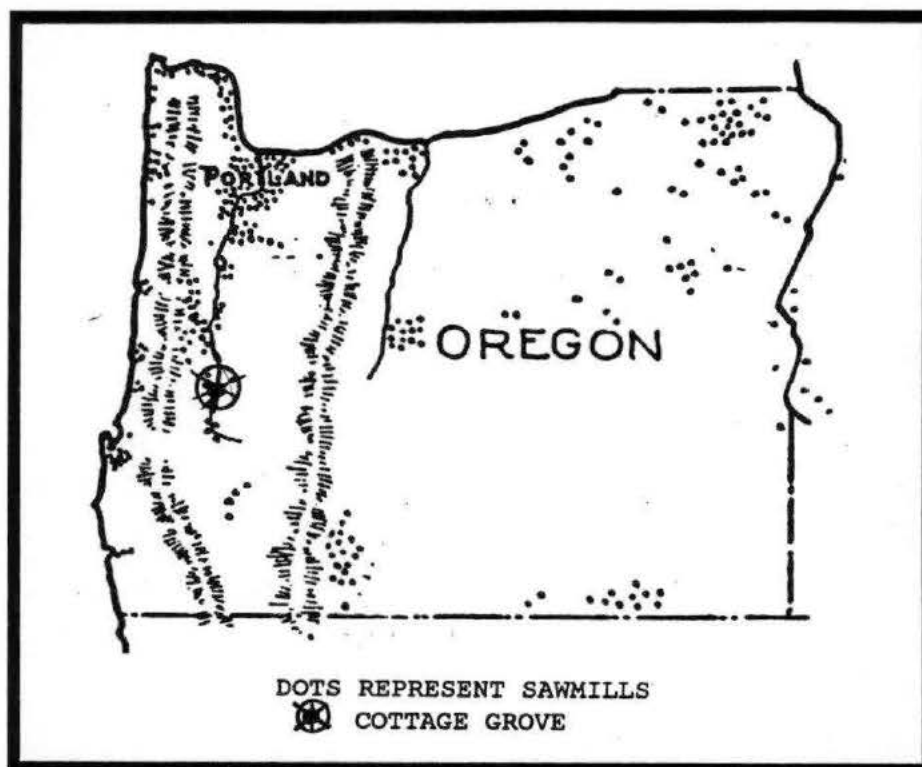


Figure 34. Concentration of Mills in Willamette Valley, 1925. Source: Derived from Smith, Physical and Economic Geography.

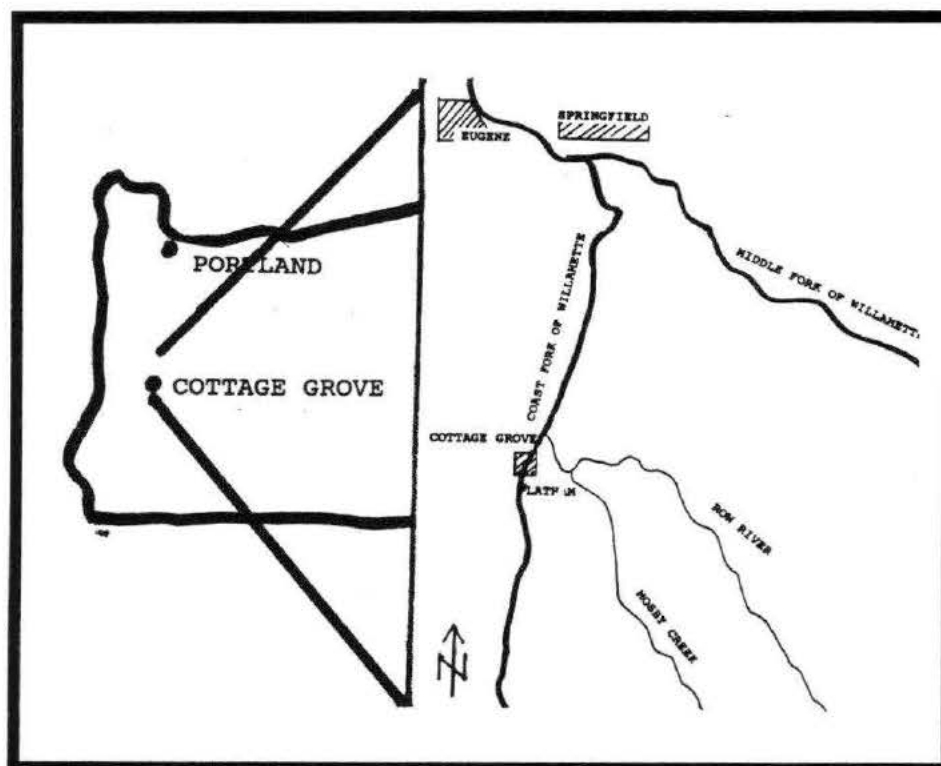


Figure 35. Regional Map of Cottage Grove. Source: Author

The Oregon and California Railroad began construction in Portland in 1868, reaching Cottage Grove in 1871. It was the beginning of the link between mills and markets for the valley's lumber industry (see figure 36).⁴⁹

Even after the railroad provided an expanded market, the former pattern of many scattered mills with low output

⁴⁹Corning, 180.



On the Line of the Oregon and California Rail Road.

Figure 36. Local Lumbermen Along O&C Railroad, ca. 1880. Source: Angelus Collection, University of Oregon, Eugene.

remained. In 1909, there were 31 mills in the immediate area using Cottage Grove as their base. Abbey's Register listed nine mill manufacturers in 1922, the largest producing 75M and the smallest 10M. In 1924, there were 13 mills in the area with similar capacities. By 1932, the town's population was approximately 2,000, with 18 mills listed with capacities ranging from 10M to 125M; by contrast, at the same time the mill at Vernonia had a potential of 350M with 1,625 residents. Even in 1932, the two largest mills in Cottage Grove had capacities of 125M and 120M respectively, and neither had bandsaws.⁵⁰

Employing a limited number of people--often less than ten compared to several hundred at Vernonia--these mills were rather mobile. It was not unusual for the sawmill to move to a new site after the timber had been cut out. Moving the sawmill limited the expense of extra machinery and manpower; obviously, these were not the large bandsaw mills. It was not unusual for these sawmills to operate one year and be gone the next.⁵¹

Another common pattern that occurred in the valley, but not exclusively, related to the owners and presidents of the

⁵⁰Abbey's Register, 1922, 1924, 1932; and Overholser, 182. "M" designates thousands. Capacity figures, such as 125M, indicate board feet of lumber per day.

⁵¹Boyd Allen, interview with author, Cottage Grove, Oregon, April 24, 1992.

lumber companies. Larger mill owners from Vernonia, Garibaldi, or St. Helens lived and maintained an office in a different place, unlike the owners of the two largest mills in Cottage Grove, Chambers and Woodard, who both resided in the town.⁵²

The Woodard Lumber Company in Cottage Grove was operated by Walter A. Woodard (known as "W. A.") who had come from a local lumbering family. In the 1922 Abbey's Register, both father and son were listed as having an operating sawmill. The comparison of W. A. Woodard's sawmill in 1920 is a sharp contrast to the Charles McCormick Mill complex in St. Helens during the same period. The Woodard mill capacity was 25M in 1924, and at McCormick's main mill 160M (see figure 37).⁵³

Before W. A. concentrated on his lumber operation in Cottage Grove, he wore several hats in the industry. He had been in partnership with a Michigan man in a large milling operation on the Lower Columbia called Bradwood. He also designed and counseled on the layout of mill complexes.⁵⁴

⁵²Robert A. Booth of Booth-Kelly Lumber Company, prominent lumber baron in Lane County, lived in Eugene. In Mill City, to the north, the owner of the large Hammond mill lived outside the area.

⁵³Abbey's Register, 1924, 85, 117.

⁵⁴Fred D. Sturdivant, "The Woodard Lumber Company": A Case Study in "Rugged Individualism" (Master's thesis, University of Oregon, 1961), 6-12; and Erickson, 253-255.

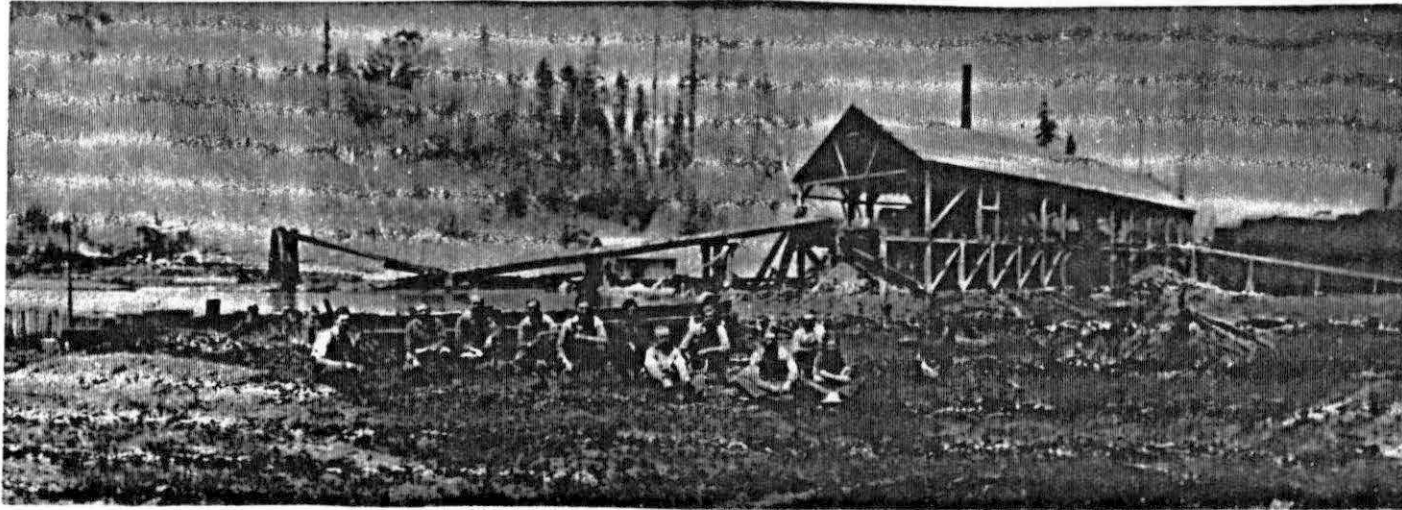


Figure 37. Sawmill and Crew of the Walter A. Woodard Company, 1920. Source: Sturdivant, "The Woodard Lumber Company," 148.

Woodard's mill operation was south of town in an area known as Latham. Characteristic of valley mill towns was the establishment of mills on the periphery of the town. W. A. had an eight-mile flume that connected the logging operation with his manufacturing plant at Latham, where the Southern Pacific Railroad was located.⁵⁵

Within this area of the Douglas fir region, there were particular industrial concerns specific to the valley, such as freight rates being charged by the railroad companies. As a result, the Willamette Valley Lumbermen's Association was formed to address the needs of the valley mill owners. Woodard was one of the organization's directors.⁵⁶

The mill site of the Woodard Lumber Company, located south of Cottage Grove on Highway 99, is occupied today by Weyerhaeuser. Other than the mill itself, no resources were found in the sawmill nucleus. A 1956 aerial photo of the mill showed post-1940 company housing, and these were removed in the 1950s to make room for plant expansion. The road across from the mill, Dugan Road, bears the name of the

⁵⁵Sturdivant, 20-24. No doubt, W. A.'s practical knowledge from his working in flume country on the Lower Columbia River helped him facilitate this flume.

⁵⁶"Lumber Operations in Linn and Lane County," The Timberman (April 1928), 48 (Knight Library, University of Oregon, Eugene).

long-time superintendent. The W. A. Woodard Company sold out to Weyerhaeuser in 1956.⁵⁷

As a lumbering location, the Willamette Valley had its own characteristics and developed a specific identity within the Douglas fir region. Small mills coexisted with larger ones, yet none were as large and dominating as those seen along the coast or mountain interiors. A sawmill pattern developed in the pioneer days that continued through the Rail Era, with agricultural towns becoming lumber towns and mills growing up around the edges near the transportation routes and rivers. An active, prosperous lumber industry evolved with the advent of rail transport that continues today.

The Cascade Range and the Town of Westfir

Known for its steep rugged slopes and forests of Douglas fir, spruce, and cedar, the Cascade Range developed a lumber industry later than the lower Willamette and Columbia rivers and ports along the coastal fringe. Engineering skills and a large outlay of capital were essential for the industry to take hold in these formidable mountains.

⁵⁷Marcia Allen and Boyd Allen, interview with author, Cottage Grove, Oregon, April 24, 1992.

The town of Westfir, nestled in the mountains along the Willamette North Fork of the Middle Fork of the Willamette River, was established for the sole purpose of a lumber company. Westfir was named for the Western Lumber Company. It was a company town where the sawmill, townsite, utilities, and most residential and commercial structures were built and owned by the lumber company. In the 1920s, such towns were commonplace in western Oregon.⁵⁸

Westfir began as nothing more than a "wide spot in the road" on the old Military Road that wound through the rugged North Fork canyon. After 1900, that spot became a campsite for laborers building a railroad tunnel that established Oakridge as a railroad town (see figure 38).⁵⁹

In 1923, the United States Forest Service put up 685 million board feet of timber for sale, specifying that the purchaser establish "a stable community . . . to provide decent living conditions and to encourage family life and opportunities for permanency in a well-balanced lumber

⁵⁸McArthur, 895; and Erickson, 346. One of the more well-known company towns in the Cascades that no longer exists is Wendling. Located past Marcola, it was established in 1899 by the Booth-Kelly Company. At its peak, more than 400 people lived in this remote town. Torn down in 1946, it has been a tree farm for several decades.

⁵⁹Linda Lord, "Frankly We'd Rather Do It Ourselves," paper compiled for the Upper Willamette Economic Development Corporation, Oakridge, Oregon, November 1978, 23 (typescript; Special Collection, Knight Library, University of Oregon, Eugene).

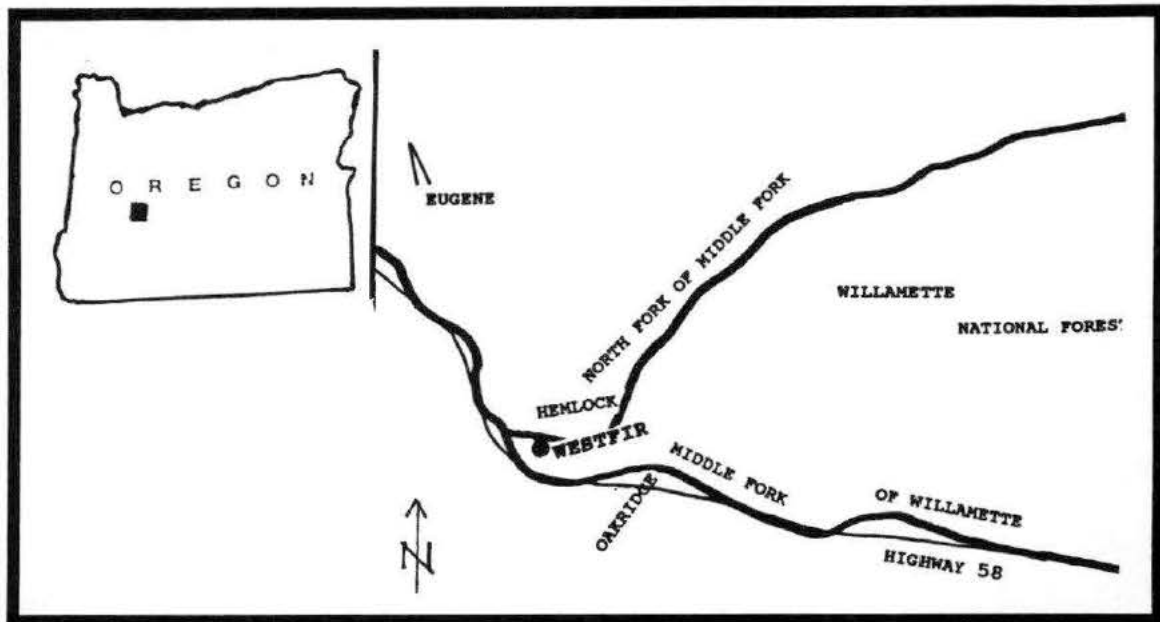


Figure 38. Regional Location of Westfir. Source: Author.

operation." It was a tremendous amount of timber, offered under restrictions that even designated where the mill site and logging camp were to be located. This timber had been untouched prior to 1923. It was purchased by the Western Lumber Company, formed by George Kelly, who surfaces periodically in the lumber history of Lane County. He was from a Springfield, Oregon, lumbering family and was involved in

the initial organization of the Booth-Kelly Lumber Company in 1896.⁶⁰

Kelly soon encountered financial problems and sold the company to Myron Woodard of the Silver Falls Lumber Company. Completing the mill and the company town, Woodard eventually sold it in 1936. It was purchased in 1944 by Edward Hines, remembered as the mill owner in the town of Westfir.⁶¹

Within Westfir there was the usual paternalism from the mill. Residents relied on it not only for their paychecks but other securities as well.⁶² An example of this dependence is evident in a 1941 notice circulated throughout the town after war had been declared:

"IN CASE OF EMERGENCY WHERE BLACKOUT IS REQUIRED BEFORE 11:00 O'CLOCK THERE WILL A SERIES OF LONG BLASTS FROM THE MILL WHISTLE. THIS IS NOT TO BE CONFUSED WITH THE FIRE SIGNALS AS THE FIRE SIGNALS ARE ONE LONG BLAST FOLLOWED BY SHORT BLASTS, BUT REMEMBER! THE BLACKOUT SIGNAL IS BY LONG BLASTS ONLY."⁶³

During Edward Hines' ownership, electricity was provided by the company, although it was not allowed for cook stoves, since those tended to use too much power. Instead,

⁶⁰Veryl M. Worth and Mary S. Worth, "Logging and Lumber," in Early Days on the Upper Willamette (Oakridge, Oreg.: Fact Book Co., 1989), 28.

⁶¹Lord, 23.

⁶²Allen, 1966, 105-107, 122-127.

⁶³"Notice to General Public!" (public letter, December 9, 1941, author's private collection), typescript.

wood slabs from the mill were delivered to the homes to fuel the wood stoves.⁶⁴

Although there had been a change of ownership over the years, the form and layout remained generally as it had been in 1923. The mill office, with residential homes behind it, the company store, and the pool hall, were all on the south side of the river, and the mill complex and rail transport were found across the river. Bunkhouses for single men were located on one side of the river near the mill, and the single family houses on the other. The mill site was built on the level land near the river, close to the Southern Pacific Railroad (see figure 39).

The mill office remains today at the intersection of Riverside Avenue and Roney Road. Built between 1923 and 1925, it was remodeled and a second floor added by the Edward Hines Lumber Company. Directly behind the office is a horseshoe-shaped road that appears to date back to the original organization of the town (see figure 40).

The street patterns within the town itself are an important resource. The unpaved rounded corners reflect a common street configuration in company towns. Another remaining resource not within the temporal boundaries of this

⁶⁴Jim Stromberg, interview with author, Westfir, Oregon, April 15, 1992.

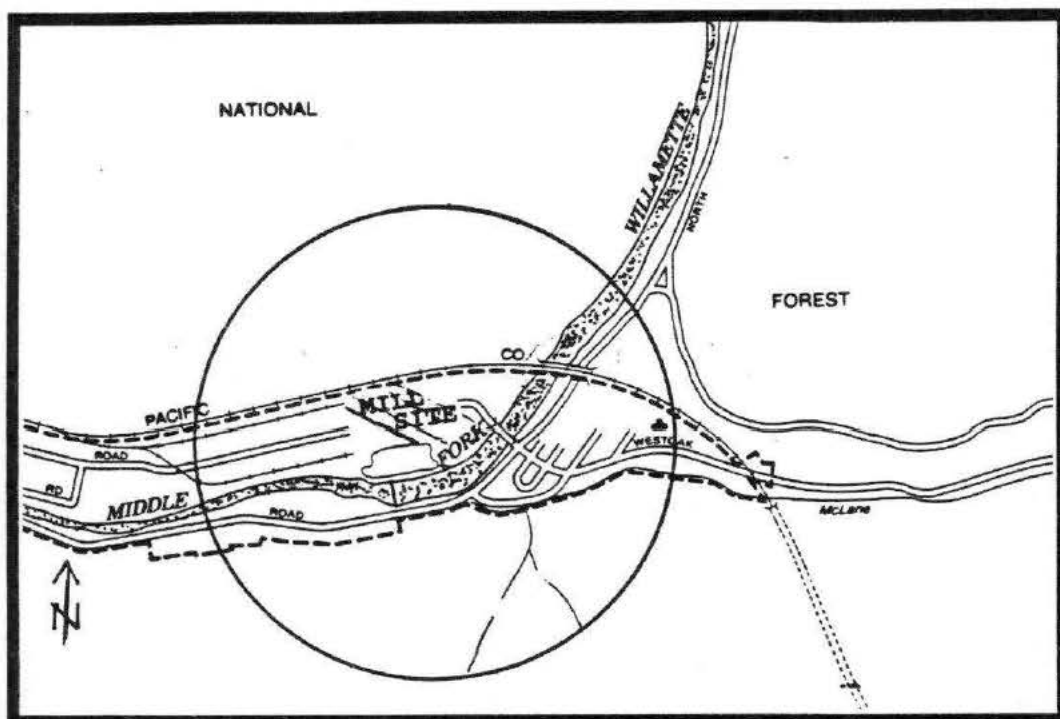


Figure 39. Westfir Sawmill Nucleus. Note the "horseshoe" street. Source: Author.

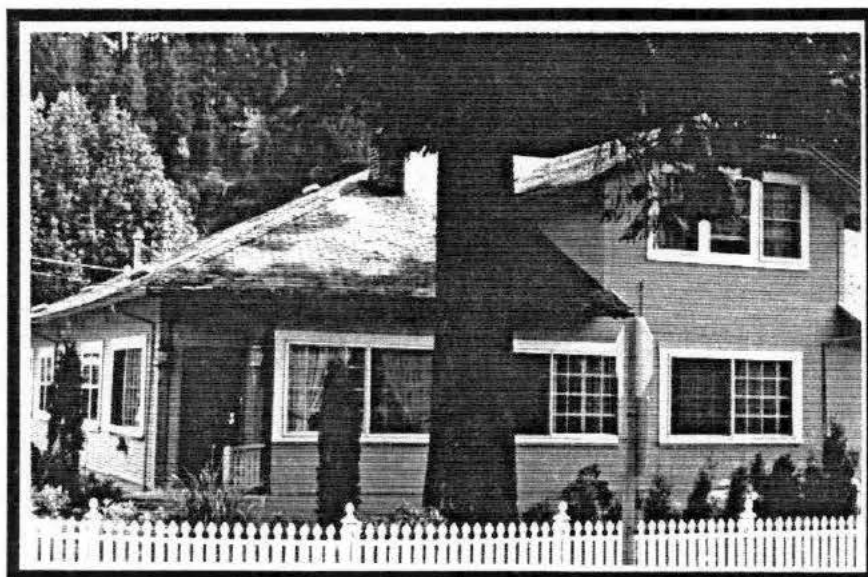


Figure 40. Mill Office at Westfir, 1991, built ca. 1923, altered ca. 1945. Source: Author.

thesis, but worth commenting on, is the covered bridge connecting the townsite and the mill complex. Built by the Edward Hines Lumber Company around 1945, it is a covered bridge constructed to the height of logging trucks. It has a pedestrian walkway on the west side for mill employees walking to work. This unique bridge has become a symbol for the local residents and is a striking red structure coming into view on the approach to Westfir (see figure 41).

Edward Hines Lumber Company closed its mill in 1977 and sold the town along with the public facilities. The new owners wanted to transfer the utilities to public ownership, and in January 1979 the residents voted to incorporate. The mill plant burned later that same year.⁶⁵

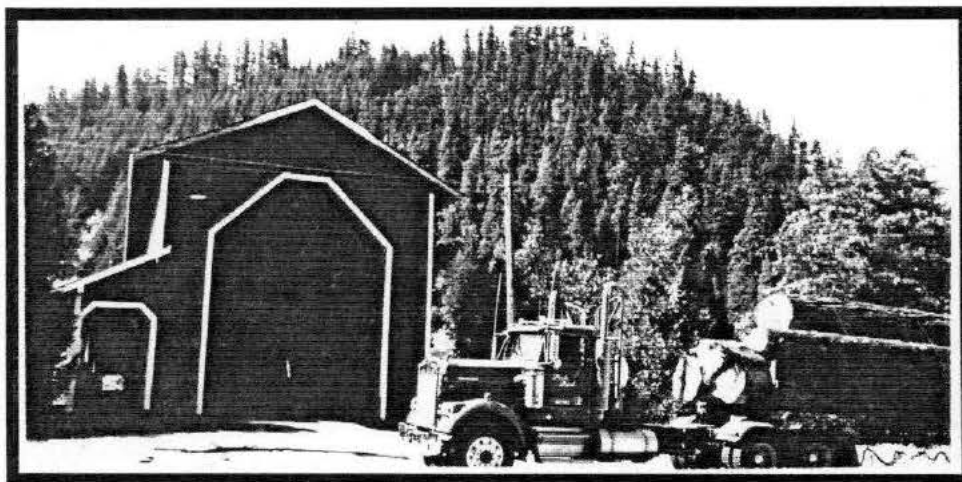


Figure 41. Covered Bridge at Westfir, 1991, built ca. 1945. Built for logging trucks. Source: Author.

⁶⁵McArthur, 896.

CHAPTER III

HISTORICAL RESOURCES

I loved every last bit of it, not for anything it accomplished, but because it was the greatest industrial show in North America.¹

The mill complexes, with whinnying bandsaws, log ponds, puffing locomotives and smoking waste burners, are gone, and so are the general stores. In Westfir, the store had a false front with general supplies for sale on the ground floor and 16 rooms for rent on the second, no doubt playing a vital role in the residences' lives during the golden age of the big mill (see figure 42). It was a typical company store in a western lumber town. As seen in an old photograph, it occupied the now empty spot across from the mill office. The mill office has survived, while the store was torn down several decades ago. Though Oakridge was only eight miles away, Westfir was considered remote in 1925.

At the turn of the century, Oregon, like the entire Pacific Northwest, was a distant place. The climate and

¹Steward H. Holbrook, The Columbia (New York: Rinehart, 1956), 54. Holbrook worked in the New England and Pacific Northwest woods. Later, he became an author and wrote about those experiences. Holy Old Mackinaw, written in 1938, is his best-known book.

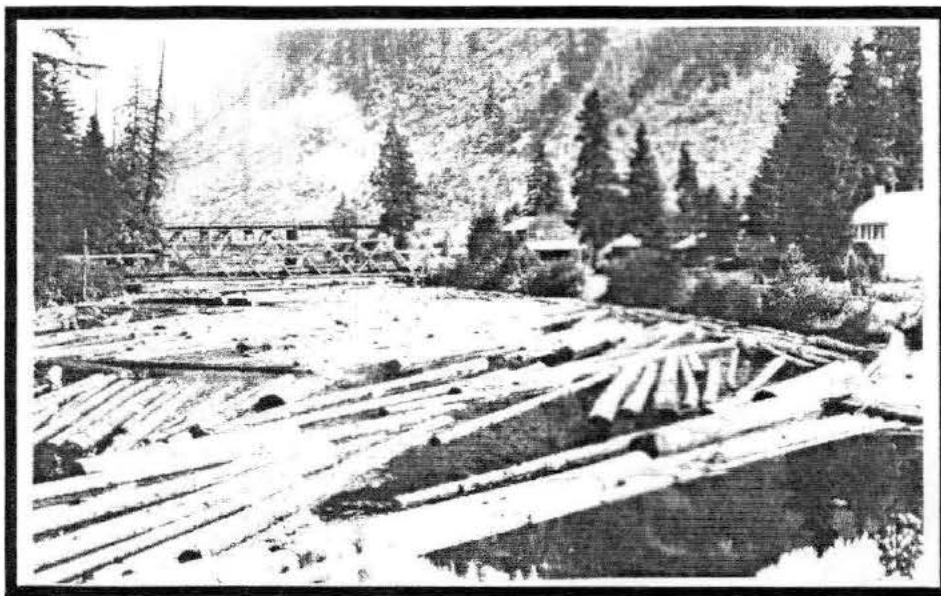


Figure 42. Westfir Company Store, date unknown. Located to the right of walking bridge; replaced by covered bridge. Source: Worth, Early Days on the Upper Willamette, 32.

rugged terrain were unlike the rest of the United States, and it was remote from any urban centers. Oregon was still a frontier. Within this hinterland were abundant natural resources, and from that sprang the lumber industry. Simply, it is a story about humankind occupying an area and making a living. What remains of that built environment and altered landscape can be analyzed today.

This thesis addresses only the built environment, although it is fully recognized that the imprint of humans is

not interpreted by structures alone. This section will isolate the remaining historical structures and forms discussed in the preceding chapters. By providing a brief summary description and statement of significance, this chapter will be useful in later surveys that seek to identify resources related to the Rail Era, a past era in the western woods.

A geographic base is necessary to understand the development of the lumber industry in Oregon's Douglas fir region. This study accepts the concept that "a geographic region depends on human use and adjustment to the natural environment."² Therefore, while isolating resources, it is only appropriate initially to consider the geographic location, since it was of prime importance when large lumber companies calculated where to place their massive operations in timber country. A water source, such as a river or quiet bay, was essential: St. Helens was on the Columbia River, Garibaldi on Tillamook Bay, Vernonia on the Nehalem River, Cottage Grove on the Coast Fork of the Middle Fork of the Willamette River, and Westfir on the North Fork of the Middle Fork of the Willamette River. A river valley bed provided level land for the placement of the mill operation. Houses were often terraced up the slope near the mills seen

²Smith, Physical and Economic Geography of Oregon, 24.

in Garibaldi or Vernonia, to be within walking distance and above the flood plain.

A changing lumber industry and social values diminished the need for company housing. With the building of modern highways and other advancements in transportation, mills were located farther from the logging operations and closer to population centers, subsequently decreasing the need for housing in secluded wooded regions. No longer were these communities in the woods considered desirable places to live. Families wanted a larger social milieu than the insular life in the forest. The commuting age allowed families to live in bigger towns and the workers traveled to the remote places. This situation occurred in Westfir in the 1950s, when the population diminished yet lumber employees increased. Each morning, the roads in front of the mill office were lined with cars that had been driven from Oakridge.³

During the Rail Era, lumber companies found it necessary to provide housing for their employees in these outback areas. Living accommodations varied in arrangement from a company town like Westfir, which also provided schools and a theater, to Vernonia or Garibaldi, where only housing was

³Archie W. Mbogho, "Sawmilling in Lane County, Oregon: A Geographical Examination of Its Development" (Master's thesis, University of Oregon, Eugene, 1965).

available. In Garibaldi, the Whitney Company also sold building sites and encouraged construction of homes. With a company's need for steady workers, the managers preferred married men, so companies supplied single family housing to foster that standard.⁴

Company housing identified in Vernonia, Garibaldi, and St. Helens have some general characteristics. Uniformity in style and age in a group of houses in a mill town probably indicates it was housing built by a lumber company. Though not unlike some housing seen today, the intention was from another era. The houses have a cookie-cutter appearance, like those marching up the hill from the mill site in Garibaldi. On the author's initial visit to Vernonia, a city employee reassuringly said there would be no problem locating the company housing, because "they all look the same." In Vernonia and Garibaldi, only minor adjustments in the front porches differentiate the houses.

The arrangement of the housing is important to note. At Vernonia and Garibaldi, there was a definite pattern with regularly spaced houses going up the hill. In St. Helens, the grouping is somewhat haphazard; apparently later homes were built within an existing arrangement, so that when an employee of the mill needed a place to live, a house was

⁴Huckleberry, 21.

built. Some similar homes appear in a rhythm, while others facing away from the street are different and irregularly spaced. Although no company houses were positively identified at Westfir, the houses behind the mill have a clustered sequence, indicative of company housing in a mill town.

There was a definite display of hierarchy in company housing. In Vernonia, at the base of the worker housing are three obviously larger homes for office personnel or management. The double row of housing in Garibaldi for bookkeepers or foremen are modest, yet in comparison to mill worker housing are decidedly larger. A long-time office worker for the Booth-Kelly Lumber Company described the positioning as follows:

Social caste in a mill town paralleled the system of such division in India. Company-owned houses were graded and classified in accordance with employee rank, and the streets and lanes designated accordingly, the street names being done by the employees. The General Superintendent lived in the best houses, and on a street or lane known as "Millionaire Row." Next Straw Bosses, Sawyers and other skilled help, on Silk Stocking avenue. Then on down to the unskilled workmen (the "common people") who lived on "Property Flats" or "Skidrow," or "Oklahoma Flats."⁵

In accordance with that depiction, "Bungalow Flats" in St. Helens implied unskilled workers lived in those houses. According to a resident in Garibaldi, the homes along "Mill

⁵Herbert J. Cox, Random Lengths: Forty Years With "Timber Beasts" and "Sawdust Savages" (Eugene, Oreg.: Shelton-Turnbull-Fuller, 1949), 49-50.

Row" were occupied by office workers. They were only one-story structures, but nevertheless were considerably larger than the homes in St. Helens. Reflective of the pre-automobile period, all company housing was within walking distance of the mill site.

Company housing is significant because it represents the industrial era of lumbering in the West. Remote, isolated western lumber company housing differs from what the industrial manufacturers of the Northeast built. Influenced by the surrounding landscape of trees, these communities looked inward. Built of wood and encircled by the forest, employment was part of a resource-based economy. An economy based on a natural resources would, at some point, run out. On one hand, there was the large company that viewed the timber as limited; yet the community that grew up around the mill deemed it as lasting. The geography and natural resources of the region suggest a distinct regionalism for company housing built in the Douglas fir region.

At intersections or other prominent places was the mill office. In Westfir, the office constructed by the Western Lumber Company is at the lone turn into town. Slightly altered by the Edward Hines Lumber Company, it remains today. In St. Helens, the Charles McCormick mill office was located where Strand Street dead-ended into the short street of Mill. The office no longer remains, nor does Mill

Street.⁶ The Oregon-American mill office in Vernonia is found on the main street, where the road turns up to the housing on O-A Hill.

Wooden in construction, these familiar buildings existed mainly for the purpose of dispensing local paychecks. They were built simply, with modest proportions, and were not intended to impress investors or shareholders; that happened elsewhere at some branch or main office in Portland, Detroit, Michigan, San Francisco, or Kansas City.

Functioning as the local company office for large corporations, these vernacular buildings are representative of the Rail Era. The mill offices were the vital link between the local community and the large corporation. As colonial outposts for big organizations, such as the Coal and Coke Company of Kansas City, Missouri, they were regionally recognized as part of the community.

Street patterns reflect another identifying characteristic of a mill town. The streets are generally curving and without sidewalks, not unlike many of today's suburban plans. Yet these streets were not modern and reflected non-permanence. Streets were used more for foot traffic than for automobiles, since work, a paycheck, and the essentials of life were all within walking distance.

⁶Sanborn Insurance Fire Map, "St. Helens, 1916."

Planked roads were common in these mill towns. Though none exist today, they are seen in the 1920s Sanborn maps. It was logical to have wooden roads in a wooden environment, as well as tennis courts, shown on the Sanborn maps of both Garibaldi and St. Helens. In St. Helens' "Bungalow flats," the curved dead-ended street that cut into the rectangular grid in 1921 was a planked road, unlike the other surrounding streets. Now labeled Park Way, it is no longer planked and looks like any other street. In Westfir, the rounded corners and lack of sidewalks suggest that the streets were shared by both autos and residents. The aerial view of Vernonia clearly indicates the contrast between the grid streets and the curving roadways that invited foot traffic on O-A Hill. A view of "Mill Row" in Garibaldi during the 1920s (see figure 26) illustrates a planked road down the middle of the parallel lines of houses. Built around 1922, it appears the planked path was built for foot traffic. Today, the road is paved, but still has no sidewalks. In Garibaldi, the streets within the sawmill nucleus present a different configuration than the grids to the north.⁷

Within the sawmill nucleus, there is a diverse street pattern unlike the typical grid arrangement more prominent today. Significantly, the street configurations reflect a

⁷Cox et al., 124-125.

topographic response to street planning, or, rather, a non-permanent plan with an inclination towards foot traffic.

In the resource category of industrial artifacts, log ponds have been separated as a distinct asset. Though part of the large mill complex in the Rail Era, they are isolated in this study because of their possible reuse in a recreationally conscious society. In Vernonia, the pond has taken on a completely new identity: the 45-acre log pond essential to the operation of the mill is now Vernonia Lake, stocked with fish and part of a more elaborate plan to develop the industrial complex into a park. In Garibaldi, the portion of the bay that held logs is now a marina.

There is no doubt the log ponds are significant in the analysis of lumber resources. They complemented the technological innovations of the Rail Era by providing a relatively easy solution to the problem of storage, the handling and guiding of the massive logs into the sawmill, as well as ridding the log of any debris that caused harm to the saw and sawyer. The forming of ponds occurred in the Douglas fir region where water, an abundant resource, was easily diverted into reservoirs in the inland valleys of the mountains and the Willamette Valley; thus, the water resource was an integral part of the lumber operations. The coastal towns likewise used the water resource available in the bays.

Industrial artifacts are few, since the mills, no longer functional in the modern technological world that has replaced them, are gone. Following the 1979 fire in Westfir, only rubble and concrete foundations remain. The covered bridge for logging trucks illustrates a post-1940 industry when trucks replaced rail in logging and lumber shipments. In Vernonia, concrete foundations, rusting metal, and debris are evident throughout the area where the massive mill complex was located.

The surviving smoke stack at Garibaldi, however, is a fine example of a remaining industrial artifact that has become a landmark for the town of Garibaldi. The stack is proof of the town's former identity. To the west of the stack is the partial structure of the planing mill from the once-large mill complex. Together, they represent a fraction of the former mill complex that dominated the water front (see figure 43).

Industrial artifacts are indicators of a previous industrial era, providing insight into the function of the mill complex and the towns dependent on them. They help to explain the process and role of milling in our industrial heritage. The artifacts are significant because they depict a regional lumber industry.

Between 1890 and 1900, with advancements in technology and corporate organization, vigorous expansion of the lumber

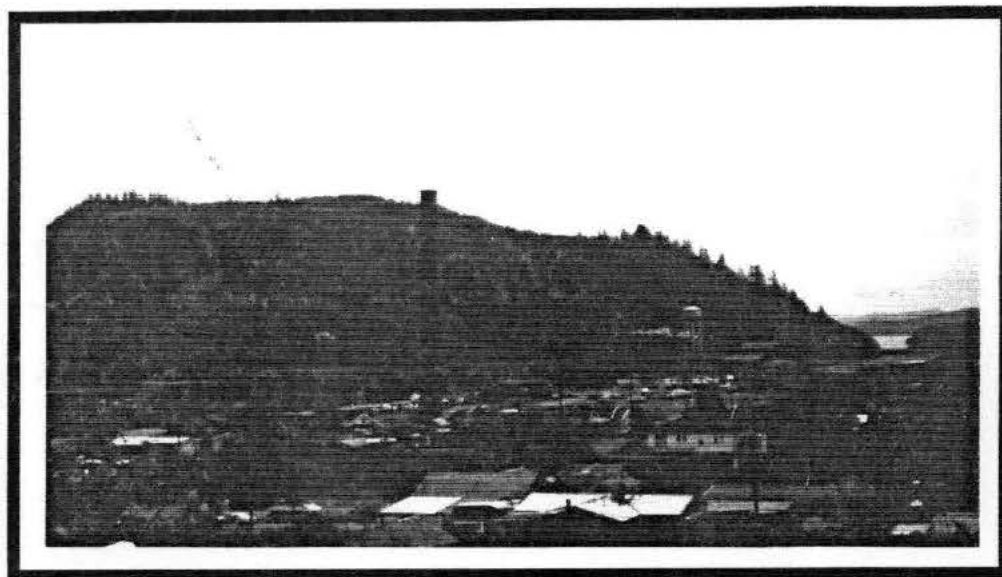


Figure 43. Smoke Stack at Garibaldi, 1992.
Source: Author.

industry began in western Oregon. Large businesses and their huge budgets were a match for the big trees. In the early days, mill towns hugged the coastline, serving the West Coast and markets around the Pacific Basin. At the turn of the century, with an ever-increasing demand for lumber, the industry moved inland, away from the ocean to the dense forests, using railroads as the transportation link.⁸

⁸Michael William, "The Clearing of the Forests," in The Making of the American Landscape, ed. Michael P. Conzen (Boston: Unwin Hyman, 1990), 152-153.

The lumber companies cut into the forests, converting timber to lumber and shipping out millions of board feet. Not only was there a national need for sawn lumber, but regionally it was ubiquitous in the construction of towns, from streets to large commercial buildings. Between 1910 and 1920, an astounding 27 percent of all lumber produced in Oregon and Washington was consumed within the region. The company town of Wendling, positioned in the southern Cascades Range up the Mohawk Valley, cut forty-two thousand acres during its four-plus decades of existence from 1899 to 1946.⁹

Small mill towns, located near the timber supply, provided the muscle for the manufacturing of this natural resource, timber. It is within these towns, scattered throughout Oregon's Douglas fir region, that fragments of that industrial era are visible today.

⁹Leland M. Roth, "Company Towns in the Western United States," in The Company Town: Architecture and Society in the Early Industrial Age, ed. John S. Garner (New York: Oxford University Press, 1992), 90; and Erickson, 386.

CHAPTER IV
PLANNING FOR THE PRESERVATION OF
OREGON'S LUMBER RESOURCES

Buildings, like poems and rituals, realize culture.¹

There is an increasing curiosity about the common and ordinary that comprises our cultural landscape. Barns and bridges, gardens and granaries are the current concerns of Historic Preservation. Preservation has been extended to engineering and industrial structures; no longer is it just the grand mansion or singular majestic event that is deemed worthy of our attention. It is not only the field of Historic Preservation that is experiencing this refreshing breeze, but "historians as well now realize that interpreting the course of history depends on investigating and preserving the material remains of everyday folks, as well as the privileged few."²

¹Henry Glassie, "Architects, Vernacular Traditions, and Society," Journal of the International Associations for the Study of Traditional Environments 1, no. 11 (Spring 1990): 21.

²Ray A. Williamson and Jannelle Warren-Findley, "Technology Transfer, Historic Preservation, and Public Policy," Public Historian (Summer 1991): 26.

It is therefore important to look at vernacular buildings for a more holistic view of our society. Even the name "historic preservation" is undergoing change, with many people now preferring to use the term "cultural resource management." An awareness to preserve is not enough; management of these resources is equally important.

Along with interest in the country's industrial past has come new technologies for maritime preservation and archaeological resources. Regard for our industrial past has gained widespread recognition with Lowell, Massachusetts, as the first and best example to date in the United States.³

The historic preservation movement has changed its scope from the early beginnings of the National Preservation Act of 1966. What is now considered significant has broadened. This is indeed fortunate for the resources located during this research.⁴

For too long, the built environment from Oregon's industrial past has remained outside the preservation mainstream. It is time to ask: How much longer will these

³For further information on Lowell, Massachusetts, see Allen Freeman, "Lessons from Lowell," Historic Preservation 42 (November/December 1990): 32-39.

⁴James Marston Fitch, Historic Preservation: Curatorial Management of the Built World (San Francisco: McGraw-Hill, 1982), 39-42, 349-351.

industrial reminders linger on Oregon's landscape? These artifacts will be missed by motorists traveling along the old Roosevelt Highway, now Coast Highway 101. What will it be like not to see Garibaldi's lone smoke stack towering 225 feet into the air? Severed from its associated mill plant and power house, it comes straight out of the ground and is devoid of its former manufacturing objective.

What has been taken for granted in the cultural landscape is slowly being lost without an inquisitiveness to document, record, or preserve. Wigwam burners, a once-common sight, are gradually disappearing. Part of an evolving lumber industry, they are now obsolete. Although many have been torn down or replaced, a few still survive (figure 44). Are these structures adequately significant on Oregon's cultural landscape to be preserved? An investigation of the number and locations of wigwam burners in the Douglas fir region is appropriate. A "windshield" survey could determine if the burners are significant and merit listing on the National Register.

Preservationists are often guilty of romanticizing the past. Past technology was no less intrusive and alienating than that of today. In the pursuit of industrial preservation, it is critical not to manipulate the past. For example, when the smokey locomotive chugged into town, hauling logs from the timber source, housewives probably did not

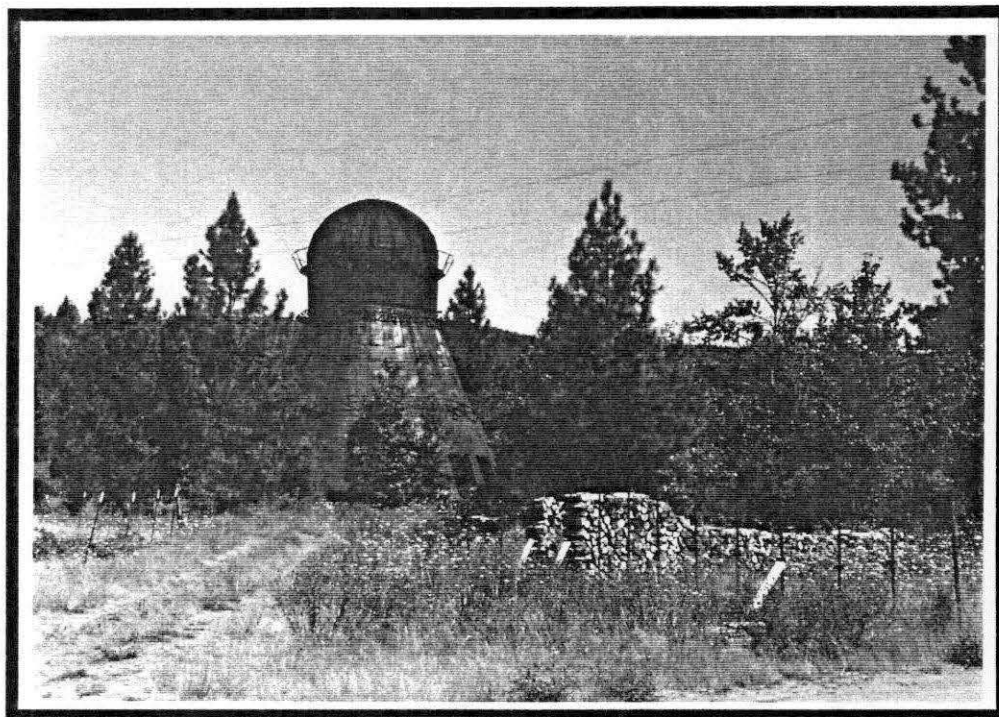


Figure 44. Abandoned Wigwam Burner, 1991.
Source: Author.

enjoy running to remove laundry from their clotheslines before their morning's work was soiled with dirt and cinders. Because misdirected nostalgia often results in a biased and incomplete portrayal, it benefits neither history nor the preservation movement.

Although the mill complexes are gone or have been replaced with modern facilities, a built environment does remain that clearly indicates how daily activities were

centered around a resource-based economy. Preservation of these cultural resources would provide a testament to the past lumber industry without creating a "Disneyland" mill town. There are road patterns, company housing, mill offices, and spatial arrangements that communicate what it was like to live in these wooden communities.

Historic Preservation tells the story of the built environment and the attitudes, values, and goals of the people connected with it. The meaning of a building is a layering of cultures, economics, politics, and personality. How did these buildings appear to the people who knew them at the time they were built? What symbols or images of themselves are hidden in these structures?

A description of a building or site cannot overlook the material culture: "The plain form vernacular building represents the external image of an enduring social idea."⁵ Stressing the material culture allows the preservationist to ask: Who were these people, and what did their homes mean to them? For example, does the single car garage with an attached wood shed facing the alley in Vernonia make a statement about the daily activities of that community?

⁵Glassie, 21.

Findings

A set of test questions was posed at the conclusion of research for each town, as follows:

1. Do historical buildings remain from the industrial past?
2. Do road patterns or spatial arrangements suggest the influence of lumber based economy?
3. Is the town worthy of future study?
4. Are there cultural resources that can be preserved?

Repeatedly, the answers were affirmative. The subject of the lumber industry definitely needs further examination while cultural resources still exist.

Recommendations

Following a written historical context of western Oregon's Douglas fir region and a brief survey of the town's sawmill nucleus, the following recommendations can be made. First and foremost, for any preservation plan to be successful, it is vital to include the community and open plans to public comment. Interest, commitment, and involvement are essential from the local community as well from interested outsiders.

The history of the lumber industry along the Lower Columbia River needs further examination, especially during

the early cargo trade period before 1883. The topography along the river resulted in a technology that merits the name "flume country," yet little is known or documented about this technology. What was the extent of the lumber trade in the communities of Bradwood and Westport? What is the history of the three flumes in Rainier? Are there any artifacts?

Within this area, the town of St. Helens lacks an appreciation of its lumber industry; little is known about the empty fenced area near the river front. The 1984 Historic District Nomination of downtown St. Helens mentioned almost nothing about the lumber industry, yet this research indicates that lumbering developed the town's economy. History of the McCormick Lumber Company is difficult to obtain and few written articles exist. Considering the lack of written documentation, an aggressive use of oral history would be a good beginning. The local museum may very well be an appropriate place to initiate an afternoon of reminiscence with the community's senior citizens. These conversations could be recorded and become the basis of a book of local history on the lumber industry. A reconnaissance survey of "Bungalow flats" is needed to determine the age of the homes, the properties' characteristics, changes made over time, and current ownership.

Along the northern coastline in Tillamook Bay, the town of Garibaldi has a unique opportunity to nominate industrial artifacts to the National Register. Nominating an industrial artifact requires a different outline and requirement than, for example, a Queen Anne mansion. Although in some instances industrial buildings are architecturally typed, oftentimes they appear without a specific architectural "style." The description of such an industrial structure, artifact, or object then must necessarily include function and process in the description, rather than specific category or style.

On the other side of the street from Garibaldi's old mill complex, the community has started a local museum. From the museum's front window, the colossal stack is easily seen. To further draw public attention to local historical resources, it is recommended that a diorama of the bygone mill complex be placed in the museum and an interpretive plaque be placed adjacent to the smoke stack. A miniature model mill in the museum and an informational sign adjacent to the smoke stack would link the lumber history to the preservation of the remaining artifacts.

Across Miami Cove and well within the surroundings of the Garibaldi community is the forgotten site of Hobsonville. Research of the area's lumber history revealed the existence of this former nineteenth-century mill town. A

kiosk is needed at this site to explain the lost history of this early port town. Surface and subsurface industrial archaeology is recommended to probe its history. Any artifacts could be housed in the Garibaldi museum, adding to the educational base of the area's lumber history.

Within the Coast Range lie some of the finest, pre-1940 resources in the Douglas fir region. They exist within the town of Vernonia, where the Oregon-American Lumber Company developed a mill complex and adjoining housing in 1923-1924. Once owned by the company, the area is now incorporated into the town. Of the original 66 company houses built by O-A Lumber Company, only three have been torn down, and many of those remaining are essentially as they were in the early years. The mill complex, though void of the buildings themselves, has many concrete foundations remaining. The possibilities of preserving the fabric and culture of a community closely meshed with a dominating lumber mill are extraordinary.

A complete survey of O-A original ownership of 175 areas would be ideal. However, reality suggests beginning with a reconnaissance survey of the homes on O-A hill and along Bridge Street. Upon conclusion of that survey, a walking tour from the museum up the hillside could be developed, describing the material culture of the residents, and spatial arrangements and building plans of the homes in the

company's early years. This self-guided tour would benefit tourists and residents alike. A leisurely stroll from the museum at the base of the hill would reveal the relationship of the housing to the mill, the use of the alleys, and how the community functioned during the reign of the big mill.

The identity of a mill town endures with the citizens of Vernonia. The museum's main theme is the area's lumber industry. On the porch is a horizontal tree slab with the title: "This tree is as old as Vernonia." Both the tree and the town were "incorporated" in 1891. Different events are associated with the tree's growth rings. The World Wars and astronauts landing on the moon have equal billing with the opening and closing of the O-A mill. Every year since the closing in 1957, the community has held a summer jambo-ree to celebrate its identity. A remarkable esprit de corps has kept alive the fine qualities that most residents remember about the isolated days many decades ago.

The town of Westfir in the Cascades was the only bona fide company town within this study. Though lacking many of the original buildings, the spatial arrangement clearly indicates the pattern of a town that functioned around the mill. This community merits additional exploration and evaluation. Although the mill site burned in 1979, all concrete foundations remain, making a study in surface archaeology. Although a reconnaissance survey of the entire city

limits would be desirable, a first step would be to survey the buildings located behind the mill office on all sides of the "horseshoe" street. Because the covered bridge that has come to represent the town is less than 50 years old, it therefore does not meet the criteria of a National Register nomination. Before a recommendation to list it under a special exception is made, a discussion with the community should be considered.

The Willamette Valley towns had an interwoven economy rather than one based solely on timber, thus leaving Cottage Grove with few resources from its early twentieth-century lumber industry. Outside the studied area of the Woodard sawmill nucleus, however, two resources within the town are deserving of further research. These are the concrete remains of a waste burner from the Cottage Grove Manufacturing Company, located east of Main Street near the Southern Pacific Railroad tracks, and the Chambers Railroad Bridge, a covered railroad bridge built to accommodate steam engines pulling logging trains.

The Woodard Lumber Company had a sawmill at the current site of the Cottage Grove Reservoir. An interpretive sign at the reservoir with an explanation of the eight-mile flume that carried cants to the re-saw mill in Latham is recommended. While an interpretive sign is recognized as a form of reproduction, not preservation, it does strengthen the

appreciation and significance of the lumber industry and the few remaining resources within the town.⁶

Further historical research concerning other towns within the Douglas fir region is needed to determine the remaining cultural resources. If resources are found, the question then becomes: Will preservation benefit the community? Research begins with an historical overview of the town's lumber industry, followed by a survey. As always, any survey work beyond a cursory one must be completed with the involvement and interest of the community.

An interpretive strategy must be developed before signage is displayed. If descriptive signs are used to give a rendition of history and past activity, it is critical that such an expression does not trivialize the intent. For example, a walking tour through the mill rubble at Vernonia or Westfir would be more appropriate than a marker indicating what was once there, and an interpretive sign near Garibaldi's smoke stack would similarly strengthen and explain its value.

This study, though limited, demonstrates that the lumber industry is worthy of further research. Cultural resources remain on Oregon's landscape that signify the importance of the lumber industry. Because strong regionalism

⁶Sturdivant, 86-88, 151.

exists in the lumber industry, future work must consider geographic influences. Long-term planning, along with cooperation from the community, is necessary for successful preservation. In order that future generations may come to appreciate what it was like to live in a mill town during the Rail Era.

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