

Contents

Introduction	1
Natural History	3
Native American Habitation	5
Euro-American Settlement	8
Weyerhaeuser Timber Company and the South Bay Log Dump	11
Building the South Bay Log Dump	14
Working at South Bay	21
The Decline of South Bay	28
Weyerhaeuser's Legacy at South Bay	31
State Ownership	32
Recommendations	34
Further Study	34
Works Cited	35
Figures	2
1. Area map	6
2. Vicinity map	15
3. Proposed log dump, 1926	16
4. Proposed log dump elevations, 1926	18
5. Henderson Inlet, April 1946	18
Photographs	12
1. The town of Cherry Valley being moved as a train	12
2. The town of Vail in the 1930s	14
3. Crew loading logs	17
4. Line-up of locomotive power	22
5. Steam jammer unloading pilings	24
6. Hand sorting saw logs	25
7. Early boom boat	26
8. Log train approaching South Bay	26
9. Grapple unloader	27
10. Log bronc moving a bundle of logs	30
11. Aerial view, 1965	33
12. Aerial view, 1989	33

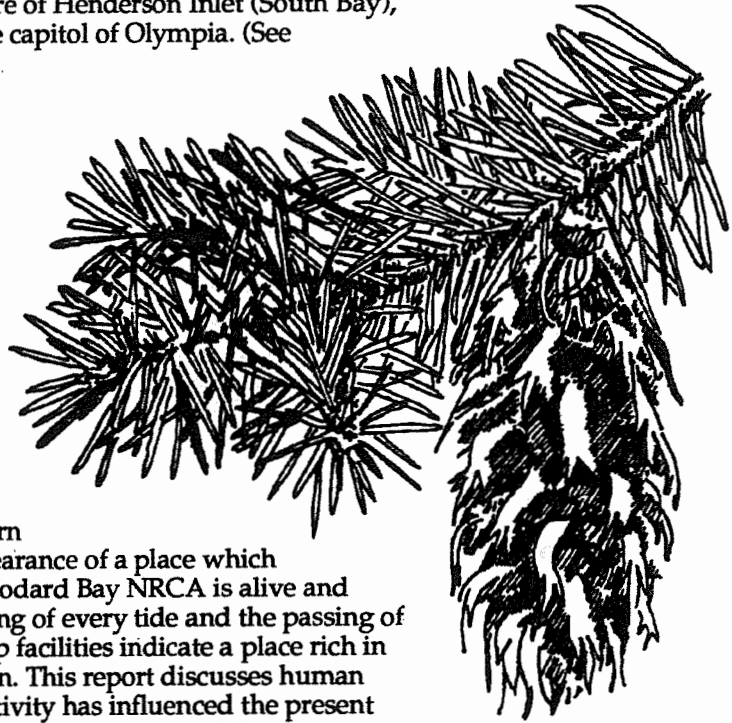
Introduction

The 1987 Washington State Legislature adopted Substitute Senate Bill 5911, creating a new class of public ownership, the Natural Resources Conservation Area (NRCA). This bill defined a potential NRCA as:

An area of land and/or water which retains some degree or has reestablished its natural character, although it may not be completely undisturbed, or has other flora, fauna, geological, archaeological, scenic or other similar features of importance to the people of Washington.¹

The state Department of Natural Resources (DNR) acquired four properties for this program. The first three are: Cypress Island, Skagit County; Dishman Hills, Spokane County; and Mount Si, King County. The fourth NRCA lies in Thurston County, midway along the western shore of Henderson Inlet (South Bay), about eight miles from the state capitol of Olympia. (See Figure 1.)

Centered in the eastern half of Section 18, Township 19 North, Range 1 West, Thurston County, the Woodard Bay NRCA contains approximately 260 acres of uplands, 190 acres of tidelands and 6.2 miles of railroad right-of-way. The more conspicuous features of this site are the pier, trestle and buildings of the former Weyerhaeuser South Bay Log Dump.²



These artificial structures, forlorn and eerily empty, give the appearance of a place which is extinct and static. But the Woodard Bay NRCA is alive and robust, changing with the coming of every tide and the passing of each day. The defunct log dump facilities indicate a place rich in the history of human occupation. This report discusses human activity in the area, how this activity has influenced the present appearance of the site, some of the actions planned for the near future and how these affect Woodard Bay.

¹ Text of Substitute Senate Bill 5911. Thurston Reg. Plng. Council, 1.

² Ibid; 1. Wright 1989.

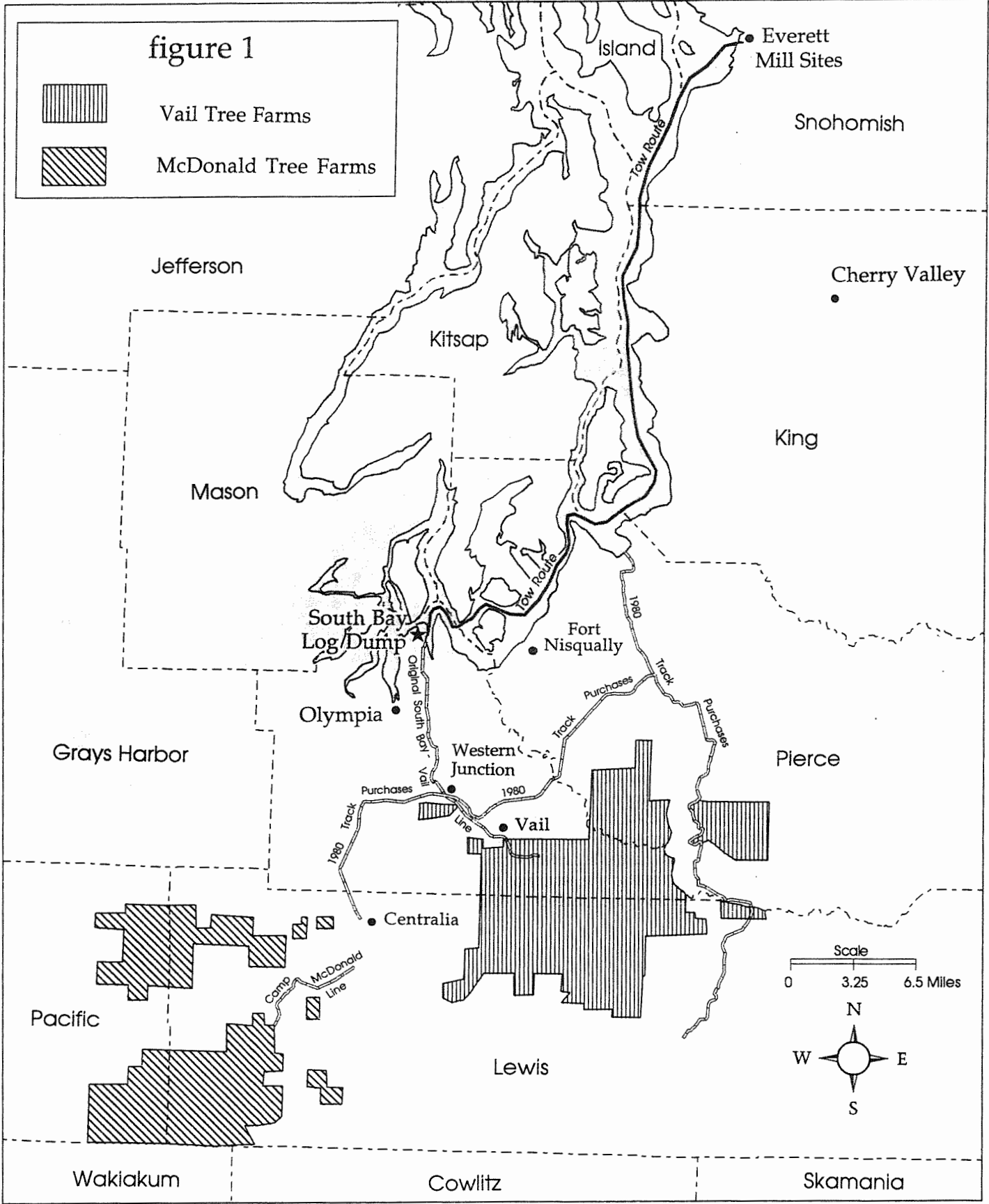


FIGURE 1. Area map. DEPARTMENT OF NATURAL RESOURCES

Natural History

The main features of the site are three peninsulas (north, central and southern) and two bays, Chapman and Woodard. Chapman Bay lies between the first two peninsulas and Woodard Bay between the second two. From the shores of Henderson Inlet the peninsulas rise to approximately 75 feet on the northern, 95 feet on the central and 65 feet on the southern. Sleepy Creek drains into Chapman Bay and Woodard Creek flows into its namesake bay.³ (See Figure 2.)

Various plant communities inhabit the site. The peninsulas contain dominant second growth, mixed broadleaf/coniferous forest. The principal trees are Douglas fir, red alder and bigleaf maple. Other notable trees include western hemlock, western redcedar and grand fir. Most of the Douglas firs are second growth, 12 to 30 inches in diameter, with occasional residual old growth trees up to 4 feet in diameter.⁴

Understory plants consist of swordfern, salmonberry, salal, Oregongrape, elderberry, Indian plum, cascara, red huckleberry, wild blackberry, honeysuckle and poison oak. Swordfern thrives in the moist, low-lying areas. As soil drainage increases, salal predominates. On well-drained portions the most common shrub is Oregongrape. Invasive plants include holly, Himalayan blackberry, English ivy and Scotch-broom.⁵

Of the two creeks, only Woodard Creek contains anadromous fish. Chinook, coho and chum salmon, as well as sea-run cutthroat trout inhabit Woodard Creek. Coho runs average about 400 fish each year, while chinook and chum runs each average about 50 fish per year.⁶

Shellfish habitation is limited by the muddy beaches. However, Manila clams on lower Woodard Bay and butter clams below the railroad trestle are usually found higher on the beach, close to the surface. The mud surrounding the piers contains ghost shrimp, while the pilings provide habitat for mussels and barnacles.⁷

Many species of birds inhabit Chapman and Woodard Bays. According to a report issued by the Washington State Department of Wildlife, at least 39 different species of waterfowl gather in the area. Another 77 species of birds occupy the upland areas.⁸

Most notable of the birds present at Woodard Bay is a pair of Bald Eagles. These birds have been observed nesting here since 1983.⁹

Another avian resource of significance is the Great Blue Heron rookery. Located on the point between Chapman Bay and Henderson Inlet, its nests have increased from 26 in 1976 to 61 in 1985.¹⁰

The other prominent wildlife resource is the colony of harbor seals. This is the second largest population of harbor seals in southern Puget Sound, the largest being located on Gertrude Island, next to McNeil Island. The colony has grown from 40 in 1977 to 228 in 1984. A census conducted in November 1988 counted 237 seals. The group is thriving with the total expected to top 300 in 1990. These animals haul out on the logbooms and walkways.¹¹

³ Crawford, 1987. Thurston Reg. Plng. Council.

⁴ Crawford. Thurston Reg. Plng. Council. 10. Wright 2.

⁵ Author, personal obs. Crawford. Thurston Reg. Plng. Council. 11.

⁶ Thurston Reg. Plng. Council. 11. Peoples, et al. 6. "South Bay crews keep Everett in logs." Weyerhaeuser World. Sept. 1969.

⁷ Thurston Reg. Plng. Council. 13.

⁸ Div. of Land and Water Conservation. "Terrestrial Birds of Woodard Bay NRCA." Internal communication.

⁹ Thurston Reg. Plng. Council. 21-3. Wright, 9-10.

¹⁰ Thurston Reg. Plng. Council. 24. Wright, 20-1.

¹¹ Sweeney, J., pers. conv. for 1990 number. Thurston Reg. Plng. Council. 25-6. Nov. 1988 number from Wright 10.

Native American Habitation

Before recorded history, people lived along the shores of Henderson Inlet. These people were the Nisqually.¹²

The natives lived in small groups Europeans called villages. The sites of the villages were determined by the availability of food and the local topography. Because a fresh water stream meant both a source of potable water and proximity to salmon runs, villages were always located along a stream or near its mouth.¹³

On Henderson Inlet around 1854, George Gibbs, an agent of Territorial Governor Isaac Stevens, identified the natives of the South Bay area as the Noosehchatl. He estimated the population of this village at 12 people. Marian Smith, an ethnologist, later provided a more exact location as "on South Bay or Henderson Inlet between the creek at the head and that on the south." She called this village *tuts'e' tcaxt*.¹⁴

According to T. T. Waterman, an ethnologist of the early twentieth century, the natives called the peninsula between Chapman and Woodard Bays *Su'pEks*, translated as "blowing promontory."

A very narrow and elongated promontory jutting out into the inlet from inside a cove. The term is descriptive of the shape of the promontory, which looks like a seal emerging from the water.¹⁵

The head of Woodard Bay was called *TsEle' xgwil*, which means "squeezing one's canoe." This refers to the narrow channel in which Woodard Creek flows when the tide is out.¹⁶

While the exact location of this village is no longer known, some tentative conclusions can be made about Native American activity in the Woodard Bay area. *Tuts'e' tcaxt* was a permanent village, consisting of two cedar plank houses that measured approximately 30 feet by 100 feet. Here the natives lived during the inclement winter months. During fair weather, it was a hub from which hunting and other food gathering activities radiated. The principal summertime hunting and gathering grounds for the people of South Bay were the prairies and beaches of nearby Anderson Island. Since the older people rarely participated in the seasonal gathering expeditions, the village site was probably never completely vacant.¹⁷

The Noosehchatl people, like the rest of the Nisqually, returned home in the fall in time for the salmon runs. The reappearance of this abundant source of food marked a change in the seasons and provided the sustenance necessary for the coming winter.¹⁸

¹² Carpenter letter of Jan. 22, 1990.

¹³ Carpenter, 1986, 1. Haeberlin and Gunther, 1930, 15. Smith, 1940, 4.

¹⁴ Gibbs, 1978, 41 and 1982. Smith 12, for pronunciation 14. South Bay Historical Assn. 1986, 5.

¹⁵ Carpenter letter, Feb. 16, 1990.

¹⁶ South Bay Hist. Assn. 5-6.

¹⁷ Carpenter, 1986, 8. Haeberlin and Gunther, 18. Smith, 5, 26-7.

¹⁸ Carpenter, 1986, 10. Haeberlin and Gunther, 19.

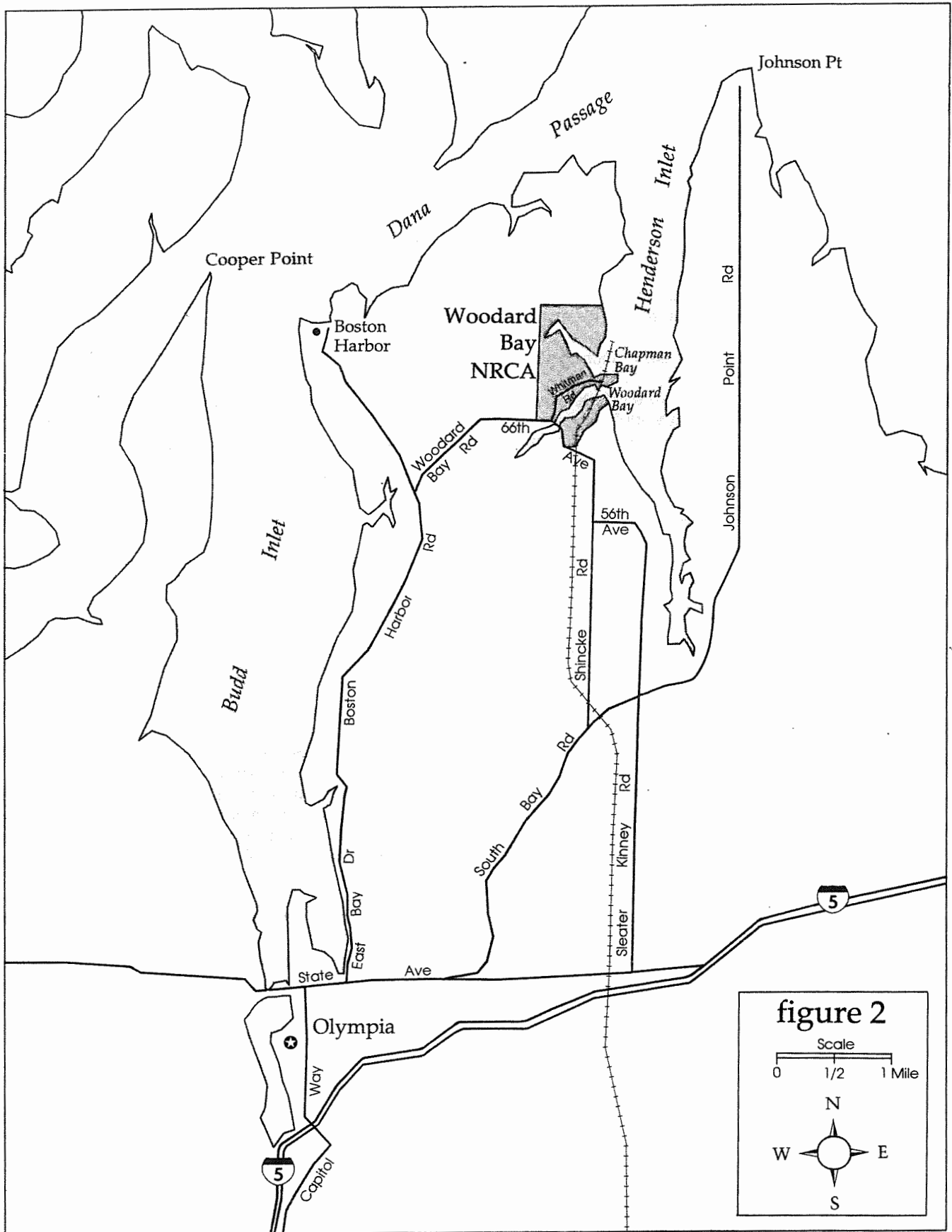


figure 2

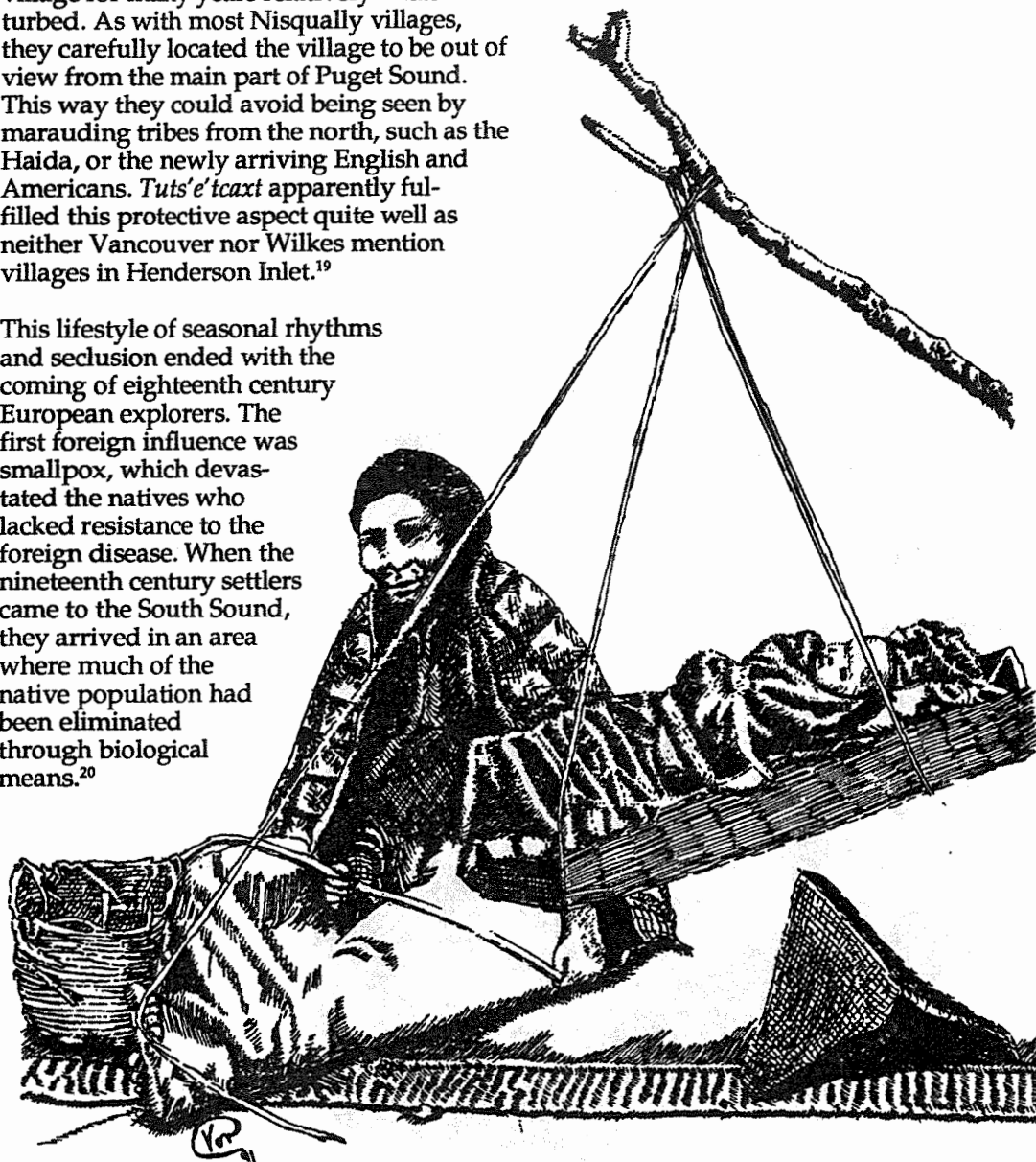
Scale
0 1/2 1 Mile

N
W E
S

FIGURE 2. Vicinity map. DEPARTMENT OF NATURAL RESOURCES

The native people of South Bay lived at their village for many years relatively undisturbed. As with most Nisqually villages, they carefully located the village to be out of view from the main part of Puget Sound. This way they could avoid being seen by marauding tribes from the north, such as the Haida, or the newly arriving English and Americans. *Tuts'e'tcaxt* apparently fulfilled this protective aspect quite well as neither Vancouver nor Wilkes mention villages in Henderson Inlet.¹⁹

This lifestyle of seasonal rhythms and seclusion ended with the coming of eighteenth century European explorers. The first foreign influence was smallpox, which devastated the natives who lacked resistance to the foreign disease. When the nineteenth century settlers came to the South Sound, they arrived in an area where much of the native population had been eliminated through biological means.²⁰



Currently, an ongoing Nisqually study of Henderson Inlet suggests that the entire shoreline is of a "sensitive nature."²¹ This refers to the possible existence of village and burial sites. The historical evidence of Nisqually habitation in the area and the presence of a shell midden on lower Chapman Bay indicate that the inclusion of archaeological explorations in the state's management plan for the NRCA could be rewarded by revealing physical evidence of Native American habitation.

¹⁹ Carpenter, 1986, 4.

²⁰ When Lewis and Clark explored the Pacific Northwest in 1804-5, they noted smallpox scars on the natives. Exactly how many died from this disease can never be determined. For more information see White, 1980. 26-7.

²¹ Carpenter, letter of Jan. 22, 1990.

Euro-American Settlement

The initial European settlements in the South Puget Sound area were primarily British, represented by the Hudson's Bay Company at Fort Nisqually. This site is about ten miles east of Woodard Bay. (See Figure 1.) Here the British company established a fur trading post in 1833. When Hudson's Bay Company leaders determined that the fur trade was becoming unprofitable, their business at Fort Nisqually shifted to agriculture. The Puget Sound Agricultural Company, an Hudson's Bay Company subsidiary, formed in 1838 to farm the prairies around the fort.²²



George Bush

Shortly after, Americans began to settle in the area. Michael T. Simmons, George Bush and their party established the first permanent American settlement of Newmarket (now Tumwater), about eight miles south of Woodard Bay, in 1845.²³ (See Figure 1.)

The Oregon Country became undisputed American territory when Great Britain and the United States signed the Oregon Treaty in June 1846. The 49th parallel became an international boundary that separated their political and economic agendas.

American settlers increasingly migrated to the Puget Sound area.

²² Carpenter, 1986, 35-40, 81-2, 96-7. Rainey, 2. South Bay Historical Assn. 3.

²³ Rainey, 3.

In 1852 a millwright from New York, Harvey Rice Woodard, with his wife Salome and sons Alonzo, Theodore and Aldebert, crossed the Great Plains in a wagon train and spent the winter in Milwaukie, Oregon Territory. Late in the winter of 1853, the Woodard family came to Olympia by ship. In March of that year the Woodards settled by the bay which now bears their name. Here the family erected a house and cleared ten acres to farm.²⁴

Under the provisions of the Donation Land Claim Act of 1850 and its amendments of 1853, Harvey Woodard filed a claim for 320 acres in Thurston County in Sections 17, 18 and 19 in Township 19 North, Range 1 West (see Figure 5). The legal description of the claim was:

The east half of the southwest quarter of Section 18 in Township 19 North, Range 1 West, Southeast quarter of same section fractional; the southwest quarter of Section 17 fractional; the east quarter of the northwest quarter of Section 19 fractional including the whole of fraction number 1 in the said quarter section.

Woodard applied for this claim in March 1854, and received his patent in December 1859.²⁵

But by the time Woodard secured his title, his family was long gone from the site. During the Indian War of 1855-56, the Woodards, along with most of the settlers of the area, fled to Olympia for security.

The Woodard family returned to South Bay, discovering their house had been burned, possibly by the Indians, during the uprising. Perhaps this was too great a privation or perhaps Olympia proved too appealing. Whatever the case, the Woodards moved to the west side of Olympia in 1856. They settled on the street which bears the family name. The Woodard home, although slightly modernized, still stands on West Bay Drive.²⁶

The natives, too, had left South Bay by this time. The event which precipitated the Indian uprising was the signing of the Medicine Creek Treaty in December 1854. The Nisqually were upset about the low quality land that had been allotted to them as a reservation. At the start of the conflict, the natives who did not take up arms were moved to Fox Island. After the war, more suitable land along the Nisqually River was given to the tribe.²⁷

Although Harvey Woodard made his home in west Olympia, he retained ownership of his Donation Land Claim. Over the years he sold portions of this land to nearby residents. By the time he died in November 1872, his widow Salome Woodard retained only 57 acres from the original claim.²⁸

The surviving Woodards continued selling land parcels. In addition, they also sold timber. In April 1875, a prominent pioneer logger of the area, Ben Turner, paid Aldebert Woodard "\$12.50 for the remnant of timber on the Southeast quarter of Section 18, Township 19 North, Range 1 West, containing 18 or 20 acres, more or less." Given Turner's standing as a logger, it is possible he logged other portions of the site during his career.²⁹

Other timber was also sold to local loggers. A. C. Jefferson erected a shingle mill in Boston Harbor around 1907. From the Boston Harbor Railroad Steamship and Land Company he bought the cedar on Sections 18 and 19 for 50 cents per cord. This might have been one of the first *log booms* in the area as the contract included an easement for "the use of all streams upon said premises for the floating of shingle *bolts*."³⁰

²⁴ Blankenship, 1972, 255-6. South Bay Historical Assn. 10. Wash. St. Lib., Washington Room. Manuscript 134.

²⁵ Freeman, 1980, i and 15. South Bay Historical Assn. 15.

²⁶ Blankenship, 257. South Bay Historical Assn. 10.

²⁷ Carpenter, 1986. 173-94.

²⁸ Weyerhaeuser Land Title Dept. Vail-McDonald Operations, Purchase Deed Folder 5.

²⁹ Thurston Co. Auditor. Misc. Records 1: 242.

³⁰ *Boom: a. A raft of logs or a loose bag of logs in the water. b. A string of boom sticks used to guide logs.*

Bolts: A chunk of wood split or cut off a larger piece or off a log.

Thurston Co. Auditor. Misc. Records 9: 125. Vail-McDonald Operations, Purchase Deed Folder 10.

In August 1923, C. H. Sylvester bought the rights to "all the tie timber on the east half of Section 19, Township 19 North, Range 1 West and on lot 7 of Section 18, Township 19 North, Range 1 West." The contract allowed Sylvester 15 months to cut as many as 1800 ties per month and required him to pay the landowner, Norpia Realty Corporation, \$2 for each 1,000 board feet.³¹

Those who inhabited the Woodard Bay area after the Woodards' departure seem to have practiced a lifestyle characteristic of rural Puget Sound in the late nineteenth and early twentieth centuries. Historical research indicates the area was primarily forest and "unimproved" land. Woodard Point (the peninsula between Woodard Bay and Henderson Inlet, see Figures 2 and 5) was occupied by a small farm, about ten acres, containing a cultivated field and a small orchard. It is possible that this farm was the legacy of the Woodard family.³²

Additionally, the area also supported limited oyster farming. Early settlers discovered a bed of oysters "four or five acres in extent"³³ in the South Bay area. The muddy beaches reduced the area available for commercial oystering, but one attempt was made.

In April 1902, the Capital City Oyster Company acquired "the lands surrounding Weyer Point and all of Woodard Bay and Lot 6, Section 18 and Lot 2, Section 17,"³⁴ at a sheriff's sale held because of tax delinquency. Robert Whitham was employed by the company to live on the site and oversee the oyster farming. Today the county road from Woodard Bay Road into the NRCA bears his name.

Whitham worked for Capital City Oyster Company, but the relationship had its troubles. In November 1919, Whitham filed a complaint in Thurston County Superior Court against his employer for "monies owed for work and labor performed and monies paid to and expended for the defendant and owed since September 29, 1919." Whitham won a judgment in his favor the next month and received the money owed him, plus interest, a total around \$1,200. This allowed Whitham to buy the company's oyster lands at a January 1920 auction. Capital City Oyster Company went out of business two years later. Through this astute move, Whitham was able to sell the land to Weyerhaeuser for \$9,000 only four years later.³⁵



³¹ Thurston County Auditor. Misc. Records 15: 224. Vail-McDonald Operations Purchase Deed Folder 10.

³² Vail-McDonald Operations Purchase Deed Folders, 3, 4, 5, 6, 7, 10, Sundry Folder 1.

³³ South Bay Historical Assn., 107.

³⁴ Vail-McDonald Operations Purchase Deed Folder 5.

³⁵ Articles of Incorporation for Capital City Oyster Company, Wash. St. Archives and Records Center. Vail-McDonald Operations Purchase Deed Folder 5, Sundry Folder 1.

Weyerhaeuser Timber Company and the South Bay Log Dump

Since the Weyerhaeuser Company, more than any other individual or entity, has had the greatest impact on the NRCA, it is necessary to focus briefly on the history of this company to better understand the context of its former South Bay Log Dump.

During the last years of the 1890s, the Northern Pacific Railway (NP) wanted to sell its extensive timberlands. The NP was strapped for cash and looked to land sales as a way to generate sorely needed income. In August 1899, negotiations began between the NP and a syndicate of midwestern lumbermen led by Frederick Weyerhaeuser. At stake were 900,000 acres of timberland, only a quarter of which had been surveyed.

Two points slowed the talks. The first was, of course, price. The NP wanted \$7 an acre, while Weyerhaeuser thought \$5 a fair price. The second involved a shipping clause which the railroad wanted to include in the contract. This clause would have obligated Weyerhaeuser and his associates to ship all timber and lumber from the lands on the NP. Weyerhaeuser balked.

After much debate the two parties agreed to a price of \$6 per acre with the shipping clause to be in effect for 15 years. With the signing of the contract on January 3, 1900, the Weyerhaeuser Timber Company (WTC) was born.³⁶

Suddenly, the complexion of the Pacific Northwest timber industry changed. Here was a giant company with abundant timber holdings and no manufacturing facility. This raised questions among other lumbermen. Why would anyone invest over \$5 million in stumpage and not buy a mill? Was this a land hoarding scheme?³⁷

This was not the case. The first move by the new company was made on a grand scale and with an eye to the future. Frederick Weyerhaeuser acknowledged this long-range perspective and said of the purchase: "This is not for us, nor for our children, but for our grandchildren."³⁸ This large-scale and visionary method of doing business would become the pattern for the WTC. It was also the beginning of the chain of operations that would include the South Bay Log Dump as a vital link.

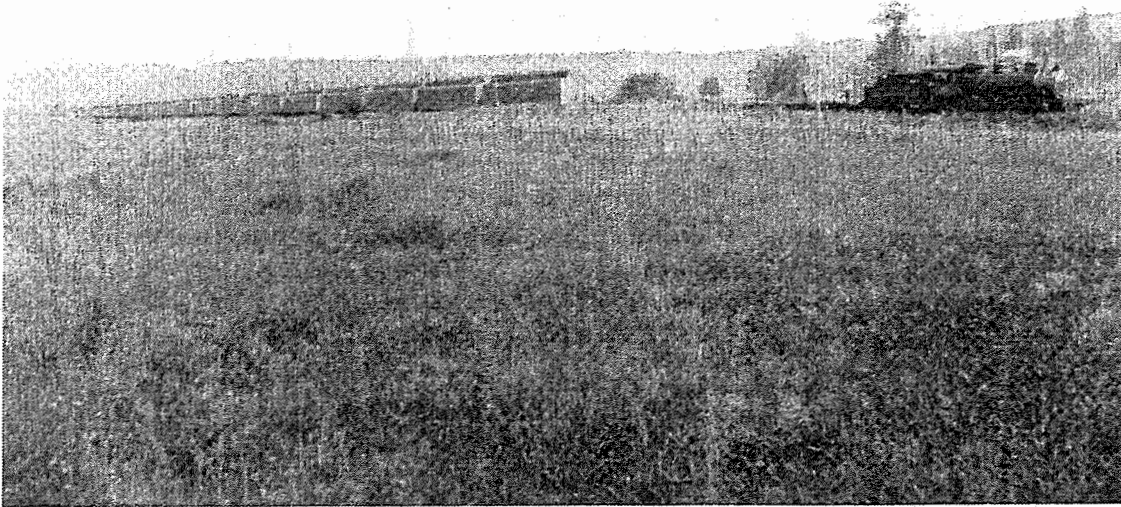
The first general manager of the Weyerhaeuser Timber Company, George S. Long, Sr., added another key element: efficiency. From the start he established the policy of continued timberland purchasing, encouraging efficient logging and management. The company undertook buying "all the adjoining land which has timber and can be bought reasonably."³⁹ Since the NP land was alternate sections, it was Long's practice to begin "blocking in" the company's holdings. This tactic allowed the company to acquire the land between the checkerboard holdings of the railroad at a reasonable cost.

³⁶ Cotroneo, Ross R. "Western land marketing by the Northern Pacific Railway." *Pacific Historical Review*. 1968 37:3; 300-8; Ficken, Robert E. *The forested land: a history of lumbering in western Washington*. Seattle: Univ. of Wash. Press. 1987 : 95; and "Weyerhaeuser and the Pacific Northwest timber industry, 1899-1903." *Experiences in a promised land: essays in Pacific Northwest history*. Edwards, G. Thomas and Carlos A. Schwantes. Seattle: Univ. of Wash. Press. 1986: 139; Hidy, Ralph Willard, Frank Ernest Hill and Alan Nevins. *Timber and men: the Weyerhaeuser story*. New York: Macmillan. 1963: 212-3.

³⁷ Ficken, 1986: 144 and 1987: 96; Hidy: 214.

³⁸ Hidy: 214.

³⁹ Hidy: 216, quotation on 222.



PHOTOGRAPH 1. Town of Cherry Valley being moved as a train. While this is probably not the move to South Bay, it illustrates the mobility of the logging town. D. KINSEY COLLECTION, WHATCOM MUSEUM OF HISTORY AND ART, BELLINGHAM, WASH



PHOTOGRAPH 2. The town of Vail in the 1930s. COURTESY WEYERHAEUSER ARCHIVES

But Long also established the practice of providing assistance to small local mills and cultivating a good public image. This assistance came in the form of the sales of timber and timberland, whenever it did not conflict with the company's primary goals. Not only did this help Weyerhaeuser look good to the public, these sales yielded some cash to help meet large property tax bills. Long felt strongly that positive public opinion was the only way to do business.⁴⁰

In 1902 WTC purchased its first sawmill in Washington. It bought a small, third-rate mill in Everett from the Bell-Nelson Lumber Company. (See Figure 1.) This became known as Mill A and it served two purposes for Weyerhaeuser. It allowed the company to generate some cash from the sale of lumber, and more important, it gave the company a chance to study the sawmilling industry of the Pacific Northwest.⁴¹

Apparently, WTC learned quickly. The capacity of the mill increased from 28 million board feet in 1902 to over 70 million board feet in 1914. This hands-on investigation of the lumbering business allowed Weyerhaeuser to forge another segment in their chain of business that would be as solid as their extensive stumpage holdings.⁴²

On April 29, 1915 WTC opened the "world's most modern sawmill" in Everett. Mill B was completely electrified and had a capacity of 400,000 board feet per 8-hour shift. It was the solid northern end of the Weyerhaeuser chain. Heeding years of lessons from Mill A, WTC planned and built a mill which was large, modern and a model of efficiency. All that remained to complete the forest to mill chain was the crucial link of transportation.⁴³

Mill B had a voracious appetite for timber. The necessary logs came from the open market as well as the lands of Weyerhaeuser subsidiaries operating in the vicinity, Siler Logging Company and Cherry Valley Logging Company. This stumpage in northern King and Snohomish Counties was within 50 miles of Mill B. However, this timberland had already been supplying the increasing needs of Mill A for over a dozen years.⁴⁴

In 1923, another modern mill, Mill C, opened in Everett. It too was a model of "unprecedented efficiency," employing compressed air as well as electricity in its machinery. With the demand for timber increasing, and Cherry Valley's supply dwindling, it was apparent that Weyerhaeuser would have to find another supply source.⁴⁵

It was time to forge a connection between the extensive stumpage in southwest Washington and the insatiable mills in Everett. These timberlands had been part of the initial purchase in 1900. "Blocking in" over the ensuing years had yielded an area of around 300,000 acres with an estimated 4 billion board feet of timber. (See Figure 1.) This area was destined to become the Weyerhaeuser Timber Company's first company-owned logging operation.⁴⁶

⁴⁰ Ficken, 1986: 145 and 1987: 97; Weyerhaeuser Company History. Tacoma, Wash.: Weyerhaeuser Company. 1974: 8.

⁴¹ Ficken, 1986: 149 and 1987: 66. Hidy: 221.

⁴² Clark, Norman H. Mill town: a social history of Everett, Washington from its earliest beginnings to the tragic and infamous event known as the Everett Massacre. Seattle: Univ. of Wash. Press. 1970: 59. Hidy: 232; Tobin, Sharon. "Everett site represents 78 years of company history." Today. Tacoma, Wash. Weyerhaeuser Company Jan./Feb. 1982: 4.

⁴³ Hidy: 237, 273, 363; Langlois, Jim. "New Weyerhaeuser mill at Everett." Today. July/Aug. 1978. 6; Weyerhaeuser Company History: 13.

⁴⁴ Hidy: 396-7.

⁴⁵ Clark: 235-6; Hidy: 397-8; Men, mills and timber: fifty years of progress in the forest industry. Tacoma, Wash.: Weyerhaeuser Company. 1950: 16.

⁴⁶ Hidy: 397. "Shareholders' visit: Vail-McDonald Operation, May 24, 1951." "The Vail-McDonald Tree Farm." Weyerhaeuser News. June 1956, 20-1. "Welcome to the Vail and McDonald Tree Farms."

BUILDING THE SOUTH BAY LOG DUMP

Because of the 125-mile distance between timber and mill, the transportation link was crucial. Moving logs totaled 60 to 70 percent of logging costs. The logging camps, centered around the town of Vail in southeastern Thurston County, the logging railroad and the South Bay Log Dump, were strategic links connecting the static ends of Weyerhaeuser's forest to sawmill chain. (See Figure 1.) These vital segments were perhaps the strongest links in the chain, evidenced by the fact they outlasted Mills B and C.⁴⁷

In early 1924, Weyerhaeuser Timber Co. began acquiring property for its Skookumchuck Operation, named for a river neighboring the timberlands in Thurston and Lewis Counties. Lloyd R. Crosby, who earlier built railroad bridges and cruised timber for Weyerhaeuser, was placed in charge of property purchasing and railroad construction for this logging enterprise.⁴⁸

The buying was done as quietly as possible. In a letter to Crosby dated February 9, 1926, George Long said:

In all instances where you take title in your own name, for any piece of property, I would suggest that immediately thereafter you arrange to make proper conveyance of it to Weyerhaeuser Timber Company by deeds, which of course may not be put on record until we progress further with our work.⁴⁹



PHOTOGRAPH 3. Crew loading logs onto railcars in the hills above Vail. COURTESY WEYERHAEUSER ARCHIVES

⁴⁷ "The big log round-up." *Weyerhaeuser News*. Oct. 1953: 8.

⁴⁸ Andrews, Ralph Warren. *This was logging!* Seattle: Superior Publishing Co. 1954: 93. Untitled article *Olympia Chronicle*. July 3, 1926. 1; Vail-McDonald Operation Purchase Deed Folders.

⁴⁹ Vail-McDonald Operation Purchase Deed Folder 6.

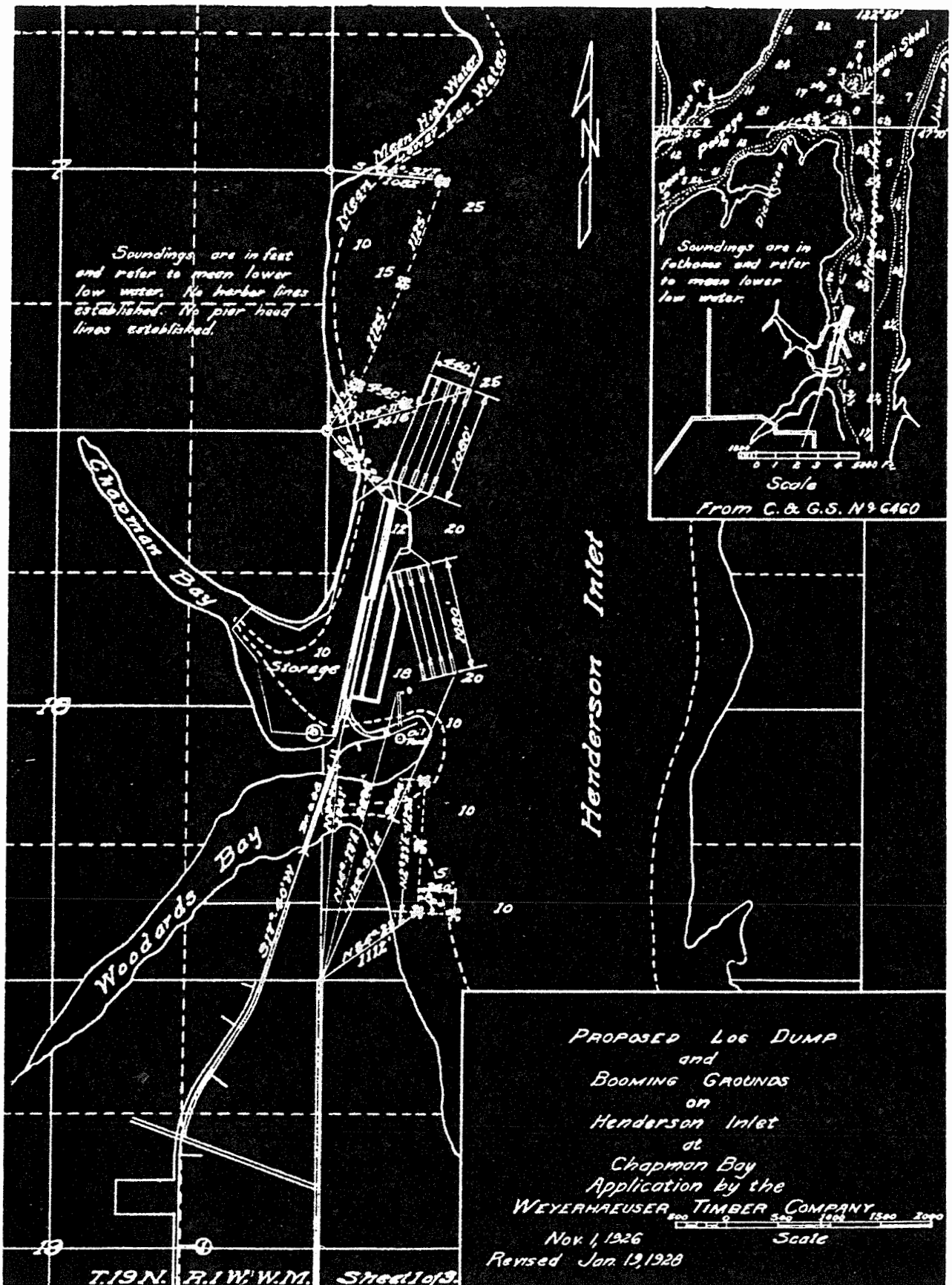


FIGURE 3. Proposed log dump, 1926. COURTESY WEYERHAEUSER ARCHIVES

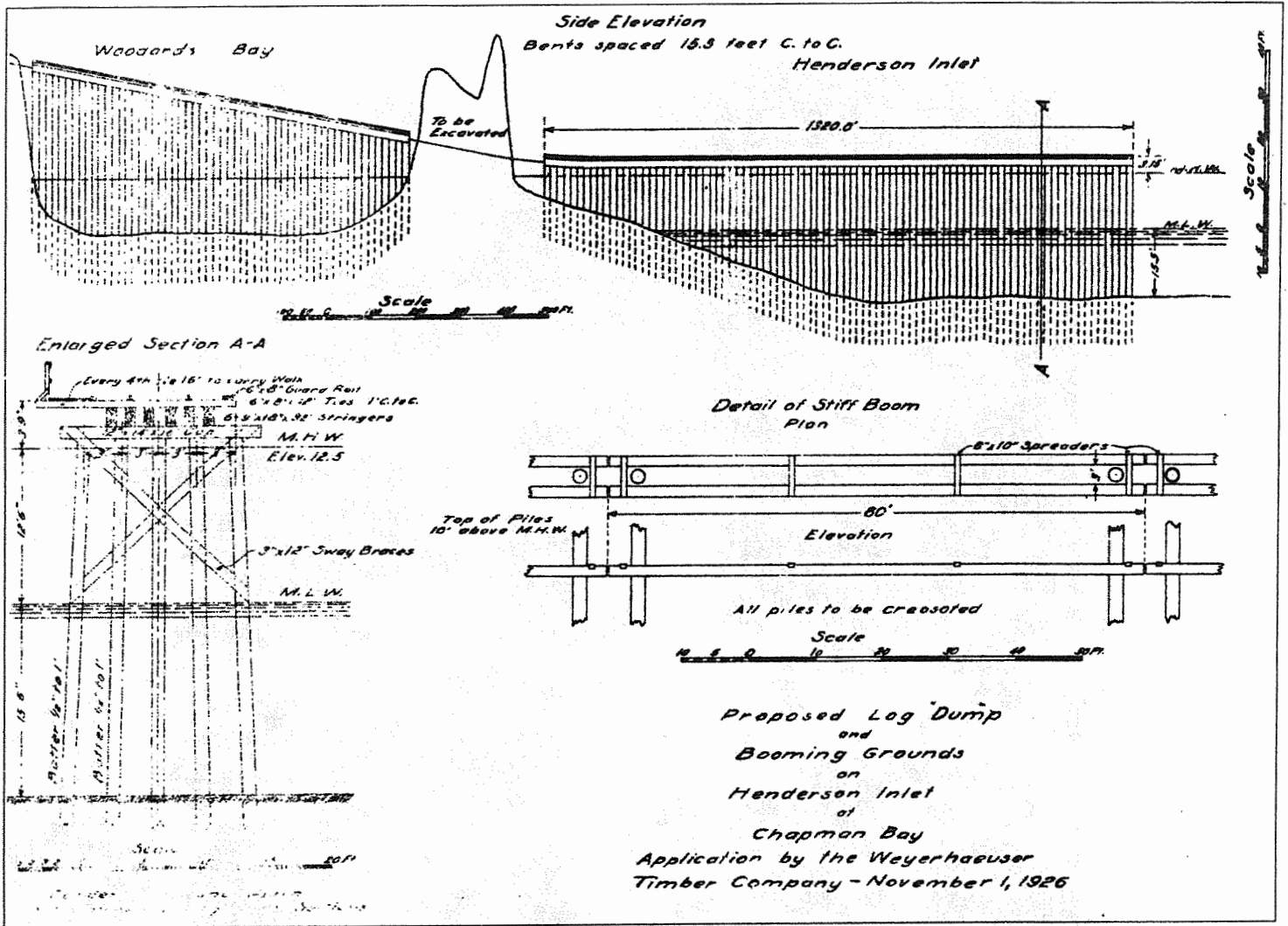
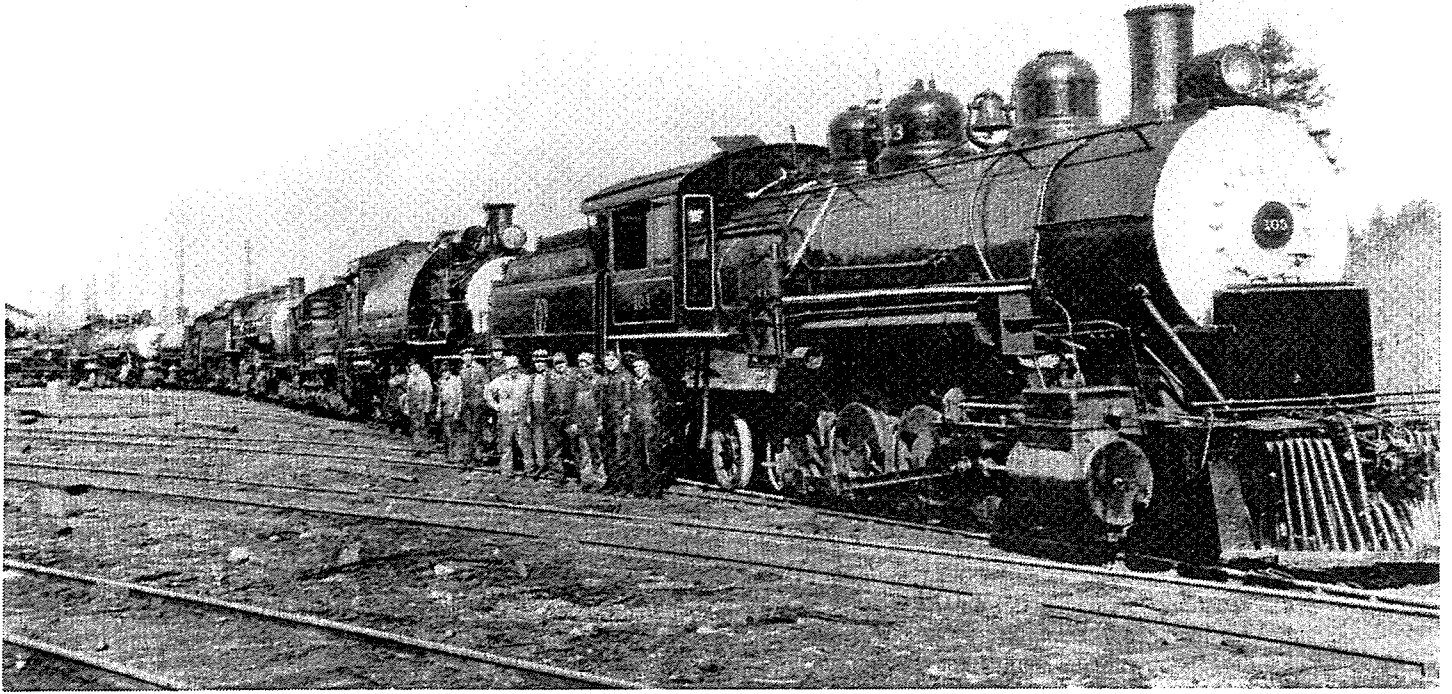


FIGURE 4. Proposed log dump elevations, 1926. COURTESY WEYERHAEUSER ARCHIVES

Crosby echoed this consideration in a statement to the Pacific Logging Congress held in 1927:

The most interesting part of the whole construction job was buying the right-of-way. Most logging railroads start right in the timber. Here, we had to cross thirty miles of improved farmland. In addition we had to have a lot of terminal property on the bay. So we made our survey quietly, and after getting hold of key pieces, we came out and told the people we were going to build a railroad. We told them we would be fair with them if they would be fair with us; that we wanted to pay what was right and wanted them to take what was right.⁵⁰

⁵⁰ Adams, Kramer A. Logging railroads of the west. Seattle: Superior Publishing Co. 1961: 26.



PHOTOGRAPH 4. A line-up of locomotive power and crews at Vall, 1938. COURTESY WEYERHAEUSER ARCHIVES

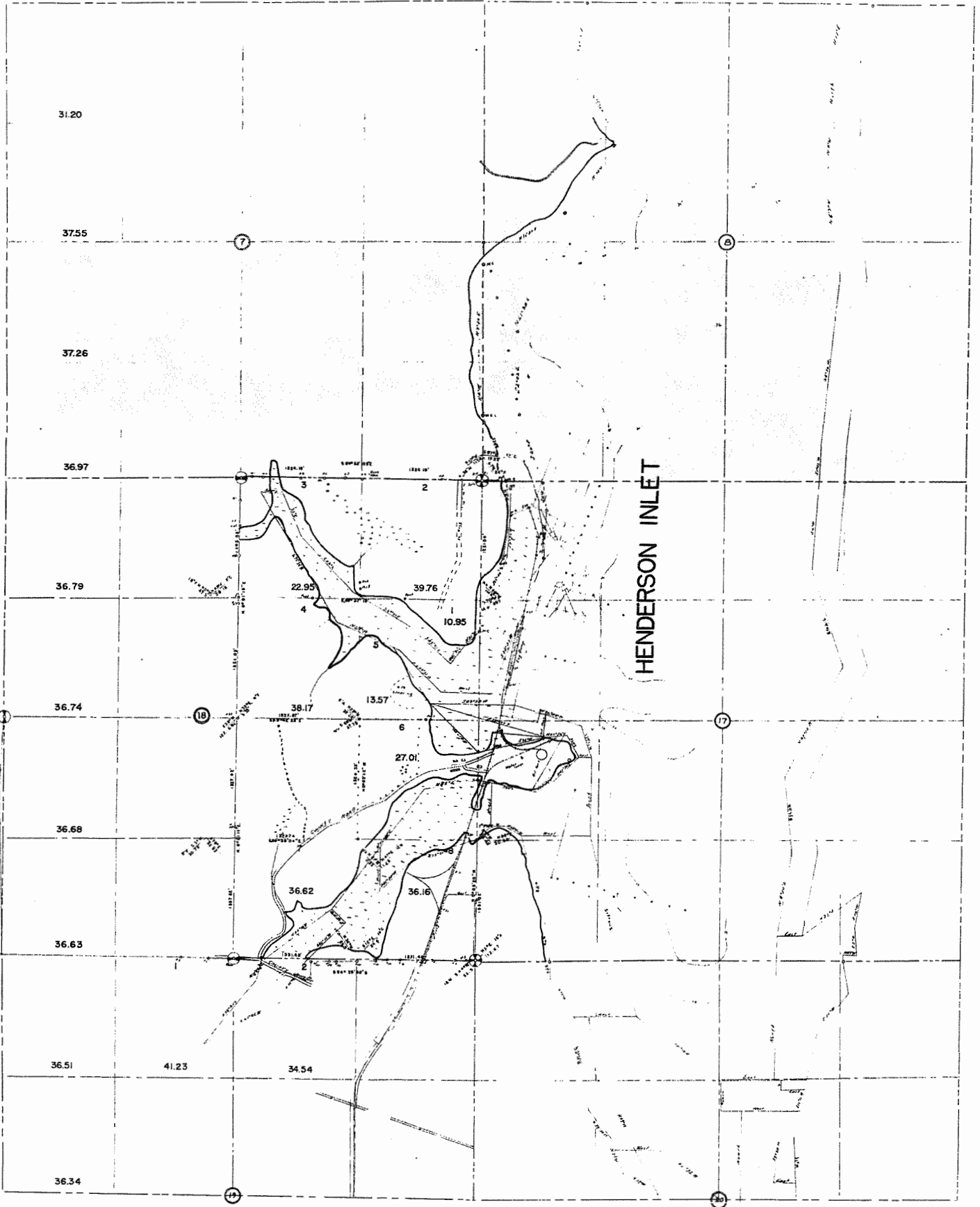
This approach led to agreements with 108 property owners.

The “terminal property on the bay” had to satisfy two important requirements. First, it had to have reliably deep water so the dumping, sorting and booming of logs could occur regardless of tides. Second, like the Native Americans, WTC also needed a sheltered site, protected from the wind. A log boom on water can operate in almost any weather, except wind.⁵¹

On November 2, 1926, Weyerhaeuser presented an application to the U.S. Department of War to “construct a trestle, boom and log dump, in Henderson Inlet, at the entrance to Woodards (sic) Bay and Chapman Bay, about 7 miles northeast of Olympia, Wash.” In a letter dated November 30, 1926, Colonel W. J. Barden of the Army Corps of Engineers approved the application.⁵² (See Figures 3 and 4.)

⁵¹ Edwards, Roy. Oral Interview with Roy Edwards conducted by Andrew Poultridge. Mar. 15, 1990.

⁵² Weyerhaeuser Archives, Records Group #14, Chehalis Timberlands. Box 144. The box with this label is unprocessed material at the Weyerhaeuser Archives as of Nov. 10, 1990. There is no records group #14, but this box does exist.



DRAWN BY G. C. BOYLE

FIGURE 5. Henderson Inlet, April 1946. COURTESY MEYER-HAEUSER ARCHIVES

Work had already begun on the railroad. Local newspapers published stories about the start of the surveying in July 1926. The papers were enthusiastic about the operation and the employment it would provide. By this time, 20 miles of the survey were complete and two-thirds of the right-of-way had been purchased.⁵³

The railroad was completed in the same meticulous manner as other Weyerhaeuser enterprises. A local journal described it this way:

If you have the idea that railroading between the camps around Vail and Olympia is a matter of a snorting, puffy little logging camp engine and a few cars, you would be surprised to see what it really is. They built the railroad from Olympia into Vail, put up their own bridges and culverts, filled in the low spots and dug out to make grade, put down ties, laid seventy-pound rails and rock ballasted the entire line with the same care that would be employed by a transcontinental line.⁵⁴

Even the logging town of Vail, while not new, was carefully planned. The company moved the entire town of Cherry Valley, located near Carnation; (Cherry Valley Logging Co. had almost exhausted its stumpage by this time.) (See Figure 1 and Photograph 1.) This was done by placing the logging camp buildings on specially designed trucks and moving them to Kirkland on the shores of Lake Washington. Here the buildings were loaded onto barges, towed through the Lake Washington Ship Canal and the Ballard Locks and down Puget Sound to Henderson Inlet. Once at South Bay, the journey continued on railcars, where at the end of the line, the buildings became the town of Vail.⁵⁵

Additional equipment and key personnel were also transferred from Cherry Valley to Vail. Machinery included gear driven locomotives for use in the woods and rod-type engines for the mainline haul to South Bay. The superintendent from Cherry Valley, R. A. McDonald, journeyed south to direct logging at the Skookumchuck operation.⁵⁶ (See Photographs 2, 4.)

Construction proceeded rapidly at South Bay, and the log dump neared completion in January 1928. Olympia newspapers reported that over \$1,000,000 had been invested, that logging had been going on for several weeks, and that operations would begin February 1, 1928. The majority of *piling* and *dolphins*⁵⁷ present today were driven during this period of initial construction.⁵⁸

⁵³ "600 to be Employed on New Logging Road, Report." Morning Olympian. July 1, 1926: 1. "Logging road to be Started." Olympia News. July 1, 1926: 1. Olympia Chronicle. July 3, 1926: 1.

⁵⁴ Batwell, E.A. "Building a town is a trick." Puget Sound Electric Journal. April 1928: 4.

⁵⁵ Batwell, 5; Bueter, Arthur J. "Lumber railroads of the Weyerhaeuser Timber Co." Pacific Railway Journal: 1957. 2:1. Reprinted from Baldwin Locomotives Magazine, April 1935: 10. Stevenson, Shanna and Thomas Constantini. Thurston County Cultural Resources Inventory. Olympia, Wash. Wash. St. Off. of Archaeology and Historic Preservation. 1985: 34-140.

⁵⁶ Bueter, 11; "Log shipments to start." Morning Olympian. Feb. 1, 1928. "Vail-McDonald Tree Farm." Weyerhaeuser News. June 1956: 21.

⁵⁷ *Piling: Cluster of piles or buoys to which a vessel may be moored in open water, or a cluster of piles used as a fender as at the gate to a dock.*

Dolphin: Several piles driven in a bunch to form booming grounds for logs or to make docks.

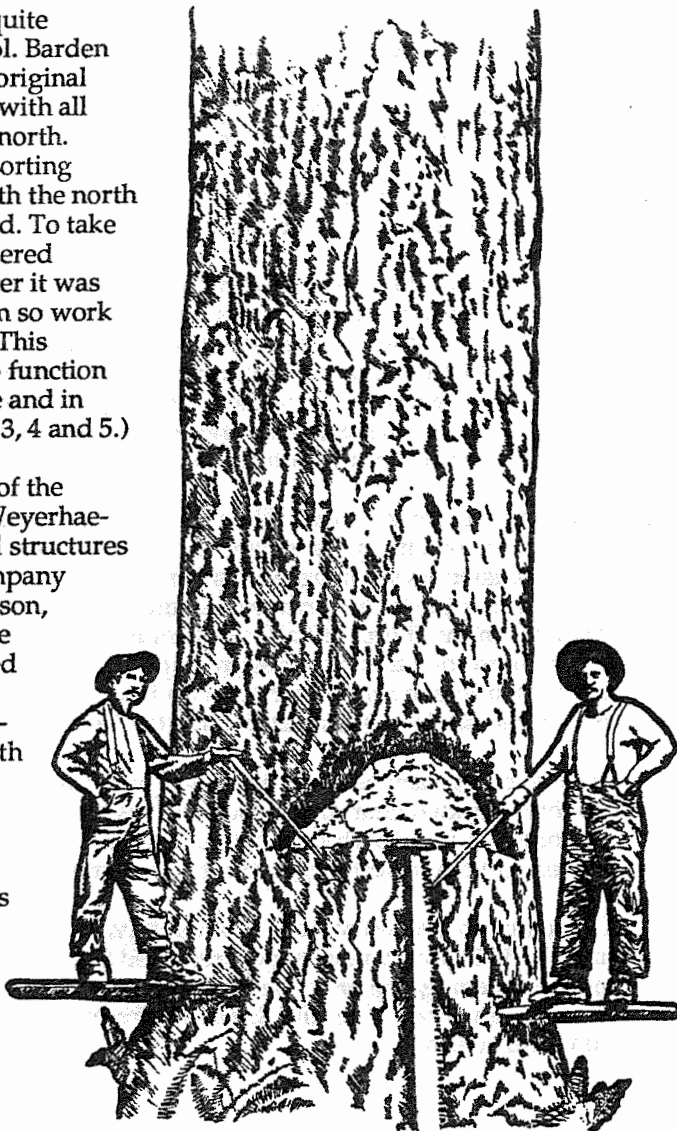
⁵⁸ Chehalis Timberlands. Box 144. "Million dollar industry under way." Morning Olympian. Jan. 6, 1928, 1 & 6. "Weyerhaeuser Co.'s new camp center of activity—will aid in development of Thurston County." Olympia News. Jan. 6, 1928. 1 & 3.

The finished log dump would be quite different from the drawing that Col. Barden approved in November 1926. The original plan showed a one-way log boom with all sorting pockets and storage to the north. However, a two-way boom, with sorting pockets and storage facilities to both the north and south, was actually constructed. To take full advantage of South Bay's sheltered location and consistently deep water it was necessary to build a two-way boom so work would not be limited by the tides. This alteration allowed the log dump to function in either an ebbing or flooding tide and in almost any weather.⁵⁹ (See Figures 3, 4 and 5.)

This change aroused the attention of the Corps of Engineers who notified Weyerhaeuser that the deviation had yielded structures which were illegal. The timber company enlisted the support of Albert Johnson, congressional representative for the Olympia area. Rep. Johnson worked for the passage of a special act of Congress to authorize the construction. He was successful, and the 70th Congress approved HR 15382 on March 1, 1929, legalizing the log dump.⁶⁰

In addition to log booming facilities over the water, buildings were erected on the land. Originally, most were constructed to house the survey crew and other workers. Two of the buildings survive today. One is the boom foreman's house which stands at the end of Whitham Road. The other is the old office building situated at the end of the railroad pier. This office originally was transported from Cherry Valley. It is a prime example of mobile logging camp structures which once dotted the landscape of Western Washington.⁶¹ (See Photograph 1 and Figure 5.)

Why did WTC avoid Olympia and its thriving port when building a South Sound log dump? The reasons seem to be privacy and expense. The railroad from Vail to South Bay was a private carrier, built to haul WTC logs, men and equipment. Building a common carrier railroad, such as the one WTC operated from Longview, Washington, involved federal regulation by the Interstate Commerce Commission and the ensuing expense. By the mid-1920s, it probably was too costly to construct a private line through the city of Olympia to its port.



⁵⁹ Edwards, Mar. 15, 1990; "South Bay crews keep Everett in logs." *Weyerhaeuser World*. Sept. 1969. 6.

⁶⁰ Chehalis Timberlands, Box 144.

⁶¹ Edwards, Mar. 15. Stevenson: 32-140.

WORKING AT SOUTH BAY

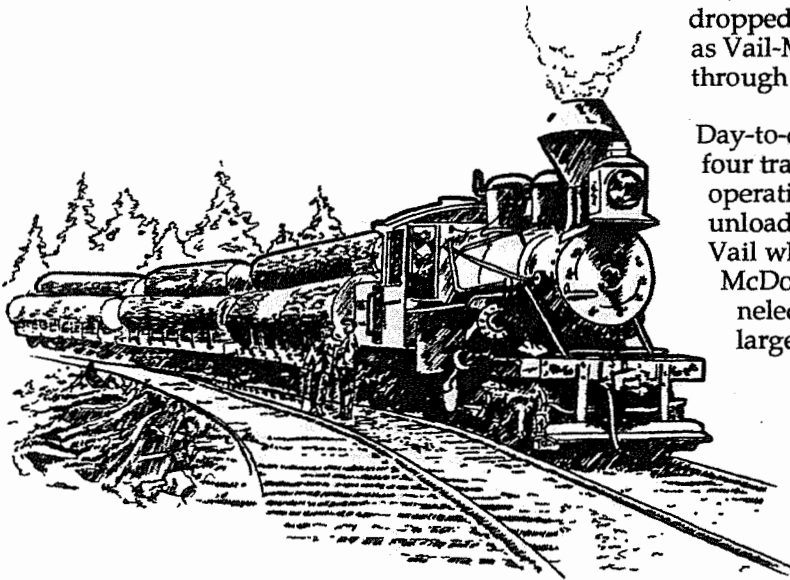
On February 2, 1928, the first load of logs was dumped at South Bay, making history in the process. The unloading machine, known as a steam "jammer,"⁶² was unique. Called the "only one of its kind" and the "speediest and safest log dumper in the world," it unloaded the debut train of 39 cars at the rate of seven to eight cars per minute. It ran on a track parallel to the log train and placed itself in front of cars needing unloading. The train itself ran on a track slanted toward the water, which aided the unloading process.⁶³ (See Photograph 5.)

Olympia leaders were justifiably proud of the new operation. Between the logging camps, the railroad, and the log dump, around 600 new jobs were expected. Some estimates placed the duration of the timber supply at 80 years. The settling of this large, long-term industry on Olympia's doorstep gave residents hope for future economic development of the area. The esteem granted the Skookumchuck Operation was evident when local papers devoted front page space to report a derailment that occurred less than two weeks after the opening of activities.⁶⁴

Within ten years, another block of timberland shipped its logs through South Bay. This area, located southwest of Centralia and Chehalis, was named the McDonald Tree Farm in honor of R. A. McDonald. (A small tugboat which operated at South Bay was named for him in

1928.) Also around this time the Skookumchuck name was dropped, replaced by Vail and the areas were referred to jointly as Vail-McDonald Operations. The total acreage now accessible through South Bay was around 400,000.⁶⁵ (See Figure 1.)

Day-to-day activity at South Bay generally involved three or four trains arriving, each with 40 to 60 cars. This full-scale operation saw around 140 cars or close to 1,000,000 board feet unloaded daily. Two trains made the 26-mile journey from Vail while one or two completed the longer, 66-mile trip from McDonald. The harvest from southwest Washington funneled through South Bay furnishing Mills B and C with "the larger portion of their log requirements."⁶⁶



⁶² This machine was converted from a steam donkey.

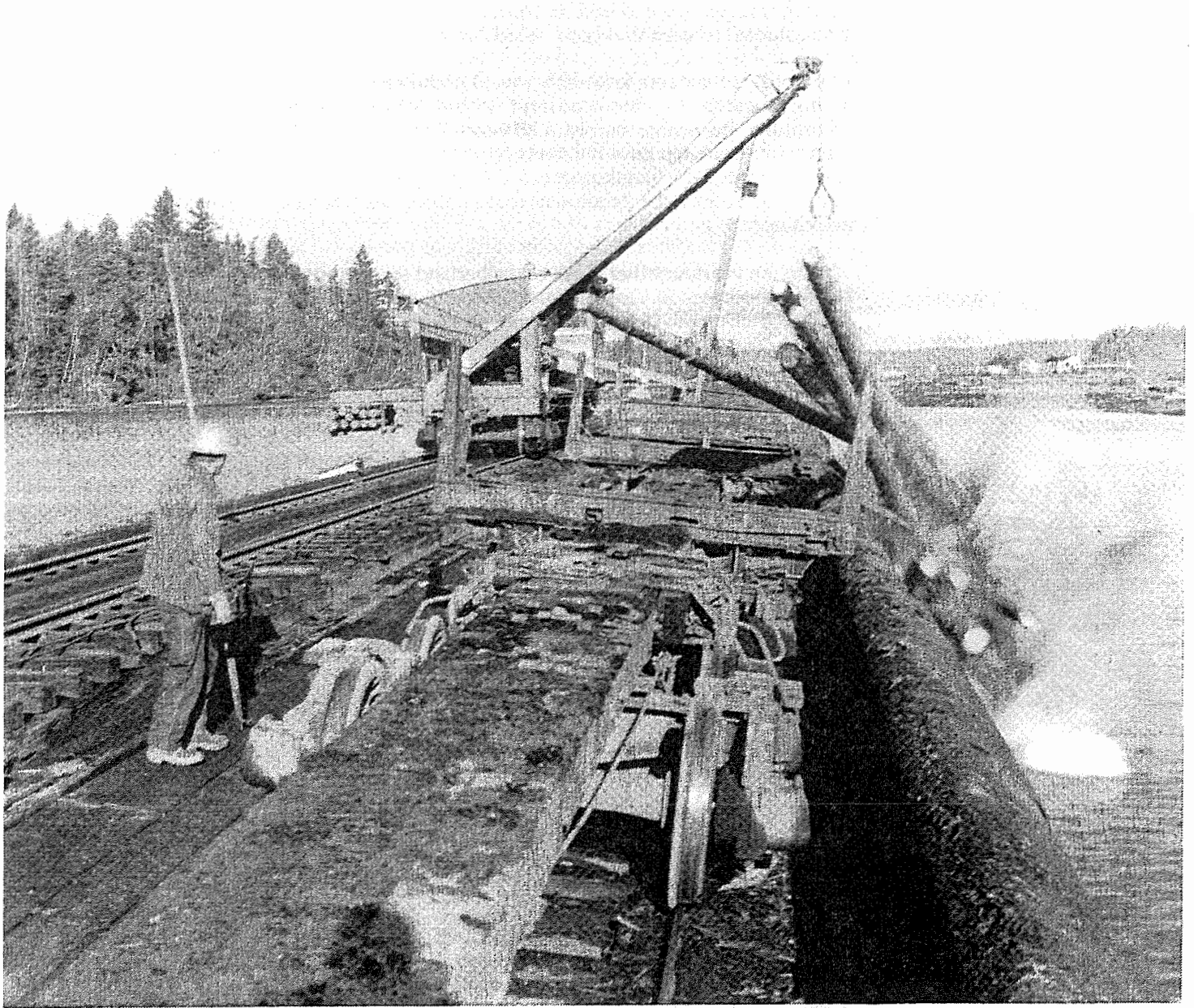
⁶³ "First logs from Vale (sic) dumped at South Bay." *Morning Olympian*. Feb. 3, 1928. Hereth, Dorothy. "Weyerhaeuser logging camps at Vail, Washington." *The Bee and Cee*. Weyerhaeuser Timber Co., Everett Div. June 1947: 8.

⁶⁴ *Morning Olympian*, "600 will be employed on new logging road, report." July 1, 1926, 1 & 6. "Log shipments to start." Feb. 1, 1928, 1. *Olympia News*, "Build the roads first." Jan. 6, 1928, 2. "City Growing Rapidly." Feb. 3, 1928, 2. "Logging train wrecked in Skookumchuck yard." Feb. 24, 1928, 1. "Opportunity for business." Jan. 6, 1928, 2. "Weyerhaeuser Co.'s new camp center of activity—will aid in development of Thurston County." Jan. 6, 1928, 1 & 3.

⁶⁵ Skalley, Jim. "R.A. McDonald." *The Bee and Cee*. May 10, 1943, 6. "South Bay crew keeps Everett in logs." *Weyerhaeuser World*. Sept. 1969, 6. "Vail-McDonald tree farm." n.d. "The Vail-McDonald tree farm." *Weyerhaeuser News*. June 1956, 20.

⁶⁶ "Log shipments to start." *Morning Olympian*. Feb. 1, 1928. Skalley: 6. "Switch clear ... proceed." *Weyerhaeuser Magazine*. July 1952: 2. "Weyerhaeuser's logging railroads." *Weyerhaeuser News*. Oct. 1957: 6.

Once at the dump, the jammer shoved the logs into the water. The dumping pocket in front of the pier was then cleared by a "sweep," (a set of boomsticks connected to a donkey engine). This pulled the logs toward the sorting pockets or "raceways." Here they were sorted by size and species, scaled (measured for usable lumber), graded and made into "sections" 80 feet square and secured on two sides by boomsticks. When a sorting pocket held six sections, it was full. The tugboat *R A McDonald* towed out the logs and placed a set of boomsticks in the empty pocket. The drifting sections were then towed to a storage area and secured.⁶⁷



PHOTOGRAPH 5. Steam jammer unloading pilings. Note clean-up man in foreground and boomshacks in background. COURTESY WEYERHAEUSER ARCHIVES

⁶⁷ Edwards. Mar. 15, 1990. "Introduction to Vail-McDonald tree farms." Oct. 7, 1949, 3. Skalley, 4. "Saltwater Scalers." *Weyerhaeuser Magazine*. March 1954. "Vail-McDonald: The woods are different now." Dec. 1951. *Weyerhaeuser News* "Strong-arming at the log dump." #13, n.d.

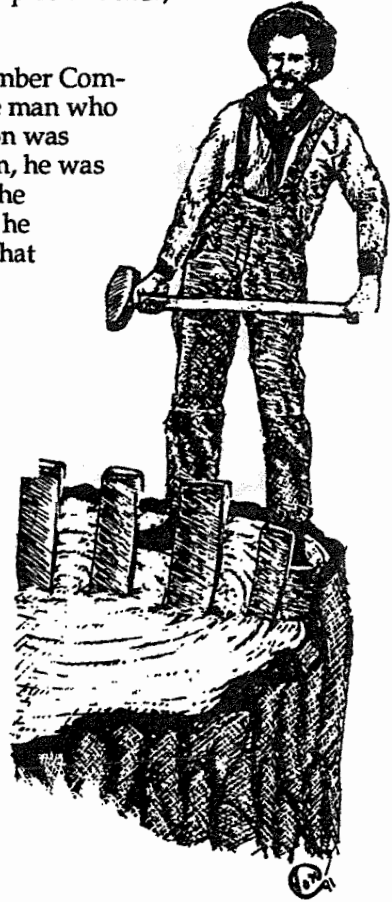
Two or three times per week logs were escorted to Everett. Twelve sections made a "raft" and four rafts made a "tow." The *R A McDonald* assembled these tows according to the orders placed by the Everett mills. A typical tow scaled around 700,000 board feet, contained about 150 carloads of logs and measured 1,000 feet in length. These huge masses of logs took about four or five days, but sometimes as many as ten, to complete the 90-mile journey to Everett.⁶⁸

To support this activity a number of floating buildings or "boomshacks" were erected. One was a lunchroom which also contained lockers. Here the crew donned their *corks*⁶⁹ in the morning, stored a change of dry clothes should they fall into the water, and took a break during the day. The other boomshacks were working buildings. The "rigging crew" worked in one, maintaining the boomsticks. A blacksmith shop occupied another, complete with forge and anvil.⁷⁰

In 1943, R. A. McDonald retired from the Weyerhaeuser Timber Company. However, this was not the end of his association. The man who had guided the WTC's first wholly owned logging operation was rewarded for his many years of service. An exceptional man, he was given an exceptional honor. His former employer told him he could build his retirement home on any company property he chose. In 1947, he opted for South Bay, building the house that stands on Weyer Point today. Out of respect for this logger among loggers, log dump employees affixed the name McDonald Point to the site.⁷¹

From the start of operations in 1928 all logs in the woods moved exclusively by rail. In 1945 Vail-McDonald saw the start of truck logging. While the voyage to South Bay was still made by train, logging trucks picked up the logs at the logging "side" and transported them to reload points at trackside. By 1948, this transition was complete and Vail-McDonald operated in the woods exclusively with trucks. This eliminated much of the trackage in the woods, which at one time measured over 200 miles.⁷² (See Photograph 3.)

Technology influenced work done on the water. Initially, all sorting was by hand, using pike poles, tidal action and brute force to move a log to a desired location. "Jackpots," clusters of immobilized logs, were broken with the use of a grapple attached to the steam engine on the jammer. Crews at this time averaged around 25, but could swell to as many as 35 or more during the rush times of spring and early summer. With the introduction of boom boats in the 1950s, fewer workers were needed since these machines allowed one person to do the work of many. With the advent of these boats, another boomshack was erected for storage and maintenance.⁷³ (See Photographs 6, 7.)



⁶⁸ "The big log round-up": 8. "Boom story." *Weyerhaeuser Magazine*. Mar. 1952. Edwards, April 2, 1990. "South Bay tugs keep logs moving." *Weyerhaeuser World*. Nov. 1969.

⁶⁹ *Corks: The right way to say calks; means both the calks and shoes with calks in them.*

⁷⁰ Edwards, Mar. 15, 1990.

⁷¹ Edwards, Mar. 15, 1990. Longmire, Harry. *Oral Interview with Harry Longmire* conducted by Andrew Poultrige. Mar. 18, 1990. Skalley: 1-6.

⁷² "If it's transportation ... Vail-McDonald has it." *Weyerhaeuser Magazine*. Dec. 1950: 6. "Introduction to Vail-McDonald tree farms." Oct. 7, 1949, 3. "The Vail-McDonald tree farm." *Weyerhaeuser News*. June 1956, 21. "Weyerhaeuser's logging railroads." *Weyerhaeuser News*. Oct. 1957: 6.

⁷³ "Boom boat for South Bay." *Weyerhaeuser Magazine*. Dec. 1950. Edwards, Mar. 15, 1990. Longmire, Harry, Mar. 18, 1990. "Moving the big sticks with WTC's navy." *Weyerhaeuser Magazine*. April 1958: 7.



PHOTOGRAPH 6. Hand sorting saw logs, c. 1950. COURTESY WEYERHAEUSER ARCHIVES

Around 1950, the first diesel locomotives appeared on the South Bay line. These machines were cleaner, quieter and safer than the steam locomotives that formerly traveled the road. No longer was it necessary to shut down during dry weather because of fire danger. Steam made its final exit from South Bay when the jammer was converted to a gasoline engine in 1953. The demise of steam on the rails had little to do with work on the water.⁷⁴ (See Photograph 8.)

However, state regulations changed in the 1950s and these influenced how Weyerhaeuser did business. The state required Weyerhaeuser to lease the state-owned tidelands and beds of navigable waters over which South Bay operated. The term of these leases was typically ten years, with the fee renegotiated upon renewal. The first lease began in 1956 but was superseded by a lieu lease in 1960 so Weyerhaeuser could install additional piling and dolphins east of the original lease area. This brought the total area under lease to 169 acres.⁷⁵

Changes in the woods profoundly affected South Bay. Little old growth timber remained in the Vail-McDonald area by the 1960s, so log sorting started in the woods. This required significant changes at the log dump. In November 1963, the tail track⁷⁶ was lengthened 465 feet, for a total length around 3,000 feet. This allowed an additional 12 cars to tail out along the pier.⁷⁷

⁷⁴ Edwards, Mar. 15 and April 2, 1990. South Bay Log Dump Box #1.

⁷⁵ Vail-McDonald Operations Grantee Lease Folder #17. Dept. of Nat. Res. Aquatic Lands Lease Application #4966, #8685, #10847.

⁷⁶ The portion of the pier beyond the unloader used to hold empty cars.

⁷⁷ Edwards, Mar. 15, 1990. Chehalis Timberlands. Vail-McDonald Operations. Grantee Lease Folder 17. Dept. of Nat. Res. Aquatic Lands Lease Application #8685.

Other improvements quickly followed. The formerly innovative jammer succumbed to a new electric unloader in the fall of 1965. This machine employed huge grapples and was capable of lifting an entire railcar of logs at one time. Carloads of logs were bundled with wire ropes before being unloaded. This significantly increased the time required to unload each car, but the loads were much larger. The unloader no longer ran up and down the pier on its own tracks. Instead it moved back and forth 23 feet, perpendicular to the train, necessitating that each car be spotted directly in front of the grapples. The track the trains ran on was leveled. The change in unloading was prompted not only by diminishing supplies of old growth but also by new state lease agreements which required "logs to be lowered into water without tumbling."⁷⁸ (See Photograph 9.)



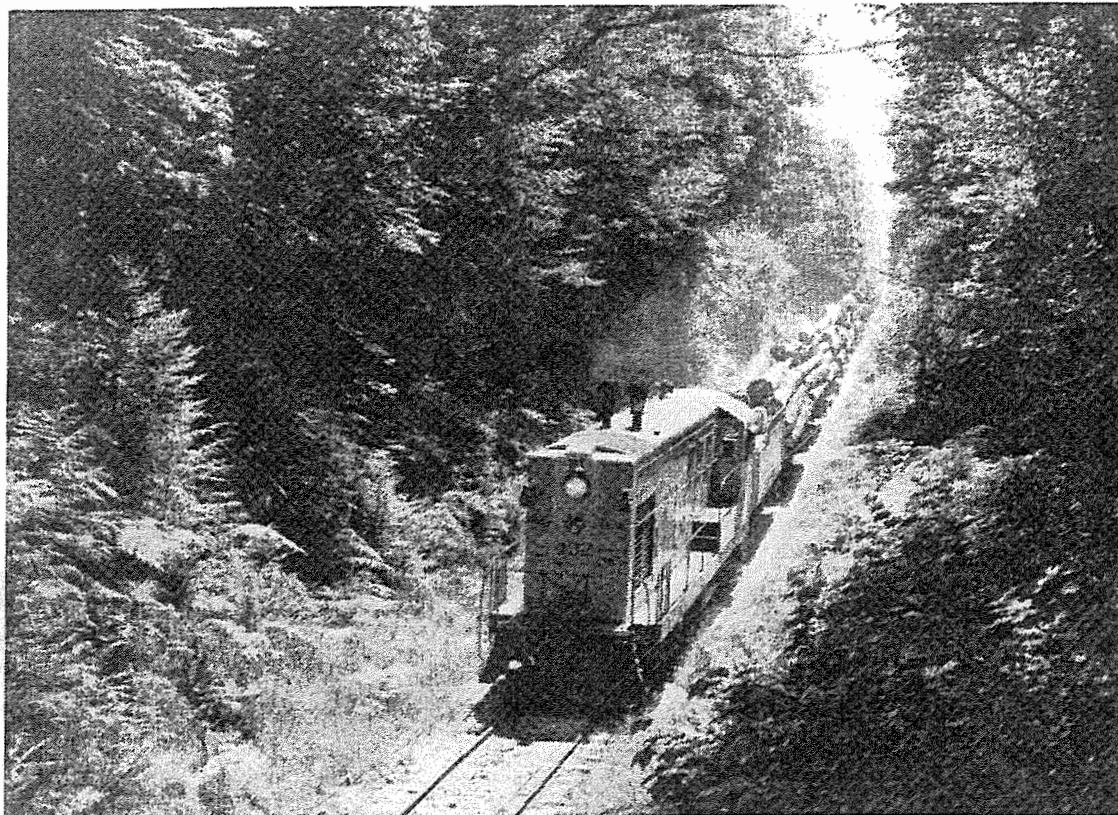
PHOTOGRAPH 7. Early boom boat breaking a "jackpot." Note log scaler on the right. COURTESY WEYERHAEUSER ARCHIVES

Because of the time-consuming unloading process, train crews could no longer afford to wait and spot their trains. This problem was overcome by the use of a *snubbin' car*⁷⁹ and a continuous wire cable system. Train crews set out half the train, 24 cars, and hooked it to the wire cable where the grapple operator moved each car in front of the unloader. When the first 24 cars were empty, the grapple operator used the *snubbin' car* to move the second 24 cars from a siding just south of the Woodard Bay trestle to where they could be attached to the cable.⁸⁰

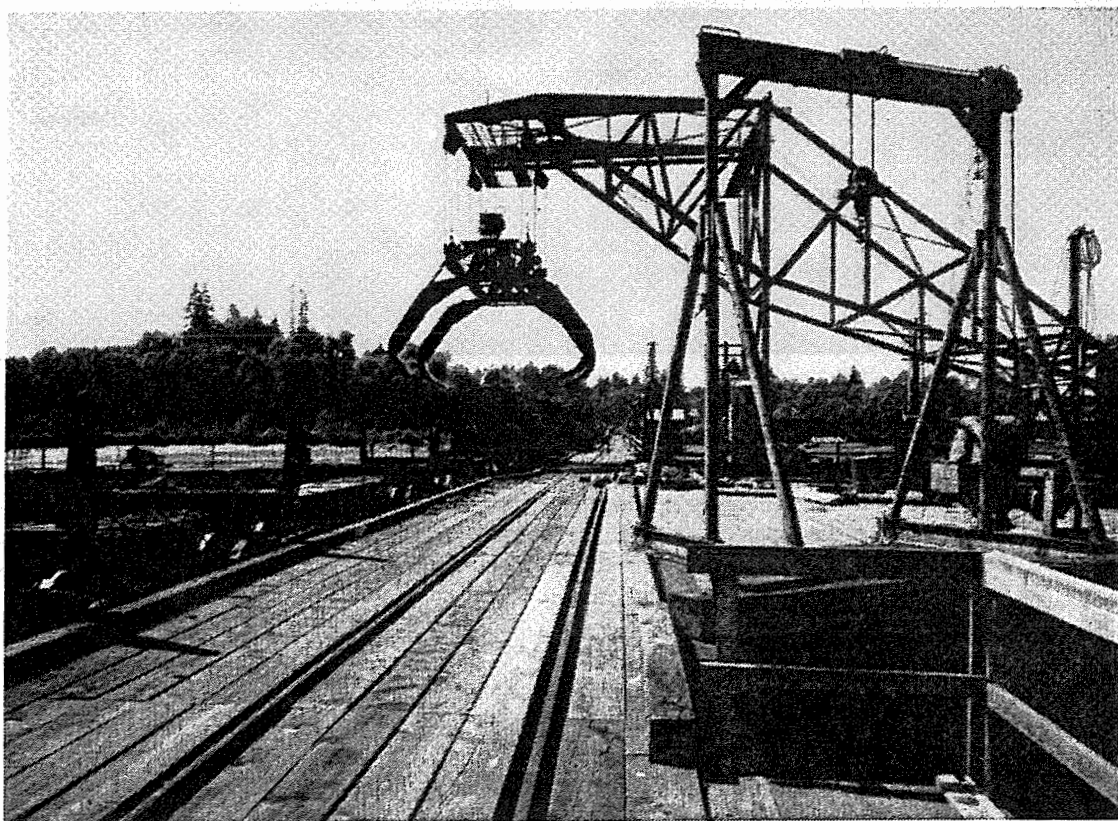
⁷⁸ Edwards, Mar. 15, 1990. "South Bay crew keeps Everett in logs.": 6. Vail-McDonald Operations Grantee Lease #17. Dept. of Nat. Res. Div. of Land and Water Conservation. Memorandum, "South Bay Log Unloader." Dept. of Nat. Res. Aquatic Lands Lease #10847.

⁷⁹ *Snubbin' car*: A radio controlled locomotive operated by the worker running the grapples.

⁸⁰ Edwards, Mar. 15 and April 2, 1990. "South Bay crew keeps Everett in logs.": 6.



PHOTOGRAPH 8. Log train approaching South Bay. COURTESY WEYERHAEUSER ARCHIVES

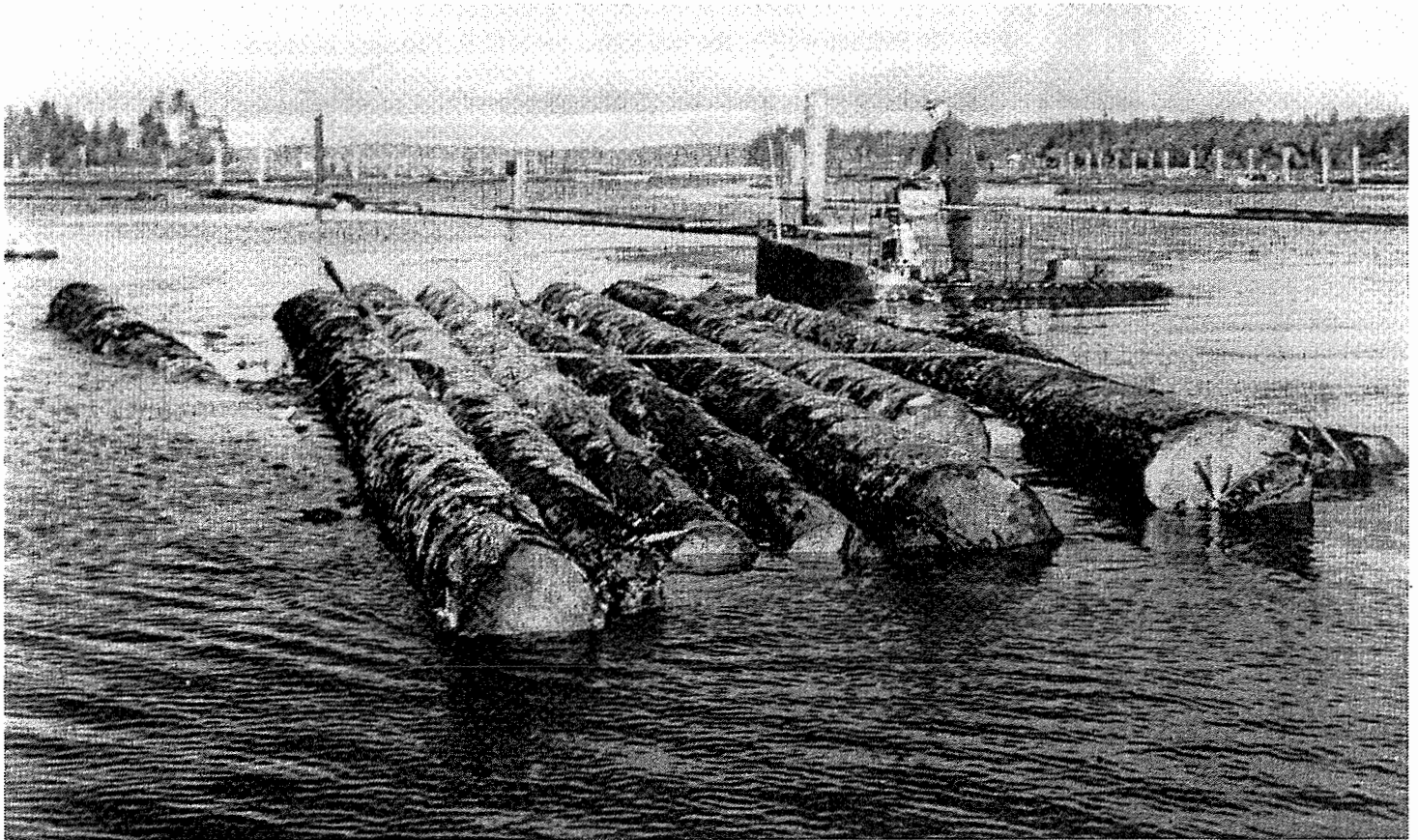


PHOTOGRAPH 9. Grapple unloader with truck unloading facility in foreground. COURTESY WEYERHAEUSER ARCHIVES

Since the dumping area was now only one car in length, the old sweep made of boomsticks was also replaced. In its stead one 24-inch electrically powered propeller was mounted below the unloader to move the bundles of logs. Pike poles were not as effective on the large bundles of logs and the sorting was now done with small, highly maneuverable boats called "log broncs." This cut the crew size on the water from 25 to 16.⁸¹ (see Photograph 10).

The grapple system had its advantages. It was more efficient, eliminating log breakage which was a problem with the jammer. With the breakage problem solved, the operation was also much cleaner. No longer was it necessary to dredge the entire log dump annually. Only the dumping area in front of the unloader had to be kept clear, which could be done with much less frequent dredging.⁸²

After the installation of the grapples, the portion of the pier previously occupied by the jammer was converted into a truck turnaround so trucks could dump loads between trains. Because it was too tight for easy turning, most drivers backed up to get off the pier. Also, since one truck could hold up an entire train, the truck facility was not heavily used.⁸³



PHOTOGRAPH 10. Log bronc moving a bundle of logs. COURTESY WEYERHAEUSER ARCHIVES

⁸¹ Edwards, Mar. 15, 1990.

⁸² Edwards, Mar. 15, 1990.

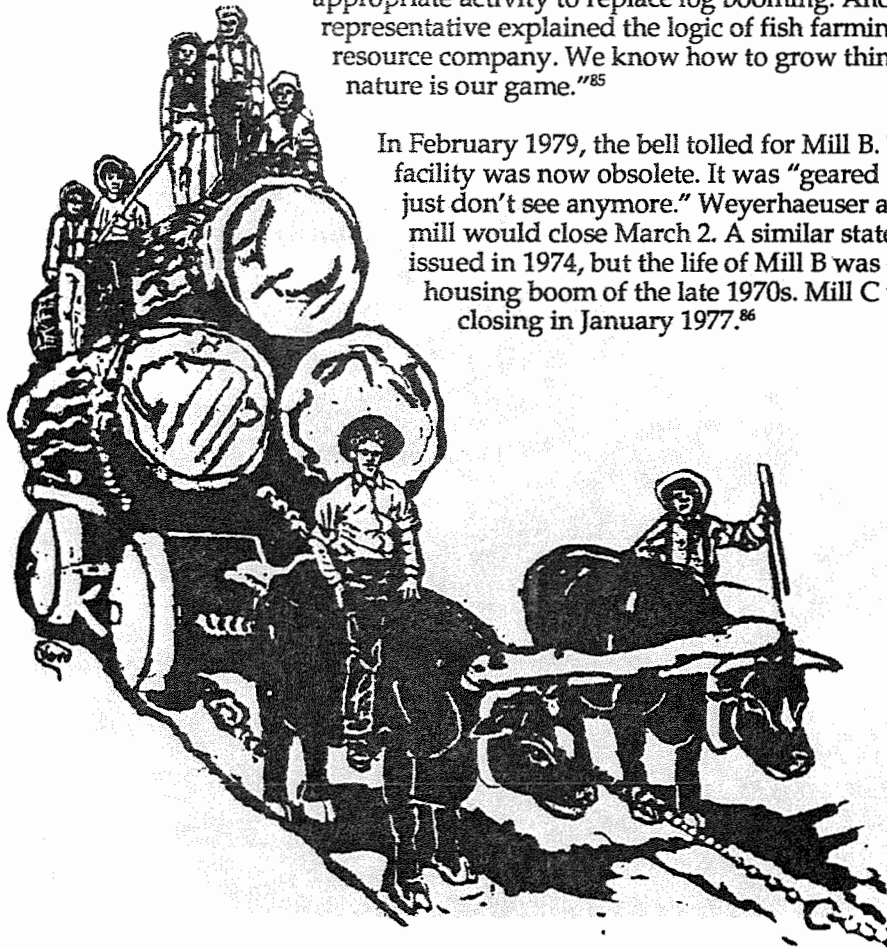
⁸³ Edwards, April 2, 1990. Chehalis Timberlands.

The Decline of South Bay

In 1973, Weyerhaeuser and the University of Washington began raising salmon experimentally at South Bay. Initial efforts were successful and the experiment was expanded in 1974. Results were once again positive, with about 560,000 fish raised, but the salmon farming was terminated for other reasons. Foremost among these was the failure of the 1975 Washington State Legislature to legalize aquaculture. As a result, Weyerhaeuser acquired Oregon Aquafarms of Newport, Oregon, and moved their fish farming efforts south.⁸⁴

These "sea ranching" experiments reflected Weyerhaeuser's continuing tactic of managing for the future. A company spokesman said at the time: "Eventually the Henderson Inlet log dump will probably be closed down, but not any time soon." Aquaculture was seen as an appropriate activity to replace log booming. Another Weyerhaeuser representative explained the logic of fish farming: "We're a natural resource company. We know how to grow things. Managing nature is our game."⁸⁵

In February 1979, the bell tolled for Mill B. The once modern facility was now obsolete. It was "geared to the large logs we just don't see anymore." Weyerhaeuser announced that the mill would close March 2. A similar statement had been issued in 1974, but the life of Mill B was extended by the housing boom of the late 1970s. Mill C was not so lucky, closing in January 1977.⁸⁶



⁸⁴ Chehalis Timberlands. Watts, Alice. "Weyco's fish experiment ending." Daily Olympian. Aug. 7, 1975: C1. Williams, Hill. "Weyerhaeuser rearing salmon in pens." Seattle Times. Mar. 28, 1974: A5.

⁸⁵ First quotation from Watts. Second from Williams.

⁸⁶ Quotation from "End of the line for Mill B" Seattle Times. Jan. 13, 1979: D1. "Everett's Mill B to close." Today. Feb. 1979: 3. "Mill B to close after 64 years." Seattle Times. Jan. 9, 1979: D6. Young, Dick. "A blow to Everett area: 'Mill B' will close." Seattle Post-Intelligencer. Jan. 9, 1979: A6. Jobs." Seattle Times. Oct. 5, 1984: E1.

With Mill B shut down, large saw timber no longer moved through South Bay. Logs that used to be milled in Everett were now sent to Weyerhaeuser's Longview facility. South Bay outlasted Mills B and C. Its booms were now filled with logs that went to Everett's 2 x 4 mill, Mill E, logs destined for export and occasional peeler logs.⁸⁷

Despite the demise of Mill B and the resulting decline in volume at South Bay, the log dump still retained an important position in Weyerhaeuser's scheme. When the trestle across Woodard Bay was badly burned on July 19, 1980, crews moved quickly to repair it. Work began on July 21 and, with double shifts starting on July 29, the bridge was repaired by August 8. With South Bay back in operation, Weyerhaeuser maintained the "flexibility offered by the ability to raft and store significant quantities of export in Puget Sound."⁸⁸

In September 1980, Weyerhaeuser made a purchase that would lessen the significance of South Bay. Through a subsidiary, Chehalis Western Railroad, Weyerhaeuser purchased over 100 miles of abandoned trackage and 99 log railcars from the dying Milwaukee Road. These tracks spread from Chehalis to Tacoma and Morton to Fredrickson and linked timberlands, mills and export facilities. No longer was it necessary for the company to store large amounts of export timber at South Bay. Logs bound for foreign lands could now be held in the Tacoma sort yard while awaiting shipment.⁸⁹ (See Figure 1.)

The final blow to South Bay came in October 1984. Mill E, which had been producing 2 x 4s in Everett since 1971, closed. With this move, there was no longer any reason for saw timber to move through South Bay. Rehabilitation of the former Milwaukee tracks began in 1981. When this work was done, export logs went directly to Tacoma for shipping. In addition, state lease fees were rising. While the area under lease remained about the same, the fee had mushroomed from \$500 per year in 1956 to over \$8,400 annually in 1976. The last load left South Bay in November 1984; the property was designated "inactive" by Weyerhaeuser on January 1, 1985.⁹⁰

Although South Bay was no longer needed as a place to sort and store logs, Weyerhaeuser still owned the land and held a lease on the tidelands and bedlands until June 1986. Oyster farming returned to South Bay when an agreement was negotiated with Western Oyster Company of Seattle to allow the experimental growing of oysters at the defunct log dump.

During the fall of 1986 and the winter of 1987, Western Oyster leased ten acres of bedlands and grew oysters on suspended rafts as an experiment. An expansion to 25 acres the following year indicates that the oyster farming was promising.⁹¹

However, the Department of Natural Resources maintained that since Weyerhaeuser's lease to the aquatic lands had expired in June 1986 the company "had no legal rights to enter into agreement or encumber state aquatic lands." Weyerhaeuser had to pay a charge covering the period June 1986 to June 1987 that was about 3.5 times the last lease fee.⁹²

Western Oyster continues to grow oysters at Woodard Bay. The state granted a right-of-entry permit which is reviewed annually. The Woodard Bay Advisory Committee, a group established to help formulate policy for the NRCA, cautioned Western Oyster that this type of activity might not be appropriate with goals of a NRCA and could be terminated when the management plan is written and approved. Because of this potential conflict, the right-of-entry permit does not allow Western Oyster to expand.⁹³

⁸⁷ Edwards, April 2. "Everett's Mill B to close."

⁸⁸ Chehalis Timberlands.

⁸⁹ Illman, John C. "Chehalis Western: Weyerhaeuser's northwest logger." Pacific News. May 1982: 45. "Weyco buys track." Today. Jan./Feb. 1981: 5. "Weyerhaeuser Co. buys railroad lines." Daily Olympian. Sept. 24, 1980: C1.

⁹⁰ "Railroad sounds heard again at Vail-McDonald." Today. Jan./Feb. 1981: 5. Schnellinger, Lisa. "It hurts, but laid-off men still laugh." Seattle Post-Intelligencer. Oct. 11, 1984: A14. Vail-McDonald Operations Grantee Lease Folder 17. "Weyerhaeuser to close lumber mill in Everett; 206 to lose jobs." Seattle Times. Oct. 5, 1984: E1.

⁹¹ Vail-McDonald Operations Grantee Lease 17.

⁹² Vail-McDonald Operations Grantee Lease #17. Dept. of Nat. Res. Aquatic Lands Lease #10847.

⁹³ Dept. of Nat. Res. Aquatic Lands Lease #12604.



PHOTOGRAPH 11. Aerial view, 1965. DEPARTMENT OF NATURAL RESOURCES PHOTO

WEYERHAEUSER'S LEGACY AT WOODARD BAY

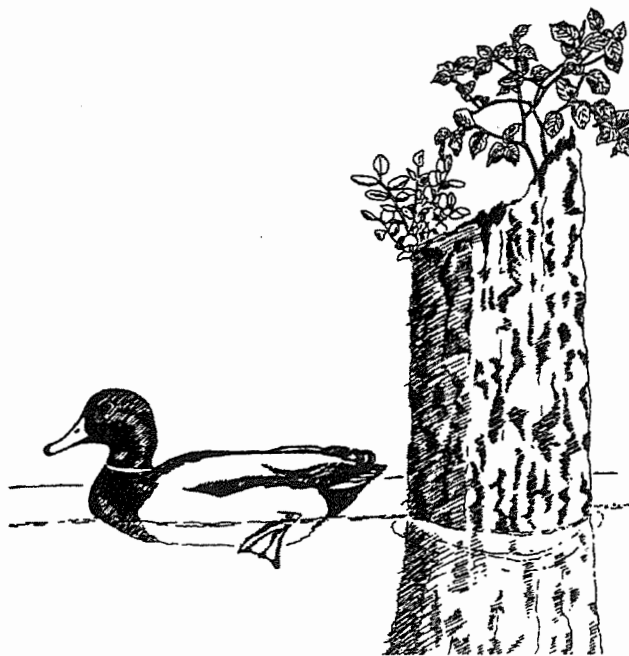
After the last tow of logs left the South Bay Log Dump in late 1984, Weyerhaeuser "locked the doors and walked away."⁹⁴ The only employee remaining was the boom foreman, who worked as a caretaker. The pier, pilings, dolphins, standing booms and unloader remained. A substantial amount of equipment was on the site including the boomshacks. The facility had not "been maintained in recent years,"⁹⁵ and safety hazards existed. A large oil tank had been erected on Weyer Point during the days of steam and lingered as a toxic monument to this bygone era. (See Figure 5 and compare Photographs 11 and 12.)

Many remarkable things endure beyond Weyerhaeuser's occupancy. These include the colony of harbor seals, the pair of bald eagles and the heron rookery. These "wild" and "natural" creatures make their homes in a highly developed area.

Weyerhaeuser's tenancy and development at Woodard Bay has inadvertently created favorable wildlife habitats. The standing booms and walkways provide haul out space for the seals. The pilings and dolphins provide perches for cormorants and gulls. Under the water, they furnish excellent habitat for barnacles, mussels and anemones. The pier provides a home to a colony of bats as well as a place for birds to drop shellfish, break open the shells and eat. Due to the relatively large area "protected" by the South Bay operation, eagles and herons have found a suitable environment.

Without Weyerhaeuser's lengthy occupation of the site, it is doubtful that such resources would exist here, since the area would not have been preserved. A survey of the surrounding shoreline reveals numerous private residences. Likely, urban encroachment would have befallen the Woodard Bay area had not a large corporation moved in and consolidated its holdings.

So there now exists at Woodard Bay a unique setting. It is an area that will preserve wildlife habitats, some history of Native Americans and early white settlement, as well as industrial artifacts from the heyday of the logging industry. It is ironic that a place erected to exploit one resource has unintentionally led to a place where other resources will be preserved. What was once an island of industry in a rural sea has become an island of open space protected from a rising tide of residential development.



⁹⁴ Edwards, Mar. 15.

⁹⁵ Vail-McDonald Operations, Grantee Lease #17.

State Ownership

The Natural Resources Conservation Areas Act (SSB 5911) was signed by Governor Gardner on May 18, 1987. The bill authorized the Department of Natural Resources to purchase land from willing sellers within the four designated Natural Resource Conservation Areas using proceeds from a two-year real estate excise tax.

The law, (RCW Chapter 79.71) also requires the department to hold a public hearing before acquiring a proposed conservation area, and to develop management plans for each area. For Woodard Bay, a public information meeting was held March 9, 1988, and a public hearing April 6, 1988, at the Thurston County Fairgrounds. At that time 54 people spoke, 53 letters were received, and a resolution opposing purchase of the railroad right of way was submitted.

An advisory committee was appointed by Commissioner of Public Lands Brian Boyle to assist the department in developing a management plan for the site. The committee represents state agencies, the cities of Lacey and Olympia, Thurston County, environmental groups, and people living near the conservation area and the railroad corridor.

In late 1987 and early 1988 appraisals of the property were conducted for both the Weyerhaeuser Company and the DNR. The investigations included a timber cruise and an investigation of potential suitability for on-site sewage disposal. It was mutually agreed for appraisal purposes that the property could support about one dwelling unit per five acres of land.

Negotiations were conducted by Clyde Cassell for the Weyerhaeuser Company and John Edwards, manager of the DNR's Land and Water Conservation Division. The uplands, tidelands and all improvements were purchased from the Weyerhaeuser Foundation on October 31, 1988, for \$2.7 million. The railroad corridor was included in the acquisition package at no cost to the state. The acquisition was announced by Commissioner Brian Boyle and Senator Mike Kreidler in a brief ceremony at the site attended by members of the advisory committee, department staff, former Weyerhaeuser employees and neighbors.

In addition to equipment removed by Weyerhaeuser, a bridge over the railroad built to allow access to the McDonald house, was removed in the spring of 1988, along with a 395,000-gallon crude oil tank that fall. More than 500 tons of oil contaminated soil was removed along with the oil tank. Other structures, subsequently removed because they posed a threat to public safety, included a three-car garage near the McDonald house, a "bunkhouse" which had been converted to equipment storage, and an 8,000-gallon wooden water tank. The last of the "boomshacks" was sold by Weyerhaeuser to a private party who relocated it to the Shore Acres area north of the log dump.

Huge amounts of debris were left on the site during log dump operations. The mostly metal debris consisted largely of choker cables, metal banding, railroad track and other used equipment. Much of this debris was left along the shoreline north and south of the pier, and under the electric unloader. For many years, people have dumped trash along Whitham Road and the logging roads which branch off Whitham Road.

One of the first tasks undertaken by the department upon assuming ownership was an extensive clean-up of the entire site. This work, which is still proceeding, has been accomplished largely by crews from the Cedar Creek Correctional Center and personnel from Central Region. Approximately 50 cubic yards of junk was collected along Whitham Road and 60 yards of cable removed from shoreline areas near the pier. A gate has been installed on Whitham Road to control midnight dumping.

A 17-foot Boston Whaler "Nauset" was recommissioned by the department and stationed on the site in Spring 1990 to patrol and maintain log boom areas.

An engineering study of the remaining structures and utilities is currently being completed by Justus Fisher Engineers, Grulich Architecture and Cross Engineers. A study of the indigenous harbor seal population is being conducted jointly by Cascadia Research Cooperative of Olympia, and the Department of Wildlife Marine Mammal Investigations section. A management plan for the site is being prepared with the assistance of the Woodard Bay NRCA Advisory Committee.



PHOTOGRAPH 12. Aerial view, 1989. DEPARTMENT OF NATURAL RESOURCES



Recommendations

This history is the second in a three phase project. Phase 1 was an extensive review of the historical record. Phase 2 is the written results of this research. Phase 3 will involve the creation of a framework for on-site interpretive displays of historical and other information relevant to the site.

From a historical viewpoint, the Woodard Bay NRCA is a unique parcel of land. A strong effort should be made to preserve this heritage and tell its story to those who visit the area. Historic buildings on the site offer prime locations for an interpretive museum. The scope of this interpretation could range from simple photographs and text to an intricate, working model of the log dump. Another possibility would be an exhibit of various pieces of log booming and railroad equipment, such as the unloader grapples. This exhibit could be located in close proximity to the pier, railroad grade, and boom foreman's office.

In the author's opinion the working model would be the best choice. A series of exhibits could clearly tell the story of Washington's logging industry at its peak, c. 1940. The first display would depict a mobile logging camp, such as those that surrounded Vail. It could be shown in full operation complete with spar tree, steam donkey and falling timber. The second display would portray the town of Vail with its homes, shops and roundhouse. It could also show a truncated version of the logging railroad's mainline. The third display would be a model of South Bay, with logs being dumped, sorted and rafted.

An exhibit of this magnitude would require considerable research and funding. However, this would be time and money well spent. It would illustrate the lumber industry at a time before tree farms and "renewable resources." Such an exhibition could aid in our understanding of the current timber supply crisis.

FURTHER STUDY

From the aspects of technology and history, the unloader presents an excellent opportunity for further study. One could examine the relationship between the ebbing old growth timber supply and the role of the log unloader. This investigation in industrial archeology could lend fresh perspective to the contemporary crisis.

Another subject in need of additional investigation is the location of the Woodard family homestead and its relationship to the nearby village, and traditional hunting and fishing areas.

Works Cited

FOREST HISTORY

Andrews, Ralph Warren. 1954. This was logging! Seattle: Superior Publishing Co.

Batwell, E. A. April 1928. "Building a town is a trick." Puget Sound Electric Journal. 3-8.

Clark, Norman H. 1970. Mill town: a social history of Everett, Washington from its earliest beginnings to the tragic and infamous event known as the Everett massacre. Seattle: Univ. of Wash. Press.

Cotroneo, Ross R. 1968. "Western land marketing by the Northern Pacific Railway." Pacific Historical Review. 37:3, 300- 314.

Ficken, Robert E. 1987. The forested land: a history of lumbering in Western Washington. Seattle: Univ. of Wash. Press.

_____. 1986. "Weyerhaeuser and the Pacific Northwest timber industry, 1899-1903." Experiences in a promised land: Essays in Pacific Northwest history. Edwards, G. Thomas and Carlos A. Schwantes. Seattle: Univ. of Wash. Press. 139-152.

Hidy, Ralph Willard, Frank Ernest Hill and Allan Nevins. 1963. Timber and men: the Weyerhaeuser story. New York: Macmillan.

White, Richard. 1980. Land use, environment and social change: the shaping of Island County, Washington. Seattle: Univ. of Wash. Press.

LOGGING RAILROADS

Adams, Kramer A. 1961. Logging railroads of the west. Seattle: Superior Publishing Co.

Bueter, Arthur J. 1957. "Lumber railroads of the Weyerhaeuser Timber Company." Pacific Railway Journal. 2:1, 1-16. reprinted from Baldwin Locomotives Magazine, April 1935.

Illman, John C. May 1982. "Chehalis Western: Weyerhaeuser's northwest logger." Pacific News. 45-6.

NATIVE AMERICANS

Carpenter, Cecelia Svinth. 1986. Fort Nisqually: a documented history of Indian and British interaction. Tacoma, Wash.: Tahoma Res. Serv.

_____. Letter dated Jan. 22, 1990.

_____. Letter dated Feb. 16, 1990.

Contains photocopy of T.T. Waterman's map from his Geographic names of Puget Sound along with some photocopied text.

Gibbs, George. 1978. Indian tribes of Washington Territory. Fairfield, Wash.: Galleon Press.

Haeberlin, Hermann and Erna Gunther. 1930. The Indians of Puget Sound. Univ. of Wash. Pubs. in Anthropology. 4 vols. Vol. 4, 1-84. Seattle: Univ. of Wash. Press.

Smith, Marian Wesley. 1969. The Puyallup-Nisqually. New York: AMS Press. Reprint of 1940 ed.

— PIONEER HISTORY

Blankenship, Georgiana (Mitchell). 1972. Early history of Thurston County, Washington, together with biographies and reminiscences of those identified with pioneer days. Seattle: Shorey Book Store. Reprint of 1914 ed.

Freeman, Marie. 1980. Washington Territory donation land claims: an abstract of information in the land claim papers of persons who settled in Washington Territory before 1856. Seattle: Seattle Genealogical Soc.

Rainey, Thomas B. n.d. A short history of industry and manufacturing in Thurston County, Washington. Olympia, Wash.: The Evergreen State College, draft.

Rathbun, John C. 1972. History of Thurston Co. Washington. Seattle: Shorey Book Store. Reprint of 1895 ed.

South Bay Historical Assn. 1986. South Bay: Its history and its people, 1840-1940. Olympia, Wash.: South Bay Historical Assn.

Wash. St. Library. "Field notes of land surveys in Washington." On microfilm in the Washington Room. 2:167-75 roll #12, 3:123 roll #13

———. Thurston County pioneers before 1870. Biographical and historical data collected on 210 pioneers. manuscript #134, Washington Room.

— NEWSPAPER ARTICLES

"600 Will Be Employed on New Logging Road, Report." Morning Olympian. July 1, 1926. 1&6.

"Build the Roads First." Olympia News. Jan. 6, 1928. 2.

"City Growing Rapidly." Olympia News. Feb. 3, 1928. 2.

"End of the Line For Mill B." Seattle Times. Jan. 13, 1979. D1.

"Fifty Cars Logs Delivered Daily at South Bay." Olympia News. Feb. 3, 1928. 1.

"First Logs From Vale (sic) Dumped at South Bay." Morning Olympian. Feb. 3, 1928. 1&8.

Hogan, Hal. "History Drops the Vail on a Northwest Logging Era." Daily Olympian. Oct. 30, 1969. 25.

"Log Dump South Bay Finished Soon." Olympia News. Sept. 16, 1927. 1.

"Log Shipments to Start." Morning Olympian. Feb. 1, 1928. 1.

"Logging Road to be Started." Olympia News. July 1, 1926. 1.

"Logging Train Wrecked in Skookumchuck Yard." Olympia News. Feb. 24, 1928. 1.

"Mill B to Close After 64 Years." Seattle Times. Jan. 9, 1979. D 6.

"Million Dollar Industry Under Way." Morning Olympian. Jan. 6, 1928. 1 & 6.

"Open Switch Wrecks Train on Log Line." Morning Olympian. Feb. 19, 1928. 1.

"Opportunity for Business." Olympia News. Jan. 6, 1928. 2.

- "Pioneer Dentist of State Passes Away." Washington Standard. Mar. 1, 1918.
- Schnellinger, Lisa. "It Hurts but Laid-off Men Still Laugh." Seattle Post-Intelligencer. Oct. 11, 1984. A 14.
- Untitled Article Olympia Chronicle. July 3, 1926. 1.
- Watts, Alice. "Weyco's Fish Experiment Ending." Daily Olympian. Aug. 7, 1975. C 1.
- "Weyerhaeuser Co. Buys Railroad Lines." Daily Olympian. Sept. 24, 1980. C 1.
- "Weyerhaeuser Co.'s New Camp Center of Activity—Will Aid in Development of Thurston County." Olympia News. Jan. 6, 1928. 1.
- "Weyerhaeuser to Close Lumber Mill in Everett; 206 to Lose Jobs." Seattle Times. Oct. 5, 1984. E 1.
- Williams, Hill. "Weyerhaeuser Rearing Salmon in Pens." Seattle Times. Mar. 28, 1974. A 5.
- Young, Dick. "A Blow to Everett Area: 'Mill B' Will Close." Seattle Post-Intelligencer. Jan. 9, 1979. A 6.

GOVERNMENT DOCUMENTS

- Crawford, Rex C. Aug. 1987. "Woodard Bay site evaluation." Dept. of Nat. Res., Div. of Land and Water Conservation. Olympia, Wash.
- Peoples, Martin, Mike Cenci and Jay Hunter. n.d. Sea-run cutthroat studies in South Puget Sound tributaries, July 1986 to June 1987. Wash. St. Dept. of Wildlife, Fisheries Management Div. Olympia, Wash.
- Stevenson, Shanna. Nov. 1988. Memorandum. "South Bay Log Unloader." Thurston Cty. Plng. Dept. Olympia, Wash.
- _____ and Thomas Costantini. 1985. Thurston County Cultural Resources Inventory. Wash. St. Off. Archeology and Historic Pres. Olympia, Wash.
- Thurston Reg. Plng. Counc. June 1988. Woodard Bay Natural Resources Conservation Area preliminary reconnaissance report. Olympia, Wash.
- Wash. St. Dept. of Nat. Res. Nov. 7, 1988. "South Bay Log Unloader." Memorandum. Div. of Land and Water Conservation. Olympia, Wash.
- _____. n. d. "Terrestrial birds of Woodard Bay NRCA." Div. of Land and Water Conservation. Olympia, Wash.
- Wright, Lavinia A. and Wayne R. Clifford. 1989. A Survey of the birds and of the wildlife responses to human activities on the waters and shores of the Woodard Bay Natural Resources Conservation Area. Wash. St. Dept. of Wildlife. Olympia, Wash.

WEYERHAEUSER ARCHIVES

Records Group #4: Branches and Regions. South Bay Log Dump Box 1.

Records Group #12: Weyerhaeuser Company Publications, Non-Periodic.

Boxes 1-5, 9-10, 13, 16, 19, 20.

Outside Publications. Boxes 16, 22.

Records Group #14. Chehalis Timberlands, Box 144. (The box with this label is unprocessed material at the Weyerhaeuser Archives as of Nov. 10, 1990. There is no Records Group #14, but this box does exist.)

Photographs

Records Group #4: Olympia-South Bay Log Dump Folder. Vail-McDonald Box #7.

WEYERHAEUSER COMPANY PUBLICATIONS

(Some published by predecessors or divisions of the Weyerhaeuser Co. All documents are available at the company archives in Federal Way.)

"The Big Log Round-up." Weyerhaeuser News. Oct. 1953, 8-9.

"Boom Anniversary." Weyerhaeuser Magazine. Mar. 1953, Vail-McDonald section.

"Boom Boat for South Bay." Weyerhaeuser Magazine. Dec. 1950, Vail-McDonald section.

"Boom Story." Weyerhaeuser Magazine. Mar. 1952, Vail-McDonald section.

"Bridge is Rebuilt." Weyerhaeuser Magazine. Aug. 1951, Vail-McDonald section.

"Bridges Rebuilt." Weyerhaeuser Magazine. Feb. 1951, Vail-McDonald section.

"Bundling Machines Busy." Weyerhaeuser Magazine. May 1954, Vail-McDonald section.

"Everett's Mill B to Close." Today. Feb. 1979, 3.

"From Forest To Mill." The Bee and Cee. April 10, 1939, 1.

Hereth, Dorothy. "Weyerhaeuser Logging Camps at Vail, Washington." The Bee and Cee. June 1947, 2-8.

"If It's Transportation...Vail-McDonald Has It." Weyerhaeuser Magazine. Dec. 1950, 6-7.

"Introduction to Vail-McDonald Tree Farms." 1949.

Langlois, Jim. "New Weyerhaeuser Mill at Everett" Today. July/Aug. 1978, 6.

Men, Mills and Timber: Fifty Years of Progress in the Forest Industry. 1950.

"Moving the Big Sticks with WTCO's Navy." Weyerhaeuser Magazine. April 1958, 6-7.

"Olympia: Capital (sic) of Washington State and Home of Three Weyerhaeuser Operations." Weyerhaeuser Magazine. Jan. 1964 16:1, 8-12.

"Railroad Sounds Heard Again at Vail-McDonald." Today. Jan./Feb. 1981, 5.

"Saltwater Scalers." Weyerhaeuser Magazine. Mar. 1954 Vail-McDonald section

"Shareholders' Visit: Vail-McDonald Operation, May 24, 1951." 1951.

Skalley, Jim. "R. A. McDonald." The Bee and Cee. May 10, 1943, 1-6.

"South Bay Crew Keeps Everett in Logs." Weyerhaeuser World. Sept. 1969, 6-7.

"South Bay Tugs Keep Logs Moving." Weyerhaeuser World. Nov. 1969, 8-9.

"Strong Arming at the Log Dump." Weyerhaeuser News. #13, n.d., 2-3.

"Switch Clear...Proceed." Weyerhaeuser Magazine. July 1952, 3- 5.

Tobin, Sharon. "Everett Site Represents 78 Years Of Company History." Today. Jan./Feb. 1982, 4.

"Vail-McDonald Tree Farm." n.d., ca. 1958.

"The Vail-McDonald Tree Farm." Weyerhaeuser News. June 1956, 20-1.

"Vail-McDonald: The Woods Are Different Now." Weyerhaeuser Magazine. Dec. 1951, 5-7.

"Welcome to the Vail and McDonald Tree Farms." n.d.

"Weyco Buys Track." Today. Jan./Feb. 1982, 5.

Weyerhaeuser Company History. 1974.

"Weyerhaeuser's Logging Railroads." Weyerhaeuser News. #36 Oct. 1957: 6-7.

WEYERHAEUSER LAND TITLE DEPARTMENT

Vail-McDonald Operations.
Grantee Lease Folder #17.
Purchase Deed Folders.
Sundry Folder #1.

WASHINGTON STATE ARCHIVES AND RECORDS CENTER

Articles of Incorporation for Capital City Oyster Company.

Wash. St. Dept. of Nat. Res. Aquatic Lands Div. Records
Second Class Tidelands and Bed of Navigable Waters Lease
Applications. Numbers 4966, 8685, 11547, 10847, 12604, 12349.

Second Class Tidelands Purchase Applications.
Numbers 2821, 2867, 2897, 2994, 3245, 3435, 3446, 4951,
6864, 8321, 12956.

INTERVIEWS

Edwards, Roy. Mar. 15, 1990. Oral Interview with Roy Edwards. Conducted by Andrew Poultridge.

_____. April 2, 1990. Oral Interview with Roy Edwards. Conducted by Andrew Poultridge.

Longmire, Harry. Mar. 15, 1990. Oral Interview with Harry Longmire. Conducted by Andrew Poultridge.

MAPS CONSULTED

Gibbs, George. 1982. Map: "Indian Tribes and the Land Ceded by Treaty, 1855." Tacoma, Wash.: Reproduction by Friends of the Wash. St. Historical Soc. Lib.

Hyde & Preston Survey Map of T 19 N, R 1 W. Feb. 1854.

Surveyor General of Washington Territory Map of T 19 N, R 1 W. July 1863.

Thurston County Lands Subject to Taxation, 1871.

Thurston County Plats. ca. 1873.

United States Coast and Geodetic Survey.
Chart #6460 "Puget Sound, Seattle to Olympia." May 1935.

United States Geological Survey.
7.5" Topographic Quadrangles.
Lacey, 1959 series, photo revised 1981.
Longbranch, 1959 series, photo revised 1968.

15" Topographic Quadrangles.
Olympia, 1937 series and 1949 series.

Weyerhaeuser Timber Company.
Map of Henderson Inlet, Showing Log Dump, Tidelands and Harbor Surroundings Drawn April 1946.

