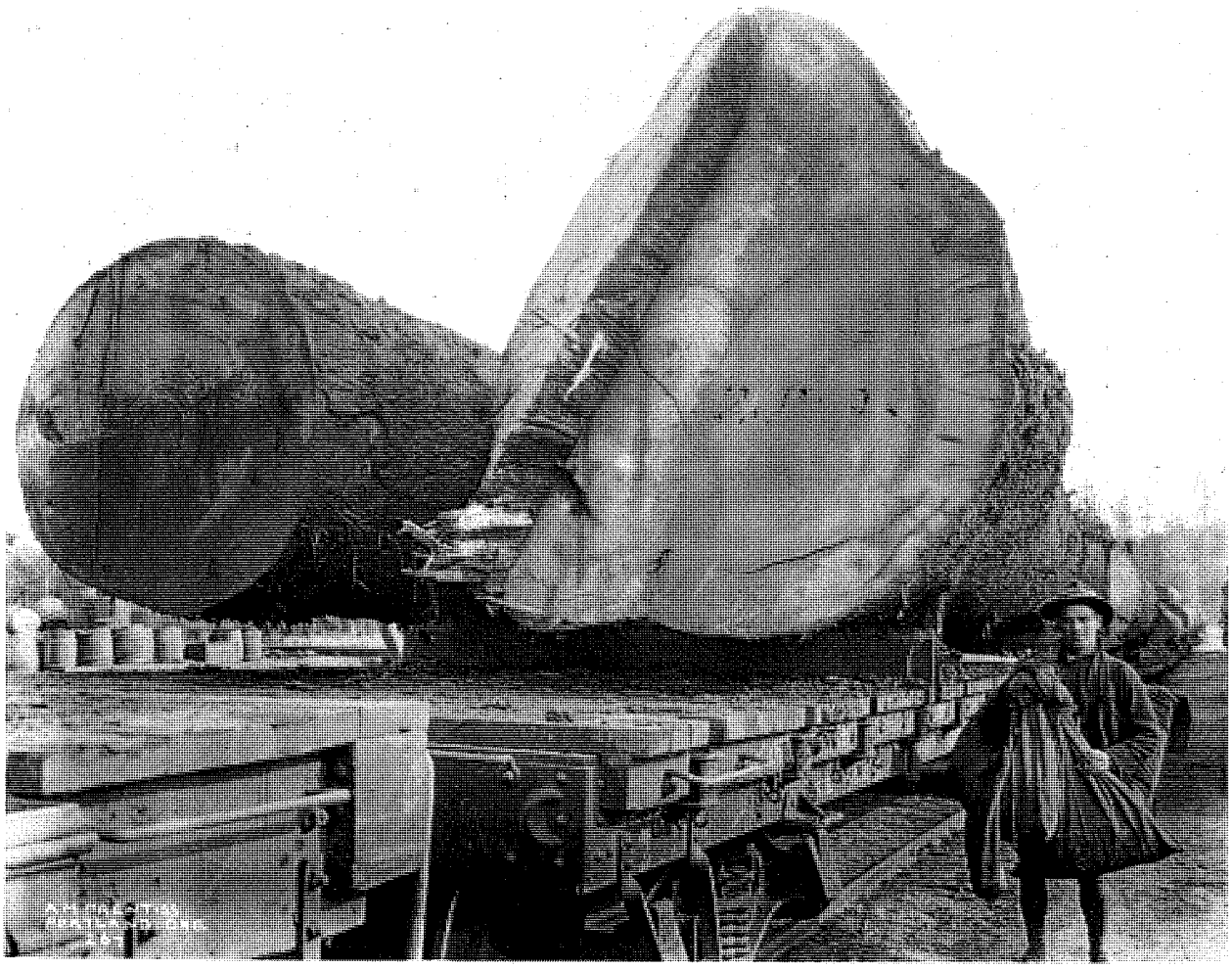
Land and Life in the Columbia-Pacific Region:

A Special History Study of Lewis and Clark National and State Historical Parks



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2013

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Cover image: Sitka spruce logs loaded onto cars of the U.S. Army's Spruce Production Division's Lewis and Clark Railroad, for the manufacture of World War I aircraft. Netul Landing, in Lewis and Clark National and State Historical Parks, was among the sites used as log dumps for this short-lived operation in 1917-18. Photo courtesy Clatsop County Historical Society.

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1: Land and Life in the Columbia-Pacific Region: An Introduction

Since the beginning of human time on the lower Columbia, this great river of the West has been a nexus of profound regional significance, a place where the natural bounty and peoples of the Northwest meet. Tumbling down from the Northwestern interior, the Columbia meets the ocean and coast with a scale and force that define this place, the Columbia-Pacific region, as it is often called today. On the verdant and rain-soaked hillslopes and from the somnolent estuaries, teeming with life, to the wave-pounded outer beaches, water defines this place. Here, the West's largest river meets the Earth's greatest sea. The human history of the Columbia-Pacific region matches the uniqueness and position of its geography. A trade and transportation corridor for unknown generations before Lewis and Clark's time, the mouth of the Columbia River has long served as a crossroads between cultures and a geographical locus for the interaction of diverse peoples from around the region and around the globe. From ancient times into the present day, this place has served as an economic locus, too, where the resource wealth of the Northwestern interior, from Willamette Valley beaver furs to Palouse grain, have been shipped past the incoming resources of the coast and the open Pacific beyond. Since long before Lewis and Clark, people have converged here to trade, to work together, and to share their ideas, their languages, even their songs.

Captains Meriwether Lewis and William Clark, whose visit in the winter of 1805–06 so shapes the mandates and the message of today's Lewis and Clark National and State Historical Park (LEWI), were keystone characters in many respects. They were symbolically central and catalytic figures, representing the vanguard of Anglo-American exploration and ultimately the reoccupation and transformation of the larger Northwest region. Their influence in this story cannot be lightly dismissed. Yet the captains and their Corps of Discovery were visitors, stepping into and back out of a world that they could only perceive dimly through the lens of one rain-soaked winter spent huddled on its shores. As the Corps' ranks seemed to understand, they had arrived in a region with its own rich and ancient history. The history that would follow the Corps of Discovery's visit would prove to have its own richness, too, bringing a succession of new peoples and new ways of living that would change the land in profound and enduring ways. The arrival of Lewis and Clark was in this respect a historical pivot-point, marking the end of thousands of years of autonomous Native American occupation and the beginning of something quite different, a story that is still being written today. The document that follows is in many respects an attempt to place the Corps of Discovery's journey in this larger historical context, so that these connections might be better understood.

If there are linkages that connect the successive phases of history in the region, they tend to be rooted in the nature of the Columbia-Pacific landscape. It is the relationship of humans with the distinctive lands and natural resources that has always defined the region's character. More often than not, economies have centered on the accumulation and exchange of naturally occurring things—wild fish, trees from the coastal forests, the furs of otter and beaver taken from the shore—and the freedom of movement along ocean beaches and navigable waters. Even the modern tourist industry, which does not harvest from the land per se, still depends very much on these same natural landscapes for its momentum and its appeal. Beaches, the ocean, and mountain scenery present natural resources in their own right.

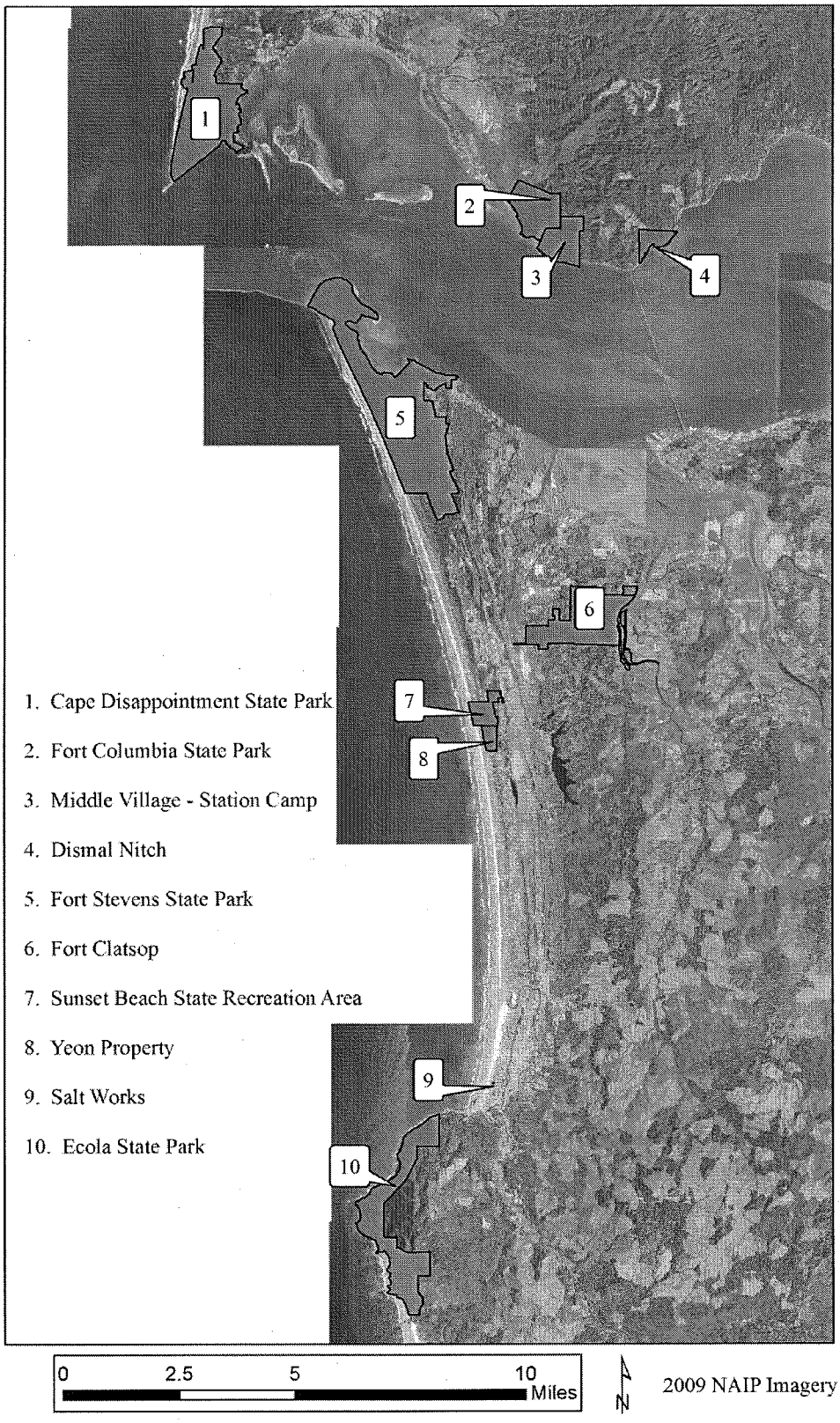
Another theme that links these phases of history is a tendency toward economic busts and booms, as very distant markets rise and fall and natural resources are sometimes harvested beyond the limits of sustainability - especially in the era of *laissez faire* economies and prior to the advent of regulatory controls in the 20th century. The sea otters that first brought explorers and non-Native traders to this coastline were all but extirpated from the Columbia-Pacific region a century later, the species nearly becoming extinct throughout the North Pacific as their furs adorned the hats, coats and capes of Asian and European gentry. Beaver fared a little better, rebounding slowly from depressed numbers in the 19th century. Salmon canning magnates arrived from depleted New England and California fishing grounds, building a nationally significant salmon industry on the banks of the Columbia estuary and feeding people throughout the nation, only to see the fish numbers plummet and the industry depart for Alaskan waters a few decades later. The Columbia-Pacific's timber industry and the forests that spawned it are still here today. Yet, both are much changed, with modern tree farms bearing little resemblance to the ancient forests that preceded them, timber products and economies having transformed accordingly. As an industry that does not rely on resource extraction, tourism's potential for overexploitation may be relatively small, and yet there are thresholds that might still limit or change its character, as people arrive in growing numbers and the Columbia-Pacific becomes an increasingly urbanized region.

While the economies of the Columbia-Pacific region have risen and fallen like the tides, each cycle has washed up new peoples on its shores. The region's history is thus characterized by remarkable ethnic diversity, too, which continues to shape the culture and character of the region today. Long before Lewis and Clark's journeys, resident Native American communities—the Chinook, Clatsop, and others—had long hosted traders, travelers, and even slaves hailing from tribes throughout the Northwestern region, gathering here to participate in a bustling trade at the river's mouth. The European fur trade, in turn, brought working people of French-Canadian, Native Hawaiian, Cree, Iroquois, Metis, and other extractions to the river's mouth, working under the oversight of a British (often ethnically Scottish) managerial class. As the fur trade waned, new industries developed through the initiative of men, largely of

northwestern European extraction and most from the American East, who recruited a diverse immigrant labor pool to build their empires. Some recruited immigrants from southern China, men mostly, who served as laborers in the region's canneries and early farms. Indeed, for a time the Chinese population roughly matched that of the native-born American population in the Columbia-Pacific region. Some also recruited Scandinavian immigrants—Norwegians, Swedes, and Finns, in particular—who moved to the region as families and helped build the early logging industry in the mills and in the woods, working in fishing boats and canneries, and eventually founding their own businesses and small farms. In time, new waves of laborers arrived. Japanese workers arrived in the early 20th century, for example, only to be removed from the area under nationwide internment policies during World War II. Since their departure, there have been other newcomers, such as laborers from Mexico and other parts of Latin America Their presence in local industries has been widespread and, especially since the late 20th century, this immigrant population has been involved with almost every part of the burgeoning tourist industry. Native American labor has remained a small but persistent part of the local economy, while each successive generation of immigrants has left some lasting, multigenerational imprint on the region's demographic picture. They have shared their traditions and their values with one another and often intermarried, producing a kind of cultural mélange in the Columbia-Pacific region that has persisted in spite of the homogenizing influences of modern American media and migrations.

Each of these resource economies and each of these human communities have some bearing on the story of Lewis and Clark National and State Historical Parks. The various sub-units of the park - no less than ten of them - include Cape Disappointment and Fort Columbia State Parks, Station Camp, and Dismal Nitch in Washington, as well as Fort Clatsop, the Fort-to-Sea Trail, Fort Stevens, Sunset Beach, the Lewis and Clark Salt Cairn in Seaside, and Ecola State Park in Oregon. (The newly-acquired Yeon property is addressed here too, albeit parenthetically.) These park sub-units are widely dispersed along the region's shoreline and intersect with the historical geographies outlined above in myriad ways.

The scale and scope of this document reflects this fact. The National Park Service initiated this study with an ambitious vision, hoping that it might provide a general context for discussing the human history of the Columbia-Pacific region, including the whole of Clatsop County in Oregon and Pacific and Wahkiakum counties in Washington. This was done in part to aid in the general public's understanding of historical themes, but also to aid anyone seeking to nominate properties in these parks to the National Register of Historical Places. At the time this research began, there were ongoing discussions within the communities of the Columbia-Pacific region and the offices of the National Park Service of a potential National Heritage Area that might be centered on the mouth of the Columbia, thus contributing to this document's broad geographical scope. As the research progressed and the National Heritage Area

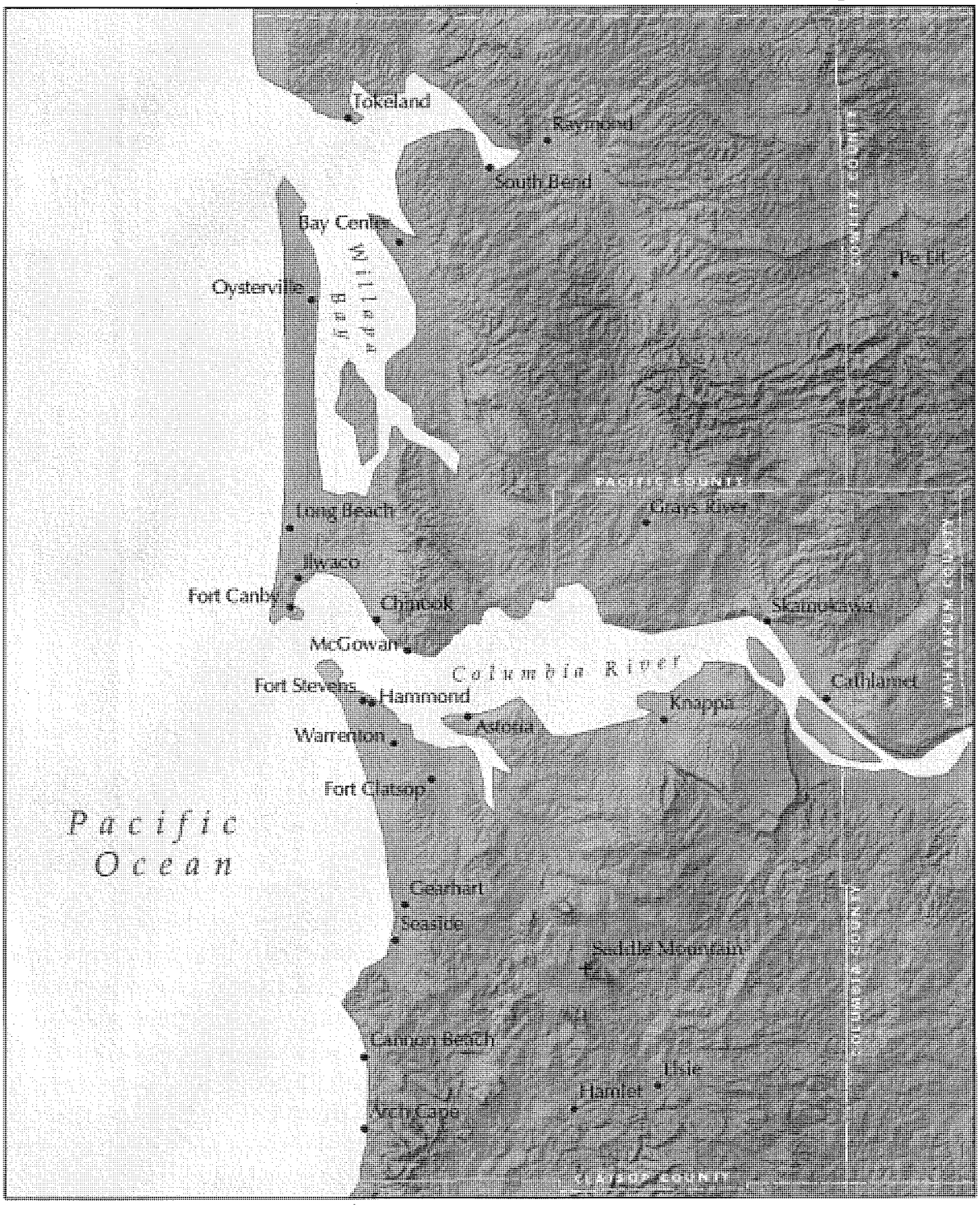


Map 1.1 – A map of the LEWI Parks. Courtesy Chris Clatterbuck, National Park Service.

proposal was tabled, this study's objective narrowed somewhat, instead focusing on the historical context of lands now within Lewis and Clark National and State Historical Parks. During this early planning for the study, the park superintendent at the time, David Szymanski, and the regional managers for Washington and Oregon State Parks all expressed a strong desire to see this document written in a certain way. They wanted it to support ongoing efforts to provide the public with accurate and compelling interpretation of their parks, outlining broad storylines that would help interpreters situate past events on park lands within a broad and integrated historical context. Though their seasoned interpreters would know many of the stories we would assemble, the document might be used to help train new interpreters, as well as to share the study's findings with a public curious about regional history. These managers also expressed particular interest in illuminating familiar themes—the fur trade or salmon canning—through the lenses of environmental history and ethnic history, providing perspectives that have sometimes been overlooked in more conventional historical treatments. They also expressed a wish that we would steer clear of fine-grained discussions of the Lewis and Clark Expedition, already a mainstay of park interpretation, to instead focus on events both before and after their arrival that might place the events of the winter of 1805–06 in their broader historical context. There was very little interest in producing a manuscript that was defined primarily by the logic and lingo of the National Register of Historic Places, and they urged that we not turn the final report into a planning document that would bore the masses and sit dusty and unused on office shelves. This document has been produced in response to these requests and this larger vision.

With such an ambitious scope, the breadth of this study is understandably vast, addressing key themes in human history over a period spanning hundreds of years. In this light, the content had to be bounded by certain parameters. Foremost among these, we focus mostly on those historical developments that have made an imprint on the landscape, within parks or within sight of them. The research began with an early attempt to define our key themes, reviewing what National Register properties existed in the area and conducting a windshield survey of historic properties in and immediately adjacent to the parks. From this effort, we defined what themes might require the greatest attention in this document, while also illuminating the parks' future nomination needs for the National Register. The research team, principally Steve Mark, has produced National Register nominations for Cape Disappointment and Fort Columbia State Parks as part of this effort, and they are included in the appendices of this document. Other spin-off documents from these early investigations were compiled separately, such as a windshield survey summary report (Deur 2009) and an overview of the historical configurations of Fort George (Watters and Deur et al. 2009); they are available from the National Park Service in the LEWI collections for anyone who wishes to see them.

The Counties of the Columbia-Pacific Region



Map 1.2 – The Columbia-Pacific region. Courtesy Patrick Hammons, Cartographer.

While this exercise narrowed the list of topics somewhat, using park relevance as a kind of litmus test, the scope of this document remains broad. Writing summarily about any of the topics contained in this document—from the fur trade to salmon canning to the history of military occupation at the Columbia's mouth—is at best a challenge. Volumes could be (and, in many cases, have been) written about each of the themes discussed with compressed brevity here. In some cases, we summarize in a single paragraph topics that have been the subject of entire dissertations and multiple-volume historical tracts. This compression can prove awkward, even a bit embarrassing, but it is also somewhat inevitable. We have sought to provide basic statements of historical context, but not to write the final word on any one topic. Those seeking the final word have a sizeable task ahead of them. They are encouraged to mine our bibliography, which lists the sources that we have reviewed, their facts compressed into the summary statements contained herein. They are also encouraged to reach out to our regional and state museums and their staff, many of whom have a vast knowledge of the topics at hand. With such a broad scope and a counterbalancing desire to avoid having this document become a multiple-volume set, a tremendous amount of our own work has found its way onto the cutting room floor. A portion of the larger archive amassed for this project will be stored along with the preexisting collection at the Lewis and Clark National Historical and State Parks Archive, where it will be available to researchers and members of the public who might seek greater detail.

This research effort has been somewhat unique for other reasons, too. The lead author, a longtime principal researcher on cultural and historical matters for the national parks and tribes of the West, has lived in the study area much of his life. His younger years were spent listening to the stories of community elders, exploring the history and derelict industrial landscapes of the forests and tidelands, navigating the cold, cavernous interiors of the old military forts, and watching the Columbia-Pacific's archaeological sites slowly erode into the sea. His family's history is connected, at least tangentially, with many of the themes outlined in this document, and this local knowledge has helped to inform the content of the document in various ways. Yet, this was very much a group effort, from start to finish. At each stage, the work was supported by fellow researchers Steve Mark (National Park Service), Deborah Confer (University of Washington), and Rachel Lahoff (Portland State University), all of whom contributed to the writing of certain sections of this document. Portland State University graduate students, especially Roy Watters, assisted in various literature review tasks. Lewis and Clark National and State Historical Parks (LEWI) staff, including David Szymanski, Deb Wood, and Chris Clatterbuck, all made intellectual contributions of their own, as did National Park Service cultural resource specialist Gretchen Luxenberg. The product is a group effort, then, in most senses of that term.

Indeed, the staff at almost every museum in the Columbia-Pacific region has made some contribution to this project: the Clatsop County Historical Museum (Astoria), Columbia-Pacific Museum (Ilwaco), and Columbia River Maritime Museum (Astoria)

most of all, but also the Pacific County Historical Museum (South Bend) and various local museums in Warrenton, Seaside, Cannon Beach, and beyond. The Columbia-Pacific Museum provided many photographs, as well as volunteer assistance that went above and beyond the call of duty. The archives and staff of the Washington and Oregon State Historical Societies, in Tacoma and Portland, respectively, aided considerably in identifying sources for this work, while also providing photographs of their own. So, too, the official state archives in both states were of assistance, as were the archives of particular agencies, especially Washington State Parks and the Oregon Parks and Recreation Department. Certain local park staff members, such as recent Washington State Parks retiree Donella Lucero, have also made invaluable contributions to this effort. Staff members from certain federal archives, including the National Archices and Records Administration (NARA) archives in both Seattle and Washington, D.C., assisted in certain tasks, as did the archivists from the National Park Service in both the Pacific-West and Washington, D.C., Support Offices. In addition, representatives from tribes with varying degrees of local interest have provided brief but useful comments in the course of this work, including certain members of the Chinook, Clatsop-Nehalem, Grand Ronde, Quinault, and Siletz. So, too, considerable non-Native oral tradition has aided in the effort, the observations and personal collections of loggers, fishermen, farmers, hoteliers, and avocational local historians. The contributions of each of these sources were compiled, giving particular attention to those sources that placed park history into the context of regional history. The results and the contributions of all these people are summarized thematically in the pages that follow. This document is presented with the hope that, taken together, these summaries might provide a foundation for future investigations and for many good conversations regarding the history of the Columbia-Pacific region.

2: The Environments of the Columbia-Pacific Region: A Brief Introduction

Draining a vast inland basin and encompassing roughly 260,000 square miles of the Pacific Northwest interior—from the Canadian Rocky Mountain ridgetops to the edges of Nevada and Wyoming drylands, draining much of Idaho and vast portions of Montana, Oregon, and Washington—the Columbia River tumbles down to the sea. The Columbia is a mighty river, but it must give way to the ocean. On its lower reaches the river is effectively an estuary, shaped by tides and growing increasingly salty as it progresses from the Columbia River Gorge to the sea. Indeed, twice-daily tides and harbor seals (*Phoca vitulina*), encountered near modern Bonneville, energized members of the Corps of Discovery in late October 1805, announcing to them all that the ocean was not far ahead. Here, in the Columbia-Pacific region where the Columbia River makes its final westward run, the river is swift but calm, rising and falling with the tides until it meets the heaving Pacific just beyond the Columbia River bar.

The Columbia-Pacific region has been fundamentally shaped by the meeting of the Columbia River drainage and the sea. The recoverable geological history of the region suggests that for millions of years some sort of estuary has been situated on this part of the coastline, where the waters of northwestern North American meet the Pacific. By geologists' reckoning, complex arcs of volcanic islands and submarine lava flows, erupting from deep below the Earth's crust, once dotted this shallow estuary of what would become the Columbia outfall during the Eocene, roughly 49 million years ago, with portions of these islands becoming the Crescent Formation foundations of important local landmarks, such as the Willapa Hills and Cape Disappointment (Lasimanis 1991; Snavely 1987; Walsh et al. 1987). The turbulent geologic history of this place, where oceanic and continental tectonic plates collide, continued to reshape the coast in dramatic ways, producing volcanoes, uplifting mountains, submerging coastlines, and causing earthquakes and tsunamis. In the Miocene epoch, roughly 11 million years ago, the collision between oceanic and continental plates seems to have accelerated (Orr and Orr 2006). The pressure and mass of underground magma spiked, just as the continental plate lurched westward, creating vast fissures in the bedrock of eastern Oregon and Washington that oozed liquid lava, flowing downstream along the ancestral Columbia River's course. Meeting the Columbia estuary and the sea, sometimes with explosive force, these flows cooled in and around the river's course to become today's Columbia River Basalts. The arc of mountains, including Saddle Mountain and Tillamook Head, created by these flows mark one ancestral course of the Columbia cast in heavy black rock. The results are impressive, including the wonderfully rugged scenery of Ecola State Park's headlands and offshore rocks, as well as peaks up to 3288 feet (in the case of Saddle Mountain), so high, in fact, that these

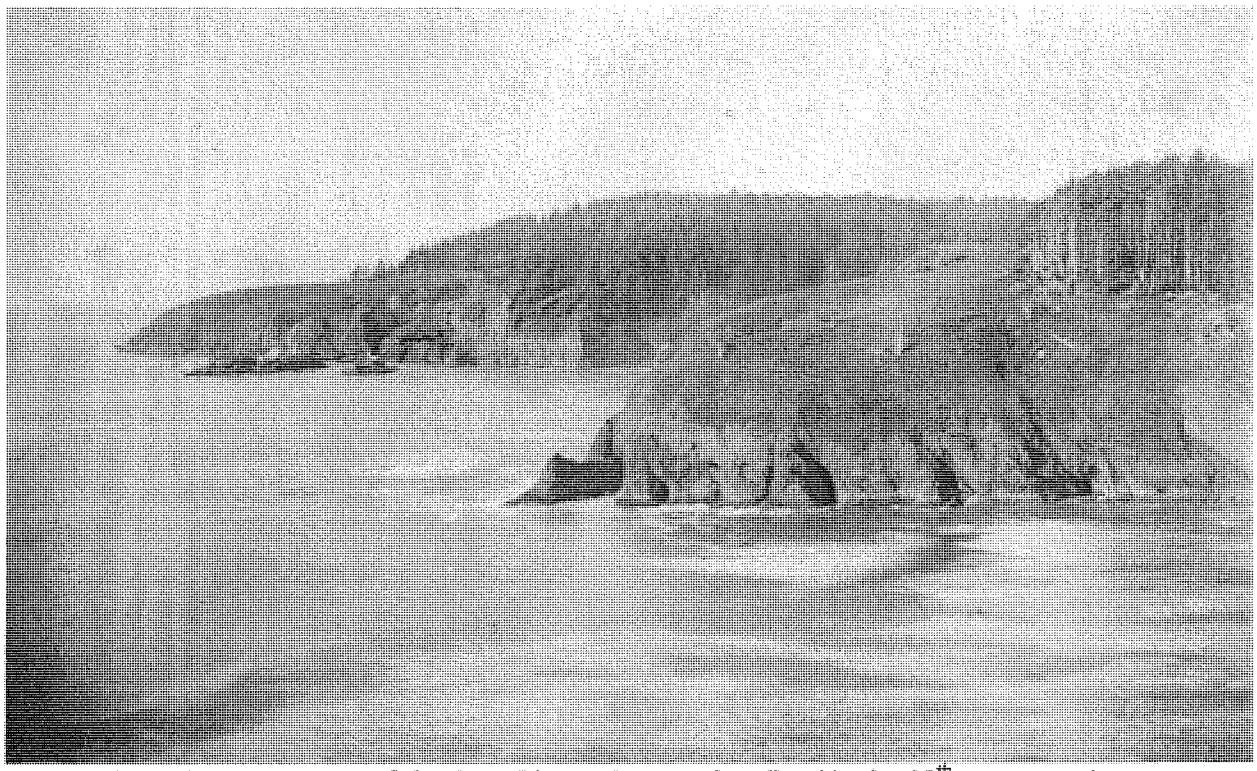


Figure 2.1 – A portion of the Cape Disappointment headland in the 19th century, prior to its development. The rugged headlands of this coast, as well as its loftiest peaks, bear the hallmarks of ancient volcanic events. Photo courtesy Washington State Historical Society.

peaks contain islands of rare vegetation isolated since the last ice age amid mountaintop forests of Pacific silver fir (*Abies amabilis*). The prominent backbone of Clatsop County, this volcanic mountain chain—Saddle Mountain in particular—is a key landmark in all local history and features prominently in the cornerstone oral traditions and spiritual practices of Native peoples into the present day.

As tectonic forces lifted the coast upward in the eons that followed the formation of the Columbia River Basalts, the region's heavy rainfall ensured the rapid downcutting of streams through this fractured lava rock, leaving behind the rugged mountainous terrain visible today. Sediments from the adjacent estuary and shorelines, trapped amid the volcanic landforms and folded by the continued collision of tectonic plates, created vast lenses of sandstones, siltstones, and mudstones. These sedimentary formations often contain fossils of fish, shellfish, and other estuary-dwellers, some long extinct on this coast. Whether volcanic or sedimentary, bedrock is heavily weathered throughout the region. With a mild climate, dense vegetation, and no history of glaciation, soils are deep. Tree roots and flowing water work their way down into mazes of bedrock fissures, and it is often difficult to discern where soils end and bedrock begins.

Sediment passing down the Columbia contributes much to the look of the outer coast. Mud, silt, and sand build shifting shoals in the river's mouth, hazards to early navigators that are regularly dredged today. On the ocean beaches, sand-sized particles settle out to form the brilliant, light beige beaches of the outer coast, home to unique shellfish such as razor clams (*Siliqua patula*) and to a diversity of durable, drought-tolerant plants, isopods, birds, and other beach specialists. Especially in the last 3000 years, the sands have accumulated, so that the beaches and dunes of the outer coast have crept incrementally westward. Geologists have found, for example, that the age of each dune ridge in Clatsop Plains is younger as one progresses from the east (such as Cullaby Lake) to the west (such as Sunset Beach). Dune lakes and marshes are found in abundance in these places, where streams and rivers were partially trapped behind the advancing sand. Likewise, former Native American villages on the dune ridges are also successively younger as one moves from east to west, the residents being compelled to move as sand accumulated from time to time and left them isolated from the shore (Connolly 1992; Rankin 1983). The accretion of sands even appears prominently in the oral traditions of the Clatsop, who clearly had spent considerable time observing the phenomenon and its effects and attributed some portion of the change to Coyote, who shaped many facets of the natural world:

"Coyote was coming. He came to Gôt'a't [near Seaside, Oregon]. There he met a heavy surf. He was afraid that he might be drifted away and went up to the spruce trees. He stayed there a long time. Then he took some sand and threw it upon that surf: "This shall be a prairie and no surf. The future generations shall walk on this prairie." Thus Clatsop became a prairie. The surf became a prairie" (in Boas 1894: 101).

The fundamental cycles of the Columbia-Pacific region are defined by the seasons. In the winter, low-pressure systems centered on the North Pacific send spiraling cyclonic storms, rotating counterclockwise, pounding one after the other into the Columbia-Pacific region's coast. Strong south winds dominate the coastline from fall into spring, occasionally gusting to hurricane force and tossing surf high along its shoreline, with waves sometimes rising to 30 feet or more. The ocean currents pull strongly from south to north in this season, carrying logs and debris from distant places to the south. So potent are these forces that some Native American traditions describe South Wind as one of the world's most potent spiritual beings. The tribes of the Columbia-Pacific region had protocols for making claims to giant redwood logs that were carried from the coasts of northern California and used in fashioning special large canoes (Deur and Thomson 2008; Harrington n.d.). Beaches erode, but Columbia River sediments moving northward each year help to replenish the 28-mile Long Beach Peninsula, one of the longest continuous sand beaches on Earth. Most of the region's heavy precipitation arrives in this season, from around 65 inches per year in the lowlands to 150 inches or more in places where high peaks wring moisture orographically from the storms sweeping onshore. Frosts are relatively uncommon, and snow typically falls only in the

higher peaks, though there is historical evidence to suggest that winters were colder and snowfall more abundant in past centuries (Schulz 1990).

In the summer, the scene changes dramatically: high pressure systems settle on the North Pacific, bringing relatively calm weather, gentle surf, and light, north winds. In this season, ocean currents turn southward, with the Columbia sediments helping to build up beaches along the Clatsop County shore. Yet, the currents also pull slightly offshore in this season, creating a sort of hydrological vacuum in waters immediately along the shoreline; this phenomenon pulls cold, nutrient-rich water from deep in the ocean to its surface in the nearshore zone, a process called upwelling. The nutrients in these waters feed a seasonal burst in plankton and other small organisms that, in turn, support a rich oceanic food chain, attracting large schools of fish, whales, nesting seabirds, and other marine life to feed and to breed. When making contact with the warm air above, these cold ocean waters also can produce impressive fogs—sometimes termed upwelling fogs—that creep onshore during many summer days. In addition to increasing humidity and causing modest precipitation, these frequent fogs moderate temperatures so that coastal lowlands might have temperatures in the 50s or 60s Fahrenheit in the summer, reflecting the ocean's chill, even when air temperatures may be 10, 20, or occasionally 30 degrees higher only a few miles inland.

The dominant vegetation of the region is shaped in many ways by these diverse forces of geology and climate. Standing tall along the outer coast, Sitka spruce (*Picea sitchensis*) is the dominant forest tree. Members of the Corps of Discovery marveled at the prevalence, and sheer scale, of this tree:

"The hunters who were over the Netull the other day informed us that they measured a pine tree [Sitka spruce] which at the hight of a man's breast was 42 feet in the girth about three feet higher, or as high as a tall man could reach, it was 40 feet in the girth which was about the circumpherence for at least 200 feet without a limb, and that it was very lofty above the commencement of the limbs. from the appearance of other trees of this species of fir and their account of this tree, I think it may be safely estimated at 300 feet. it had every appearance of being perfectly sound" (Meriwether Lewis, March 10, 1806).

Found close to the ocean from northern California to southern Alaska, this tree has found a winning strategy for coastal living: extraordinarily durable but lightweight wood has allowed stands of Sitka spruce to survive countless winters of violent storms while staying upright. As will be discussed in the pages that follow, this would make the tree of national importance in the construction of early airplanes. Broad but shallow roots allow these spruces to stay upright, usually, while staying out of the perennial water table not far below the ground's surface. Piercing-sharp needles with porous exteriors capture fog droplets, so that on a foggy summer day spruce trees' roots are supplied with a constant rain-like drip, while other trees go without precipitation for

Figure 2.2 – Mature Sitka spruce trees in the Oregon coastal forest. Photo courtesy Oregon State University Archives, Special Collections Commons.

weeks or months at a time. Standing amid the spruces, and benefitting from their abilities to withstand storms and capture fog-drip, are the western hemlocks (*Tsuga heterophylla*), which are not as durable, but are uniquely adapted to germinate and grow within the dark, protective cover of the region's characteristic spruce-hemlock forest. In certain well-watered but protected places, stands of western red cedar (*Thuja plicata*) can be found, with reddish wood, often tight-grained and soft compared to other woods, rich in tannins and uniquely resistant to rot. The red cedar is the cornerstone of the Native toolkit—used in everything from houses to canoes to clothing—and shingles made from old cedars are in high demand today, often lasting for generations when other shingles do not. Wildfires are remarkably rare in the fog belt, so that it is sometimes possible to find cedars (or, at least, cedar stumps) in excess of 1000 years in age (e.g., Long and Whitlock 2002). Only in the interior hills and mountains of the region, where summer fogs are rare and fires more common, does one find the iconic Douglas fir (*Pseudotsuga menziesii*), which has been such a mainstay to the modern timber industry. Immediately along the shoreline one often finds a tree more widespread in the arid interior Northwest, shore or lodgepole pine (*Pinus contorta* var. *contorta*), which is salt-tolerant, but can also survive long, dry summers in the draughty, sandy soils of the beachfront in a way that hints at its arid-country kinship.

The forests of this region are among the most productive to be found in the temperate zones of the world, if measured in terms of total biomass. There is also a diversity of lichens, fungus, and insects so vast that is still being catalogued today. Within forests so well watered and dense, understory plants tend to be tolerant of shade, saturation, and highly acidic soils. Because windborne seed dispersal is difficult in this environment, many species instead grow berries, their seeds being dispersed through the forest in the digestive tracts of myriad animals—humans sometimes among them—enriching the diets of everyone concerned. Native people of the region traditionally employed fire at the margins of these imposing forests to produce needed clearings for settlements and camps, to open vistas, to foster the growth of culturally preferred plants such as camas or bracken that colonize such clearings, and to produce predictably rich hunting grounds (Deur 1999). Early Euro-American settlers also struggled to find clearings in the forest, often occupying areas formerly cleared by Native Americans first before embarking on their own efforts to push back the forest margins to accommodate new settlements. Decomposition in this mild, moist climate is rapid, and historical structures disappear from the landscape with astonishing speed. Moreover, under a constant barrage of rainfall and conifer litter, the soils are also generally quite acidic, making agriculture a much more challenging prospect than the region's rich vegetation might superficially suggest.

The heavy runoff feeds a number of smaller rivers and streams in addition to the formidable Columbia. A few produce estuaries, where fresh water meets the sea. Some of these estuaries are river dominated, admitting large rivers and little seawater - a

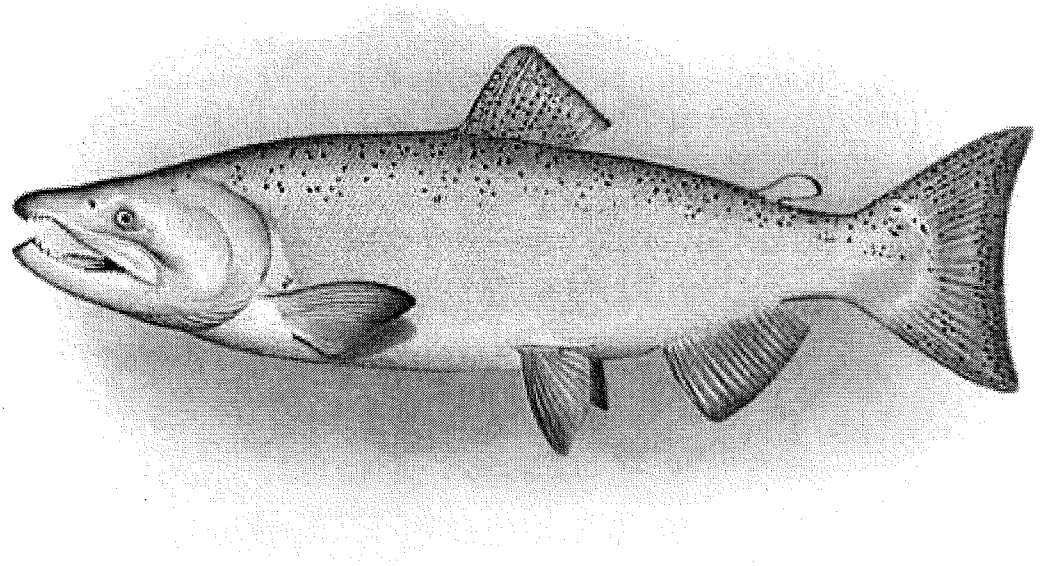


Figure 2.3 – The Chinook salmon (*Oncorhynchus tshawytscha*) – the iconic fish of the Columbia River, and the cornerstone of the 19th century fishing industry, named for the Chinook people of the Lower Columbia River. From *National Oceanic and Atmospheric Administration, Alaska Fisheries Science Center.*

result, especially in the rainy winters, they have low salinity by the standards of most tidal environments as a result. The Columbia and Necanicum estuaries are excellent examples. Others estuaries are ocean-dominated and relatively saline, admitting only small rivers and exchanging vast quantities of seawater with each tide. Within the Pacific Northwest, Willapa Bay is widely known as an estuary of this type, providing a home to unique sea life such as the native Olympia oyster (*Ostrea conchaphila*) and a number of flatfish.

These rivers and streams are home to a great diversity of fish. All five species of Pacific salmon return from the sea each year to spawn in the Columbia and in other waterways of the region, while sturgeon (*Acipinser* spp.), eulachon (*Thaleichthys pacificus* and possibly the origin of the name Oregon), and other riverine and anadromous fish abound (Byram and Lewis 2001). Most famously, the Columbia and other rivers of the region are home to the Chinook or king salmon (*Oncorhynchus tshawytscha*), which defined the Native traditional fishery and commercial fisheries alike, especially prior to the 20th century construction of the Columbia River dams. In the smaller waterways, coastal Coho salmon, cutthroat trout, and steelhead thrive, living their freshwater life phases in shallow, marshy streams, often in and around ponds and backwaters that form behind beaver dams. As they swim to and from the sea, these fish have historically

fed in extensive kelp forests, undulating, submerged stands of the giant bull-whip kelp (*Nereocystis luetkeana*) that are home to several species of rockfish and to scavengers such as the Dungeness crab (*Cancer magister*) lurking below. Sea otters, now extirpated, once frolicked in these kelp beds and sustained them by eating the sea urchins that graze on juvenile kelp. Their thick fur, much prized by Native Americans and early European traders (*"the riches[t] and I think the most delicious fur in the world,"* according to Meriwether Lewis), which allowed these animals to survive in cold waters without the aid of thick blubber, played no small part in prompting early Euro-American exploration and occupation of this coast (Lewis, February 23, 1806, in Moulton 1990: 339).

Figure 2.4 - A sea otter (Enhydra lurita) mother with small pup. The sea otter was widespread in the region, being hunted by Native American communities and prompting the earliest European exploration and settlement in the region. Photo by Michael L. Baird, bairdphotos.com, made available courtesy Wikimedia Commons.

Much of the landscape has changed since the arrival of the Corps of Discovery, as will be discussed in the pages that follow. Still, the environmental fundamentals of the Columbia-Pacific region have helped to define the limits and opportunities of life on this coast from the beginnings of human time into the present day.

3: The People of the Columbia-Pacific Region at the Time of European Contact

Descending into the calm, tidal, lower reaches of the Columbia River, members of the Corps of Discovery quickly recognized that they were entering a distinctive cultural landscape. Along the estuary of this mighty river, they found themselves traveling through a densely settled land, home to peoples, cultures, and polities that were unlike anything they had seen previously on their journey across North America. The Columbia estuary and the adjacent coastline, they must have sensed, was exceptional, with one of the largest and densest indigenous populations in North America north of the urban civilizations of Mexico (Kroeber 1953; Hodge 1907). Traveling along the shores of the Columbia estuary on the eve of European contact, it would have appeared to a visitor that this was a place of rare resource abundance and wealth, and surprisingly urban by Native North American standards. Almost every habitable portion of the shoreline was being used by Native communities, for such purposes as villages, resource camps, fishing stations, hunting grounds, plant gathering areas, burial sites, spiritual or healing sites, and the like. So, too, on the ocean coast, major settlements sat wherever freshwater rivers and streams entered the sea. The Corps of Discovery was not encountering a wilderness on the lower Columbia, then, but a homeland to thousands of people and one of the most economically and culturally vibrant places in the Northwest.

The tribes of the Columbia-Pacific region were of huge importance to the history of the Pacific Northwest, Native and non-Native history alike (and some maintain critical, if more symbolically important, roles today). The Chinook proper, or Lower Chinook, traditionally occupied the entire northern shoreline of the Columbia River, from Grays Bay to the sea. Their claims also extended over the greater proportion of Willapa Bay, the Willapa Hills, and the entirety of the Long Beach Peninsula. The Chinook had sprawling waterfront villages of cedar plank longhouses at almost every place within this homeland where rivers met the sea. On Willapa Bay, there were villages at the mouths of the Palix, Nemah, Bear, and Naselle Rivers, ideal fishing sites and convenient to the diverse resources of the bay. There were also villages on the Long Beach Peninsula, in grassy clearings near Nahcotta and Oysterville, prime sites for shellfish harvesting and other tasks tied to western Willapa Bay and the ocean beaches beyond. In their northern territories, beyond Bay Center and including the northern shores of Willapa Bay, Chinook territory and society was interconnected with that of Salish-speaking peoples, Lower Chehalis bands including those sometimes called the Willapa for whom the bay is named. Chinooks sometimes co-occupied villages and shared resource sites with these people, whose language was quite different but whose culture and values were much the same. However, it was along the Columbia River, especially

along the sweeping shore of Baker Bay from Megler to Cape Disappointment, that the vast and powerful Chinook community was often concentrated and typically encountered by visitors, especially in the spring and summer, when people moved back to the riverfront from Willapa Bay and other more interior winter communities. Here, there were several independent settlements, on almost every habitable waterfront patch of ground, big villages situated at places later called Fort Canby, Ilwaco, Chinook, McGowan, and others. Between them, and in the uplands adjacent, sat an almost continuous constellation of traditional fishing stations, plant gathering areas, burial sites, and other places of cultural importance. Together, these Baker Bay villages formed a single cultural and social unit—in some respects, the Chinook core—and represented one of the great cultural, social, and economic powerhouses of the contact-period Northwest (Ellis in press; Silverstein 1990; Ray 1938; Curtis 1911; Boas 1894).

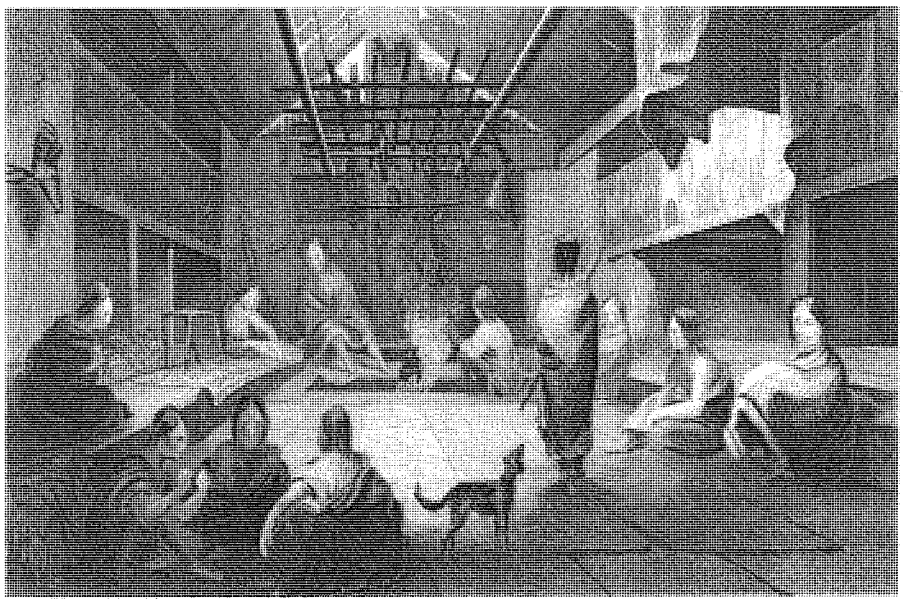


Figure 3.1 - The interior of a Chinookan longhouse, as seen by the U.S. Exploring Expedition, led by Charles Wilkes, in the 1840s and drawn by A.T. Agate. From Wilkes (1845). Image courtesy Wikimedia Commons.

To the south of the Columbia, from the vicinity of Tongue Point to the sea, were the Clatsop. Closely related in language and culture to their Chinook kin to the north, the Clatsop occupied much of the coastline in the Oregon county now bearing their name. While apparently somewhat smaller in number than the Chinook across the river, they also occupied a long east–west string of large villages lining the Columbia estuary's south shore, from the vicinity of Fort Clatsop to Point Adams (today's Fort Stevens). At the time of European contact, Clatsop villages sat on the mouth of the Lewis and Clark River, Youngs River, and Skipanon Creek, as well as in modern Hammond, Fort

Stevens, and places in between. As on the northern side of the river, the spaces between and adjacent to these villages abounded in resource camps, fishing stations, hunting grounds, burial sites, and ceremonial spaces, all the things needed to sustain such large and settled communities. A smaller, secondary hub of settlement centered on the Necanicum estuary in modern-day Seaside and Gearhart. As on the northern side of the river, the Clatsops from the Columbia River villages often retired to the Seaside villages and other smaller settlements for the winter months. And, as the Chinooks were connected to their Salish-speaking neighbors to their north, so these southern Clatsops in particular shared villages and resource sites with the Salish-speaking northern Tillamook. Like the Chinook across the river, the Columbia estuary villages—occupied most densely in the spring and summer—functioned as a social, cultural, and economic unit in many respects and were a powerful center of trade and ceremony in the contact-period Northwest (Ellis in press; Silverstein 1990; Taylor 1953; Ray 1938; Curtis 1911, 1913; Boas 1894).

Southward were the Nehalem (or northern) Tillamook, Salish-speaking peoples who differed in language, if not necessarily in culture, from the Chinook and Clatsop to the north. While the exact delineation of territories is problematic, the Nehalem Tillamook are typically associated with the area from Tillamook Head to the south, with major population centers concentrated on Nehalem and Tillamook Bays. Yet, Nehalems also lived alongside Clatsops in what were multi-tribal communities at Seaside and apparently Cannon Beach, and the contact-period residents of Ecola State Park also appear to have been northern or "Nehalem" Tillamook (Boas 1894; Jacobs n.d.; Harrington n.d.).

Other ethnolinguistic communities occupied interior places. To the east of the Chinook were the Wahkiakum Cathlamet, whose territories extended upstream from Grays Bay to near Cathlamet, Washington, with large villages situated on the mouths of each tributary river along this reach. Cathlamet proper, meanwhile, occupied the upper Columbia estuary along its south bank from roughly Tongue Point to the vicinity of modern Rainier, Oregon. All of these groups spoke Chinookan languages, closely related to Chinook and Clatsop. Meanwhile, in the interior mountains of Pacific and Clatsop Counties lived two relatively small and culturally distinct Athabaskan groups, the Kwalhioqua and Clatskanie, respectively. Linguistically related to the Athabaskans of interior Alaska and the Navajo, these populations were small, relatively distinctive culturally (to the extent that this can be inferred from limited evidence), and ceased to exist as independent groups by the early 20th century (Ellis in press; Silverstein 1990; Suphan 1974; Spier 1936).

The tribes of the Columbia-Pacific region shared rich traditions of artistic, technological, and ceremonial practice that were common to each of these communities. Villages consisted of a number of longhouses, usually constructed of hewed cedar planks, each housing one or more families. While house sizes varied, large houses could comfortably

accommodate tens of residents; some of the larger villages had 10, 20, or (in the case of Middle Village and perhaps the Point Adams villages prior to contact) more than 30 of these houses at certain times. Cedar canoes, often huge and custom designed for travel in rough waters, were carved from individual trees, and canoe travel linked these villages along the rivers, bays, and sea. Both at these villages and from a constellation of seasonal camps, these peoples harvested every imaginable fish, mammal, and plant for subsistence and cultural purposes. Chinook salmon, coho salmon, steelhead, sturgeon, eulachon, and many other fish were caught in season; mussels, oysters, crabs, razor clams, and myriad other shellfish were sought out in suitable settings, too. A diverse range of plant foods were also key to the diet: berries such as salal, various huckleberries, and salmonberry; roots such as silverweed, wild onion, wapato, and camas; fresh edible shoots of salmonberry, thimbleberry, and cow parsnip. Whatever was desired but not locally abundant could often be traded from villages nearby. Moreover, though ethnographic evidence is scarce, Native peoples sometimes burned meadows in such places as Clatsop Plains to facilitate the growth of culturally important plants, such as camas and bracken fern, and to produce predictable hunting areas. (Where modern disturbances have been few, the vegetation in certain LEWI parks bears hints of this history of traditional vegetation management, though further investigation would be needed to confirm the origins of these patterns.) Resources and

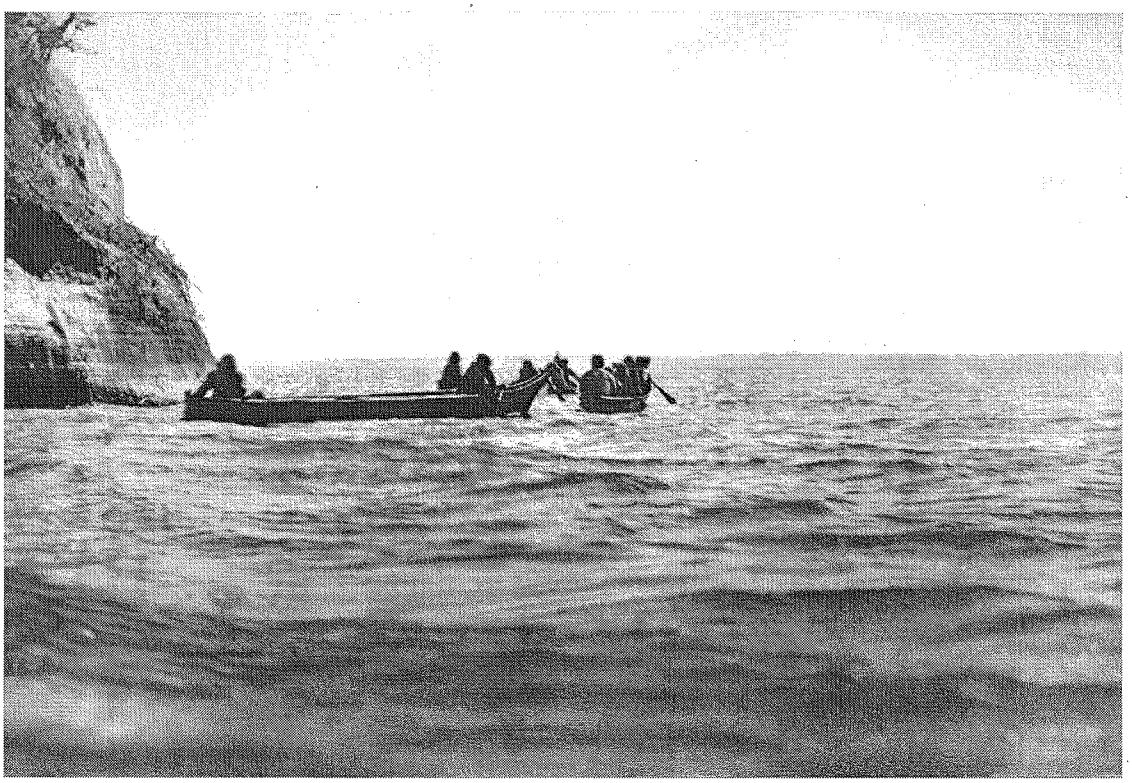


Figure 3.2 - "Lower Columbia" – a 1910 photo by Edward Curtis, of Chinookan canoeists on Columbia River tidewater. Digital image CP08031, Northwestern University Library, *Edward S. Curtis's "The North American Indian.*

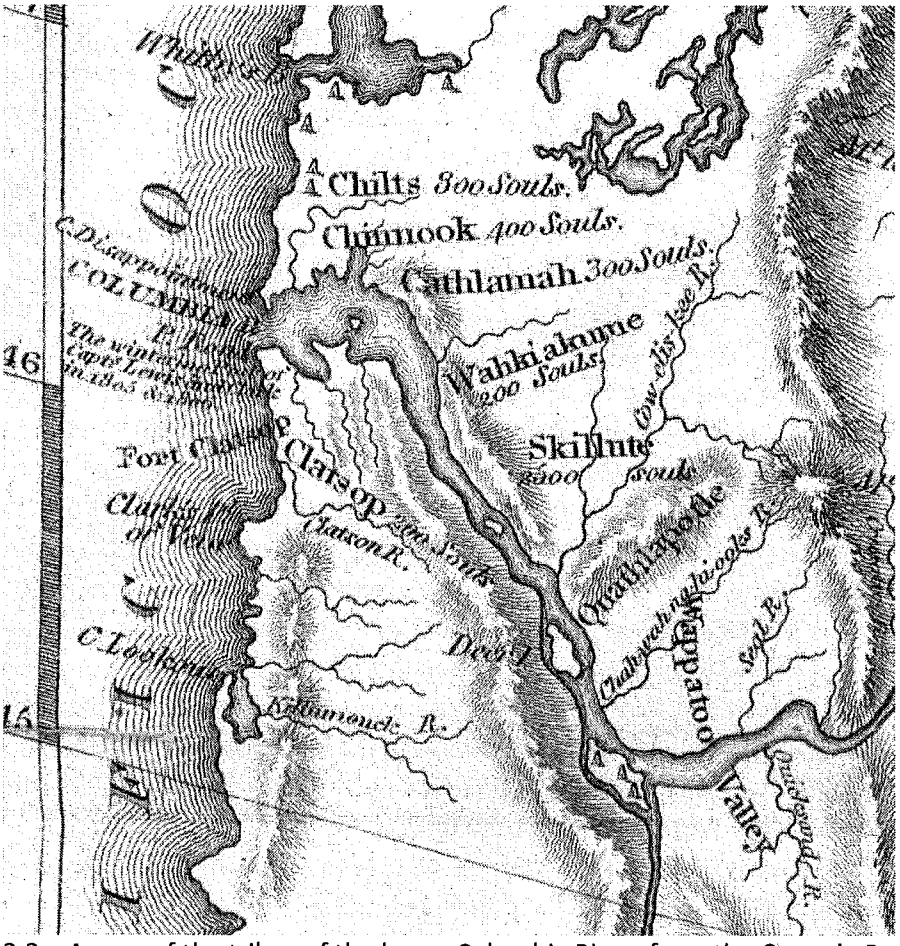


Figure 3.3 – A map of the tribes of the lower Columbia River, from the Cascade Range to the sea, from the first published edition of the Lewis and Clark journals. From P. Allen, N. Biddle, W. Clark and M. Lewis 1815, *Map of Lewis and Clark's Track across the Western Portion of North America*. London: Longman, Hurst, Rees, Orne & Brown. Image courtesy Wikimedia Commons.

land were claimed by particular villages and village leaders and were in some senses owned. Each generation bore a certain responsibility to maintain balanced relationships with prey species through proscriptions on overharvest and respectful ceremonial interventions, such as the first salmon ceremony (Deur 1999; Boyd and Hajda 1987).

The Chinook and Clatsop, in particular, sat at the hub of a vast trading empire, involving the exchange of goods up and down the coast, as well as along the Columbia River from the Northwestern interior. Prized dentalia, the long, tooth-like shell money of the Pacific Northwest, was carried by canoe to the major Chinook and Clatsop villages by Nuu-chah-nulth (or Nootka) traders who gathered the shell in the inlets of their homelands on the west coast of today's Vancouver Island. Slaves, raided from

communities as far away as northern California by middlemen such as the Klamath, were sold by the Chinook and Clatsop to tribes visiting from elsewhere along the coast. Specialized local products, such as a special type of dried, pounded salmon that was lightweight and easy to transport was such a popular trade item for the Clatsop that they were named for it, Tlatcep, meaning "those with pounded salmon." Furs, canoes, tools, foods, and any number of other goods passed through these villages as they were exchanged between tribes. A casual perusal of ethnographic and early historical accounts reveals an impressive list of tribes converging at Chinook and Clatsop villages—Middle Village and the Fort Stevens villages, in particular. They met there to trade, but also to socialize, gamble, meet potential spouses, participate in ceremonial events, race, and sing: the Kwakwaka'wakw (Kwakiutl) from the central British Columbia Coast; the Makah, Quilleute, and Quinault of the northern Washington coast; the Yaquina, Alsea, and Tillamook from the Oregon coast; and many, many others visited for these reasons. They also came to fish. Especially in reference to the Chinook of Baker Bay, there are many accounts of visiting tribes being allowed to fish alongside the Chinook, at once sharing some of the Chinook's prodigious wealth, but also building and reinforcing relationships with a network of tribes that insured the Chinook's primacy in regional economic and social life. Especially among the high-ranking individuals of Columbia-Pacific tribes, a good marriage was a marriage with someone from another tribe, building intertribal social relationships that supported, and were supported by, economic relationships and insured that many of these visitors had deep ties, and possibly roots, in the villages of the lower Columbia. Multi-lingual "polyglot" communities were the norm, contributing to the development of a trade language, Chinuk wawa or Chinook Jargon, which the people of the lower river honed with time to bridge these linguistic divides (Lang 2008; Hajda 1984).

While settlement was especially focused on the shorelines, the interior portions of northwestern Oregon and southwestern Washington are also of traditional importance to Native peoples. The highest mountainous areas, occupied by meadows and plant communities rare in the deep forests below, were often visited for specialized hunting and plant gathering. Places such as Saddle Mountain and Onion Peak in Oregon and the Bald Ridge and Gray's River Divide complexes in Washington served as places to hunt elk and to gather onions (especially *Allium cernuum*), bear grass (*Xerophyllum tenax*), and other plants uncommon in the lowlands. Hunting was popular in these upland areas, along established elk trails or in meadows, and hunters sometimes took advantage of the rough terrain to chase elk, buffalo-jump style, off of precipices to be dispatched below.[1] These high-elevation places, far from the bustle of human settlements, were also often of elevated spiritual significance. Most Columbia-Pacific tribes' oral traditions traced their origins to events on Saddle Mountain, where ancestral beings emerge from the eggs of Thunderbird, each descending to a particular watershed to found the region's tribes. Spirit questing often involved travel to places of such elevated importance: Saddle Mountain, critically, but also apparently places such as the higher elevations of Tillamook Head in today's Ecola State Park.[2]

As the whole of the Columbia-Pacific region was occupied by Native American people in some manner and the densest centers of settlement hugged the shoreline, it is clear that every sub-unit of the Lewis and Clark National and State Historical Parks has some history of Native American use and occupation. A portion of this history can be reconstructed from the available written record, though much of it is still elusive. Contemporary Native American knowledge may yet help to fill in some of the gaps in this record, which is summarized in cursory form here.

The options for settlement were limited at Cape Disappointment, in part because of a limited number of fresh water sources.[3] At what later became Fort Canby on the protected eastern slopes of Cape Disappointment sat the village of Walmlm (or Walumlum, meaning "rotting wood"), which was described as a village of approximately 10 multi-family longhouses during the time of European contact. In addition to being a residential village, this was a fishing station of importance for salmon and other species that occupied the boundaries between ocean and river. As Ray's interviewees noted, "fishing was excellent here at extreme low tide" (Ray 1938: 39). There is some evidence to suggest extensive hunting here, too, of both marine and terrestrial mammals, such as seals and deer. The village was occupied by Chinooks but was often visited by people from other tribes, who were sometimes granted fishing access by their resource-rich Chinook hosts. The village served as the westernmost extension of the large settlement complex occupying the shoreline of Baker Bay. Adjacent portions of Cape Disappointment appear to have had diverse functions, being used for hunting, plant gathering, lookouts, and spiritual purposes linked to life in the villages below (Ray 1938; Boas 1894).

At today's Station Camp sat the sprawling Chinook Middle Village (Qiqaiaqilxam, meaning "middle town," apparently referencing its central location among the settlements of the north bank), perhaps the single most powerful center of social, political, and economic influence in the Chinook lands and indeed along the entire lower Columbia. Some sources suggest well over 30 longhouses lining the waterfront at this place, sometimes called Chinook Point on early navigator's maps until that term was reapplied to the Fort Columbia area in the 19th century.[4] With a commanding view up, down, and across the river, this village served as a center of trading activity and social and ceremonial life to the Chinook. It was also visited by tribes from throughout the region and was a fishing site of great importance, where salmon could be netted as they began their ascent up the Columbia. During the times of European exploration and fur trade, discussed in more detail in later sections, Middle Village played a distinctly prominent role. Adjacent landmarks, such as the modern site of Fort Columbia, were reportedly clearings, used extensively by residents of the adjacent villages as a lookout and trail corridor, but also for a variety of other ceremonial and utilitarian purposes related to life in the village complex sitting immediately below. It has been reported that the Chinook "*called the point [Fort Columbia, today's Chinook Point] 'No's-to-ils' and the*

hill [now called Scarborough Hill] behind the point 'No'si-misp'" (Weathers 1989: 24, 31; Wilson et al. 2009).[5]

At Point Adams, on the banks of the Columbia near the site of the oldest military fortifications, was the largest Clatsop village, Niak'ilaki (meaning "pounded salmon place"), which was also simply called Tlatcep (or Clatsop) village. This village was of singular importance to the Clatsop. As Ray (1938: 39) noted, "it was one, perhaps the largest, of a number of [Clatsop] villages in the vicinity. The early writers speak of it, however, almost to the exclusion of all others." Due in no small part to this village's prominence, the entire Clatsop people were known by this village-specific moniker to arriving Europeans. Various accounts suggest that the village had between eight and ten large longhouses at the time of European contact, and a population in the hundreds. These sources also suggest that Niak'ilaki served as a center of fishing and other forms of resource procurement. Salmon fishing was especially important, as was the production of dried pulverized salmon that was among this village's principal exports, and the basis for its name. As at Middle Village on the opposite bank of the river, this cornerstone Clatsop village was also a major trading center, hosting people from throughout the region who stayed in camps on the village's margin for days or weeks as they participated in economic, social, and ceremonial activities. A short distance upstream were the large Konapee (named for a chief by that name) and Naiaaqsta (meaning "at the head") villages situated between Niak'ilaki and the center of modern Hammond, close to the northeastern boundary of the modern park. Konapee village was said to have been massive at one time, with 40 or more longhouses, but was in rapid decline by the time of direct European contact (Ellis in press; Deur 2008; Ray 1938; Boas 1894; Jacobs n.d.).

Close to Fort Clatsop, at the mouth of the Lewis and Clark River, was Ni'tl, or Netul, once a "very large village" that collapsed early in the history of European exploration (Curtis 1911: 183). The Fort Clatsop site, itself, is widely agreed to have been used by Clatsops—a use suggested by the large clearing occupied by the Corps of Discovery—though its use is debated and was arguably in flux at the time of contact. The Fort Clatsop site is variously reported as the location of a small settlement. A burial site, linked to Netul or the local village, as reported a very short distance of the fort site, denoted by some sources as "Memaloose Point." By the time of Lewis and Clark's arrival, some part of the site was used seasonally as a resource processing area for fish, game, and other products. The Fort Clatsop site, or lands along the shoreline very close by, are said to be occupied by "two houses of Clatsops" on December 14th of 1813, when traders from the Northwest Company came ashore there:

"At noon we entered the river and proceeded up to Fort Clatsop. There we found two houses of Clatsops, busily employed making mats and straw hats; they had an extraordinary number of children...We walked up to see the old American winter quarters of Captains Lewis and Clark in 1805-06, which are in total ruins, the wood having been cut down and destroyed by the

Indians…Having examined this spot, we returned to our horses, which are left in the care of the Indians; there being no grass near the fort, we allow them to graze on the salt marsh along the bay and river" (Henry 1897:771-72).

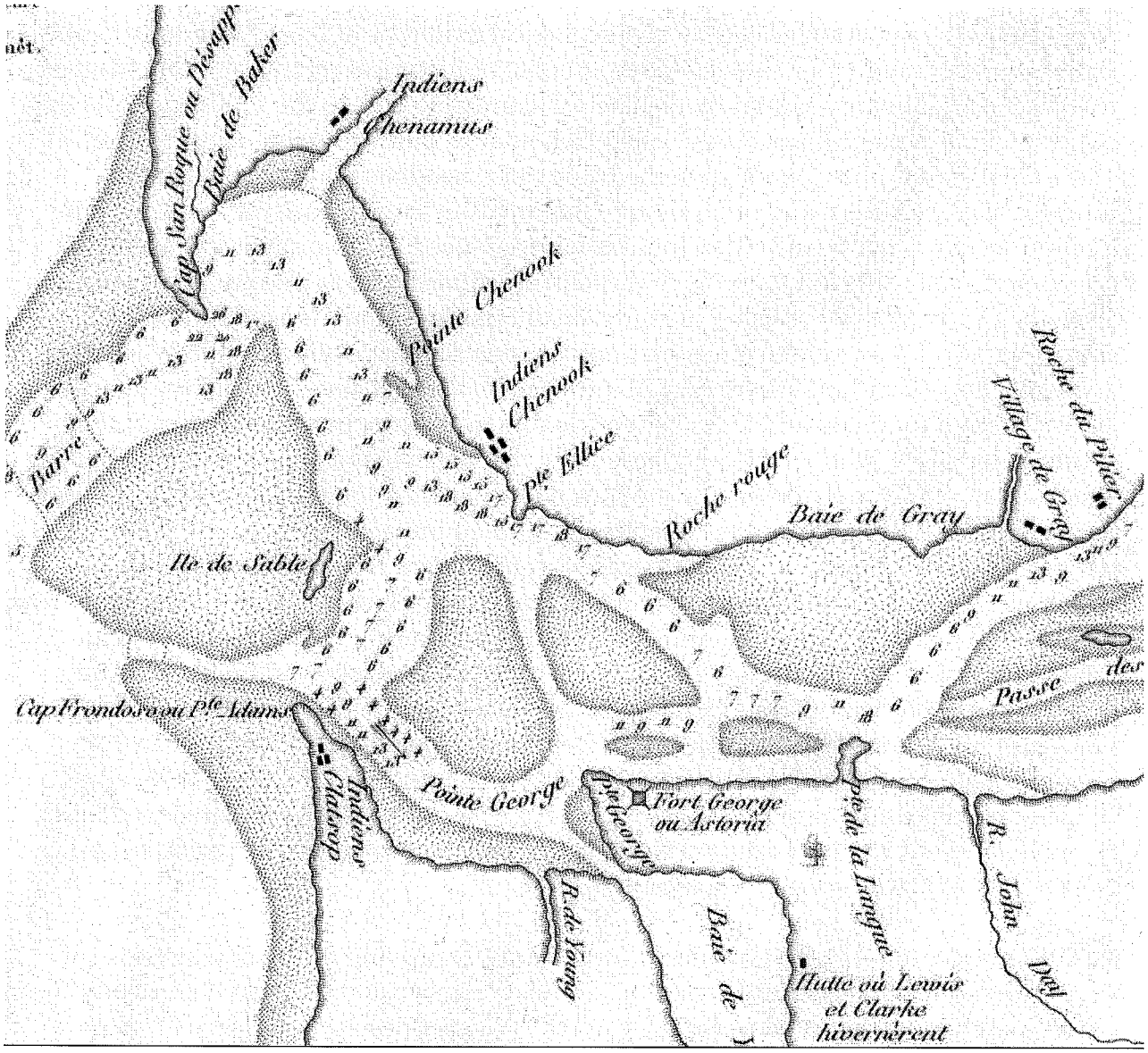


Figure 3.3 – A detail of one of the earliest maps of the mouth of the Columbia, dating from the 1840-42 explorations of French explorer, Eugene Duflot de Mofras. Clearly visible are the two large villages at today's Station Camp ("*Indiens Chenook*") and Fort Stevens ("*Indiens Clatsop*"). In addition to other Chinook villages, de Mofras included the site of Fort George and a somewhat misplaced reference to Fort Clatsop. From Duflot de Mofras, 1844. *Carte du Rio Colombia Depuis don Embouchure Jusqu' au Fort Vancouver….* Paris: Arthus Bertrand. Map courtesy Cartography Associates, David Rumsey Map Collection.

Writing in 1853, Preston Gillette appeared to be referencing this site, or one very close to it, when he noted, "*The small cleared spot at the landing was done principally by Indians. It seems to have been a village or camping place occupied by them from time immemorial*" (Gillette n.d.).

To the south, in what is today Ecola State Park, there were at least two settlements including the Ecola Point and Indian Beach villages. (A third settlement, situated between these two, is suggested by archaeological materials at Bald Point, now largely eroded away, though there are few ethnographic or historical references to a village at this place.) Oral history shared by Nehalem Tillamook elders in the 1930s suggests that the Ecola Point village (apparently called Dehontatch, perhaps referencing "baskets") was a small community perched on the Ecola Point headland that specialized in hunting seals, sea lions, and other marine mammals in the offshore rocks below, "the sea lion rocks . . . where the olden Indians long ago used to go to spear the sea lions" (Harrington n.d.: 381). Elk hunting and shellfish gathering were also common pursuits. The village apparently consisted of many small houses, though the exact number cannot be ascertained due to landslides and erosion that have almost entirely washed away the site. Hand-holds were carved into the cliff face leading down to the beach below, though these too are no longer visible due to erosion. In a narrow gap at the southern base of Tillamook Head (Neaseu'su), the archaeological remains of the Indian Beach village sits largely below the modern park's parking lot and, though eroding at its margins, is still partially intact in spite of repeated impacts by road and, later, parking lot development. Little ethnographic information was reported for this site, which was largely abandoned by the time of Lewis and Clark's arrival, though it is clear that elk and marine mammal hunting and shellfish gathering were important to its inhabitants. At least one petroglyph, no longer visible, was reported on the adjacent beach (Deur 2008; Minor 1991; Harrington n.d.; Jacobs n.d.; Ross 1976). Near this village, on the slopes of Tillamook Head, were places used to gather white clay for purposes both ceremonial and ornamental. As Clark noted on January 7, 1806, while crossing from Seaside to Indian Beach, "*In the face this tremendeous precipice immediately below us, there is a Strater of white earth (which my guide informed me) the neighbouring indians use to paint themselves*" (in Moulton 1990).

The other sub-units of LEWI, while not necessarily occupying major village sites, sat very close to such villages and were part of those areas visited and used frequently by villagers living nearby. A short distance north of Sunset Beach was a large Clatsop village, Niak'iwanqi (meaning "where there is killing"), which sat where the former Neawanna Creek estuary pierced the dunes on its way to the sea. This site is now buried below the sands in what is today the Camp Rilea National Guard base, the Neawanna having turned its course southward in the 19th century. A short distance from the Salt Cairn site in Seaside, Oregon, was Nakut'at village, a sizeable community especially supported by salmon fishing, berry picking, and the hunting of land and marine mammals, whose Clatsop and Nehalem Tillamook residents befriended the

Figure 3.4 – Clatsop Chief Tostom, a nephew of Chief Coboway, who hosted Lewis and Clark in the winter of 1805-06. A signatory of the unratified 1851 Tansy Point treaty, which promised the Clatsop a reservation encompassing Point Adams, Tostom was the last leader to oversee life at the prominent village at that Point until being asked to vacate by Army Engineers beginning construction of Fort Stevens in the 1860s. His descendants and those of his immediate family, still reside on both sides of the Columbia. Photo courtesy National Park Service, Lewis and Clark National and State Historical Parks.

Corps of Discovery (Lyman 1900). Other villages sat a short distance north and south. On the north shore of the Columbia, not far west of the Dismal Nitch wayside, was Qailciak, apparently a small fishing community on the far eastern end of the Baker Bay village complex.

Linking these villages were trails. True, waterways were the principal sources of food and water, as well as the highways of the region's Native people, allowing for efficient transportation by canoe. Yet, trails linked most major villages, allowing for travel by foot, especially when inclement weather brought wind and waves to the coast. A trail is reported to have linked the Netul village near Fort Clatsop with Niak'iwanqi, roughly

approximating (but slightly north of) today's Fort-to-Sea trail route. In turn, this trail linked those villages to the villages of Seaside and points south. Trails linking the Seaside villages, the villages of Ecola State Park, and the village at the mouth of Ecola Creek (perhaps Necost) in Cannon Beach passed over the top of Tillamook Head, roughly approximating the present trail route managed there today by Oregon State Parks (Harrington n.d.). Members of the Corps of Discovery would make use of both trails in the course of their stay in the winter of 1805–06, as they traveled to and from the salt cairn as well as the Necost village at the mouth of Ecola Creek, seeking to barter for whale meat and blubber in January 1806. Other trails lined the shores of the Columbia, linking the settlements on the northern and southern sides of the river, respectively, while the Chinook forded between the Columbia at Baker Bay and the southernmost navigable reaches of Willapa Bay on a trail linking the two. In many places, and especially along the ocean, the beach served as a trail of importance. Networks of trails also linked many places in the interior—the upper Naselle to Deep River, the upper Youngs River to the Nehalem, and so on—ensuring that most major communities of the region could be reached by land, if not by water (Ray 1938; Dicken 1978).

Various lines of evidence make it clear that the population encountered by Lewis and Clark, though large and still culturally robust, was only a portion of what may have existed a few generations before. Diseases such as smallpox seem to have already found their way to the Columbia-Pacific region well before their arrival, and members of the Corps of Discovery remarked on a number of Native people with pock scars on their faces. These epidemics apparently arrived through direct contact with ships on the coast, but also through tribal trade networks linking the Northwest to the American interior, from the Spanish-controlled Southwest, the northern Great Plains, and beyond. Such diseases brought a two-stage shock to Native societies, killing many people during initial exposure, but also causing infertility among a number of survivors, so that the demographic effects of single epidemics echoed across generations (Boyd 1999). Moreover, the monumental subduction zone earthquake and tsunami that struck during the night in January 1700 is likely to have caused high mortality in some villages, a point suggested by tribal oral traditions up and down the coast (Losey 2007). The populations encountered by Lewis and Clark were therefore survivors of repeated disasters, who had maintained the integrity of their communities, economies, and culture in spite of repeated devastating shocks.

This had several specific consequences prior to the Corps of Discovery's visit, and certainly for decades thereafter (as will be discussed later in this document, in reference to the fur trade era). As the people of the region experienced episodic contractions in their population, survivors often regrouped with one another in certain villages. People from multiple villages came together in one place, perhaps contributing to such phenomena as Chinookan and Salishan people living in shared villages. Meanwhile, peripheral or minor villages were often largely abandoned, becoming temporary

resource encampments, for example, when they had been largely year-round villages in generations past. In cases where there were no survivors remaining in a village, these places were often given over to the dead, the grounds or even the houses being filled with the remains of former inhabitants (Jacobs n.d.). This appears to have been the fate of the village at Indian Beach, within today's Ecola State Park. By the time of Lewis and Clark's arrival, this village was abandoned and filled with burial canoes. As William Clark noted on January 8, 1806, "*I observed large Canoes of the neetest kind on the ground Some of which appeared nearly decayed others quit sound, I examoned those Canoes and found they were the repository of the dead*" (in Moulton 1990). Though this phenomenon is reported in ethnographic materials relating to the Columbia-Pacific region, the Indian Beach village was unique in being the focus of such a detailed written account, and was a harbinger of horrific events yet to come.

In light of this historical, ethnographic, and archaeological evidence summarized here, it is clear that every sub-unit of LEWI has some history of Native American use and occupation. There are Native American archaeological sites eligible for listing (many already listed) under National Register Criterion D, minimally in Middle Village/Station Camp, Cape Disappointment State Park, Ecola State Park, and Fort Stevens State Park associated with each of these large villages. In spite of extensive site disturbance, there are likely to be archaeological materials as yet unrecorded in the other sub-units as well. This is an archaeological question, however, and is beyond the scope of the current report. While many of these places continue to be of profound cultural and historical importance to tribes, they have also been reoccupied and redeveloped for more than a century and a half in some cases. For this reason, it is difficult to assess the potential eligibility of Traditional Cultural Properties (TCP) in LEWI, and further consultation with park-associated tribes would be required to clarify this point. Middle Village/Station Camp, for example, is of profound importance to modern Chinooks, but it is unclear whether the "integrity of condition" required as part of a TCP nomination would be sufficient. Cape Disappointment and Ecola State Park still possess certain undisturbed areas of cultural significance where one might "see the landscape as the ancestors saw it," and these may warrant consideration, but it is unclear whether the "integrity of relationship" consideration might be met in those cases. One place within the larger study area (but beyond the jurisdiction of LEWI) clearly meets TCP criteria: Saddle Mountain. Still revered by many tribal members today and visited by some for ceremonial purposes, this Oregon State Park may still warrant consideration as a TCP through consultation with the federally recognized and unrecognized tribes of the region.

4: The Unknown Coast: European Exploration and the Maritime Fur Trade in the Columbia-Pacific Region

Though the Columbia-Pacific region was a hub of Native American history and culture in the Pacific Northwest, this place was very peripheral to peoples from more distant corners of the globe. Spain, England, France, and other European nations had launched their exploration and occupation of the Americas on the far side of the continent some three centuries prior to Lewis and Clark, but they had made only slow progress to these far shores. Even as much of the world had been mapped by the beginning of the 18th century, the Northwest coast of North America remained *terra incognita,* an unknown land, to the peoples of Europe. Prior to the explorations of such figures as Bruno de Heceta and Captain James Cook, its geography was wrapped in mystery and speculation, and the Northwest remained one of the few blank spaces on world maps of the time. Yet national ambitions and growing markets for the luxuriant, dense fur of the sea otter would soon bring a wave of foreign explorers and traders to the region—English, Americans, Spanish, Russians, and others—transforming the region profoundly and irrevocably (Hayes 1999; Vaughan 1982; Pethick 1976; Wagner 1937).

A few outsiders did visit the Columbia-Pacific region prior to the period of exploration outlined here. Tantalizing accounts speculate on the travels of Sir Francis Drake and Juan de Fuca, who may have plied the coast in the late 1500s. Tribal oral traditions also hint of visitation by Asian explorers, and various lines of evidence suggest wrecks by Manila galleons and other ships along this coast long before Lewis and Clark's arrival (Ray Gardiner pers. comm. 2012; Deur and Thompson n.d.). Asian porcelains also are sometimes encountered archaeologically on the coast, some attributed to the Spanish, but others attributed to Asian ships that drifted crewless in currents from far across the Pacific (Lally 2008). Still, it was the European exploration of the 18th and early 19th centuries that triggered the colonial reoccupation of the Northwest and the dramatic transformation of its landscape; such developments as the Lewis and Clark Expedition, the founding of Astoria, and all that would follow are rooted somewhat in this early maritime history.

Thought the Columbia-Pacific shoreline was unknown and arguably unimagined to the peoples of Europe - a conspicuous blank spot on maps of the known world in the mid-18th century, the potentials offered by the North Pacific were of keen interest to that continent's expanding empires. Two vast empires had slowly advanced on the North Pacific from opposite directions: the Russian Empire, which had been slowly crossing eastward across Eurasia, and the Spanish Empire, with its sprawling holdings in the Americas from Mexico to the distant southern fringes of South America.

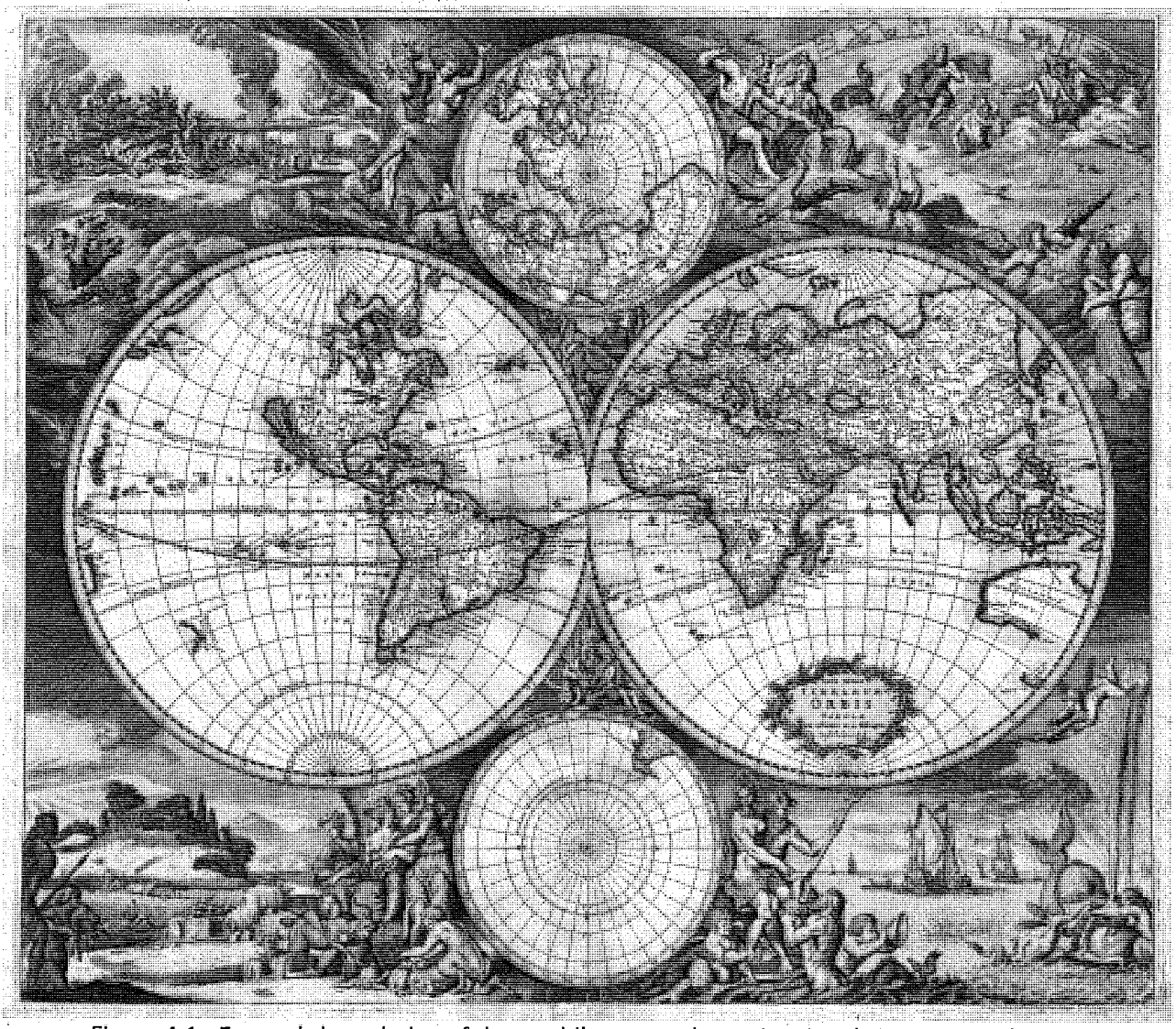


Figure 4.1 - Europe's knowledge of the world's geography, as it existed circa 1689. The Northwest Coast of North American remained a conspicuous gap in the known world. From Gerard Schagen, *Nova totius terrarum orbis tabula Amstelodami*, an Amsterdam world mapping project of the late 1600s. Image courtesy Wikimedia Commons.

While different in many respects, both empires were astonishingly vast and expansionist, ploddingly autocratic, and increasingly overextended, especially on their most remote Pacific Ocean frontiers. In the early 18th century, both began to converge on the North Pacific, claiming this region as their own. Sitting roughly 2000 miles from the outer reaches of both European domains, the Native peoples of the Columbia-Pacific region unwittingly sat roughly equidistant between two global empires, with advancing toward the region slowly from the northwest and the southeast.

Though Spanish colonial forces had found their way to the Pacific coast of Mexico by the 1500s, they had made relatively little progress northward in the years that followed. Their early encounters with the Pacific Northwest coast were so brief, fleeting, and poorly documented that they seem nearly mythical in the retelling. Spanish colonial claims to the Northwest coast relied heavily on accounts of a Greek sailor, Ioánnis Fokás, or Juan de Fuca, who sailed under the Spanish flag in 1592. Details were thin, but his journals suggested that de Fuca had entered a waterway somewhere on today's Pacific Northwest coast. This waterway, sometimes called the "Straits of Anian," was described as a possible Northwest Passage to the Atlantic coast or other interior waters. While some suggest that this was the Strait of Juan de Fuca between Washington state and Vancouver Island, others doubted that there was any real geographical basis for de Fuca's Northwest Passage. The allure of a short, fast passage between the Atlantic and the markets of Asia, however, would tantalize generations of explorers. The accounts of de Fuca were known to the Spanish explorer Sebastián Vizcaíno, who led an expedition up the southern California coast in 1602. One of the expedition's ships, the *Tres Reyes* under the command of Martin d'Aguilar, separated from the rest and apparently ventured as far north as present-day Oregon. Returning from this detour, d'Aguilar reported a major river near the 42nd parallel. On the basis of this account, European maps began to depict a "River of the West," sometimes alongside and sometimes as a portal to the mythical "Straits of Anian" and the Northwest Passage beyond (Pethick 1976).

In spite of these tantalizing glimpses of the coast, there were few major Spanish expeditions northward in the century and a half that followed. Those few sea voyages that extended north of southern California commonly produced only scurvy, supply shortages, and few detailed findings. The Spanish Empire was still eager to claim the entire west coast of North America as Spanish territory, based in part on the *Inter caetera,* a decree made by Pope Alexander VI that gave the New World to Spain, signed in 1493 only two months after Christopher Columbus' return from his first voyage. Yet, for roughly two centuries, the Spanish had been largely content to establish missions on its northern frontier in southern and central California and to leave the stormy, forbidding coast beyond Alta California as an unexplored Spanish possession. There were no reports of gold there, nor was there much cultivable land by the standards of Mediterranean agriculturalists, and little incentive to extend the colonial reach. For more than two centuries, Spanish maps showed de Fuca and d'Aguilar's two reported waterways as the only known geography of the region (Cook 1973).

Over the course of the 18th century, though, European interests in the North Pacific would change, transitioning in a few decades from a protracted period of distant, ambiguous speculation to a mad scramble undertaken to assert national interests and build commercial empires. Improvements in navigation and seamanship, especially involving sailing over huge distances, revolutionized sea travel and effectively placed the North Pacific within sailing range of several national entities, the British in

particular. Especially among the British, French, Spanish, and Russians, the goals of exploration were also intertwined with those of the European Enlightenment. Casting aside the lingering medieval torpor of European scholarship and the weight of religious orthodoxy, the Enlightenment movement prized evidence and data collection as the foundation of knowledge. So, too, the Enlightenment married the spirit of scientific discovery that swept 18th-century Europe with national dreams of empire-building, a movement that would later inspire Thomas Jefferson and shape his decision to launch the Corps of Discovery to western North America. Data collection was key to geographical understanding, and no empire could expand or be sustained without it. From almost every major European empire, then, explorers were sent to the far corners of the Earth—especially those without strong competing European claims—to map the landscape, but also to document flora, fauna, mineral resources, and Native cultures alike. This was done not only as a contribution to Western science but as a prelude to possible Western occupation. The objectives of Enlightenment-era explorers were unswervingly nationalist, territorial, and commercial, even as they gathered information that would be of lasting importance to Western scientific thought (Haycox et al. 1997).

In many respects it was the Russians who first brought Enlightenment-era exploration to the North Pacific. As the Spanish had found their way to southwestern North America, so too Russian exploration had found its way gradually across Siberia, edging toward the Northwest Coast from the distant northeast. Following furs, the Russian Empire had founded remote outposts in the Siberian Far East by the 1600s. Before the century was through, Russians and those who followed their advance into the North Pacific had come to recognize the unique potentials of sea otter fur. A sea otter pelt might contain 250,000 to a million hairs per square inch, allowing the otter to spend most of its life submerged in the cold waters of the North Pacific in the absence of blubber or other special protection. Their coats were found to be unimaginably dense, silky, and warm, giving them a kind of unparalleled status among fur bearers sought by the expanding trade empires of Europe (Vaughan 1982).

By the early 1700s, under the leadership of the brilliant and expansionist Peter the Great, Russia was beginning to more thoroughly explore and occupy the Russian Pacific coast, lured in no small part by the prospect of cornering the fur markets of Europe and Asia. Sea otters abounded in the cold waters of eastern Russia, along Sakhalin and the Kuril Islands, as well as the Kamchatka Peninsula. Their dense, dark coats fetched astonishing prices when they could, with some difficulty, be delivered to Asian and European markets. The sea otter fur was a tremendous sensation in China, particularly, becoming emblematic of high status and increasingly being integrated into the dress of Chinese elites as hats, capes, and as the furry fringe of silk robes and other clothing. By the late 1720s, sea otter hunting posts were well established in the Kuril Islands, and the Russians were eager to establish an expanded claim on the North Pacific. Under the command of Danish explorer and Russian Navy officer Vitus Bering, Russian

expeditions explored the coast of Kamchatka, and what is today the coast of Alaska, in the course of two voyages (1725–30 and 1738–41). Though Bering did not venture as far south as the Columbia-Pacific region, his explorations set the stage for Russian occupation of Alaska and helped them bolster claims to the entire region. The expedition maps and the place names assigned to Alaskan topographic features gave the Russians a foundation for territorial advancement. The naturalist from their expedition, Georg Steller, described some of the plant and animal species for the benefit of Western science, lending his name to such common Columbia-Pacific denizens as Steller's jay and Steller's sea lion, among others. The sea otter pelts brought back from these expeditions helped launch interest in the development of what, in time, would become a robust Russian–American fur trade (Tikhmenev 1978; Fisher 1977).

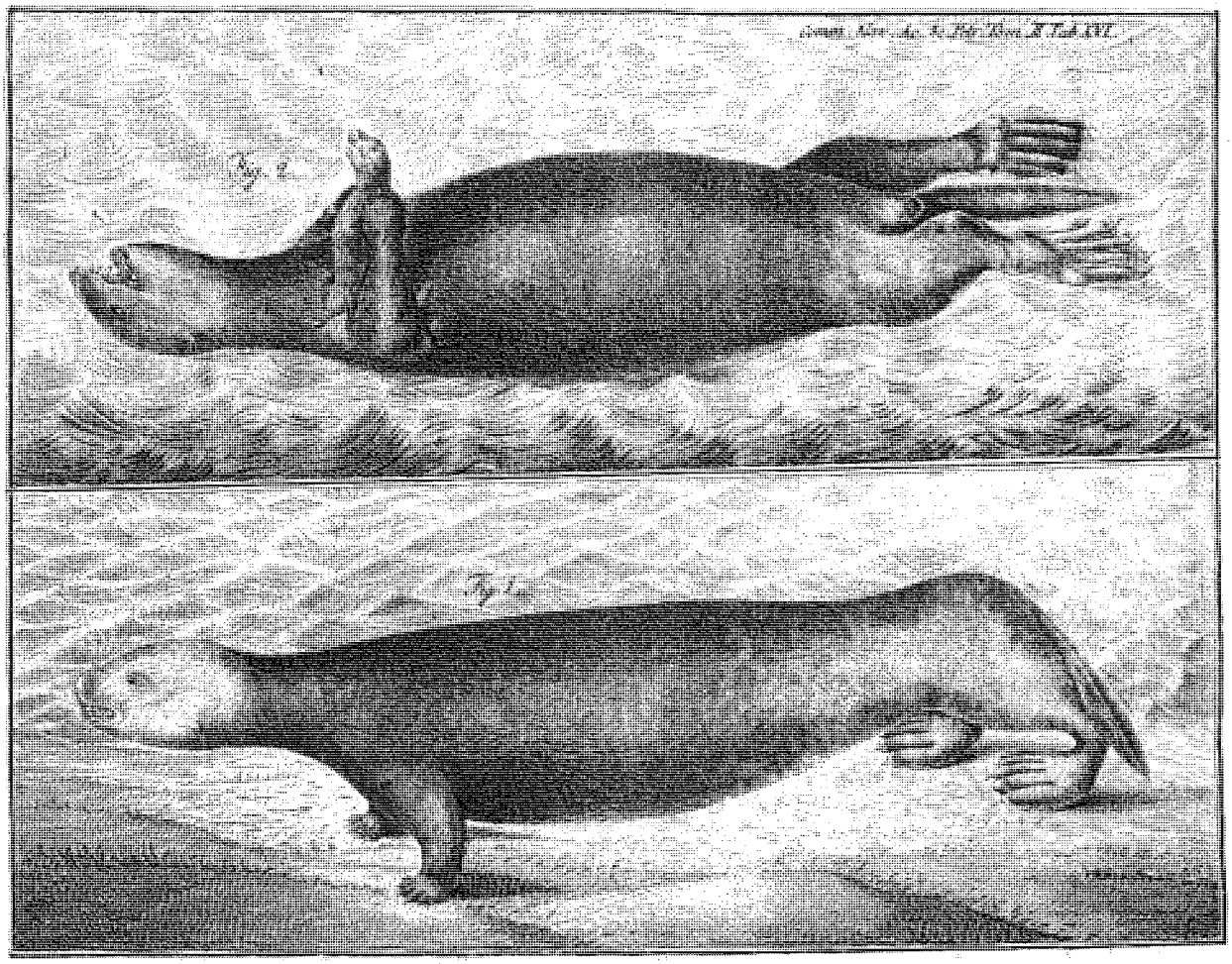


Figure 4.2 – One of the earliest (and least flattering) images of the sea otter (*Enhytra lutris*) within Western scientific writings – by Georg Steller, based on observations during the voyages of Vitus Bering in the 1730s. From Georg Wilhelm Stellero *1751. De bestiis marinis.[The Beasts of the Sea] Novi Commentarii Academiae Scientiarum Imperialis Petropolitanae. 2: 289-398. Image courtesy Wikimedia Commons.*

News of the Russians' movement into North American was particularly alarming to the Spanish Empire. Spain's growing awareness of their strategic vulnerabilities on the North Pacific prompted the construction of a large and centralized naval station at San Blas, a short distance from Puerto Vallarta, Mexico, in 1768. Though more than 2000 miles from the mouth of the Columbia, this naval station would have tremendous implications for the Native residents and the larger history of the Columbia-Pacific region. From the San Blas station, the Spanish launched a series of expeditions along the Northwest coast, asserting their national claims and interests in unprecedented ways. In 1774, explorer Juan Perez sailed northward on the *Santiago*, making the first of what would be many Spanish expeditions to the region. Perez passed the Columbia-Pacific region but made little mention of it. However, traveling to what is today the northern British Columbia coast, the Perez expedition met with the Haida, trading for pelts and other goods in the first well-documented encounter between European peoples and Northwest coast tribes. Perez returned to San Blas, where his commanders and viceroy celebrated the expedition's success in extending the Spanish reach to the lands and peoples of the distant northern coast, while also celebrating the apparent absence of Russians on those shores.

A year after Perez's voyage, the San Blas station outfitted the *Santiago* for a second Northwest coast expedition, under the command of Spanish Basque explorer Bruno de Heceta. Accompanying Heceta was the *Santiago*, under the command of Juan Francisco de Bodega y Quadra. Sailing northward, Heceta traveled along the Oregon coast, which still bears place names such as Heceta Head to mark this journey. In August 1775, Heceta anchored off the mouth of the Columbia. The geography of the Columbia-Pacific region, with its rugged mountains and sediment-clogged river mouth, defied the geographical conventions known to Heceta, as they would defy the imaginations of other explorers who followed, being seemingly incompatible with the mighty "River of the West" described by d'Aguilar more than 170 years before. Questioning whether he might be at the mouth of a substantial river, Heceta examined the sandspits, shoals, and impenetrable river bar. Deciding that this could not possibly be a vast river, the expedition mapped the Columbia River estuary as an inconsequential bay called "La Asunción," marking the feast day of the Assumption, which coincided with the dates of their visit. To Cape Disappointment on the northern side of this imagined bay he applied the name "Cabo San Roque" and to Point Adams on it southern side, now within Fort Stevens State Park, he applied the name "Cabo Frondoso." The crew then turned their attention to the rugged high mountains along the coast, from roughly Neahkanie Mountain to Tillamook Head. On August 18, the feast day of Santa Clara de Montefalco, they designated this small range as "Sierra de Montefalcon," a name that persists today in the name of Cape Falcon (McArthur 1992: 40). (Like Cape Disappointment, the mountains of this range, especially Tillamook Head proper, proved to be important navigational landmarks to many explorers who would follow,

though very few indeed would set foot on these rugged promontories until the Corps of Discovery.) For a brief time, Spain had reinforced its claims to the Northwest, based on the thinnest of ties and an assortment of inexact maps and place names.

Yet, in 1776, as the Americans were declaring independence from Britain and Heceta was returning home with his vague accounts of the Columbia-Pacific shoreline, the Russians were mounting their occupation of northwestern North America. In that year, Kamchatka's fur trading posts bustled with traffic in sea otter pelts, and enterprising Russian fur traders lobbied for new posts in Alaska. By 1783, with the backing of wealthy Russian merchants, Grigory Shelikov established a fur trading post on Kodiak Island. Naming the bay after his ship, he established the first permanent Russian settlement in Alaska's Three Saints Bay, constructing a permanent European settlement on the Northwest coast some 28 years before the founding of Astoria. As he returned to Kamchatka with his first shipment of sea otter pelts from Kodiak, Shelikov petitioned the Russian crown for a corporation that could develop and monopolize the sea otter trade of the Northwest coast. His petition was approved, allowing Shelikov to establish a company that would in 1799 become the Russian-American Company, the corporation that developed Alaska's fur trade and defined the economic and social landscape of Alaska's Russian period. Although Kodiak Island was situated very far from Russian or even Asian markets, Shelikov's move was extraordinarily well-timed. Almost everywhere the sea otter was hunted, its populations were almost obliterated in time, and the Russian waters were no exception. As the Russians began to extirpate commercially viable sea otter population from the Kuril Islands and Kamchatka Peninsula through the 1780s and 1790s, the entire Russian Pacific fur trade began a move into Alaskan waters. They built small forts that would support Shelikov's operations and transferred materials and men already well-seasoned in Russia's sea otter trade, gradually moving eastward and southward into the waters of the Northwest coast. Native labor, especially the Aleuts of the Aleutian Islands and the Koniags of Kodiak Island were conscripted, often with brute force or the threat of it, to become the principal hunters supporting these new operations.

All of the activity in the North Pacific by the Russians and Spanish had drawn the attention of the powerful seafaring nations of Europe, France and England, in particular. Even as they lacked seaside colonial footholds on the Pacific comparable to those of Russia and Spain, both were growing and relatively nimble empires, eager to establish their own presence upon the vast and largely uncharted Pacific region. Ambitiously expansionist, England found itself more ready than ever before to enter the scramble for territorial claims and fur trade wealth on the North Pacific. With the significant involvement of Captain James Cook, the British Navy had made huge technological strides that allowed them to sail over vast distances, learning how to avoid scurvy, for example, and developing such instruments as the chronometer, a precise clock that allowed mariners to establish their longitude with pinpoint accuracy. With these and other tools at their disposal, a cartographic revolution was taking hold

in British exploration, allowing for mapping with unprecedented precision and supporting British claims of discovery and future navigation efforts alike. This revolution was advanced in many respects by Cook and significantly honed by his former midshipman, Captain George Vancouver, who would later command some of the most historically significant early mapping expeditions in the Pacific Northwest.

As British attention turned to the Pacific, the crown eagerly recruited and outfitted Cook, already a celebrated veteran of two prior global journeys of exploration. The Northwest coast of North America was one of several places around the Pacific to be visited in the course of this journey, which would also serve to support British claims to Australia and New Zealand. Arriving on the western coast of North America in 1778, Cook operated under formal instructions to use the maps of Drake, the Spanish, and others to determine whether a fabled Northwest Passage might exist, thus providing a sea route between the European nations of the Atlantic and the Asian nations of the Pacific. However, this aspect of the mission was arguably secondary; it is clear that, through Cook's third voyage, the British hoped to usurp thin Spanish (and perhaps Russian) claims to the Northwest coast and, through the process of discovery, stake claims for a British foothold in this newly contested land.

Though a skilled navigator, Cook and his crew missed the Columbia River entirely while traveling along the coast of today's Oregon and Washington. Instead, Cook made landfall on Nootka Sound, on the west coast of what is today Vancouver Island. There, Cook and his crew found the Mowachat Nuu-chah-nulth (or Nootka) living at the village of Yuquot to be eager traders in furs, especially those of the sea otter. Indeed, the Nuu-chah-nulth were accomplished traders, having honed these skills in part during their exchanges with their longstanding trade partners, the Chinook and Clatsop, at the mouth of the Columbia River. As Cook observed upon their arrival at Nootka,

A great many canoes filled with the Natives were about the ships all day, and a trade commenced betwixt us and them, which was carried on with the Strictest honisty on boath sides. Their articles were the Skins of various animals, such as Bears, Wolfs, Foxes, Dear, Rackoons, Polecats, Martins and in particular the Sea Beaver, the same as is found on the coast of Kamtchatka (Cook, in Cook and King 1784: 27).

Satisfied with his experiences with Yuquot's inhabitants, Cook referred to the village as "Friendly Cove" in his journals, while designating Nootka Sound "King George's Sound." His writings would so fix this place in the minds of Europeans that Nootka Sound would become the geographical locus of European maritime exploration and fur trade. While directly linked to the lower Columbia during the period (both Native and non-Native traders passed between Nootka and the lower Columbia almost constantly), Nootka Sound would eclipse the Columbia-Pacific region's early importance in most respects. Beyond Nootka, Cook and his crew entered the Bering Strait and encountered solid sea ice off of Alaska's west coast; seeing no evidence of a Northwest Passage,

Cook and his crew turned south, landing in Hawaii. Here, in a conflict with Native Hawaiians on the western shores of the big island, Cook was killed. Resolving to return home through the Indian Ocean, his crew sailed on to China, where they found that the sea otter pelts from Nootka Sound commanded unimaginably high prices.

When the ships returned to England, the journals from Cook's third and final voyage were promptly published, spreading news of Cook's demise and of peoples and lands around the Pacific, but also of the tremendous commercial opportunities of trade in sea otter furs. In the published edition of Cook's journals, his second-in-command, James King, provided prospective traders with fine-grained details about Asian markets for sea otter pelts. So, too, Dr. James Douglas wrote a preface to Cook's journals, calling for the British and other empires to use exploration, mapping, and the other tools of the age to build European commercial dominance on the North Pacific, based in no small part on the trade in furs: "*Every nation that sends a ship to sea will partake of the benefit; but Great Britain herself, whose commerce is boundless, must take the lead in reaping the full advantage of her own discoveries*" (in Cook and King 1784: xliv).

By no later than 1785, a steady procession of English ships was en route to the Northwest coast, most using Nootka Sound as a base of operations. There, the British maintained a lively trade with Native hunters encountered along the outer coast, providing these peoples with metal, tools, and other goods that would revolutionize those societies and rearrange traditional social relationships in myriad ways. At Nootka, Chief Maquinna served as a highly influential gatekeeper to area tribes in a manner that would be recapitulated on the lower Columbia by Concomly one or two generations later, becoming one of the wealthiest chiefs on the coast. For a time, even Maquinna sought to build his own ship to travel to China, to cut out the European middlemen, but, lacking support from the British and Spanish, he did not succeed.

It was in this context that British explorer John Meares brazenly sought to capitalize on the sea otter wealth of the region. Inspired by the Cook journals, Meares successfully lobbied London investors to help him supply and launch two British ships christened the *Nootka* and the *Sea-otter*, in order to seek furs in Alaska. After a successful visit to the Northwest coast, Meares sailed to Asia to sell his cargo. While there, he secured a lucrative commission with investors of the British East Indian Company to return to the Northwest in partnership with that company, and in 1787 he departed in the command of a ship called the *Felice Adventurer*. In May 1788, Meares sailed to Nootka Sound and arranged with Chief Maquinna to build a fort there in support of British trade. During Meares' voyage, he made landfall both north and south of the Columbia River, but did not detect the great river itself. Meares, like others before him, entirely missed the mouth of the Columbia, passing in July 1788 and, with remarkable confidence, interpreting the estuary as a small and isolated bay. In his disappointment at not finding the river, he recorded the name of the bay as "Cape Disappointment" and the

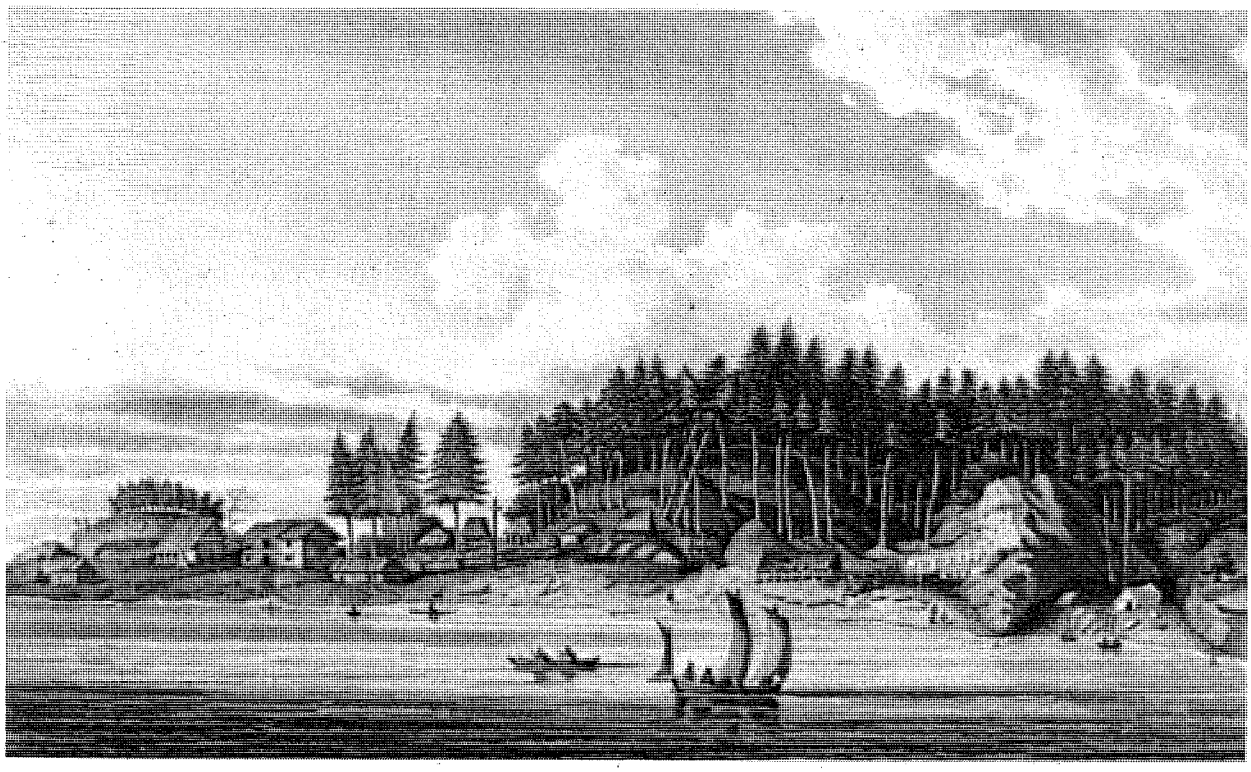


Figure 4.3 – Nootka Cove, as observed by George Vancouver in 1792, on the west coast of what is today Vancouver Island. By this time, both Spanish and British explorers had established outposts on this cove alongside the resident Nuu-chah-nulth, and American ships were a growing presence. The cove served as a cornerstone of the early maritime fur trade and most of the ships involved in the early exploration and trade at the mouth of the Columbia had been anchored at Nootka for part of their journeys. From Vancouver (1801).

Columbia estuary, which he only perceived at a distance, as "Deception Bay." As Meares reported in his journals,

After we had rounded the promontory, a large bay, as we had imagined, opened to our view, that bore a very promising appearance, and into which we steered with every encouraging expectation. The high land that formed the boundaries of the bay was at a great distance, and a flat level country occupied the intervening space. . . . As we steered in, the water shoaled to nine, eight, and seven fathoms, when breakers were seen from the deck, right ahead, and from the masthead, they were observed to extend across the bay; we therefore hauled out, and directed our course to the opposite shore, to see if there was any channel, or if we could discover any port. The name of Cape Disappointment was given to the promontory and the bay obtained the title of Deception Bay. . . . We can now with safety assert that there is no such river as that of St. Roc exists, as laid down in the Spanish charts. . . . We now reached the opposite side of the bay, where disappointment

continued to accompany us; and being almost certain that we should obtain no place of shelter for the ship, we bore up for a distant headland [probably Tillamook Head] keeping our course within two miles of the shore (Meares 1791: 154–55).

Though Meares did explore nearby Willapa and Tillamook Bays, and traded for a few furs with Native residents clearly familiar with such a routine, he left little in his wake but enduring place names, reflecting his misunderstanding of the Columbia's unique geography.[6]

The British were not alone in their response to the Cook journals. The French, too, reviewing accounts of Cook's voyages, were eager to participate in the exploration and the assertion of territorial claims along the Northwest coast. King Louis XVI hastily commissioned a vast, if somewhat secretive, expedition to the North Pacific in 1785, under the command of Jean-François de Galaup, the Count of Lapérouse. Lapérouse traveled to Alaska, where he and his crew gathered extensive information on the coast from his base on Lituya Bay. Upon crossing the mouth of that bay to return home and report their findings, the expedition lost two longboats and 21 members of their crew, with the survivors promptly retreating to Spanish territories in California. Though Lapérouse gave the French king some basis for territorial claims on the North Pacific, the French Revolution brought an effective end to these explorations, turning national attention inward and scuttling the grand vision of the French royalty for a fur trade empire on the Pacific (Inglis 1997).

Agitated by both British and French exploration, the Spanish sent a series of expeditions to further document and assert claims to the North Pacific coast under some of the most skilled commanders in the Spanish Navy: Ignacio de Arteaga and Bodega y Quadra (1779, 1785), Esteban Jose Martinez and Gonzalo Lopez de Haro (1788), Salvador Fidalgo and Manuel Quimper (1790), Francisco de Eliza and Alejandro Malaspina (1791), and Dionisio Galiano and Cayetano Valde y Flores (1792), among others. Most left behind place names, including many features named for themselves, that are still used on the coast today. Boldly, during several of these voyages, the Spanish repeatedly ventured into Russian-occupied Alaska, seeking to reassert claims to the region and undermine Russian fur trade monopolies by instigating their own trade with Native peoples. In 1790, the Spanish also attempted to build a permanent base on Nootka Sound as a base of operations on the Northwest coast, supplied and supported as a distant outpost of the San Blas naval station in Mexico. There, they sought to portray themselves to the rising tide of visiting ships—British, Russian, and even Swedish and Portuguese—as the rightful colonial authorities in the Northwest. Moreover, the Spanish brought their own naturalists to begin documenting flora, fauna, and Native peoples (Moziño 1991; Pethick 1980). Direct conflicts with the British over claims to the coast erupted at Nootka. The Spanish began to try to arrest British traders there, including John Meares' business partner, James Cornett, and the two nations almost went to war over the diplomatic standoff that followed. George Vancouver and Bodega

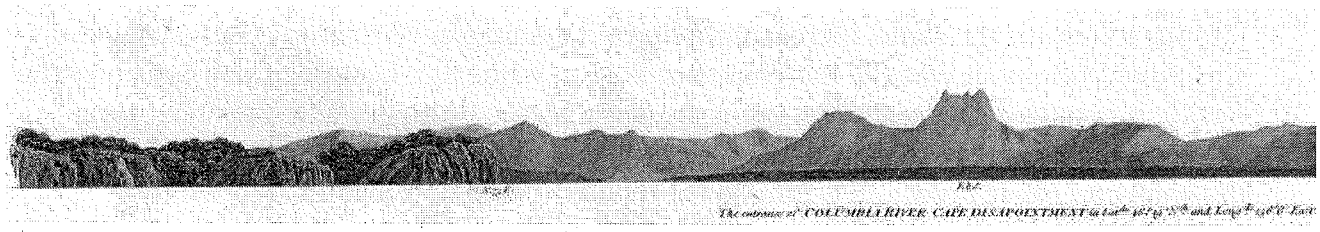


Figure 4.4 – A partial view of the mouth of the Columbia River from the sea, as observed by Captain George Vancouver and his crew in the summer of 1792. Cape Disappointment's rocky cliffs are clearly visible to the left, while the low, forested dunes of Point Adams can be seen on the right, with Saddle Mountain looming in the background. Excluded from this image are portions of the shoreline shown in the original, extending along the dunes past Sunset Beach to Tillamook Head. Unaccustomed to such mountainous settings at the outlets of major rivers, and with sediment often choking the bar, many early European navigators noted this coastline and proceeded on without noting the presence of the Columbia River – the largest river to enter the Pacific in the Americas. Image from George Vancouver 1798, *Views of Parts of the Coast of North West America*. London: G.G, & J. Robinson. Image courtesy Cartography Associates, David Rumsey Map Collection.

y Quadra were dispatched to negotiate a settlement, resulting in the Nootka Sound Convention of 1790, the first of three conventions signed at Nootka agreeing to shared areas of interests along the coast by Spain and England and to the ultimate abandonment of both nations' Nootka Sound holdings. While these conventions kept the peace, the British, in particular, continued to survey the coast and work to reinforce British claims. Perhaps ironically, it was George Vancouver who was enlisted to oversee the most detailed survey efforts of the coast while in command of the *Discovery* and *Chatham* (Tovell 2008). As those who had passed before him, Vancouver applied myriad place names to the landscape, while his on-board naturalists, most notably Archibald Menzies, his name memorialized in the scientific name for Douglas fir (*Pseudotsuga menziesii*), chronicled the flora and fauna encountered during this expedition.

Soon enough, Americans were embarking on their own journeys of trade and exploration along the Northwest coast. The signing of the Treaty of Paris in 1783 brought the Revolutionary War to an end. An independent class of American merchants emerged on the scene, eager to build their own small empires independent of the British Crown and its chartered corporations. In this effort, they were aided by an abundance of skilled but underemployed mariners, many just retired from naval service at the conclusion of the war or let go from British commercial enterprises involved with the triangular trade in slaves, sugar, cotton, tobacco, liquor, textiles, and other goods between Africa, Europe, and the Americas. The fledgling United States, too, was eager to promote exploration in discovery, as the nation sought to establish itself on the international stage. With the prospect of fur wealth, American merchants arrived on the coast with an entrepreneurial tenacity that rivaled the British and prepared them well for the coast's complex laissez faire trade, involving multiple Native and European

nations vying for the same, increasingly limited resources. With ample industrial and shipping capacity, it was the merchants of Boston who were best positioned to enter the Pacific fur trade. Among those merchants was Charles Bulfinch, who began reading Cook's journals, released only a year after the end of the Revolutionary War. By 1787, Bulfinch and other investors arranged for the launching of two ships that would embark on one of the earliest successful American fur trading journeys to the Pacific coast. One of these ships was the sloop *Washington* (or *Lady Washington*) commanded by Captain Robert Gray of Boston, a veteran of the triangular trade and the Revolutionary War (Howay 1941).

Gray oversaw a number of successful trade voyages along the Pacific coast in the years ahead, but found the traffic in some well-known parts of the coast to be problematic. Certain areas, Nootka foremost among them, were crowded with European ships following in the path of Cook. In these places, Native traders could sometimes monopolize the supply while European buyers bid prices ever higher; moreover, on such parts of the coast, local sea otter populations were beginning to dwindle, shifting attention to beaver and other less lucrative furs. With the support of Boston investors, Gray was able to add ships to his fleet, including the *Columbia Rediviva* ("America reborn," but sometimes translated as "Columbus reborn"), reputed to be the first American ship to have circumnavigated the globe, which was sailed by Robert Haswell, his second in command. Sailing in command of the *Lady Washington* and *Columbia Rediviva* into the early 1790s, Gray was eager to find less-known and less-exploited parts of the coast. Establishing their own fort on Clayoquot Sound (on Vancouver Island many miles south of Nootka) late in 1791, Gray and his crew resolved to carve out new trading areas on the North Pacific coast, embarking on a more detailed investigation of hitherto untapped trading places and partners. The following spring, Gray traveled south. In May 1792, sighting the shoals that had frustrated mariners from d'Aguilar to Meares, but also open channels leading into the mouth of the Columbia River, Gray successfully crossed into the Columbia estuary aboard the *Columbia Rediviva*, becoming the first non-Native person confirmed to have entered the Columbia estuary. It had taken exactly 300 years from Columbus' first voyage for a Euro-American, his ship bearing Columbus' name, to cross into the mouth of the Columbia. As reported in Gray's journal, the land along the river was inhabited by "vast numbers of natives," who were eager to trade:

May 11th – At eight, a.m., being a little to wind-ward of the entrance of the Harbor, bore away, and run in east-north-east between the breakers, having from five to seven fathoms of water. When we were over the bar, we found this to be a large river of fresh water, up which we steered. Many canoes came along-side… a village on the north side of the river west by north, distant three quarters of a mile. Vast numbers of natives came along-side; people employed in pumping the salt water out of our water-casks, in order to fill with fresh, while the ship floated in. So ends (Gray 1941: 435).

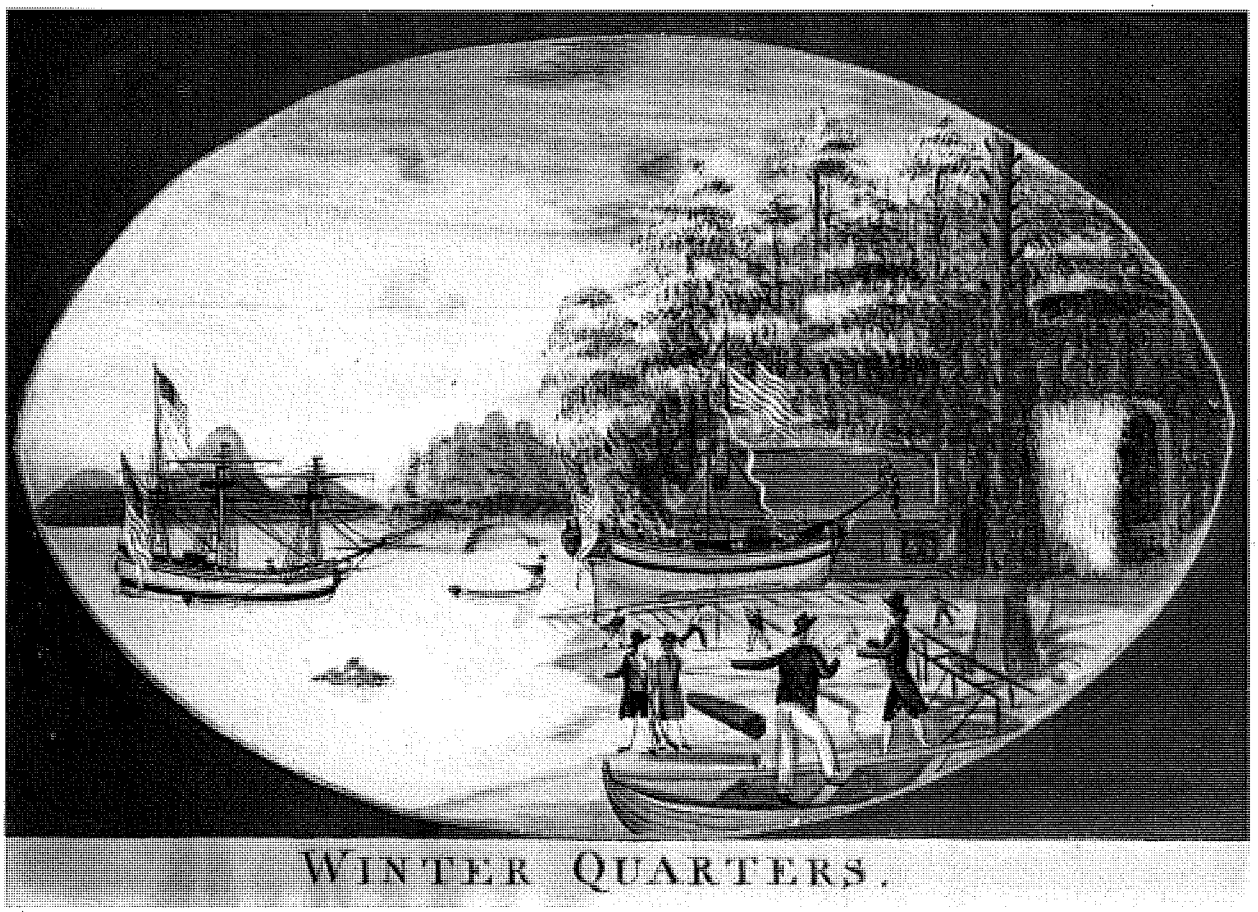


Figure 4.5 – A painting by crew member George Davidson of "Fort Defiance," erected by Captain Robert Gray and the crew of the *Columbia Rediviva* on Clayoquot Sound (Vancouver Island) in the winter of 1791-1792, shortly before their first arrival on the Columbia River. The *Columbia Rediviva* sits offshore, while the crew constructs a new ship, the *Adventure*, on the beach. Photo courtesy Wikimedia Commons.

Gray anchored near the vast Chinook village, so as to trade and find shelter from the waves. While his anchorage is conventionally designated as "Chinook Point" it is clear that this anchorage may have sat somewhat upstream from the place now bearing this name, by Middle Village. (The location of "Chinook Point" has changed; until the late 19th century, the term was applied to the general point of land on which Middle Village sat, but was later applied to the promontory on which Fort Columbia now sits.) By May 13, finding that the ship was still exposed to the current, wind, and waves, the crew sailed upriver to the waterway now called Gray's Bay. On May 16, the *Columbia Rediviva* returned downstream, anchoring very close to Megler, in or very near the cove where the NPS Dismal Nitch unit is located today. Each day of this journey, Gray noted "many natives alongside," always curious and willing to trade furs; on some days he reported "many natives from different tribes" as well as a fair amount of "rainy, dirty weather."

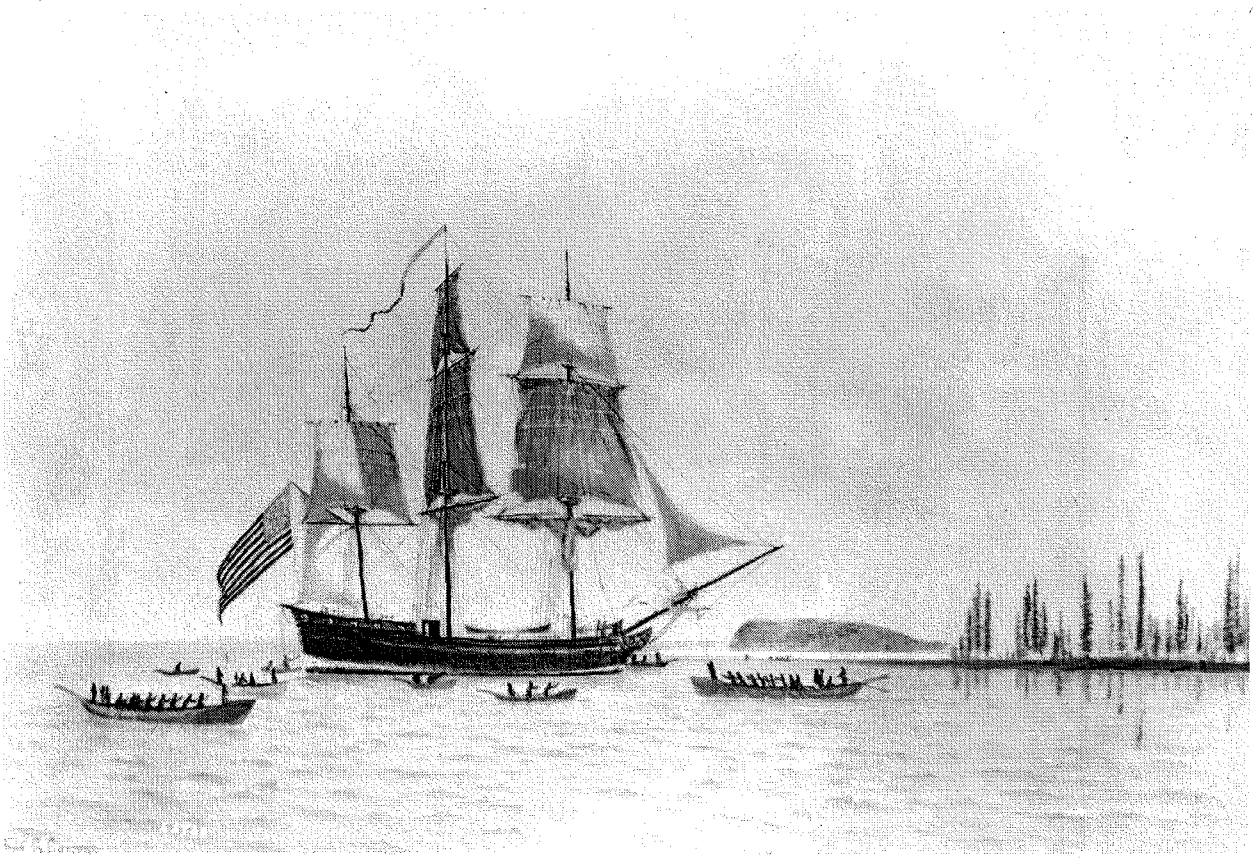


Figure 4.6 – "Discovery of the Columbia River by Robert Gray," a painting by Fred Cozzens. As was true of most ships of the late 18th and early 19th century, when confronting the complex and dangerous bar of the Columbia River, Gray found it easiest to enter the river along its north shore, finding shelter in the lee of Cape Disappointment (in the background) and then proceeding to Chinook Point, where ship-borne encounters with the Chinook people of Middle Village (today's Station Camp) would become commonplace. Image courtesy Washington State Historical Society.

On May 18, the crew attempted to depart the river but found the bar menacing and anchored once again, very near Fort Columbia and Middle Village. The following day, "Captain Gray gave this river the name of *Columbia's River*, and the north side of the entrance *Cape Hancock*, the south, *Adam's Point*" (Gray 1941: 437). On the 20th, the *Columbia Rediviva* returned to sea, having made no lasting marks on the landscape during roughly a week in the lower Columbia River region, but changing its history forever. The Native people of the river also have their written record of this visit, which was understood to be "an omen of the coming of a new epoch" (in Miller 1958: 28; Boas 1894).

Encountering the Spanish at Nootka later that summer, Gray related his discoveries, providing both an account of the lower Columbia and his own rough charts of its

mouth. In turn, Bodega y Quadra shared Gray's findings with Vancouver. Vancouver, who had traveled the coastline offshore from the Columbia earlier that year, was reluctant to take Gray's account at face value, nor to allow an American merchant to make uncontested claims to such a prominent landmark. In late October 1792, Vancouver returned to the river's mouth. Finding the bar too perilous for the *Discovery*, he sent across the smaller *Chatham*, under the command of Lieutenant William Robert Broughton, to explore the river. The *Chatham* came across the bar with difficulty. Like Gray before, and many mariners who would follow them, Broughton followed the north shore, the most readily navigated part of the estuary at the time, visiting all of the prominent northern shore landmarks now within Lewis and Clark National and State Historical Parks. Initially taking refuge on the protected eastern side of Cape Disappointment, the *Chatham* finally anchored off what was termed "Village Point" (apparently Chinook Point, now known as Middle Village), which was largely unoccupied in that season, many residents then at villages on Willapa Bay and beyond. Yet the river's mouth was not vacant. Indeed, the crew of the *Chatham* was astonished to find themselves in the presence of large numbers of skilled traders, who seemed to already understand the value of sea otter pelts to visiting mariners:

One very large Canoe with about five & twenty Indians in her (the second we saw since we entered the River) came along side and brought some Salmon which we eagerly bought of them on reasonable terms; they also brought two or 3 Otter Skins for sale and seem'd to know the value of them very well (Bell 1932: 39).

After some initial trading, Broughton determined to survey the mouth of the river, recording some of the first detailed written accounts of places now within LEWI.[7]

Returning to the *Chatham*, Broughton then anchored that ship somewhere in the vicinity of the waters offshore from the NPS Dismal Nitch wayside and ventured upstream in the ship's small cutter, mapping the shoreline and trading with Chinookan people who greeted and aided Broughton's party as they traveled almost 100 miles upstream. The expedition proceeded east of modern Portland and within sight of the Columbia Gorge. Returning to the *Chatham* on November 4, the crew departed a few days later, rejoining Vancouver in San Francisco Bay with a full account of their observations (Mockford 2005). By 1794, Vancouver's accounts of the mouth of the Columbia were gaining the wide attention of British traders. In that year, Vancouver would also officially declare that the existence of the Northwest Passage had been disproven, ending roughly 200 years of speculation by European explorers. Both Gray's and Vancouver's accounts would be used by the Americans and the British, respectively, in the years that followed to assert national claims to the lower Columbia and to the entire Northwestern region.

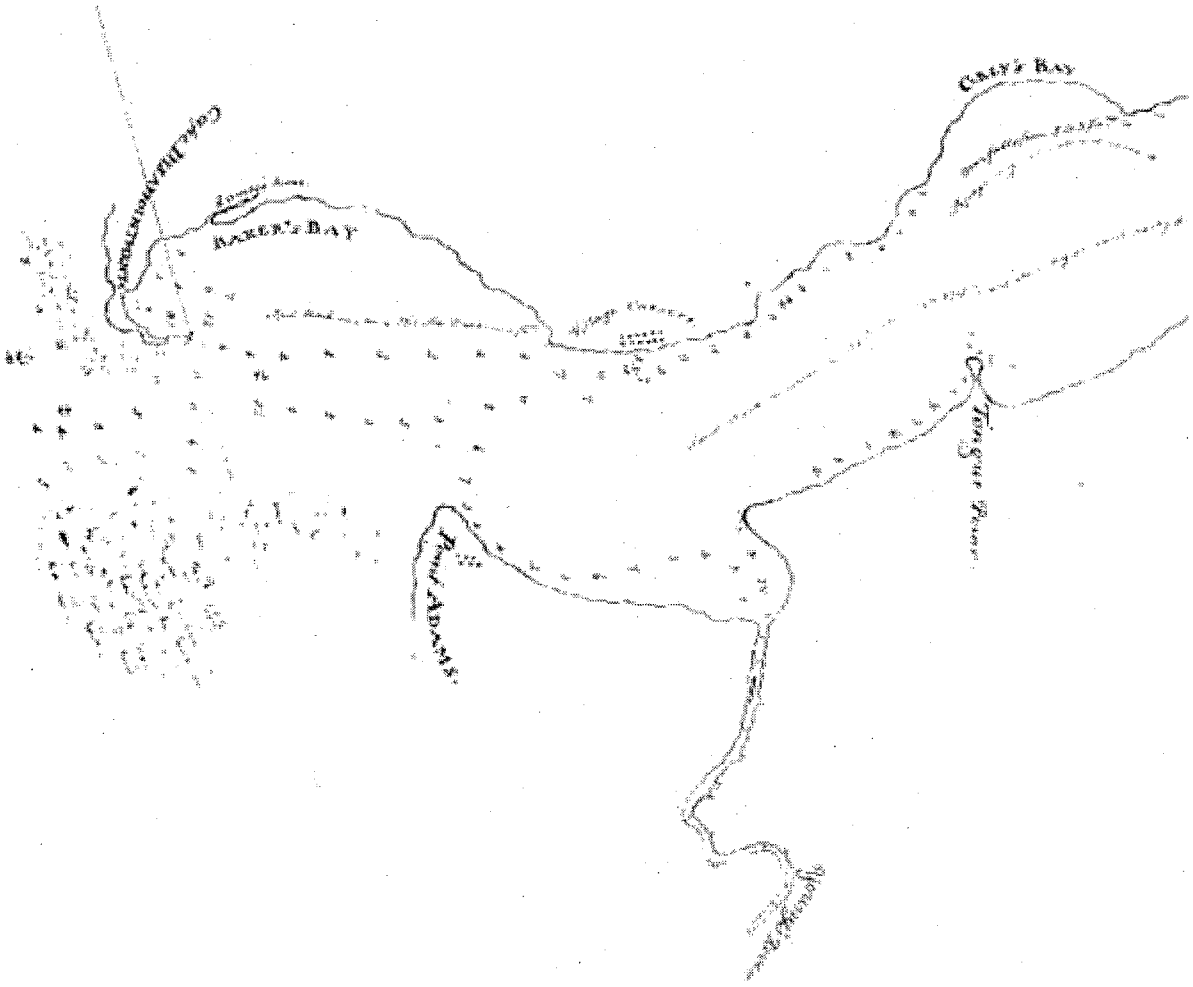


Figure 4.7 - Broughton's sketch map of the entry of the Columbia, showing the large Chinook settlement at Middle Village as well as the Clatsop settlement at Point Adams. From Vancouver 1801.

Once Gray's and Vancouver's observations were reported to the Anglophone world through their journal and press accounts, the Columbia River estuary soon became a popular stopover point for merchant ships plying the coast in search of furs. Much less crowded or contested than Nootka, and as yet much less overhunted, too, the river quickly became a thriving center of trade, primarily for American and British ships. Most did not treat the Columbia as their final or sole destination, but as one of several places within a circuit of tribal entrepots visited along the coast before departing across the Pacific to Asia or back to the Atlantic with holds full of furs. So began the era of the maritime-based fur trade in the Columbia-Pacific region, a period lasting a mere 20 years, from 1792 until roughly 1812, by which time Astoria was beginning to hold a centralized role in the Columbia-Pacific fur trade. Though the exact number of ships that visited the Columbia will always be conjectural, it is clear that the number

escalated with time into the early decades of the 1800s. By 1795, Charles Bishop reported that the Chinooks at the mouth of the Columbia apparently had a system of alerting one-another to the arrival of traders: "*at Sunset a Gun was fired by desire of some of the Natives to inform their bretheren up the River of the Arrival of the Ship*" (Bishop 1967: 56). (British ships were numerous, while no fewer than fifty separate American trade expeditions embarked for the coast between Gray's and Vancouver's voyages of 1792 and the Corps of Discovery's stay in the winter of 1805–06 (and that estimate certainly falls short of the actual figure). Almost all of the American ships in the trade were from Boston, so that in Chinuk wawa, the term for American became "Boston," to distinguish these traders from the "King George" men. Lewis and Clark found that the Chinook and Clatsop could recount the names of many of these ships and describe their cargoes and crews: "*they possess good memories and have repeeted to us the names capasities of the Vessels &c of maney traders and others who have visited the mouth of this river*" (Clark, in Moulton 1990: 190). Indeed, the Lewis and Clark journals mention no less than thirteen ship captains who were reported to be not just one-time visitors but regular traders on the lower Columbia by that time (Lang 2008; Moulton 1990; Swan 1857).

Very little hunting was ever attempted by these visiting fur traders, so far as can be discerned from the written record. Instead, they obtained much of their furs through trade with the Chinooks along the readily navigable northern bank of the river, in particular, but also the Clatsop on the southern bank. These peoples obtained sea otters by hunting the rocky shorelines in places such as Cape Disappointment and Tillamook Head, but also in the open ocean, where the otters could be found in nearshore kelp beds; moreover, these tribes hunted beaver, fox, and other species that became increasingly important in the trade with time. By going directly to these large and powerful nations—so eager to trade and so wealthy in furs and other material goods—European and American traders were able to tap into large and well-established tribal trade networks that sustained the Native and non-Native fur trades alike. For the Native peoples of the Columbia-Pacific region, this increased attention from the peoples of Europe brought growing access to imported goods such as metal, tools, fabrics, and porcelain, especially within the two major village complexes on either bank. As William Clark noted in January 1806, "*there is a trade Continually Carried on by the natives of the river each tradeing Some articles of other with their neighbors above and below them, and those articles which are Vended by the whites at their enterance of this river find their way to the most distant nations inhabiting its waters*" (in Moulton 1990: 199).

Augmenting their prodigious significance in Northwestern trade networks, these people had access to goods that were largely unknown along the adjacent coast and through much of the interior Northwest and could be traded with other tribes for a considerable price. The Chinook, in particular, occupying the most readily accessible part of the estuary, achieved a kind of economic and social ascendance that would be unmatched on the Columbia-Pacific's expanding fur trading frontier. Yet, the growing number of ships also carried diseases to which the Columbia-Pacific's Native people

had limited immunity, bringing a series of epidemics that would reach epic proportions in the decades ahead, as fur traders built permanent establishments on the Columbia's shores.

In the end, the Russians would only control those areas of North America already under their control by roughly the time of Lewis and Clark, and the Mexican empire somewhat less, with the whole of the middle being taken by the English or their American progeny. The abdication of the Spanish throne in 1808 plunged that nation slowly into chaos, contributing in part to the launching of the Mexican War of Independence in 1810. Overtaxed by the war and events at home, the Spanish ceased all claims to the shoreline north of modern California by 1819 in the Adams-Onís Treaty between the United States and Spain, even as the Mexican revolution was still underway. By the time that Mexico had achieved independence some 11 years later, the nation had lost much of Spain's colonial ambitions. Moreover, by this time the Columbia-Pacific region was home to permanent trading posts and was firmly in the control of British and American interests.

The Russians retracted their claims to the Northwest coast for reasons similar to those of Spain. The Russians long claimed the coast as far south as California, though they were in no position to defend their claims from British and American interests from their remote Alaskan outposts, some 1400 miles away from the Columbia-Pacific region. Russian outposts on the Northwest coast literally sat on the opposite side of the globe from St. Petersburg, roughly 7000 miles away, over vast and largely undeveloped terrain that lie frozen for a good portion of the year. Russian supply lines were severely overstretched, and the shipping of furs and supplies from these outposts to the markets of Europe was ominously slow and expensive. As a land rather than a sea power, Russians often found themselves having to construct their own ships in Alaska, while also occupying a precarious security environment. While sometimes serving as trading partners, the Tlingit —distant cultural relatives of the Chinook and Clatsop—were so numerous, technologically advanced, and organized that they could (and sometimes did) combat or embargo the Russians, leaving the fur traders feeling a very isolated minority indeed. The prospect of having to occupy and somehow control the sprawling Northwest coast region from Sitka to the mouth of the Columbia and beyond was simply more than the Russians were prepared to contemplate. Occasional hunting expeditions plied the coast, and a fur trading outpost was established near prime sea otter hunting grounds north of modern San Francisco at Fort Ross, California, in 1812. In spite of occasional diplomatic efforts to claim the larger coast and attempted alliances with the Spanish to repel the British and Americans, the Russian presence on the Columbia-Pacific coast was at most fleeting and ephemeral (Gibson 1993).[8] The Russians passed the mouth of the Columbia many times. Though they did land occasionally, most ships only witnessed this coastline from the sea (Mackie 1997).

Pressures to discover and claim the Northwest coast would soon launch expeditions by land, too. The first to succeed was the Alexander Mackenzie Expedition, which traveled across land with the support of the North West Company. A year after Gray's and Vancouver's visits to the Columbia, the Mackenzie Expedition completed the first transcontinental journey of exploration, reaching saltwater inlets near what is today Bella Coola, British Columbia, in July 1793. Though Mackenzie encountered hostility from local tribes and did not proceed to the open ocean, the success of that expedition bolstered British claims for what became the British Columbia coast, building on the work of Vancouver, who had passed Bella Coola only 48 days earlier. Some 12 years after Mackenzie, Lewis and Clark would find their way to the Pacific, too, guided by similar objectives in the Columbia-Pacific region.

Though none of the early European maritime explorers and traders left lasting landmarks on the Columbia-Pacific region, it is clear that they had connections with local landmarks that warrant commemoration. Only one of these places, Fort Columbia, has a National Register nomination that reflects that history: Chinook Point on which it sits was granted National Historic Landmark status in 1961 by virtue of the fact that Robert Gray anchored there during his journey. Yet Gray, Vancouver, and almost every maritime fur trader who came after them in the two decades that followed seems to have traded with people from the Chinook community at Middle Village and, to a slightly lesser degree, the Clatsop community at what is today Fort Stevens, usually with residents paddling to shipside by canoe. Cape Disappointment, Chinook Point, Point Adams, and Scarborough Hill/Fort Columbia are navigational landmarks seen and mentioned by most chroniclers passing through the area, even though all but the major village sites were seldom visited. Ships commonly anchored just offshore from Middle Village/Station Camp and Fort Columbia, and somewhat less frequently on the eastern side of Cape Disappointment or in the vicinity of the NPS Dismal Nitch sub-unit. Tillamook Head, too, appears in these early narratives, such as Meares' account, as a navigational landmark of importance. While it is unclear whether these places warrant National Register status by virtue of these connections, it is clear that the story of European exploration and the early fur trade is part of the story of those landmarks and might be interpreted there to good effect.

Parenthetically, though the small village of Yuquot still persists at Nootka as home to the Mowachaht, and the chiefly name Maquinna is still inherited by modern Nuu-chah-nulth leaders, the shores of Nootka Sound are today remarkably quiet, belying little of the area's prominence in the early history of the entire Northwest coast. Nootka Sound would be bypassed as the fur trade shifted inland and international competition cooled along the coast. Today, the village and the associated landmarks from the early imperial period are commemorated as part of the Yuquot National Historic Site of Canada.

5: Lewis and Clark and the Corps of Discovery: Explorations on the Pacific Shore

So much has been said about the Corps of Discovery that it is presumptuous to say much more about that expedition and its outcomes. Local historians and nationally known celebrity scholars alike have sifted through the written record of the journey and expounded on its implications until, it seems, little more of value could be wrung from this topic. So, too, the recent bicentennial of the Lewis and Clark expedition prompted the development of an entire new literature on the subject and a reissuing of several classics addressing the epic journey (e.g., Josephy 2006; Ziak 2005; Ronda 2002; Duncan and Burns 1999; Ambrose 1997; DeVoto 1997; Moulton 1990). Moreover, the story of the Corps of Discovery members is so central to the mission of the Lewis and Clark National and State Historical Parks that some staff have a nearly photographic recollection of the details of the journey and can recite and interpret passages from the expeditions' journals like master scholars reciting passages from a core canonical text. With this in mind, we do not seek to significantly retell or recast the Lewis and Clark story as part of this broad historical narrative. Instead, our aim is to provide here a basic sketch of the key places associated with the Corps of Discovery's time in the region, linking certain key historical themes with events that precede and follow their brief stay in the Columbia-Pacific region.

Thomas Jefferson was in most important respects the architect of the Corps of Discovery. Deeply influenced by both a patriotic fervor for the fledgling American nation and the Enlightenment intellectual currents of his time, his vision for this grand expedition involved striking a balance between dissimilar, if not entirely incompatible, objectives. While this balance of scientific inquiry and nationalism in many ways defined the history of exploration in Jefferson's time, one can see that such balances have a long and venerable history in the whole enterprise of exploration, from Columbus to the Wilkes expedition to the U.S. space program of the mid-20th century and beyond. The Louisiana Purchase of 1803 had provided Jefferson with a territorial basis for westward exploration and a foundation for the sometimes delicate diplomacy surrounding the Corps of Discovery when explaining his motives to those other nations that held claim to western North America—Spain, in particular (DeVoto 1997). Yet he was eager to have a land-based expedition push to the Pacific shores, recognizing that such a journey might bolster American claims to the Northwest and would provide information that might allow for its successful American occupation and resettlement. Accordingly, "*guided by Jefferson's vision, shaped by Enlightenment agendas, the Corps of Discovery was at once a marathon scientific mission, diplomatic junket, and an act of territorial conquest*" (Deur 2008: 9). Jefferson's complex and lofty goals for the expedition converged on the banks of the lower Columbia—as the Corps of Discovery surveyed the coast, documented its myriad plants and animals, and chronicled information on the region's Native peoples on the basis of direct observation with a degree of detail

that had never before been attempted. Under the highly skilled Captains Meriwether Lewis and William Clark, from early November 1805 until late March of the following year, the members of the Corps of Discovery brought these values and agendas to the shores of the Columbia-Pacific region.

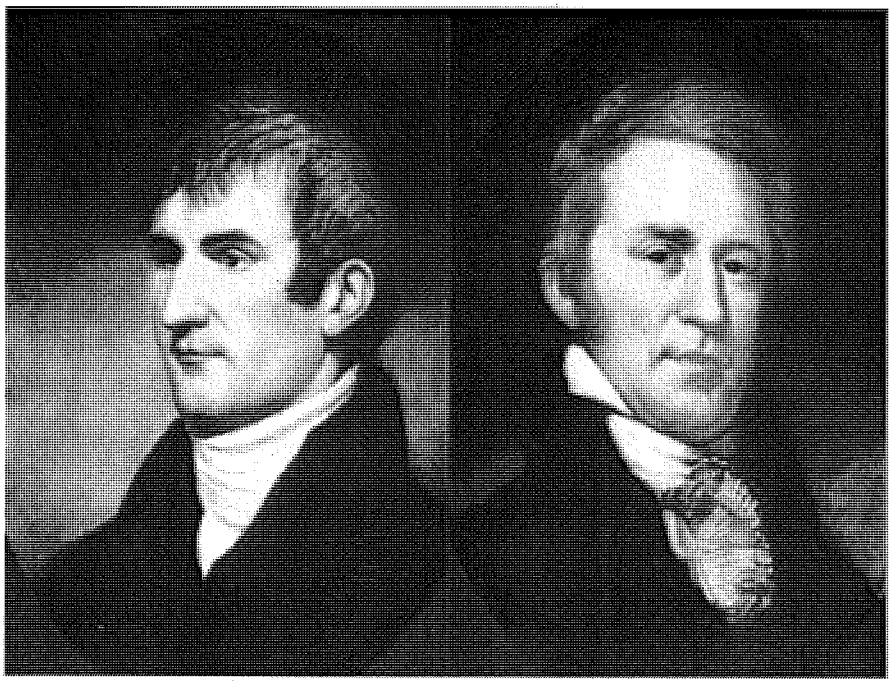


Figure 5.1 – Portraits of Lewis and Clark, as depicted by prominent American portrait painter Charles Wilson Peale in 1807 and 1810 respectively. Image courtesy Wikimedia Commons.

Yet, in spite of its grander goals, it is astonishing how much of the Corps of Discovery's story in the Columbia-Pacific region was defined by simple matters of survival. After nearly 18 months crossing the continent by foot, horseback, and canoe, coupled with the bad fortune of arriving on the coast at the onset of a particularly dark and rainy winter, the Corps of Discovery were dangerously low on provisions. They were, as the captains' journals often observed, *"very pore & weak for want of Sufficient food"* during much of their time on the Pacific (in Moulton 1990: 181). Many of the key decisions made during their stay on the Columbia estuary and many of the sites now within National Park Service management centered on simple matters of finding adequate shelter and food to recuperate and to prepare themselves for the long journey home. The Salt Cairn site was critical for the preservation of meat, which was scarce and spoiled rapidly in the heavy winter rain. The travel over Tillamook Head, through the Ecola Park villages to the village at the present site of Cannon Beach, was motivated in

no small part by a desire to secure meat and blubber from a stranded whale. Indeed, the food quest had a critical bearing on the choice of the Fort Clatsop site, the most critical geographical decision of their stay in the Columbia-Pacific region. The northern banks of the estuary are steep, and those parts that were not sheer and heavily forested were densely occupied with tribal settlements. The south side, as Broughton and Vancouver's crew had noted in 1792, was a relatively forgiving place, with *"low meadows"* and *"marshy edges of the river"* with wild geese and ducks in abundance (Vancouver 1801: 55). The famous vote by the Corps of Discovery to relocate to the estuary's south bank, a historic event involving votes by all expedition members including a woman (Sacajawea) and an African-American slave (York), was probably not an especially difficult or divisive one in the end.

For the Native people of the area, the arrival of the Corps of Discovery clearly signaled a transition in their relationship with the non-Native world. As the first party to arrive by land and from the east—a sizeable and disheveled group of men, who were low on provisions and eager to construct a fortified base camp—the Corps of Discovery was seen as both a novelty and a potential threat. As Clatsop matriarch Jennie Michel reported of her tribe's oral traditions regarding the Corps,

"When Lewis and Clark first came and camped on Tongue Point, the Indians believed they came to make war on them and they cut trees across the rivers near their town so the women and children could run to the woods and hide, and came down [to Seaside on] the Neahcoxie and Necanicum and hid in their canoes" (in Cox 1900: 17).

In time, these concerns would largely evaporate as tribal communities began to interact and trade with expedition members. Indeed, the time spent on the lower Columbia would prove to be among the longest and most congenial periods of interaction between the members of the Corps of Discovery and tribes encountered along the trail, comparable only to the Corps' stay the prior winter among the Mandan. In spite of the fact that it was winter, when many of the largest Columbia estuary villages sat all but unoccupied, interaction was nearly constant, allowing for a steady supply of trade goods and information flowing in both directions. The captains' journals from this period were rich with detail, reflecting the candid sharing of information by the Clatsop, Chinook, Tillamook, and others as they huddled in the dimly lit interior of the fort, the rains pounding on the rooftops during one of the dampest winters on record. Both the journals and tribal oral tradition suggest that the Native people were underwhelmed with the Corps' trade goods, accustomed as they were to seafaring traders—both Native and non-Native—with rich cargoes that dwarfed the Corps' meager supply. Still, the Corps' larders were also filled in part by the intervention of Native peoples, who brought a steady supply of foods, furs, and other items to trade for the metal tools and ornaments, knives, fishhooks, beads, cloth and clothing, and what few other items the Corps still had in their possession after a long trek across the continent.

The Corps of Discovery effectively entered the study area in the beginning of November, as the winter storms commenced. On November 7, near Pillar Rock in Wahkiakum County, Clark reported (with characteristically inventive spelling) "*Great joy in camp we are in View of the Ocean, this great Pacific Octean which we been So long anxious to See*" (in Moulton 1990: 33). Though it is likely that their view largely included the open estuary, it was clear that it emptied uninterrupted into the sea and that their journey was nearing its westernmost destination.

Yet, as they descended into the Columbia estuary this elation soon evaporated, as the Corps of Discovery saw how very unforgiving the Columbia-Pacific's environments could be, especially in the stormy winter season. By November 10, the entire party found themselves unhappily marooned at Clark's "Dismal Nitch," where most of them would remain for six disheartening days. The characteristic cyclonic south winds of the wintertime coast had already begun by this time. With only a few miles to go before reaching their final destination, the Corps was trapped by strong winds on a steep, rocky shoreline on the Columbia's north shore, fully exposed to the south winds, but also the considerable swell that builds on the north banks of the estuary during such storms—waves that were navigated by some Indian canoes visiting the Corps, but swamped others: "*the highest waves I ever Saw a Small vestles ride,*" as Clark observed (Moulton 1990: 41). The Corps was trapped in this location from November 10 to 15, unable to escape using their own canoes, hemmed in by steep banks, camping atop driftwood logs that were buoyed and became unnervingly mobile on the highest tides. Their gear and clothing were soaked and food was scarce, causing the Corps to break into a supply of pounded, dry fish that was kept for emergency purposes. Writing in his journal on November 12, 1805, Clark noted, "*a hard rain...with a hard wind which raised the Seas tremendiously high braking with great force and fury against the rocks & trees on which we lie, as our Situation became Seriously dangerous,*" only the second time in the entire expedition that Clark explicitly mentioned the Corps being endangered (Moulton 1990: 42–43).

After the sixth day of being stranded at Dismal Nitch, the storm broke and the Corps was able to move onward to the Pacific Ocean. A smaller team from the Corps, led by Lewis, proceeded over land in the direction of Cape Disappointment. The majority remaining there, under Clark's command, proceeded westward by canoe, bringing all of the canoes and gear downstream toward the sea. On November 15, 1805, Clark wrote,

"I had the canoes loaded in great haste and Set Out, from this dismal nitich where we have been confined for 6 days passed, without the possibility of proceeding on, returning to a better Situation, or get out to hunt, Scerce of Provisions, and torents of rain poreing on us all the time" (in Moulton 1990: 49).

Leaving Dismal Nitch, Clark's party moved westward in order to escape their predicament, view the sea, and locate both food and a more desirable location for a winter camp. Clark reported that they "*proceeded on passed the blustering point below which I found a butifull Sand beech*" (Moulton 1990: 50). Here, on the eastern edge of Middle Village and within a half-mile of today's Chinook Point, they established Station Camp, which served as the base of operations for the Corps of Discovery from November 15 to 25. After a precarious six days at Dismal Nitch, the Corps was relieved to settle into shelters built from boards taken from the Chinooks' sprawling Middle Village, which was largely unoccupied at this time of year. Captain Lewis and the remainder of the Corps joined Clark's group on November 17 from their trek to Cape Disappointment. Not only did they find the sandy shoreline much more accommodating that their prior quarters on Dismal Nitch, but—as the Chinooks knew very well—the location of Chinook Point and Station Camp gave the Corps of Discovery a commanding view of the river in many directions. In the days that followed, the Corps would make the most of this position, taking their first detailed surveys of the Columbia estuary shoreline. Chinooks visited the encamped group occasionally, including visits from some portion of the Chinook chieftainship, and canoe-loads of Chinooks brought food both as gifts and for trade. Based on the information now available, there seems to have been little objection to these temporary visitors setting up camp on the edge of town.

At this time, both Captains Lewis and Clark brought separate groups on exploratory side trips to Cape Disappointment, with Lewis going there before his arrival at Station Camp, and Clark making a detour there in the middle of his Station Camp stay. First, Lewis brought a group of four men from the Dismal Nitch on what must have been an arduous and damp overland journey to Cape Disappointment - leaving a day before Clark's party on November 14. After camping at Cape Disappointment, this group backtracked to Station Camp on November 17, to the camp already established by Clark and his group. Clark then traveled with eleven men overland to Cape Disappointment between November 18 and 20. Allowing the members of the Corps to behold the open sea, the ultimate geographical objective of their journey, these trips clearly boosted the morale of the group, which had dipped quite low during their stay at Dismal Nitch. According to Clark's journal entry dated November 18, 1805, "*men appear much Satisfied with their trip beholding with estonishment the high waves dashing against the rocks & this emence ocian*" (Moulton 1990: 67). Clark and his men ascended one of the flanks of Cape Disappointment, probably McKenzie Head, and camped there. Clark's group also explored a few miles north of the cape on this journey, venturing into the vicinity of modern Long Beach and carving their name on a tree at their northernmost point along the peninsula (NPS 2004a, 2004b, n.d.). Clark's party returned to Station Camp on November 20, meeting and trading with many Chinooks en route, including the chief, Concomly, who would become so famously powerful along the lower Columbia in the years to come (NPS n.d.).

During their stay at Station Camp, the members of the Corps explored options for a favorable location for a winter encampment. They found game to be scarce in the vicinity of their northern shore camp, and in discussions with the many Chinooks who visited, they learned that food was more readily available on the southern shore of the river: "*They generaly agree that the most Elk is on the opposite Shore, and that the greatest numbers of Deer is up the river at Some distance above*" (Clark in Moulton 1990: 85).

Though there was some discussion of moving back upstream on the Columbia for the winter, provisions were low and the weather was not improving; on the coast there was game, potential for salt making, and even a chance of a visiting ship carrying needed supplies. On November 24, with only one dissenting vote, the group consented to cross to the other side of the river. The following day, the entire Corps of Discovery departed Station Camp to head towards the opposite shore of the Columbia, in search of their winter campsite (NPS 2004b, n.d.). Finding the wide, open estuary too turbulent to cross, they tracked back upstream, crossing at narrows near Pillar Rock. Between November 25 and 29, they slowly moved downstream, intermittently delayed by storms, from modern-day Svenson, Oregon, to Astoria. Quite low on provisions, Lewis and Clark sent out several hunting parties once they arrived near modern Astoria, sending them to Youngs Bay and the Lewis and Clark River estuary, where they found waterfowl especially abundant.

After a few days' exploration, Captain Lewis chose the location of the winter campsite in the first days of December 1805. The fort site sat on a clearing atop a small hill. The site was of strategic value, defensible and with commanding views of the surrounding waters. Yet it was also rich in the natural resources required to sustain the team for the winter. The site had a spring and was close to good hunting grounds: "*extencive marshes at this place of Encampment We propose to build & pass the winter, The situation is in the Center of as we conceve a hunting Countrey*" (Clark in Moulton 1990: 112). Captains Lewis and Clark ordered that a log structure be built on the site, with palisades and other defensive features echoing the design of Fort Mandan, built by the men the winter before. The captains moved into the fort, which they named Fort Clatsop in honor of their host tribe, by December 23, with the rest of the Corps settling in by Christmas Day. The men were clearly eager to get indoors and out of the elements, and the fort remained incomplete even at this date; portions of the fort, including its defensive pickets, were completed only several days after its initial occupation.

Fort Clatsop would serve as the principal home, work space, and trade center for the Corps of Discovery from Christmas of 1805 until they began their journey home on March 23, 1806. Situated at Fort Clatsop, the Corps entered in a routine that is familiar to most students of Lewis and Clark history. Hunting parties from the Corps spent much time pursuing game in the vicinity of Fort Clatsop, no doubt in many places now sitting within the park, including elk, deer, and waterfowl, as well as fish.

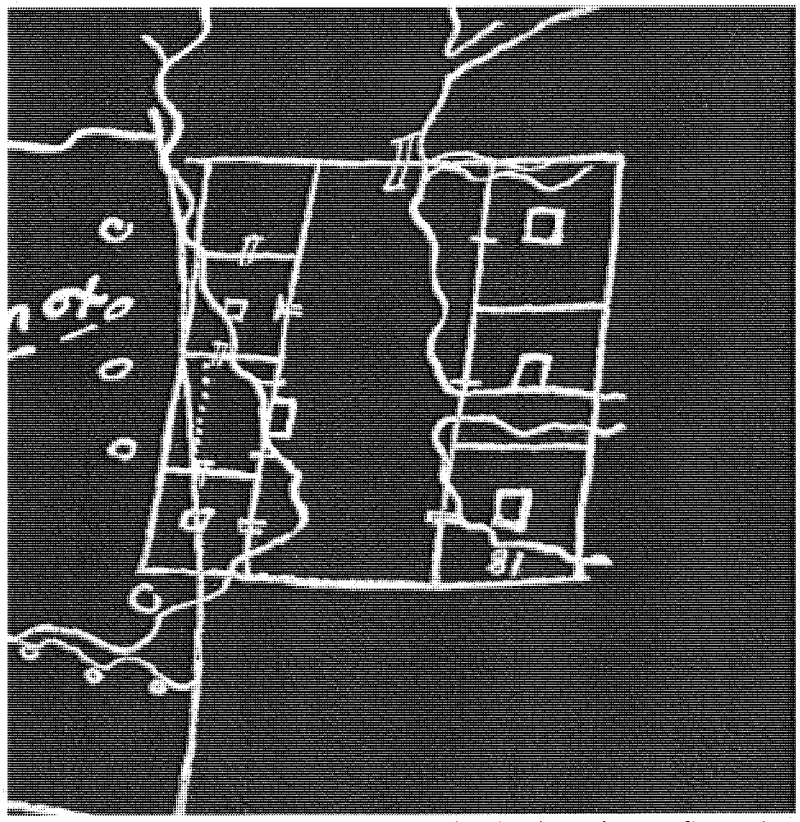


Figure 5.2 – A sketch from William Clark's journals, showing the configuration of Fort Clatsop's rooms and exterior palisades. Clark's sketches and notes have served as the principal source of guidance in the construction of the Fort Clatsop replica, and in other representations of the fort. Image courtesy Oregon Historical Society.

They processed large quantities of meat both for immediate use and in anticipation of the long journey home. While at Fort Clatsop, the Corps frequently engaged with local Clatsop and Chinook people, trading goods and sharing information. The Corps was especially interested in documenting the size, location, and demeanor of these tribes and others like them near the mouth of the Columbia, as well as the fundamentals of local flora, fauna, and geography. Large quantities of food were supplied to the fort through trade with the Clatsop, in particular, who brought fish, deer and elk meat, waterfowl, whale meat and blubber, and a diverse assortment of edible roots and berries. Serving as the principal host to the Corps was Coboway (also reported as "Comowool" in the journals), who the Corps found generally generous and agreeable. Other Clatsop chiefs, such as Kotata and Twilch, were reported to have visited with the Corps and participated in joint hunting expeditions (Cox 1900: 17). Both captains kept detailed journals during this period, and it was here that Lewis began writing in his journal again after a three-month hiatus. They also developed maps of the coastline and, to the extent that conditions allowed, collected samples of plants and animals to carry back to Jefferson and the scientific community of the United States.

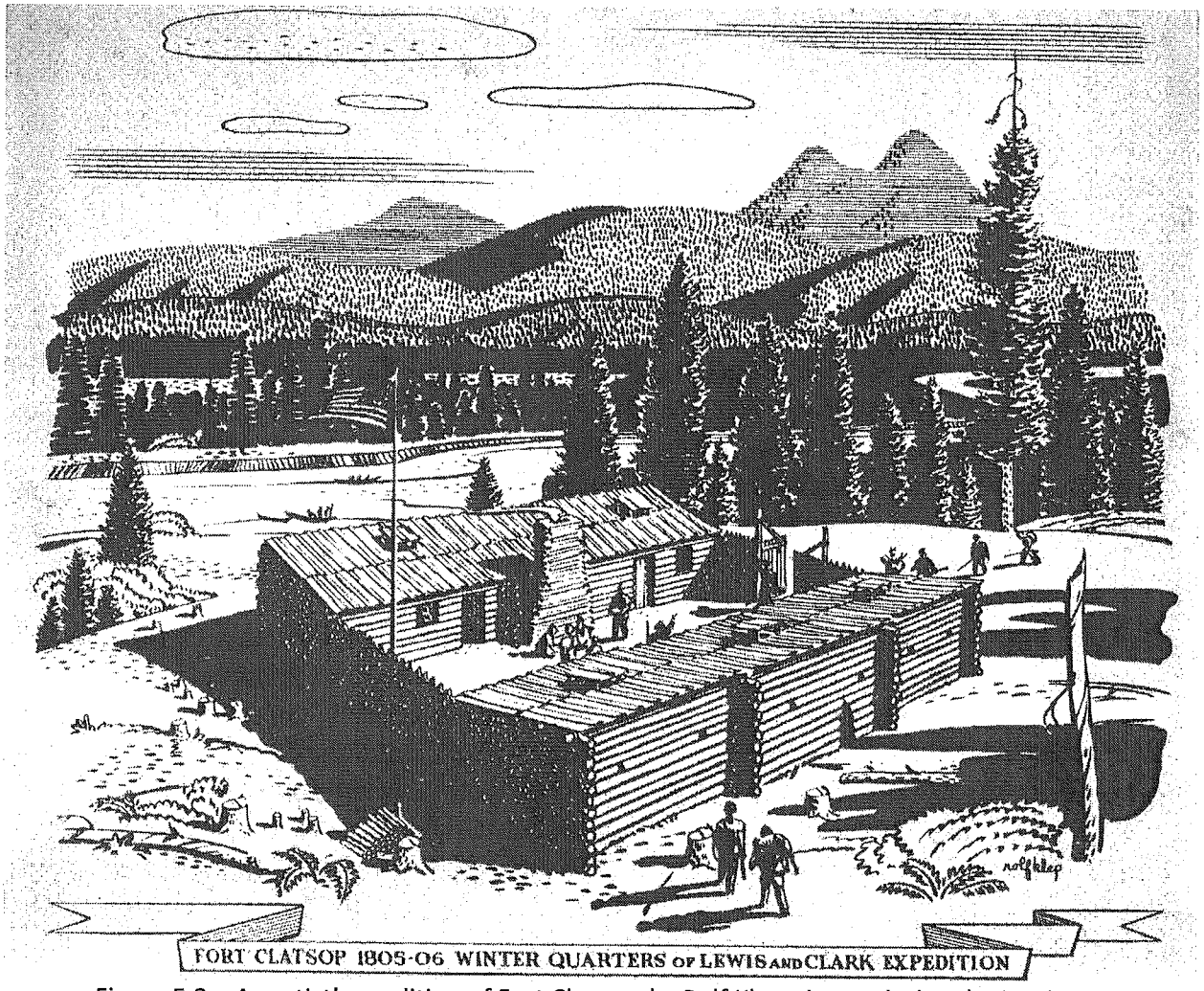


Figure 5.3 – An artist's rendition of Fort Clatsop, by Rolf Klep, drawn during the Lewis and Clark Sesquicentennial celebrations of 1955-56. Courtesy Oregon Historical Society.

From time to time, while based at Fort Clatsop, the two captains and other members of the Corps explored the surrounding countryside, not only to hunt and fish, but also to gather other items, to meet with Native peoples in their own communities, and to survey the landscapes of what is today coastal Clatsop County. There are several mentions of travels in the direction of the ocean or south and into the interior, but the exact geography of these references is often vague. Point Adams, within what is today Fort Stevens State Park, figures prominently throughout the Lewis and Clark journals, though it is not clear how much time was spent there, or indeed if the village was visited at all. There are cryptic references to Lewis exploring the Point Adams area at one point in the journals, but no geographically specific observations are recorded; there are also references to hunting parties being sent there from Fort Clatsop, and the salvaging of boards from unoccupied houses either at the Point Adams village or very

nearby. The detailed discussions of Clatsop longhouses may have been influenced by visits to the village as well, though this remains largely unclear in the journals. Some scholars have determined that the village was never visited at all by the Corps of Discovery.[9] Still, it is clear that Point Adams is mentioned often, especially as a navigational landmark of prominence, as would be the case in the many accounts of explorers and mariners who passed through the Columbia estuary, both before and after the visit of Lewis and Clark.

From their Fort Clatsop base, the members of the Corps of Discovery also traveled southward along the coast, well beyond the shores of the Columbia estuary. During their time stationed here, the Corps needed salt to preserve food, meat, in particular. On the humid coast, meat spoiled quickly and was not always easy to dry. Recognizing that the need for preserved food was urgent, both for use at the fort and for the return journey home, the captains dispatched a group of Corps members to develop a salt-making camp, a group initially consisting of expedition members Fields, Bratten, Gibson, Willard, and Wiser.

The location of a suitable site for this salt-making camp presented certain challenges to this group. Because the salinity of the Columbia estuary is low, as is that portion of the ocean immediately adjacent to its mouth, it was determined that this camp would have to be located on the open ocean coast, several miles distant. The group left on December 28, 1805, only three days after the Corps took up residence in the fort, packing "*5 of the largest Kittles*" across the dune fields of Clatsop Plains. The Corps had recently developed a trail to the ocean coast on what probably included portions of a preexisting tribal trail network running somewhat north of the present Fort-to-Sea Trail. Following this trail to its outlet somewhere near Sunset Beach, the crew then hiked southward along the beach. Their challenge was to find a place on the outer coast that possessed sufficiently saline ocean water to support their operation, while also having a freshwater source nearby that was satisfactory for drinking. They found this combination at what is today Seaside, on the distant southern end of the Clatsop Plains. Here the crew established an encampment in close proximity to a village of mixed Clatsop and Tillamook speakers. They established a cairn, a pile of rocks that allowed them to build a fire below in the recessed spaces while perching kettles on top to heat. The group made salt by repeatedly boiling sea water on these rock structures until they rejoined the expedition at Fort Clatsop on February 21, 1806 (Cannon 1995).

During the time that the salt-making crew was on the coast, members of the Corps occasionally traveled by land from Fort Clatsop to the salt cairn and back, presumably using this trail between the fort and the ocean. This route was also apparently taken to the ocean beach by Clark and his party when traveling to what is today Cannon Beach to retrieve whale meat and blubber. The trail was difficult to use in places due to brush, stream fords, and swampy conditions, and sometimes groups chose different paths or traveled by canoe for portions of the trip. For example, on a journey from the fort to

find the salt cairn on January 3, Sergeant Patrick Gass and George Shannon avoided the trail altogether, choosing instead to travel along a ridgeline. The captains' journals make it clear that they often felt "*uneasy*" about the safety of the salt-making team, but also took some comfort in the congenial relationship that the team had established with the residents of the adjacent village, "*4 houses of Clatsops & Killamox, who they informed me have been verry kind and attentive to them*" (Clark in Moulton 1990: 177). The location of the salt cairn was later overgrown and largely forgotten, but the site was identified in 1899 by Clatsop elder Jennie Michel, who as a child knew many of the Clatsop chiefs who had hosted Lewis and Clark; she identified the site for an expedition of the newly established Oregon Historical Society, led by half-Clatsop attorney and grandson of Chief Coboway Silas B. Smith (Cox 1900).

Yet, from Seaside, the Corps of Discovery would travel further southward still. In early January of 1806, Captain Clark and twelve other Corps members, including Sacagawea, traveled beyond the salt-making camp to see a beached whale south of what is present-day Ecola State Park. Blubber from the whale at Cannon Beach had already been transported to the fort by Native traders in the first few days of January. According to Lewis's journal, dated January 5, 1806, the portion of this blubber they had received at the fort was "*not unlike the fat of Poark...I had a part of it cooked and found it very pallitable and tender, it resembled the beaver or the dog in flavor*" (Moulton 1990: 166). The men of the Corps had acquired a taste for whale blubber during their journey, and, still being low on provisions, the captains agreed that they should send a party to obtain whale meat and blubber from the people living in the vicinity of the whale.

The steep and muddy condition of the tribal trail leading over Tillamook Head (roughly approximating the route of the modern park trail) made for slow and difficult travel, but the setting was spectacular (Dicken 1978). Near the summit of the trail, at a place designated by Lewis as "Clark's Point of View," Clark and his party marveled at the scenery, which encompassed much of the entire Columbia-Pacific region:

"we Set out early and proceeded to the top of the mountain next to the which is much the highest part and that part faceing the Sea is open, from this point I beheld the grandest and most pleasing prospects which my eyes ever surveyed, in my frount a boundless Ocean; to the N. and N.E. the coast as far as my sight Could be extended, the Seas rageing with emence wave and brakeing with great force from the rocks of Cape Disappointment as far as I could See to the N.W. The Clatsops Chinnooks and other villagers on each Side of the Columbia river and in the Prairies below me . . . and on the other Side I have a view of the Coast for an emence distance to the S.E. by S. the nitches and points of high land which forms this Corse for a long ways added to the inoumerable rocks of emence Sise out at a great distance from the Shore and against which the Seas brak with great force gives this Coast a most romantic appearance" (in Moulton 1990: 182).

While atop Tillamook Head, Clark also marveled at the massive mature Sitka spruce that dominated that headland in dense, cathedral forests. As Clark noted, the spruce *"on the top of the Point of View rise to the emence hight of 210 feet and from 8 to 12 feet in diameter, and are perfectly Sound and Solid"* (Moulton 1990: 183).

Descending down the southern face of Tillamook Head, Clark and his party visited the abandoned village at what is today called Indian Beach, in Ecola State Park:

"I proceeded on down a Steep decent to a Single house the remains of an old Kil a mox Town in a nitch immediately on the Sea Coast, at which place great no. of eregular rocks are out and the waves comes in with great force. Near this old Town I observed large Canoes of the neetest kind on the ground Some of which appeared nearly decayed others quit sound, I examoned those Canoes and found they were the repository of the dead" (in Moulton 1990: 182).

Interestingly, Clark made no mention of the Ecola Point Village, which is likely to have been larger than the remnant Indian Beach community, and probably still occupied (at least seasonally) at the time of their travels. It is possible to bypass that community while traversing this part of the coastline, which may partially explain the omission.

By the time the party arrived at the mouth of Ecola Creek, according to Clark's journal, the resident Tillamook and visitors from nearby communities had already harvested most of the whale's meat and blubber, presenting Clark with a largely skeletonized animal and little prospect of the group harvesting any part of the whale independently. His January 8, 1806, journal entry reads, *"the Whale was already pillaged of every valuable part by the Kil a mox Inds. in the vecinity of whose village's it lay on the Strand where the waves and tide had driven up & left it"* (in Moulton 1990: 183). Clark estimated the whale to be roughly 105 feet in length, suggesting the possibility that it was a blue whale (*Balaenoptera musculus*), which is the only whale to reach such proportions on this coast. The Corps found that the Tillamook prized the whale products and did not part with them lightly; in the end, they were only able to trade for about 300 pounds of blubber and a few gallons of rendered whale oil. Clark declared the name of the creek to be "Ecola," the Chinook jargon term for a whale, which was probably heard incessantly by the Corps during their stay - a name that would, many years later, be applied to the state park occupying the lands the Corps crossed to get there.[10] While staying for the night across from the main Tillamook village at the mouth of Ecola Creek, some members of Clark's party were in an altercation with Native visitors to the village, at least some of them Chinook, but still left the following morning without incident. On the way back over Tillamook Head, they encountered several Clatsops and Chinooks returning home with *"emence loads"* of blubber and meat from the whale.

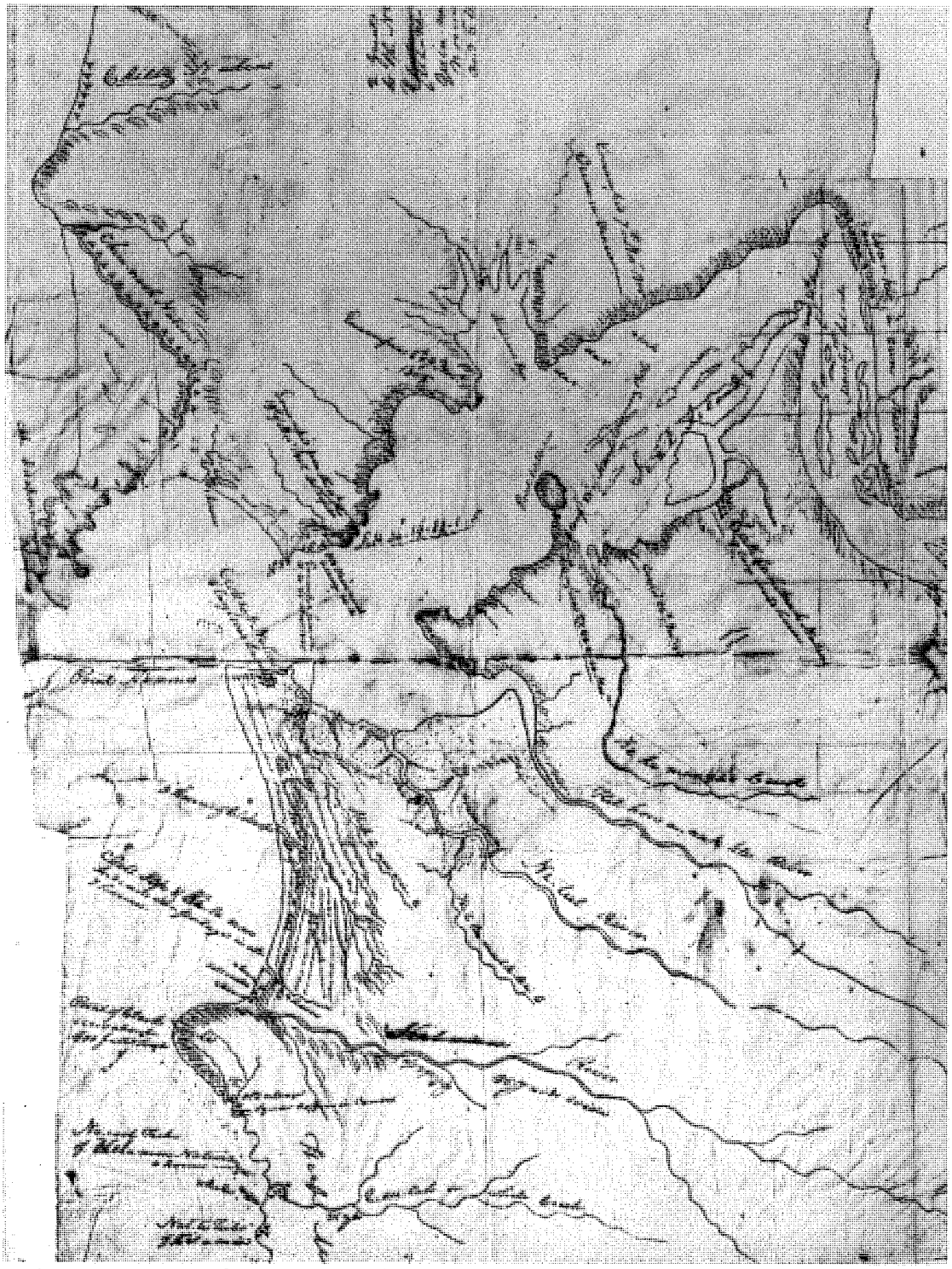


Figure 5.4 – A map from the journals of Lewis and Clark, showing much of the Columbia-Pacific region. The tribal villages at such locations as Chinook Point (today's Station Camp) and Point Adams (today's Fort Stevens) are visible – labelled "*Old Chinnook Village*" and "*Clott Sop Nation*" respectively. Near the Salt Cairn, the map notes "*Clott Sop & Ki-la-mox Indians at a portage in abt 7 houses*." In what is today Ecola State Park, Tillamook Head is marked "*Point of Clark View*," while Indian Beach is marked "*old village – squar coffins in canoes*." Image courtesy Oregon Historical Society.

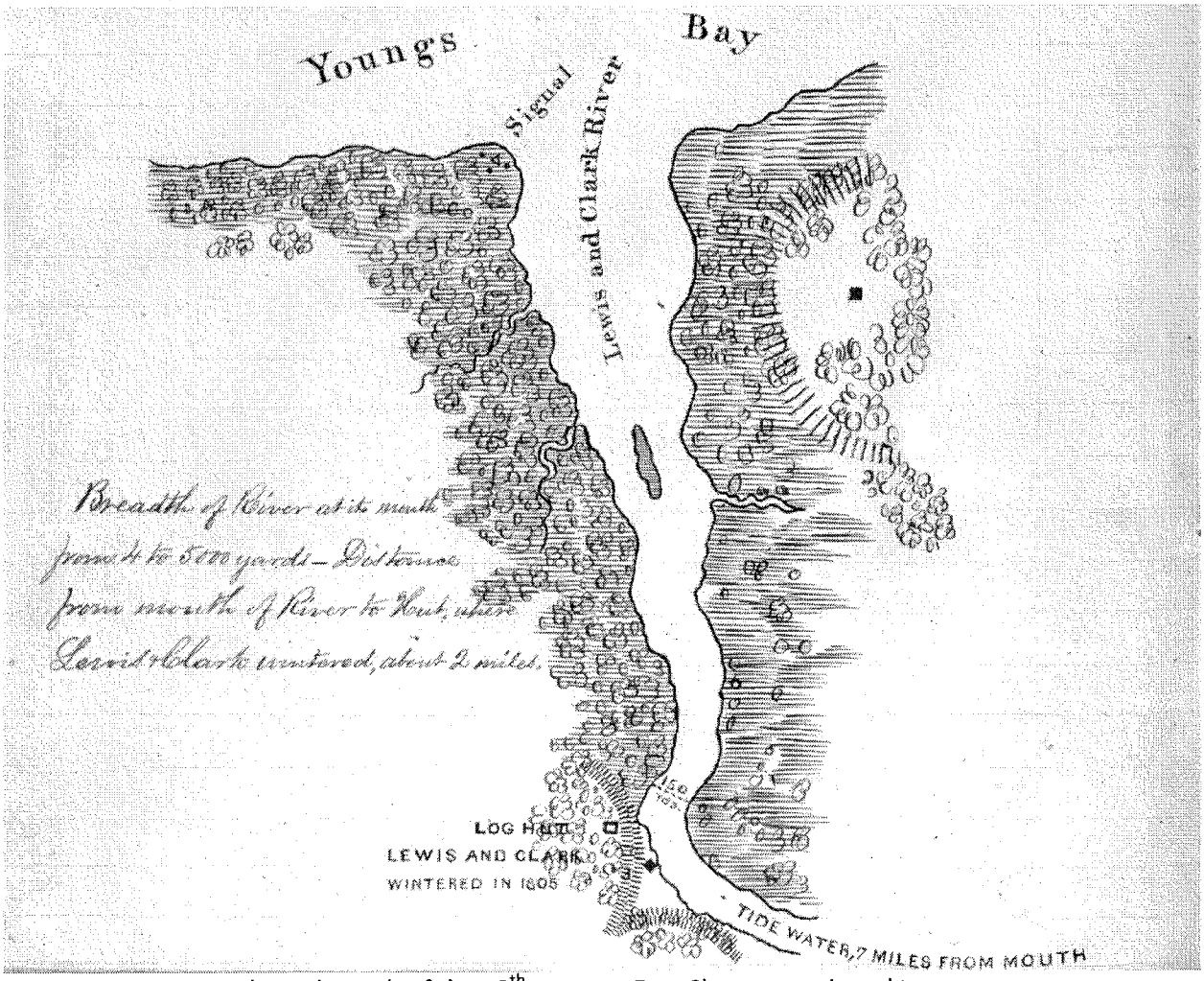


Figure 5.5 – Through much of the 19th century, Fort Clatsop continued to serve as a landmark, even as it rotted away into oblivion and its last surface remnants cleared to make way for farming in the mid-19th century. Here, a mid-19th century field survey map continued to reference the site, in spite of few recognizable surface features by this date. Image courtesy Oregon Historical Society.

Though most historians would agree that the Corps of Discovery's stay at Fort Clatsop was successful, it was clearly a difficult period for the expedition in many respects. The journals suggest that both captains worked hard to maintain morale at the fort, which was continually undermined by fleas, poor diet, sickness, the hard labor and challenging conditions of their preceding months on the trail, and the nearly incessant winter rains. To cite one of many examples, in a December 28, 1805, journal entry, Clark remarked that *"york [is] verry unwell from violent Colds & Strains Carrying in meet and lifting logs on the huts to build them... rained all day moderately without intermition"* (in Moulton 1990: 140). Though the group was originally intending to depart for home on

Figure 5.6 – Members of the 1899 expedition from the Oregon Historical Society stand on the former Fort Clatsop site. They include Silas Smith, grandson of Lewis and Clark's host, Clatsop Chief Coboway. The expedition was guided to the site with the assistance of the resident Shane family, who homesteaded the site, clearing some of the fort's last wooden remains, and P.W. Gillette, a former homesteader from the opposite shore of Lewis and Clark River. Identified in this manner, the fort location was later used for the construction of the replica that is the centerpiece of today's Fort Clatsop sub-unit of Lewis and Clark National and State Historical Parks. Photo courtesy Oregon Historical Society.

April 1, 1806, an excitement for home, coupled with growing fatigue with the discomfort of the fort, prompted the group to set off a week early, on March 23, 1806 (Cannon 1995). The journals, as well as local oral tradition, agree that the captains gave Coboway medals upon their departure and formally transferred to him ownership of Fort Clatsop: "*upon their departure gave the Fort to Chief Cobiway of the Clatsop tribe, who lived here from time to time*" (Brallier 1957; Moulton 1990). The members of the Corps, not having enough canoes to make the return trip and finding the Clatsop unwilling to trade for one of theirs, took a canoe "*in lieu of 6 Elk which they Stole from us this winter &c.*" (Clark, in Moulton 1990: 428).[11] In recent times, both the Clatsop-Nehalem and Chinook tribes have held ceremonies—linked loosely to the Lewis and Clark

bicentennial—involving a traditionally carved canoe being symbolically returned to their respective tribes to compensate for this loss.

All of the places mentioned here are central to the Lewis and Clark National and State Historical Parks' mission, being fundamental to the national park's mandates and the formal justifications that have been provided for the park's modern boundary. The entirety of the Fort Clatsop sub-unit was used or occupied by the Corps of Discovery, and there are clearly recorded references to the Corps visiting every one of the other sub-units of LEWI. Exceptions might include Point Adams, which was nonetheless a landmark of importance to their journey, perhaps visited directly, and important to the history of their Clatsop hosts. Similarly, the Sunset Beach and Fort-to-Sea Trail areas approximate historical travel routes, even if the exact location of those routes might not be readily recoverable today.

There are certainly issues requiring further attention, however. While it is clear that the National Park Service and Oregon and Washington state parks now possess most of the key sites from the Lewis and Clark journeys, it is also clear that there are places that have been excluded or misidentified as part of the National Park Service effort to manage and interpret Lewis and Clark sites in the Columbia-Pacific region. The identity of the Dismal Nitch location, visited by the Corps of Discovery in November 1805, is currently under review by the Washington State Historical Society. Following the interpretation of the expedition journals by Moulton (1990) and others, prior National Park Service studies suggested that this Dismal Nitch sat immediately adjacent to the present-day site of the Megler Safety Rest Area - the place now called "Dismal Nitch" and mapped as such in the introduction of this report (NPS 2013; Ziak 2006). On the basis of that information, the Megler Rest Area was included in boundary expansion planning and ultimately acquired by the National Park Service. While this parking area has proven to be useful for interpretive purposes, it is also clear that the actual Dismal Nitch is located a short distance to the east, in an area sometimes called Hungry Harbor. A historical report on the location of the Dismal Nitch is being produced concurrently with the current study, by Washington State Historical Society staff member Jim Sayce (in press); there may be some advantage in interpretation and commemoration at this alternative location, pending the results of Sayce's report. There may also be a need to revisit interpretation along some portions of the coastline, not the least of which is the content of Ecola State Park's Indian Beach interpretive trail pertaining to the forest conditions at the time of Clark's journey. The notion that the trees of Tillamook Head were only 100 years old at the time of Lewis and Clark's visit—a cornerstone theme for Oregon State Park's single interpretive trail in that location today—seems questionable at best based on the journal accounts and a variety of other evidence. Also, concurrent with the development of this report, the potential for interpretation at places such as the Ecola Creek village site (Necost) in Cannon Beach, where Clark and his party bartered for whale meat and blubber, are also being discussed between the National Park Service, local governments, and tribal representatives.

6: The Rise and Fall of Empires on the Columbia-Pacific: Native Nations and the Fur Traders of the Early 19th Century

The history of Astoria and the larger Columbia-Pacific region has been shaped in no small part by the circumstances of the fur trade. Indeed, when considering the two-century history of Euro-American settlement on this coast, it is important to recall that the first quarter was played out within the context of the fur trade. And while for two decades almost all of this trade was carried out by passing ships that left little permanent imprint, the arrival of permanent land-based trade, with forts at Astoria and beyond, would reshape the human and natural landscape in profound and lasting ways. From the Pacific Fur Company's founding of the fur trading post known as Astoria in 1811, to the consolidation of American claims in the late 1840s, fur trading empires dominated the coast. Non-Native peoples became a permanent part of the region's cultural geography and interethnic ties sustained both Native and non-Native economies. The communities that emerged on the banks of the Columbia-Pacific were comfortably, even enthusiastically, multi-ethnic and interethnic families were commonplace – points too often forgotten in retellings of regional history. And, like the historical events that preceded and followed this period, many critical moments pivoted on places now within the management of the Lewis and Clark National and State Historical Parks.

The great transformation of the Columbia-Pacific would arrive in 1811, in the form of a single ship and an overland expedition, converging at Astoria.[12] Consisting of fur traders and associated staff, these men were representatives of the newly-formed Pacific Fur Company. Founded by John Jacob Astor, a German-born and omnivorously capitalist New Yorker, the Pacific Fur Company was one of several new American operations spawned by the investment interests of Northeastern businessmen. Operating fur stores and shipping facilities in New York, Astor was well aware of the booming trade in otter and beaver on the Northwest Coast. He had served as an importer of furs obtained from the Montreal-based North West Company, which he resold on the American and European markets at a considerable profit. Tariffs and international frictions between the United States and Britain frequently complicated his operations, however, causing supply interruptions that idled his workers and cut deeply into his profits. In response, Astor decided to incorporate fur trading into his operations, allowing him to have a more direct hand in controlling fur supply while also circumventing international barriers to trade. In 1808, he founded the American Fur Company, a holding company with subsidiaries each focused upon different fur-trading regions and products, allowing Astor to tap into regions and markets previously dominated by British Canadian interests. Yet, Astor was eager to recruit experienced fur traders, and he had few qualms hiring men from the British fur trading

companies to achieve that end. Recruiting labor from the North West Company in particular, Astor determined to develop his own trading depot on the west coast, creating the Pacific Fur Company with outside investor support in 1810 as a subsidiary focused on the lower Columbia River region. (There is evidence to suggest that some portion of the Astor Expedition leadership operated under the impression that the North West Company was a partner in the Astor enterprise.) Mobilizing the assets of this new Company, Astor sent an overland expedition, the Astor Expedition (1810-12) to the mouth of the Columbia - the first such American expedition since Lewis and Clark. There, it was to be met by a supply ship, the *Tonquin*, which would rendezvous at the mouth of the Columbia in 1811 with all the supplies needed to build a permanent trading post.

The *Tonquin* left New York in September of 1810, an American ship with a largely British crew. The ship passed around South America, traveling then to Hawaii - anchoring at Kealakekua Bay, the exact spot where Cook died decades before and a perennial stopover point for fur trading ships that followed. Here, they recruited Native Hawaiians to join their crew and traded for livestock. Arriving at the Columbia bar in March 1811, the notoriously caustic captain of the *Tonquin*, Lieutenant Jonathan Thorn, demanded that members of the crew attempt to cross the bar in small boats, in order to find a channel suitable for the ship. After three failed attempts in the rough surf, resulting in the loss of three boats and no less than eight crew members, the crew identified a suitable channel and the *Tonquin* crossed to safety. Among the crew members who were lost was a Hawaiian man, who was buried where one of the boats containing his body had come ashore. His fellow Hawaiians dug a grave in the sand of the beach on the northern end of Cape Disappointment, a place that has since been known as "Waikiki" in honor of their homeland.[13] Arriving on the waterfront of what is today Astoria, the crew unloaded building supplies, livestock, and other provisions. Construction of a permanent fort, "Astoria," commenced almost immediately in a small clearing - probably a Native American campsite of some kind. In June, the *Tonquin* departed for Nootka to trade for furs, leaving the permanent Astoria crew behind. En route, Thorn stopped at Clayoquot Sound, where he accosted prominent Nuu-chah-nulth chief Wickaninnish in a dispute over fur prices, prompting an attack that left the ship in smoldering pieces, and the crew likewise; the one survivor was Lamazee (George Ramsay), a half-Clatsop (or half-Chinook) interpreter who found his way home to the lower Columbia to inform the fort's inhabitants of the *Tonquin's* fate. A land party led by longtime North West Company employee David Thompson arrived a month after the *Tonquin's* departure, being greeted enthusiastically by his former colleagues now living at the fort in spite of his expedition's British backing; the land-based Astor Expedition, under the command of William Hunt, successfully passed through the interior Northwest, arriving at the fort by the following January (Gibson 2001; Seton 1993; Bancroft 1890; Franchère 1851; Irving 1836; Ross 1832).[14]

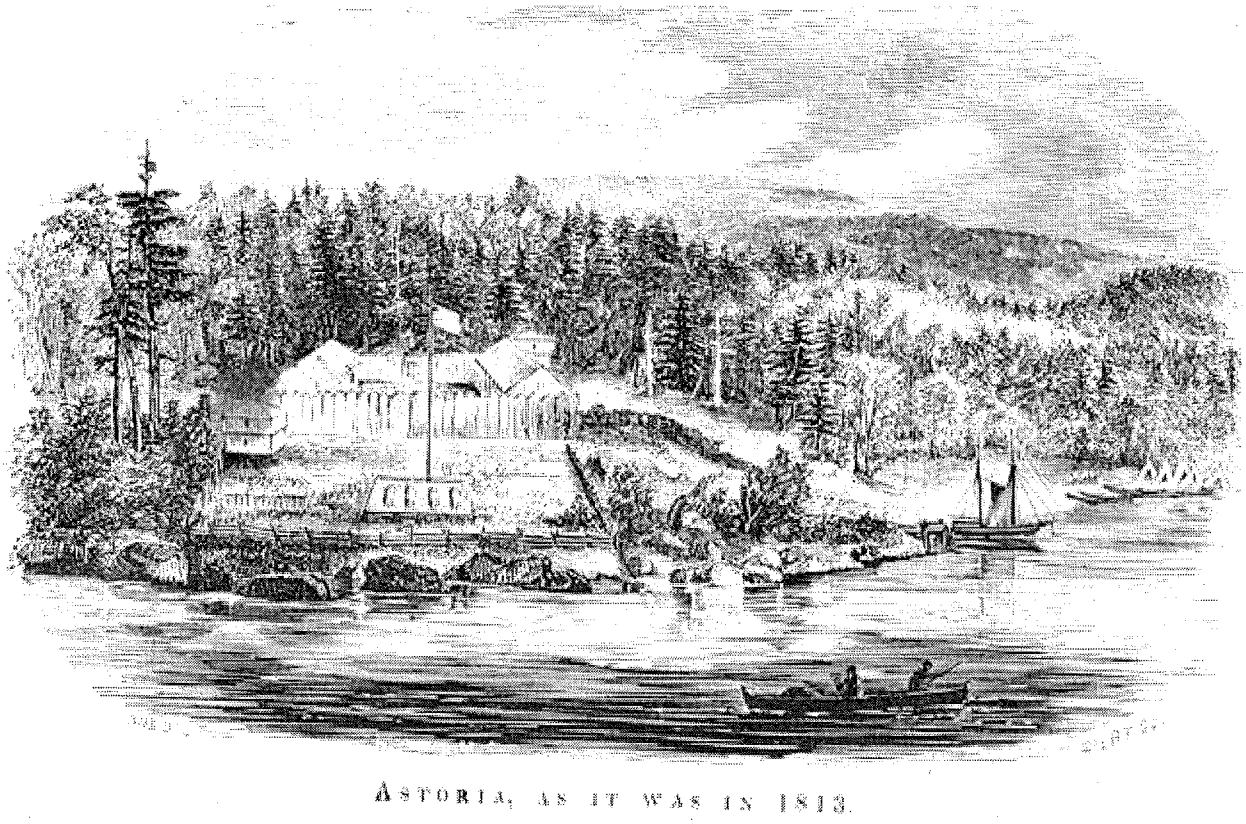


Figure 6.1 – An idealized image of the fort at Astoria, as it appeared in 1813, situated in a modest clearing and surrounded by a stockade. From Franchere (1854).

In addition to building and organizing the fort, the Astorians set about building the trading system with local tribes that would come to define the lower Columbia fur trade for decades to come. As experienced former North West Company employees, the Astorians appreciated that in order to succeed they would need to tap into, and in some ways co-opt, Native trade networks. In a quintessentially British pattern, they did not seek to obtain furs independent of tribal societies, but to foster the "investment" of Native leadership and labor in the enterprise, so that they might provide a steady supply of furs through their existing hunting territories and intertribal trade partners, and would wish to support, rather than undermine, Company interests. The residents of the fort purchased furs from surrounding tribes, loading them into a warehouse within the fort that would be repeatedly unloaded onto ships. The ships, in turn, brought an array of trade goods that were stockpiled at the fort to exchange with Native people. While furs were sometimes obtained during traders' visits to villages, an increasing proportion of the fur trade was carried out at a fort store, where Native traders could come and exchange furs for a growing cornucopia of imported goods. A stockade and blockhouse were constructed for defensive functions, but with time these became increasingly irrelevant to the fort's security – it was the tribes' eagerness

to trade, coupled with their growing social ties to the fort community, that would prove to be the best defense, more effective than any wood palisade ever could be.

Into this context stepped Concomly, once of the most skilled traders of his generation. Identified by Lewis and Clark as the second-ranking Chinook chief during their stay in 1805-06, Concomly's rank and status had only increased in the intervening time (Moulton 1990). In their first days on the lower Columbia, two of the leaders of the Astoria party, Duncan McDougall and David Stuart, visited Concomly in Middle Village to introduce themselves and to initiate what would become a golden era of interethnic trade. In chiefly style, Concomly fed them well; when their boat capsized on their paddle back to the *Tonquin*, Concomly rescued the party from the cold water, gaining a kind of cachet that would endure for years to come. (During these early visits, the Astorians also visited the villages on the south side of the river, including "*the natives who occupy Point Adams, who are called Clatsops [and] received our young gentlemen very amicably and hospitably*" [Franchère 1967: 44]). Leading from his Middle Village home, Concomly became an increasingly prominent presence at the fort, organizing for vast shipments of furs obtained by the Chinooks both directly by hunting, but also through the sprawling tribal trade networks that they had helped maintain long before Europeans came to the Columbia. Under Concomly, there was a consolidation of the power, influence, and identity of certain Chinookan peoples, fueled by their unique position relative to the Astoria traders and all of the unique, imported goods that now flooded into the region through their fort. Concomly represented himself to Astoria's traders, and the ships that visited their fort, as the representative of not only the Chinook proper, but most other lower Columbia tribes; meanwhile, he represented himself to Native peoples of the region as the principal intermediary to the fort. In this way, he became an adept middleman, profiting from a sizeable portion of the early exchanges between Astoria and area tribes. (Fur traders, for their part, often tried to overcome the monopolistic vision of Concomly by reaching out to other tribes and exploiting divisions between them.)[15] In time, Concomly would marry his daughters into the non-Native fur trading community, forging relationships of unique depth (and the many descendants of these marriages still live in the region today). While the rising affluence of certain chiefs and villages sometimes had destabilizing effects in the balance of power between tribal communities, which the Astorians and their successors sometimes sought to counterbalance, it was generally in the traders' interest to have these leaders maintaining positions of great prominence, where they could marshal the vast resource wealth of the Northwest in a manner that might profit the new traders.[16]

Meanwhile, other leaders watched Concomly's ascendance with what seems to have been a mixture of enthusiasm and concern. On the south side of the river, the Clatsops, led by Coboway, his successor Tostom, and secondary chiefs, also maintained played an active role in the Astoria trade from the village complex in modern-day Fort Stevens, sometimes collaborating with, and sometimes chafing under, Concomly's growing influence. (Tribal oral traditions recounted in Hussey [1967] report that a large rock

promontory stood atop the hill above Fort Columbia and was prophesized to be linked to Concomly's power; so long as the rock stood, it was said, Concomly and his kin would reign in the region. Clatsops from the opposite side of the river were reported to paddle over to the point at Fort Columbia in the night, toppling the stone into the ravine below, where it is still reported to sit today.) All matters of intertribal power relations aside, all tribes of the Columbia-Pacific region played an important role in the land-based fur trade - sometimes independently and sometimes with Concomly as their intermediary. Through this frenetic trade, Chinook, Clatsop, and other tribes of the immediate area acquired an unprecedented diversity of trade goods - blankets, beads, tools, guns and ammunition, fine china, and any number of other goods - that served to display and reinforce the prominence of Columbia-Pacific tribes within the larger Pacific Northwest. Together, the tribes of the lower Columbia and the Astorians initiated a period of sometimes awkward mutual interdependence that would persist for decades to come.

The fur trade frontier on the lower Columbia was a place of surprising ethnic diversity, reflecting a variety of sometimes awkward alliances meant to both reduce the threat of conflict and to give the North West Company and Hudson's Bay Company (HBC) unique access to tribal trading partners. Interethnic marriages were part of the fur trading experience from long before the arrival of Europeans on the lower Columbia River. On the lower Columbia, the success of fur trading operations was often contingent in no small part by the alliances created by fur traders' marriages of Native women. Kinship allowed traders to pass from "outsider" status to "insider" status almost instantaneously. Marriages into tribal families, especially the families of prominent leaders, opened up a world of trade opportunities to the fur trading companies in this ethnographic context, in which familial ties insured an "inside track" when trading with the woman's home community. Thus, many - though by no means all, or even a majority - of the women who married into the fort communities were from high-status families; some historians have suggested that "daughters of the Chinookan nobility were the exceptions rather than the rule among Native wives of this generation" (Lang 2008: 109). Visiting the territories of the women's tribes to seek furs, the Companies could receive special dispensation, the hospitality afforded esteemed guests, and preferential treatment relative to any competitors - such as the Americans visiting by ship or sometimes building temporary forts - who might seek to trade there. (American venture capitalists did attempt to build small operations on the lower Columbia during the height of HBC influence; most notable was the Nathaniel Wyeth party, which attempted to establish their own fur trading posts in 1832 and 1834, failing both times due in no small part to the tactical advantages of the HBC.) Native women, with their knowledge of tribal languages and territory, were an indispensable source of information to HBC traders too. With women married into the fort community, there was a greater opportunity for diplomatic relationships with the woman's home community, and a reduced chance of violent attacks from her countrymen both at the fort and while on trading expeditions. There is ample evidence that the North West

Company and the HBC sought to induce young men in their service to marry into the Chinook, Clatsop, and other local tribes - not always a difficult task, for single men stationed here for years at a time. Meanwhile, the tribes of the region - accustomed to strategic inter-village and inter-tribal marriages for similar purposes- fully understood and often embraced the idea of having young women marry into the fort communities.[17] Women from multiple tribes were clearly part of the Astoria community, and dwelled within the walls of the fort.

There were not only Chinooks, Clatsops, and other tribes from the immediate area represented at the fort. There were also many other tribes that still gathered with these Native hosts to fish and to trade, many of whom came to trade with Chinook and Clatsop villages with an "inside track" to the fort, or to attempt to trade with the fort directly. Oral traditions of long paddles to Fort George from distant Native communities are still found among the region's tribes today.[18] There were also slaves. The practice of Native slavery brought a pronounced diversity of tribal members into the vicinity of the fort, having arrived on the lower Columbia through a vast slave raiding and trading network. Many Chinookan people of high status held slaves, obtained especially through trade with other tribes along the coast and in the Northwest interior - Shasta, Achomawi, Quilleute, Yaquina, and other people were just a few of those reported as slaves on the lower Columbia. Alexander Ross commented on the women that he saw arriving to trade in the early days of Fort George:

"Slaves do all the laborious work; and a Chinooke matron is constantly attended by two, three, or more slaves, who are on all occasions obsequious to her will. In trade and barter the women are as actively employed as the men, and it is common to see the wife, followed by a train of slaves, trading at the factory, as her husband" (Ross 1849: 92).

Once Chinookan women and fur traders began to marry, these slaves were then owned by multiethnic households, sometimes living in or immediately beside the forts.[19]

The ethnic makeup of the Company employees was similarly complex. In the early years of the North West Company and HBC, most of its European employees were Scottish, and many of these men hailed from the Orkney Islands. Over time, as the Companies evolved, they maintained an English and Scottish-born managerial staff, such as Astoria's Alexander Ross and Alexander MacKay. In the HBC, they had long maintained a mixed employee population of lower-class British and French-Canadian men, as well as Native peoples. To some degree, the organization of the Company recapitulated the class structure of contemporaneous British society. French influences continued to grow, however. By the time the fur trade had arrived on the lower Columbia, the larger industry was increasingly centered on Montreal and Quebec, with the North West Company employing English or Scottish managers and French-Canadian voyageurs serving as the principal field staff. In the consolidated Hudson's

Bay Company, the administrative culture was decidedly British: duties and status were differentiated by race, and administrative positions, divided among white employees, were shaped by preexisting class distinctions to no small degree. In this new Company, the men of the British Isles were disproportionately represented in the fort's Officers and clerks. These men commonly married Indian or Métis "half-breed" women. The lower-status "employees" or "servants" of the fort were more commonly French Canadian or Métis, often descended from previous generations of fur trade employees who had intermarried with Native women. "Laborers" or "canoemen" who were temporarily employed for specifics tasks often consisted of local Indians, Iroquois and other eastern Indians, French Canadian, Métis and - by the time Astoria was founded - Native Hawaiians.[20] While the hierarchical organization of the Company thus still recapitulated British society, it did so within an increasingly multicultural milieu, with race and class clearly defining one's position and one's potentials within the Company in a way that might trump the merits of individual employees. It is clear that the Company officers maintained strict control over some aspects of daily life and often punished transgressions of lower-status employees severely, in a manner that reflected not only employment relations, but the larger relations of race and class which served as the context of Company employment.

While the North West Company and HBC were eager to trade with local tribes, they were reluctant to hire them for anything more than temporary assignments, fearing that their local and tribal loyalties might exceed their loyalties to the Companies. For this reason, the Companies hired Native labor taken from distant lands, who maintained no other local loyalties than those they had to the Company. For example, prominent among the workers at Astoria, and later Fort Vancouver, were Native Hawaiians. Detours to the Hawaiian Islands had been commonplace from the very beginnings of the fur trade, as a resupply point and minor trade outpost visited during the monumental ship journeys between the Northwest, Asia, and eastern North America - Cook's terminus at Kealakekua Bay being an especially popular place (Corney 1932; Bishop 1967). Within a decade of Cook's journeys, Native Hawaiian laborers were being recruited as labor on ships, both British and American, traveling on fur trading expeditions between the Pacific Northwest, Hawaii, and China. Thus it came to be that Native Hawaiians, including the young chief named Attoo from the island of Niihau, was on board Robert Gray's ship the *Columbia*, when this ship made history as the first foreign vessel to enter the lower Columbia (Bona 1972). Roughly one-dozen Native Hawaiians were among the Astorians who arrived at the mouth of the Columbia River in 1811 aboard the *Tonquin* and contributed to the construction of Fort Astoria. A small group of Native Hawaiians were involved in fur trade from this outpost, becoming important to the North West Company operations throughout the region. The men who were employed on the lower Columbia at this time included a few of the men who had arrived on the *Tonquin* in 1811, including Naukane or "John Cox" and Paul Poah. They also included James Coah, who had arrived at Astoria in 1812, and Jimo, Frank Kanah (or Kanak) and Henry Bell Noah who arrived in 1814. The remainder appear to have

arrived on a voyage of the *Beaver* in 1813 or aboard the *Columbia* in 1817 - the latter ship bringing a reported 60 Hawaiian laborers to the lower Columbia. In time, the HBC established its own depots in the Hawaiian Islands, selling goods locally but also warehousing furs and other items to supply their vast intercontinental shipping efforts; by this time, Native Hawaiians were integrated into most of their major operations on the Pacific. (They were, however, the only group to be formally quartered outside of the protected stockade at Fort George) (Barman and Watson 2006: 62; Bona 1972: 166).

On the lower Columbia, the Hawaiian men were widely admired as members of boat crews working in support of fur trade operations. Many fur trade journals make passing reference to highly competent boat crews of Native Hawaiians. Alexander Ross quipped that, on "water...they are as active and expert as the reverse on dry land" (Ross 1855: 193). These Hawaiian men were also seen as being essential to the early defense of the fort and fur trading brigades - especially in the early years of the land-based fur trade, when new tribal territories were being explored and relationships with many Indian communities was still tentative and uncertain. These Native Hawaiian men were often brought along on voyages to serve as guards or paramilitaries in support of fur trade operations. As Ross noted,

"They are submissive to their masters, honest and trustworthy and willingly perform as much duty as lies in their power...They are not wanting in courage; particularly against the Indians, for whom they entertain a very cordial contempt. And if they are let loose against them, they rush upon them like tigers. The principal purpose for which they were useful on Columbia was as an array of numbers in the view of the natives especially in the frequent voyages up and down the communication....on every occasion they testify a fidelity and zeal for their master's welfare and service...It was from this people that captains, in their coasting trade, augmented their crews in steering among the dangerous natives from Columbia River to Behring's Straits" (Ross 1855: 193-94, 293).

Also in their number were a number of Iroquois who, according to Alexander Ross (1855: 85) were "chiefly men from the vicinity of Montreal," who had originally been employed by the North West Company. The North West Company, at the time of the establishment of their Columbia basin operations, recruited labor most actively in a handful of Indian communities in close proximity to their Montreal headquarters. Many of the Iroquois recruits appear to have been associated with the Caughnawaga area, immediately across the Saint Lawrence River from Montreal. Other Iroquois populations from the Oka and St. Regis communities, sitting a few kilometers' distance east and south of Montreal respectively, were recruited into the Northwest trade as well (Jennings 1885: 71; Mackie 1997; Nicks 1980). These men were considered to be great assets to the Company, hunting, trapping and serving as boatmen. Many did not return home, but married Native or Metis women, staying in the Northwest permanently -

often "on Indian reservations established in the United States from 1856 onward" (Lang 2008: 93).

Also among the fur traders, especially after the arrival of the HBC in 1821, were the Cree. The shoreline of Hudson Bay in Canada consisted significantly of Cree territory, as did adjacent lands of the Canadian interior east and west of the bay. The term "Cree" is generally applied to Algonquian-speaking people whose traditional territories have ranged from Atlantic Canada to the eastern edge of the Rocky Mountains in Canada. The Cree traded actively with the HBC beginning very early in that Company's history, and had gradually taken on roles as trappers for the Company. Simultaneously, for well over a century prior to the development of Astoria, the policy of encouraging intermarriage with native communities had been tested and developed squarely within the heart of traditional Cree territory. By the time that the HBC had ventured into the Pacific Northwest, the Company employees included a population of Cree descendants who were, in some cases, more than fourth-generation descendants of the original cross-cultural marriages between Cree and Euro-Canadian Company employees. New Cree employees were being recruited constantly throughout much of the Company's operations north of the 49th parallel in the early 19th century, and some portion of this population was recruited to assist in the early development of operations in the Columbia District (Hale 1846; Lang 2008).

While succeeding at its commercial objectives in many respects, the fort at Astoria had turbulent beginnings. At the onset of the War of 1812, only a few months after the fort was constructed, British forces dispatched the sloop *Raccoon* to assert British claims to American holdings on the north Pacific coast, and to take possession of Astoria's assets for wartime "prize money." Before the ship had arrived, however, Astor decided to sell his fort and other Pacific Fur Company holdings to the North West Company. (Displaced from his Northwest Coast operations, Astor would continue to operate ships along the coast, while developing his interests in other sectors, such as opium smuggling and real estate, the latter elevating him to great wealth and fame in East Coast circles [Ebeling 1998, Smith 1929]). Arriving at Astoria, meanwhile, the *Raccoon* found that the fort already consisted of a largely British crew working under the British-chartered North West Company. The crew carried out a small "possession" ceremony and rechristened the fort "Fort George" to honor King George III all the same. For the men stationed at the fort, most of them British subjects, the event was of minor and largely symbolic significance. In 1818, at the conclusion of the War, the Treaty of Ghent required the British to return their spoils of war to the Americans, including its former Pacific Northwest possessions, leaving the fort's status ambiguous. The United States sent a U.S. navy ship, the *Ontario*, to the coast to formally retake possession of the territory and of Astoria. Taking shelter on the eastern side of Cape Disappointment, the commander, Captain James Biddle came ashore with his crew, held a brief ceremony and nailed a plaque to a tree – an event that was largely ignored by the region's inhabitants – while also raising the American flag over the fort (Long 1983). Two

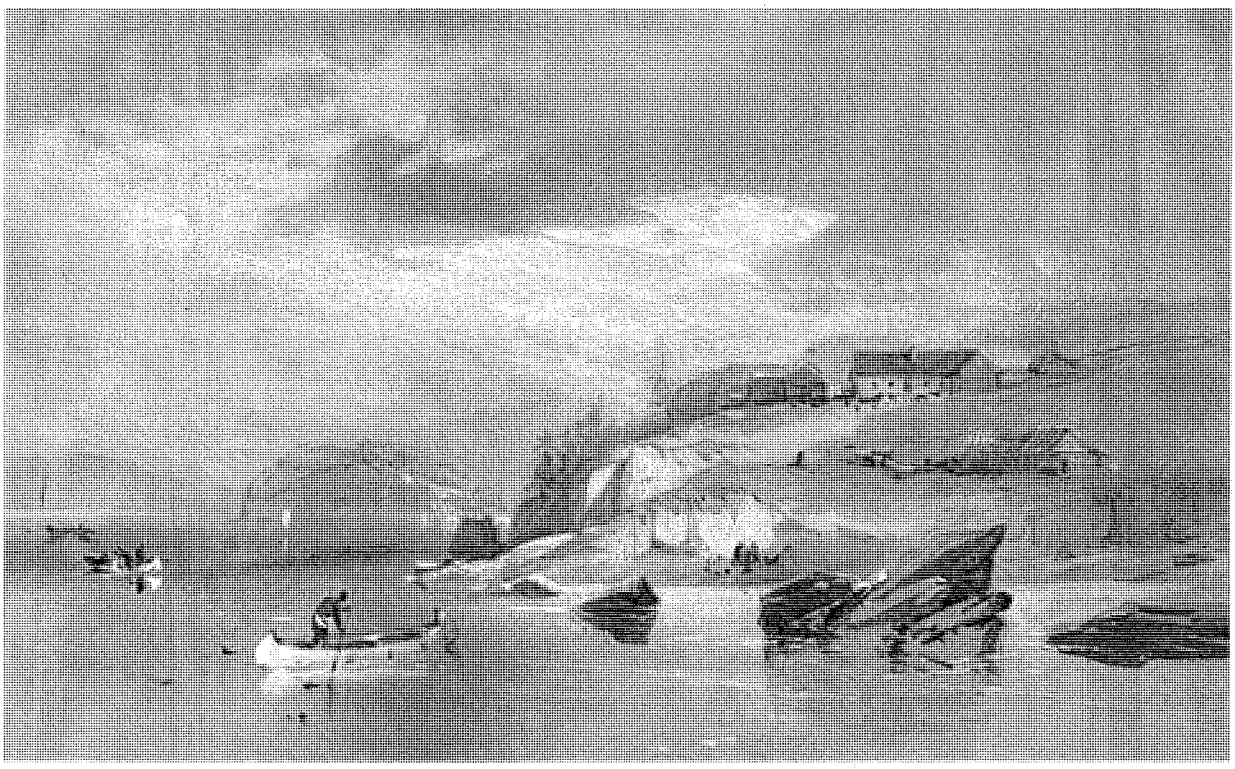


Figure 6.2 - A watercolor image of Fort George (also known as Astoria) during the British period of 1813-18. From National Archives of Canada, W.H. Coverdale collection of Canadiana. Image courtesy Wikimedia Commons.

months later, British officers on the HMS *Blossom* apparently conducted similar proceedings on the same spot at Cape Disappointment, admitting the transfer of "Fort George" back to the Americans but asserting continued British dominion in the territory.[21] The convention of calling the fort "Astoria," "Fort Astoria," or "Fort Astor" rebounded, and an American flag sometimes flew over this British fort, creating an existential basis for the joint national occupation of the Northwest that would follow (Hussey 1957; Elliott 1918a, 1918b).

In 1821, the HBC merged with the North West Company, effectively absorbing its operations and bringing with it a very different, hierarchical business culture. The arrival of the HBC on this coast was the realization of roughly 150 years of Company ambition, initiated when the Company was incorporated under a British royal charter in 1670 as "The Governor and Company of Adventurers of England trading into Hudson's Bay," with the aim of bringing the furs of North America to European markets for a considerable profit. Since its inception, the Company's operations had spread across the expanding frontiers of British North America, especially eastern Canada. Their arrival on the famously fur-rich Northwest coast, within shipping range

of Asia, was a move of great strategic importance to the Company, making the North West Company merger a critical step in their global business strategy. Optimism about the Company's future abounded, and the value of shares in the Company soared in the early years of their Northwestern operations.[22] The rise of the Company's fortunes in this distant corner of North America temporarily gave credibility to British territorial claims to the Oregon country and gave hope to those who envisioned British colonization of the region. For both of these ambitions – pecuniary and nationalistic - to be realized, however, the Crown and the Company recognized that they would have to proceed cautiously and strategically with the large resident population of tribes living there, building upon relationships established by the North West Company. Astoria staff were retained, and even promoted, within the new company, and trade relationships with area tribes did not appreciably change in the Company's first year or two on the lower Columbia (Deur 2011).

Soon, however, the shortcomings of the Astoria fort became a source of concern to HBC officers and governors hoping to expand their presence in the Northwest. By early 1824, HBC Governor George Simpson ordered that the Company move its operations from Fort George to Fort Vancouver – roughly 100 river miles inland. This was done as the HBC restructured their "Columbia Department" following Simpson's tour of the region in 1824-25, in order to make operations more efficient and to adapt to the changing realities of the Northwestern fur trade (Simpson 1931). Fort Vancouver was chosen for its strategic location relative to the developing fur trade of the Northwestern interior. By 1824, the sea otter population of the outer coast had been largely exhausted, and the supply of locally available terrestrial furbearers on the Columbia estuary and adjacent coastline was in abrupt decline. (Various lines of evidence suggest the decline of the kelp forests offshore and a change in the nearshore ecology as a result – an effect of the fur trade that has never been remedied.) The land-based fur trade was quickly eclipsing the ship-based maritime fur trade and the HBC leadership looked eagerly toward the Northwestern interior as a source of beaver and other furs. By necessity, the HBC expanded its commercial operations into a widening sphere of tribal trade networks in the Northwestern interior, and Fort Vancouver sat at an advantageous intersection of the principal avenues of tribal trade running east-west along the Columbia River and north-south along the Willamette Valley and Puget-Cowlitz Lowland.

Simultaneously, food security was also a critical consideration. While there were many reports of Fort George's general success in fostering early agriculture, in truth the agricultural potential was limited. Clearing the dense spruce-hemlock forest was no small task. After working all day chopping a single tree, Alexander Ross noted,

"it seldom came to the ground. So thick as the forest, and so close the trees together, that in its fall it would often rest its ponderous top on some other friendly tree...giving us double labor to extricate the one from the other, and when we had so far succeeded, the removal of the monster stump was the work of days. The tearing up of the roots was equally arduous... Nearly two

months of this laborious and incessant toil had passed, and we had scarcely yet an acre of ground cleared" (Ross 1832: 73-74).

Clearings around the fort were understandably small. Crops were few in number, and often struggled in the small forest clearing housing the fort, with its acidic soils, long winters and north-facing slopes; lacking large fields for grazing, livestock (except perhaps the pigs) tended to suffer high mortality from cougars, bears, wolves, and other predators while grazing the forest. In this light, traders had been largely dependent on the Clatsop and Chinook to acquire a sizeable portion of their food supply - salmon in particular. This created dependence on local tribes, undercutting not only the fort's security, but also the negotiating power of its traders who bargained with these tribes for each pelt arriving at the fort. At Fort Vancouver, in contrast, the land was relatively level and south-facing, with vast meadows cleared of forest by an apparently long history of Native burning. With its verdant fields and its southern exposure, the site had agricultural potentials unsurpassed, arguably, along the entire lower Columbia River shoreline, and was Fort Vancouver's most important strategic asset. So too, the fort was located on the north bank of the river, based on expectations that the south side of the river might someday fall into American control By as early as April 1824, visitors depict Fort George as being largely abandoned, with most of its residents assisting in the construction of Fort Vancouver far upstream.[23] By April of 1825 all of the operations of Fort George had been moved to the new facility in what is today Vancouver, Washington, bringing with it all of Fort George's storage, trade, and other functions in one centralized facility. Here, Fort Vancouver became hugely important in the region, the heart of the Columbia District and the central headquarters of a network of fur trading posts throughout modern-day Washington, Oregon, Idaho, and British Columbia. Meanwhile, Fort George was largely unoccupied for the next four years, being used mostly for storage and as a depot for shipments moving up and down the river (Deur 2011).

In spite of the HBC's decision to largely vacate the Columbia estuary, the landmarks of the estuary remained of great importance to the Company's operations. Cape Disappointment and Chinook Point (both Fort Columbia and Middle Village) remained the principal landmarks used by mariners entering and leaving the river to establish their bearings. Meanwhile, Cape Disappointment was commonly used as a lookout by men sent to watch for ships attempting to enter the river, or to see if winds and the bar were right for vessels attempting to leave (Hussey 1957). Indeed, once Americans began to move into the area, Chief HBC Factor Peter Skene Ogden spent a total of $1,000 of his own funds (later reimbursed by the Company) in order to purchase American claims to the cape. He did this so that the Company could establish a small trading post and a "pilot's lookout" to aid in navigation in the site - actions that anticipated the construction of lighthouses and other navigational infrastructure several decades later.[24] Meanwhile, the rotting remnants of Fort Clatsop, still occasionally

used by Coboway and his family as an outpost, now became a curiosity visited by traders traveling up and down the river en route to the forts - a kind of early historical tourism.[25]

While these changes in HBC operations were greeted with a mix of concern and enthusiasm by Portland Basin Chinookans, the move was understood to be a potential threat to tribal trade interests on the estuary. Concomly worked to remain relevant now that he was being bypassed by the shifting geography of the land-based fur trade, and worked to demonstrate to Chief Factor John McLoughlin and other HBC leadership that he was the preeminent leader of the lower Columbia who should still be the conduit for regional trade. Concomly made several visits upriver to Fort Vancouver, often with flotillas of canoes mobilized as much for their dramatic effect as for their fur-carrying capacities. Arriving at the new fort, Concomly was reported to be preceded by 300 slaves and, as reported by deSmet, "he used to carpet the ground that he had to traverse, from the main entrance of the fort to the governor's door, several hundred feet, with beaver and otter skins" (deSmet 1905: 443). This demonstration of his tremendous wealth and power had multiple audiences, both Native and non-Native - helping to inspire loyalty among his own people and commercial enthusiasms among the Company officers, thereby to insure the continuation, and perhaps even the expansion of his influence.

Indian-white relations on the Pacific Northwest fur trade frontier were surprisingly peaceful, aided by the mutual economic interests and intermarriage. There were a few exceptions that marred this history of interethnic cooperation, however, and one of the most prominent took place in the Columbia-Pacific region. The HBC fur traders had a keen interest in developing binding relationships with the tribes as a means to economic ends, and yet were also wracked - especially in the 1810s and 1820s - by a sense of vulnerability and dependence on the tribes, who outnumbered Company staff by a vast margin. Clearly, the threat of violent attacks from the Indians was a source of great concern to HBC officers in the early years of Astoria and Fort Vancouver. The example of the 1811 *Tonquin* disaster was still fresh in the minds of many HBC employees, some of whom (including HBC Chief Factor, John McLoughlin) had adopted the children and married the widows of those killed in the conflict. Recognizing that even the perception of Indian troubles was a threat to their enterprise the HBC employed a policy of what we might today term "massive retaliation," responding severely to any hostile acts by the region's tribes in order to make a highly visible example of them. It is clear that attacking and razing entire villages was a retaliatory tactic employed by HBC employees throughout the Columbia District, and one of the most widely known examples of this occurred at the mouth of the Columbia (McLoughlin 1843b).

When the ship, the *William and Ann*, carrying HBC cargo and crews foundered in the surf at the mouth of the Columbia in 1828 and sank, killing all aboard, the Clatsop salvaged the cargo along the shoreline, as was their custom. Rumors surfaced that the

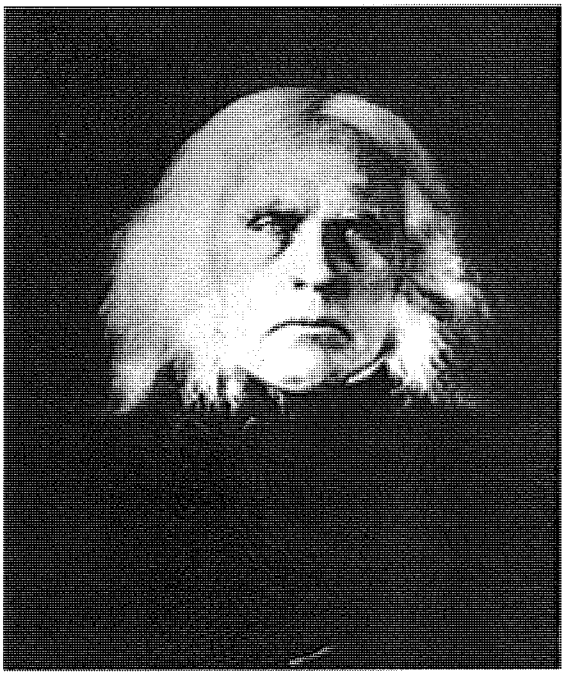


Figure 6.3 – Hudson's Bay Company Chief Factor, John McLoughlin, who oversaw that Company's operations on the lower Columbia River for most of its almost three decades of dominance in the region's fur trade. Image courtesy Oregon State Library, Salem.

Clatsop had killed survivors and John McLoughlin dispatched a team from Fort Vancouver to recover property and to make an example of the Clatsop; they shelled the main Clatsop village in what is today Fort Stevens and burned it to the ground. While McLoughlin indicated in official correspondence that four Indians were killed, tribal oral tradition suggests that the attack killed many more residents of this village, as well as guests from other tribes (Deur and Thompson n.d.).[26] Only later did McLoughlin determine that there was no evidence of Clatsop murdering the crew of the *William and Ann* (though there was evidence that tribes who competed with the Clatsop for Company trade had been involved with the spread of such rumors). Still, in light of the *realpolitik* of the Northwestern fur trade, McLoughlin depicted this action as a strategic necessity. In his letter to the Governor and Committee of the HBC, dated August 13th, 1829, McLoughlin explained his actions. He noted that the Clatsops had not killed the crew but had obtained its cargo, and that the Company had to make an example of them for larger, strategic reasons:

"the Indians considered the [salvaged] property as ours…if we had not made a demand of it we would have fallen so much in Indians Estimation that whenever an opportunity offered our safety would have been endangered… our people [had] no alternative but to attack the Indians and act towards them in the manner they did" (McLoughlin 1829e: 41).

The Clatsop rebuilt what was left of their village, with no apparent retaliation against the well-armed Company - the Clatsops' longtime trading partners now stationed in Fort Vancouver. The HBC did not provide reparations, though McLoughlin's correspondence makes it clear that he was ultimately convinced of the Clatsops' innocence in the matter of murdering the *William & Ann* crew.

The lower Columbia generally, and Astoria and Fort Vancouver in particular, were gathering places for people traveling through the region by land and by sea. As such, the forts and villages at the river's mouth became vectors for diseases carried by people arriving by ship. With ship traffic arriving regularly, originating from ports in Asia, the Pacific Islands, coastlines throughout the Americas and the British Isles, a steady procession of diseases had struck the lower Columbia since Robert Gray's arrival, and it was perhaps just a question of time before a major epidemic would arrive at this bustling trading center. In the year 1830, that major epidemic arrived. This year brought a devastating epidemic to the lower Columbia River, which would radically and permanently change the demographics of the region. The "fever and ague" or "intermittent fever," as it was often called in the journals of the time is first reported at Fort Vancouver in 1830 - the first major epidemic witnessed directly by non-Indians. Most sources concur that the disease was, in fact, malaria. While the specific path of introduction remains unclear, most sources acknowledge that the fort was probably its first point of arrival in the region. The American ship *Owyhee* is sometimes implicated in historical sources, though some authors have suggested that the rumor of this ship's responsibility might have been broadcast by HBC employees to undermine tribal communities' confidence in their American competitors (Cook 1955: 38-39; Boyd 1999, 1990: 85-88, 1985: 112-145; Salleeby 1983).

The epidemic spread through the region from its lower Columbia core, ultimately appearing in the interior of Oregon and well into central California, and continued to plague the lower Columbia for much of the decade, with outbreaks rebounding each year - typically in the summer, when mosquitoes rapidly spread the sickness along the marshy margins of the Columbia. Despite its geographically wide influence, the epidemic's effects were most lethal on the densely settled tidal reaches of the Columbia River. The demographic consequences of the epidemic for the Chinookan peoples of the lower Columbia were severe, while the personal, social and cultural consequences for tribal communities was clearly horrific - a point on which there is regrettably little record reflecting the contemporaneous perspectives of the Native people, themselves. Clearly, the loss of this scale - roughly 90% of the total population - from the ranks of any society would be apocalyptic and cause contractions and transformations throughout every aspect of community life.[27]

Among the major consequences of the epidemic was an almost immediate change in the relative size and influence of individual Chinook populations. The lower river

Chinooks - once the largest and most prosperous population in the region - were abruptly eclipsed in their scale and regional significance by other interior tribes. As French explorer Eugene Duflot de Mofras observed toward the end of the epidemic, *"Upper Chinooks still number about 1,000 individuals. However, the Lower Chinooks, who a few years ago had nearly 100 huts, today do not exceed 300 persons. Malignant fevers have decimated entire villages"* (Duflot de Mofras 1937: 182). Concomly and many of his kin were among the dead. In 1830, HBC employee Francis Ermatinger reported of these lower river populations that

"we were visited by a most malignant intermittent fever some time ago, and of which we are not totally recovered yet. It carried off King Concomly with most of his subjects and those of the tribes about him. It is no unusual thing to see two or three dead bodies, in a short excursion along the river. Some of the villages were entirely depopulated" (in McDonald 1980: 140).

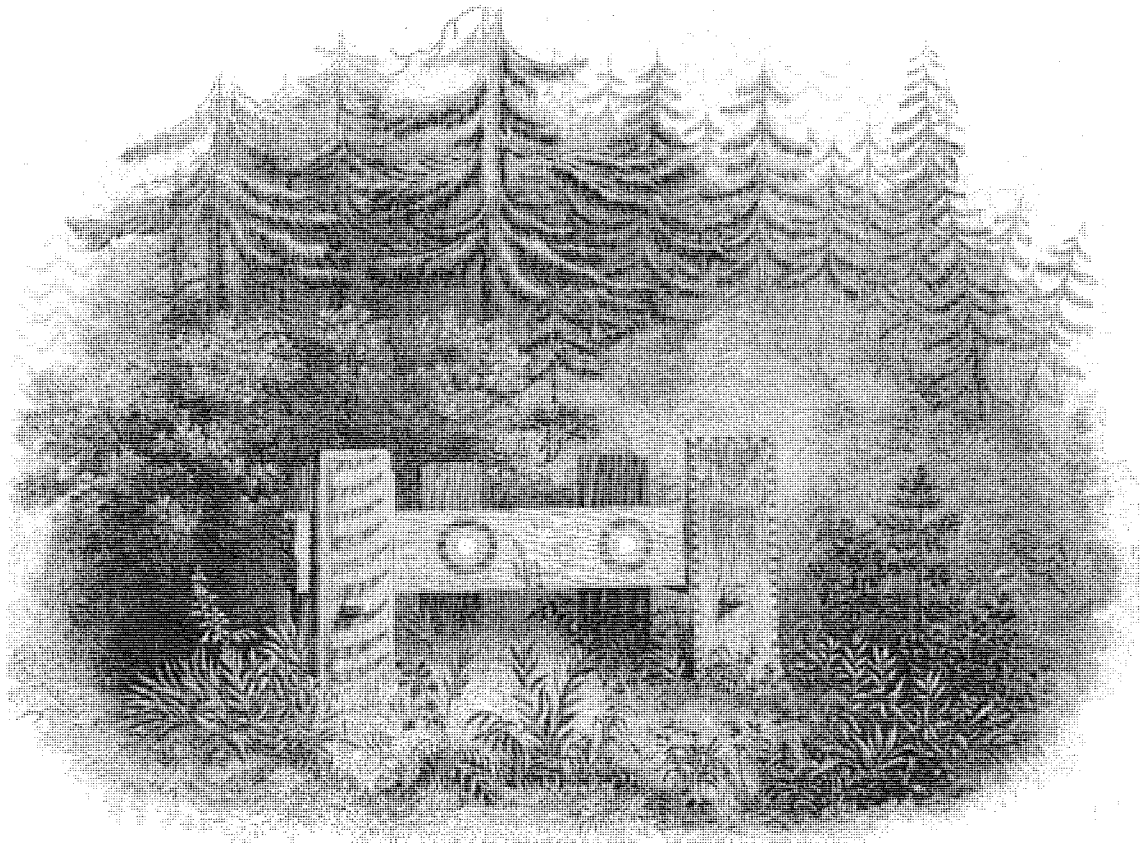


Figure 6.4 – Concomly's gravesite, as depicted by Alfred Agate of the Wilkes Expedition, in 1841. Concomly's death in 1830 came at a time of unparalleled suffering in the tribal communities of the region resulting from the arrival of diseases on ships traveling to the fur trading posts at Astoria and Fort Vancouver. A monument to Concomly, echoing the design of this burial, would later be constructed on Coxcomb Hill in Astoria. From Wilkes (1845).

With the death of Concomly, the prominent chief of the lower Chinooks, along with many of his villagers and slaves - reducing Middle Village to a fraction of its former size - the Chinookan position in the fur trade was forever transformed.[28] To many, Concomly's death to malaria symbolically marked the "end of Indian social dominance on the Greater Lower Columbia," and reduced the lower Chinook villages to a position of relatively little influence on the economic and social life of the fort community (Hajda 1984: 46). As had been the case during prior epidemics, survivors regrouped in myriad villages along the coast. Many other village sites were largely abandoned, becoming seasonal camps or burial sites where large settlements once stood. Vast burial sites, hastily constructed by survivors, are reported in the area, some apparently dating from this period. Not far from the Salt Cairn site in Seaside, for example, early chroniclers mentioned a space of no less than an acre "almost covered with human bones and skulls," while similar, sprawling burial areas are reported on the Lewis and Clark River not far from Fort Clatsop (Gillette n.d.). At this point, the Chinook, Clatsop, and other peoples of the lower Columbia were becoming a minority on their own lands, and were no longer treated as either a strategic threat or as a source of commerce by the HBC.

Reflecting these dramatic changes, as well as changes in the international operations of the HBC, the Company reactivated Fort George in 1830, expanding the fort's storage and depot functions for transoceanic trade. The Company also redeveloped a portion of the fort to serve as the base of operations for a growing salmon fishery and very small-scale lumbering operation - a function that the fort would maintain until the HBC departed in 1848. Fort Vancouver maintained an apparently lively and enduring trade selling salmon and lumber in Hawaii and those ports around the Pacific that were served by the Company's Hawaii depots. Company employees, especially Native Hawaiians but also French-Canadian and Metis, shipped barrels of preserved fish to Hawaii and other destinations. Native Hawaiians caught, processed and barreled salmon - a small portion was consumed locally by HBC staff and visitors, but most was shipped to Hawaii. Though reeling from the effects of the epidemics, the Native communities of the lower Columbia, Chinooks and Clatsops, supplied the fish for these operations (Sylvester 1933: 360). There was also a small wood milling operation at Fort George, maintained by the same employees who operated the fishery. Upstream, Fort Vancouver had maintained a large operating sawmill since 1828, largely supplied by Native Hawaiian labor, as well as Métis and French Canadians, and it is likely that some of the men who aided in the milling and shipment of lumber at Astoria had first gained experience in that operation. As with salmon, most of the lumber was shipped to Hawaii for sale or redistribution throughout the Pacific. In addition to supporting the Hawaiian trade, ships occasionally arrived on the lower Columbia from Spanish California and Mexico, seeking lumber to build missions and other structures on their northern frontier (McLoughlin 1829, 1841; Martin 2006).

The mouth of the Columbia remained a major thoroughfare, visited by most prominent travelers of the day who entered the Columbia Basin. Explorers of the day passed

through and commented, if briefly, on what they observed at the mouth of the Columbia, noting key navigational landmarks such as Cape Disappointment, Chinook Point, and Point Adams, as well as the modest fort community in Astoria. Among those explorers were members of the United States Exploring Expedition under Commander Charles Wilkes, one of the United States' great journeys of exploration. Attempting to enter the Columbia, the Wilkes Expedition wrecked the U.S.S. *Peacock* off of Cape Disappointment on July 18, 1841. A faulty chart of the river entrance doomed the *Peacock*: following proper bearings on Cape Disappointment and Chinook Point along channels that had shifted or improperly surveyed, the ship became trapped in the breakers. All of the *Peacock's* crew escaped because of a rescue organized by an African-American servant, John Dean, who had joined the crew while they were anchored on Puget Sound. From the bluff of Cape Disappointment, Dean recruited a boatload of Chinooks, led by a pilot called "Old George," who directed the schooner over the bar. The *Flying Fish*, another Expedition ship, joined the castaways at the first landing beach north of the cape, finding the crew safe but a sizeable portion of the expedition's records lost to the sea (Philbrick 2003). The only remnants of the rescue that could be seen at this site in 1858 were ovens used by the encamped crew, but an African-American cook from the *Peacock* named James Sanler (also called "De Sauls," "DeSaule," "Santos," or "Saul") decided to stay, building a shack on Cape Disappointment and residing there until 1846.[29] Undeterred by the wreck, Wilkes had his men complete a chart of the lower river and the first report on the rivers and harbors of the Pacific coast two years later (in 1843) as a precursor to work by the United States Coast Survey. Though the findings of the Wilkes Expedition, including the five-volume *Narrative of the United States Exploring Expedition*, were well received and widely hailed as a national scientific achievement of national importance, Wilkes was court-martialed upon his return - in part for his loss of the *Peacock* (Tyler 1968; Hussey 1957).

The objectives of the Wilkes Expedition to map the mouth of the Columbia, and report on its natural resources, was only part of a larger American effort to assert their claims to the Oregon Country. As part of this larger effort, the United States formally assigned a man named Elijah White to the position of Oregon "Sub-Indian Agent" in 1842, one year after Wilkes' journey. White was instructed to begin negotiating American treaties with tribes preemptive of proposed American expansion into the region. White attempted to negotiate treaties with the Cayuse, Nez Perce and others, seeking to carve out an association with those tribes that would depart from their long and relatively close relationship with the HBC and its British subjects. Whereas the HBC had maintained a cautious approach to the large Native nations of the region, White began to introduce concepts such as forced relocation and reservation development to area

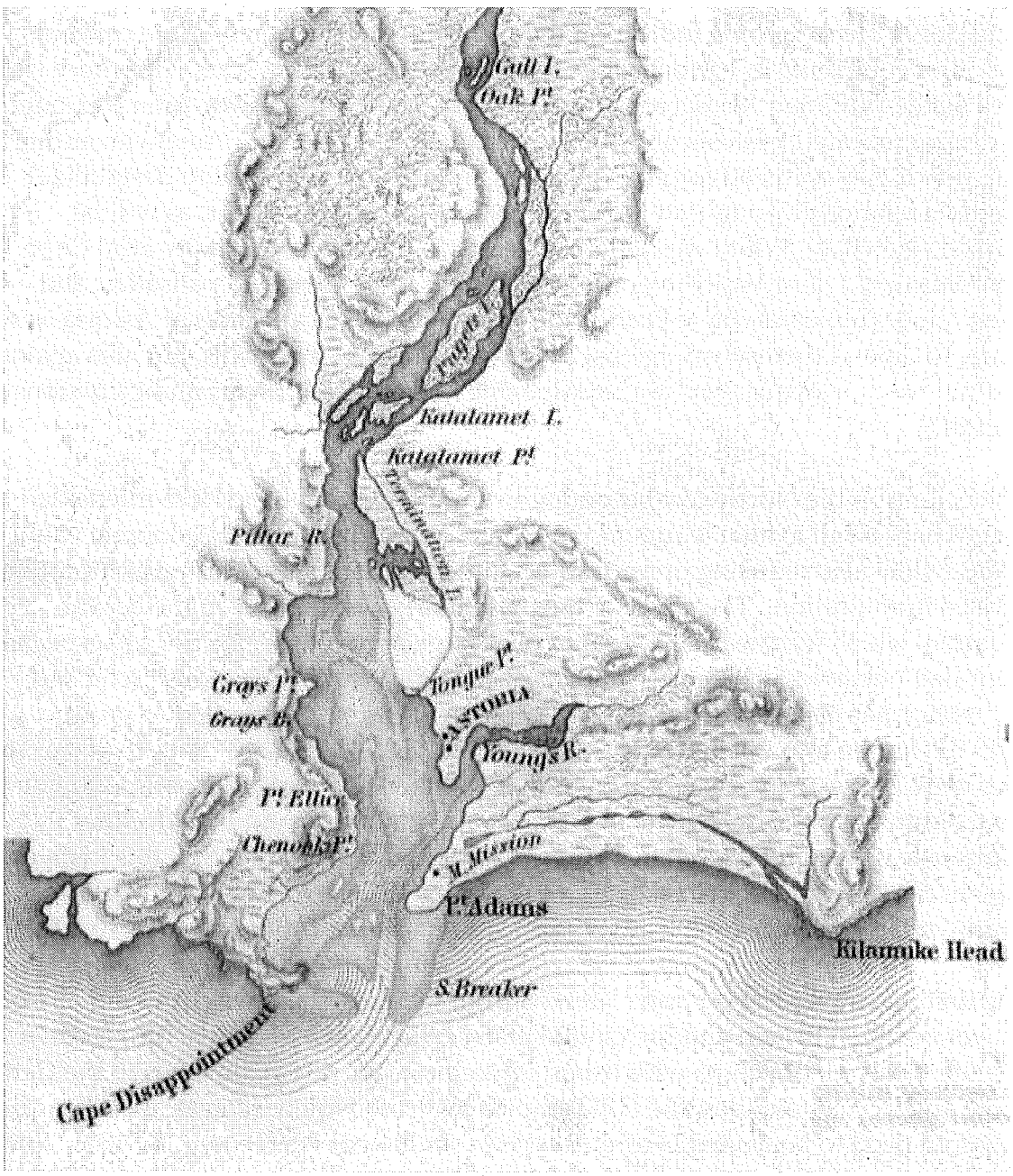


Figure 6.5 – The mouth of the Columbia River, as mapped by the Wilkes Expedition in 1841. By this time, the Methodist mission sat near the Clatsop village on Point Adams and Astoria merited two 'dots' on the map, indicating some modest growth beyond the original fort. From U.S. Exploring Expedition, 1845. *Map of the Oregon Territory by the U.S. Ex. Ex., Charles Wilkes, Esqr., 1841*. Philadelphia: Lea and Blanchard. Image courtesy Wikimedia Commons.

tribes – strategies that would have been unthinkable and unnecessary during the fur trade, but designed to accommodate America's vision of regional agricultural

reoccupation. There is some indication that White's introduction of these concepts would later contribute in various ways to nationally significant wars with those tribes, as well as the Whitman Massacre (Deur 2011; Bancroft 1890: 253-96). John McLoughlin would send repeated protests of White's interference to HBC and American authorities, noting that it was both bad for HBC business and had the potential to destabilize interethnic relations throughout the entire region. (Some years later, as will be discussed elsewhere, White would later attempt to found a community atop Cape Disappointment.) Fort Vancouver reinforced their long-neglected palisades, and modest repairs appear to have been made to the defensive capacities at Astoria as well - not only to defend themselves against potentially hostile Americans, but also against tribes that were growing ever more restive due to American threats and incursions (Deur 2011).

British claims on the Northwest becoming ever more tenuous, the HBC intensified their efforts to harvest all available furs in the region - wringing the last economic value from the land, while also reducing opportunities for American competition and incentives for American immigration. The effects were particularly destructive on the beaver population, which was nearly extirpated over large areas of the Northwest, especially in present-day northwestern Oregon and southwestern Washington. This "scorched earth" policy has been termed a kind of "ecological warfare" intended to produce a "fur desert" in Oregon and Washington (Muller-Schwarze 2011: 162).[30] Some 3,000 or more beaver were harvested per year through much of the HBC period of occupation on the lower Columbia; in the final years of HBC occupation, those numbers declined precipitously, reflecting the relative scarcity of the species. In practice, this instigated a change in the broader riparian ecology of the lower Columbia region, probably resulting in the first measurable adverse effects on salmon (Muller-Schwarze 2011).

As the first American wagon trains arrived from the East, there was growing talk of open war between Britain and the United States over claims to the Pacific Northwest. With their close relationships with tribes, interethnic marriages, linkages to the Catholic Church, and British loyalties, the HBC employees were widely seen as alien occupiers who would need to be ousted before American settlement was secure. By 1845, spies working on behalf of the British Crown, Henry Warre and Merwin Vavasour, even explored the lands of the lower Columbia to assess the loyalties of Chinookans and other peoples to the HBC in the event that they would need to be enlisted for a war against the United States. Consulting with HBC Governor, George Simpson, they proposed taking Tongue Point, Point Adams and Cape Disappointment by force and building armed fortifications on these promontories to repel American ships (Warre and Vavasour 1909; Warre 1848).

Figure 6.6 – Rounding Cape Disappointment by ship, as shown in a watercolor by Henry Warre in 1845. Serving as a British spy on the lower Columbia River during the tense border negotiations between his country and the United States, Warre and his fellow traveler Merwin Vavasour would propose British fortifications atop several local landmarks, including Cape Disappointment – shown here with markers on its summit. Image courtesy Oregon Historical Society.

"For the protection of British interests on the Columbia and N. W. Coast...it would be highly important to get possession of Cape Disappointment, and to erect thereon a strong battery, which would effectually command the mouth of the Columbia River, as unless the southern channel may have been found practicable since I was there, ships entering the River must pass so close under the Cape that shells might be dropped almost with certainty upon their decks from the battery...

"On Point Adams I would place a battery of 5 guns, having its gorge defended by a blockhouse, similar to that for Cape Disappointment. These points being covered with immense timber, which would require a length of time to remove, open works could not easily be formed...

'For the occupation of Tongue Point, I would recommend a battery of heavy guns on the West side overlooking the ship channel, with a blockhouse or defensible barrack near its gorge...There are some other points on the north shore apparently offering good positions, such as Chinook point and Point Ellis" (in Simpson, et al. 1912: 149-50).

By the time that Warre and Vavasour's proposals were being reviewed in London, the issue of Northwestern claims had already been settled. The passage of the Oregon Treaty in 1846 largely settled the boundary dispute between the U.S. and Britain, sealing the fate of the HBC on the lower Columbia River. The Company began a slow-motion retreat, removing goods, personnel and facilities to other parts of their domain. A significant proportion of those people still in the service of the Company moved to Fort Victoria, in Victoria, British Columbia, becoming founding figures in the history of that province. Many others stayed, living in the community of Champoeg in the Willamette Valley, or integrating into the larger fabric of Pacific Northwest society - within white communities or Native communities, depending on their pigmentation and predilections, as the comfortably multiethnic world of the fur trade gave way to the comparatively segregated world of the American agricultural frontier. The fort at Astoria was abandoned by 1849 with the final departure of the HBC, the lands formerly occupied by the fort gradually being reoccupied and redeveloped as part of the urban fabric of Astoria, Oregon. The sea otter that had largely instigated the trade was nearly extirpated from this coast, meanwhile, and beaver would only rebound slowly over the years - both animals' absence having broad effects on regional environments that arguably still affect fisheries and other human affairs today. Fur trading would never again be a major part of the economic and social landscape of the lower Columbia (Bancroft 1890).

Parenthetically, it should be noted that the year 1911, exactly one-hundred years after the arrival of the Astor party on the Columbia estuary, was of huge symbolic importance, marking the end of the sea otter population that had precipitated the great European scramble to the Columbia-Pacific. In that year, the last native sea otter seen on the coasts of Oregon and Washington was reported at Willapa Bay, mobilizing enthusiastic local hunters into the water in boats big and small. (Only many decades later would reintroduction efforts and population rebounds bring a rare 'bachelor male' otter, swimming solo, to the Columbia-Pacific.) As the sea otter disappeared, so too did the republics that had brought it very close to extinction. In that same year, over 2,000 years of imperial Chinese history came to an end with the Xinhai Revolution, while Mexico too was at the height of its own violent revolution that sought to overthrow vestiges of the old colonial state. Also in that year, an environmental treaty far ahead of its time was signed by the United States, Britain, Japan and Russia - also on the verge of its own transformative revolution; the North Pacific Fur Seal Convention of 1911, called for an end to the hunting of the sea otters of the north Pacific, noting that after a century of frenzied commercial hunting, the entire species was approaching extinction (Vaughan 1982; Scheffer 1940).

As during the era of maritime exploration and seagoing fur trade, almost every part of Lewis and Clark National and State Historical Parks had some connection to the story of the land-based fur trade in the first half of the 19th century. The Chinook village at Middle Village/Station Camp was central to much of the history of interethnic trade, as

was the Clatsop village formerly sitting at the modern site of Fort Clatsop. In addition to being home to the principal Native traders, these places were visited frequently by non-Native traders based in Astoria or visiting by ship. The fur trade history would certainly be included in any complete National Register nomination for these two places. Cape Disappointment and Ecola State Park were traversed by fur traders and Native hunters alike, and their shorelines were no doubt hunted for sea otter. Cape Disappointment and Fort Columbia/Station Camp were arguably the principal navigational landmarks used by almost every ship attempting to cross the Columbia bar during this period. Several park sub-units are associated with specific historical events of this period including: the loss of *Tonquin* crew upon their arrival in 1811 (Waikiki Beach at Cape Disappointment), the ceremonial proclamation of British and American territorial rights at the end of the War of 1812 (Cape Disappointment), the *William and Ann* sinking and HBC attack on a Clatsop village (Fort Stevens), the wreck of the *Peacock* (Cape Disappointment), and the proposed war between Britain and the United States in the 1840s (Cape Disappointment and Point Adams especially). Though not within park management, the former fort site at Astoria - including both private and public lands – has been designated as a National Historic Landmark on the National Register of Historic Places; this is the highest possible recognition for a historical site other than designation of a place as a unit of the National Park Service. Recent archaeological investigations at the former fort site have been facilitated in part by the research for the current research, and a separate report has been produced as part of the current research to detail the location, configuration and appearance of the fort over time (Watters, Deur et al. 2009).

7: Reoccupying the Land: Settlers and the Formation of Agricultural Landscapes

The resettlement of the Columbia-Pacific region that took place over the course of the 19th century was in many respects an agricultural occupation. Non-Native people had lived on this coast for a few generations beforehand, but the settlers who arrived in Oregon and Washington during the mid-19th century possessed a fundamentally different vision of the landscape than the communities that had preceded them. Whereas fur trappers presented a somewhat transient presence, navigating Native communities and a relatively unmodified natural landscape, the people who now arrived in the Columbia-Pacific region intended to settle the land extensively and permanently, transforming the terrain to cultivate introduced crops and to produce enduring homes spread diffusely across the land. Of northwestern European stock, by and large, and primarily hailing from the American Northeast and the recently resettled Midwestern frontier, these people came to the Northwest with particular, and largely unprecedented, expectations of how one might make a living in the Columbia-Pacific. The horrible epidemic diseases that had nearly depopulated the land immediately preceding their arrival gave a false impression that they arrived in a relatively untrammeled "wilderness," awaiting human occupation and husbandry to achieve its full potential. Though they did not build the agricultural empire that some might have envisioned, and many early horticulture experiments had ambiguous success, they did transform the landscape in pervasive and enduring ways.

The Native peoples of the region had actively managed plant communities in ways that were in many respects horticultural. There is evidence of burning and pruning of berry bushes to enhance their output, as well as the burning of prairies to foster the production of bracken fern, camas, and other food plants. There was probably a lot of planting and seeding of plant seeds and rootlets, and the region's tribes engaged in abundant ceremonial prescriptions to ensure successful future harvests. The agriculture brought to the region by European peoples was certainly not a complete novelty to Native peoples and, ironically, the success of these introduced agricultural practices was in some manner aided by landscape-level cultivation practices of aboriginal origin, which opened the clearings that would be occupied by non-Native settlers in the 19th century (Deur and Turner 2005; Deur 1999).

From the very beginnings of the fur trade, introduced agriculture was beginning to transform the Columbia-Pacific landscape. Journal accounts make it clear that various ships' crews sometimes planted small and experimental gardens at the mouth of the Columbia, in the hope of cultivating a few familiar crops as they passed through on later stages of their voyage. The earliest reported case was in September 1795, when the English ship *Ruby* anchored in Baker Bay – just east of, and interior to, Cape

Disappointment - and crew members planted beans, peas, celery, and radishes on a small island there. Returning to the lower Columbia on their return voyage, they were able to harvest some modest crops, an event that was claimed to be the "first horticultural enterprise in the Pacific Northwest" (quoted in Lucerro and Hobbs 2004: 14). A variety of other temporary gardens, planted to support the maritime fur trade, were reported on the Columbia in the years that followed. In 1810, the Boston-based Winship brothers attempted to develop an agricultural outpost to support visiting fur trading ships and their own anticipated fur trading post. Finding arable and unoccupied land to be rare near the river's mouth, the brothers opted to develop their gardens upstream in the vicinity of Clatskanie; their operation would soon fail, though, due to the combined effects of riverbank floods and tribal opposition (Jerzyk 1940). The gardens planted at the Astorians' fort beginning in the spring of 1811 produced modest crops, but only with considerable difficulty and many months of fighting back the oppressively dense spruce-hemlock forest. Livestock raising was a mixed success there, but pigs thrived, becoming so numerous that fort residents went on occasional pig hunts in part to simply cull the herd. A few cattle survived the region's large predators long enough to supply beef, and the fort even kept a few milk cows, too. Yet, after a little over a decade in use, the fort was largely abandoned due in no small part to its lack of agricultural potential in the dense, damp forests of the coast, as well as the strategic disadvantages placed on fort staff by their dependence on the Clatsop and Chinook peoples for staple foods. The HBC eagerly moved their operations to Fort Vancouver, where vast open fields and floodplain soils provided for the development of a thriving agricultural enterprise (Hussey n.d.; Deur 2011).

The agricultural occupation that would commence at the end of the fur trade era, however, was quite different in its scale and effects. Its footprint would be far larger and more geographically widespread, involving large numbers of settlers arriving and acting independently in many parts of Oregon Territory, clearing the land with an expanding range of methods and technologies. In the new era of settlement, too, land was also acquired through legal mechanisms, designed at once to encourage American emigration to Oregon Territory and to place sizeable portions of the territory into private ownership to facilitate settlement and development, including non-agricultural development. By 1843—the effective beginning of appreciable American emigration along the Oregon Trail—the Oregon Territorial legislature made arrangements for land claims of up to 640 acres for married couples or 320 acres per individual. These claims did not have legal standing in U.S. or British courts, but provided a legal context for very early settlement in places such as the Willamette Valley.

It was the Donation Land Claim Act and the Homestead Act that followed, however, that more completely transformed the Northwestern landscape and allowed for an effective reoccupation of the land by settlers hailing primarily from the American East. On September 27, 1850, President Millard Fillmore signed the Donation Land Claim Act, commonly referred to as the Oregon Land Law, authored by Oregon Territory's

first congressional representative, Samuel Royal Thurston. This law allowed white and half-Indian citizens over the age of 21 to select claims on unsurveyed lands in Oregon Territory. The law was later extended to California and to Washington Territory, which was carved from Oregon Territory in 1853. Under the terms of this law, homesteaders could obtain 320 acres and, if married, the couple could obtain 640 acres in total; continued ownership of the claim required that the owner "prove up" the land by demonstrating "the fact of continued residence and cultivation" within 12 months of its initial survey. The law served to promote homestead settlement of Oregon Territory and to create an unassailable American presence in the West. In this respect the law was a success: when the law expired in 1855, roughly 30,000 new American settlers had entered Oregon Territory, and roughly 7000 individuals held legal claims to 2.5 million acres. Oregon and Washington congressional delegations petitioned for extensions of the act to foster additional settlement in the years that followed. Ultimately, President Abraham Lincoln would sign the Homestead Act on May 20, 1862. This law, which largely expanded on the spirit of the Donation Land Claim Act in Oregon and Washington Territories, enabled any U.S. citizen, or intended citizen, who had never borne arms against their government to file an application to claim 160 acres of surveyed government land. The act required the homesteader to file an application, live on and improve the land for a period of 5 years, then file a deed of title to the land. Northern states in particular supported this act, which was meant to populate Western states with farmers and undermine some of the South's economic and political sway in the increasingly fractured nation at the beginnings of the Civil War.

Yet, Native title proved to be a persistent obstacle, as the United States sought to issue settlers clear title to lands to support this imagined agricultural foothold of the American nation. Treaties meant to extinguish Native title were the principal mechanism for clearing title for the reoccupation of the landscape by federal and private landowners alike. A series of treaties negotiated at Tansey Point (in what is today's Warrenton) by Anson Dart in August 1851 were meant to accomplish this goal with the tribes of the Columbia-Pacific. In the course of these treaties, U.S. representatives negotiated independent treaties with numerous tribal communities, including the Clatsop, Wau-ki-kum, Konnaacc, Kathlamet, Klatskania, Wheelappa, Lower Chinook, Nehalem-Tillamooks, the "Lower Band of Tillamooks," and others. Though the content of these treaties varied, all of them involved tribes ceding claims to the bulk of their territories in exchange for promises of modest payments and government assistance, and in some cases the retention of small inholdings within their former lands as reservations. The Chinook were able to reserve "*the grounds they now occupy*," protecting the remaining Chinook settlements north of the Columbia as *de facto* reservations. Though the point was not explicitly stated in the treaty, this would have presumably included a good portion of Station Camp. In their negotiation of treaties, the Clatsop requested a single sizeable reservation, but non-Native agricultural settlements were already beginning to encroach on the margins of their larger villages and U.S. negotiators found it difficult to envision a reservation proposal that would not

prompt opposition from settlers. Instead, the Clatsop were promised a smaller reservation at Point Adams, in what is today Fort Stevens State Park, as well as continued access to "*their fishing grounds at the mouth of the Neacoxsa Creek [in Seaside] whenever they wish to do so for the purpose of fishing.*" In the end, however, the U.S. Congress did not ratify the treaties, due in part to the intercession of members of Oregon's congressional delegation such as Joseph Lane, who objected to the effects of the proposed reservations on what were perceived as American strategic interests: the loss of non-Native homesteads, the preemption of potential military forts at the Columbia mouth, and the continued presence of a large Native population on the lower Columbia (Ronda 2011: 110–113). Other legal mechanisms and other treaties would be ventured in the years ahead, including separate treaty negotiations at Chehalis, Quinault, and elsewhere, but none recognized the independent tribal status of the Chinook, Clatsop, and other peoples of the lower Columbia, nor did they provide reservations or federal protections for these tribes similar to that afforded other tribes of the Northwest. In the absence of ratified treaties, the legally sanctioned occupation of lands by non-Native settlers increasingly displaced Native people from prime spots along the Columbia estuary, often pushing many families southward to places such as Seaside, Cannon Beach, Nehalem, and Garibaldi, Oregon, or northward to places such as Bay Center, Tokeland, and, ultimately for some, Taholah, Washington.[31]

In the Columbia-Pacific region, it is clear that the Donation Land Claim process was messy and defied textbook explanations of American settlement. Some families with deep local roots made claims in places where they had already been located for a number of years. Settlers such as Solomon and Celiast Smith, for example, were able to establish a 639-acre claim around the Clatsop Plains house that they had occupied for many years, as they had worked in support of the Lee and Frost mission long before the advent of the Oregon Trail. In some cases, claims were jumped by other parties, so that people living on the land previously without clear legal title were displaced by individuals who made claims on the same lands, a problem for some early farmers, to be sure, but also for Native peoples whose claims on the land had not been recorded in state, territorial, or federal records. Some claims were not "proved up" and lost, only to be reoccupied by other settlers. Very often, lands were claimed only briefly, being improved and then resold—either as large blocks of land or as subdivided parcels—sometimes as a speculative real estate venture yielding considerable profits. These scenarios played out throughout many parts of Oregon and Washington, but they seem to have been especially common in the Columbia-Pacific region, where farming was often difficult and lands obtained through land grants could be resold for alternative uses, such as fishing stations, military and lifesaving posts, recreational developments, and a range of other purposes uniquely suited to the distinctive coastal geography.

There were other significant departures from the textbook explanations of American settlement that characterized the land claims process in the 19th-century Columbia-Pacific region. Here, the effects of the fur trade era were ubiquitous and longstanding.

Unlike many other parts of Oregon and Washington, where families of agricultural settlers often arrived without prior ties to the land, the early history of land claims and agriculture in the Columbia-Pacific region was inextricable from the history of those fur trade families that had become established in the two or three generations preceding the Donation Land Claim Act. In this respect, the experiences of the Columbia-Pacific resembled those of the community of fur trader families in Champoeg (and many connections linked these two communities) rather than those of other, more homogeneous parts of the Willamette Valley, for example. The stories of the early settlers and farms demonstrate many points of intersection between the rising tide of non-Native settlers arriving along the Oregon Trail and the lives of various former North West and HBC employees, missionaries, and mixed-race families who had long seen the lower Columbia region as their home.

Many individuals were associated with the early resettlement of the lands now within the Lewis and Clark National and State Historical Parks, either as early settlers, land claimants under the Donation Land Claim Act, or as later recipients of lands acquired under that act. A complete biographical overview would be a sizeable study in its own right, and so we only address the key players here to give a sense of the greater historical processes at play and to aid park interpreters in their undertakings. More detailed biographical assessments of these individuals are available from preexisting sources, too.[32] A review of these biographies show that many—perhaps most—of these settlers did not fit the stereotypical image of Donation Land Claim pioneers, but were individuals who were simply attempting to obtain legal title to lands already well known to them or were pursuing development for reasons other than agricultural settlement. Those who did seek to develop agricultural settlements and "prove up" their land typically embarked on months, and sometimes years, of toil, clearing lands with saws, axes, fire, and—when resources permitted—the labor of neighbors or Native peoples hired to assist.[33]

On Cape Disappointment, the Donation Land Claim claimant was Elijah White, former Oregon Sub-Indian Agent, who contributed so much to the early history of the Northwest, arriving with Jason Lee's Methodist mission to Oregon, advancing American claims into the HBC -dominated Northwestern frontier, as noted previously, and causing considerable anxiety within the ranks of that company and among the tribes of the interior Northwest.[34] White had dabbled in many different professions, and by the late 1840s he served as a missionary to the Chinook and other tribes of the region. Like most of his contemporaries on the lower Columbia, White recognized the prominence and strategic importance of Cape Disappointment. Before the passage of the Oregon Treaty in 1846, a settler by the name of John E. Pickernell had submitted a legally ambiguous land claim to 640 acres on the Cape Disappointment headland. In the fall of 1849, working with business partner James D. Holman, White occupied the interior, northeastern flank of Cape Disappointment. This was no agricultural venture, but seems instead to have been driven by a desire to profit in the sale of this distinctive

piece of Columbia-Pacific real estate. Submitting the paperwork for a Donation Land Claim by 1850, White almost immediately began to subdivide his claim into lots in an imagined community called "Pacific City," and began selling these lots to arriving settlers. White and a few of his purchasers built structures, and a small community immediately took tentative form. Several of these lots were sold to two brothers by the name of Holman; with White's support, one of these brothers - James D. Holman - built a hotel off-site and subsequently had it placed at Pacific City. By doing so, James D. Holman consequently became White's partner in promoting the town, which grew to 75 residents before President Fillmore declared much of the area a military reservation by executive order on February 20, 1852. White was involved with the development of this hotel, while a small sawmill, store, and several houses were constructed atop purchased lots. Indeed, in 1851, with White's significant involvement, the town succeeded in its effort to secure the county seat of the newly formed Pacific County. Yet, White was simultaneously petitioning the U.S. government to acquire his land for a military reservation due to its strategic values, a point of military history that will be addressed later in this document. In the end, the federal government acquired the land, condemning the town and its various buildings. As Weathers noted, "*He sold most of his subdivided property to unsuspecting settlers and was undoubtedly compensated for the loss of his Donation Land Claim when the government announced the land was government property in 1852*" (Weathers 1989: 51). The community gradually disbanded, making way for the military reservation that would become Fort Canby by the early 1860s (Hussey 1957).

Similarly, Fort Columbia was originally homesteaded by a settler who had ties to the region preceding the advent of the Oregon Trail. James Scarborough, born in Ilford, Essex, in England, had moved to the lower Columbia in 1830, working as an employee of the Hudson's Bay Company. By 1843 Scarborough had married a Chinook woman, Ann Elizabeth, and the two are known to have visited the Chinook Point area while looking for a place to settle somewhere along the lower Columbia. The exact date of their occupation of the Fort Columbia site is unclear, but it is known to have occurred sometime between 1843 and 1846, while James was still in the employment of the HBC, placing them conveniently close to their friends and family in both Fort George and the Chinook community. By 1848, both James and Ann were cultivating the property, and they secured a 643-acre Donation Land Claim by 1850. The prominent landmark of Scarborough Hill, rising to the north of Fort Columbia, is still named for the couple. After securing his land claim, James retired from the HBC, turning his attention to farming the point, salmon fishing in its adjacent waters, and occasional work piloting mail boats across the Columbia bar. Both James and Ann died by 1855, however, and control of the land was granted to their sons' guardian, James Birnie, another employee of the HBC. Birnie, in turn, sold the land to fellow company employee, Rocque Ducheny, who was married to Concomly's granddaughter Mary Rondeau. Like Scarborough, Ducheny died soon after

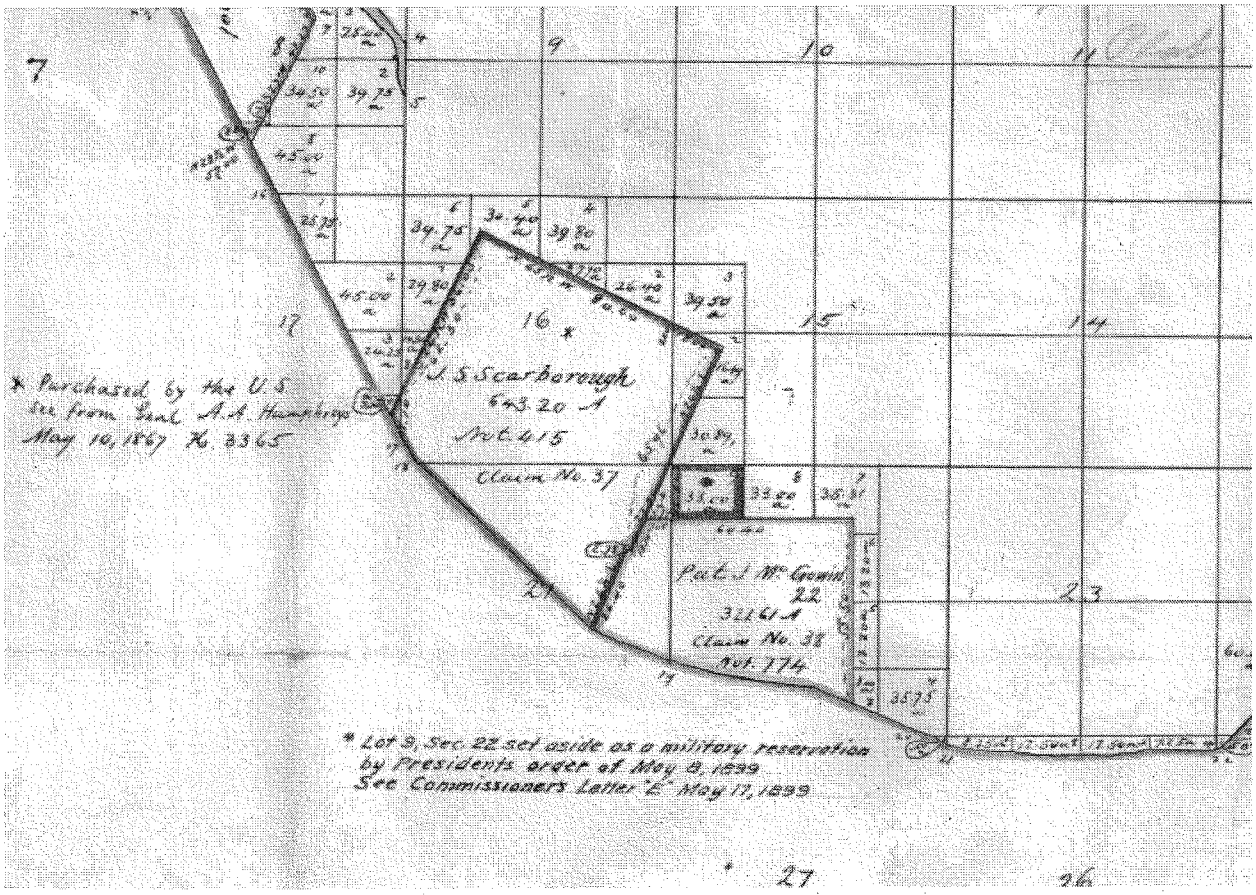


Figure 7.1 – By the early 1860s, J.S. Scarborough and Patrick McGowan owned adjacent land claims, occupying much of what is today Fort Columbia and Station Camp respectively. McGowan, in particular, was not a conventional agricultural settler – acquiring his lands largely as an investment in the future of the Columbia River fishing industry. From Bureau of Land Management, *General Land Office Map, Township 9 North, Range 10 West, Willamette Meridian, 1863*.

securing title to the land; though Mary appears to have sold her interest in the land, she continued to live there into the 1860s, when the land was purchased as a military reservation, ultimately the home of Fort Columbia (Hussey 1967: 17-22).[35]

The Station Camp area also was acquired by individuals who did not fit the typical agricultural settler mold. The Station Camp site was first acquired by Catholic missionary Father Louis Joseph Lionnet under an 1848 mission grant, a type of grant made by the territorial government to support the missionization of Indian communities. Establishing his mission practically in the front yard of the Chinook's Middle Village settlement, Lionnet and members of his mission attempted to win the loyalties of the Chinooks, who had already been exposed to considerable, if less invasive, Catholic missionary efforts during the period of HBC dominance. Operating the Stellam's Mission, Lionnet performed baptisms, marriages, and last

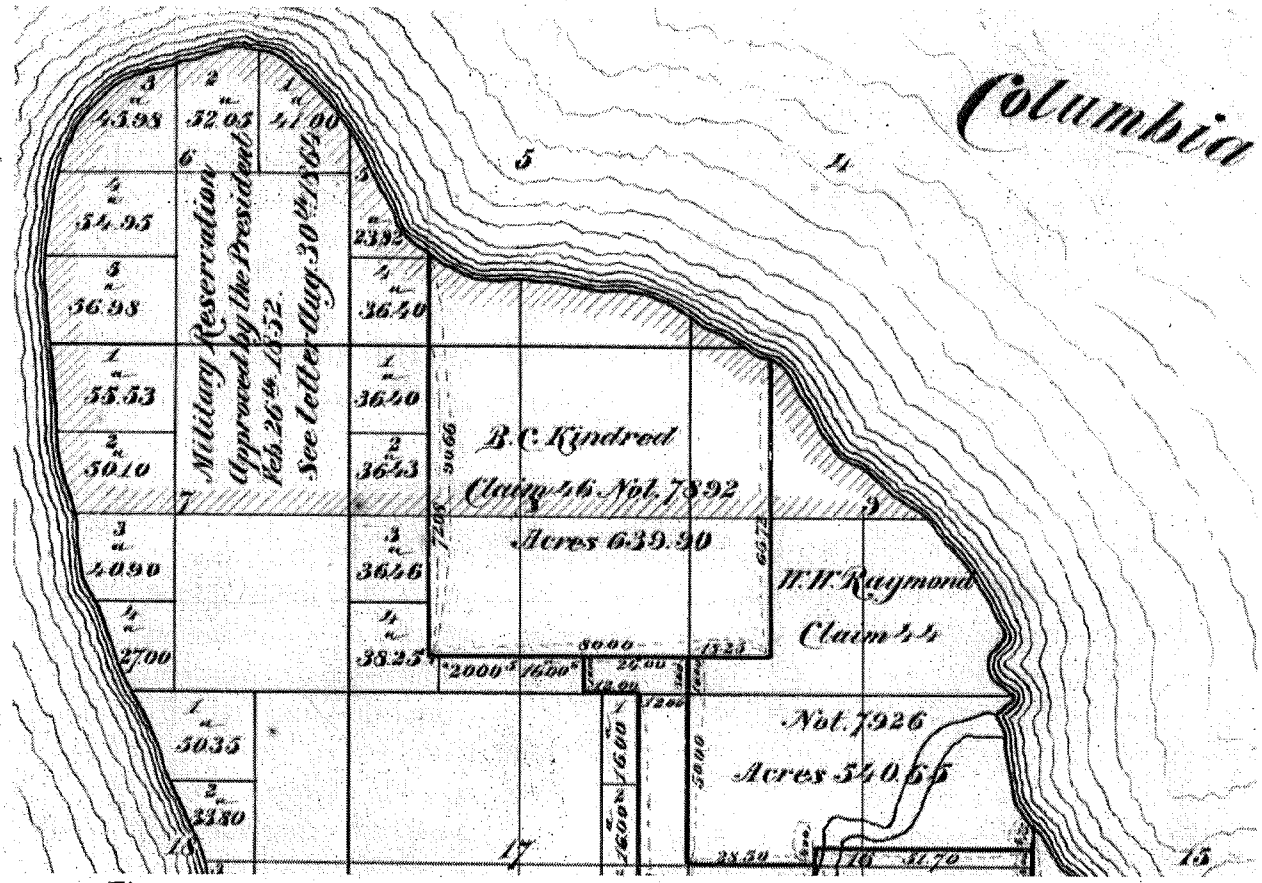


Figure 7.2 - By the time of the 1863 General Land Office survey, Fort Stevens was already functioning as a military reservation, though the lands had been briefly homesteaded by the Schwatka family and had remained the site of a sizeable Clatsop village. Hachures show where the new reservation incorporated lands from the claims of B.C. Kindred and W.W. Raymond. From Bureau of Land Management, *General Land Office Map, Township 8 North, Range 10 West, Willamette Meridian, 1863.*

rights to Native and non-Native people living in and around Middle Village. With mixed success among the Chinooks and their numbers declining at Middle Village, Lionnet sold his claim to Patrick J. McGowan, a Portland-based businessman. McGowan saw the potential of this prominent riverfront site, not for agriculture, but for fishing and other industrial pursuits. Establishing a Donation Land Claim to the site in 1853, McGowan only occupied the land intermittently for several years, "proving up" the land but not moving to the site until around 1861 to develop his salmon salting and packing interests, a point discussed in later sections of this document (Weathers 1989: 39).

At Point Adams, a settler by the name of Frederick G. Schwatka was still processing his family's Donation Land Claim to much of Point Adams as Army surveyors arrived, asking him to vacate the premises. He had initially moved his family to Memaloose

Point, just south of Fort Clatsop by 1853, apparently attempting to settle at a former Clatsop burial site there before moving on to Point Adams. Displaced from Point Adams, the family later moved to the Willamette Valley, making retroactive claims for compensation for lands lost to the military fort. Two separate Donation Land Claims were established just to the east, by B.C. Kindred and W.W. Raymond. Raymond served as a temporary Indian agent to the Clatsops at Point Adams, with the sanction of Oregon's Indian Superintendency. Both also lost large tracts of land to the new forts.[36] There is some evidence to suggest that the Methodist missionaries, Lee and Frost, temporarily occupied the shoreline at Point Adams too, prior to the establishment of the military fort and the displacement of the Clatsops (Deur 2005; Penner 1998; Lee 1916; Wilkes 1845, 1841; Lee and Frost 1844).

Among the settlers associated with the lands now in the national park, it is perhaps the Shane family at Fort Clatsop that most closely fits the agrarian vision of early proponents of the Donation Land Claim Act. Carlos Shane arrived in Oregon by way of the Oregon Trail in 1846. Seeking suitable sites for an agricultural homestead, Shane had established a presence in the Fort Clatsop area by 1848. In 1850, he acquired the Fort Clatsop site from Thomas Scott, who had used the Donation Land Act earlier that year to "jump" the Oregon Territory provisional claim of an 1849 settler, S.M. Hennell. By 1851, Shane had built a house very close to the historical site of Fort Clatsop. Yet, these historical facts—familiar to many members of the park staff—represents a much simplified version of what were, in truth, complex events. Preston Gillette, himself a prominent settler on the east bank of the Lewis and Clark River who wrote extensively about the Fort Clatsop site, reported some of these details:

"Fort Clatsop has had many a claimant and owner within the last 50 years. Lewis and Clark gave it to the Clatsop chief, Co-mo-wool, as they spelled it, but his descendants say it is Co-ba-way, who used it during the remainder of his life as a winter home. In 1849, S. M. Henell, of Astoria, put a man on the place to make some improvements, expecting himself to take it up under the donation act, but in 1850 Thomas Scott, whom I knew well later on, jumped it, and established a claim to it. However, he held it but a short time, when he traded it to Carlos W. Shane for Ka-lots-ka, which had been the home of Twilch and his tillicums (people) from time immemorial, and afterwards became my place" (Gillette 1900a).

Carlos sold the land to his brother Franklin Shane in 1853, moving to a separate homestead a short distance upriver. Franklin ultimately occupied a house some distance south of the fort; the original Shane home on the property, built by Carlos, was said to have "long since disappeared" by 1900 (Shane 1900: 21). As Gillette noted, "*the young growth of timber that had overgrown the old Lewis and Clark clearing had been cleared away [by the Shanes] planted in orchard, and put into cultivation*" (Gillette 1900a). The Shanes planted the land in crops, including orchards of fruit trees and a variety of vegetables including potatoes, acquiring at least a portion of their cultivated trees and

Figure 7.3 – The Shane land claim, sitting at the 1805-06 site of Fort Clatsop and future site of Fort Clatsop National Memorial and the Fort Clatsop sub-unit of the Lewis and Clark National and State Historical Parks. By the time of the 1863 General Land Office survey, Carlos Shane had already transferred the land to his brother, Franklin. From Bureau of Land Management, *General Land Office Map, Township 8 North, Range 10 West, Willamette Meridian, 1863.*

crop seed from Gillette (Gillette 1900b). They continued to use the land for agricultural purposes—always, apparently, engaged in subsistence farming, with occasional moments of success at commercial agriculture—and the family continued to occupy the site into the early 20th century.[37] Cultivation generally ceased on the Shane farm in the 1860s, but a generation after the family's original settlement, they once again tried to make the land profitable for agriculture and other pursuits. Gillette noted,

"In the 1870s one of the Shane heirs took possession of the place, and for the third time the land was cleared and an attempt made to make an Important place of Fort Clatsop" (Gillette 1900a).

Still, they clearly had broader visions for the economic development of the land that were not solely agricultural in nature. As will be discussed elsewhere, the Shanes allowed for the development of a sawmill on the site in the 1850s, which sold lumber locally and to burgeoning California markets of the Gold Rush era; they also promoted

and developed a short-lived boat landing linking the Youngs Bay estuary by wagon road with the early resort towns on Clatsop Plains (Cannon 1995; Gillette 1900a, 1900b). A trail is still referenced (or at least implied) in mid-19th-century accounts, very roughly approximating the Fort-to-Sea Trail route, connecting the settlements of the Lewis and Clark River area to the beach, thence to the south toward modern Seaside (Gillette n.d., June 2, 1861; Metsker 1910).

Figure 7.4 - The Shane family farm continued to cultivate the site of Fort Clatsop in various crops through the late 19th and early 20th centuries – in this 1899 photo, the fort site is covered in flowering potato plants, one of the more successful crops on the cool and humid Columbia-Pacific region. Photo courtesy Oregon State Historical Society.

The Sunset Beach area, meanwhile, was a point of convergence among several Donation Land Claims, the most central and important arguably being that of Cyrus Olney. Olney's lands included much of the southern portion of Sunset Beach State Wayside, as well as the Yeon property. Born in New York and raised in Ohio, Olney practiced law in that state for a number of years before moving to Oregon. Here, he became a prominent figure in early Oregon history. President Franklin Pierce appointed Olney to the Oregon Supreme Court in 1853, at around the same time that he was settling in Clatsop County. Like a few of his Clatsop Plains contemporaries, Olney seems to have held ambitions of

becoming a gentleman farmer, with agricultural holdings on Clatsop Plains and a house in town. He acquired the land fronting the ocean near modern Sunset Beach for his own Donation Land Claim, as well as purchasing a portion of a land claim belonging to John McClure in Astoria to achieve this purpose. The scenic oceanfront provenience of Olney's claim was no doubt part of its appeal, reflecting a trend apparent in later Clatsop County land claims. (Portions of the scenic southern coast of the county were later acquired through homestead claims by such notable Astoria figures as cannery owner Samuel Adair, for example, whose 1892 homestead encompassed Hug Point and was the site of a seasonal home perched above that point's scenic beachfront waterfall.)[38] Olney was a member of the 1857 Oregon Constitutional Convention, and represented the northern coast in the Oregon legislature in the late 1860s. He occupied and worked the Clatsop Plains farm intermittently, but was in declining health for many years, ultimately dying in 1870. The town of Olney, in Clatsop County, is named in his honor. Portions of the Olney Donation Land Claim were acquired by members of the Carnahan family and were later known as the Carnahan Place, with these farm lands gradually being subdivided and platted in part to foster resort community development in the decades that followed (Miller 1958; Corning 1956; Lockley 1928: 793).

Yet Olney was not the only major 19th century landowner in that area. Today's Sunset Beach parking area sits very close to the western corner between lands owned by Cyrus Olney and James Taylor. Pennsylvania-born James Taylor (1809-1893) was raised in Ohio and had come west in 1845, crossing the Barlow Pass over the Cascade Range even as it was still being built by Sam Barlow. Living in the Portland area, Taylor became business partners in a mill operation with Portland founder and Oregon territorial legislator, Asa L. Lovejoy (for whom various Portland landmarks, including Lovejoy Street. Their operation was severely damaged by flooding, and the Taylor family – including his wife Esther and their children (ultimately numbering seven) - then moved to Clatsop Plains. The Taylors purchased an unoccupied Donation Land Claim near present-day Sunset Beach, which they farmed. They also acquired lands in Astoria, fronting Young's Bay – providing for them, like Olney, a farm and a "town house" that allowed them to send their children to town schools. Also typical of families of that era, the Taylors moved to and from the Willamette Valley on more than one occasion, returning to participate in further business ventures with Lovejoy, as well as James Taylors' stints fighting in the Cayuse War and working as the Director of the Oregon Territory's short-lived coin minting operation. The family continued to return to their homestead in-between these interior obligations; James and Esther contributed to the development of the original Presbyterian church along what is today the Fort-to-Sea Trail route, and their children contributed to the development of the later buildings at that site, now known as the Clatsop Plains Pioneer Presbyterian Church. The family continued to live in the area well after the early settlement period, participating in the salmon fishery and taking part in various other aspects of Columbia-Pacific history (Miller 1958; Lockley 1928: 792-94).[39]

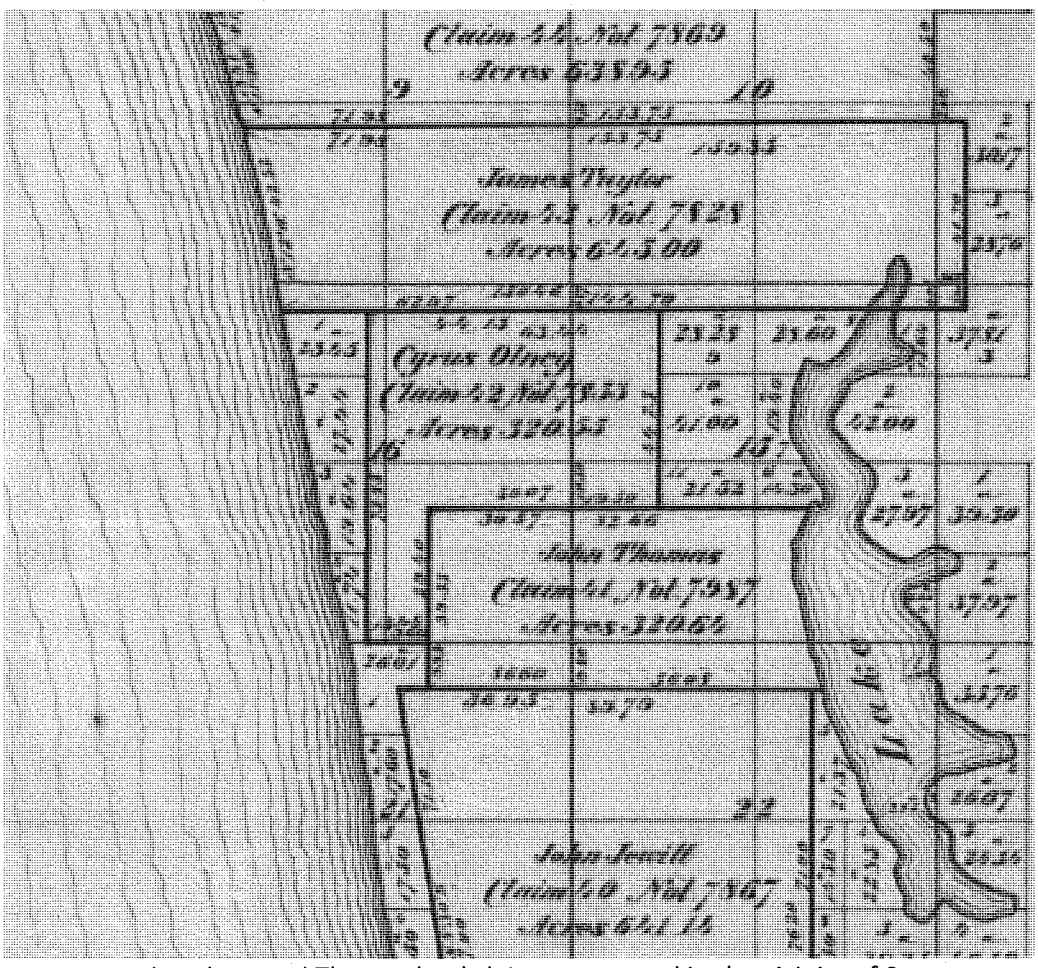


Figure 7.5 – The Olney and Thomas land claims converged in the vicinity of Sunset Beach, on Clatsop Plains, with Cullaby Lake on the east and the Pacific Ocean to their west. From Bureau of Land Management, *General Land Office Map, Township 7 North, Range 10 West, Willamette Meridian, 1863*.

The lands now encompassing the Salt Works in Seaside were within the Lattie family Donation Land Claim. In many respects, the Latties' circumstances resembled those of the Washington park lands, with their linkages to tribal families and history. Born in Scotland, Captain Alexander Lattie Sr. had worked for the HBCas a bar pilot and served for a time as captain of the *Beaver*, the first steamer ship to enter the Columbia (Millard 1977; Lattie 1846). He was married to Ce-cust (also called Marie Catherine or Sikkas), a woman of Clatsop and Tillamook parentage, born circa 1813. The couple had married in 1831, initially settling adjacent to the tribal settlement at Station Camp while Alexander worked as a bar pilot. They lived in that place while Lionnet's mission was still active. The Latties had several children, including Alexander Jr., William, Helen, Mary (or "Marie"), John, and maybe others. Alexander Sr. drowned in 1849, and the

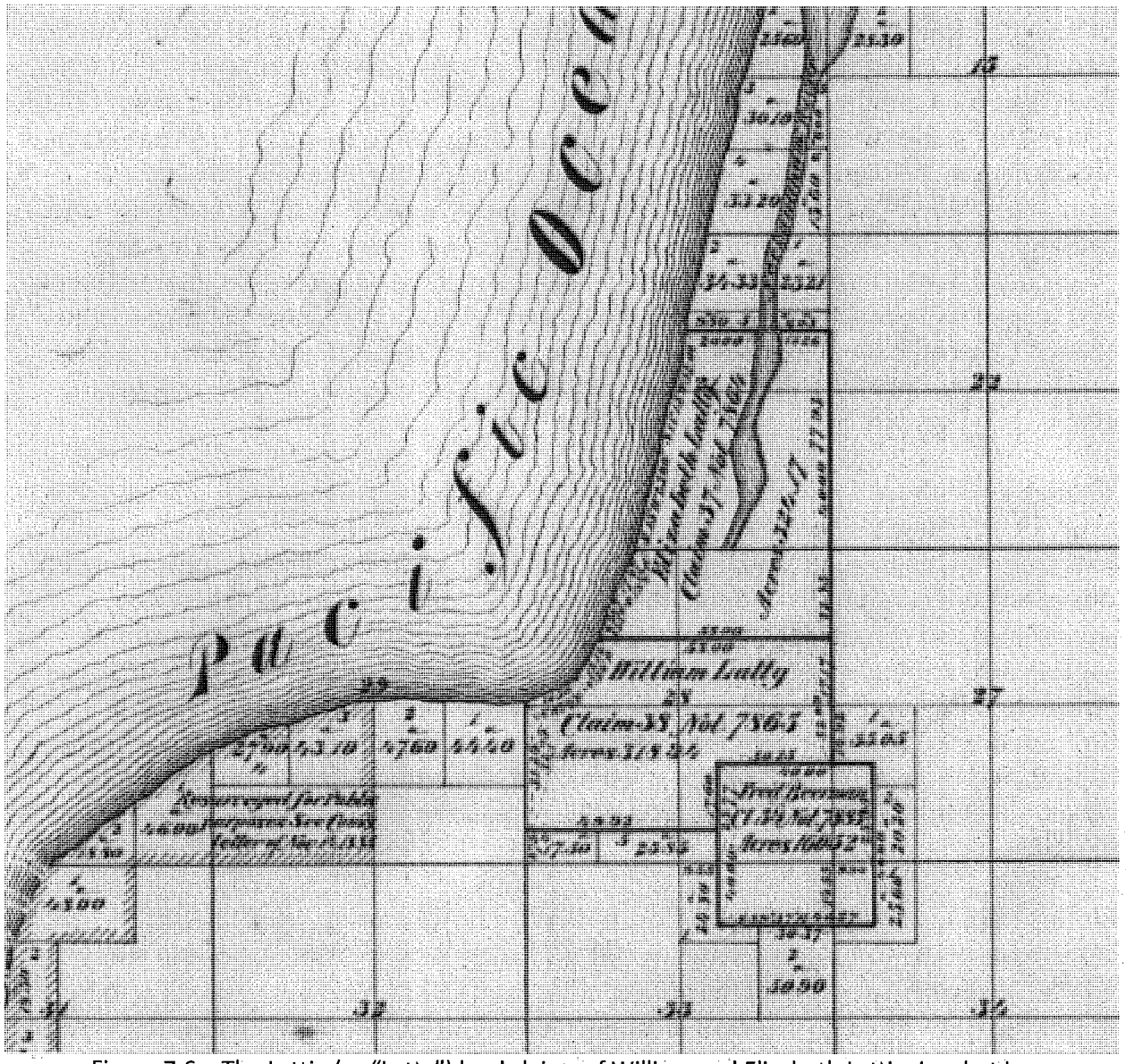


Figure 7.6 – The Lattie (or "Latty") land claims of William and Elizabeth Lattie, in what is today south Seaside. The Latties were successful in using legal instruments largely intended to aid recent settlers in the acquisition of agricultural land claims, allowing this family – of partial Clatsop and Tillamook ancestry – to maintain their home at a longstanding village site on Seaside's south cove. From Bureau of Land Management, *General Land Office Map, Township 6 North, Range 10 West, Willamette Meridian, 1863.*

family, like many other tribal families of the time, felt increasingly unwelcome on the rapidly developing mouth of the Columbia. The Lattie family moved to the Seaside area, and the sons successfully secured title to the family's lands, employing the provisions for half-Indian claimants within the Donation Land Claim Act. Acquired in 1853, their claim consisted of 325 acres, running roughly from what is today Seaside's Avenue G to Tillamook Head. The Lattie home sat a short distance from the south cove

of Seaside, near the site of an old Clatsop village, and was a meeting place for Native people still living in the Seaside area. Early settler, P.W. Gillette (n.d.) noted that when he visited the family's home in 1852, *"there were many Indians in the neighborhood."* The Latties' home also became the focal point of early Seaside tourism, with Alexander and Ce-cust's son, William Lattie, serving as proprietor of a small rooming house commonly called "Bill Lattie's Place." [40] After Ce-cust's death in 1871, the family sold much of their land claim to Bill Holladay, where Holladay founded Seaside's first major hotel; Lattie family descendants sometimes worked as part of his establishment and helped recruit Native storytellers to entertain guests. Their land claim was later platted to become the southern portion of the growing resort town of Seaside, and a few Lattie descendants still live in that part of Seaside today (Deur 2008; McChesney 1969).

Though agriculture was not a major component of most of these stories, it is true that every one of these settlers had subsistence farms of some sort and *"all but a few depended on farming"* (Gillette n.d., January 17, 1861). From the earliest records of agriculture on this coast, and continuing well into the 20th century, there is a division between subsistence and commercial farming. Small kitchen gardens were widespread and subsistence farming was certainly the norm. And, much more than is apparent in the official histories of the region, the early homesteaders and farmers of the area survived through mixed economies involving both small-scale farming and subsistence hunting, fishing, and the gathering of plants and shellfish. Expeditions taken for the purpose of elk and deer hunting, salmon fishing, and berry picking are ubiquitous in early pioneer diaries.[41]

More ambitious, commercial farming efforts were not always fruitful, and the landscapes of the Columbia-Pacific would defy early settlers' expectations in many ways. The farmers arriving in the area to stake land claims, perhaps especially those from Midwestern states, were not always prepared for the difficulty of clearing ancient forest nor for the acidic and often nutrient-poor soils that were commonplace on this coast. The arduous task of clearing forest, alone, was enough to sink many agricultural ventures. As noted before, the combined labor of the Astorians over the course of months had resulted in perhaps an acre clearing during their critical first year, scarcely adequate to support the needs of that early fort (Ross 1832: 74). Some 40 years later, Preston Gillette and his neighbor together had cleared only half an acre in their first season on the Lewis and Clark River.[42] The many other settlers who occupied forested lands often had little more success than this, expanding their farms only slowly and incrementally over the course of years.[43] The lands that were cleared proved difficult to farm, with stumps, mazes of roots, and nutrient-poor soils.

With early experiments at developing farms on forestland proving so disappointing, cleared lands were at a premium. Early settlers were drawn especially to the rolling

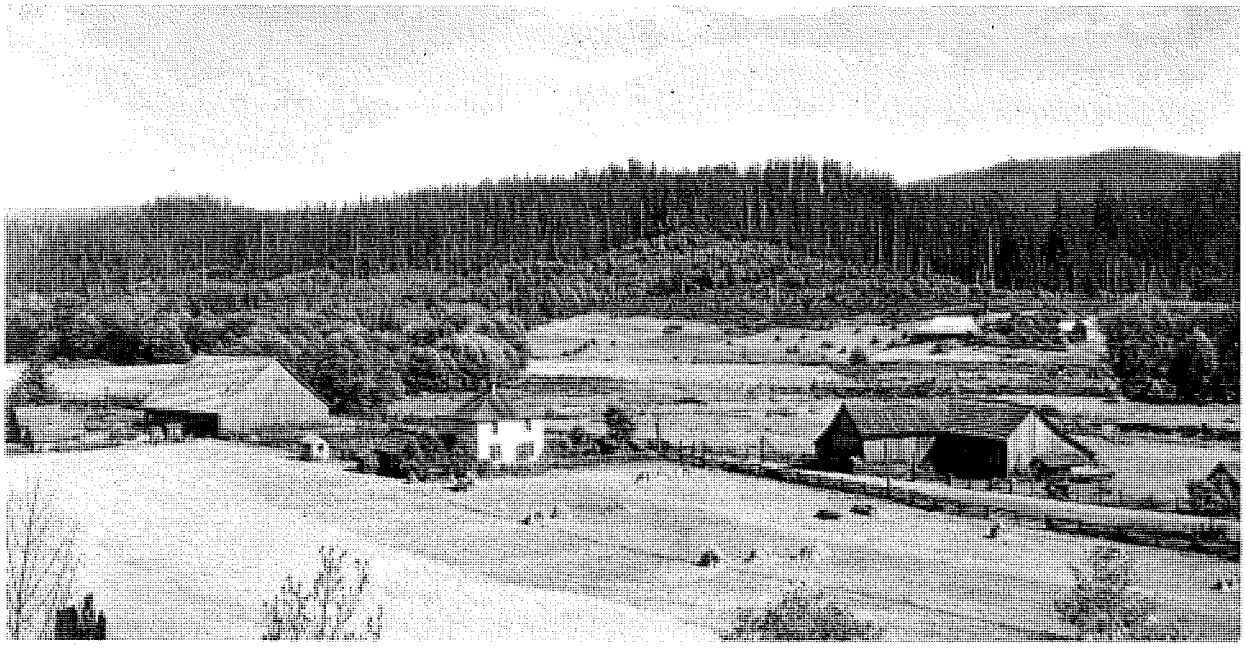


Figure 7.7 - Farms that were established in the few available bottomlands and former floodplains with rich soils, such as those in the Grays River area (shown here, in the late 19th century) and along the Lewis and Clark River, often fared much better than farms in cutover timberland and stabilized dune fields, which were often marginally productive and plagued by erosion. Photo courtesy Washington State Historical Society.

grasslands on the Clatsop Plains and, to a somewhat lesser degree, the Long Beach Peninsula. In the earliest years of the Donation Land Claim Act, most of the unforested portion of these two areas was occupied by new land claims; it was one of the largest contiguous areas of Donation Land Claims in Oregon Territory outside of the Willamette Valley, extending unbroken from Youngs Bay to the base of Tillamook Head. Though in many cases these lands were unforested, they sat atop stabilized sand dunes. These lands proved to have shallow, highly acidic soil, which when cleared could sometimes turn to shifting sands. In this context, former Native village sites were also at a high premium, often being the only significant clearings along the shoreline in a landscape otherwise dominated by dense forest and dune fields. Moreover, soil acidity had always been a limiting factor for agriculturalists, not only on the dunes, but in most parts of the Columbia-Pacific (and even today, commercial farmers must lime their lands or provide other buffering agents to make untilled ground cultivable [e.g., J. Trelawny pers. comm. 2013]). The lands around villages, with their ancient refuse heaps, dense shell middens, and rotting wood, represented atypical "anthrosols," soils that were transformed and often much fertilized by longstanding human occupation. On more than one occasion, early crops appear to have been planted amid burial sites, where human remains buffered the acidic soils and fertilized the ground. As recalled by Preston Gillette of his own successful early farm,

"This small cleared spot at the landing was done principally by the Indians. It seems to have been a village, or camping place, occupied by them from time immemorial [making] the ground exceedingly rich. They buried their dead in the back part of where now [sits] my orchard, where we burned up many bones in clearing the land" (Gillette n.d., January 14, 1861).

For unrelated reasons, the fear of Indian attacks sometimes depopulated the emerging agricultural lands of the Columbia-Pacific in the mid-1850s. While local Native-white relations were generally peaceful, in spite of the reoccupation of lands and occasional violation of burials, the Rogue War to the south and the Yakama War to the east prompted a brief abandonment of many rural areas in favor of larger and more defensible cities. Citing this as a major cause alongside movement to the California gold fields, Gillette (1900a) noted, for example, that the registered voting population of the "Fort Clatsop precinct" dropped from 56 to only one between the years of 1853 and 1856, with the population only rebounding in the decade that followed.

There were other challenges for agricultural settlers, as well. The growing season in the mid-19th century was clearly shorter than it is now, and cloud cover, hard winter rains, and even snow sometimes delayed sprouting crops or cut short growing seasons. Frosts were reported in 19th-century settlers' diaries somewhat frequently into late May and sporadically even into the summer (Penner 1996). Even when soils were adequate, early crops were often disappointing. Warren Vaughan, who settled on Clatsop Plains and later moved to Tillamook Bay, complained that in many places the tomatoes rotted on the vines while still green and that, for a number of years, only potatoes would yield a significant crop. The diets of some settlers, much truncated by these crop failures, centered on salmon and potatoes, he noted; the settlers who moved to Tillamook Bay, their humor growing dark with crop failures and a persistent (if unrealized and probably unfounded) fear of Indian reprisals, began to use the phrase "salmon and potatoes" as a password for entry into homes and forts of the 1850s (Vaughan n.d.).

While readily cultivable land was scarce, grass grew abundantly in the humid coastal climate, making livestock grazing one of the few highly successful agricultural pursuits of the Donation Land Claim era. Missionaries and Native people had played an important role in the introduction of livestock to this region, even before the arrival of Oregon Trail settlers. Reverend Joseph Frost, a Methodist missionary, had taken an interest in the coastal tribes and resolved to establish a mission there, based in part on the recommendations of Celiast Smith, daughter to Chief Coboway, who was residing in the northern Willamette Valley in the late 1830s. In the summer of 1840, Reverend Frost moved to Clatsop Plains, accompanied by Celiast and her husband, Solomon Smith, a Vermont-born member of the 1832 Wyeth party. Frost, in particular, viewed the introduction of agriculture, as it was practiced in the American East and ultimately Europe, as key to the settlement of the region and the "civilization" of Columbia-Pacific tribes. As Frost observed, "We must use the plough as well as the Bible, if we would do anything to benefit the Indians. They must be settled before they can be enlightened"

(Frost 1934: 71). In 1841, Smith and Frost determined to develop the agricultural potentials of the Clatsop Plains by introducing large numbers of cattle to graze the verdant and as yet largely unoccupied grasslands. Following tribal trails in part, Smith and Frost blazed a cattle trail south along the coast from Clatsop Plains to Salmon River, where they cut inland to the Willamette Valley. On the south end of Clatsop Plains, the trail veered inland to bypass what is Ecola State Park, as the Clatsop warned that the trail was too rough for livestock and horses, passing instead over a secondary Tillamook Head trail that approximates the modern highway route. (Some 51 years later a team of Indians would improve this route for the creation of the first formal wagon road to what became Cannon Beach.) Cattle drives along the coast were often treacherous, with cattle sometimes falling to predation or sliding to their death while crossing the cliffs of Neahkahnie Mountain, just south of the Clatsop County line. Still, a number of settlers brought cattle to Clatsop County by this route, relying on the Nehalem and Tillamook peoples to help ferry them across the rivers in their way. Clatsop Chief Tostom was also instrumental in cattle drives, involving livestock purchased from Fort Vancouver and herded over other Coast Range trails. Many years later, cattle drives were eclipsed by waterborne livestock shipments, with settlers such as Warrenton namesake, D.K. Warren, hiring steamers to carry cattle down the Columbia from eastern Oregon (Dicken 1978; Miller 1958: 201 ff.).

Raising livestock came with its own unique set of challenges in these early years. Herds quickly grazed over certain portions of the Clatsop Plains and Long Beach Peninsula, breaking through the thin sod and leaving drifting sands in their wake, so that by the 1870s drifting sand was becoming a significant problem. There were several impromptu efforts by the community to fence cattle to reduce impacts on areas where trampling and grazing accelerated erosion. Heavily grazed portions of the Clatsop Plains and smaller portions of the Long Beach Peninsula remained moving sand fields until government-sponsored reclamation efforts of the Depression, when Civilian Conservation Corps (CCC) crews planted Scots broom, shore pine, and European beach grass and built fences to contain the effects (Reckendorf et al. 1985). So, too, these early agricultural areas—the Clatsop Plains, in particular—sat adjacent to dense forests that continued to be home to large predators including timber wolves, cougars, and grizzly bears. The journals of early farmers contain astonishingly high losses of livestock in these early years to these predators. Wolf meetings, organized by early settlers like Solomon Smith, were held to promote creative ways to repel and kill wolves, whose populations remained numerous through the end of the century until organized and impromptu eradication efforts took the desired effect. Through the 1850s and 1860s, farmers complained of their fields being filled with pits from grizzly bears, apparently searching for grubs and small burrowing mammals, and livestock sometimes fell into pits constructed by area tribes to catch game (e.g., Gillette n.d., May 2, 1861). Grizzly hunts were organized, too. (The extirpation of so many top-order predators eventually brought increases in other species, such as elk and coyote, with the latter apparently being rare in the area previously.) In spite of many stock drives along the Smith and

Frost trail, as well as overland and by boat on other paths, cattle remained surprisingly scarce and locally expensive. As Gillette noted, *"I neglected to get any cattle until 1857, which was a great error. Had I but two or three cows when I first came here I now would have been worth almost double what I am"* (Gillette n.d., January 14, 1861). Only in the 1860s did beef and milk cows become relatively commonplace, along with sheep, pigs, horses, and other livestock. Pig and sheep farming persisted into the late 19th century, often with the extensive assistance of Chinese labor, with small corn fields sometimes being planted for feed.

Early cattle operations depended on grazing areas and grass, a resource that was found only in certain places on this coast, such as old villages, the dune fields of Clatsop Plains and Long Beach, and in bay-front salt marshes and other wetlands. Grazing in the forest was sometimes productive, but forage was often limited, and cattle often went astray in the trackless distances and were more vulnerable to predation. For this reason, the estuaries were often the preferred places to graze cattle, where grassy salt marshes lined the middle to higher tidal zone: *"We have turned our cattle upon the moors again to keep them from going astray in the woods. . . . They seem to be doing very well"* (Gillette n.d., January 24 & 30, 1861). Cattle operations were especially commonplace and successful when they had access to such marshes. In these places, homesteaders sometimes filled the deep, muddy, and intermittently inundated channels, or built impromptu bridges over such channels, to open up lands for grazing. In time, with the aid of horse teams, they would begin to build dikes, often augmenting and reconstructing these features with time to expand and repair the soil berms around individual fields. A generation or more after the advent of diking, the construction of dikes began to transform the lower Columbia and Willapa Bay estuaries, in particular, as farmers sought to increase the total area available for grazing and to minimize flooding during peak tides and stream flows. These structures replaced biologically productive marshlands with damp but passable grazing lands, often containing nutritious grasses that proved to be elusive on other portions of the coastal landscape. Only gradually, in the late 19th and 20th centuries, did grazing lands move into former forest lands in appreciable ways, with fields gradually taking shape amid the decomposing stumps.[44]

From the beginnings of these industries, a lack of local markets, coupled with limited transportation options for fresh agricultural products, created further impediments to agricultural development. Transportation by land was quite difficult in places, nearly impossible in others. Landlocked farms were at a particular disadvantage. Many of the Donation Land Claims that survived were on navigable waterways, especially the Columbia estuary, and boats were long the principal mode of transportation. In the 19th century, produce could sometimes be placed on steamers to Portland, and in the 1890s rail service was available to support the shipping of farm products to that city. (The fact that the one especially accessible regional market, Portland, sat close to very high quality farmlands in the northern Willamette and Tualatin Valleys only added to the pressures to specialize in local niche markets on the coast.) Together, these factors

favored agricultural products that did not spoil rapidly and, by extension, did not require rapid shipping to market. For a time, the unpredictable shipping conditions and abundance of grass contributed to the development of a small cheese industry, led by such settlers as Josiah West, with Chinese labor helping to run the dairying, cheese-making, and distribution. Cheese was an ideal commodity for the time, one that would be unharmed by a long wait dockside, circumstances that famously contributed to the development of cheese-making along other parts of the Oregon and Washington coasts (Heintzelman 1958; See n.d.; Miller 1958: 203). Several small dairymen's associations took form in the late 19th and early 20th centuries, as Chinese labor moved out of the area and dairies sought to consolidate production facilities, marketing, and shipping. In the lower Columbia region, many Scandinavian immigrants had bought logged land at a low price from lumber companies, which they used for raising beef and dairy cattle to supplement their incomes from fishing and logging. Finnish farmers in the region were primarily dairy farmers and established the Consumers' Cooperative Dairy in 1917 in response to rising milk prices. The dairy cooperative was one of the largest dairies in Astoria and one of its most successful businesses in the first half of the 20th century (Hummasti 2002: 141–142). In 1921, four other small dairy groups consolidated into the Lower Columbia Cooperative Dairy Association, an organization that participated in cooperative marketing and distribution in the urban Northwest and maintained shared factories in Astoria, Clatskanie, Cathlamet, and Grays River, producing cream, cheese, butter, and other products from locally produced milk. In this way, the association also helped dairy farmers maintain a degree of quality control to insure the stability of the "lower Columbia" brand, and the organization issued certifications to guarantee the quality of feed, milk, and other variables (Miller 1958: 201 ff.; Meyer 1950; See n.d.).

The productivity of grass on the coast had other ramifications for the early agricultural efforts on the Columbia-Pacific. On the open grasslands, early farmers began cutting hay by scythe and storing it for later use. With the recruitment of Chinese labor, in particular, surplus hay became a commodity for some farms. The hand-cutting of hay persisted well into the late 19th century, when mowing and threshing machines became commonplace and the Chinese population went into decline. Hay, which thrives in the damp climate, became the dominant crop in the area by the end of the 19th century and still occupies a solid majority of the Columbia-Pacific's total cropland today (Oregon State University 1963, 1936; Miller 1958; See n.d.).

The growth of other crops on early farms was difficult but not impossible, with a few farms succeeding especially on the narrow floodplain margins of local rivers, such as the Lewis and Clark and the Chinook. The accounts of Preston Gillette, "Clatsop County's first horticulturalist" (Penner 1996: 3), are always instructive on the early introduction of crops to the region. Not only was Gillette commonly involved with their introduction, but he was also an avid chronicler of agricultural developments in the region. Gillette was also situated near Fort Clatsop, as he took a Donation Land Claim on the eastern bank of Lewis and Clark River, a short distance upstream from the fort,

occupying a clearing that was formerly a Clatsop village site.[45] Potatoes were widely established in the 1850s, he noted, but there were very few crop plants: "*At that time, fruit trees were very dear*" and ornamental plants were almost unknown (Gillette n.d., January 14, 1861). By the early 1850s, Gillette was in the vanguard, experimenting with the planting of a wide range of crops, including several varieties of apples, on his land claim. By the early 1860s, settlers experimented with flax, oats, wheat, barley, and other grains, with mixed success; grist mills operated sporadically in the area and did so for many years to come. Cold-weather crops such as beets and cabbages, introduced at around the same time, were sometimes successful, too, while Gillette and his neighbors were adding pears, plums, peas, and other crops to their repertoire. Recognizing soil fertility as a major limiting factor to their success, as early as the 1860s some farmers obtained seed for red clover and other cover crops that helped to amend the soil (Gillette n.d., March 15, 1861).

Figure 7.8 – Women processing and canning peas in the early 20th century at the Glacier Bay Oyster Cannery, a Pacific County facility primarily used for fish and shellfish. Asahel Curtis photo, courtesy Washington State Historical Society.

With this palette of crops, a number of small commercial farming operations succeeded over the years, especially in places where the soils were relatively rich and forgiving. Jeffers Garden and other areas around Warrenton experienced temporary farming booms, centered on those crops that could thrive in coastal conditions. Peas and garden beans proved to be good choices: with nitrogen-producing roots, these crops could survive in rain-leached soils where other crops failed. In places such as the margins of wetlands and along the riparian zone of the Lewis and Clark River, farm workers including Chinese (and occasionally Native American) labor were sometimes paid to harvest and process peas, beans, potatoes, and other crops. As with cheese, farmers sought ways to preserve crops so that they could be shipped to distant markets. Some portion of the pea and bean crop was canned for sale, under arrangements with local fish canneries, using waterfront canning equipment when salmon was not being processed. The canneries also served as the venue for brief experiments in the processing of beef and mutton, often with the involvement of Chinese labor, in salmon fishing's off-season.

The region, abounding in native berry species, was also well-suited to the commercial production of berries. By the late 19th century, blackberries, strawberries, blueberries, raspberries, loganberries, and others were cultivated in very small commercial plots, totaling only a few acres over the entire study area. By the early 1900s, using the juices of local berries, a company called the Astoria Soda Works was producing the unfortunately named beverage Wine-O, a product that became especially popular once Oregon passed statewide prohibition laws in 1915.

In the cranberry, too, agriculturalists found a crop well-suited to the unique circumstances of the Columbia-Pacific region.[46] A marsh fruit requiring acidic peat soil and a moist climate, the domestic cranberry thrives in few locations but was uniquely suited to the challenges of Columbia-Pacific agriculture. The Chinook, Clatsop, and other tribes traditionally gathered a native wild cranberry for their own use and for trade with other tribes, and Lewis and Clark recorded area tribes picking *pil olallies* or "red berries" (*Vaccinium oxycoccus*) that grew in swamp or peat soils in the area (Weathers 1983: 52; Seeman 1941). Indeed, Article 2 of the Chinook's 1851 treaty guaranteed them "the right to pick cranberries on the marshes." While some non-Native settlers used these wild berries, most settlers who explored options for commercial cultivation in the 1880s found the native berries too small and too labor-intensive to harvest on a commercial scale.[47]

Anthony Chabot was the first to successfully introduce commercial-scale domestic cranberry production on the Pacific Coast in the 1880s, planting in boggy areas on the Long Beach Peninsula and beyond. Chabot, a Canadian living in California, had already been experimenting with cranberry agriculture elsewhere on the west coast, working in partnership with H. Pierce, A.J. Pope, and W.C. Talbot (of the Pope and Talbot Timber

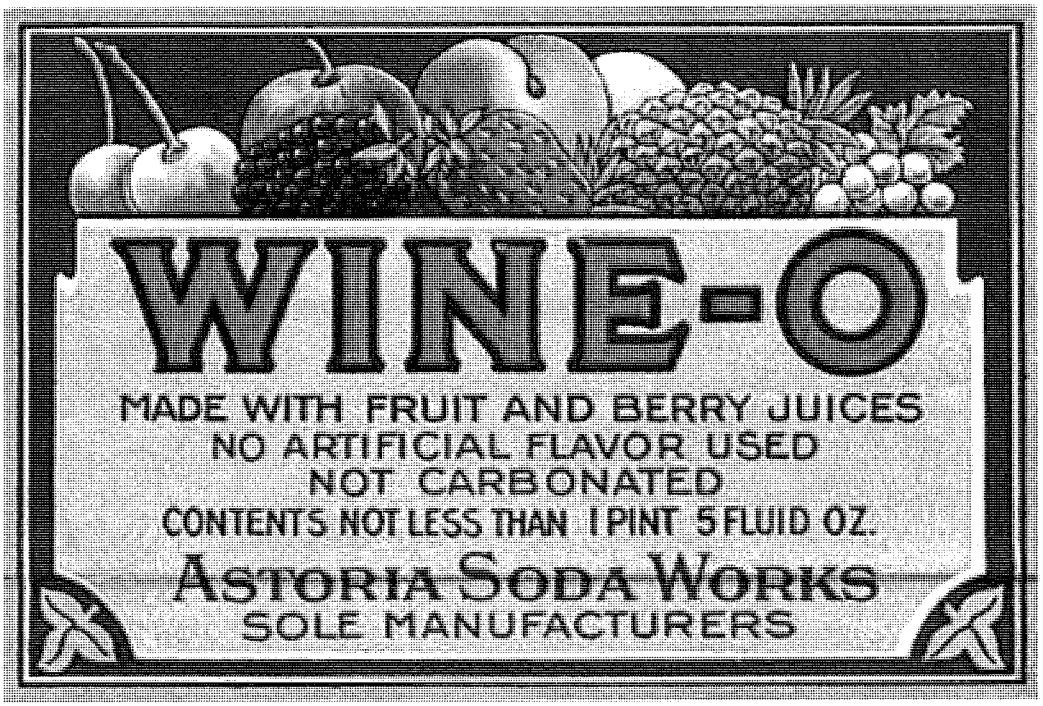


Figure 7.9—A 1918 label from Wine-O, a product of the Astoria Soda Works. Image, Label 1891, courtesy State of Oregon Archives, Trademark Collection.

Company). As he embarked on those efforts in the late 1870s and early 1880s, Chabot's Massachusetts-based brother-in-law visited Long Beach Peninsula and encouraged Chabot's interest in the potential for a Pacific County cranberry industry. The following year, Chabot imported McFarlin variety cranberry vines from Cape Cod and planted 35 acres of marshland on the peninsula. In 1883 Chabot and his wife, Emilie, incorporated the Pacific Cranberry Company, appointing their nephew Robert as the company's authorized agent; Robert later relocated the business operations to Ilwaco, while maintaining and expanding cranberry acreage on the peninsula and areas adjacent. The Chabot bogs on Long Beach Peninsula thrived for several years before dissipating in the late 1890s. During good years, the harvest annually reached 7500 barrels (equal to 750,000 pounds). The crop was dry harvested by hand, and the picking was done by local Native labor, Chinese laborers working under picking contracts, as well as women and children (who were sometimes let out of school for extended periods at harvest time). Despite Chabot's early success, there were few cranberry farmers actually living on Long Beach Peninsula between 1883 and 1910, with most local farmers using cranberries as a supplementary source of income from otherwise unusable marshlands on their properties. After Chabot's Pacific Cranberry Company quit production, there were only four producers left on the peninsula (Weathers 1983).

In Oregon, meanwhile, there had been commercial harvesting of cranberries in Coos and southern Tillamook Counties as early as the mid-1880s.[48] In 1911 C.N. Bennett put out the first bogs in Clatsop County (Seeman 1941: 181), and the *Oregonian* reported that

Figure 7.10 – Men and women harvesting cranberries by hand near Grayland Washington in the early 20th century. Asahel Curtis photo courtesy Washington State Historical Society.

by 1924 cranberry acreage had increased to more than 100 acres in Clatsop County, with most of it centered on the northern portions of Clatsop Plains (Allen 2006). Like their Washington counterparts, farmers on Clatsop Plains used cranberry farming as a means of eking out additional income from boggy lands. Inter-dunal lakes were partially drained to accomplish this, in some cases, and the course of more than one small stream was diverted to fill earthen impoundments made for this purpose. Such cranberry bogs were established on what are now the southern edges of the Fort Clatsop sub-unit of Lewis and Clark National and State Historical Parks.

Still, the nascent cranberry industry had stagnated in both states by 1920 and contracted significantly in the following decade during the Depression. Geographer Albert Seeman reported in a 1941 study that there were only about 75 acres of cranberry bogs left in Oregon (Allen 2006). Most cranberry growers found it a better business decision to let

their bogs revert to swamp and marsh (Weathers 1983: 46).[49] These effects were ameliorated somewhat by the research and local promotional efforts of the Cranberry Investigations Laboratory, established at Long Beach as a branch of Washington State College (now WSU) in 1923, with the intervention of Ilwaco banker and state senator Percy Sinclair.[50] Also, during World War II, the U.S. government asked farmers to commit sufficient amounts of their agricultural products, including cranberries, to the armed forces to feed the troops, resulting in an increase in local cranberry production. Along with this spike in military demand came innovations in harvesting equipment and improvements in cranberry drying and freezing technologies that would aid the industry significantly in the post-war years.[51] Immediately after the war, cranberry operations on both sides of the Columbia began to organize in a manner reminiscent of the Lower Columbia Cooperative Dairy Association, with most producers organizing the sale and distribution of their crop through the newly formed National Cranberry Association. By 1959, Ocean Spray Cranberries, Inc., absorbed the functions of the National Cranberry Association and remains perhaps the only nationally important agricultural operation with significant interests in the Columbia-Pacific region, using cranberries from both sides of the river to produce sweetened dried cranberries, cranberry sauce, and frozen cranberries especially for the holiday market.[52]

The 20th century saw many other, mostly fleeting, agricultural ventures. There were brief markets for local bentgrass seed and experimentation with ornamentals, such as lily bulbs, ornamental water lilies, and ornamental mosses. Beginning in 1930s, some farmers began to raise mink for their pelts. By the mid-20th century, up to forty mink farms operated, many using fish waste from local processors; most ceased operations as the fur market largely evaporated later in the century. A few small Christmas tree and berry farms persist, as do some very small-scale dairying, beef cattle, and sheep operations. In light of the complexities of forest management, there has also been experimental cropping of woody plants to produce pulp on old floodplains, with loblolly and radiata pine, poplars, and eucalyptus being among the plants being tested in recent times. The prevalence of vegetable and orchard crops declined significantly by World War II, but interest in these crops has rebounded in recent times, especially propelled by various small but successful organic farming operations that continue to expand in the region.

If the history of agricultural reoccupation transformed the landscape, so too did it provide an avenue for the introduction of a plethora of non-native plants, many of them invasive. A diverse assortment of non-native grasses and forbs arrived in hay, straw, and livestock brought to the region from elsewhere. Certain ornamental plants—those adapted to disturbed ground and leached, acidic soils—were especially problematic, too. William Hopson brought Scots broom to the Clatsop Plains in the 1840s as an ornamental (the CCC and Oregon State Parks also planted it in later years for dune stabilization), and the plant now occupies many of the Columbia-Pacific's fallow fields and sandy margins (See n.d.). There was even an official Scotch Broom Festival that

persisted through the 1920s and 1930s, until people's enthusiasms for the highly invasive plant began to wane (Adams n.d.). Foxglove, a European native, began to spread aggressively from gardens, prompting local laws forbidding its careless redistribution (Miller 1958: 204); today it turns fallow farmlands and forest clearcuts bright purple and pink through the summer. The "Himalayan blackberry," apparently coming from the Caucasus Mountains by way of Britain, arrived early, too, escaping gardens and occupying the cleared margins of settlements, its seeds being all too happily distributed by birds and other animals. Other ornamentals have become a source of concern in intervening years: European holly and English ivy have made their way from gardens into the forests, and purple loosestrife and yellow iris have crept into the wetlands. In more recent times, the ornamental Japanese and Sakhalin knotweeds have thrived, their rootlets often being transported inadvertently with composts and soils, eagerly taking a foothold and surviving the relatively mild Northwest coastal winters in stride.

The legacy of early agricultural experiments in dune environments continued to pose an especially big challenge to the residents of the Columbia-Pacific region into the 20th century. As a result of grazing livestock, but also jetty development and other disturbances, there were roughly 3000 acres of exposed active sand dunes on Clatsop Plains by the early 1930s, threatening adjoining farmland, forests, lakes used for recreation, and navigational channels. Though the Oregon Railway and Navigation Company Railroad had recruited sand stabilization specialists and the Army Corps of Engineers would launch their own sand stabilization projects (as will be explained in later chapters), this had little effect on the overall stability of Clatsop Plains. By 1935 an estimated 40 million cubic yards of sand had blown inland from the old foredune that extended from the mouth of the Columbia River to Tillamook Head. The foredune was almost completely destroyed as the sand redeposited inland. Local residents and the Clatsop County government requested assistance from the USDA Soil Conservation Service (SCS). The most complete and extensive stabilization project undertaken in response to these changes was called the Warrenton Dune Control Project, though its influences extended well beyond that town. The SCS cooperated with the county Agricultural Experiment Station and the Extension Service and involved the CCC (Reckendorf et al. 1985: 263). CCC built Camp SCS-7 at Warrenton, Oregon, to house the manual laborers who were to assist in stabilizing the dunes. CCC enrollees established a temporary camp at Coos Bay, where, under the direction of SCS, they dug culms of non-native European beachgrass (*Ammophila arenaria*) that were cleaned, bundled, and shipped to the Warrenton project to establish a nursery. The SCS began collecting plant material in November 1935, and by March 1936 it had established the 215-acre Astoria Nursery Unit to produce beach and dune grasses, collect seed, produce shrubs and trees, test plant fertilization, and assess cultural methods of dune stabilization (Carlson et al. 1991; Reckendorf et al. 1985).

Studies at the SCS Warrenton Dune Control Project suggested that they should revegetate the dunes of the outer coast in a three-step process: (1) place sand fencing to establish a foredune immediately above the beach to reduce the inland movement of sand from the beach; (2) establish grass cover on the foredune; and (3) permanently stabilize the dune with herbaceous or woody vegetation, which usually follows the grass. The SCS tested 75 species of native, naturalized, and exotic shrubs at their Astoria nursery. They determined that the species best suited for stabilizing the dunes of the Columbia-Pacific region included the native Seaside lupine (*Lupinus littoralis*), but were largely non-native plants: Scots broom (*Cytisus scoparius*), tree lupine (*Lupinus arboreus*), and coyotebrush (*Baccharis pilularis*). They also favored largely native trees for permanent stabilization, including shore pine (*Pinus contorta*) and Sitka spruce (*Picea sitchensis*). By January of 1938, SCS crews had planted beach grass from the Columbia River mouth to Gearhart, a distance of 13 miles. Similar plantings were installed on certain parts of the Long Beach Peninsula. After the introduction of European beachgrass, they followed with plantings of the other plants on their palette. As W.T. White, of the SCS Regional Agronomy-Range Section headquartered in Spokane, wrote in 1938 to P.G. McGrew, Assistant Regional Conservator, "*it might be pointed out that the dune topography is Nature's way of stabilizing unstable soils such as we have at Warrenton, and that all we are trying to do is to assist Nature in reforming such stabilized topography*" (White 1938b). They were largely successful in this goal. The foredune was completely reestablished from the Columbia to the Necanicum estuary - including the sunset Beach dunes - and in time even began to expand seaward as the Columbia jetties increased sand input and planted vegetation expanded into new places (Carlson et al. 1991; Reckendorf et al. 1985).

The SCS and laborers from the CCC completed most of the initial control work on the Warrenton Dune Control Project by 1941. That spring the dune area landowners organized a soil conservation district as a local unit of government under Oregon state law. The conservation district, with technical assistance from SCS, administered further planting projects and provided for maintenance of the planted dunes. The Astoria Nursery Unit continued as a fully staffed SCS nursery until 1944. By that time, the unit had leased a 413-acre area that was operated by the Warrenton Dune Soil Conservation District from 1944 to 1949, primarily to provide shrubs and trees for permanent stabilization. SCS discontinued its support of the nursery in 1954 as part of reorganization of its plant materials program. Still, because of the original severity of the dune activity prior to 1935, the district established an ordinance to enforce proper land use for the area, which remains in effect into modern times. The Warrenton Dune Soil Conservation District has been consolidated into the Clatsop Soil and Water Conservation District, a county-wide conservation district. Meanwhile, many of the plants originally established by the SCS have become invasive, occupying areas well beyond the original project footprint (Reckendorf et al. 1985: 263).[53]

Figure 7.11 – In addition to working at area farms, Civilian Conservation Corps workers of the 1930s, such as these men in Pacific County, aided in early dune stabilization efforts, propagating and planting European beach grass and other species to stabilize portions of the shoreline that had been overrun with blowing sand due to heavy grazing, jetty construction, and other changes in the preceding century. Photo courtesy Washington State Historical Society.

Similar efforts to control, and sometimes turn back, the negative effects of early agricultural experimentation also were applied to the tidelands. The 1936 Federal Flood Prevention Act provided for the creation of diking districts to coordinate efforts, helping to fund and consolidate what had been largely informal associations of waterfront farmers who coordinated the diking of their adjacent pastures. Dikes were built around tidelands in the Fort Clatsop area, turning the almost peninsular fort site into a high point along a relatively straight shoreline consisting largely of diked tidelands on the Lewis and Clark River estuary; while there is evidence of pre-1936 diking in this area, the remnant dike structures visible today largely date from after the FFPA legislation. By the post-World War II period, the widespread availability of heavy equipment brought a burst of new dike construction and the consolidation of numerous small diking districts, allowing tideland farmers to expand their coordinated diking efforts like never before. By the mid-20th century, some 65% of the tidally influenced Columbia River floodplain and roughly 40% of the salt marshes of Willapa Bay had

been reclaimed through diking (Proctor et al. 1980). In recent decades dike breaching had become popular as a mechanism of wetland and salmon habitat enhancement along the estuaries of the Columbia-Pacific region. Dikes are now being removed with almost the same zeal and speed as they were being added to the landscape 100 years ago. Several such projects have taken place on the lower Columbia in recent years, some involving sites within the Fort Clatsop portion of Lewis and Clark National and State Historical Parks, such as Otter Point and Colewort Creek (NPS 2009).

The implications of the history of settlement and agriculture for the National Park Service are diverse. The interpretive value of the settlement and agricultural history of park lands is certainly vast. The non-native plants found throughout the park are in part a product of this history, and there are remnant agricultural landscapes worthy of interpretation. Remnants of the estuarine diked tidelands can be found on the eastern edge of the Fort Clatsop sub-unit of the park, and there are defunct cranberry bogs on its southern edge as well. The National Register implications of this history are uncertain. None of the places in the park are likely to warrant National Register listing solely on the basis of their settlement and agricultural history, in part due to their general absence and in part due to the lack of integrity at those historical agricultural properties that do exist. In each case, the major structures and agricultural landscapes associated with the early occupation are all but gone, overrun by later development or by some conspiracy of weathering and revegetation. Perhaps more significantly, in several of the sub-units of LEWI, we have various former agricultural (and non-agricultural) homesteads. There is the Shane homestead at Fort Clatsop; with almost the entire claim being overgrown by young spruce forest, there are no clear remnants of the orchards and vegetable cultivation from the Shanes' era. Similarly, there are few traces of the homesteads or land clearing and cultivation efforts of these early settlers. Here, too, the history of these sites and their connection to regionally important figures in 19th-century Northwest history might not warrant National Register status, but is certainly worthy of interpretive treatment. There is the Elijah White homestead on Cape Disappointment, which is more of interest for its historical linkages to White's peculiar personal history and the story of military preemption rather than to the more general themes of settlement and agriculture. So, too, the Fort Columbia and Station Camp sites provide ample opportunity to discuss interethnic marriages of the fur trade era (such as the Scarborough, Ducheny, and Lattie families who occupied these lands) and the transformative influences of religious missionization on Native lives and economies (especially the Lionnet mission). The Lattie claim at the Salt Cairn provides an opportunity to discuss that family's history and the complexities of Native American life in the period of agricultural reoccupation and early resort development. While no one of these stories might be determined to be "nationally significant," they are pivotal to certain moments in local history. They also provide a revealing glimpse into the processes by which the lives, landscapes, and economies of Native people and the fur trade era were overwhelmed by a flood of new people and new interests in the Columbia-Pacific region through the second half of the 19th century.

8: A Rush of Silver:
The Rise and Fall of Salmon Canning on the Lower Columbia

Among the many resources that define this coast, none are as iconic as salmon. Salmon fishing and the cultural and occupational traditions that have supported that industry have long defined the Columbia-Pacific region and the larger Pacific Northwest of which it is a part. While most rivers and large streams in the Columbia-Pacific region are home to salmon, the Columbia River stands apart. For a time, the Columbia estuary was the epicenter of the salmon industry within the Pacific Northwest, and arguably the world. The river's salmon population was of a monumental scale, while the sprawling 260,000 square mile Columbia Basin possessed all the habitat diversity required for an abundance of all five species of North America's Pacific salmon - Chinook, coho, chum, pink, and sockeye. For a time in the late 19th century, roughly forty canneries lined the banks of the estuary, bustling with Chinese factory workers and the steady traffic of fishermen, comprised especially of Scandinavian immigrants. Still, the salmon industry that took shape on the lower Columbia in the 19th century was short-lived. Arriving in the wake of the California gold rush, fleeing the overtaxed rivers in California and the American East, the canning industry was a resource bonanza of unique proportions; yet, it only lasted a few decades' time, cannery interests soon moving on to relatively untapped waters in Alaska and British Columbia. Piers and pilings, left as testament to this period, still line the estuary today, along with a resilient fishing industry that has eked out an existence into modern times, while the industry persists with smaller catches, alternative species, and enduring linkages to an Alaska fishery that was arguably spawned on Columbia River shores. While the story of fishing on the lower Columbia is vast, and has inspired a historical literature of suitably impressive scale, we focus here only on a few highlights - the fundamentals, and those elements that must be understood as part of the larger history of Lewis and Clark National and State Historical Parks.

The salmon harvest was the very foundation of the Native American communities that lined the river's banks, and was the cornerstone of Native subsistence and society. There was a thriving Native "fishing industry" at the time of European contact. Even the Chinook salmon, the premier commercial fish of the river, would be named for the Native people on its lower reach, who depended so heavily on the species for their subsistence and maintained positive relations with the salmon through strictly observed ceremonial protocols. This was not merely a subsistence fishery, but a source of considerable wealth to those tribes so fortunate to live at the mouth of the Columbia. The Clatsop were named for their principal product, pounded dried salmon, which was a major trade good, lightweight and easy to transport to more distant places by canoe. Such seafood products could be traded for dentalia money shells, canoes, furs, even slaves, which were themselves convertible into other forms of wealth. The Clatsop, but

even more so the Chinook, were widely known to share their salmon fishing grounds with visiting tribes, which not only created bonds between these tribes, but also fostered various obligations that were reciprocated with access to goods or resource sites found in those tribes' lands. When the earliest ships arrived on the Columbia, the Chinook and Clatsop provided salmon in trade, doing so without hesitation, in a manner that reflected this deep history of salmon – not only as a food product but as a commercial item and a mechanism of forging bonds between communities. In spite of efforts by the Hudson's Bay Company, commercial canneries, and many other organizations to squeeze out Native competitors along the river in the years to follow, Native people have remained active participants in the procurement and exchange of salmon into the present.

As noted earlier in this document, the HBC, too, entered the salmon business, especially from their Fort George outpost in Astoria. The Company relied significantly on Native American fishermen for their supply of fish, while Native Hawaiian and other employees sometimes fished for salmon by net, and worked to process, salt and barrel salmon for distant markets. A significant portion of the Company's salmon production was shipped to Hawaii, for local consumption or to be shipped to other places around the Pacific that were linked to Hawaii by fur trade shipping routes. Especially after the epidemics of 1830, the HBC also sold salmon to visiting ships, both barreled and fresh; this was not necessarily meant to be a profitable enterprise, but was undertaken in no small part to prevent visiting ships (many of them American) from developing independent trade relationships with area tribes that might interfere with the Company's effective monopoly of the local fur trade. This early salmon trade was in most respects supplementary to the trade in furs, but it introduced the Northwest's iconic fish for the first time to consumers and markets that would later become key to the rapid ascendance of a canning industry centered on the lower Columbia.

Still, as settlers moved into the area in growing numbers in the 1840s, and the Hudson's Bay Company's influence waned, the Company could no longer maintain its position as middleman in the salmon trade. Along the whole of the Columbia estuary, Native American fishermen were an entrepreneurial presence, selling directly to settlers in growing numbers, and developing their own fishing "industry," catering to the needs of local markets and largely independent of European control. Referring to the general pattern of salmon fishing on the lower Columbia in 1844, settler Peter Burnett noted that

"All the salmon caught here are taken by the Indians, and sold to the whites at about ten cents each, and frequently for less. One Indian will take about twenty per day upon an average. The salmon taken at different points vary greatly in kind and quality, and it is only at particular places that they can be taken. The fattest and best salmon are caught at the mouth of the Columbia" (Burnett 1902: 421).

Figure 8.1 – Willapa Bay Oyster shucker, circa 1909. Fueled by demand in the California gold fields, oystering was one of the few occupations available on Willapa Bay in the mid-19th century, and prompted some of the earliest non-Native settlement on this central Pacific County waterway. Photo courtesy Washington State Historical Society.

In this way, Native American fishing supported the fledgling settler communities on the river's mouth and in the Portland Basin, and this early "commercial" fishing was largely restricted to those two areas.

As with lumbering and other fledgling industries, the California gold rush created the first major impetus for non-Native commercial fisheries in the American period. The shipping of salmon to supply these markets was not always simple, for it spoiled in transit; coopers and salteries operated on the lower Columbia to help overcome this problem. Some of the earliest successes and the salting and shipment of salmon relating to this period were connected to places within the parks. At Station Camp, importantly, Irish-born Patrick (or "P.J.") McGowan (1817-1912) was an early innovator. First coming west with the gold rush, he relocated to Portland, buying the missionary land claim at the Chinooks' Middle Village with a vision of a future salmon packing empire based at that strategic location. There, in the place that would later be renamed McGowan, Washington, he developing a salmon salting and packing operation in the 1860s, serving both California and Northwestern markets and building the foundation for one of the more enduring salmon packing companies in the Columbia-Pacific region. First entering the market with salted and barreled salmon, McGowan developed his early operations with the considerable involvement of Chinook workers, who ironically

became fishermen and factory labor for a salmon packing plant built atop what had been one of their premier village sites. McGowan oversaw fish gillnetting operations in the prime waters immediately offshore, but also developed land-based fishing operations in the adjacent waters immediately up- and downstream. Hand- or horse-pulled seines operated immediately upstream, while McGowan and his contemporaries had vast complexes of weirs immediately downstream of the McGowan operations. (At least one weir was operated not far offshore from the NPS Dismal Nitch area too.) McGowan, in fact, developed these shoreline and shallow-water weirs so ambitiously that by the early 20th century he was the subject of litigation for blocking boat navigation through the Megler area with all of his salmon trapping infrastructure (Weathers 1989; Seattle Post Intelligencer 1912).[54]

Oysters, too, would be loaded onto ships headed for the growing California market; so long as they were kept moist and cool, could be kept alive for extended periods, and served fresh in the eateries of San Francisco and beyond. The native Olympia oyster thrived in the shallow and relatively saline bay waters of Willapa Bay. In the early years, a number of mostly American-born entrepreneurs of East coast origin began to harvest wild oysters in that bay for the California market. Like McGowan, they relied heavily on Chinook labor for whom the oyster business served as an early point of entry into the non-Native cash economy. Some of the earliest first-hand accounts were by Swan (1857: 60), who observed,

Figure 8.2 – Harvesting the oyster beds of Willapa Bay in the early 20th century. The early industry focused on the harvest of the naturally-occurring and native Olympia oyster on the bay's broad tidal flats, but several influences – such as intensive harvesting and water quality – turned attention to introduced species, seeded on privately owned "oyster farms." Photo courtesy Washington State Historical Society.

"These oysters are found on the flat and in shoal water, in different parts of the Bay, and are readily procured, either by collecting them by hand at low ride, when the flats are bare, or, in the deeper water, by oyster-tongs, rakes, or dredges....When the tide is nearly out, the boats and canoes start for the oyster-beds...Each oysterman has a bed, which is marked by stakes driven into the flats...as they arrive at the beach a lively time ensues, trading, measuring, and shoveling the oysters, and for an hour or two all is bustle. This over, the day's work is done, and the Indian goes off to eat and lounge away the rest of the time till the next tide, and the white settler to work in his garden, or do what work is necessary to be done around his house. The arrival of a schooner from San Francisco is a time of general excitement, and particularly at that early time when I first arrived, for, as we had opportunity to replenish our supplies except by the schooners, the arrival of one was a matter of moment."

Oystering provided one of the first incentives for non-Native settlement on Willapa Bay in the 1850s, drawing these settlers largely from the emerging towns on the lower Columbia. Surveying the region in 1852, James Alden noted of Willapa Bay: *"At present there are no whites in the Bay, except a few who are employed in collecting oysters for the California market"* (Alden 1852 in Swan 1857: 24). The town of Oysterville, founded in that year, became the principal port of call for schooners carrying oysters to California, and would remain a central hub of oystering into modern times. Within a few decades, however, the native oysters would be largely depleted; by the end of the 19th century, the tidelands of Willapa Bay were divided into privately owned "oyster farms," seeded with imported stock (Espy 1977; Kincaid 1951; Thompkins 1932; Swan 1857).[55]

It was the industrial-scale processing and sale of salmon, though, that would transform the entire Columbia-Pacific region. By the latter half of the 1860s, the salmon industry would begin to overcome the challenges of distant markets, moving beyond small-scale salteries such as the early McGowan operation to become a formidable presence on the lower Columbia. The Hume brothers - George, William, Joseph and Robert - would be key figures in this early history. For many years before they came West, the Hume family had overseen a family business in the harvest of Atlantic salmon on the Kennebec River in Maine. Canning was a new technology, being applied to the Northeastern fisheries by the 1840s, a technological shift that the Humes had witnessed firsthand, and participated in, during the mid-19th century. The runs of Atlantic salmon there had been in steady decline through the same period, falling victim to both overharvesting and water pollution in the steadily urbanizing Northeast. The Humes had long considered a move into the largely untapped Pacific salmon runs of the West, yet the West coast market for salmon had been small, and formidable barriers existed to shipping salmon over land to East coast markets. The discovery of gold at Sutter's Mill, California in 1848 had begun to change the equation, however, and as California's population surged in the following decade the Humes prepared to mobilize for a new salmon cannery that would supply the gold fields and the new towns of that territory. Together, the family-run partnership of George (G.W.) and William Hume, and Andrew Hapgood constructed the first salmon cannery on the Sacramento River in 1864, initially

operating the entire operation on a floating barge – the first industrial canning operation on the West coast. Yet this Hume operation began to founder almost as soon as it started, as salmon populations in the Sacramento River plummeted, falling victim to habitat destruction and declining water quality caused by widespread hydraulic gold mining in that river's headwaters. Frustrated by the steadily decreasing salmon runs on the river, the partners scouted for new locations more distant from the gold fields (Dodds 1959; de Sales McLellan 1934; Hume 1920, 1903).

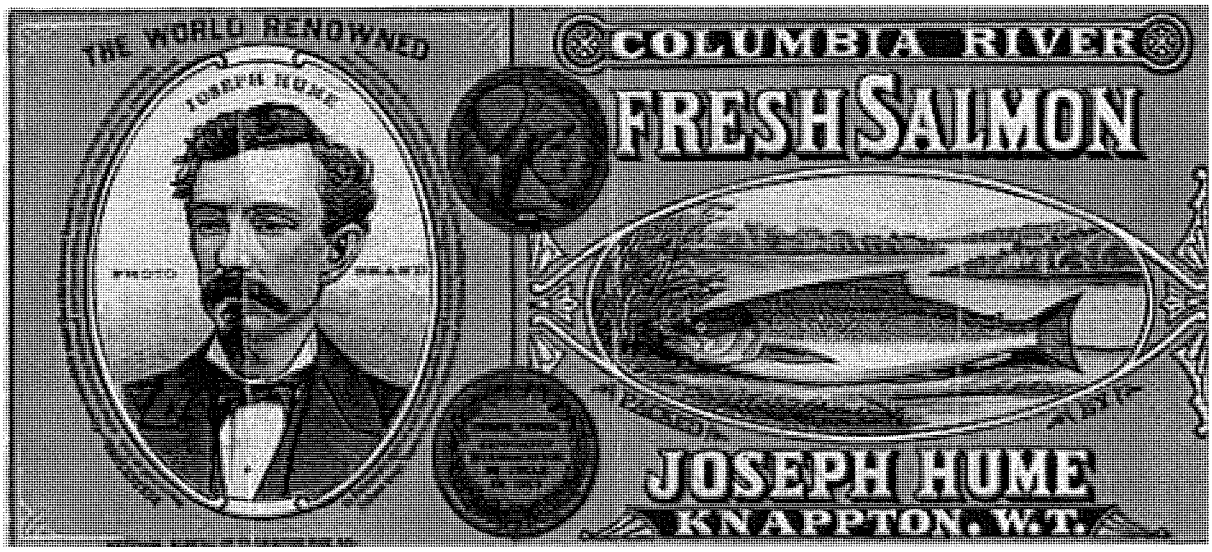


Figure 8.3 - Joseph Hume Brand Salmon label, from 1882, showing a likeness of Joseph Hume, and identifying the cannery's provenience in Knappton, Washington Territory. Image courtesy of Oregon State Archives, Historical Oregon Trademark #113.

After some searching, the Humes brothers and Hapgood decided to move their operations to the Columbia River with its legendary vast salmon runs, with the intention of shipping canned salmon back to the burgeoning communities of California and places beyond.[56] They were joined at this point by two other Hume brothers, Robert (R.D.) and Joseph Hume, building the Columbia River's first cannery at Eagle Cliff, in what is today Wahkiakum County. Together, these founders and their employees initially constituted the entire salmon canning "industry" on the river. R.D. Hume recounted the founding of the first cannery on the lower Columbia in a 1903 issue of the fishing industry journal *Pacific Fisherman*:

[O]n account of the scarcity of salmon in the Sacramento [river]...in the spring of 1866 William Hume went to the Columbia to see what could be done...G.W. Hume also went to the Columbia, for the purpose of selecting a site and building a cannery and other necessary buildings, that should be ready for the reception of the others, who went there some time in October of that year. The selected by him was at Eagle Cliff in Wahkiakum County, Washington, and part of the cannery now owned and operated there by William Hume is the original building erected by him.

During the winter of 1866-67 we put our machines in order and made the nets and cans for the spring season of 1867, at which time we packed 4,000 cases of 48 cans each.

At the time of our arrival there was but little business done on the Columbia River below Portland...At that time the business of the lower Columbia cut but a small figure – a wheezy old mill at Astoria and a dilapidated affair of the same kind at each of the other places on the Columbia, except Cathalamet [sic], which had nothing in the way of manufactures, comprised all there was to furnish a livelihood for the laborers of that section, except that furnished by the few engaged in salting salmon, and that work was mostly done by Indians (Hume 1903: 12).

Using what was then relatively new metal canning technology, the Hume cannery could ship Columbia River salmon almost anywhere in the world, with little chance of spoilage, and in standardized sizes and weights that could be accommodated by an increasingly standardized shipping industry. Learning of the Hume's success, other cannery developers appeared along the shores of the Columbia estuary in the months and years ahead, largely following the Hume model. While all salmon were eligible, it was Chinook salmon, the largest salmon of the River with its delicious oil-rich meat, that would become the cornerstone of this new industry (Dodds 1959; Hume 1920; Barker 1920).

The heavy seasonal demand for workers in salmon canning, especially in the early years, created challenges in this thinly-inhabited part of the world. Native American workers were relatively few in number by this period, often had competing obligations on their time, and were not always eager to help with the wholesale killing and processing of fish for use by people living in remote places. Local non-Native settlers often had competing obligations too, in the form of new enterprises and homesteads, often leaving only a small and itinerant non-Native workforce available to support the fishing industry. With such limited options for local cannery workers, the Humes began to rely on contractors who recruited Chinese laborers to work in the region - a pattern that would soon be repeated by many other cannery owners in the Columbia-Pacific. These contractors were established in Oregon's newly forming cities, as well as other major Western cities, largely in response to the demand for laborers to build railroads after the Civil War. At the time, they had recruited a large number of laborers to the region from a few counties near the Pearl River delta region in Guangdong. In 1870 George Hume had hired a dozen of these Chinese workers -including a oft-mentioned twenty-year-old man named Ah Shing - for positions in the canning line, plus two as tinsmiths and one as a cook, to supplant a supposedly belligerent "*riff-raff and criminal element*" of non-Chinese workers. The Humes found these workers to be dependable and efficient; they also accepted lower wages than their American counterparts and tolerated risky industrial working conditions with few complaints. The rush of cannery construction in the 1870s was serendipitously timed, in this respect, coinciding with the completion of many of the West's largest railroad construction

projects, so that labor contractors seamlessly began to shift Chinese workers from railroad to cannery crews. After 1873 the canneries grew in direct proportion to the availability of Chinese workers, and by 1874 twelve of the thirteen Columbia River canneries then in operation had an entirely Chinese crew. Encouraged by their availability and performance, cannery owners increased production by increasing the size of their Chinese crews, allowing them to avoid costly investments in mechanization. By mid-decade Chinese crews had become the industry norm in salmon canneries along the Pacific Coast. From Hume's original 15 Chinese workers, the number by 1881 had soared to more than 4,000 Chinese immigrant workers, working in 35 Columbia River canneries.[57] Indeed, for a brief time, the number of Chinese immigrants living in the Columbia-Pacific roughly matched that of native-born Americans, reflecting both the regional prominence of the fishing industry and of the Chinese place within it (Friday 1994; Newell 1998; Dodds 1959; Hume 1920; see Appendix A).

Figure 8.4 – Chinese factory workers processing freshly-caught Chinook salmon. Chinese cannery labor was a cornerstone of the lower Columbia canning industry from its beginning in roughly 1870 until the first decades of the 20th century, when various exclusion laws prompted an exodus of Chinese immigrant labor. Photo courtesy Oregon Historical Society.

While canneries were found along the Columbia as far upstream as the Dalles, they were disproportionately concentrated on the lower river, where the fish quality was best and where shipping by boat was easiest (see Table 1).[58] Soon, the number of canneries would balloon, lining the north shore of the Columbia from Grays Bay to Ilwaco, and especially dominating the waterfront of Astoria on the south shore. The number of canneries in Astoria illustrates the explosive growth of the industry at the mouth of the Columbia, and the demographic effects of that change. The first cannery opened in Astoria in 1874, and the second opened the following year, as the *Weekly Astorian* proudly observed that the "*success of the Astoria canneries establishes the fact that Astoria is the place for fish canneries.*" By 1876 the town had five canneries, eight in 1877,

Figure 8.5 – Chinese immigrant men, but also sometimes women and children, worked in cannery support positions, such as applying the distinctive brand labels to cans and boxes – here, labels are applied for the "Bon Bon Brand Salmon." Photo courtesy Oregon Historical Society.

and fourteen canneries in 1880. Owners of these new plants also followed Hume's practice and hired Chinese labor. The 1880 census listed 2,122 Chinese immigrants living in Astoria and identified some 77 percent of them as cannery hands (Friday 1994: 56; see Appendix A).

During the height of the salmon industry on the lower Columbia (roughly 1880 to 1910), arriving a few years later than the Chinese, Scandinavian immigrants flocked to the mouth of the river - many seeking work as fishermen. A large proportion of arriving Swedish and Norwegian men, and almost all of the early Finnish men of working age who immigrated to the region, were fishermen for at least part of their working lives. In Astoria, for example, according to the 1880 census some 133 Finns were listed as fishermen or as "working in fishing," and only 12 worked at other occupations – representing some 92% of the Finnish immigrant workforce; by 1890, a solid majority of Astoria-based fishermen were Finnish immigrants (Hummasti 2002: 139).[59] Some worked directly for the canneries as fishermen and in other supporting roles, but a sizeable number worked as independent fishermen, selling their catch to canneries on contracts or as independent sellers, on a per-pound basis. While most notable for their contributions as fishermen and as labor for the industry, these immigrants also readily entered managerial roles as well. On the Washington side of the Columbia in Ilwaco, a Finnish immigrant named B.A. Seaborg established the Aberdeen Packing Company in 1880, one of the earliest canneries in Pacific County (Jacob 2005; Hummasti 2002).

As the Scandinavian population grew, the roles of immigrant labor became increasingly segregated in the fishing industry. The canneries employed Chinese men to work the lines butchering and cleaning fish, as well as in constructing and packing the cans. The White fishing community – Scandinavian, native-born American, and otherwise - maintained increasingly strict prohibitions on Chinese occupations and all but prohibited Chinese participation in any aspect of the industry other than cannery work; various sources suggest that those few Chinese men who attempted to fish commercially in the late 19th century sometimes lost their lives for making incursions into what was considered by many the exclusive occupational domain of White fishermen (Jacob 2005: 9). Congress passed a series of Chinese exclusion laws from 1882-1924, making it increasingly difficult for Chinese to enter and work in the U.S. By the 1890s, the Chinese population was in decline, as these immigrants began to move to urban areas in search of employment, to pursue work in canneries elsewhere on the coast (such as British Columbia), or to move back to their homes in southern China. By 1920 Scandinavian women who had recently immigrated to the area – Finnish women in particular – had largely replaced Chinese workers in the canneries (Lewis 1993: 126).

Table 6.1: Salmon canning companies on the Columbia River, 1890

Shaded Canneries located within Clatsop, Pacific and Wahkiakum Counties

Location	Company	Brand names
	Oregon	
Astoria	Astoria Packing Co.	Astoria Packing Co.; Kinney's
Astoria	Badollett & Co.	Badollett & Co.
Astoria	Booth & Sons	Oval
Astoria	Columbia River Packing Co.	Cocktail
Astoria	Devlin, John A. & Co.	John A. Devlin & Co.
Astoria	Elmore, Samuel	Magnolia; Seal
Astoria	White Star Packing Co.	White Star
Astoria	Eagle Canning Co.	Favorite
Astoria	Fisherman's Packing Co.	Fisherman
Astoria	Scandinavian Packing Co.	Scandinavian Fishermens'
Astoria	George & Barker	Epicure; Point Adams Lighthouse
Astoria	Hanthorn & Co.	Hanthorn & Co.
Astoria	Hume, George W.	Flag
Astoria	I X L Packing Co.	I X L
Astoria	Occident Packing Co.	Mermaid
Astoria	Washington Packing Co.	American
Maple Dell	Buchheit Packing Co.	Cascade
The Dalles	The Dalles Packing Co.	Otter
Cascades	Warren & Co.	
Clifton	Oregon Packing Co. (J.W. & V.C.)	Medal
	Washington	
Ilwaco	Aberdeen Packing Co.	Bear
Knappton	Knappton Packing Co.	Beacon
Knappton	North Shore Packing Co.	Argonaut
Chinook	McGowan, P.J. & Sons	Keystone
Pillar Rock	Pillar Rock Packing Co.	Pillar Rock
Brookfield	Megler, J.G. & Co.	Stag; St. George
Waterford	Hapgood & Co.	Hapgood & Co.; Waterford Pressing Co.
Eureka	Eureka Packing Co.	Star
Cathlamet	Warren, F.M. & Co.	Monogram (F.M.W. & Co.)
Bay View	Ocean Canning Co.	Esquimaux
Eagle Cliff	Hume, William	Eagle

From *Select Committee on Relations with Canada, US Senate, 1890*

The Hume cannery, and those that followed, quickly became virtual small towns, compete with bunk houses and mess halls for workers, tool and machine shops, boat and net repair sheds, and many other types of supporting infrastructure. Canneries were situated on portions of the waterfront with slow and deep waters, often with little or no land access, where both small fishing boats and larger shipping schooners could easily offload whole fish, or bring canned fish onboard. Fishing was initially carried out by small gillnets, often extended by hand or rowboat, but these would be augmented with horse-drawn nets, sailboats, seines, fish traps, mechanized "fish wheels" – on land or boat - that scooped fish from the shallows, and myriad other technologies. In time, the land-based technologies would often be owned, or very much controlled, by canneries and packing organizations, while the waterborne fishermen were comparatively independent.

Figure 8.6 – Especially after Chinese labor began to move out of the region, women – immigrant Finnish and Scandinavian women in particular – began to work in the canneries in much greater numbers. Here, a woman works in one of Pacific County's Columbia River canneries in the early 20th century. Photo courtesy Washington State Historical Society.

The earliest gillnetting boats on the river had been propelled only by oars, drawing nets out into the river's channels and pulling them back in by hand – heavy with salmon, if the gillnetter was fortunate. Yet, progress was slow in these little rowboats, and sometimes dangerous in the river's swift currents. With the addition of sails in the

1870s, the gillnet fleet provided one of the most efficient means of harvesting salmon on the lower Columbia. The canneries of the Columbia-Pacific were supported in no small part by this "butterfly fleet" - the salmon gillnetting boats which plied the lower Columbia River in the late 19th and early 20th centuries. The small, split-rigged fishing vessels earned the boats their nickname, resembling butterflies underneath the two triangular sails that propelled them through the water. At one time, there were over 2,500 of these double-ended gillnet boats fishing the waters of the lower Columbia, often competing directly with commercial operators of fish wheels, seines, and land-based gillnetting. These boats were relatively inexpensive to maintain, required only two or three crewmembers, and were highly mobile, yet also quite vulnerable to rough weather. Residents of the small port towns on both the Washington and Oregon sides of the estuary took part in this fishery - Scandinavian immigrants most prominent among them, but also including other men of northern European extraction, immigrant and American-born fishermen, as well as a small number of independent Native American operators (Tobias 2012; Engeman 2005; Martin 1994; Andrews and Larsen 1959; Smithsonian Museum of American History n.d.).[60]

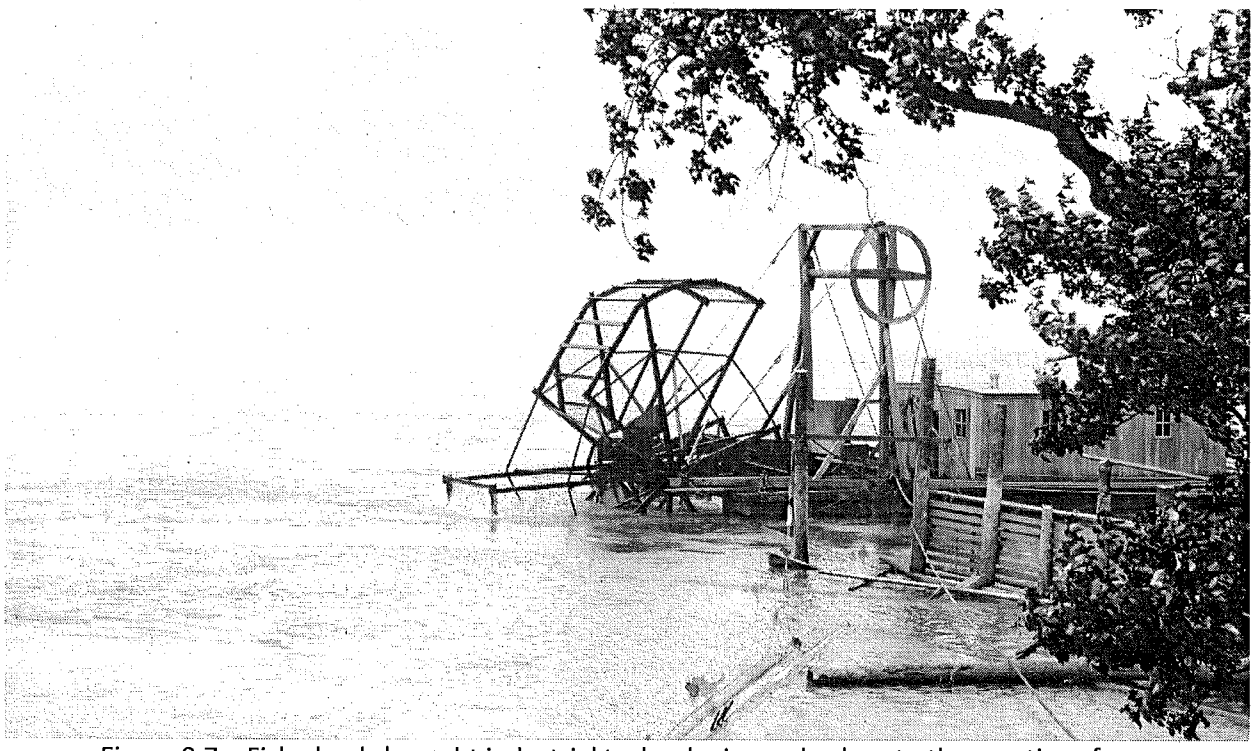


Figure 8.7 – Fishwheels brought industrial technologies and values to the practice of Columbia-Pacific region fishing. These contraptions, of various designs, were designed to rotate in the river shallows, scooping up fish in mesh cages or similar and depositing them in a holding pen for later processing. They were highly effective in some settings, providing a regular supply of fish even when fishermen were scarce, but were eventually banned as one of several conservation measures on the Columbia River. Photo courtesy Washington State Historical Society.

Figure 8.8. - Men seining for salmon with hand-pulled gillnets on the lower Columbia RIver, in 1914. African-American men, while not widespread in the salmon industry historically, sometimes found work on fishing crews. Image from Plate 6-B in *U.S. Geological Survey Bulletin 614*, 1916, Washington D.C.

Meanwhile, salmon-canning methods changed little before the twentieth century. William Wilcox of the U.S. Fish Commission described in 1896 a cannery on the Columbia River whose methods represented the standards of the time:

As a rule the factories are located adjacent to or very near the fishing-grounds, so that at the most but a few hours elapse from the time the fish are freely swimming until they are caught, delivered at the cannery, dressed, canned, cooked, and packed, thus insuring a perfectly fresh product, old or stale fish never being met with at a salmon cannery…The buildings connected with a salmon cannery are always built at the water's edge or partly over the water, so that vessels or boats may come alongside and deliver their fish and supplies or receive the packed products. As a rule they are large, roomy, one-story frame structures, the business of receiving, cooking, and packing of salmon all being in the one large, high, and well-lighted room. The lofts are used for the storage of empty packing cases, empty cans, nets, etc., and in some instances

Figure 8.9 – A multiethnic gillnetting crew on Sand Island, south of Cape Disappointment, circa 1911, having just removed their catch of Chinook salmon from the nets, and beginning to load the fish for processing. Photo courtesy Washington State Historical Society.

large rooms are there used for the manufacture of cans. Adjacent to the cannery are the rude quarters in which the Chinese employees live, and nearby is usually the home of the superintendent. Chinese have a monopoly in the canning of salmon, but never engage in their capture. Before the season opens contracts are made with some large Chinese firm of San Francisco or Portland to do the work so far as relates to receiving raw products and turning the salmon over canned, packed, and ready for shipment. As a rule the fish are bought from the fishermen at so much apiece or per pound, a stipulated price for the season having previously been agreed on; but in some cases the fishermen are hired by the month, with or without board, the fishing boats and nets, in that event, being furnished by the cannery (Wilcox 1896: 583).

The growth in the canning industry had been spectacular, with roughly 40 canneries operating simultaneously along the Columbia estuary through the halcyon years in the 1880s and 1890s. Competition was sometimes fierce, and canneries designed specialized labels, logos, and other marketing devices in an attempt to differentiate themselves

Figure 8.10 – The P.J. McGowan and Sons Cannery, McGowan Washington, at today's Station Camp, circa 1897. Little remains of McGowan's extensive cannery today. Photo Courtesy Columbia-Pacific Heritage Museum, Ilwaco, Washington.

from the pack.[61] In the early 1890s, when nearly all other branches of business were depressed, the salmon canning industry of Washington and Oregon continued to expand, and the fishing industry represented more than a third of the entire industrial workforce for those states (Wilcox 1896: 577).[62]

Amidst all of these developments, the McGowans retooled their fish salting operation at Station Camp, by this time one of the oldest fish processing operations on the lower river. P.J. McGowan took on his four sons as business partners and changed the name of their operation to P.J. McGowan and Sons. By 1884, they had completely redeveloped the saltery, building a cannery in its place - sometimes called the "Chinook Cannery." They later expanded their company's operations to include canneries on the waterfront of Ilwaco - very near the northwestern edge of Cape Disappointment State Park, as well as at sites along the shores of Willapa Bay, and at Warrendale and Dodson, Oregon on the Columbia. Unlike some canneries, a small and relatively stable community developed around the cannery, in part due to the enduring presence and investment of the McGowan family, whose commitments to the area arguably ran deeper than many of their industrialist peers of the time. In P.J. McGowan's later years, he would fund a

Figure 8.11 - P.J. McGowan cannery label from the early 20th century. Image courtesy Columbia-Pacific Heritage Museum, Ilwaco, WA.

number of community institutions, including the St. Mary's Catholic Church, constructed in 1904, as part of the family's effort to foster a relatively coherent community life in the cannery town.[63] That church, as well as a 1903 cannery office and the 1911 McGowan family house still remain on the site.

This period also saw the early development of fish processing facilities near what is today the NPS Dismal Nitch property. Joseph Megler, a German-born tinsmith turned cannery magnate, had operated a cannery and fish buying station on the western edge of the cove through the 1870s and 1880s.[64] Various sources suggest that the small fishing station built inside the cove – the operation that appears to be ancestral to those that built the pilings now visible from park lands – was first constructed in 1880 by Astorian industrialist, Marshall J. Kinney.[65] Though not built by Megler, the structure was soon incorporated into the Megler operation following its 1880 construction. As Weathers notes: "*The site was initially a fishing station built by Astorian Marshall Kenney* [sic] *in 1880. Megler used the site for a fish receiving station in 1883*" (Weathers 1989: 40). President of Astoria Packing Company, Kinney was owner of the "Marshall J. Kinney" Cannery in the Uniontown district of Astoria, which was at the time the largest salmon packing operation on the river – a facility that was later listed (then delisted) on the National Register, and is partially reoccupied with retail space on today's Astoria waterfront. He would enter into occasional business ventures, including lower Columbia lumber milling, with his almost equally prominent brother, William S. Kinney. (Moreover, Kinney – his timing fortuitous - would soon move some part of his assets from Columbia River canneries to recreational beachfront real estate, buying out the Phillip Gearhart Donation Land Claim in 1888, and platting and beginning sales of

luxury homesites at "Gearhart Park" at the modern location of Gearhart, Oregon.) The Megler Cove site was a very small outpost of Kinney's much larger operation.

When Megler acquired the land, it expanded his holdings to the west of the site, where he and partners Thomas Jewett and Jacob Chambers had developed a cannery on land they purchased in 1872 from Andrew Wirt. Megler continued to operate a cannery at that location but was increasingly dissatisfied with the suitability of this shoreline for large-scale shipping access – an issue that would plague the site's use throughout the salmon cannery period, and relegate his operations in the "Megler area" to a relatively

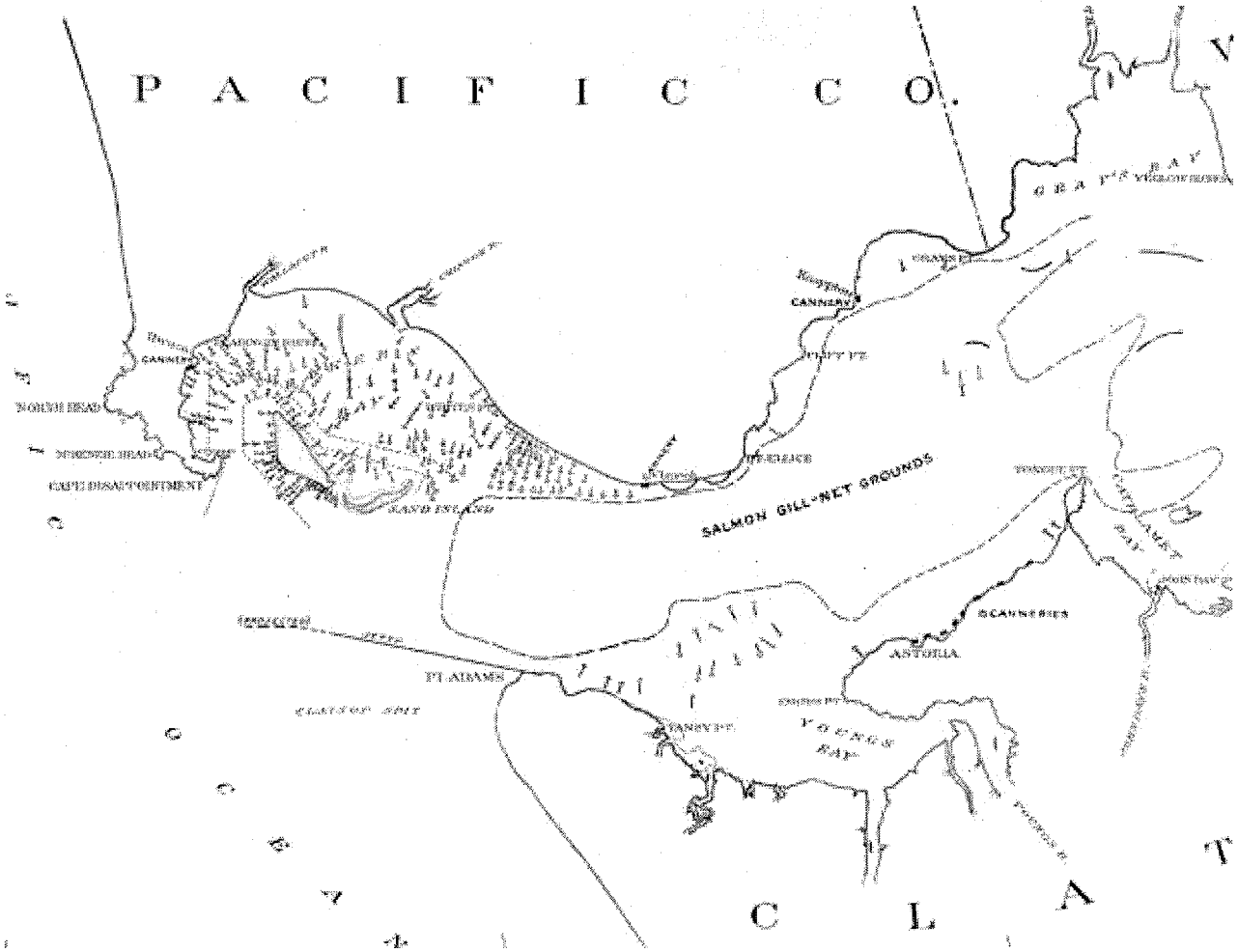


Figure 8.12: At the peak of the salmon canning industry, the prime gillnet grounds sat just offshore from Dismal Nitch, as well as Station Camp and Fort Stevens. Megler represented a prime seine hauling area, and waters just to its west were crowded with weirs. From U.S. Commission of Fish and Fisheries, 1892. *Chart of the Lower Columbia River, Showing the Location of Salmon Apparatus, Fishing Grounds and Canneries in 1892.* Washington, D.C.

minor role in that industry's history. He also built cannery facilities many miles upstream, below Cathlamet, in the early 1870s. To support his operations, Megler began to lease the land on Megler Cove from a Knappton mill owner to develop a fish transfer station. He developed his fish transfer station - commonly called the Point Ellis (or "Point Ellice") Buying Station - at the site by 1883 (Appelo 1966).[66] The piers and structures in this area sometimes appear as an "old fishing village" on 20th century maps, suggesting the extent of operations at this place. In the late 1880s and early 1890s, at the peak of the salmon canning industry, the principal gillnetting grounds in the area sat immediately adjacent to this rough and rocky reach of the River - extending from roughly Tongue Point and Grays Bay on the east to Point Adams and Sand Island on the west. When fishing was especially good, gillnetters from the butterfly fleet often stayed the night in Megler Cove, fronting today's "Dismal Nitch,"returning to the adjacent fishing grounds the following morning, so that they did not need to take the long, slow trek to and from their home ports each day. In their small boats, the gillnetters also took refuge there to get out of inclement weather or the bustle of the fishing grounds. The enduring presence of a fish transfer and buying station on the shoreline made this possible, allowing gillnetters to unload their catch between sets without having to proceed to distant canneries before returning to these prime fishing grounds.[67] The site would continue operations into the early 20th century, though the extension of the Oregon Railroad and Navigation Company rail line past the site undermined its use significantly with the demolition of shoreline structures associated with the site.

The profits generated by the canneries on the lower Columbia were astounding, but working conditions and wages in the canneries, and the price offered to fishermen for fish, did not improve commensurately. With so many Finnish immigrants entering into the workforce, a growing number of them having been ousted from Russian-controlled Finland for their labor activism and leftist sympathies, perhaps it was inevitable that there would be an organized response from fishermen along the lower Columbia. In 1896 the fishermen's union waged a strike in response to low fish prices being paid by the canneries at a time of such huge profits. Cannery operators called in the National Guard to break the strike; these strikers lost the battle, but the strike would have ripple effects throughout the lower Columbia fishing industry. The cooperative movement, a particularly Finnish form of enterprise, had been popular in Finland around the turn of the 20th century, and immigrants brought its principles to America. After the unsuccessful fishermen's strike in 1896, some two hundred Columbia estuary fishermen, with Finnish immigrants in the vanguard, organized the Union Fishermen's Cooperative Packing Company in Astoria. This company helped fishermen to coordinate their sales to canneries in such a way that they could influence prices paid for their catch, and allowed them to pool fish and other resources for the purpose of shared sales, shipping, and marketing that might function independent of cannery owners' control. The Fishermen's Cooperative Packing Company became a highly

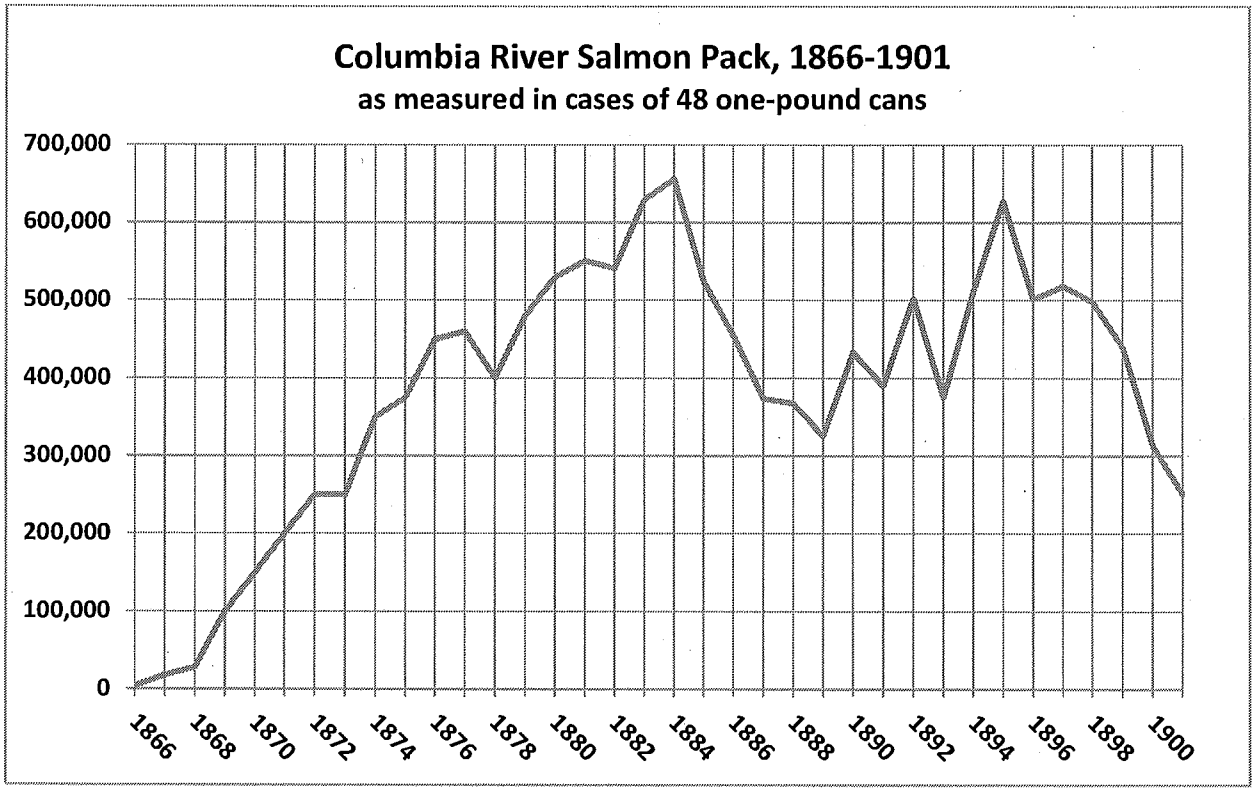
successful packing cooperative, and remained a fishermen-owned business until the late 1940s when it was sold to private interests (Jacob 2005: 17-21; Hummasti 2002: 142).

Shortly after the 1896 strike on the river, prominent industrialist, A.B. Hammond, had completed the development of the railroad link connecting Astoria to the Northern Pacific Railway via Goble, Oregon, effectively opening an eastern shipping route for Astoria canned salmon. The strike in conjunction with the newfound eastern markets had broad and transformative effects in the industry. Recognizing that the cannery owners held redundant assets (and were in a poor position to negotiate individually with an increasingly collectivized workforce), Columbia-Pacific cannery owners acknowledged a need to combine their assets and organize into their own, more cohesive corporate entity. Such an umbrella organization would create economies of scale in fish purchasing, shipping, sales, marketing, and almost every other facet of their business. With A.B. Hammond leading the charge, many of the river's most prominent cannery owners agreed to combine forces and assets under a single corporate umbrella - founded in 1899, the Columbia River Packers Association (CRPA) would serve as a significant galvanizing force in the later years of the canning industry. The original CRPA consisted of seven Astoria canning companies with ten canneries located on the Columbia. They included many of the key cannery owners associated with the larger history of LEWI lands, such as Kinney, Seaborg, Hammond, and others.[68] New York native Samuel Elmore, a Columbia River cannery owner and onetime partner of Joseph Hume, was a key figure in these early years of the CRPA, acting as the first vice president and general manager of the organization.[69] Elmore was fundamental in uniting the cannery owners to take part in the CRPA, and was widely heralded for his early success in the organization as a man that "*puts more Chinooks in tin cans and salt barrels than anybody on the river, who is salmon king of Tillamook, Coquille, Alsea, Umpqua and Siletz, who operates Tillamook's boat line and who is the newspaper power of Astoria*" (Morning Oregonian 1908:3). At the onset, the interests of each cannery owner that agreed to join the CRPA were entirely bought out, or cannery owners were given stock that equaled the value of their cannery, land, and other disposed assets (Bumble Bee Foods, LLC. 2012; Martin 2009, 1994; NPS n.d.).

In truth, the rise of organized labor might have been the least of the cannery owners' concerns. Among the ranks of these early industrialists, there was a growing realization that the supply of fish was in peril. When canning operations on the Columbia River began in 1866, 4,000 cases were packed that first season and sold at an average of $16 per case. By 1872 the total pack reached 250,000 cases, and the price had declined to $9 per case. From 1866 to 1884, each successive year (with one exception) saw an increase in the quantity of the salmon caught and processed. Salmon canning on the Columbia reached its peak in 1884, when more than 650,000 cases were packed for the season. Literally millions of pounds of salmon were being taken from the river each year. Following 1884, the catch declined sharply, to roughly half its peak. So began a cycle of similarly-sized peaks and valleys that would make fishing unpredictable until the

salmon fishery entered a period of steady decline 40 years later as dams began to appear up and down the Columbia, with the catch never again reaching historical levels (Lichatowich 2001; Taylor 1999a, 1999b). In its 1894 bulletin, the US Fish Commission warned that over-fishing was imminent:

Up to 1888, practically the entire pack consisted of the king or chinook salmon, and the fishing season did not extend beyond the first of August. In 1889 the packers began canning bluebacks and steelheads to make up the deficiency in the supply, and extended their operations to the first of September…It is certain that the continuation of these fisheries under present conditions will eventually result in rendering them unremunerative. It concerns alike the whole people of the State, as well as those directly interested in the fisheries, that such regulations of the times, methods, and apparatus of these fisheries should be established and enforced as are necessary to maintain supply" (McDonald1894: 156, 165).



Source: *Pacific Coast Fisheries* 1903b: 7.

While the profits of cannery owners may have still been astounding, some in their ranks began to express concern about the sustainability of the industry – quietly at first, but with growing urgency as early and dire predictions seemed to be borne out by catch numbers. By the mid-1870s, lower Columbia cannery operators were already expressing

concerns internally about the long-term viability of the industry. In 1877, a number of these cannery owners helped to organize and fund the Oregon & Washington Fish Propagation Company, which built a salmon hatchery on the Clackamas River – a tributary of the Columbia, via the Willamette River – which was then operated largely by the U.S. Fish Commission. (At around the same time, R.D. Hume – having developed secondary cannery capacities on the Rogue River – began to develop hatcheries on the lower reaches of that river Basin for similar reasons.) In the late 1880s and early 1890s, the industry became increasingly involved in early fish conservation efforts on both sides of the river, including the development of state hatcheries as well as state fish commissions and early fish wardens. The earliest hatchery effort on the lower Columbia, and within the state of Washington, was founded near Chinook in 1893 amidst this foment, with the significant involvement of Station Camp cannery owner P.J. McGowan. In 1898, a special session of the Oregon legislature introduced a sweeping set of salmon protection measures, establishing a licensing system for industry to start developing hatcheries, imposing prohibitions on salmon fishing in many Columbia River tributaries, and requiring a wide range of specific conservation measures. By the early 1900s, these conservation measures were having little measurable effect. In 1908, the *Morning Oregonian* headlines announced a thirty to forty percent decline in salmon catches, for example, stating that the salmon supply was *"still going from bad to worse"* (Morning Oregonian 1908:3). In a rare show of self-regulation, the CRPA intervened, calling for shortened fishing seasons, halting Sunday fishing, regulating mesh size, and restricted salmon fishing above the mouth of the Willamette. However, these measures were not enough to curb the diminishing salmon supply. Huge salmon harvests had taken their toll, surely, but a steadily growing proportion of the Columbia Basin was being urbanized, its forests felled and its grasslands converted to farms, with complex but often negative consequences for water quality and for the integrity of spawning areas throughout the Basin; modest salmon harvest limits alone would prove insufficient to turn the tide. By the time that extensive dam construction began in the Columbia River Basin – especially as an outcome of Depression-era federal hydroelectric projects – the salmon population was only a small fraction of its mid-19th century numbers. (Depression-era dam building, undertaken as part of the Work Projects Administration would ultimately produce some of the most imposing dams, such as the Rock Island Dam (completed 1932), Bonneville Dam (completed 1937) and Grand Coulee Dam (completed 1942), contributing to the final descent of salmon numbers. With more than 400 dams ultimately being built on the Columbia, 11 monumental ones on the main river alone, it would in time become the most developed river, in hydroelectric terms, on the planet (Lichatowich 2001; Taylor 1999; White 1996; Martin 1994; Smith 1979; Dodds 1959; Morning Oregonian 1908).

The industry was at a turning point in the early 20th century for other reasons, too, just as fish numbers were going into decline and the CRPA sought to consolidate canning company interests. Increasingly it became clear that the canneries and their supporting infrastructure along the lower Columbia were woefully out of date and in need of costly

upgrades. By 1900, national and state exclusion laws had drastically reduced the Chinese labor pool in the Pacific Northwest – perhaps satisfying the racially-driven political activists of the region but undermining the entire economic model on which the salmon industry was predicated. Through the end of the nineteenth century, the canning industry had largely avoided mechanized innovation, but the industry now sought out a fish-butchering machine partly to replace Chinese salmon cutters, who were becoming scarce (and, where they persisted, increasingly expensive because of their special technical skills). In 1903 Canadian, E.A. Smith had developed the iron fish butcher, the only such machine invented specifically for salmon canning since the industry's birth 40 years earlier. With the unfortunate nickname, "Iron Chink," this fish-butchering machine could butcher and clean fish at the astonishing rate of 100 fish per minute, *"doing the work of 30 or 40 Chinese and doing it in a much more uniform manner"* (Pacific Coast Fisheries 1903a: 13). Advertisements for the iron butcher capitalized on concerns about the declining labor pool, *"1909, the big year, the big opportunity. Are you prepared? Chinese labor will be scarce. Contract prices will be raised. The iron chink is your only*

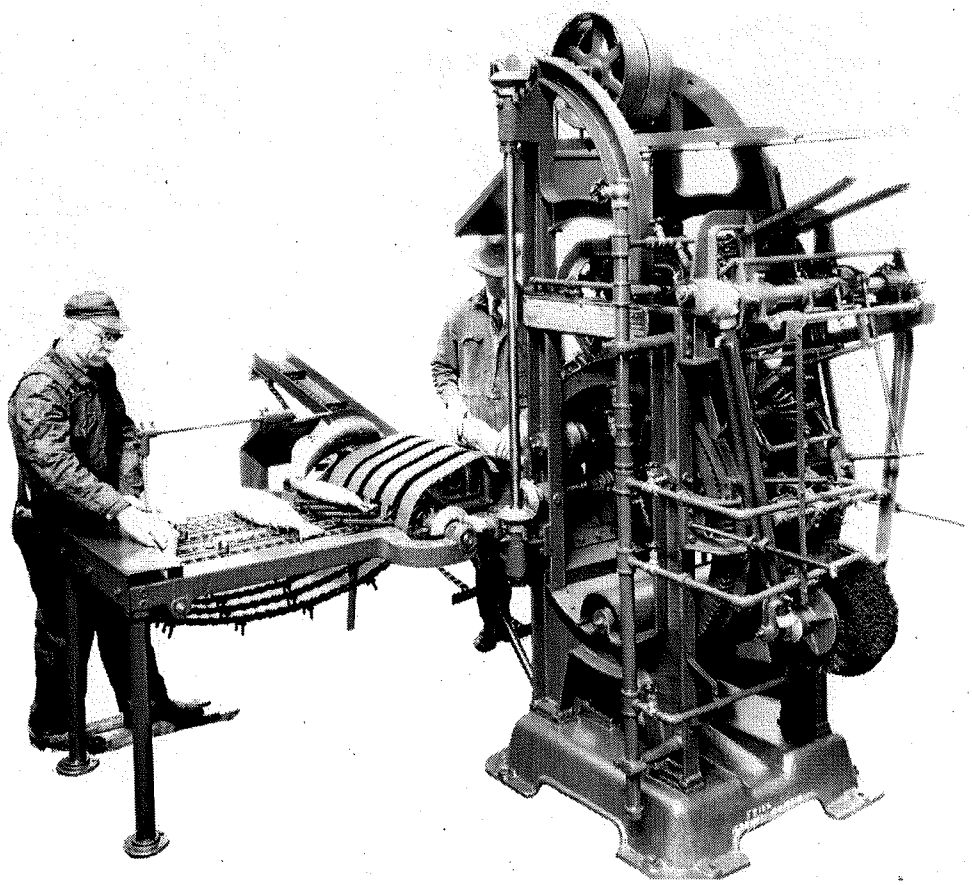


Figure 8.13 – The iron butcher or "Iron Chink" – a machine that allowed canneries to increase their productivity even as Chinese labor became increasingly scarce along the lower Columbia River. Photo courtesy Washington State Historical Society.

Figure 8.14 – A Columbia River gillnetter (location unknown), pulling salmon nets by hand into his small wooden boat. Photo, fish5722, from National Oceanic and Atmospheric Administration Archives, Historic Fisheries Collection.

relief" (quoted in Newell 1988: 649). Most canneries that survived the period adopted the new iron machinery, or its close successors. Gasoline powered boats, too, began to replace the sail-rigged "butterfly" gillnet boats in the early twentieth century, but the transition took a number of years. Those canneries that leased gillnetter boats to fishermen were initially hesitant to invest the capital needed to retrofit these vessels with gas engines in light of the broader economic realities of the lower Columbia. Independent fishermen, adopting the new motorized boats, soon outpaced the cannery fleets, forcing cannery owners to adopt gasoline engines under a certain amount of economic duress. By the 1930s, the butterfly fleet boats had by and large disappeared

entirely on the lower Columbia River, replaced by what became known as the Columbia River bowpicker, while other, larger motorized netting boats began to ply the river's mouth and the open Pacific. True, as the 20th century began, the salmon industry's labor requirements were generally deceasing, so that bunk houses, mess halls, and other facilities were being mothballed by the first decades of that century; simultaneously, canneries increasingly had to maintain fuel tanks, oil tanks, machine shops and other infrastructure to accommodate motorized boats and all the equipment associated with these increasingly automated canning facilities (Martin 1994).[70] These events also played out on the margins of what are today park lands. The Columbia River Packers Association had acquired lands and an old cannery on Hungry Harbor, roughly a mile east of Megler Cove during their consolidation in the early 20th century. By the late 1910s, they had converted the cannery to a fish receiving station that functioned somewhat like Megler's original operation inside Megler Cove. This receiving station was later called the "Northshore" facility in Columbia River Packers Association reports. The CRPA continued to use the facility as a fish receiving station through the early decades of the 20th century, but also increasingly used the site as an equipment and storage facility, and a place where CRPA nets could be dried and repaired - reflecting the increasingly mechanized and capital-intensive direction taken by the canning industry, as well as the growing consolidation of CRPA cannery operations on the lower Columbia. During World War I, as they shuttered cannery operations on the site, a large steel tank was assembled on the docks to hold an emergency reserve of fuel oil to support the various CRPA cannery operations on the lower river; this was dismantled by 1940. A few temporary "bunkhouses" were reported adjacent to the site as well, serving as housing for transfer station operators and for boat crews staying there temporarily between sets, or for repairs and inclement weather (Gunderson 2005; CRPA 1943). There are cryptic references in certain documents implying that there may have been a small boat repair shop at the site, and that Chinese laborers may have lived at the site briefly prior to the 1920s. By 1943, an insurance assessment of CRPA properties provided a detailed description of the site at that time, noting that:

"this is a very old cannery site, but for the last twenty-five years it has been used only as a fish receiving station and for living accommodations of a few local fishermen...The property at Northshore comprises two large net-rack docks 600 feet long and 240 feet long with an interconnecting tramway between them and a tramway 700 feet long leading to the shore. The fish receiving station building is a small structure 25x50, located on the other end of the dock" (CRPA 1943: 13).

With all of these challenges - declining fish stocks, antiquated machinery, dwindled and increasingly organized labor, and a host of other issues on the lower Columbia -the cannery owners of the region began to look north, to the productive waters of the far north Pacific. By 1900 Alaska was already becoming the salmon industry's new locus,

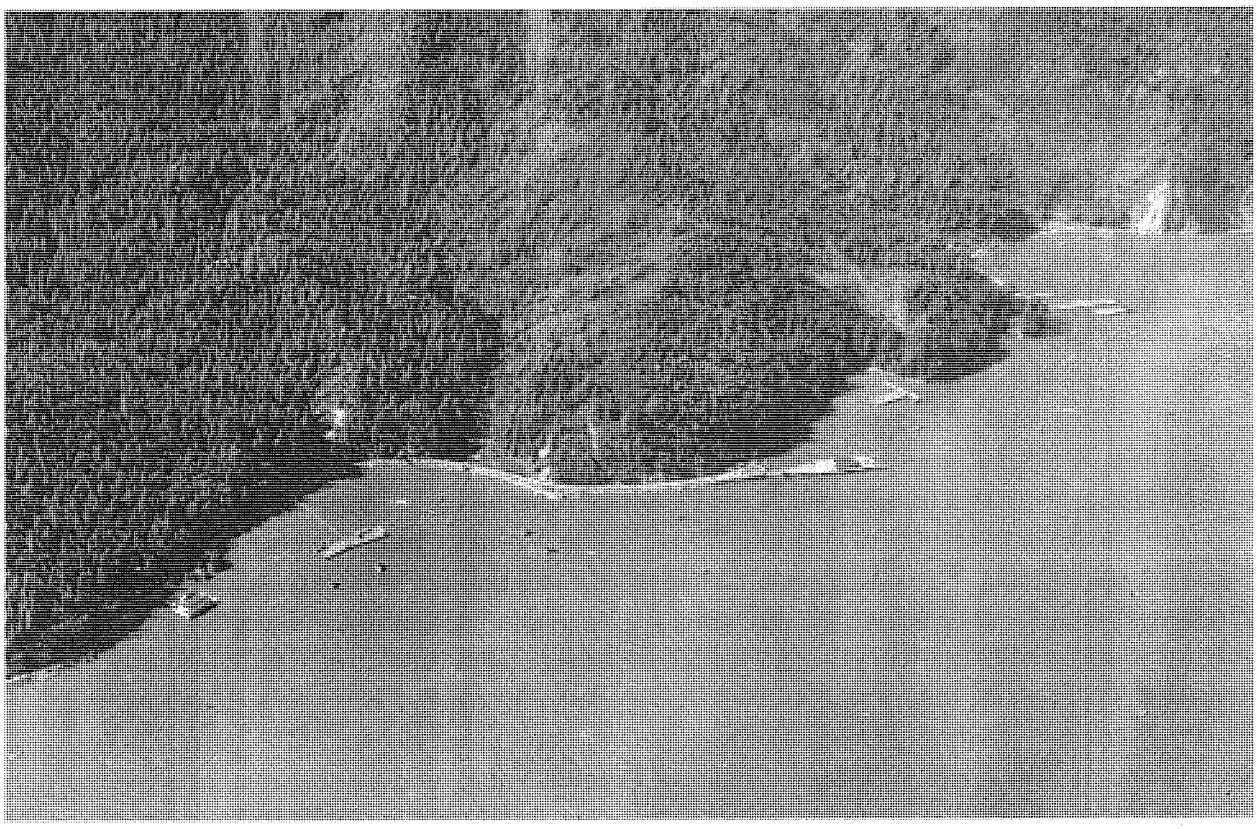


Figure 8.13 – An early 20th century aerial photo of the Dismal Nitch area shows the Megler Cove fish transfer station piers and infrastructure on the left, the Northshore facilities in the background on the right, and the Clamshell railroad wharf, sitting on what is today the Dismal Nitch parking lot, on the point in the middle of the frame. AT this time, the only access to the shoreline was by rail or boat. Photo courtesy Washington State Historical Society

with British Columbia not far behind. Growing efficiencies in shipping technologies were making this possible, as sailing ships were being replaced by steamships, which would very soon be replaced in turn by diesel ships of even greater speed. Troubled by unpredictable and gradually declining numbers, cannery owners began to explore options for the development of canneries in Alaska – especially to take advantage of the abundance of sockeye salmon in the rivers of Southeast Alaska, the Alaska Peninsula, and Bristol Bay. To facilitate the movement of Columbia River cannery operations into Alaska, a number of lower Columbia cannery owners – led by two heirs to the Hume cannery legacy, Elmore and George Hume - founded the Alaska Packers Association (APA) in 1891.[71] This organization sought to aid in the remobilization of Columbia River fishing assets to Alaska, but also to sequence this process judiciously, so as to avoid creating temporary supply gluts that might depress the price of Columbia River fish. Once the CRPA was formed in 1899, that organization took up this cause, and almost immediately began to move Columbia River assets northward - initiating the

Figure 8.15 – A CRPA cannery on the Astoria waterfront, circa 1941. Photo by Russell Lee, U.S. Farm Security Administration, Lot 338, courtesy Library of Congress.

construction of a large cannery plant in Bristol Bay, Alaska, as well as the purchase of a small fleet of ships to carry Alaska canned fish as early as 1900. Indeed, the CRPA came under increasing criticism in its early years as it seemed to be moving so much of Columbia River production swiftly north and out of the region, while also, some suggested, moving cannery administration (and profits) out of the Northwest and instead into the purview of East coast investors.[72] Sometimes with the institutional backing of the APA and the CRPA, and sometimes moving independently, many of the Columbia-Pacific's key cannery owners began to develop canneries in various parts of Alaska, as well as on the mouths of major British Columbia rivers; Marshall Kinney founded canneries associated with Skagway and Ketchikan, Alaska, for example, while Samuel Adair and his brothers used profits from their Astoria waterfront salmon packing operations to capitalize canneries in Steveston's cannery row on the Fraser River estuary, in what is now greater metropolitan Vancouver B.C. Through the 1920s and 1930s, the CRPA would move a significant amount of their production from the lower Columbia to Alaska. Reflecting this monumental relocation, by 1937, at the height of the Great Depression, there were 177 salmon canneries operating on the Pacific Coast, 116 of them (over 65%) in Alaska, followed by 37 (some 21%) in British Columbia (Newell 1988: 633). As the canneries closed on the Columbia, many moved their equipment and capital north; a certain amount of local labor and boats often followed. Slightly modified Columbia River "butterfly fleet" boats ironically became the standard gillnetting boat among the growing fleets of gillnetters in such places as Bristol Bay,

Alaska – in some cases being maintained well into the mid-20th century (Martin 2013, 2009; Newell 1988; Barker 1909).[73]

As cannery operations drifted northward to Alaska beginning in the 1890s, and accelerating thereafter, so too did lower Columbia fishing families who had been part of the Columbia cannery boom. While some fishermen moved directly to Alaska ports, many chose to maintain their families and homes on the lower Columbia, only traveling to Alaska waters during the fishing season – a long and dangerous trek, involving long periods away from home. These fishermen understandably sold most of their catch directly to Alaska canneries, but they also often returned home to the Columbia with a full hold of salted fish for local markets and personal use. Beginning in 1894, residents of Astoria chose to celebrate the annual return of Astoria fishermen from the Alaska fishing grounds with a formal regatta. Featuring celebrations and special events along the waterfront, as well as boat races and fishing derbies, the regatta quickly became one of the West coast's premier boat racing events. The event has continued almost uninterrupted since 1894 into the present day, being cancelled only during the two world wars and for a decade after the devastating 1921 Astoria fire. In recent times, the Oregon Heritage Commission named the Astoria Regatta as one of only four "Oregon Heritage Traditions" within the state, reflecting its unique time depth and importance among Oregon celebrations.

For those who stayed on the lower Columbia during this period, there were many efforts to adapt to the downward spiral of salmon numbers on the Columbia, as well as the migration of the industry to distant, northern Pacific waters. With such highly developed cannery infrastructure, and a pool of specially trained labor, there was little reason to let boats and canneries sit dormant. Columbia River cannery owners and fishermen began to explore other catches. First, they moved away from the production of dwindling Chinook salmon to less numerous and popular catches including sockeye. Finding those secondary species in decline, they began to experimentally transition away from salmon altogether. In the 1920s, a number of canneries tried to market alternative species with limited success. Some, including the McGowan company facilities, began to catch and can American shad (*Alosa sapidissima*) as an alternative to salmon. An introduced fish, shad had found their way to the Northwest from fish populations originally planted in the Sacramento River Basin from Atlantic coast waters in the 1870s, the population growing steadily on the Columbia in the decades that followed. Canneries replaced their preexisting salmon can labels with new iterations, placing images of shad where salmon had been featured before. The CRPA and other area canneries were beginning to experiment with other catches, such as sardine and crab; today's relatively robust Dungeness crab industry, sustained by small-scale boat operators working just beyond the ocean surf, being a partial outgrowth of this effort to keep idled salmon cannery infrastructure and labor occupied. Certain fishermen and fish packing operations experimented more broadly, developing small fisheries for soupfin shark and dog fish especially focused on the harvest of shark livers for their oil

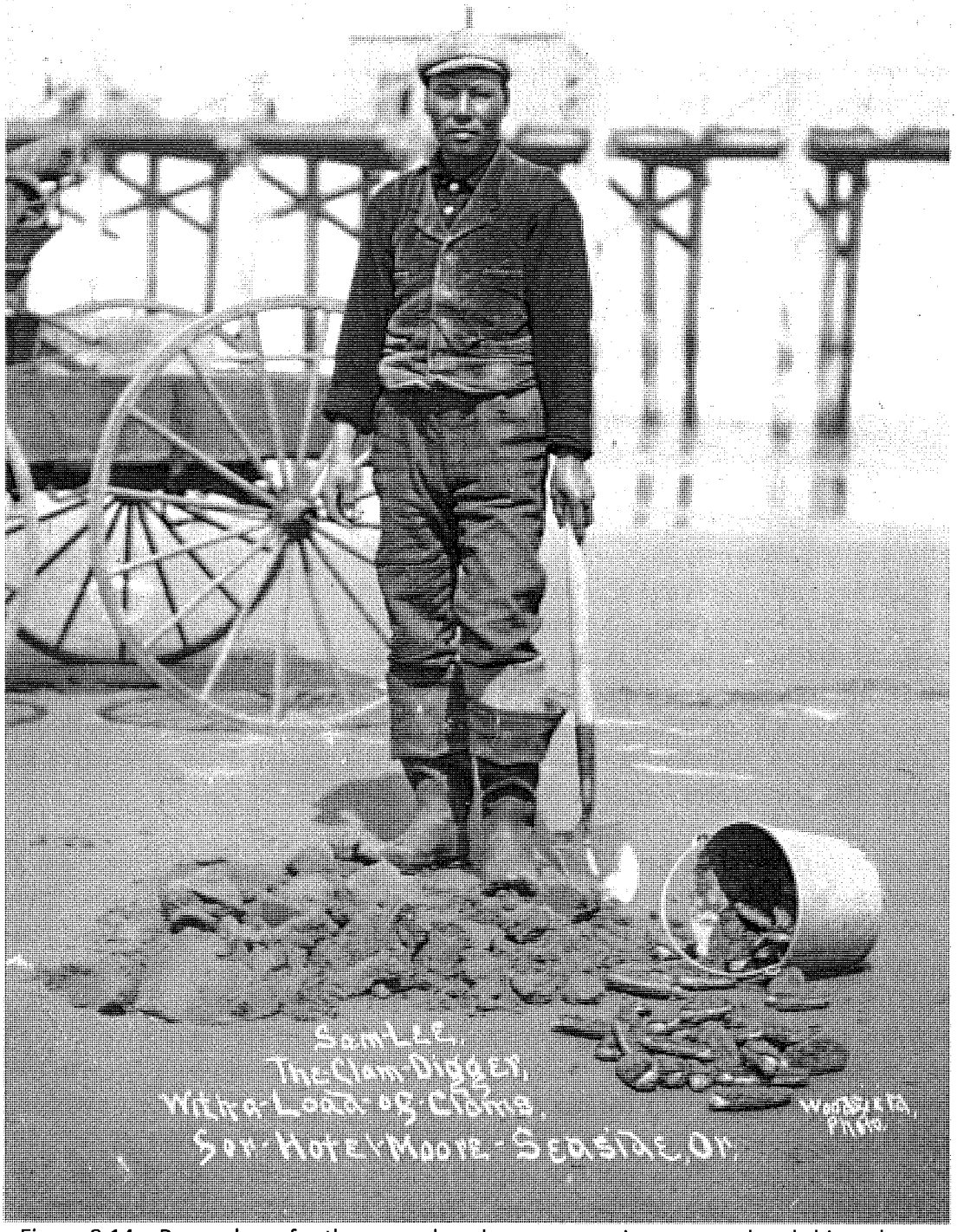


Figure 8.14 – Razor clams for the ocean beach were sometimes canned and shipped to distant markets, but were also harvested for sale to local tourists. Sam Lee, shown here, was one of several clam diggers providing clams for Seaside's early hotels. For Asian immigrants and Native Americans, this was an important, if small cottage industry that could be pursued with relative independence and without factory conditions. Photo courtesy Oregon Historical Society.

(Arestad 1943). Some sought to retool salmon cannery infrastructure to the time-honored tradition of oystering. Individual fishermen sometimes supported themselves with the harvesting of clams - most notably the razor clams on the sand beaches, which were canned but also sold fresh in lower Columbia towns (a common cottage industry for Native American families that had been displaced from commercial fishing a generation or two before by the influx of Chinese and Scandinavian workers). There was even a whaling station in Warrenton managed for a time by Bioproducts Incorporated, as well as other ports just beyond the study area, processing the meat and oil of humpback and sperm whales for various commercial uses. Later in the century, other fish would be tapped too - herring, rockfish and lingcod, and pollock - a nondescript whitefish used in such products as fish sticks and artificial crab.

Among these experimental efforts to revive the Columbia-Pacific's flagging fishing industry, tuna may have been the most successful. By 1937 fishermen from the lower Columbia encountered and began to fish large schools of tuna in offshore waters, bringing new life to local CRPA operations. The CRPA began to retool their cannery facilities in order to process tuna, and by the end of that decade the tuna industry outgrew the salmon industry of the lower Columbia, with both salmon and tuna canned under the CRPA's "Bumble Bee" label. The CRPA's activities were increasingly split into two halves - one, centered on Alaskan salmon production, and the other, much smaller, focused on tuna production on the lower Columbia and many other places around the globe. By the end of World War II, the CRPA was acquired by large holding companies and its assets reorganized to eventually become "Bumble Bee Seafoods, Inc.," a company most popularly associated with canned tuna. By the 1970s, Bumble Bee Seafoods' offices had moved to southern California, drawing away much of the company's remaining administrative positions from Astoria.[74]

The canneries of the great salmon boom largely fell into disuse over the course of the mid-20th century. Some remnant canneries, such as Kinney's cannery in Uniontown, Astoria, were later converted into storage facilities for grain and other products being shipped up and down the Columbia. Many others were demolished for scrap, and to limit owners' exposure to liability (Steen 2009). When the McGowan cannery was finally closed in 1947, it was then reported to be the oldest fish processing plant in the state of Washington (Appelo 1966; McDonald 1966).The Northshore CRPA fish transfer facility became part of the Bumble Bee operations, fell into disuse and was partially dismantled during the construction of State Route 12B along the Columbia shoreline in 1956, with remaining offshore facilities largely being largely dismantled by the 1970s (CRPA 1943).[75] By 1970 the Columbia River canning industry was only a vestige of what it had been, with just six canneries left on the river. The last major cannery on the Columbia, the Bumble Bee facility in Astoria, closed in 1980. Since then, a few small canning operations have persisted, but their output is modest, and oriented toward specialized niche markets, scarcely comparable to the production of the industry that once outpaced all others on the lower Columbia. Certain structures from this great

canning history persisted, even as they no longer continued to operate commercially. Such structures as the Samuel Elmore Cannery on the Astoria waterfront - also closed in 1980 - served as a prominent landmark of this history – being listed as a National Historical Landmark until it was consumed in a fire in 1993 and ultimately delisted from the National Register of Historic Places (Harrison 2011).

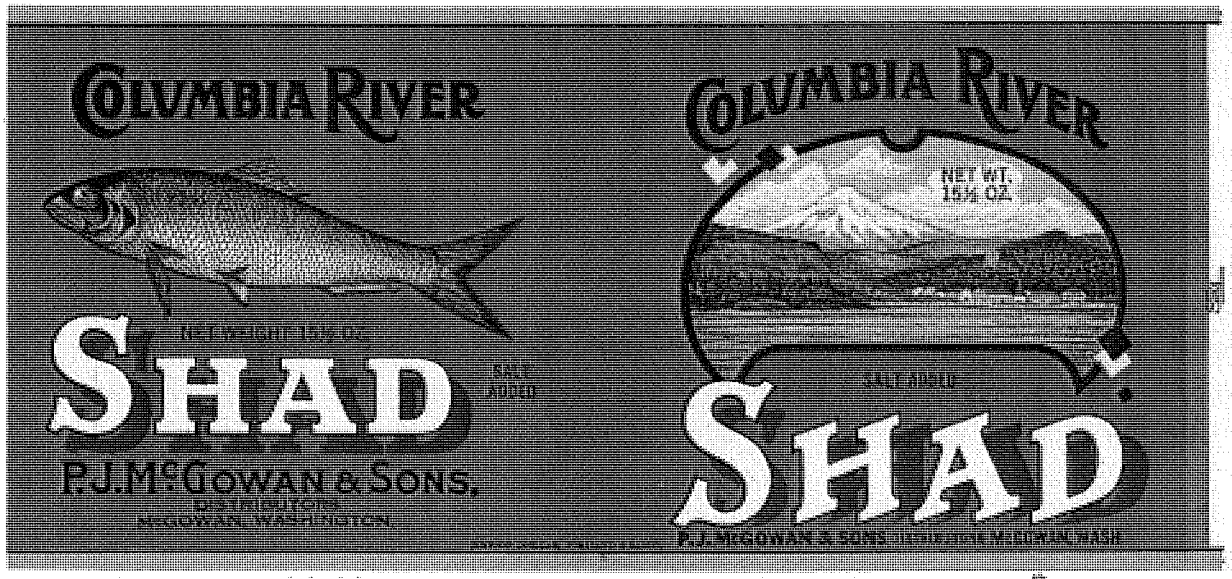


Figure 8.16 – A label for P.J. McGowan & Sons canned shad, reflecting early 20th century efforts to maintain the solvency of the lower Columbia River canning industry in spite of increasingly volatile salmon numbers. Image courtesy Columbia-Pacific Heritage Museum, Ilwaco Washington.

Emerging in New England and California waters, salmon canning had grown to become the major industry of the Columbia River in only two decades, peaking in the 1880s with 39 canneries on the lower river (some sources suggest up to 42, using inclusive definitions), but declining almost as quickly as it had emerged - with some of the industry's founding families moving to more productive waters in the northern Pacific (Harrison 2011). The River is much changed since the days the Hume brothers recruited Chinese labor to beginning cutting fish at their Eagle Cliff plant. Once considered to be the world's most productive salmon river, some of the constituent runs of the Columbia now receive protections under the Endangered Species Act, and watershed councils and nonprofits work earnestly on both sides of the river to sustain those salmon runs that remain. In spite of these changes, fishing has remained an enduring and central part of Columbia-Pacific community identity into recent times. Smokehouses sell their products to tourists, and a small and resilient fleet of gillnetters still work in their short season. Columbia-Pacific families still come together to celebrate the Astoria Regatta and new festivals such as the "Fisher poets" gathering, hosted annually in Astoria since 1998, which bring together fishermen from Alaska to the

Columbia-Pacific - to reflect, emote, and commiserate about the conditions of the modern industry.

There are two places in the park that are especially appropriate for the interpretation of fishing history – Station Camp and the NPS "Dismal Nitch." Both locations were integral to the larger story of salmon harvesting on the lower Columbia. Regrettably, little remains of the original structures associated with salmon canning at these two sites – remnant pilings being the main landmark visible today. These pilings, while of great interpretive value, do not have the integrity required for National Register listing. At Dismal Nitch, there are no remaining structures and the site is apparently not of sufficient historically significance to warrant National Register listing (AINW 2005). The ancillary structures at Station Camp – the McGowan church, office and home – all date from after the golden era of salmon canning, and are only tangentially related to the industrial story related here, but appears to have local significance worthy of documentation and commemoration (Wilson et al. 2009). The story of the rise and fall of the salmon industry on the lower Columbia, however, is a significant element of the region's history and will continue to be a mainstay of local historical commemoration and public interpretation for the foreseeable future.

9: Cutting the Forests, Reshaping the Land: The Historical Development of the Columbia-Pacific Timber Industry

The sprawling damp forests of the Columbia-Pacific region and the massive scale of its coastal trees stretched the limits of pre-industrial lumbering technologies, just as it stretched the imagination of the region's early settlers. For early loggers accustomed to using hand labor to clear the forests, with only the power of their own muscle and that of their oxen and horses, with little more than crosscut saws and axes at their disposal, the commercial potentials of the vast forest could be envisioned but scarcely realized. Labor requirements were high, the only fuels required were food and feed. Much of the earliest logging practices on this coast would have seemed very familiar to woodcutters of pre-industrial Europe. In the few generations that followed, timber harvesting was revolutionized, becoming a highly-efficient, mechanized and petroleum-intensive industry that bore little resemblance to its earlier historical incarnations. The Pacific Northwest generally, and the Columbia-Pacific in particular, is one of those few places in the world that was being logged for the first time during the arc of this great technological revolution in the timber industry. And, while the bulk of the landscape was in the public domain at the beginning of this logging history, corporate-owned industrial forests would occupy the majority share of the study area's lands by the mid-20th century – reflecting the dealings of land barons as well as the objectives of federal land policy in the American West. Today, the majority of the study area is occupied by industrial forest, and logging history is woven through the broader history of the Columbia-Pacific region in myriad ways. It is not surprising that there is still considerable interest in, and nostalgia for, the "logging history" of this region. Logging has literally shaped the landscape of the region, and intersects in many ways with the history of Lewis and Clark National and State Historical Parks.

The Native peoples of the Columbia-Pacific region were highly skilled woodworkers, who maintained a sort of "timber industry" of their own – involving the production and exchange of a vast assortment of wood products. Planks, removed individually from logs or sometimes living trees, were used in the production of houses, while entire logs, hollowed out with meticulous skill, were used to produce canoes – the region's most important mode of transportation well into the 19th century. Every manner of objects was produced from wood products, the western red cedar in particular: wooden boxes and tools, root baskets and hats, bark mats and clothing. Wood products, interpreted in this sense, were central to all Native material culture, and were actively traded with people along the coast and into the interior Northwest. Entire books could be, and indeed some have been, written about the place of wood products in the lives of Northwest Coast Native peoples (Stewart 1984), though there were locally unique technologies and practices that still remain poorly documented in written form. No

doubt, considerable Native American wood procurement and processing took place on most, and perhaps, all of the sub-units of Lewis and Clark National and State Historical Parks, though the only clearly visible remains are to be found in subsurface archeological deposits in such places as Station Camp (Wilson et al. 2009).

While the North West and Hudson's Bay Companies participated in timber production on the lower Columbia, their results were mixed and modest. With a significant involvement of Native Hawaiian and French-Canadian labor, the Hudson's Bay Company maintained a sawmill at Fort Vancouver and intermittently participated in the cutting, storage and shipping of wood at Fort George. Woodcutting allowed the Company to supply the local lumber needs of its employees and early American settlers, as well as supporting a modest ship-borne export business to Hawaii and other places where the HBC had operations. This lumber was commonly shipped along with other goods, such as furs and barreled salmon, and it is unclear that lumber 'export' would have been profitable independent of these combined cargoes. The geographical reach of this early logging was negligible, timber being felled very near the forts and on shorelines where they dropped to the water and could be floated to fort mills and ships.

The earliest American commercial mill on the lower Columbia, in turn, was constructed by Henry Hunt and Ben Wood near modern Cathlamet, Washington in the early 1840s. As the HBC began to slowly move their operations out of the region and in to uncontested British territories such as British Columbia, this new mill took up much of the slack. Drawing on locally knowledgeable labor, including a number of Native Hawaiians and Indians familiar with the HBC mills, the Hunt and Wood mill sold lumber harvested on the Columbia River shoreline to growing settlements of the northern Willamette Valley, while also temporarily hijacking certain HBC markets in California and Hawaii. After most Native Hawaiians left the region with the departure of the HBC, the mill increasingly hired arriving settlers as temporary labor, while continuing to hire many local Indians for mill and tree-cutting work - the Native portion of the workforce often being compelled to take on high-risk jobs that were unpopular with other workers.

The late 1840s and early 1850s, however, were transformative throughout the Columbia-Pacific, as the promise of free land brought a wave of new settlers to the Northwest and the promise of gold brought a more itinerant wave of settlement to California. Tidewater timber within the Columbia estuary was some of the first to be logged commercially anywhere in the Pacific Northwest, linked to these early events (Erickson 1965). Just as the California gold rush of the mid-19th century spurred early commercial innovations in fishing, oystering, and other fledgling natural resource industries, so too did California's explosive growth prompt the birth of the modern timber industry on the lower Columbia. With the objective of providing wood for burgeoning California markets, a number of small-scale logging and lumber shipping enterprises popped up along the shores of the lower Columbia in the early 1850s, most

organized by arriving settlers from logging centers in the American East. As before, logging and wood processing was centered on the slow-moving Columbia tidewater, where trees could be felled directly into waterways and towed by boat to mills, or could be drug to these waterways across level terrain by oxen or draft horses with relative ease. Several small mills appeared on the shores of the Lewis and Clark River, including the Harold Lumber Mill, built in 1851 by Chief Coboway's son-in-law, Solomon Smith. One of the largest of these Lewis and Clark River operations, and indeed one of "the largest sawmill[s] then in Oregon" sat within what is now Lewis and Clark National and State Historical Parks, sitting on the waterfront of what is today the Fort Clatsop section of the park (Gillette 1896).[76] Early in the Shane family's ownership of the land, they allowed for the occupation of a portion of their land claim by a mill under the proprietorship of Richard M. Moore. Producing lumber largely for the California market in 1851-54, a significant portion of the native vegetation was cleared from the area around the fort site to accommodate the mill, while the margins of these new clearings were planted in orchards (Gillette 1900a). Originally from Ohio, Richard Moore had moved as a young man to the Mississippi River town of Port Gibson, Mississippi. In that town, he had operated a small sawmill and married into a local family. By 1851, he and his family were eager to explore the economic prospects of the West and, apparently, to escape the growing threat of civil war in the East. In that year, Moore moved to Oregon with his wife, Permelia, their children, their nephew William Irvin (an apprentice woodmill operator who would one day become governor of California) and apparently the family's two African-American slaves – both of them women. Moore had shipped sawmill machinery ahead of them, with the intention of starting a mill near Astoria (Smith and Moore 1963). As recounted by Gillette,

"R. M. Moore came there to build a large saw mill, and the lines of the Shane claim were moved north so as to make room for Moore, giving him the old Lewis and Clark land...where he erected his mill. Fort Clatsop soon became a lively place, with 35 or 40 people, all busy clearing land, cutting sawlogs, sowing lumber, etc. For two or three years there was hardly a week that did not find one or more ships the crew loading with lumber for San Francisco. I have seen five there at one time" (Gillette 1900a).

After establishing the Fort Clatsop mill, Moore later founded mills to service California markets in South Bend, Washington and Greenhorn, California. As Moore discovered, the California lumber boom would be somewhat short-lived, as larger operators, closer to California markets and with much lower shipping costs, were usually able to edge out small-scale operators in the Pacific Northwest. California wood demand also came in infuriating booms and busts, reflecting the chaotic nature of early migration to that state. Many timber operations along the lower Columbia came to an abrupt end by the mid-1850s, including the Moore mill which closed by roughly 1854. Again, quoting P.W. Gillette (1900a), *"In 1854 the milling business became so unprofitable that the mill closed down, and Fort Clatsop's prosperity came to a final end."* Some portion of the milling

equipment at the Fort Clatsop site - rare and coveted materials in that era - were apparently relocated to other mill operations in the region. By the end of the decade, Moore moved away, taking his family to Eugene, Oregon, where they permanently settled, maintaining a farm and still owning mill interests around the West (Smith and Moore 1963). Meanwhile, the docks and facilities idled at the former Moore mill site were briefly used as a convenient place for ship repairs. As recalled by P.W. Gillette,

"In the summers of 1860, '61 and '62, Captain Shattuck, of the United States revenue cutter Joe Lane, *stationed at Astoria, took his ship to Fort Clatsop each year to overhaul, repair, paint and clean her. But then came the great civil war and the* Joe Lane *was ordered away, and Fort Clatsop soon grew into a wilderness as silent and gloomy as when Lewis and Clark found it"* (Gillette 1900a).

In spite of occasional downturns, though, logging persisted and even expanded in the region in the decades ahead, supplying lumber for growing local markets - especially in the northern Willamette Valley - while a modest ship-borne trade continued with California markets. The technology of these early operations was simple, and progress through the dense coastal forests was slow, involving crosscut saws and handaxes taken up against giant and ancient trees. When trees could not be felled directly into a navigable waterway, they had to be pulled by teams of horses, mules and oxen, often over networks of corduroy "skid roads" made of logs laid parallel to one-another - covered with grease, these log roads allowed downed timber to be pulled more efficiently across the forest floor to tidewater.[77] Confronted by the broad, buttressed bases of ancient trees, often rotten and riddled with a complex grain, early loggers were required to set "springboards" into the side of the tree at chest level and sometimes much higher - standing atop these, they could cut into the trunk with crosscut saws and axes (and in later times, hefty oversized chainsaws designed to cut old-growth trees while operated by two-man crews). While stumps of spruce, Douglas-fir and hemlock from the early days of logging are very few in number, the rectangular notches made to hold springboards can be seen in many stumps of the western red cedars, with their tannin-rich, rot-resistant wood, and are popular objects of public interpretation today (Cox 1974).[78]

The logging history of the region was defined by certain geographical fundamentals. While the largest mills and shipment facilities sat on the tidewaters of the Columbia estuary, surrounded by dense and dripping Spruce-hemlock forests, the more marketable and rot-resistant Douglas-fir timber, which fetched the highest prices as dimensional lumber, often stood some distance inland - much of it inaccessible to early tidewater logging. In truth, market demand for the tidewater trees seldom matched the market for Douglas-fir, and the coastal species never matched Douglas-fir's popularity as dimensional lumber, prompting the development of diverse specialty markets with specialized mills to match. The rot-resistant rich orange woods of the western red cedar

made it popular for outdoor uses. Shingle and shake mills began to appear along the coast, using local cedar and catering to local markets. Hemlock and alder wood were light but often fragile, while spruce was so solid as to be a challenge for everyday woodworking. In specialty mills, these woods were often cut into simple furniture, or doors and sashes. Several small mills manufactured specialized thin-dimension lumber from the sturdy spruce. There were cabinet mills and there were box factories – the boxes used especially in industrial shipping of fish, produce, and other goods along the lower Columbia. Wainscoting and other types of patterned 'bead board' of spruce or hemlock were sold on local and regional markets, manufactured by small operations such as the Morrison mill in Seaside - these specialized ornamental wood products still adorning the interiors of some of the older homes in the Columbia-Pacific region. There were mills constructing railroad ties, and others producing planks for the construction of plank roads – a standard method of early road construction on the rough, uneven and usually very muddy backcountry of the Columbia-Pacific. In later times, spruce wood would be used for the construction of musical instruments such as guitars and violins. In spite of a general preference for Douglas fir, the larger plywood and dimensional lumber mills of the region sometimes used these woods too. In sum, there was an impressively large number of mills in the second half of the 19th century, large and small, some long-lasting and some fairly ephemeral. Alongside these operations was a complex assortment of supporting and subsidiary businesses - machine and tool shops, mechanics, specialized retail stores for logging and milling equipment, and any number of other operations catering to the highly variegated timber industry of the coast (Kamholz et al 2003; Miller 1958: 214-25).

Only in the 1880s did innovations in industrial forestry begin to accelerate what was a slow and arguably ancient mode of timber production. Inventions such as the Dolbeer Logging Engine or "steam donkey" revolutionized the timber harvest, allowing for logs to be drug by cable to water-, rail- or road-side loading areas with steam-powered gears that pulled cables and attached trees across the forest floor. Such donkeys arrived in the study area by the mid-1890s, sometimes bought from nationwide manufacturers, but often assembled in places such as Astoria and Portland from locally available industrial scrap. Not only were they much more efficient than teams of oxen, but they were less expensive to maintain and allowed for operation during the wet season when animal-based operations would otherwise be mired in the mud and damp. Early loggers such as Ed and Pete Malone, who had overseen logging in the upper reaches of the Lewis and Clark River by hand and ox team, eagerly expanded their operations by adopting the steam donkey and other revolutionizing technologies of the day. These steam donkeys were moved from one harvest area to another in the forest atop vast "sleds" assembled from large logs, pulled by cables attached to standing trees and other sturdy parts of the landscape; the remains of many such sleds can still be found rotting below the second- and third-growth forests of the Columbia-Pacific region (Adams 1961; Miller 1958).

Figure 9.1 – The L.G. Isaacson mill supply store in Raymond, Washington – one of several retail outlets that filled the towns of the Columbia-Pacific region in the late 19th and early 20th centuries as part of the larger logging economy. Photo courtesy Washington State Historical Society.

Allowing for larger and more centralized harvests, the advent of donkeys fostered the growth of temporary "logging camps" established near harvest areas to house loggers – a practice that would persist in some form until the widespread availability of personal cars in the middle 20th century. Especially at large logging base camps, these were sophisticated operations, often with bunkhouses, a mess hall (often with women or Chinese men working as cooks), a pen for livestock and a livestock keeper, a tool shop and various types of mechanics and equipment specialists. Like impromptu small towns, these logging operations often appeared and then disappeared in the course of a single season, and were found widely throughout the low-elevation forests of the Columbia-Pacific region.

As early logging moved away from the tidal waters of the Columbia estuary, upslope and inland, early industrial loggers developed other innovative ways to transport logs to tidewater mills. Among these were the "splash dams," temporary dam structures built in creek valleys to produce log ponds that were filled with logs. Once the pond

Figure 9.2 – Logging crews with "choker cables" (visible overhead) attached to steam and later gasoline-powered donkeys allowed for the transport of the huge logs of the region without the use of horses or oxen – a considerable improvement in the speed and efficiency of these early operations. Photo courtesy Oregon Historical Society.

was full, the dams was demolished - sometimes with constructed floodgates and sometimes with cruder methods such as dynamite - allowing a torrent of log-laden water to surge to the tidewaters downstream. Splash dams of this type sometimes operated on the upper reaches of the Lewis and Clark River, upstream from Fort Clatsop, and on other small rivers and streams in the Columbia-Pacific. While effective, and no doubt entertaining to behold, these methods of log transport had their costs: riparian and stream habitats were often significantly compromised, scouring out fish spawning grounds and compromising riverine habitats in ways that compounded the effects of beaver extirpation a few generations before. In other places, steam networks were entirely redesigned. On the low-gradients of Clatsop Plains, for example, forester N.B. Bain oversaw the reconfiguration of several lake and stream drainages, straightening and simplifying them to produce a canal so that trees could be floated

Figure 9.3 - The Clerin Hamilton Lumber Company of Raymond, Washington, circa 1911 - one of many small mills to appear on the tidewater of the Columbia-Pacific region in the very early 20th century, as rail access improved shipping options to the Pacific Northwest interior. For the next half century, these mills would largely process large-dimension trees from virgin forest; by the second half of the 20th century, all equipment and operations had to be retooled to accommodate smaller trees from the region's second- and third-growth forests. Photo courtesy Washington State Historical Society.

from as far away as the Seaside area to mills in the Warrenton area, leaving an enduring and distinctively geometric pattern to the surface hydrology on the western edges of what is today's Fort Clatsop unit of the park (Miller 1958).

The great industrialization of the timber industry occurred just as Scandinavian immigrant laborers began to enter the local work force en masse. Many of the men arriving from the Scandinavian realm were familiar with logging practices from the old country and were able to readily assume positions working in the woods and in the mills of the Columbia-Pacific region. Norwegians and Finns were especially well represented, as well as Swedes and to a much lesser extent Danes. Many moved to the Columbia-Pacific as part of a two-step migration involving logging work first in the Great Lakes region, and thus arrived with a working knowledge of American industrial forestry. Indeed, many were recruited, formally and informally, by the mill owners of

the region, bringing a succession of early immigrants' friends and family to augment the ranks of local timber industry labor (see Immigration overview, Appendices). Almost all the early Scandinavian immigrant men of the lower Columbia area who were not fishermen logged at some time during their lives. Many worked in the woods in various logging professions, but many others worked directly in the mills or in the operation of boats and other equipment that transported logs and lumber throughout the region. In these roles, they provided the backbone of the timber industry during the period; they also contributed significantly to the early unionization of lumber operations, with the Finns in particular being instrumental in labor organizing on the lower Columbia. In time, a number of Scandinavian immigrant families established small logging firms of their own in Pacific and Clatsop Counties, including Wirkkala Brothers, Keko and Kendell, the Andrew Nygaard family, and the Penttila Brothers (Hummasti 2002).

While small-scale milling and lumber shipping thrived at the Columbia's mouth, the earliest and most innovative industrialization of lower Columbia logging was centered on those portions of the river immediately upstream from the study area. And, suitably enough, this revolution was led by figures such as Simon Benson (1851-1942), a Scandinavian-born logger turned industrialist, who sought to consolidate and streamline what had heretofore been a relatively diffuse industry on the lower Columbia. While an exceptional person, Benson's experience provides a window into the Scandinavian-American experience on the lower Columbia, as well as the forces that transformed that region into a center of industrialized lumbering. Born Simon Berger Iversen in Norway in 1851, Simon Benson immigrated with his family to the U.S. in 1867, and by the following year had moved to Black River Falls, Wisconsin, where he first worked in logging camps and sawmills. In 1879, Benson and his family relocated to the Northwest, following the general trends in Scandinavian immigrant migration, capitalizing on the timber skills he acquired in the Great Lakes. Shortly after his arrival in the region, he began to use his accumulated capital and his knowledge of the industry to acquire strategically placed forestlands along the Columbia estuary. He spent the next decade buying and selling lands along the Columbia River, developing major holdings in such places as Tide Creek in Columbia County, Oregon, and Colfax, Cathlamet, and the Deep River Basin in Washington. By the beginning of the 1890s, Benson was prompting an "industrial revolution" within his own operations, replacing ox teams with steam donkeys as quickly as his resources would allow. During this time, he was fast becoming one of the most known budding timber industrialists on the Columbia River, and in 1895, he founded the Benson Logging & Lumber Company (Abbott 2013a, 2013b; Munro 2008; Tucker 2002; Ficken 1982; Allen 1971; Sunday Oregonian 1916).

Benson had arrived at a critical moment in the region's logging history. By the late 1880s, the readily accessible tideland forests had been largely logged over, increasing demands for access to the region's interior, forested lands (Tint 2010; Tucker 2002).

Logging railroads, introduced in this period, would revolutionize logging in the Columbia-Pacific region. Most critically on the coast, perhaps, these railways allowed the old-growth Douglas-fir forests of the interior Coast Range to be linked directly and expeditiously to the mills and shipment facilities of the tidelands. First introduced nationally in the 1880s, logging railroads relied on steam-powered locomotives that used coal, scrap wood, or sometimes oil for their propulsion. The Shay engine, first introduced nationally in 1882, set the standard for logging engines. (Shay was a national leader, producing over 2,700 logging locomotives nationally, though there were many competing brands that sought to emulate or slightly improve upon the Shay design in the years that followed.) Here too, Benson was an innovator, introducing large-scale logging railroad networks to the lower Columbia, beginning with the 1891 construction of a logging railroad that delivered logs from the interior of Wahkiakum and Pacific Counties to the Columbia at Cathlamet, Washington (Allen 1971: 27). The interior lands of the region being of low value heretofore, Benson was able to beat the market, acquire timber lands cheaply while he was one of the few industrialists poised to make use of those lands. Throughout the Columbia-Pacific networks of logging railroads were quickly developed through the 1890s and early 1900s, sometimes funded by Benson and sometimes by his competitors, linking the upland portions of most river-scale watersheds to tidelands on the Columbia, and to a lesser extent the Willapa Bay tidewater. As will be discussed below, one significant rail line extended up the Lewis and Clark River from tidewater. A separate network of logging railroads centered on the Young's River drainage, including the Crown-Willamette Paper Company Railroad, the Tidewater Timber Company Railroad, and at least two other unidentified logging railroads; the John Day Forest Railroad, meanwhile, had a terminus near Svensen and operated in the hills to that community's south. On the Washington side of the river, the Deep River Logging Company Railroad and H.B. & A. Logging Company Railroad operated in the Grays Bay area, with terminuses on Rosburg and Deep River in Wahkiakum County, while the Portland Lumber Company had a terminus in Skamokawa. All of these railroads were active in the years between 1885 and the 1930s. Logging train engines continued to be produced commercially, and would largely dominate much of the lower Columbia's logging practices until the end of World War II, at which time they became specialty items, largely eclipsed by log trucks (Tint 2010; Oregon Historical Society 2009; Adams 1961; O'Neal forthcoming).[79]

In 1906, Benson made another substantial contribution to the timber industry of the Northwest with his creation of cigar-shaped, ocean-going log rafts, which allowed for large-scale waterborne shipping both within the Columbia and to distant markets (Oregon Historical Society 2009; USNPS 2010:22). As an October 1906 issue of the *Oregon Daily Journal* suggested at the time, "*Simon Benson...is believed to have solved the problem of marketing lumber at a minimum cost in southern California, by transporting sawlogs by ocean raft and sawing them at San Diego*" (Oregon Daily Journal 1906: 9). These rafts, which could ship 4.6-6 million feet of lumber in rafts of up to 1,000 feet long, allowed Benson to take advantage of the lucrative California market without suffering high

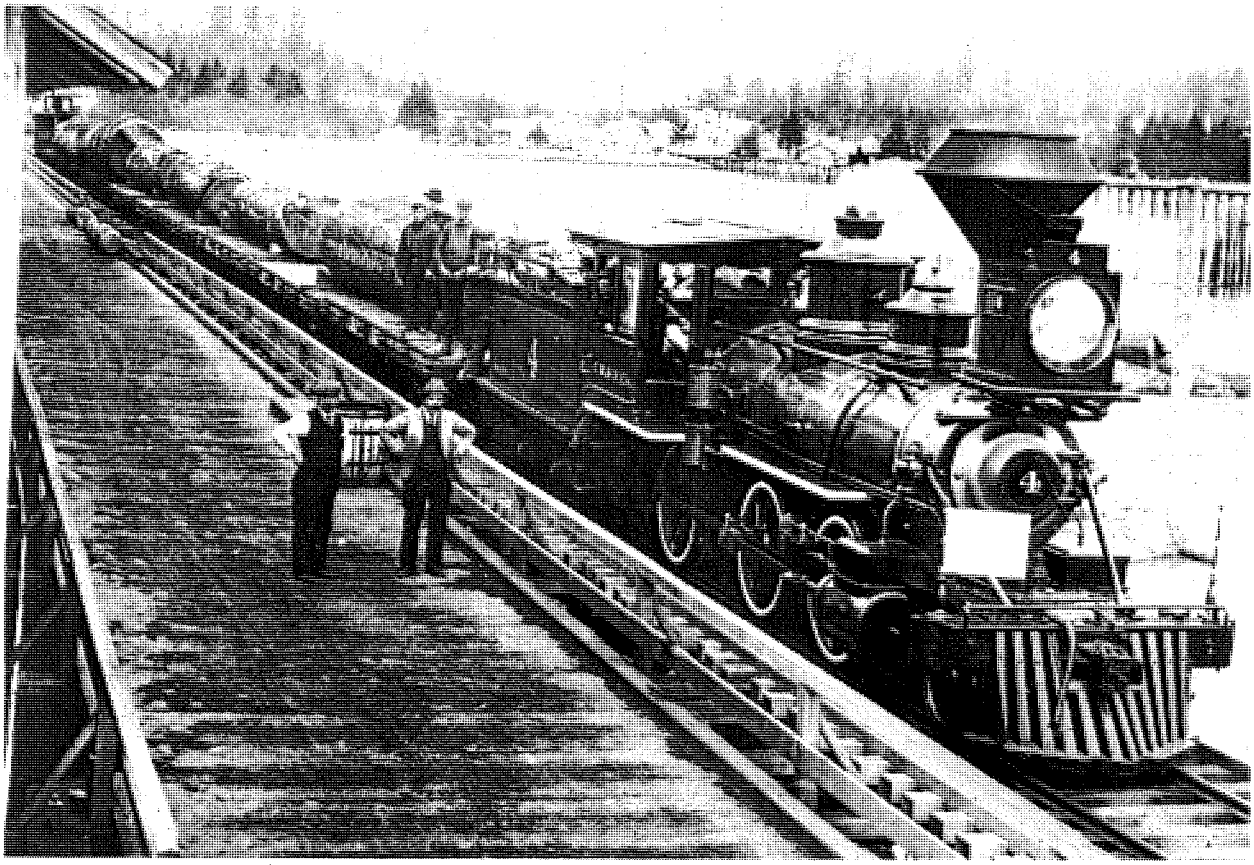


Figure 9.4 - While Simon Benson dominated railroad logging on the lower Columbia, many other companies were rapidly following his example, developing logging railroads to tidewater, where logs were deposited directly with mills or dumped in the water to be towed to tidewater mills nearby. Here, the Ilwaco Railway and Navigation Company Railroad brings hefty logs to its wharf in Ilwaco in th early 20th century – logs so large that a flatcar is required for each one. Photo courtesy Oregon Historical Society.

shipping costs in the process. Timber could now be towed directly from his extensive logging camps at Clatskanie in Columbia County, Oregon, 1,100 miles to the Benson Lumber Company mill in San Diego, California (Abbott 2004; Binus 2004; Crawford 2008; Oregon Daily Journal 1906).[80] Eventually, these rafts became widespread, an industry standard on the lower Columbia, and were referred to as "Benson log rafts" (NPS 2010:22).[81]

The Privatization of the Columbia-Pacific's Interior Lands

All of the fundamental elements of early 20th century industrialized forestry were in place on the lower Columbia River, and a scramble was soon underway between competing milling interests for timber and land rights in the interior lands of the

Columbia-Pacific. The lowland forests had provided most of the region's timber supply up to this time, yet those areas were being quickly abandoned for what was the largely unoccupied, densely forested inland part of the region, its ancient forests still largely intact, its industrial potentials still largely unrealized. Ownership of these interior lands and their timber had long been in a kind of limbo, more of hypothetical than practical importance - now, with Benson boldly moving into these areas with his logging railroads, and many competitors moving in fast behind him, the ownership in the Columbia-Pacific's interior lands would become an issue of critical importance. Looking at a map of land ownership today, it is clear that the region's interior lands are characterized by an abundance of private timberlands, in large contiguous blocks, with less public timber land than one might see elsewhere in the American West. Most of what became private timber land in the region was acquired during a speculative boom, reaching its peak within the decade of 1900 to 1909, which corresponds with purchases by large owners in all three counties of the study area. Yet, in the mid-19th century, almost all of these interior lands were effectively in the public domain, and not yet disposed of by the United States federal government. Somewhat incongruously, the region's pattern of land ownership, consisting largely of private timber company lands, reflects a legacy of federal legislation authorizing grants to aid in the development of railroads during the 1860s. The most important of these was the Northern Pacific grant, which was meant to subsidize construction of a transcontinental railroad from the Great Lakes to the Pacific Northwest; this, plus the use of public land laws by speculators and agents of the largest timberland owners, is largely responsible for the concentration of private timberlands in the Columbia-Pacific. Even today, only a small number of timber companies hold title to the majority of the study area, reflecting this historical legacy.[82]

This pattern is rooted in the mid-19th century, when the U.S. Congress made land grants to railroads as a way of providing their investors with income from land sales - the logic being that this would serve as a *de facto* federal subsidy for rail line construction, while also serving indirectly as a catalyst for regional development. Congressional reasoning was based on the idea that railroads like the Northern Pacific could help to strengthen and unify the expanding, young nation. These rail lines would link an expanding network of private lands in newly admitted states and territories to the nation's expanding industrial base located east of the Mississippi River, provided there were financial incentives for railroad companies to build. Critical to the history of the Columbia-Pacific region: the proposed Northern Pacific rail route connected Lake Superior to Puget Sound, and along that entire route Congress gifted the Northern Pacific with every alternate one-mile by one-mile sections of land. A wide swath across Minnesota, the Dakotas, Montana, Idaho, Washington, and Oregon was thus donated to private investors as the Northern Pacific Railroad Grant, totaling some 44 million acres, as authorized by the Act of July 2, 1864 (13 Stat. 365). The legislation granted odd-numbered sections of 640 acres for 20 miles on either side of constructed railroad in states, and 40 miles in territories - producing a vast "checkerboard"-like pattern of railroad company land ownership across the American West.[83] Congress made the

grant conditional in two respects; first, that the rail line be completed by a certain date and, second, that the granted land was to be sold to settlers in 160-acre tracts at a fixed price of $2.50 per acre. The Northern Pacific failed to meet either condition. More than three-quarters of their 2,138 miles of subsidized rail line was built after the grant's expiration date, so that the NPRR finally reached Tacoma and Seattle by way of Yakima in 1888. And, instead of quickly conveying their grant lands to settlers, the Northern Pacific, like other railroads of its day, retained the granted sections for speculation in timber, mining, agriculture and real estate. Other lands were routed to Northern Pacific subsidiaries that developed such resources. The Northern Pacific Improvement Company, one of these entities, owned the hillslopes above the NPS Dismal Nitch parking lot well into the early 20th century (Hedges 1930; Metzger 1930).[84]

This 1864 Northern Pacific Railroad grant affected all three counties in the study area, especially the two located in Washington. The northern half of Wahkiakum County fell into checkerboard ownership of the NPRR, which then sold the land - not to settlers - but to Weyerhaeuser Timber Company in 1900 for a price of $6.00 an acre. And, apart from the Long Beach Peninsula, which lay outside the 50 mile indemnity limit (as measured from Tacoma), this pattern of speculative redistribution was even more pronounced in Pacific County. Most was sold to Weyerhaeuser; those few sections not otherwise purchased by Weyerhaeuser were transferred to Weyerhaeuser through various holding companies (U.S. Dept. of Commerce 1913: 27-29). From this period forward, Weyerhaeuser maintained an almost monopolistic control over timberlands in southwestern Washington. As was said in official testimony on the matter of Weyerhaeuser founder, Frederick Weyerhaeuser's influence in Pacific County, made to the U.S. Department of Commerce (1914a: 14) in the early teens, *"Weyerhaeuser controls the price of stumpage in this county, in fact, he owns most of it."*[85]

It should be noted that Weyerhaeuser - a company still very prominent in Columbia-Pacific logging and land ownership - was first formed almost entirely through Northern Pacific land grants. Frederick Weyerhaeuser, a German born immigrant to the U.S., began his career in the sawmill business on the banks of the Mississippi during the Civil War. In the 1890s, Weyerhaeuser became interested in the timber potential of the Pacific Coast and by 1898 had formed the Coast Lumber Company, whose primary goal was to market Washington shingles in the Midwest and potentially develop a mill business on the Pacific coast. Learning of an opportunity to acquire Northern Pacific Railway land interests, he saw the potential for a much more ambitious operation to effectively "corner the market" on Northwestern timberlands. At the height of timberland speculation in January of 1900, in what was the largest private land transaction in U.S. history up to that point, Frederick Weyerhaeuser and 15 partners purchased 900,000 acres of timberland in Washington State from the Northern Pacific Railway. With three employees in a Tacoma-based office, Weyerhaeuser along with his investors transformed the Weyerhaeuser Timber Company into the second largest private holder of timber in the country almost overnight. Though the Weyerhaeuser

Timber Company initially operated as a timber land holding firm, they soon sought to develop their manufacturing capacity. Just two years after it was formed, the company acquired the Bell-Nelson Lumber Company of Everett in January of 1902; by September of that year Weyerhaeuser began salvage logging on lands burned in large fires earlier that summer By 1903, the Company expanded its Pacific Northwest holdings with a second purchase, acquiring 261,000 acres from the Northern Pacific Railway, giving the Company roughly 1.3 million acres in land - a figure that would continue to expand in the years ahead, in part from the consolidation of claims on Northern Pacific Railway lands (Ficken 1979; Jones 1974).

Owning much of the "checkerboard," Weyerhaeuser and other timber companies in the region acquired the intervening lands through other mechanisms. During the great timber-buying boom of 1890 to 1910, land acquisition by large owners followed, by several methods. First, there were duplicitous uses of the Homestead Act - the legislation that allowed every man and woman to acquire 160 acres of public domain land at no cost, provided they "proved up" the land. The law could be subverted in two ways, either through "dummy entries" or by "commutation." Dummy entries were technically illegal and could be prosecuted as fraud; in these cases, timber companies paid individual men and women to take out a homestead claim, who then transferred the title to the timber company for a fee. A "commuted" homestead, by contrast, was perfectly legal and made use of a provision in the law that allowed an occupant to buy his homestead for a fee of $1.25 per acre after residing there for 14 months. In practice, these homesteads were often sold immediately to lumbermen or timber land brokers by townspeople who usually lived in the same county. Occasionally, these investors also purchased defunct homesteads from families that had tried, and failed, to make a living homesteading in the forests of western Oregon and Washington. Taken together, this harvesting of Homestead Act interests provided timber companies with a powerful mechanisms for acquiring lands in the Columbia-Pacific region and beyond. During the timber boom decade of 1900-09, the Homestead Act was used to acquire some 6.9 million acres of land from the public domain in Oregon - almost twice the rate of the preceding decade, much of the difference attributable to the acquisition of private timber lands. The second method involved use of the Timber and Stone Act of 1878, legislation permitting purchase of timber from the public domain in 160 acre tracts within Oregon, Washington, California, and Nevada for a minimum price of $2.50 an acre. There was no pretense of occupation, and a sizeable portion of the private lands acquired during the timber boom of 1900-09 were obtained through this method as well (O'Callaghan 1979).[86] A third way to transfer timber lands from the public domain was through the so-called "scripper" acts. Among these was an 1898 appropriation act that gave the Northern Pacific Railroad the right to freely acquire any odd-numbered sections of land the company chose in the states transected by its rail line, if the federal government required use of any part of its original land grant. The Northern Pacific could also receive "scrip" for these lands, which were, in essence, coupons that could be

used to acquire free public lands elsewhere. In practice, this allowed the Northern Pacific Railroad to acquire prime resource lands to "fill in" their checkerboard lands in exchange for any federal parks, Indian reservations, military lands, or other federal properties established along its original rail corridor. The Northern Pacific could then sell these additional lands or scrip to private companies, in turn, just as the company had sold their original "checkerboard" lands.[87]

What transpired in Clatsop County demonstrated how all of these methods of public land alienation could work in combination, despite this part of Oregon being beyond the reach of the original Northern Pacific grant of 1864. A large portion of that County's private timber land base was originally conveyed to private owners through a railroad subsidy, this one stemming from passage of an 1866 Congressional act authorizing an Oregon to California railroad, linking Portland and Sacramento. Two sets of promoters angled to build the Oregon section, with the loser being consoled with another grant authorized by Congress on May 4, 1870. This latter legislation awarded ten sections per mile to a newly formed railroad company initially called the "Oregon Central," if they could build a rail line from Portland via Forest Grove to Astoria through the Oregon Coast Range. To subsidize the development of this railroad, the company was granted a checkerboard of lands, consisting primarily of undeveloped timberlands in Columbia and Clatsop Counties. Under the terms of the act, lands granted to the railroad had to be sold to actual settlers for no more than $2.50 per acre, with tracts not exceeding 160 acres in size. The company built a line from Portland to Forest Grove in 1871-72, but from there turned south about 47 miles and so surrendered the uncompleted portion of the rail easement to forfeiture in 1885 (Corning 1956: 182).[88] Even though no tracks were built along this route, a number of the grant lands had already passed to private timber companies, profiting Oregon Central's investors. In the course of the 15 years of Oregon Central operations, the Northern Pacific Railroad had acquired a number of "lieu selections" in the southern and eastern parts of Clatsop County within the Oregon Central's checkerboard holdings, some of which it conveyed to Weyerhaeuser and associated holding companies. The loss of so large a portion of the "public domain" in Clatsop County to private investors, in the absence of a completed product produced a minor scandal – the issue being eclipsed by a much larger scandal surrounding fraudulent disposition of public domain lands along the whole of the "Oregon and California Railroad" to which the northwest Oregon venture was linked. The Oregon and California lands would ultimately be returned to the public, in part, as the "O&C Lands," today owned by the Bureau of Land Management, though no comparable repatriation of public lands was apparently attempted in the Oregon Central lands of Clatsop and Columbia Counties (Puter and Stevens 1908).

A second group of investors acquired a portion of Clatsop County roughly equal to that of the railroad companies – they consisted of five individuals including A.M. Smith as well as Hammond, Oregon namesake and mill owner, A.B. Hammond. Like Smith, Hammond boasted holdings in a number of states other than Oregon, and these

Figure 9.5 – Frontier industrialist, Andrew Benoni "A.B." Hammond, as he looked during his days in Missoula, Montana before moving to the Columbia-Pacific region and forever transforming the industrial landscape and land ownership maps of the region. Having achieved considerable financial success in Montana and Oregon, he would later move, along with many of his business interests, to California. Special Collections, Mansfield Library, University of Montana-Missoula – Courtesy Wikimedia Commons.

investors held many billions of board feet of timber on lands throughout the West (U.S. Dept of Commerce 1914b: 104-05). Throughout the West, rail development, timberland acquisition and milling were linked enterprises, and the situation here was no different: Hammond in particular was noted for his diversified financial interests in all these sectors within Clatsop County. He purchased the Astoria and South Coast Railroad (the "Seashore Road Company") that linked Astoria with Seaside in 1897, renaming it the Astoria & Columbia River Railroad. He then forged a rail connection to the Northern Pacific by building a line from Astoria to Goble, in Columbia County, providing the first through train from Portland to the coast in 1898.[89] This linkage to the

transcontinental railroads gave the timber interests of the lower Columbia new shipping options and unprecedented access to American regional markets, allowing for lumber sales to the East Coast in particular, and increasing the demand for local timber and timberland - events that were perfectly timed for these investors as they acquired their expansive timber holdings on the Columbia-Pacific.

Together, these investors used a variety of mechanisms to acquire their vast holdings, including (but not limited to) the acquisition of homestead claims and Timber and Stone Act claims; there were also various deals with the region's rail companies, involving the exchange of lands and scrip, that were only thinly documented at the time. Among his other accomplishments, Smith was notable for having attempted to short-circuit a proposal to develop a Saddle Mountain National Park in 1908, in spite of considerable public support for such a park; he did so by presenting railroad company scrip, seeking to claim part of the 1,920 acres that the federal government was prepared to set aside to create this new park (U.S. Dept of Commerce 1914b: 57). [90] In many parts of the County, their shared interests were owned through an umbrella company, the Hammond Lumber Company. Much of the rest of the County was acquired through similar mechanisms by a range of smaller business interests.[91] A patchwork of ownerships is therefore clear on 1910 maps of the County, with such names as the Dubois Lumber Company, Oregon Timber, Western Oregon Trust Company, Crossett Timber Company, Willamette Pulp and Paper Company, and Gladstone Oregon Timber Company (Metsker 1910).

Soon, this speculative bubble would burst. The feverish pace of timber land acquisition in the beginning of the 20th century had been fueled in part by an expectation that development in the hinterlands was necessary, but also that entrepreneurs like Benson and the arrival of the transcontinental railroad would result in localized shortages of timber, causing land values to continue moving upward. Following the rampant speculation and timberland acquisition on the Columbia-Pacific in the first decade of the 20th century, it soon became clear that the cash value of timber land was all but flat. Those companies that had entered the land speculation market solely as an investment began to drop out of the region, their lands being acquired by the large companies that were actively involved in timber production. Land holdings became increasingly concentrated in only a small number of companies, including Weyerhaeuser on the north side of the river, and Crown-Willamette, which gradually acquired many of Hammond's holdings and other lands throughout Clatsop County in the years ahead. The speculative land acquisition of the early 20th century had left an enduring mark - permanently rearranging the land ownership patterns and land use practices of the entire Columbia-Pacific region, and conveying the majority of the lands in the region into the ownership of timber companies whose corporate inheritors and descendants still manage the lands to this day.

The U.S. Army Spruce Production Division

At the same moment that the speculative mania of the early 20th century began to wane, the attention of the timber industry ironically would shift away from the interior as unforeseen events in Europe would rearrange timber markets and bring lumbering back down to tidewater. Initially hesitant to commit to the war raging in Europe since 1914, the United States officially joined the Allied forces in the World War I war effort on April 6, 1917, entering the foreign conflict with unprecedented commitment and zeal. At this point, the Allies were deadlocked in trench warfare and were struggling to stay on par with the Germans' formidable air forces. The Allies had found themselves in dire need of light yet durable lumber required to construct airplanes in that era. Prior to the United States' involvement in the War, Allied forces had attempted to use timber felled in European forests to produce their combat aircrafts but were unable to maintain adequate levels of production – in part due to the loss of timber industry manpower to other military pursuits. By 1916, wood from the Pacific Northwest was already been entering the military airplane market. As America entered the war, however, the timber shortage became America's problem too. As noted by Brigadier-General Brice P. Disque, *"it was represented to me that our successful termination of the war was largely dependent upon an immediate and very great increase in production of lumber suitable for aircraft purposes"* (1920:I). The Sitka spruce of the coast, with its uniquely light and durable wood, adapted to the coastal storms spiraling off the Pacific, proved to be the military's wood of choice. As a result, in 1917, the United States Army established a subsidiary Spruce Production Division (SPD), in order to provide Allied forces with high quality spruce for combat aircraft, as well as Douglas-fir for ship manufacturing during the War (Tonsfeldt 2013; Military Order 2011; Crossman 2011).

Despite the large quantities of timber in the region and the increased production in the mills of spruce for airplanes, the Pacific Northwest timber industry struggled to meet the needs of the Allies, which translated to ten million board feet per month by October of 1917 (Williams 1999:2-3). The timing of this spike in demand was terrible: on July 16, 1917, the lumber, logging, and sawmill divisions of both the Industrial Workers of the World (IWW), as well as the American Federation of Labor (AFL) had initiated a strike against the nation's lumber companies, seeking better work conditions and an eight-hour workday for laborers in the rough-and-tumble mills of the era. There was also limited industrial capacity for Sitka spruce development and, some sources suggest, certain lumber companies maintained a cap on production to keep market values elevated, contributing to the lumber shortfall. Together, these events created unwelcome ambiguity in spruce markets and added to anxieties all the way to Washington D.C. and beyond. In the summer of 1917, France, England and Italy's governments sent a delegation from their military aviation units to the forests of Oregon and Washington in order to persuade regional mills to increase their spruce

Figure 9.5 – Workers from the U.S. Army Spruce Production Division in 1917 or 1918, harvesting an old Sitka spruce tree near Seaside. Well into the early 20th century, muscle-powered logging was the norm, with axes and crosscut saws. Springboards protrude from the sides of the tree. The wood from these trees were shipped by rail to a number of log dumps, including Netul Landing. Gerald W. Williams Collection (postcards), via Oregon State University Archives, Courtesy Wikimedia Commons.

output to meet the production needs of all the Allied forces (Tonsfeldt 2013; Williams 1999).

During that summer, the United States government began to consider the need for direct government intervention in the Pacific Northwest's lumber industry, and a number of temporary boards weredeveloped to address the spruce supply question.[92] On May 7, 1917, General John J. Pershing and chief-of-staff General James G. Harbord had brought former Captain Brice Disque to Washington, D.C. to seek his assistance in evaluating the spruce production problems in the Pacific Northwest. Disque then traveled to the region and spent several months meeting with both mill owners and IWW representatives to attempt to understand the extent of the issues. He concluded his evaluation with a report back to Washington that labor disputes could not be overcome without the intervention of the U.S. government. He believed that soldiers should be placed in the forests of the Pacific Northwest to boost production levels of Sitka spruce (Military Order of the World Wars 2011:9; Williams 1999:3-4).

Reacting to Disque's report, the Army Signal Corps was placed in charge of rectifying the labor issues in the lumber industry and seeing to the efficiency of spruce lumber production. On September 29, 1917, the army reinstated Disque as lieutenant colonel and placed him in charge of creating a plan for a unit of soldiers to work within the woods producing aircraft-quality lumber for the war (Military Order of the World Wars 2011:9). At this point, Disque travelled to Portland, Oregon to meet with both leading loggers and mill men to attempt to understand and rectify the labor and supply issues at hand. Disque was decidedly unsympathetic to the demands of labor at this time of national crisis. He noted,

"At that conference I learned that the entire lumber industry of the Northwest was in a chaotic condition. The IWW seemed to be running away with things; there had been strikes and sabotage rampant for six months. Summer development of logging operations had been prevented and the industry was going into the winter totally unprepared for normal business, to say nothing of the supreme effort it had to make because of the war" (1920:I-II).

By November 6, 1917, Disque had been promoted to Colonel and was named Commander of a new military unit to take federal control of spruce production, aptly named the Spruce Production Division (SPD) of the United States Army (Evans and Williams 1984:6). Disque's first order of business was the recruitment of new labor to bypass striking workers and increase production of aircraft-quality spruce lumber. According to Disque, when he arrived back in the Pacific Northwest, labor was scarce – not only because of the strike, but also because of the mobilization of many young men into other aspects of the war effort:

"Loyal and skilled woodsmen had left the woods in large numbers through the draft, voluntary

enlistment, and distaste for strikes and agitation, or to secure the more attractive wages and conditions in other war industries. It was estimated that there was a shortage of seven thousand in October 1917" (1920:II).

In this light, Disque requested that a modest "army" of soldiers, especially those with prior timber experience, be mobilized to take work in the forests of the Pacific Northwest coast. The Department of War, the Department of Labor and Samuel Gompers of the AFL hastily devised a plan: by December 4, 1917, 5,000 men (of a total of 10,000 authorized) arrived at the Vancouver Barracks for duty.[93] The SPD men were assigned to independent squadrons either logging or working in mills, working on construction jobs with the SPD Engineering groups or with contractors, or working at the Vancouver Cut-up Plant. While many in the IWW took this to be an act of "union-busting," Disque sought to portray the SPD forces as neutral third parties, who would work with local labor and timber companies on even terms (Tonsfeldt 2013; Williams 1994; United States Spruce Production Corporation 1920).[94]

With the labor issue largely resolved, Disque and his new SPD recruits turned to the difficult task of removing spruce timber from the woods and transporting it to the mills in the absence of significant infrastructure. While railroads were being built enthusiastically into the Douglas-fir region by the likes of Simon Benson, comparatively little attention had been directed at developing comparable infrastructure to access the spruce forests of the outer coast. As Kaminshy (1989: 33) noted of Sitka spruce production on the eve of the war, *"Logging companies had not constructed any camps nor figured out how to remove the huge sticks, as prior to the war it was of low value."* To make matters worse, the Sitka spruce that was most accessible, lining the shores of the Columbia River estuary, had been among the first trees harvested by early settlers, requiring that more remote patches be sought out in heretofore undeveloped areas up and down the coast. As the Spruce Production Division opined,

"The spruce family seems to have been an early fugitive from justice. At least its habitat is fixed in the remotest, most inaccessible portions of the whole coast country. That part of the Coast Range which faces the Pacific Ocean...It is scarred deeply with great canyons and ravines. It is covered with an underbrush impenetrable to man without the use of tools" (United States Spruce Production Corporation 1920:33).

So too, the milling of wood for spruce airplanes was to take place in Vancouver, many river miles away from the outer coast, where Sitka spruce was found. In short order, it became clear that the SPD would have to build an entirely new infrastructure to link undeveloped spruce forests to the Columbia estuary. Originally, the SPD sought to use trucks to ship logs to milling operations, but this proved difficult; few roads were

developed in some of the prime spruce lands, and those roads that had been developed were often of marginal quality and scarcely passable in the approach winter of 1917-18. In that era, railroads were seen as the only plausible solution to this transportation issue (Kaminsky 1989; Evans and Williams 1984).

The SPD almost immediately began a railroad construction program to install rail lines throughout the Spruce-hemlock zone of the outer coast. Rail lines were proposed especially for areas where grades were moderate and would allow access into large harvestable drainage basins. These were configured in places where the logs could be brought to tidewater and from there shipped in rafts - reminiscent of Benson's 'Cigar rafts" - to large spruce mills, including the Spruce Division facilities in Vancouver, Washington and Toledo, Oregon. Very quickly, the SPD developed thirteen principal railroads within Washington and Oregon, accounting for 173 miles of main line and 181 miles of tributary lines and spurs. Of these thirteen lines, six were in coastal Oregon and seven were in coastal Washington.[95] The Lewis and Clark River basin was one of the 13 places proposed for the development of such rail lines. By late 1917, the Spruce Division recruited local firms to begin laying track for the new rail line - Spruce Production Division Line 9 - with its log dump site at Netul Landing, now sitting within Lewis and Clark National and State Historical Parks (Kaminsky 1989; Evans and Williams 1984).

Local rail cars and engines were used on these rail lines, including the Lewis and Clark track, but more capacity was needed. During the height of World War I, the nation's rail capacities were being overtaxed by wartime demand for troop transport, the shipment of military and industrial goods. President Woodrow Wilson established United States Railroad Administration (USRA) to oversee efforts to streamline rail activities, while his William McAdoo, was assigned the position as Director General of this new agency. Under McAdoo, a call was put out nationwide for all unused rail cars to support military efforts, including those of the Spruce Division. The Colorado Midland was one of the rail lines that replied in the affirmative, offering twenty obsolete locomotives - two of which would become the cornerstone of the Lewis and Clark Railroad operation. These were older, geared locomotives - crude compared to other locomotives of the period, but "could take the rough, hastily laid track" through the uneven terrain up the Lewis and Clark River Basin (Kaminsky 1989: 36). These surplus engines were operational on the Lewis and Clark River by March of 1918, and linked the Lewis and Clark River operations with those further to the south - including operations around Seaside being harvested then by the large lumber camp called "Camp Clatsop." As far south as Cannon Beach, spruce camps operated in large numbers - indeed, the abrupt construction of camps prompted the beginning of downtown Cannon Beach, where a mess hall and other facilities were hastily constructed on what is today the middle of that town's commercial district (O'Donnell 1996).

Figure 9.6 – The construction of rail lines by hand was arduous, wet work – especially for the many Spruce Production Division recruits who had little or no prior experience with the work, or with the climate of the Columbia-Pacific region. Here, a SPD crew clears a mudslide from a freshly laid section of track on the Lewis and Clark Railroad, some distance upstream from the Netul Landing log dump. Photo courtesy Clatsop County Historical Society.

The large quantities of Sitka spruce brought to Netul Landing were dropped into the Lewis and Clark River, sorted, bundled into rafts, and hauled away - most, apparently, to the Vancouver Barracks facility for processing. While spruce was the most crucial timber for the war effort, railroads carried a variety of other types, as well, and the Lewis and Clark Railroad was no exception, carrying fir, hemlock and cedar to Netul Landing for processing in addition to spruce - all of this wood being used for the war effort in Europe (Army Air Force SPD 1920: Exhibit 10). While SPD soldiers were involved in most aspects of these operations, so too were local laborers and businesses, which provided mechanical support, construction, and a wide range of services to support the Lewis and Clark Railroad and its spruce production mission. There were other connections between the SPD forces and the local community as well. SPD

soldiers were also assigned to work within private lumber and logging companies in the lower Columbia River region that were deemed essential to the war effort. In Astoria, for example, the Astoria Box Company and the Oregon Pacific Mill & Lumber Co. retained some sixty-two SPD soldiers between the two companies (Evans and Williams 1984: B-3).

Yet, this was a short-lived effort. At eleven in the morning on November 11, 1918, Germany and the Allies signed an armistice to end World War I. With the end of the war came the near immediate end of the Spruce Production Division, which disbanded with the issuance of General Order #34, just one day after the Armistice was signed (Tonsfeldt 2013:140). In accordance with the Spruce Production Corporation's charter and telegraphed instructions from the Commanding General, Disque issued the General Order, which halted all logging. Trees cut in the days before the armistice were left on the ground, where they slowly rotted away - some of them still visible in the study area to this day. Disque also ordered that all construction related to the war effort cease, and called for all contract mills to send remaining timber to the Vancouver mill to be cut into commercial lumber. So too, the General Order reappointed officers immediately to a new "Sales Board" for the sale of Spruce Production Division properties and a "Catalogue Board" to prepare a sales catalog for liquidated SPD assets (Tonsfeldt 2013:140-41; United States Spruce Production Corporation 1920:93). With these final measures, the SPD was effectively disbanded after roughly one year of service to the war effort.

Most of the lands and equipment of the Spruce Production Division in the Columbia-Pacific region were put up for auction, and much of this was sold between 1919 and 1920. The Lewis and Clark rail line continued to be used, and some portion of its equipment obtained, by the Saddle Mountain Logging Company.[96] This company continued to refer to this rail line as the "Lewis and Clark Railroad," which extended up to the head of the Lewis and Clark drainage, where it connected with the Spruce Corporation Railroad near the banks of Cullaby Creek, linking the Netul Landing site to logging camps as far away as Seaside's Camp Clatsop and small-scale logging as far south as Cannon Beach (PNRBC n.d.). This Company maintained its own logging railroad for a few years and continued use of the Netul Landing log dump. In the early 1920s, the Saddle Mountain Logging Company was acquired by the Eastern & Western Lumber Company, but operations continued largely as before. The Netul Landing site appear to have reverted to the County at the onset of the Great Depression (a common situation with companies in financial distress).[97] Soon thereafter, the assets of the Eastern & Western Logging Company, including Saddle Mountain Logging Company assets, were obtained as a division of the Crown-Willamette Company at roughly the same time that this company merged with Zellerbach Corporation to become Crown-Zellerbach.[98] Netul Landing was also posed for acquisition by this new company. In Depression-era Clatsop County, the County had acquired over 100,000 acres of foreclosed timberland and other timber company assets. During World War II, pressure

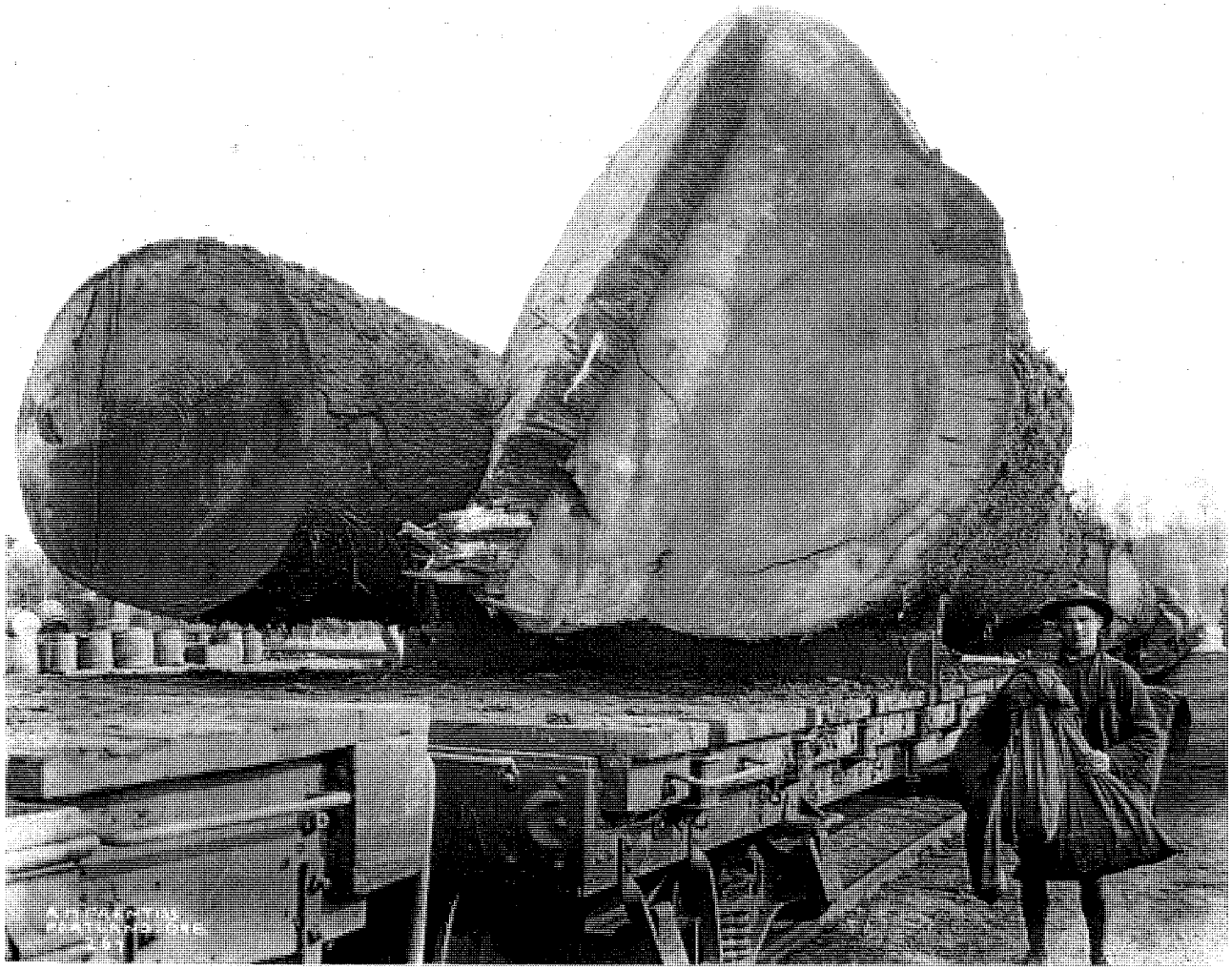


Figure 9.7 – Giant Sitka spruce logs on flatcars, along the newly-constructed Lewis and Clark Railroad – at or close to the Netul Landing log dump, where they were dumped into the water for shipping to the mill at Vancouver Barracks or other milling facilities. Photo courtesy Clatsop County Historical Society.

mounted to sell these lands back to private loggers. By 1945, Crown-Zellerbach had capitalized on this trend, buying up significant tracts of lands, as well as assets of (Robin et al. 1980:13). Apparently in the course of these transactions, the company also acquired the Netul Landing site, which remained a cornerstone of log-shipping operations on the Lewis and Clark drainage (Kaminsky 1989; Metsker 1930).[99]

Netul Landing would continue to serve as a log dump and a "wet sort yard" or "high water log boom" even after the tracks were removed, with log trucks still bringing timber to the site well into the late 20th century. It served as a dumping ground for unsorted logs, where they could then be sorted by species, size and quality for shipment

to the appropriate mill. These "sort yards" were numerous along the Columbia River estuary, but the Netul Landing yard was one of the larger and more active in the region. As O'Neal, Osburn and Williams point out,

"Eventually Oregon had at least seventeen wet sort yards and seven of those were in Clatsop County. The largest sort yard in Clatsop County was at Netul Landing on the Lewis and Clark River where it flows through what is now Lewis and Clark National and State Historical Parks" (O'Neal et al. forthcoming).

Many pilings are still visible in the water at Netul Landing, which were used to stabilize and secure log rafts being produced at this site through the late-20th century. These log rafts were largely (though not exclusively) made of logs harvested on the lands of Crown-Zellerbach, which owned the site and indeed most of Clatsop County's timberlands through this period. National Park Service volunteers have recently produced an overview of this late 20th century history, including an oral history of the loggers and other workers who used the site, which deserves more attention than it can receive here; this source is available from Lewis and Clark National and State Historical Parks (O'Neal et al. forthcoming).

Logging into the Late 20th Century

In the period immediately following World War I, the spruce forests of the outer coast once again returned to their old patterns. The market for Sitka spruce was flooded for a time, as mills sought to liquidate the inventory compiled for wartime use. Specialty mills' use of spruce and hemlock rebounded with new force, responding to the economic surge of the 1920s, buoyed somewhat by the vast new infrastructure of logging railroads, roads and other facilities that had been hastily built on the coast with military dollars. Yet, especially on the tidewater, more conventional types of milling boomed. By roughly this period, there was a great upswing in demand for large-dimension wood, as the final commercially available pockets of old timber in the American South and upper Midwest were being depleted, causing logging companies, as well as the equipment and labor used to fell these forests to migrate westward. The ancient Douglas fir forests of the Northwest, especially those close to tidewater and train stations, were the next in line.

Throughout this period in the region's history, large mills were centered on the tidewater, often in places very close to what are today park lands, in adjacent communities such as Ilwaco and Hammond. Among the largest mills in the area during this post-War boom was the "Hammond Mill," for example, first constructed in 1903 by the brothers George and William Hume - part of the Hume family that had also constructed the Columbia's first salmon cannery – but soon sold to A.B. Hammond. As

land baron A.B. Hammond built his land holdings in interior Clatsop County through the first two decades of the 20th century, he began acquiring facilities such as the Hammond Mill to accommodate production for the logs cut from his vast and growing holdings of timberlands. Logs cut along the entire Columbia estuary could be towed to the site by boat, milled, and then loaded onto ships or – with Hammond's rail link to the Northern Pacific now in place – any part of the United States. If Hammond, the man, was the central figure in the growing timber economy of Clatsop County in this period, his mill in the town of Hammond was the epicenter of its production facilities.

Meanwhile, competing mills appeared at upstream sites, closer to the Douglas-fir zone, with facilities in places such as Westport and Wauna in Oregon, and Raymond Washington, constructing large spars, large-dimension lumber and planks. In time, these upstream facilities - closer to the Douglas-fir, but also fronting rail lines and deep and relatively placid river channels – would come to eclipse the mills at the mouth of the river. Even today, these upriver sites continue to have the region's largest operating mills, while the Columbia mouth has relatively small operations, increasingly devoted to specialized products or log exports.

The lumbering boom came to an abrupt halt during the Great Depression, however, as construction largely ceased across the United States and around the world. The abrupt decline in global demand for lumber silenced timber operations throughout the region, an a sizeable portion of the small mills closed for good. The value of timber lands plummeted in 1929-30, and many landowners simply abandoned timber lands, especially cutover lands, wishing to avoid taxes or other financial responsibilities. In other cases, counties foreclosed on lands in lieu of taxes. Lands that had only two decades ago been transferred from the public domain to private ownership were returned to public ownership. A portion of these lands – especially those acquired by counties and with good stands of merchantable timber – would be resold to private entities, including Weyerhaeuser and Crown-Willamette companies, at the end of the Depression. Other lands – those that were swampy, rocky, or had been cleared of merchantable timber – commonly remained in public ownership after the Depression, becoming part of the Clatsop and Tillamook State Forests in particular. On the Washington side of the river, some portion of these abandoned lands found their way into the management of the Willapa Hills, Skamokawa, and Elochman state forests, alongside numerous sections already set aside to produce timber revenue for schools (U.S. Dept of Commerce 1914a, 1914b; O'Callaghan 1979).

During the Depression, others private lands were abandoned and returned to public ownership after the catastrophic fires of the 1930s – most notably the "Tillamook Burns" of 1933, 1939, and 1945. These vast fires consumed 311,000, 190,000 180,000 acres respectively, together consuming a large proportion of the forests in the interior of Oregon's Coast Range, including a sizeable portion of the private land holdings in southeastern Clatsop County, as well as northern Tillamook County, western Yamhill

and Columbia Counties and far northwestern Washington County. The first two fires were started by sparks from equipment at logging operations, the third by an incautiously tossed cigarette (though some have speculated that the third fire was caused by a Japanese incendiary balloon launched in the final moments of World War II to pull men from the Pacific front, as was attempted here and there along the Oregon and Washington coasts). These fires occurred during the summer months, when dry winds, propelled by high pressure systems, blew across the region from the east, burning trees up to the end of the outer coast's fog belt before losing momentum and being extinguished by fire crews. Firefighting involved a broad spectrum of the community, including CCC crews in the first two fires, and the impromptu recruitment of volunteers from local communities - manpower being so limited, the scale of the fires so big, that crews even stopped random motorists along the highways of the region (the lead author's grandparents among them) to recruit potential firefighters. There were some efforts to salvage dead timber, but in the economic climate of the time, much of the economic value of the lands being lost in an instant, most private landowners gladly walked away from their interests in these lands. Much of the burned land was obtained by the State of Oregon or county governments in lieu of taxes. Following the passage of a reforestation bond bill in 1948, the land was replanted largely by state-supported foresters. They were aided in highly publicized volunteer replanting efforts, involving children from the region - school groups, scout troops, church organizations and others all coming to aid the effort. Even today, one can encounter charred remnants of timber under the regrown forests of the Tillamook Burn, as well as considerable pride in that forest among the many Northwest elders who helped replant that land as children (Wells 1999; Kemp 1967).[100]

The Tillamook Burn lands were not entirely unique in being replanted, though the replanting of timber lands in the timber-rich Northwest had been something of a novelty up to this time. The region's timber companies, now a few decades into the experience of land ownership, were beginning to reflect on their own long-term land management issues and for the first time began to raise questions about timber supply. Their response drew heavily from agricultural modes of production. Weyerhaeuser's "Timber is a Crop" campaign, launched in 1937 with an emphasis on replanting of its logged-over southwest Washington lands, was hugely influential among the timber companies of the time; this also allowed the company to put to work laborers, largely idled by the Depression, with unconventional tree planting work in a way that mirrored Civilian Conservation Corps tree planting projects. On June 21st, 1941, Weyerhaeuser dedicated the country's first "tree farm" on 130,000 acres near Montesano in Grays Harbor County, Washington, just north of the study area. Within a few years, similar ventures were underway on the Oregon side of the border, notably led by Crown-Zellerbach Corporation on the Clatsop and Columbia County lands (Wilma 2003).

Just as the Great Depression had largely silenced the timber industry in the Columbia-Pacific region, there was an explosive increase in demand for timber products with the

Figure 9.8: Over the course of the 20th century, large mills near the head of tidewater, such as the Willapa Lumber Company mill in Raymond, Washington, came to dominate wood processing in the Columbia-Pacific region. With rail and wharf access, these mills on the eastern edge of the region and beyond also sat closer to the Douglas fir zone – as transportation, tree-cutting and milling became more efficient, they would largely eclipse milling on the outer coast. Photo courtesy Washington State Historical Society.

conclusion of World War II. Returning soldiers, their spouses, and their baby boom children prompted a burst of new construction and other wood product demands, while American industrial forests were tapped for the rebuilding of the war-torn cities of Europe and Asia. As logging railroads and steam donkeys had brought a first industrial revolution to the forests of the Columbia-Pacific, the technological developments of the mid-20th century would bring a second revolution – this one even more impactful, involving the introduction of power chainsaws, log trucks, and networks of logging roads reaching into the most remote parts of the region. Ironically, the Great Depression had stalled timber production just as technological innovations appeared that would have transformed lumbering into a modern, industrial enterprise. Yet, even as the forests had fallen silent, all of the elements for the industrial transformation of the forest were falling into place, allowing the Columbia-Pacific to spring into action with unprecedented reach and efficiency. The first log trucks in the region had been largely military trucks, converted to use for timber transport for the Spruce Production Division. After the First World War, these trucks had entered civilian use in support of logging, but had proven to be clunky and often unsuited to

the task. A number of independent inventions were made, converting these trucks into the vehicle we know today. This included the development of an articulated, trailered back half of the truck, which allowed the vehicles to turn tight radiuses and thus navigate narrow and winding forest roads as well as the tight spaces of public streets and milling facilities; some sources suggest that this articulated log truck was a technological innovation first made by logging equipment mechanics in the Columbia-Pacific during the 1930s (Miller 1958: 213). A long list of independent log trucking companies appeared by the end of World War II alongside a growing "gyppo" logger workforce, both working for timber companies on a short-term contractual basis. The entry of log trucks into the forest was aided by the rail grades of the Spruce Production Division and smaller private rail networks, which were being decommissioned by the 1930s and were largely gone by the mid-1940s, converted into "mainline" roads leading into the forest. The growing availability of "bull-graders" and other very early bulldozers being marked by the late 1930s, meanwhile, was making logging road construction more plausible, allowing logging companies at the beginning of the post-War boom to develop a vast maze of rock-bed logging roads throughout the region, linked to mainline points of access. Over the preceding century, mills had consolidated as their operations had become more efficient and centralized; with improving road networks and the rise of log trucks, single mills could now service a vast hinterland of logging operations, resulting in increasingly large and automated mills in a steadily declining number of coastal communities (Cox 1974; Erickson 1965).

So too, timber-cutting technology had made great strides from the axe and crosscut saws of the early 20th century. While a workable chainsaw prototype had been available since the 19th century, it was not until the late 1920s that portable chainsaws were first commercially manufactured by companies such as Dolmar and Stihl. Production at these companies stalled almost as soon as it had started, as the Great Depression all but eliminated vast portions of their market. It was only in the late 1940s, as demand for timber products surged, that American companies such as McCullough Motors Corporation began large-scale industrial production of commercial chainsaws. Wartime technological innovations, America's growing industrial capacities, and an abundance of cheap electricity from Depression-era hydroelectric projects made lightweight aluminum components available for the first time. In turn, this allowed chainsaws to become light enough for widespread and efficient use in commercial forests; the McCullough Model 5-49, for example, one of the very first gas-operated chainsaws light enough to be run by a single operator, first appeared in 1948-49 and was widespread in the industrial forests of the Columbia-Pacific by the early 1950s. With timber cutting becoming increasingly efficient, and the economics of logging becoming highly profitable with the rebound of lumber and plywood markets, timber companies scrambled to acquire timberlands – large companies such as Weyerhaeuser and Crown-Zellerbach buying up smaller holdings, as well as certain former timberlands that had reverted to state ownership for taxes during the Depression – including lands once

owned by the likes of A.B. Hammond and his fellow land barons of the early 20th century (Crown Zellerbach 1958; Adams 1951b). [101]

By the mid-1950s, the readily accessible ancient forests had largely been cleared from those areas accessible along the old rail grades and along the most accessible "mainline" logging roads. Road-building and logging proceeded into the highest mountains of the Columbia-Pacific, into the most inaccessible parts of the Willapa Hills and the mountains of southern Clatsop County, some of it still swathed in virgin forest until the 1970s and even early 1980s, even as lowland forests were on their second or third rotation. Ancient forests were finally, and fairly completely, cleared from the private lands of the region, with only a few old stands remaining, largely in parks and other public lands. The advent of expansive logging in the high country had diverse and often destructive effects, sometimes prompting landslides and accelerating erosion in certain settings. In turn, fine sediments drifted downstream, settling when they reached slow water. In many estuaries, the Columbia and Willapa Bay estuaries prominent among them, intensified industrial logging was matched by an expansion of mud flats and other deposits, often filled with sediments more characteristic of the high mountains; in many places, salt marsh vegetation expanded onto these new sediment deposits, creating vast lateral expansions of the tidal flats and reducing the width of navigable channels – a phenomenon that can be seen on the tide flats of the Young's Bay and Lewis and Clark River estuaries to this day. The region having been so thoroughly logged by the mid-20th century, the federal environmental legislation of the following decades such as the Endangered Species Act would have little bearing on timber practices relative to other parts of the Pacific Northwest – the impacts of such sedimentation on threatened coastal fish populations being among the few points of relevance. More salient were the Forest Practices Acts of both states, which demanded the replanting of harvested lands, and eventually set upper limits for clearcut size, require buffers on fish-bearing streams, and the like (Pyle 2001; Dicken et al. 1961).

The region's mills began to retool their operations to accommodate the changing nature of the forest, and by the mid-1950s some of the region's largest mills were downsizing their equipment to accommodate only second-growth logs, even as they intensified production. There were other major changes, too. The production of pulp for paper – often for export to mills outside the immediate area, such as in Portland or California – had been part of the Columbia-Pacific's economy since the late 19th century, growing quickly with the emergence of the Crown Willamette Paper Company and other paper manufacturing interests that were able to use less marketable tree species (such as Western hemlock) for paper production. Yet, an explosion in chemical engineering in the post-War era brought access to new laminates and resins, allowing for the region's plywood and pulp and paper industries to expand. By the 1950s, spruce and hemlock, always difficult trees to sell on conventional lumber markets, were increasingly used along with other species in the production of cardboard, laminate plywood, and even

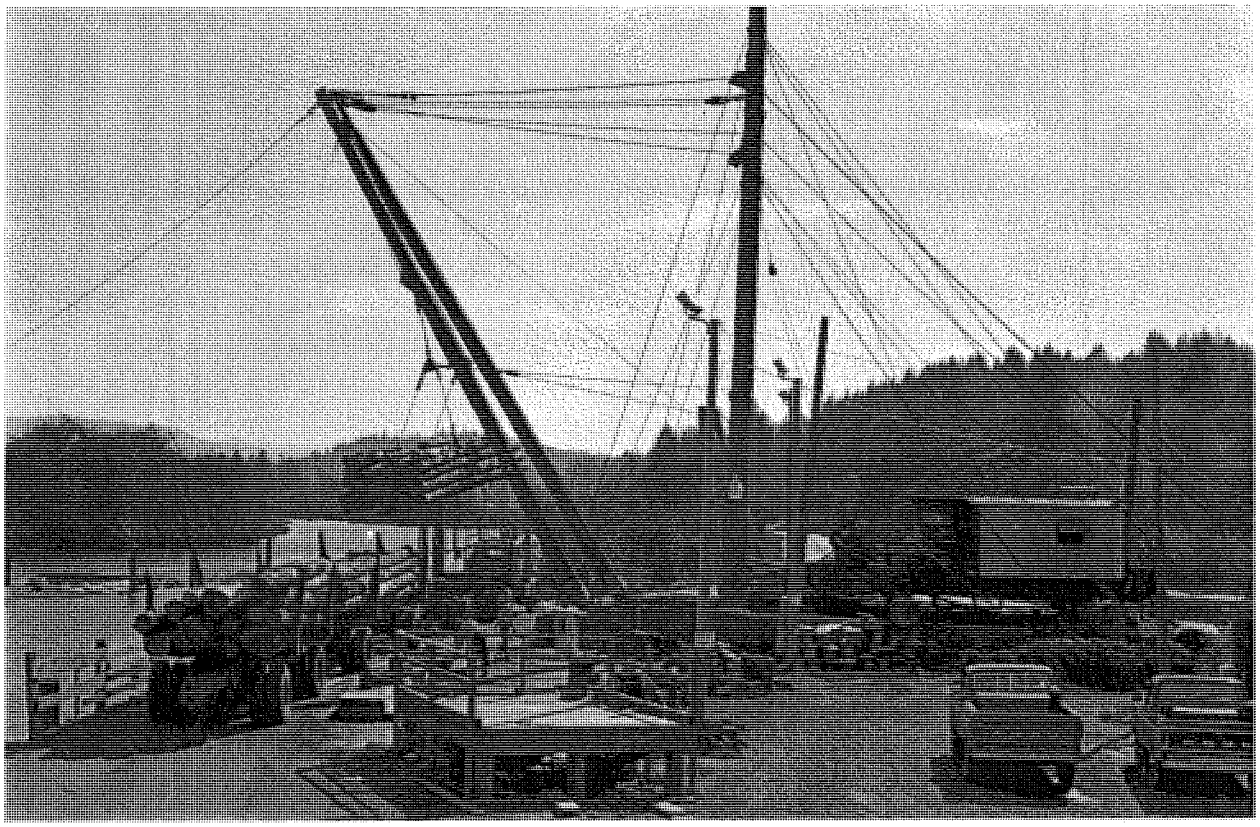


Figure 9.9 – The Crown Zellerbach log dump and sort yard at Netul Landing, seen here in the 1970s, continued to operate into the late 20th century. Its railroad tracks were removed and replaced by roadbeds long ago, as was true throughout the region – many of the old rail grades becoming the "mainline" logging roads of the late 20th century. At Netul Landing, the area was accessed by log trucks into the 1980s; logs were lifted with a boom and could be deposited in the water for sorting, then towed by boat to a number of local mills. Photo courtesy National Park Service, Lewis and Clark National and State Historical Parks.

toilet tissue. Vast mills, such as the Georgia-Pacific pulp mill in Wauna, Oregon, began to process trees from throughout the Columbia-Pacific region, appeared or were expanded to produce these consumer products on an unprecedented scale. Ironically, the rise in paper production, coupled with the growing concentration of lumber milling capacity in the upper Columbia River estuary, just beyond the study area, resulted in an aggregate decline in lumber milling in the region - the quantity of milled lumber never quite reaching its pre-Depression peak, even in the post-War years, on the lower Columbia River estuary (ODF 2005).

In recent decades, the economics of the timber industry have been changing yet again. Especially since the 1980s, speculation on timber land has rebounded in a manner reminiscent of the land booms of the early 20th century. Throughout the study area, and especially in Clatsop County, there have been many rapid exchanges of timber land

between companies that often do not log, or log much, but simply hold the land as assets in their portfolios for a time before passing them on to another investor. Many portions of the Clatsop County tree farm owned by Crown-Zellerbach in the mid-20th century – originally comprising more than 150,000 acres of the County, and including lands acquired by the National Park Service in the 2004 expansion of Fort Clatsop - has been exchanged between no fewer than eight different companies since the early 1980s.[102] Though certain employees have carried over between each company, the management philosophies guiding the fate of these lands vacillate with surprising speed – a partial explanation for why the 2004 expansion of the Fort Clatsop sub-unit of the Lewis and Clark National and State Historical Parks into adjacent timberlands was vehemently opposed by one owner (Cavenham Industries) only to be enthusiastically assisted by two of that company's successors (Willamette Industries and Weyerhaeuser Company). The fate of the Columbia-Pacific's timberlands is still clearly in flux, its history still being written.

Meanwhile, the industry's products are in flux too. The commercially available ancient forests of the coast having been logged a generation ago, large-dimension lumber is now in short supply. Similarly, the quality of the wood changed, as the tight-grained woods of the ancient forests were replaced by relatively pithy wide-grained wood of trees that have grown quickly in the direct sun. New cottage industries have emerged, centered on the salvage of what old wood is still available in the Columbia-Pacific region. Buildings built before mid-century were typically constructed of high-quality woods irrespective of their origin; these older buildings are commonly salvaged for their large beams, and large-dimension wood is even milled from the unblemished centers of old piers and pilings. Yet, this new industry also ventures into the forest: even when old Western red cedars have been toppled decades ago and lie submerged under a carpet of moss, its tannin-rich wood can lie intact within. The wood and shingles salvaged from these downed old trees, for use as shingles but also for specialized, often ornamental lumber, exceeds the quality of comparable products from freshly-cut second growth trees. The Larson mill sitting just south of Fort Clatsop boundary at the time of this writing, as well as the related Larson salvage operation to the north, are supported in no small part by the salvage and sale of such old woods as part of this growing specialty market – an adaptation to the historical circumstances of logging in the Columbia-Pacific region.

Of the various elements that make up the whole of Columbia-Pacific history, the theme of the industrial timber economy is one of the most critical, as it has come to define the human relationship with a significant majority of the region, reshaping the landscapes of almost every part of the region's mountainous interior. Still, despite the importance of this theme, ther are no resources remaining in the park that are "significant" or meet the integrity standards of the National Register of Historic Places. The one place of clear nationwide significance, the Spruce Production Division's Lewis and Clark Railroad log dump at Netul Landing, lacks the physical integrity that would be the measure of

eligibility. The Spruce Production Division site was, after all, a short-lived railway terminus that was used for roughly seven decades thereafter as a working waterfront, through multiple stages of industrial forestry. Pilings on the site appear to date, in whole or part from the final phases of this industrial lifespan, and the original railroad infrastructure was removed to accommodate log truck access long before those modifications. Netul Landing, however, presents fine opportunities for interpretation. Almost all of the forested lands within the modern Lewis and Clark National and State Historical Parks were logged at some time, in part or in whole, though little remains from this history other than stumps and second-growth forest. In Ecola State Park, those portions of the land that had to be purchased (rather than donated from public agencies or private landowners) were often logged beforehand so as to reduce their cost, though Oregon State Park Superintendent Samuel Boardman often railed against and resisted this as being antithetical to the purposes of park development (Boardman n.d.). Former logged areas can still be seen here and there within that park, shrouded in dense second-growth Sitka spruce. Other portions of Ecola, as well as Cape Disappointment, Fort Columbia, and Fort Stevens were logged in small areas – not as commercial ventures, but to accommodate military access, viewsheds and firing lines – especially during World War II. It is perhaps in the Fort Clatsop sub-unit of Lewis and Clark National and State Historical Parks, with its history of the Moore sawmill in the 1850s, the Spruce Production Division railroad in 1917-18, and its landscapes and long history of industrial forestry from that period into the early 21st century, where the story of logging can best be told.

10: Navigating the Bar:
Early Lifesaving and Aids to Navigation at the Mouth of the Columbia River

No matter the period or the dominant industry of the day, shipping has been the lifeblood of the Columbia-Pacific region. Fur trading vessels, ships heavy with canned salmon, or barges of bundled lumber have come and gone from the mouth of the Columbia, sustaining the towns that line its banks, just as the canoes of Chinooks, Clatsops, and the many visitors from coastal tribes traveled these waters for unknown generations beforehand. Yet, this is no simple task. Here, the Columbia enters the open Pacific directly and in full force, without the gentle transitions afforded by protected waters and sleepy bays. The Fraser to the north, the Sacramento to the south – both enter vast and protected interior waters before entering the sea; the Strait of Juan de Fuca is vast and wide, admitting ships in all but the roughest weather. Yet, among the major shipping port rivers of the West, the Columbia stands somewhat apart. Mariners often found, as Lieutenant Charles Wilkes did when surveying the mouth of the river in 1841, *"breakers extending from Cape Disappointment to Point Adams, in one unbroken line."* Breakers sometimes exceeding 30 feet as the full force of Pacific Ocean waves meets the surging river waters, which often enter the sea at the rate of a quarter million gallons, and sometimes over a million gallons per second– racing westward, picking up speed on the ebb tide, and making the entire bar deadly and impassible. So too, the channels at the great river's mouth were notoriously dynamic – the heavy sediment burden of the entire Columbia Basin meeting tidewater, which slowed as the river approached the river bar and dropped this suspended load. Islands and sandspits appeared and disappeared just inside the river's mouth historically, adding to the turbulence and uncertainty of an unforgiving waterway. Even the earliest non-Native navigators entering the river sometimes wrecked at its mouth. In 1798, the brigantine *Hazard* dispatched a small boat to take soundings of the river's mouth, and was lost along with its crew of five men. The British bark *William and Ann*, carrying supplies for Fort Vancouver, wrecked on Clatsop Spit in 1829, and all 29 men aboard lost their lives – an event that precipitated one of the few violent conflicts between Native and non-Native peoples in the history of the Columbia-Pacific region. Returning to Wilkes:

"Mere description can give little idea of the terrors of the bar of the Columbia: all who have seen it have spoken of the wilderness of the scene, and the incessant roar of the waters, representing it as one of the most fearful sights than can possibly meet the eye of the sailor. The difficulty of its channel, the distance of the leading sailing marks, their uncertainty to one unacquainted with them, the want of knowledge of the strength and direction of the current, with the necessity of approaching close to unseen dangers, the

transition from clear to turbid water, all cause doubt and mistrust" (in Barry 1938: 153).

Charles Wilkes knew all too well the dangers of the river: today, a broad bar of sand off the western tip of Cape Disappointment is named Peacock Spit, after the U.S.S. *Peacock*, one of the Wilkes expedition ships, which wrecked on the spit as they tried to enter the river in July of 1841 (Elliott 1917: 232).

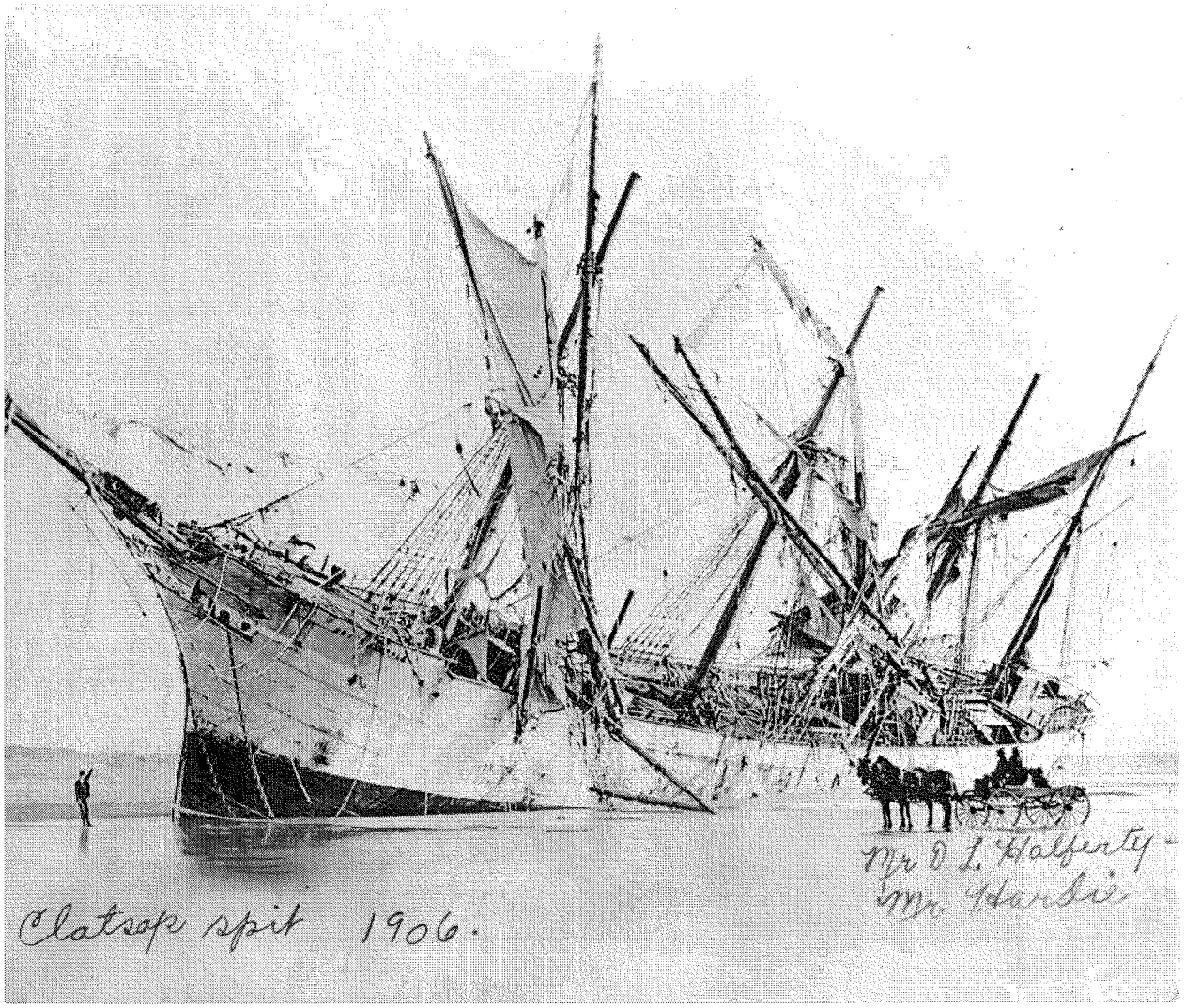


Figure 10.1 – The British bark, *Peter Iredale,* wrecked on Clatsop Spit in 1906, its crew being rescued with the aid of the U.S. Life-Saving Service and given shelter at Fort Stevens. One of many shipwrecks on the Columbia-Pacific waterfront, the uniquely accessible wreckage of this ship remains a popular attraction in Fort Stevens State Park today.

In some ways, this notorious river bar has come to define aspects of the Columbia-Pacific economy and culture. Since Robert Gray's arrival at the mouth of the Columbia in 1792, roughly 2,000 large vessels have been lost at this river's mouth, along with perhaps 700 lives. Bar pilots and river pilots have been recurring, heroic figures in the regional lore, as have the members of the U.S. Coast Guard, helping ships navigate churning and unfamiliar waters - saving ships, cargoes and lives. Through the 19th and 20th centuries, the residents of the Columbia-Pacific and the shipping and fishing interests of the larger river made ambitious efforts to tame the mouth of the river for the sake of public safety. So too, economic boosters often became some of the earliest and most eager proponents for jetty development, dredging and other navigation improvements, as they envisioned Astoria and other towns as shipping ports of national significance.

The loss of so many ships has had numerous effects on the region, bringing a succession of personal dramas and tragedies to the early coast, delaying projects, changing history. Even the landmarks bear the names of the ships that have foundered on the coast – Desdemona Sands on the Oregon side of the Columbia mouth, named for the American bark *Desdemona* which ran aground there in 1857 and sank; Peacock Spit off the mouth from Cape Disappointment, where the Wilkes Expedition's ship the U.S.S. *Peacock* was lost in 1841. The town of Cannon Beach is named for cannons and other flotsam that washed ashore from the U.S.S. *Shark*, wrecked at the Columbia River bar in 1846. Shipwrecks can still be found in fragmentary form along the shores of the Columbia-Pacific region, perhaps nowhere so prominently as at the wreck of the British bark, the *Peter Iredale*, wrecked on the shoreline near Fort Stevens in 1906, where its slowly deteriorating remains continue to be a prominent tourist attraction in that park today (Shine 2008; Gibbs 1973).[103]

As in the other chapters of this document, this aspect of the region's history represents a vast and rich topic, deserving more attention that we can possibly give it here. Yet, the story of Columbia-Pacific navigation and lifesaving has sometimes played out on the lands of LEWI parks, and it is that narrower history that we seek to contextualize in the pages that follow.

Lighthouses and Lightships at the Mouth of the Columbia

From the earliest written maritime history of this coast, it is clear that mariners have sought to reduce the dangers of navigation at the Columbia's mouth through the use of markers and other devices. The three most prominent landmarks at the river's mouth – Cape Disappointment, Chinook Point/Scarborough Hill, and Point Adams, were all used from the earliest times to navigate a course through the river's treacherous waters. In 1812, members of the Astor Party placed a white flag on the summit of Cape Disappointment and burned several trees at night there to signal their supply ship, the

Beaver. Three decades later a notch had been created on the Cape Disappointment summit by cutting the tops of tall trees on its crest, so as to serve as a bearing for vessels steering toward the river's mouth - something that was still included in official sailing directions for the Columbia River mouth issued by the United States Coast Survey in 1850. Hudson's Bay Company Governor, George Simpson, had attempted to acquire a portion of Cape Disappointment for a navigational lookout to augment these simple measures. Yet, very early in the region's non-Native history, and the beginning of the Oregon Territory as a political unit, the people of the Columbia-Pacific region perceived a need for more bold and enduring ways of marking the river's entrance, using lighthouses and similar devices. When Congress passed the Territorial Act of 1848 to establish the Oregon Territorial Government, there was not a single lighthouse along the 1,300 miles of rugged coastline from Puget Sound to the California-Mexico border. This Act, which in effect created the Oregon Territory, also authorized in the same instant some $15,000 for lighthouse construction at two places now within the state of Washington - Cape Disappointment and New Dungeness, as well as for the placement of navigational buoys at Astoria harbor and the mouth of the Columbia (Noble 1989; Hussey 1957; ***9 Stat. 323-331***).

Less than a decade after Wilkes' fateful visit to the lower Columbia, and with Oregon and Washington now in the undisputed control of the United States, surveyors began to assess the Columbia's mouth and to contemplate strategies for its navigation. Lieutenant William P. McArthur, with the assistance of Lieutenant Washington A. Bartlett, plied its waters as part of the 1849-50 Pacific Coast Survey toward this end. McArthur arrived in San Francisco in October 1849 with the intention of assembling a survey crew in that brawling new city. He was initially stymied, finding that the wages he offered could not compete with those offered by crews heading to the gold fields. After six months, McArthur finally pulled together his crew, noting, with some apparent relief,

"In a few days I go to the mouth of the Columbia River and shall make a reconnaissance of the coast both on my way up and returning. I propose also to choose Points for a Light house, Buoys, etc., at the mouth of that river" (McArthur 1915: 254).

Ironically, witnessing the bar during calm weather, MacArthur would initially conclude that the river's dangers had been exaggerated by past mariners:

"We have been successful in surveying the mouth of the Columbia River and up the same as far as Astoria. You will be surprised when I tell you that the dangers of the navigation of this truly magnificent river have been vastly exaggerated. We have crossed the bar sometimes as many as ten times a day for weeks together. More vessels have visited the Columbia within the last year than perhaps ever before and not the slightest accident has occurred" (McArthur 1915: 258).

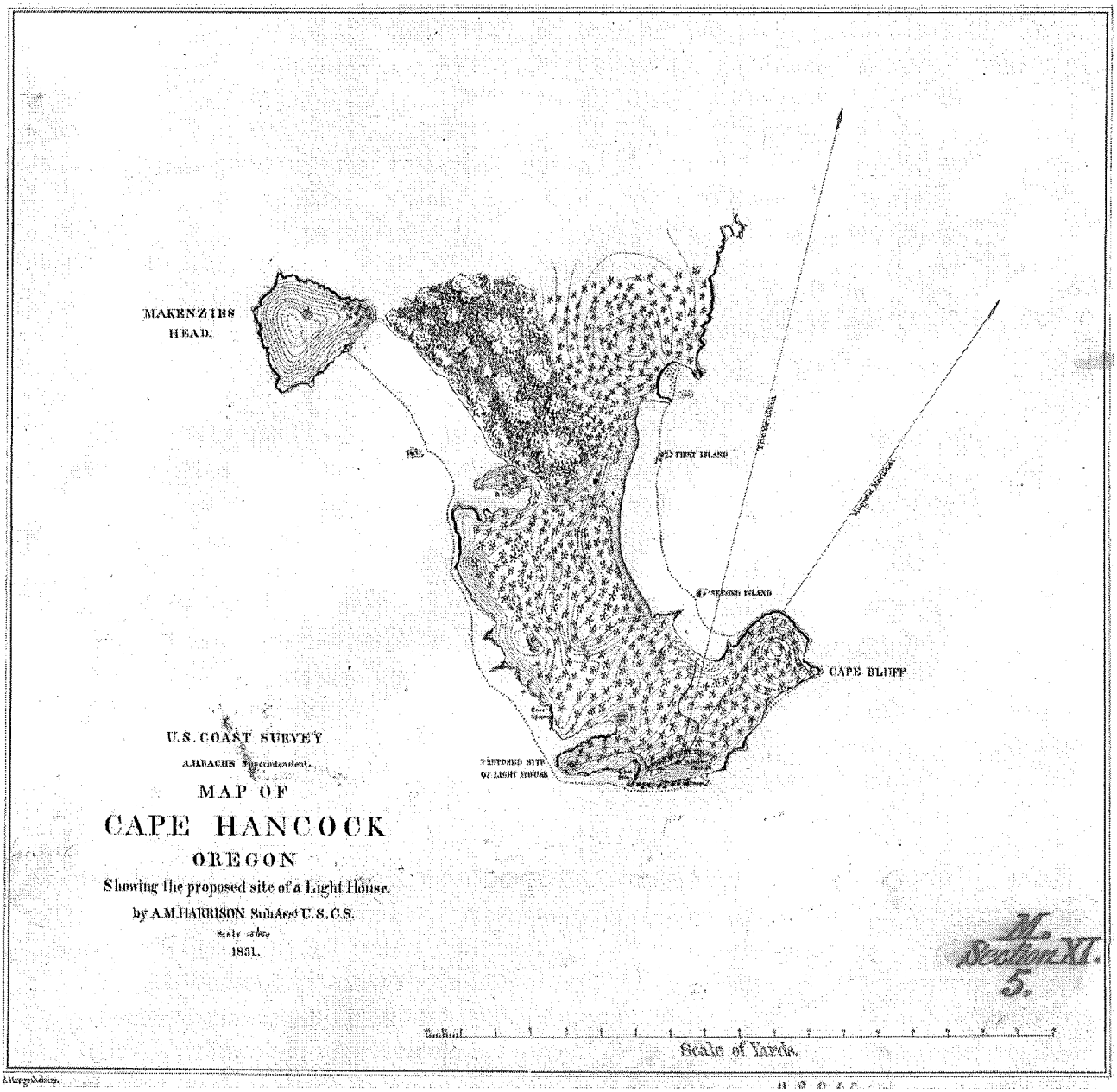


Figure 10.2 – One of the survey maps of Cape Disappointment resulting from the initial Columbia River surveys, showing elevation, vegetation, and survey meridians. From U.S. Coast Survey 1851. *Map of Cape Hancock, Oregon, Showing the Proposed Site of a Light House.* Washington, D.C. Photo courtesy National Archives and Records Administration.

MacArthur acknowledged, though, that the mouth of the Columbia in 1850 had changed its configuration significantly since Wilkes' visit in 1841, with sandspits and islands having already migrated noticeably within the river's mouth. On this basis, he reported back to Washington D.C. that the bar would need to be made safe for navigation:

"[It] *is best under all circumstances to have a pilot...When comparing our chart with that of the [Wilkes] Exploring Expedition, the changes of the channels and shoals at the mouth of the Columbia river will be found to be numerous and considerable. Sand Island is nearly a mile further to the westward now than it was in 1840-'41. The north channel seems to be gradually filling up, whilst the new south channel is becoming both larger and deeper. This change will go on until some violent storm will throw up the sand again, and upon subsiding leave the water of the river to find a new channel. To these changes in the channel is to be attributed the great dread which navigators have had of the Columbia...I have recommended a Lighthouse on Cape Disappointment...The greatly increasing commerce of Oregon demands that these improvements be made immediately. The more especially since the Columbia is the most important portion of Oregon for the pursuits of commerce*" (McArthur 1915: 266-68).

MacArthur's recommendations for the development of a Cape Disappointment lighthouse and other navigational improvements would be repeated, with equal or greater urgency, by those early surveyors who followed in the years ahead. Of no small importance, the amount of ship traffic at the river's mouth was increasing dramatically. While the gold rush may have bedeviled McArthur's efforts to raise a survey crew, these same events were bringing an economic boom to the sparsely settled Northwest. Mining operations and the explosive growth of the new city of San Francisco created large markets for lumber, salmon, oysters, and other Northwestern goods. Yet, as seaborne commerce increased so too did shipwrecks at the Columbia's mouth. It was during these years of frequent shipwrecks—three in 1849, five in 1852, and five in 1853—that mariners are said to have dubbed the region "the Graveyard of the Pacific" (Gibbs 1950: 28).

Also contributing to the pressures for Columbia River lighthouses, the United States government was under intense national pressure to modernize the nation's lighthouse system at the time of McArthur's survey. Just as the Oregon Territory had a mandate for lighthouses from its beginning, the United States government too had been responsible for constructing lighthouses along the coastlines of the country since only a few years after its own genesis, in 1789. Located exclusively on the eastern seaboard, the numbers of lighthouses had grown from 70 in 1822 to 256 over the next 20 years, to 331 in 1852. Yet, the development of the system was often haphazard, leaving some areas (especially those with powerful shipping lobbies and congressional delegations) well protected, and others much less so, and commonly leaving lighthouses in the care of untrained and volunteer staff. Complaints about the nation's "system" for aiding navigation had become intense enough that Congress ordered an investigation in 1851. A nationwide campaign to expand the number of lighthouses ensued - key to this effort was the application of new technologies such as light-intensifying Fresnel lenses, and the training and hiring of professional personnel.[104] The types of federally supported "aids to navigation" would expand rapidly over the next sixty years to include not only lighthouses, but lightships, buoys, fog signals, small lights of various kinds, and jetties.

(By the time that lighthouses and functions like lifesaving were centralized under the U.S. Coast Guard in 1939, the number of navigational aids under federal control reached some 24,000 facilities nationwide; most of the functioning lighthouses have since been automated and ownership of many of the older structures have been transferred to organizations specializing in historic preservation.)

The report of the McArthur Coast Survey had recommended the development of no fewer than 15 lighthouses along the Pacific Coast of the United States, in addition to the Cape Disappointment light. The southern tip of Cape Disappointment was designated as a "lighthouse reservation" and plans by the U.S. Lighthouse Service to construct a Cape Disappointment lighthouse moved forward by April of 1853. Construction was delayed, ironically, when the bark *Oriole*, carrying the lighthouse's Fresnel lens and other building supplies, wrecked directly below the cape. Additional supplies arrived and construction moved forward, though, with a first order Fresnel lens, relocated from a New Jersey lighthouse, reaching the site by 1855.[105] The lighthouse was fully operational on October 15, 1856. The lighthouse, the oldest still standing on the Northwest coast of North America, is a 53-foot tall structure with a focal plane set 220 feet above the sea. The lighthouse was also accompanied by a 1,600-pound fog bell, but the bell proved ineffective as its tolls from the high cape's top were lost in the sounds of the sea; built in 1856, it was removed by 1881. An "ox-team road" built by the Coast Survey in 1851 provided access to the lighthouse, but the steep terrain dictated that the keeper's residence be constructed downhill from the tower, about halfway to Baker Bay. Completed in 1854, this dwelling deviated from the original plans, which called for a combined lighthouse and residence. Situated on the more sheltered side of the cape, this house expanded in May 1865 to provide room for the keeper's two assistants; a new residential structure was built some 1,300 feet north of the lighthouse in 1871. The vessel *Shubrick*, the first steam-powered lighthouse tender, brought supplies to the Cape Disappointment lighthouse and served as a revenue cutter from its earliest operations, while also installing and maintaining some of the Columbia River's first navigational buoys beginning in 1859 (Lighthouse Friends 2013; Lucero and Hobbs 2009; Nelson 1994).

Yet, even before the Cape Disappointment lighthouse was being constructed, President Millard Fillmore was declaring the same lands as a military reservation - prompting the construction of Fort Canby. Lighthouse and military functions at Cape Disappointment remained intertwined throughout the nineteenth century, and were sometimes at odds, even though separate reservations had been approved for each. Both federal outposts developed side-by-side, often with contradictory functions and mandates. Cannons built adjacent to the Cape Disappointment were seldom fired, for example, for fear of shattering the lighthouse's glass. Fort Canby's commanders requested the relocation of some of these functions (usually involving the relocation of the cape Disappointment lighthouse) on more than one occasion without success. This odd relationship -

Figure 10.3 - The Cape Disappointment Lighthouse, sitting beside a cannon from the Fort Canby artillery battery – photographed by Eadweard Muybridge in 1871 or 1872. From National Archives and Records Administration; War Department, Fourth Army and Western Defense Command; Coast Defenses of the Columbia (03/17/1941 - 1946). Photo courtesy Wikimedia Commons.

sometimes collaborative and often not – linking the fate of the two facilities arguably persisted until the decommissioning of Fort Canby in 1947.[106]

Construction continued on other Pacific coast lighthouses in the years that followed. Between 1852 and 1858, all the lighthouses recommended by the Coast Survey were erected and manned in turn by the U.S. Lighthouse Service, one of five predecessor agencies of the U.S. Coast Guard. All these early lighthouses along the Oregon and Washington coast had the same Cape Cod style structure with the lighthouse tower emerging from the center. The Coast Survey, meanwhile, continued to chart the estuaries of the region – until then, most were poorly and incompletely surveyed – and to compile information in the *Coast Pilot*, an annual publication with data on landmarks, rocks, buoys, and anchorages (Oregon Secretary of State 2013; Nelson 1994; Noble 1989).

On a case-by-case basis, Congress appropriated funds for the design and construction of additional navigational aids in the region, as well as the appropriation of lands to develop such facilities. An overarching goal of the U.S. Lighthouse Service was to create a system of stations that might produce a continuous line-of-sight to light stations, so that a mariner at sea could hold one light in view at all times moving along the coast. (Fog signals, built in this period and powered by steam engines, blasted warnings from a number of the stations to warn ships away from rocks and other navigational hazards.) With the goal of developing a continuous system of lighthouses, lands were placed in special "lighthouse reservation" status through various federal authorities; in the West, where settlement was sparse, this was a comparatively simple process, often involving the rededication of lands already in the public domain to such a status. Lighthouse reservations were established from the public domain in a number of places in the Columbia-Pacific region – some of these ultimately being developed as lighthouses, and others not.

A lighthouse was also added to Point Adams, at Fort Stevens, in 1875, sitting a short distance south-by-southwest of the military fortifications. This was an integrated facility, with a two-story keeper's quarters built directly into the base of the light tower. With the construction of this light, the mouth of the Columbia was effectively framed by the river's two sentinels – the Cape Disappointment lighthouse and the Point Adams lighthouse. The light was plagued by shifting sands, requiring the construction of sand fences and other infrastructure, but was not undermined by the infamous erosion that had plagued other parts of the Fort Stevens military reserve. This tidy arrangement did not last for long. The 1892 commissioning of the lightship *Columbia* replaced the functions of this light, and the 1899 extension of the south jetty at the Columbia River's mouth placed it some distance inland from the sea; together, these events all but eliminated the need for this facility. After years of disuse, the light was burned down in early 1912 by order of the Secretary of War; this was done both to eliminate fire hazards and to make space to develop new gun emplacements at Fort Stevens' Battery Russell (Munson 2005; Nelson 1994; Miller 1958).

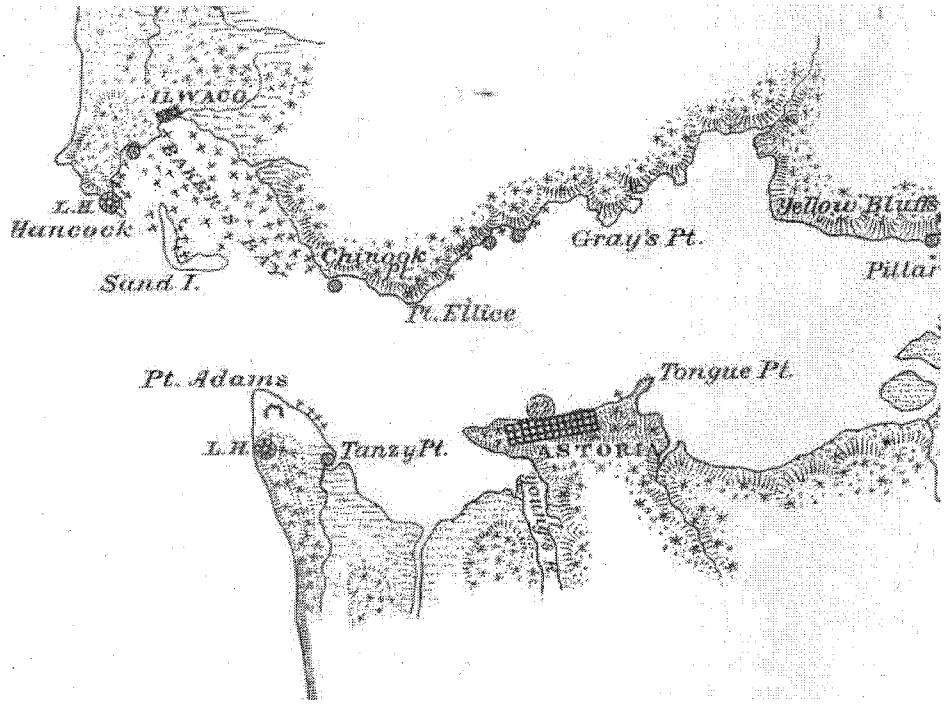


Figure 10.4 - A U.S. Army Corps of Engineers map of the mouth of the Columbia River in 1887, showing the symmetrical placement of the Cape Disappointment and Point Adams lighthouses around the Columbia River mouth. From U.S. Army Corps of Engineers, 1888. *The Columbia River from Celilo to the mouth showing locations of the salmon fisheries.* U.S. Army Corps of Engineers, Engineer Office, G.P.O. Photo courtesy National Archives and Records Administration.

After a spate of shipwrecks on the northern approaches to the Columbia, Congress also approved funding for the construction of the North Head Lighthouse on a separate lighthouse reservation sitting on Cape Disappointment's northern end. Work began in 1897 and proceeded slowly thereafter, with the contractor eventually incurring so much in late penalties that they scarcely "broke even" on the project. When completed in April 1898, the tower stood 65 feet high, with its base atop the basalt cliff situated almost 200 feet above the sea; the Cape Disappointment Lighthouse's original Fresnel lens and five-wick oil lamp was moved to the new light two months later, and the light was operational a month after that. The contract also included erection of a workroom attached to the tower, two oil houses located east of the main structure, a keeper's residence, a duplex to house assistant keepers, a barn and some smaller outbuildings. All of the original buildings in this well-preserved complex survive, the only real changes coming in the form of two lens replacements. (Electrification in 1937 allowed for substituting a fourth-order lens for the first-order Fresnel, so that mariners could identify North Head through a signature of flashes and eclipses; the U.S. Coast Guard fully automated this lighthouse in 1961 (Lucero and Hobbs 2009; University of Oregon HPP 2008).

Figure 10.5 – The North Head Lighthouse, shortly after its construction in the late 1890s, showing the main tower, as well as the attached workroom. Photo courtesy Oregon Historical Society.

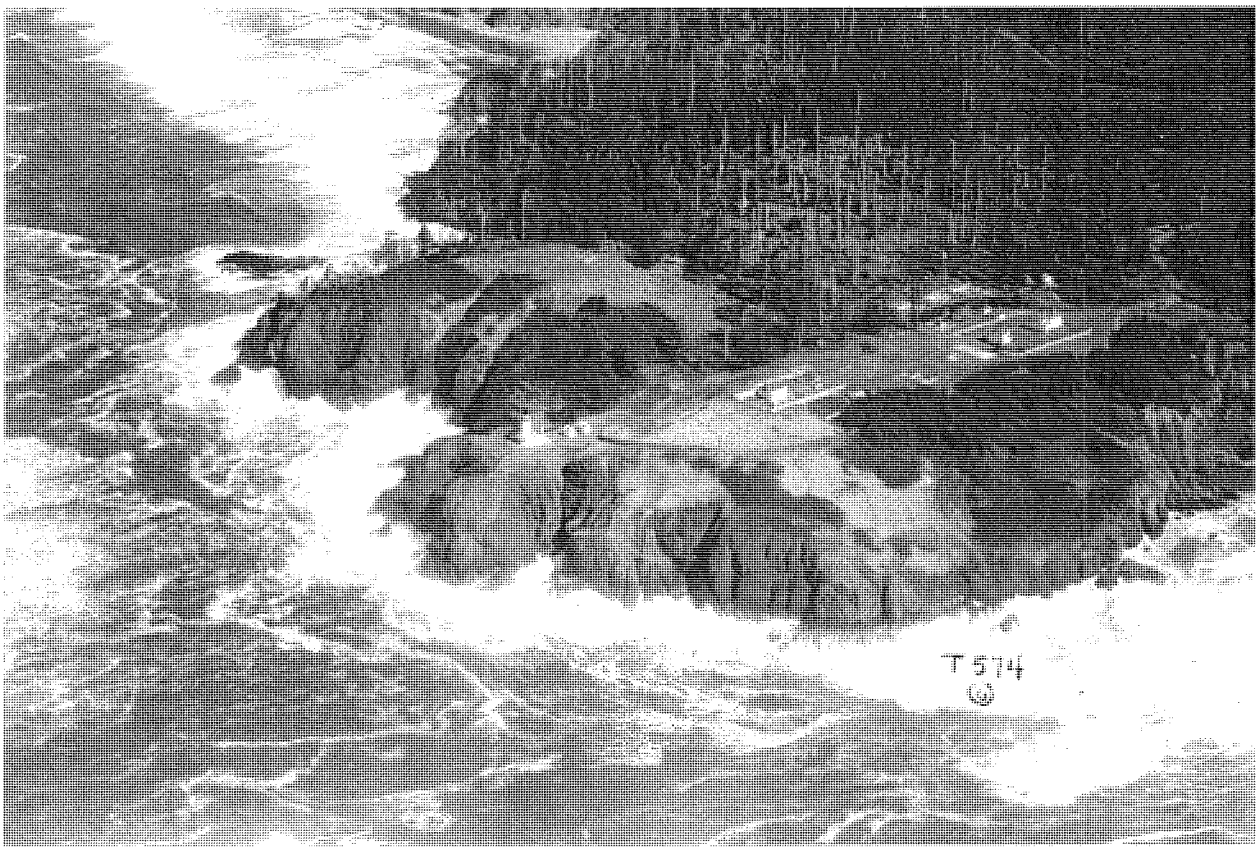


Figure 10.6 – The North Head Lighthouse in truth involved a complex of structures, seen here from the air in 1937, including an attached workroom attached to the tower, two oil houses immediately to its east; on the bluff further to the east were the keeper's residence, a duplex to house assistant keepers, a barn and some smaller outbuildings. Most of these structures remain on the site today. Photo courtesy Washington State Historical Society.

Lights also were developed in other places around the Columbia-Pacific region as well. One of the earliest lights in the region, the Willapa Bay Light, was established in 1858 on the north entrance to that bay - being undermined many years later by erosion that continues to tear away at the north entrance to that bay. Other lighthouses were established at points up the Columbia River beginning with Tongue Point (1876) east of Astoria. A light was also constructed at Desdemona Sands in 1902, in part to account for the reduced visibility, and ultimate decommissioning, of the Cape Adams lighthouse. This lighthouse sat in the shallow intertidal waters at the entrance of the river, east of the bar; one of the latest lighthouses in operation, it was discontinued in 1964 (Nelson 1994).

To guide navigation around the entire Columbia-Pacific region, as well as its southern approaches, a number of lands were set aside for the construction of lighthouses and related facilities on Tillamook Head, in what is today Ecola State Park. The navigational and lifesaving potentials of this prominent headland were a subject of considerable debate, so that land acquisitions happened at different times and places, resulting in a patchwork of federal lands fringing the ocean edge of the headland. A lighthouse reservation was proposed in 1866, on the westernmost summit of Tillamook Head. U.S. Congress then appropriated some $50,000 - a princely sum at the time - for the development of a lighthouse reservation in 1878 "on the bald hills on the south side of the head," which included certain lands on the southern flanks of Tillamook Head, proper. The U.S. Lighthouse Board initially promoted the development of the Tillamook Head site rigorously, in spite of the technical challenges of constructing a lighthouse perched atop this isolated headland, at an elevation of roughly 1,000 feet. As one of its early reports on the matter noted, "*The construction of the Lighthouse at Tillamook head, on the isolated rock, will be attended with many difficulties, but the great advantage that will accrue to navigation will more than balance the cost*" (U.S. Lighthouse Board 1879: 7). The site was contentious, however, often being concealed by fog - even in summer, when upwelling and orographic fog banks hover over the ridgeline - and surveyors found that the most suitable building sites on the south face were almost entirely concealed from the river mouth by the hulking Tillamook Head summit. Even as these negative findings were finding their way to the Lighthouse Service, Congress was appropriating additional funds for the project on the apparent strength of the original proposal (including an 1881 appropriation of $25,000) and additional lands were being acquired along the rocky headland. Ultimately, lands were set aside in several locations, including the westernmost tip of the headland, and a narrow parcel occupying several relatively unforested areas (former Native American village sites and probably burned prairie areas too) from Indian Beach to the vicinity of Chapman Point. Another piece of land, encompassing roughly a quarter section was set aside "for public purposes" on the north side of Tillamook Head in the 1880s, encompassing lands close to the modern park trailhead in Seaside.[107] Though never developed, these lands appear on maps as "lighthouse reservations" or "public purpose" lands for much of the late 19th century. They would later prove pivotal to the later development of Ecola State Park, as some of these "surplus lands" were redirected to other agencies or purchased by affluent Portland philanthropists with bold visions for the public good (U.S. Lighthouse Board 1879; GLO n.d.)

Instead of Tillamook Head, the U.S. Lighthouse Service began to promote a more visible alternative site atop Tillamook Rock. Completed in 1881, Tillamook Rock Light still sits just a little over a mile offshore from Ecola State Park. Oregon's only offshore lighthouse, it proved to be one of the most difficult lighthouses to construct or to operate along the entire Pacific coast. A little over a mile offshore from Tillamook Head and modern Ecola Park, the rock is often swept by huge swells. The rock had long been known by a placename translating as "Dangerous Place" in the Nehalem language -

Na'yigôsh - and the events surrounding the lighthouse construction only demonstrated the veracity of that term. In the summer of 1879, John R. Wheeler, District Superintendent of Lighthouse Construction, managed to make it onto the rock after two failed attempts. The swiftly rising seas made it impossible to land his measuring equipment on the outcropping, and he was forced to rely on a single tape measure to take measurements for the lighthouse construction. Wheeler hired John R. Trewaves, a lighthouse mason of almost celebrity status, to oversee construction; stepping ashore on Tillamook Rock for the first time, Trewaves was swept away by a surging wave and his body was never recovered. The growing reputation of the rock, nicknamed "Terrible Tilly," made it initially difficult to find survey and construction crews in the months that followed. A large boom was finally installed that helped to land men and supplies safely on the rock. The Army Corps of Engineers worked from October 1879 to January 1881 to build the lighthouse, with the aid of private contractors. Native American observers of the time noted that this rock had been an important sea lion rookery and that the sea lions were displaced to the rocks below Ecola Point after the lighthouse's construction; construction crews, they note, shot a large number of sea lions to keep the rock clear of these animals during construction (Noble 1994; Harrington n.d.).[108]

Just weeks before the light went into operation, the construction crew on the rock experienced a dramatic incident on the night of January 3, 1881, that illustrated the need for the light, as retold by David Nobles,

"The usual bad weather had set in around the rock, when the construction boss entered the dwelling and stated that he saw the running lights of a ship coming toward the rock...So close did the ship pass the rock, workers heard the shouted command, "Hard aport!" The laborers began to kindle a large fire and lanterns were placed about to help outline the rock. The ship, which later proved to be the British bark Lupatia, missed the rock, but her skipper made the wrong turn and slammed into the shore of the mainland causing the loss of the entire crew [16 men]" (Noble 1997: 76).

Finally lit in 1881, the Tillamook Rock light station took 575 working days to complete at a cost of $123,493 making it the most expensive lighthouse built on the west coast. The Tillamook Rock lighthouse served as an aid to navigation for more than 75 years, operated by the U.S. Lighthouse Service and U.S. Coast Guard. While this light effectively put to rest any plans to build a lighthouse on Tillamook Head, its presence did prompt the improvement of a rough road to Indian Beach, where a telegraph cable linked the lighthouse to the mainland for a time. The Tillamook Rock light was superseded by a signal-sending electronic buoy and decommissioned in 1957, being declared surplus property. The National Park Service, Oregon State Parks, and the U.S. Navy all refused to purchase the site, and it was ultimately sold for $5,000 to a private organization; a succession of owners developed proposals to use the site for any number of schemes,

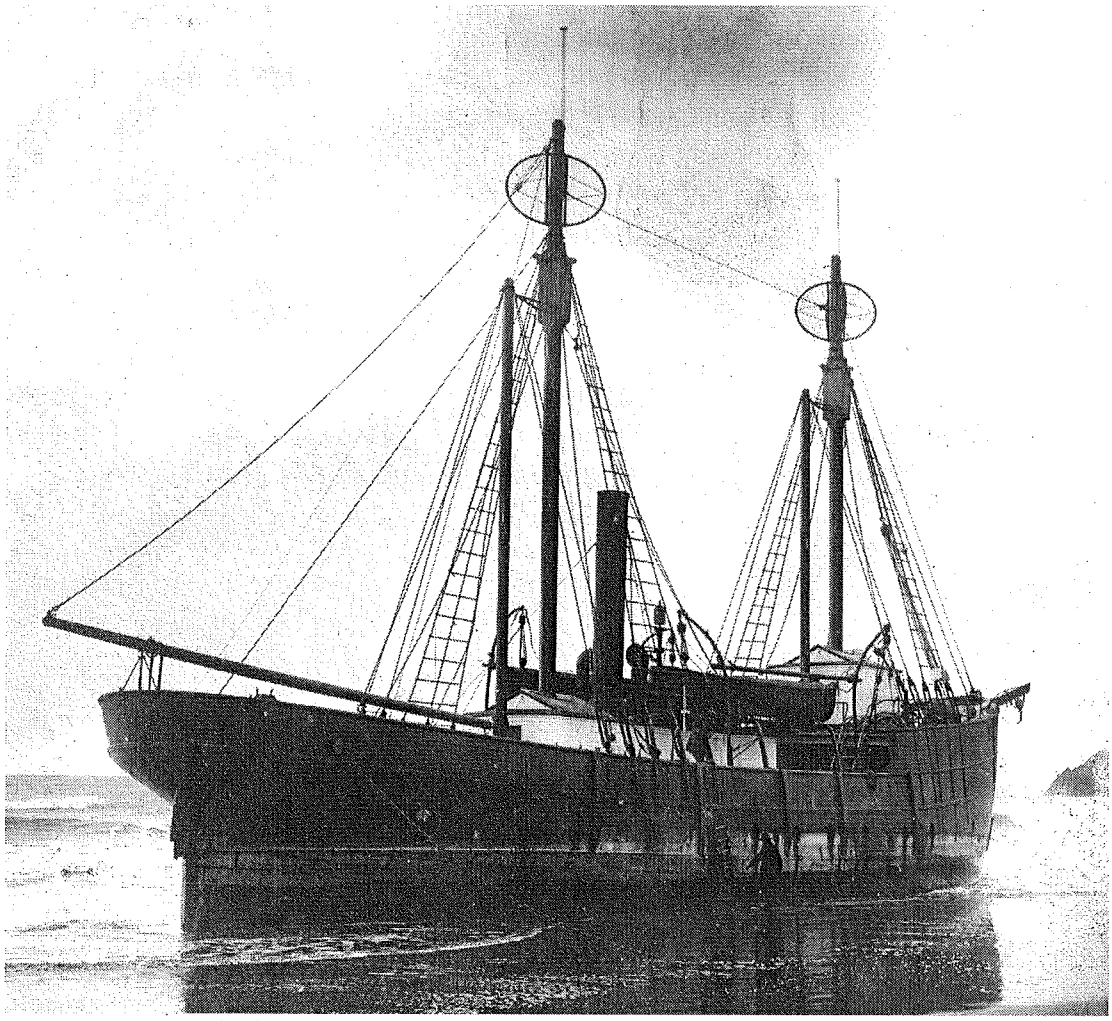


Figure 10.7 - Lightship 50, shortly after it was grounded on the western side of Cape Disappointment in November of 1899. Photo courtesy Washington State Historical Society.

including a marine research center, a casino, and (most recently) a columbarium (Noble 1997).[109]

Stationary lighthouses were not always practical in some settings, and especially perilous or inaccessible areas were serviced by lightships. These were small specialized ships that patrolled waters along rugged and dangerous shorelines, effectively serving as floating lighthouses. A total of four lightships patrolled the Columbia River Bar from 1892 until 1979, when new technology rendered them no longer necessary. To put their service into some kind of national perspective, 179 lightships were built between 1820 and 1952. In 1909, at roughly their height of use in the United States, 46 were deployed on the east coast, as opposed to only five on the west coast of the country.[110] In 1892 an appropriation of $60,000 funded construction of Columbia River Lightship No. 50, the first lightship stationed in the Pacific Northwest. The ship, built by Union Iron Works of San Francisco, measured 112 feet and had a crew of eight who for decades kept watch

over the turbulent waters on the Columbia's approaches, maintained kerosene lights to signal ships, and fed coal into boilers to power a massive foghorn. In November 1899 Lightship No. 50 battled high seas and winds, running aground on the western side of Cape Disappointment. Unfavorable weather and the difficult geography stranded the ship for months until it was put back into commission in April 1901. Three additional lightships followed in succession. Lightship No. 50 (1892-1909) was followed by steam-powered Lightship No. 88, which served the mouth of the river for thirty years from 1909-1939. Lightship No. 88 was followed by No. 93 (1939-1951), which served through World War II. Though modern technologies were making lightships increasingly obsolete, protection of the bar remained a high priority, so that they were maintained at the Columbia River and in many other places along America's coastlines during World War II. Lightship No. 604 (1951-1979) was the fourth and final Columbia River

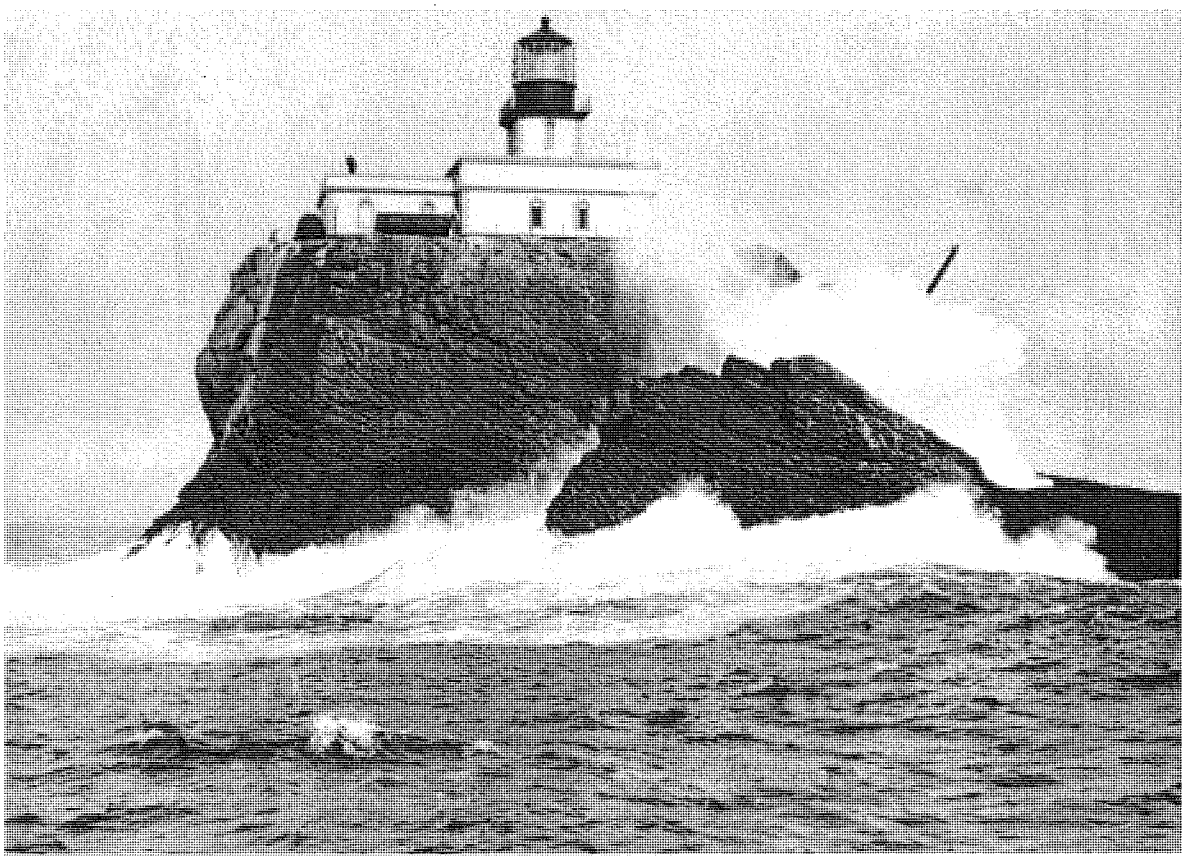


Figure 10.8 – The Tillamook Rock Lighthouse on Tillamook Rock, in the 1940s. The Lighthouse Service originally received funds and acquired lands for a Tillamook Head lighthouse, in what is now Ecola State Park, the service ultimately opted to construct the beacon on the more visible Tillamook Rock, offshore, in spite of imposing challenges of engineering and access. The light was operational from 1881 until 1957. From U.S. Department of the Treasury, Coast Guard, 13th District (ca. 1944 - 04/01/1967), National Archives and Records Administration. Photo courtesy Wikimedia Commons.

lightship and, in fact, the last lightship to serve on the Pacific coast. Lightship No. 604 was replaced by a large navigational buoy, just one of the technological innovations that rendered lightships obsolete. This final lightship was moved almost immediately to the Columbia River Maritime Museum, where it is still toured by the public; the ship was listed as a National Historical Landmark in 1989, the first ship in Oregon so listed (Oregon Secretary of State 2013; Grover 2002; Nelson 1994; Delgado 1983; Stokes 1968: 322).

Even with all of these navigational aids, the mouth of the Columbia continued to be the site of numerous shipwrecks in the twentieth century. Among these incidents, the freighter *Iowa*, carrying lumber and other cargo, crossed the bar in January of 1936, but was caught in a winter cyclone with 76-mile-an-hour winds, smashing onto Peacock Spit. The Coast Guard cutter *Onondaga* reached the wreck but all thirty-four men aboard perished. This added to pressures to modernize the capacities of the lighthouses: later that year, a class C radio beacon was installed at Cape Disappointment lighthouse, and by 1937 the light was electrified. In 1939 the U.S. Lighthouse Service merged into the U.S. Coast Guard, which operated under the authority of the Department of the Navy; with this new status, the lighthouses served as lookout posts and signal stations through World War II.[111] The light at North Head was automated in 1965, and the Coast Guard planned to discontinue the Cape Disappointment light at the same time, claiming the Columbia River lightship and entrance range lights were sufficient to mark the river. Columbia River bar pilots – licensed specialists, with more than a passing familiarity with the bar's dangers – protested the change, and the light remained in service.[112] The lighthouse at Cape Disappointment was automated in 1973 and, along with the North Head light, remains active today (Lighthouse Friends 2013; U.S. Coast Guard 2012b; Lucero and Hobbs 2009; Nelson 1994).

The Life-Saving Stations of the Lower Columbia

While the U.S. Lighthouse Service was beginning to develop the aids to navigation along the coast, other agencies were taking on responsibility for the practicalities of lifesaving, bringing other facilities and people to the mouth of the Columbia. The U.S. Revenue-Marine (eventually renamed the U.S. Revenue Cutter Service) had been established in 1790 to serve as an armed maritime law enforcement service operated under the U.S. Department of Treasury to prevent smuggling and enforce tariff laws. Beginning in the 1830s, the service was ordered to assist mariners in need, beginning the life-saving tradition for which its successor agency, the U.S. Coast Guard, would become well known. During the period when the Coast Survey of 1849-50 first determined a location for the lighthouse on Cape Disappointment, Congress was begging to provide funds for lifesaving equipment and training of the personnel who would use it, through the U.S. Revenue-Marine. This represented a significant advance

from the precedent of the early 19th century, in which east coast life stations had operated somewhat like volunteer fire departments, but with no one in charge nor any clear standards for training and rescue. By 1848, the U.S. Revenue-Marine began administering stations for the purpose of rescuing the crew and passengers of vessels in distress, making the waters of the United States - at least those with nearby lifesaving stations - considerably safer than before (Noble 1997, 1989).

By the mid-1850s, the U.S. Revenue Cutter Service was becoming a force in the waters of the Pacific Northwest.[113] Astoria, Oregon received its first "revenue cutter" ship in 1856, the *Joseph Lane*, named for Oregon's territorial delegate to the U.S. Congress.[114] Until the ship was decommissioned in 1869, the *Joseph Lane* helped ships navigate the Columbia River bar, supplied lighthouses, and aided mariners in distress, but also inspected vessels for contraband. The ship was also transferred temporarily to the service of the U.S. Navy in order to halt movements of Native Americans into the Puget Sound, especially repelling "Northern Indians" arriving from British Columbia and Alaska associated with the Isaac Ebey incident at what is today Ebey's Landing National Historical Reserve. Following the *Joseph Lane,* the cutter *Thomas Corwin* was stationed at Astoria from 1878 to 1890 (Nelson 1994).

The U.S. Life-Saving Service (USLSS), meanwhile, was established in 1848 as a nonmilitary division of the Department of Treasury. In the mid-19th century, the USLSS commissioned 19 life-saving stations along the West Coast from Nome, Alaska, to the Golden Gate of San Francisco Bay (Weathers 2001: 3). A lifesaving station has been associated with Cape Disappointment since November 1877, though it was originally built under the auspices of the U.S. Revenue-Marine in nearby Ilwaco; during the same period, lifesaving stations were also constructed on Willapa Bay and Neah Bay, in Washington.

Prior to the development of a formal lifesaving station, rescue missions at the mouth of the Columbia depended upon volunteers, usually organized by Captain Joel W. Munson - head keeper at the Cape Disappointment Lighthouse from 1865 to 1877. When the bark *Industry* wrecked near Cape Disappointment on March 15, 1865, 17 of the 24 people on board did not survive. Captain Munson believed more people could have been rescued if a lifeboat had been available to the light-keepers at the cape. Perceiving significant limitations on the light station's ability to respond to shipwrecks and other life-saving missions, and recognizing the growing need for such operations to support shipping and military operations, Munson became an active advocate for the development of lifesaving facilities. Munson raised the funds for such an operation by organizing dances in Astoria, and rebuilt a battered longboat into a lifeboat launched from the light station. Simultaneously, there were changes afoot at the federal level that would add momentum to Munson's campaign. In 1871, Congress appropriated $200,000 for the development of new lifestations and the recruitment of surfmen who were to form an organization of boat crews.

Aided significantly by Munson's lobbying, the life-saving station was established at Cape Disappointment in 1877, when the Revenue Cutter Service constructed the Fort Canby life-saving station. The station was originally located on the Fort Canby army reservation, and the Cape Disappointment lighthouse served as the operation's lookout point. Stephen Davis was appointed the first keeper of the Cape Disappointment station in early 1878, but was not given funds for the hiring of other staff. Davis attempted to raise a volunteer crew from among the soldiers at Fort Canby with little success. After his first effort at training, Davis wrote to his supervisor, Capt. J.W. White, that their reliance on inexperienced volunteer crews was rendering the station dangerously ineffective:

"I took the life boat out for practice with a picked crew from the enlisted men at this Post. The weather was pleasant with a moderate breeze from N.W. and smooth water. The men were without exception very awkward in the use of the oars. They would require more training than they could give time to before even ordinary oarsmen could be made out of them. They would not pull together or pay any attention to such instructions as I wished to give them. They behaved as if they did not care to learn. And I despair of even being able to make them available as a boats crew. The experiment was very unsatisfactory in every way" (Davis 1878).

Life-saving operations continued from the Cape Disappointment station in a limited capacity due to lack of local volunteers. When wrecks did occur, success was mixed at best. Two years after organizing the life-saving station, Davis explained in a preliminary wreck report of the English bark *Dilaharee*,

"There is no life saving Crew at this Station, and no men in the vicinity of this Station to makeup a Crew from. This Life Saving Station is on a Military Station [Fort Canby]. I applied to the Commanding Officer for leave to enroll a crew among the Soldiers and practice them in the Boats. He told me that it was against the Regulations of the service to use Enlisted men for such a purpose. Under these circumstances I am powerless to render assistance to a vessel in distress" (Davis 1880).

The following station master, A.T. Harris, expanded the volunteer recruitment efforts, focusing not only on Fort Canby soldiers but on the citizens of Ilwaco and nearby communities, who were willing to brave the sometimes deadly waters of the Columbia bar to rescue fellow mariners. The number of men available and willing to volunteer began to increase, but it was still insufficient. As indicated in the wreck report of the bark *Rival*, written a year and a half later after Davis' report on the *Dilaharee*:

"Surf boat was manned by a volunteer crew of soldiers and citizens. Strong head wind from S.W. prevented us from getting round to wreck before they had lowered their own boat. Wreck occurred when there was no regular crew [at the station], and of course no

watch to give the alarm; and the vessel had been in the breakers sometime, before it was known at the station" (Harris 1881).

By this time, however, the U.S. Life Saving Service had become a separate bureau within the Treasury Department and was receiving a larger and more predictable stream of federal funding. The scale of shipping on the Columbia was only increasing, and the reports from the life-saving stations were receiving attention all the way to Washington D.C. Finally, in 1882, Harris was able to swear in the first paid, full time crew of the Cape Disappointment life-saving station.

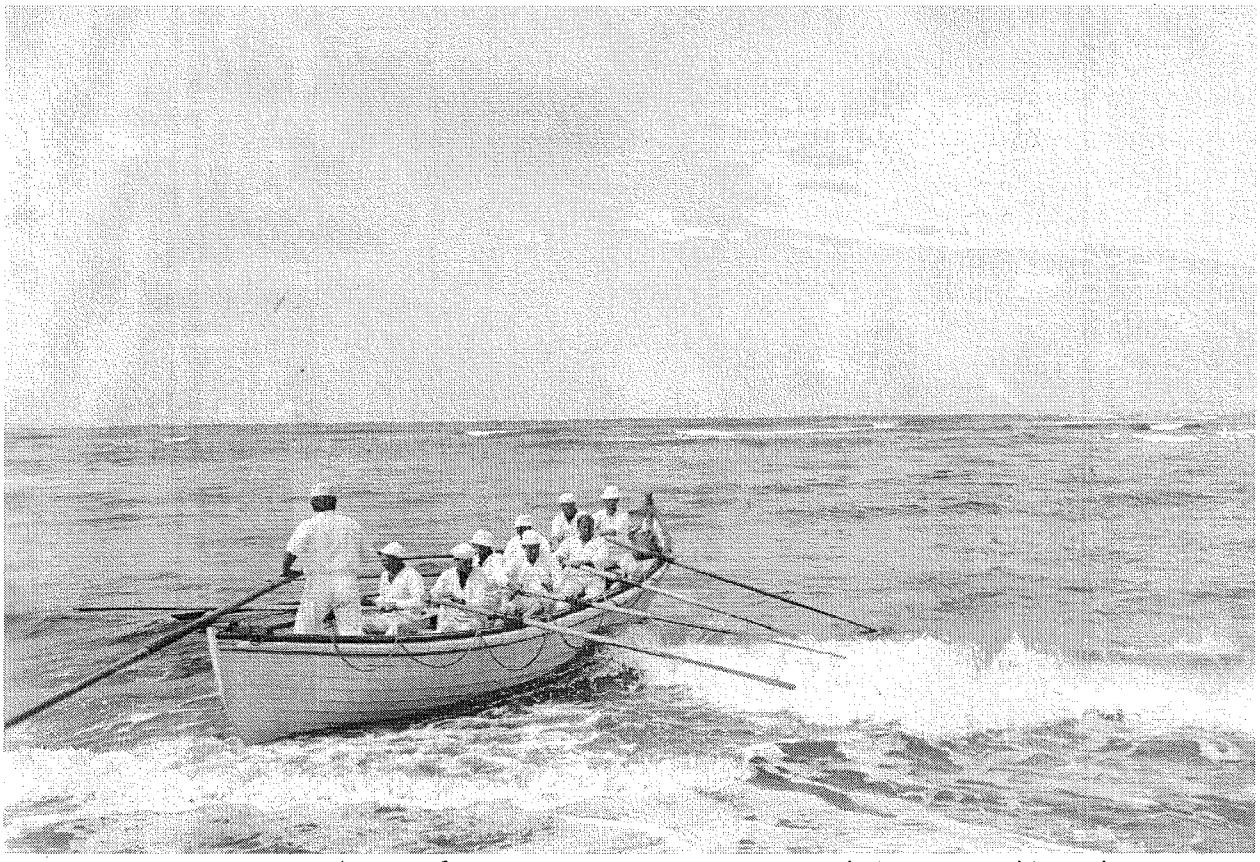


Figure 10.9 – An early U.S. Life-Saving Service crew practicing their oarsmanship at the mouth of the Columbia River. Photo courtesy Oregon Historical Society.

The USLSS soon activated other stations at the mouth of the Columbia. The Point Adams life-saving station at Hammond, Oregon, on the south side of the river began operations in 1889, alongside Fort Stevens. The station was unusual for the time in that the living quarters were in a building separate from the boathouse. Point Adams station was so badly affected by erosion in 1913-1914 the boathouse was moved to another location. Sometime between 1905 and 1923 another boathouse was added to the station, built on piles in the Columbia River. The Point Adams life-saving crew earned the Gold

Lifesaving Medal for actions taken during the rescue of the crew of the steamship *Rosecrans* in 1913. The Ilwaco life-saving station was built 13 miles north of Cape Disappointment in 1891. Renamed Kilpsan Beach life-saving station in 1912, it was discontinued in 1949 (U.S. Coast Guard 2012a, 2012b; Weathers 2001).

Until well into the 20th century, the life-saving stations were small, and the usual staff consisted of a keeper and crew of usually no more than seven men called surfmen. Most trained to become highly proficient at the use of small boats in huge surf. As in most west coast life-saving stations, their boats including the self-bailing Jersey style surfboat and the Dobbins self-righting lifeboat. Considered easier to handle in the Pacific surf, the surfboat measured 26 feet long and weighed 900 pounds, and was well suited to West Coast squalls. Surfboats were stored on a four-wheeled wagon that could be pulled by men or horses, and steered into the water where it was disassembled in order to launch the boat. Surfboats were manned by six men with twelve to eighteen-foot oars. Dobbins type lifeboats were heavier than surfboats, and specialized deck structures at both ends made them self-righting when tumbled by large waves. By the 1910s, these boats were being replaced by early gasoline-powered rescue boats that could move faster through the surf – most involving variations on these self-bailing and self-righting technologies, both being essential at this turbulent river bar (Weathers 2001; Noble 1989).

All later developments of the Coast Guard (created in 1915, merging the functions of the Revenue-Marine Service and the Life-Saving Service) in the Columbia-Pacific have centered largely on the station first founded in the 1870s. During both World Wars, temporary operations and facilities were established at the river's mouth, largely under the command of the Cape Disappointment station.[115] The Hammond station also continued to support to the Cape Disappointment facility until 1967, when that station was decommissioned. Air Station Astoria was established at Tongue Point Naval Air Station in August 1964, and two HH-52A Seaguard helicopters were assigned to the station. Two years later, the air station was relocated to Clatsop County airport in Warrenton, and a number of new aircraft were added to the station's inventory through the early 1970s.[116] The U.S. Coast Guard consolidated all lifesaving activities at Station Cape Disappointment by building a new facility on the cape when the Hammond station closed in 1967. Today, this facility is located just beyond the state park boundary and includes the only institution in the United States specializing in training for rough water surf rescue - the National Motor Lifeboat School. Operated by the Coast Guard since 1968, the school and station on Cape Disappointment are today part of a wider network that includes an air rescue facility in Warrenton, Oregon (Lighthouse Friends 2013; U.S. Coast Guard 2012a Lucero and Hobbs 2009; Weathers 2001; NPS 1975).[117]

The Creation of Jetties

Responsibility for a national response to McArthur's 1849-50 Coast Survey fell in part to the U.S. Army Corps of Engineers, who oversaw the development of jetties and the dredging of shipping lanes. Due to their cost and the engineering expertise required to build them, the first jetties along U.S. coastlines did not appear until the 1820s - well after the initiation of lighthouse construction. The U.S. Army Corps of Engineers has administered evaluation, construction, repair, and maintenance of jetties and breakwater structures since the mid-nineteenth century, under authority granted by the General Survey Act of 1824.Throughout the 19th century, the U.S. Army Corps of Engineers, known then as the U.S. Army Engineer Department, had been called on increasingly to conduct large-scale civil engineering projects around the nation, such as improvements to shipping channels and harbors, and began to work for the first time on large projects in Pacific waters.

Based on the accounts of Wilkes, McArthur, and other surveyors reporting back to Washington D.C., the U.S. Army's "Board of Engineers for Fortifications for the Pacific Coast" recommended in an 1868 report that an annual survey be made of the mean high water shoreline around the river's mouth - annual, so that it would allow them to assess the rate and patterns of change in the shoreline. The Board recommended a comprehensive survey of lands on the Oregon side of the river from Tansy Point, continuing around Point Adams, and to a distance of one mile southward. In Washington, the survey was to focus especially on Sand Island, and would assess the position of Sand Island annually with reference to the three principal natural navigational landmarks at the mouth - all part of the LEWI park system today - including Cape Disappointment, Chinook Point and Point Adams (Humphreys 1868).

Through these surveys, and the observations of military personnel stationed at the mouth of the river, federal authorities were learning that the channels and shoals of the river were highly dynamic - reflecting not only the deposition of Columbia Basin sediments, but the active erosion and reconfiguration of the sand by high waves, storm events, and changing currents. While these changes had always posed a significant challenge to ship traffic, the U.S. government's priorities at this point were significantly strategic. Of particular concern to Washington D.C. was the threat that this posed to defensive fortifications at the river's mouth. In 1870 Capt. John A. Darling, Post Commander at Fort Stevens, wrote to the Chief of Engineers, *"The sea still continues washing away the main land from the points north west and west of the Fort...If it is your purpose to do anything to check these encroachments of the sea, I would respectfully suggest that the sooner it is done the better"* (Darling 1870). This, more than the reports of navigational hazards alone, seemed to capture the attention of the Corps of Engineers, whose mandate included the protection of military facilities. Three months after receiving Darling's message, the Chief of Engineers authorized $2,000 for repairs to the fort, involving modest revetments to the shoreline.

These changes were minor, and did little to halt the advance of erosion at Fort Stevens. The Post Commander's monthly inspection report two years later, in December 1872, sent out an alarm call to Washington D.C., indicating that erosion had not been contained, and that the winter now underway was likely to materially undermine the fort:

"The ocean during the past month has rapidly encroached upon the land of the reserve and taken away in places so much of the high land that bordered it a month ago that now any medium severe south west storm with a high tide would raise it over the banks. I estimate the gain of the ocean upon the land to have been this month about 15 yards...I do not think any steps are needed at once in regard to oceans encroachment, but it should be a matter of consideration before the coming of another winter" (Office of the Post Commander 1872).

This alert prompted some of the first concerted effort to develop jetties at the mouth of the Columbia. Just two months after the Post Commander's warning, C. S. Steward, Sr. Level Engineer in the Office of the Board of Engineers for the Pacific Coast, recommended that the Army's engineers develop a system of jetties at the river's mouth. By Steward's description, these were to be modest jetties - similar in construction to those we know today, but on a much smaller scale:

"a few piers or jetties of crib-work, filled with stone, placed at intervals between the point of the shore which seems for years to have remained stationary, and that where the greatest erosion has taken place, extending from the shore line beyond low water mark, might have a beneficial effect" (Steward 1873).

In spite of Steward's proposal and apparently some basic design work to configure these early jetties, no action was taken for another two years. The commanders at Fort Stevens put out an urgent calls back to regional headquarters and to Washington D.C., indicating that Fort Stevens had less than a year before erosion would begin to undermine the fort and, by extension, American military security at the mouth of the Columbia. Captain Miller, Commander at Fort Stevens, wrote to the Assistant Adjutant General of the Department of the Columbia in 1875,

"The ocean and river have so much encroached upon the reserve the past winter, that I think it is fully time for the Engineer Department to do something to prevent further damage. I do not believe the Fort is safe from its encroachments for one whole year from this time. The river encroachment is a new thing of only the past year" (M.P. Miller 1875).

The response, while imminent, was slow in arriving. In March 1876, nearly a year after Miller's urgent letter, Brigadier General and Chief of Engineers, Andrew A. Humphreys[118] ordered a $1,000 appropriation to re-survey the bar once again, in preparation for a significant revetment project that would protect defensive fortifications at the mouth of the river (L. Casey 1876). An appropriation of $10,000 was approved in September for a revetment of brush and heavy rock work on the river's southern banks (Elliot 1876). Reports began to filter in that the north side of the river at the base of the Cape Disappointment lighthouse, but this did not initially prompt an equal response.[119]

The revetment on the south bank was initially reported to be successful in decreasing erosion and improving preservation of Fort Stevens' grounds along the waterline fronting the fort. Construction and surveying continued and, by the end of 1881, brush jetties extended out about 450 feet from high water mark into the mouth of the river (R.N. Holt 1881a). The brush revetment was no match for the highest tides, though, and was soon breached by the high waters and waves of late December, 1881.[120]

Concerns regarding the erosion problems became so intense that the Army considered the possibility of abandoning Fort Stevens. The Fort's commanders and sympathizers were compelled to make a case for its retention.[121] As part of their case, they stressed not only the Fort's great strategic advantages, but the great importance of navigation shipping safety at the river's mouth. This case, taken all the way to U.S. Congress, finally compelled the nation to act in a decisive manner. Under growing political pressure from both the military and the Northwest congressional delegation, by 1882, Congress ordered the Army Engineers to embark on thorough surveys and to draw up a plan for permanent improvement of the Columbia River bar. After considering the voluminous survey data resulting from this multi-year investigation, the Board of Engineers finally proposed the development of a south jetty at the mouth of the Columbia. As later summarized by the Chief of Engineers, this was to be a project of ambitious scale and scope:

"The project for this work contemplated securing and maintaining a navigable channel 30 feet deep across the bar at the mouth of the river by the construction of a high tide jetty 4 ¼ miles long the jetty to extend from the shore near Fort Stevens, across Clatsop Spit in a westerly direction, curving slightly towards the south to a point about 3 miles south of Cape Disappointment, and to be provided with four low groins or spurs on the north or channel side, two of them to be 1000 ft. long, one 600 ft. and the other 500 feet long... The project was approved 1884 and slightly modified in 1893 and the work was estimated to cost $3,710,000" (Office of the Chief of Engineers 1899).

Congress authorized the south jetty project in July 1884, and the Secretary of War directed that the Post and Military Reservation of Fort Stevens be turned over to the

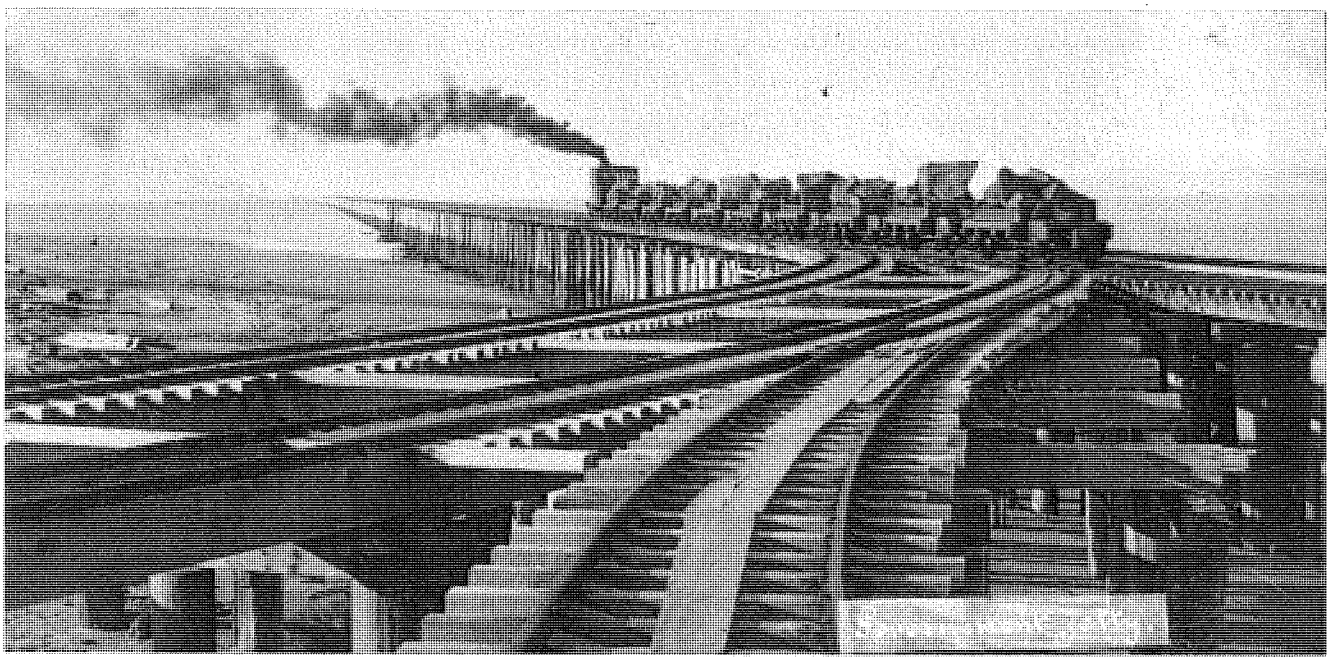


Figure 10.10 – The construction of the south jetty of the Columbia River through the late 1880s and early 1890s involved the development of a falsework of narrow-gauge railway trestles on pilings, extending into the turbulent Columbia River bar. There, huge basalt boulders were dumped over the side, where they were secured by a network of wooden pilings and fascines made of bundled brush. Photo courtesy Oregon Historical Society.

Engineer Department for the purpose of facilitating construction (Drumm 1884). Assistant Engineer Gustave Hegardt, who served 14 years at the mouth of the Columbia, would be responsible for much of the detailed engineering. Work on the monumental jetty began in April 1885 and lasted no less than ten years. Construction began with the development of supporting facilities at Fort Stevens, such as construction offices, workshops, and a government wharf where stone from upriver could be loaded from ship to rail cars. The Army Engineers then constructed a narrow-gauge railway trestle (or "falsework") with double tracks into the water, and gradually extended this line as the project progressed, using a specially designed pile driver that operated from the end of the completed trestle section. Small steam locomotives and a fleet of flat-bed dump cars hauled out building materials, principally the rocks that were dumped in a growing line west-by-northwestward into the sea. Large basalt stones for the jetty were quarried roughly 100 miles up the Columbia and barged down to the wharf at Fort Stevens for transfer to the railway cars that carried them along the trestle and dumped them over the side. This method often left the rocks in haphazard placements and the rocks sometimes fractured, so that the ocean immediately began to pick the structure apart; even before the jetty was completed, a good deal of effort went into repairs. Not only the trestle, but the jetty foundation itself, was prepared by driving pilings deep into the seabed. Fascines - bundles of brushwood 18 feet long and one foot

in diameter - were secured on the sea floor to form a 40-foot-wide "mattress" to minimize erosion of the sea bottom on which the jetty would rest. Today's landscape still exhibits many of these structures - not only the completed jetty, but the old rail trestle and other fragmentary infrastructure can be seen on the land, weathered by wind and sea for over a century.

By 1889, less than halfway into the initial construction, the new jetty had noticeable effects on the configuration of the river's mouth. As some had predicted, large deposits of sand began to build up around the jetty. This was vital to the security of the jetty, since the sand broke the force of waves that would otherwise damage the structure; indeed, the Army Engineers augmented the jetty to retain such deposits, heightening portions of the jetty and adding four perpendicular rock groins on its north side. The south jetty's extension intensified the river's scour of the main channel, so that the depth of that channel, where it transected the river's bar, increased from 20 to 31 feet in depth in the final years of construction. When completed in 1895, the south jetty was 90 feet wide across its base, 30 feet high, and projected about ten feet above mean low water (Malcolm 2002; Reckendorf, et al. 1985: 263).

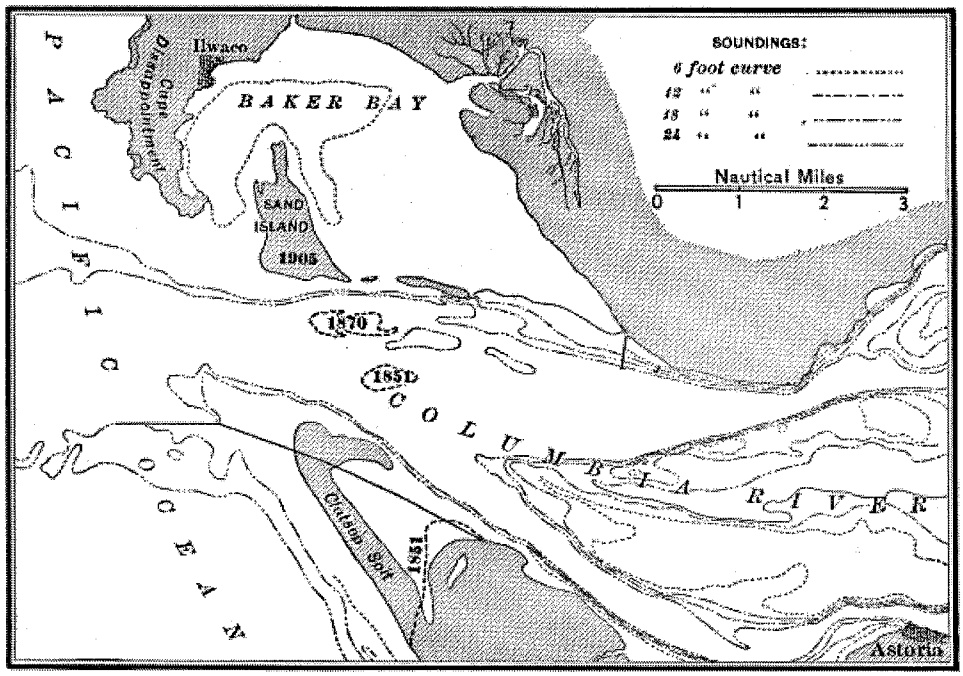


Figure 10.11 – A map of early changes in the configuration of the shoreline caused by jetty construction between 1851 and 1905. During this period, Clatsop Spit formed, significantly extending the northwestern reach of Point Adams, while Sand Island migrated to the far side of the Columbia River channel. Image CGS00114, National Oceanic and Atmospheric Administration.

The project was initially hailed as a success; the bar and channel, while not controlled, was at least becoming more predictable, and the value of shipping entering the river roughly doubled in the decade from the start to the finish of the project. However, the Columbia's mouth had not stabilized to the degree anticipated, and annual surveys beginning in 1897 showed a decrease in channel depth with each passing year. The Chief of Engineer's report of operations for November 1899 observed "*The survey of the bar having been completed, a report as to the desirability of continuing this improvement, with a view of obtaining a channel of 40 feet in depth was submitted under date of November 6, 1899*" (Office of the Chief of Engineers 1899). In March of 1903 the Board of Engineers adopted a new plan, designed to form a secure shipping channel some 40 feet in depth by extending the south jetty about two and a half miles further into the sea. The plan also provided for dredging for temporary relief, "*and the construction of a north jetty should this be necessary at some future time.*" The estimated cost, including the north jetty and dredging, was $3,715,000 (Office of the Chief of Engineers 1903a).

For the dredging work, the War Department transferred the U.S. transport *Grant* to the Engineer Department in 1903, and had it fitted in San Francisco for use as a dredge (Office of the Chief of Engineers 1903b). The ship's name was changed to the *Chinook*.[122] In addition to extending the south jetty and dredging the channel, the Corps developed a program to "reclaim" the sandspits at the mouth of the Columbia. Control of the blowing and mobile sand was of particular concern, prompting Army Engineers to reach out to the Department of Agriculture for assistance. In a 1902 letter to the Secretary of Agriculture, Captain W.C. Langfitt wrote,

"*For experiment on Clatsop Spit, it would seem that Fort Stevens would be the natural headquarters. As I have a force at work there continuously the necessary labor can be furnished by this office. If the seeds or sprouts of the grasses are furnished, with full directions for planting, I could have the work done without further aid...I noticed in the daily papers that a Mr. A.B. Leckenby had been conducting experiments at Clatsop Beach. I wrote Mr. Leckenby at Eastern Oregon Experiment Station, Union, Oregon, asking results and name of grass used. He replied that his experiments were successful with the grass Poa Macrantha, and that he would be glad to help this office so far as he might be able to do so*" (Langfitt 1902).

In 1903, under the direction of Professor A.V. Stubenrauch, Assistant Horticulturalist at University of California, a nursery for sand binding grasses was created on the Fort Stevens military reservation. In part of its initial operations,100 sacks of sand-binding live grasses, roots of the European beach grass (*Ammophila arenaria*), and one sack of seed were planted on the Fort Stevens reservation nursery, where the drifting sands would not cover them. In addition to this, a number of roots were planted on Clatsop Spit. The intention was to grow large numbers of sand-bearing plants and transplant them to the spits and in the vicinity of gun emplacements then under construction (Office of the Chief of Engineers 1903b). These efforts were guided significantly by prior

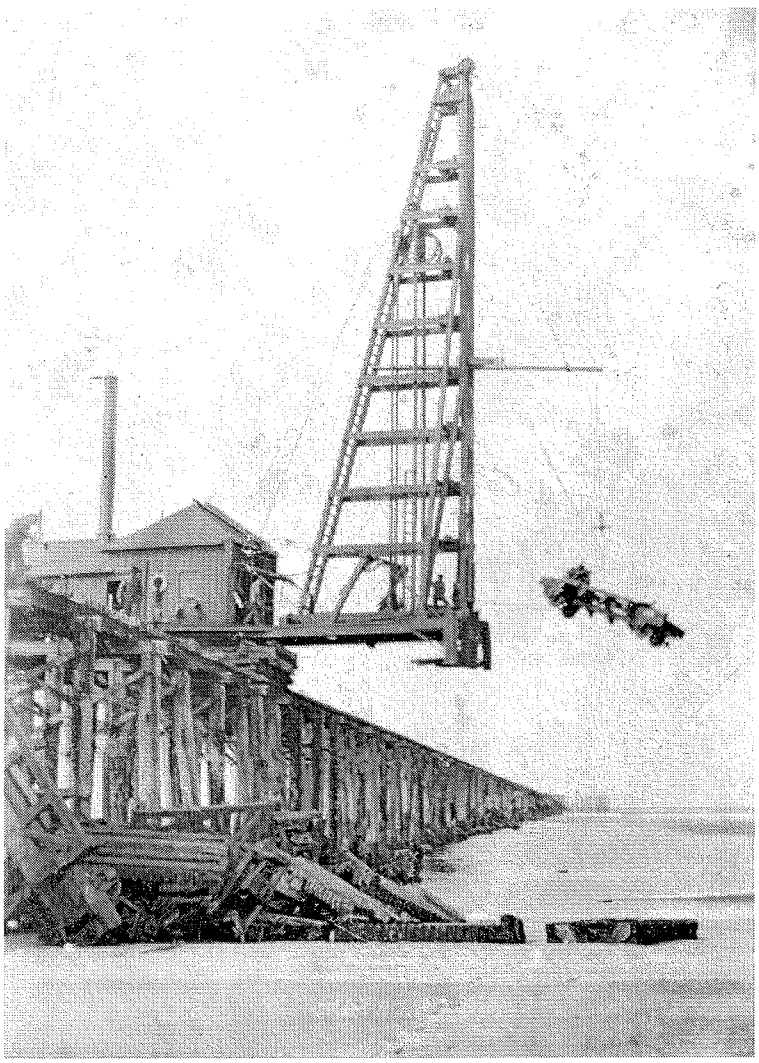


Figure 10.12 - The construction of falsework trestles on the north jetty, adjacent to the base of Cape Disappointment, in the 1910s. Photo courtesy Washington State Historical Society.

experiments by A.B. Leckenby, as noted above, who had been recruited by the Oregon Railroad and Navigation Company to help stabilize dune areas to facilitate their extension of rail lines to Seaside and Gearhart a few years before the Fort Stevens effort.[123] The Soil Conservation Service would expand considerably on these Fort Stevens planting efforts as part of a Civilian Conservation Corps project three decades later.

Extension of the south jetty continued, using the same rail grade and roughly the same construction methods as the original section. The south jetty extension was completed in 1913, extending the jetty to an impressive, and originally unanticipated, total of six and half miles in length. The cost was also of unanticipated scale: the south jetty and dredging had achieved a channel depth through the river's mouth of 37 feet depth, at a

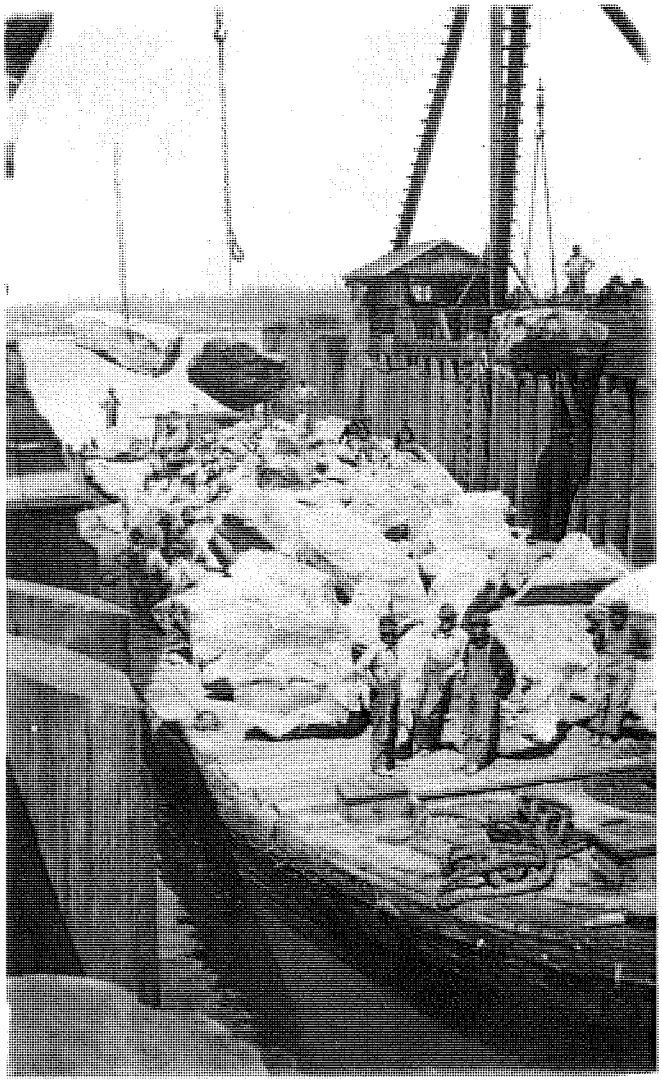


Figure 10.13 – The rock for the Columbia River jetties was quarried roughly 100 river miles upstream from the construction site and carried on barges to wharves on either side of the river. Here, rock is removed by cranes at the north jetty wharf on Bakers Bay, to be loaded onto the narrow gauge railway that passed through Fort Canby to the north jetty construction site. Photo courtesy Washington State Historical Society.

cost of approximately eight million dollars; the south jetty alone had cost as much as the Board of Engineers had originally estimated for the construction of both the south and north jetties (Roesslar 1905).

On the north side of the Columbia, there was growing interest in revetments and other improvements too. During extension of the south jetty in 1913, the channel traversing Bakers Bay and providing ship access to Ilwaco, Washington, was dredged to a depth of 11 feet. Ilwaco businessmen began lobbying for further improvements that they believed would increase shipping through their small port. The Corps of Engineers in 1916 made the case that, since 1913 shipping had not increased as a result of dredging and, therefore, further improvements could not be justified. The Ilwaco Commercial

Club successfully petitioned for a hearing before the House of Representatives in 1917 but its request for additional improvements was ultimately denied (U.S. Congress 1917). Yet, the Army Engineers determined to construct a north jetty along the lines of their 1903 plan. Anchoring the new jetty near the southwestern base of Cape Disappointment, the Army Engineers extended the north jetty southwestward into the river's mouth between 1914 and 1917. For a cost of roughly five million dollars, the privately-owned Daniel Kern's Columbia Contract Company constructed a stone jetty two and a half miles into the river's mouth. The basic construction techniques were the same as had been used on the south jetty, including a piling foundation and the construction of a temporary narrow-gauge rail line on pilings into the water. Construction offices and workshops were added along the rails, while a government wharf was constructed on the waterfront of Bakers Bay, where stone could be loaded from barges to rail cars. Hydrographic surveys in 1918 confirmed a minimum depth of 40 feet had been attained across the full width of the channel entrance, so that only very severe conditions might create the *"breakers extending from Cape Disappointment to Point Adams, in one unbroken line"* as seen by Wilkes some 77 years earlier. Sand began to accumulate rapidly on the western face of Cape Disappointment, as it had along the south jetty. Here, this process soon connected the land to Peacock Spit with level sand deposits and turning McKenzie Head into a hill instead of a rocky headland - developing broad sandy beaches south and also north of North Head. Together, these processes produced the entire level, sandy area now occupied by camping facilities and used as a recreational beach in the modern Cape Disappointment State Park. Indeed, sand redirected by the change in channel configuration was deposited along the coast on both sides of the mouth, augmenting the width of the ocean beach for several miles north and south of the river (Columbia River Channel Coalition 2012a; Carlson, et al. 1991; Dicken et al. 1961; Elliott 1917).

In 1938-39, an additional half-mile long jetty, dubbed "Jetty A," was constructed just inland of the mouth on the Washington side, extending from the southeast base of Cape Disappointment south-southeastward into the river's mouth. This final major jetty project helped to stabilize the river channels, especially the narrow channel extending to Fort Canby and Ilwaco, while also providing those places with modest extra protection from surf during certain storm conditions. Yet, the geographical outcomes of these structural changes were complex. For example, Sand Island - observed to be in motion by the Coast Survey in 1850 – settled roughly a half mile offshore from Cape Disappointment by 1917, protected there by the new jetties' configuration, though the island had been located formerly on the south side of the deep water channel and connected at very low water to Point Adams, near Fort Stevens. For this reason Sand Island remains a political part of the State of Oregon, even though it is gradually becoming connected physically to Cape Disappointment (Columbia River Channel Coalition 2012a; Elliott 1917: 233).

Figure 10.14 – An aerial photograph of Cape Disappointment, showing the sand that rapidly accumulated on the northwest side of the north jetty after its completion in 1917. The new beach had become a centerpiece of the state park, occupied in part by campsites and popular for beachcombing. Photo courtesy Washington State Historical Society.

When the north and south jetties were completed in the early 20th century, they contained nine million tons of rock and were then the largest jetties on earth. They made it possible for the biggest ships then operating in the Pacific to cross the Columbia bar at all stages of the tide and in all but the worst weather. They have required frequent maintenance to maintain their structural integrity (which may have reduced their integrity as "historical structures.")[124] As the Northwestern economy grew, as did the size of ships, the channel across the Columbia bar has been dredged many times since, making the channel deeper. The Columbia-Pacific's larger ships – those that now transport most bulk cargo and containers, containing electronics, cars, clothing, and any number of other consumer goods – have drafts of up to 45 feet. In recent times, the Corps of Engineers and six Oregon and Washington ports collaborated on the Columbia River Channel Improvements Project to deepen the navigation channel between the ocean and Portland and Vancouver, increasing its depth from 40 to 43 feet. Today the Columbia River bars main channel is vast and placid by the standards of its early mariners - approximately three miles wide and six miles long, with an entrance channel some 2,640 feet wide and some 55 feet deep. While not failsafe, these channel improvements, plus the advent of modern boats, navigational capacities, and weather

prediction facilities, have made accidents comparatively rare in recent times (Columbia River Channel Coalition 2012b; Columbia River Bar Pilots 2010).[125]

Clearly, the lighthouses, lifesaving stations, and other navigational support at the Columbia River's mouth were critical in the history and development - not only of the Columbia-Pacific region - but of the Portland metropolitan area and the larger Columbia Basin. Along with dredging and the construction of two jetties, these developments allowed even the largest ships then operating in the Pacific to cross the river bar - even in poor weather and at every tidal stage. Lighthouses and lightships, evocative and often romanticized as part of the coast's larger history - have been particularly central to historic preservation efforts. Both lighthouses in the Cape Disappointment Historic District are still among the 500 active (though automated) lights along U.S. coastlines. Few places can also supply a more dramatic view of ships crossing a river bar than can the Cape Disappointment Lighthouse, which is accessible by means of a trail that follows an old road to the light. Although not in the historic district, the Coast Guard's station on the cape still holds a preeminent role in maritime lifesaving efforts, mainly because of its position alongside a highly dangerous shipping channel of regional significance and national reputation.

National Register eligible properties related to navigational aids that lie within Cape Disappointment State Park include the North Head Lighthouse, as well as the residences and outbuildings there. The Cape Disappointment Lighthouse is also part of the existing historic district and has the distinctions of being the oldest lighthouse in Washington State as well as the oldest functioning one on the west coast of the United States. It can be inferred from the Cape Disappointment Historic District nomination in 1975 that both lighthouses are contributing resources in that district. Both are of statewide significance, not least due to the age of the lighthouse on Cape Disappointment, but also the superb integrity of the lighthouse complex on North Head. As part of aiding navigation along this part of the Pacific coast, there are "contributing resources" within the properties in the two existing National Register properties on either side of the river - the Cape Disappointment Historic District and Fort Stevens Military Reservation. The jetties in particular, as well as supporting infrastructure including the trestles built for jetty construction, may warrant focused attention in any revised nominations for these two areas. (One navigational aid of the past, Lightship WAL-604 "Columbia," was retired in 1979 but attained national historic landmark status in 1989; the ship remains docked at the Columbia River Maritime Museum.) The shipwrecks of the region, too, may warrant further consideration as part of any revised nomination process for Cape Disappointment or Fort Stevens - including, but not necessarily limited to, the *Peter Iredale* wreckage on Fort Stevens' ocean shore.

11: An Arcadian Triangle of Fire: Landscapes of Militarization the Lower Columbia

Though the Columbia-Pacific region has not, at the time of this writing, experienced a war on its soil, the region's coastlines have been shaped by military concerns. Like most west coast ports, the Columbia mouth was in the enviable position of having fine military forts but never having to use them for anything more than a deterrent. Almost the entirety of Cape Disappointment and Fort Columbia State Parks in Washington and Fort Stevens State Park in Oregon were occupied for military purposes. They have a military history of such depth and complexity that it can only be briefly summarized here; fortunately, the former forts are the subject of such a characteristically rich written military record, and possess their own skilled interpreters and museums, so that readers curious about this larger history have ample opportunity to dig much deeper into the subject independent of this document. Perched on these three coastal landmarks, the three fort defenses experienced three bursts of fortification, with long and very quiet intervals between them. The forts were also stationed during four major wars: the Civil War, Spanish-American War, World War I and World War II. The first three wars had Pacific theaters, sometimes overlooked in conventional and abbreviated histories – while generally small, these conflicts contributed to a growing perception of the Pacific as a place of strategic complexity and vulnerability. Troops guarded and mined the harbors, making a very dangerous river bar even more dangerous for any ship that might threaten American interests. There they presented a defensive "triangle of fire" – similar to what was developed on the entrance to Puget Sound at Forts Casey, Worden and Flagler, as well as at American ports at San Francisco, San Diego, and many other places around the nation in the 19th and early 20th centuries. The Army trained soldiers during these times as well, in response to broader national military needs. The militarization of the Columbia-Pacific region came to a dramatic finale in World War II, when the Pacific theater provided the first credible threat to coastal communities in modern times, prompting a redoubling of military infrastructure and a mobilization of even the coast's civilian residents to aid in the defense of the country. Declared surplus almost instantly upon that war's conclusion, the forts sit idle now, serving as prominent objects of historical interpretation and curiosity in three state parks.

Ironically, the most dramatic battles in the historical record tied to these military lands arguably predate their acquisition by the United States. As noted elsewhere in this document, a gunship of the Hudson's Bay Company leveled the main Clatsop village – sitting in the middle of what would become Fort Stevens. This occurred in 1829, in retaliation for the false rumors that the Clatsop had killed survivors of the *William & Ann*, a British ship which wrecked on the beaches nearby. Fortifications of the site also have deeper precedents. Perhaps as an outcome of the HBC bombardment, the Clatsop

people had built their own defensive palisade around the village, "*made of thick planks and joists, about fifteen feet in length, set with one end in the ground*" as it was described by Wilkes in 1841 (Wilkes 1845 (4): 322-23).

As a young nation borne of military conflict with the great naval superpower of Britain, the United States had begun to fortify its coastlines early in its history, beginning as soon as 1794. Each part of the nation placed in national control was promptly fortified, and the Northwest was no exception. The Oregon Treaty having resolved the question of international boundaries with Canada only five and a half years before, the British Hudson's Bay Company still moving its operations haltingly north of that new border, the defensive posture of the United States was still quite tentative. In this context, Present Millard Fillmore approved a proposal by his Secretary of War, Charles M. Conrad, and a "joint committee for the examination of the Pacific coast" on February 26th of 1852, calling for the development of military forts at the mouth of the Columbia River. They were to include "*Cape Disappointment, at the northern side of the mouth of the Columbia River, Oregon, to include all the land lying within one and a half miles of the southern point of the cape [and] Point Adams, at the southern side of the mouth of the Columbia River, to include all the land lying within one and a half miles of the northernmost part of the point*" (Conrad 1852).[126]

At the time of Fillmore's order, only seven years had passed since British spies, Warre and Vavasour, had proposed using Point Adams, Cape Disappointment and Tongue Point as fortified strongholds in a possible war to expel the Americans and defend the interests of Britain and its Hudson's Bay Company. The boundary had remained tense: boundary commissions continued to meet through the late 1850s to negotiate the configuration of the international border through the waters of Washington and British Columbia; amidst all this, the "Pig War" erupted in the San Juan Islands of Washington in 1859, resulting in a bloodless standoff between American and British troops over claims to those islands, still commemorated today at San Juan Island National Historical Park. The continued presence of British military vessels in the harbor at Victoria gave pause to the fledgling American settlements on the Columbia as well, not to mention the U.S. military commanders stationed at what had recently been the British stronghold of Fort Vancouver. Observing the unsteady situation in the Puget Sound region, Oregon Department commander Colonel George Wright sent out an alert to Lt. General Winfield Scott, who had helped broker a peaceful outcome to the Pig War and was tracking the Northwest's international situation with much interest:

"*Our whole littoral frontier is without a gun for its defense…our main artery, the great Columbia river, navigable for steamships one hundred and fifty miles from its mouth, with many thriving towns on its banks, the military post of Fort Vancouver, the arsenal, and the beautiful city of Portland, at the head of steamship navigation, on the Willamette, all are at the mercy of a single hostile steamer. This state of things demands the immediate and serious attention of the government*" (in U.S. Secretary of War 1860; 428-29).

The area's remoteness, however, continued to stall appropriations. Despite President Millard Filmore's 1852 order, ten years elapsed before Congress approved a fortification bill in 1862, setting aside an impressive $100,000 to be put toward defenses at the mouth of the Columbia River. The Civil War had intensified their interests in Northwestern defense in the way that a few straggling British loyalists could not. The British, whose navy still plied the Pacific from Victoria and other west coast ports, maintained a strained diplomatic relationship with the United States and significant financial interests in the plantation economies of the American South. British intervention on the side of the Confederacy was seen as a legitimate threat. The wartime allegiances of the Northwest were known to be ambiguous, with so many settlers arriving from both Confederate and Union States to this distant and insular outpost. And, as a largely undefended Union state, Oregon was seen as being of possible strategic importance in part due to the recent discovery of gold in the southern and interior parts of Oregon, as well as Idaho, and other parts of the West. Accordingly, there was growing concern about Confederate privateers, who were beginning to raid the commercial ships of Union supporters to win cargoes and funds in support of the South's war effort – a sort of wartime piracy with a long and venerable history within European military tradition. There were widely publicized (and perhaps exaggerated) examples of Confederate efforts to secure gold and silver leaving the California coast in the course of raids on west coast ships. Indeed, the Union newspapers of the time would spread word of a plot by Confederate sympathizers to hijack the *Shubrick* – reported to have been the first steamship to travel up the Lewis and Clark River in Oregon – which was foiled when written plans of the attack were captured by the North. San Francisco, the strategic heart of the gold country, set to fortifying its own harbor at the Presidio, Marin Island, Point San Jose, Angel Island, and Alcatraz island, while the United States' very small Pacific fleet fortified its principal station on the bay's Mare Island in an attempt to control the situation. (Ironically, Confederate President Jefferson Davis had been a rare voice of support for the fortification of the Columbia River mouth in the 1850s, prior to departing from his role as United States Secretary of War under President Franklin Pierce.)[127] Meanwhile, the mouth of the Columbia remained all but undefended, the Americans' small military presence concentrated upriver – strategically oriented toward the Indian wars that rocked the Northwestern interior rather than the international threats of the coast. The prospect of Confederate collaboration with the British, who maintained a formidable naval presence on the Northwest coast of North America, was simply too much for American military commanders, or Congress, to bear (McArthur 2012; Winks 1999: 162-63; Gillette 1900a, n.d.).

With the 1862 congressional appropriation, the Army Engineers were promptly dispatched to begin plans for fortifying the Columbia River mouth. Their decision regarding fort location was not an especially difficult one. When considering the opportunities for the development of future defensive structures through the first half of the 19th century, both American and British officials had identified Point Adams and

Cape Disappointment as the likely place for such facilities. In fact, reviewing the historical record of the area, historian James Ronda (2001: 111) concluded "*Virtually every explorer, traveler, and military observer who visited the mouth of the Columbia noted the strategic importance of Point Adams and Cape Disappointment for the defense of the Western United States.*" The Army Engineers dispatched to the coast in the planning phases of the Columbia's military forts reached the same conclusions. Engineers with the U.S. Corps of Topographical Engineers ultimately selected three sites for the new fortifications at the river's mouth: Cape Disappointment and Chinook Point in Washington and Point Adams on the Oregon side. The engineers promptly prepared surveys, drawings, and recommendations of these three places for approval by their superiors in Washington, D.C.

To begin, fort construction was planned for both sides of the river - in part because of the limited range of artillery at the time. Construction began by 1863, with Captain George Elliott overseeing construction of the "Fort at Cape Disappointment" (later renamed Fort Canby) and the "Fort at Point Adams" (later renamed Fort Stevens). The plans of Elliott and the Army Engineers reflected the military planning fundamentals of their time. During the Civil War, when the Columbia-Pacific was being militarized for the first time, fort design was changing rapidly, reflecting a rapid pace of evolution in the nation's coastal defense strategy. Tall masonry structures with tower-mounted guns became obsolete with the rising caliber and accuracy of gunboat weaponry, including the accurate and powerful rifled guns, so that forts were being replaced by heavy earthworks with gun emplacements. Earthen forts proved to be more resistant to canon fire than had their masonry predecessors, but were easier to build and repair. Most of earthwork forts of the middle 19th century were built hastily and inexpensively during the Civil War period (but would be virtually abandoned by the mid-1880s, when they too were made obsolete by improving warship technologies and were often falling into disrepair). The two sites initially chosen to guard the Columbia River's entrance (Fort Canby and Fort Stevens) reflected the haste in which fortifications could be erected during the Civil War period, and were soon replaced with more elaborate and modern fortifications (Hansen 1997).

Receiving approval from his superiors to proceed, Elliott stationed himself on Cape Disappointment to oversee development of the fort on the southern tip of that cape, on lands reserved for military status encompassing the recently completed Cape Disappointment Lighthouse. Considered to be the most important among the three sites to fortify, with its commanding position above the river mouth, Cape Disappointment was the first of the forts to be developed. Through 1863-64, Army Engineers raised earthworks on the ridgetops of the Cape Disappointment headland, forming three distinct, if small, gun batteries - the "Tower" (or Right), Center, and Left Batteries. Initially assumed to be temporary, these earthworks would persist for many years to come. Within the protection of these earthworks, they installed Rodman cannons behind parapets; finding that these Rodman cannons were difficult to fire accurately at

the awkward downward angle required from the cape, the Army experimented with alternatives, ultimately adding Parrott smoothbore cannons to the artillery array. Wood-framed garrison buildings, including enlisted and officers' quarters, were constructed below, fronting the water at Bakers Bay and nearby Lake O'Neil. Formerly based at Fort Vancouver, Company A of the 9th U.S. infantry under the command of Captain William Jordan, was dispatched to occupy both forts at the mouth of the river; Cape Disappointment was the first fort activated, with Jordan and his men commencing operations there in April of 1866 (Hanpf 1980; Hussey 1957).[128]

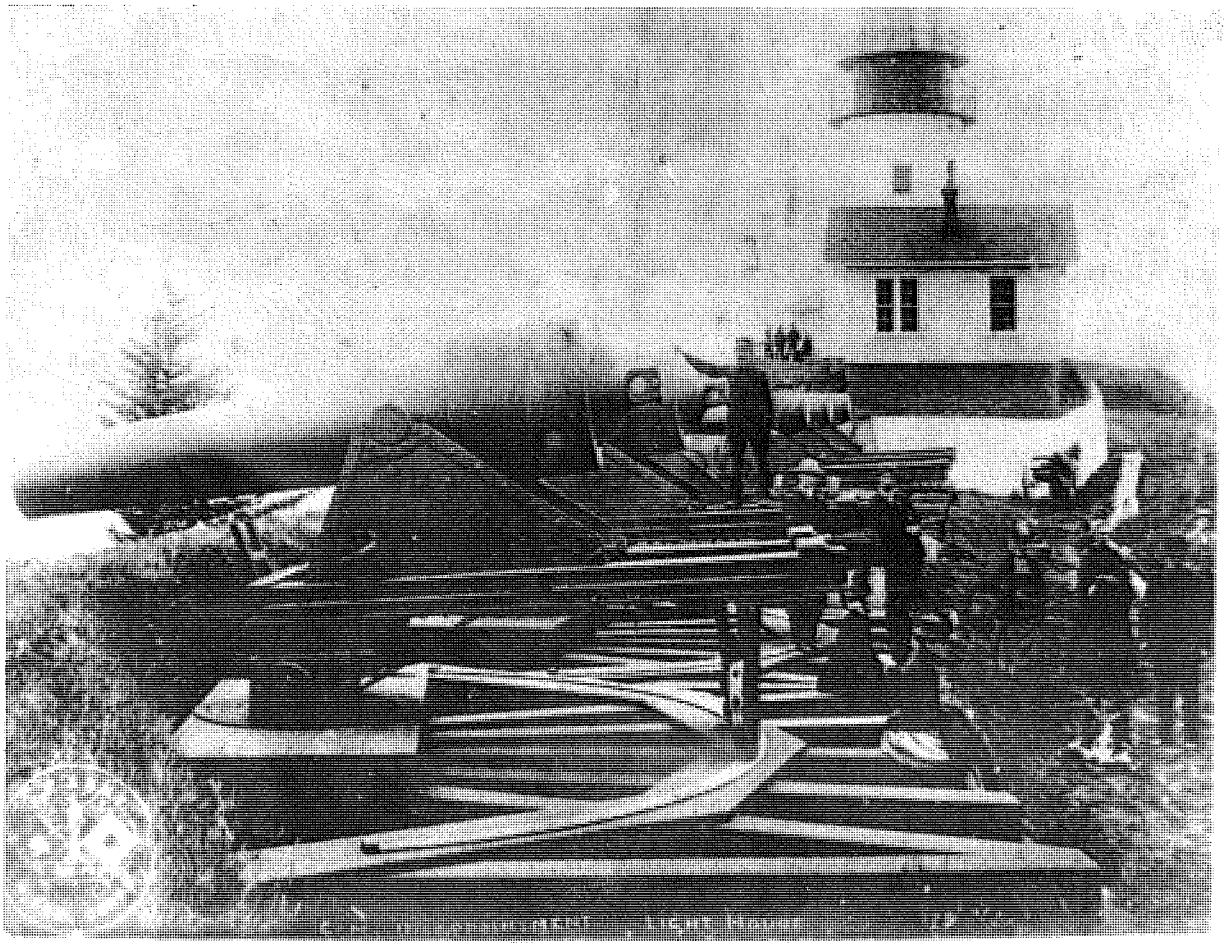


Figure 11.1 – The earliest gun installations at the Fort at Cape Disappointment, as they appeared in 1864 – the gun mounts pointing downward over a low earthwork, reflecting the cliff-top position of the fortifications. The Rodman cannons mounted in 1864 were augmented in 1866 with Parrott smoothbore cannons on their southeast side, due to the difficulty of firing at this odd angle with the former weapons. Firing of the cannons was kept to a minimum, because of the effects of the blast on sensitive lighthouse equipment, windows, and lenses. *From* War Department, Fourth Army and Western Defense Command; Coast Defenses of the Columbia. (03/17/1941 - 1946) – National Archives and Records Administration.

At Fort Stevens, construction on earthwork fortifications was also underway by 1863, but was somewhat lower priority to the Engineers, who were already struggling with labor shortages due in part to the lure of the gold fields (indeed, the gold fields, plus the tedium of occupying a fort so far from the front, would prove an obstacle to retaining military recruits for years to come). First, Elliot found he had to clear the land of its prior occupants. In occupying both sites, but especially at Fort Stevens, the military was confronted by the unusual appeal and strategic importance of these two places. By the time of construction, a number of officially sanctioned settlers, and a few 'squatters' too, occupied lands on both fort sites. On Cape Disappointment there was Elijah White and James Holman – introduced earlier in this document – but the fort would ultimately include portions of Donation Land Claims filed by James Cameron and E.G. Loomis. All lost their lands, in whole or in part. Across the river, Frederick G. Schwatka was still processing his family's Donation Land Claim to much of Point Adams as military officers asked him to leave; adjacent Donation Land Claim owners, B.C. Kindred and W.W. Raymond would also lose large tracts of land to the new forts.[129] Some portion of these settlers – including Schwatka and Holbrook – would later seek financial compensation from the United States government for their losses, but compensation came late if it came at all (Penner 1998; U.S. Senate 1878, 1877).

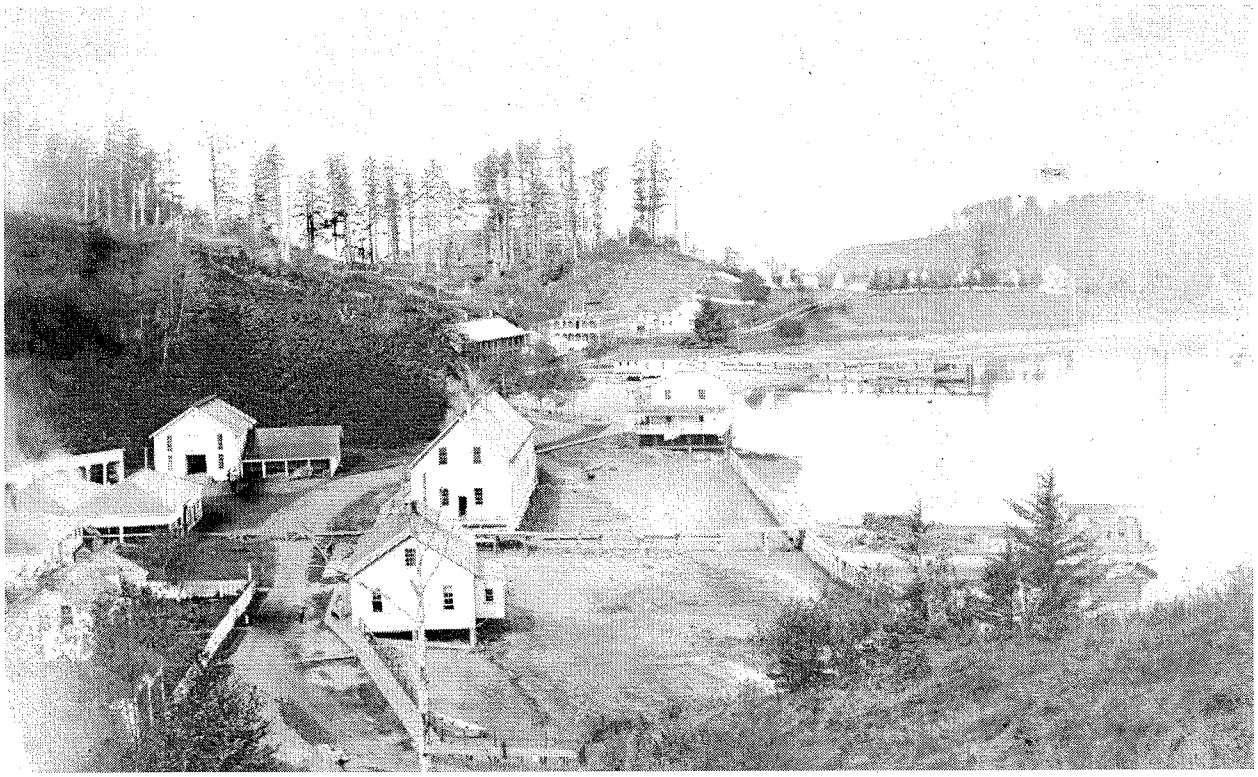


Figure 11.2 – Fort Canby, ca. 1890s. Like all three forts, Fort Canby housed a number of wooden-framed garrison structures sitting a short distance from the gun batteries. At Fort Canby, these buildings occupied the lowlands along Bakers Bay and Lake O'Neil. Photo courtesy Washington State Historical Society.

Yet, this reoccupation had even more disruptive effects. While early non-Native settlement was ephemeral, these forts displaced sizeable Native communities from their traditional lands. By the time Elliott initiated fort construction, there were still perhaps 160 permanent residents of the village at Point Adams, but the population swelled to many times that during social events, trade, and peak salmon fishing in the Columbia (Frost 1934).Decades later, Native elders from adjacent tribes remembered that the Point Adams village continued to bustle until the very moment that fort construction began: *"[they] used to go there and have a big time and all go but "the fort got that!""* (Harrington n.d.: 386). Though the Clatsop people had been promised the lands of Cape Adams in their treaty over a decade before, the treaty had not been ratified and was superseded by (and perhaps because of) Fillmore's order. Elliott pressured the Clatsops of the Point to abandon their ancient village site. After some initial resistance, the Clatsops living there - now under the leadership of Coboway's nephew, Chief Tostom - relented, agreeing to move to an alternative location some distance up the Skipanon River drainage. Elliott had many words of praise for Tostom and the Clatsops, who did not openly resist the fort's development - built almost directly atop their former village, and occupying traditional gathering sites and burial grounds. At the conclusion of their construction of Fort Stevens, Elliott would write an open letter of endorsement of Tostom for his peaceful departure from this critical place:

"[Tostom,] chief of the Clatsop Indians has lived for many years at Point Adams, and his ancestors, his children and many of his tribe are buried here. He has an excellent reputation at the Mouth of the Columbia and while constructing the works here he has given me no trouble and has been entirely quiet and honorable" (Elliott 1867).

Tostom and his people continued to live on the periphery of the fort, their numbers in the Warrenton area shrinking with time as the fort continued to grow. Still, the forts would always be of interest to the tribes and to the other people who crowded so near the rivers' mouth. In this light, one can see that, through their entire history of operations, the forts would compete for space and with abutting uses - military personnel maneuvering around lighthouses with fragile instrumentation and glass lenses that did not respond well to cannon fire, pulled inadvertently into shipwreck rescues, partially isolated from the sea by the extension of jetties and other navigational aids.

The lands cleared of their prior occupants, Elliott was able to proceed with the development of the fort - featuring a single triangle-shaped Vauban earthwork, largely flat and featureless on its interior, designed to give protection to troops and artillery under siege and to give clear lines of fire along the exterior walls in the event of a ground assault. The entire earthwork was encircled by a moat, which could be crossed by drawbridge to the "sallyport" entrance in the earthwork's exterior wall; stone

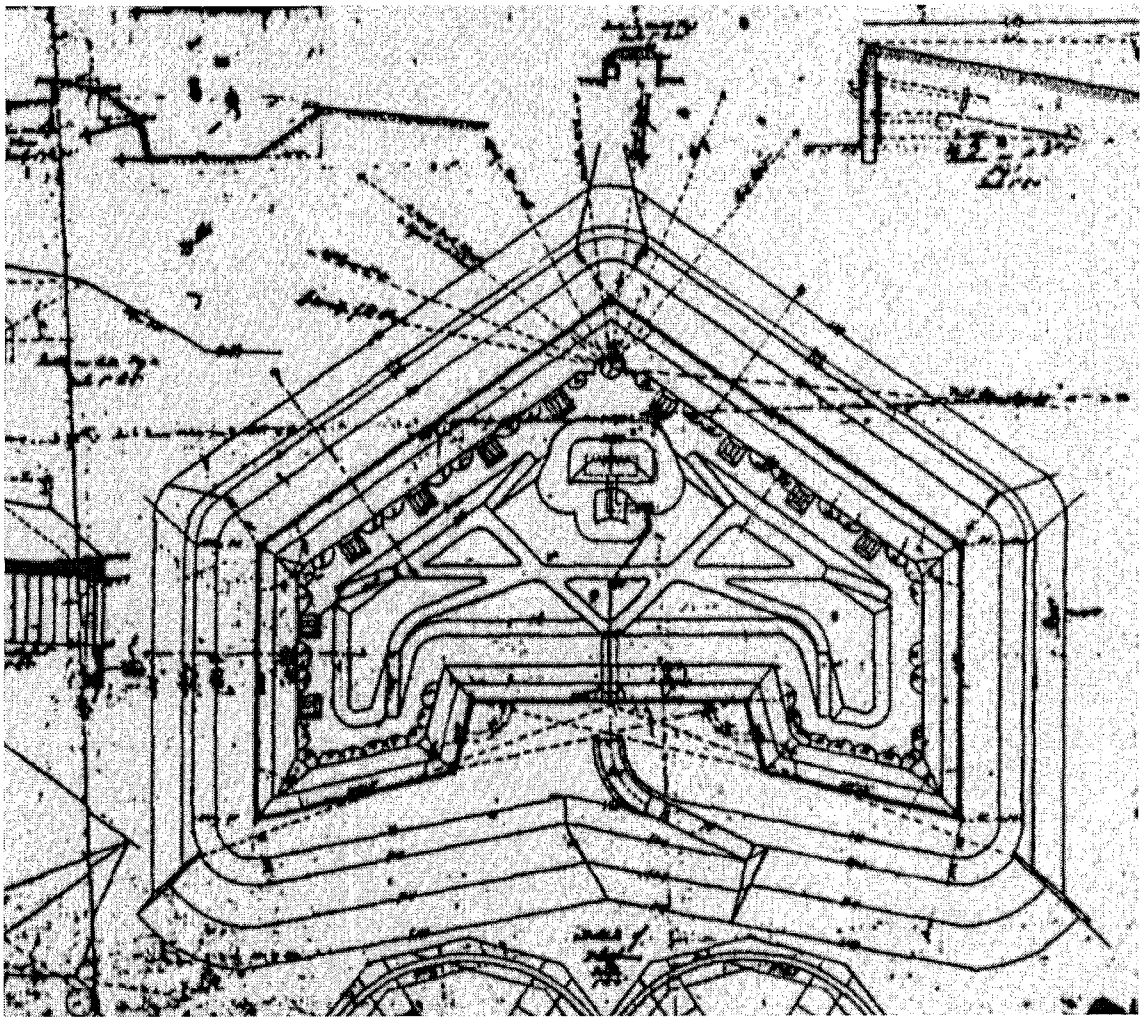


Figure 11.3 – A portion of the original 1860s plans for the Fort Stevens earthwork. From War Department, Fourth Army and Western Defense Command, Coast Defenses of the Columbia (03/17/1941 - 1946) – National Archives and Records Administration.

walkways linked gun emplacements inside the structure, while also leading to wooden garrison buildings outside the fortifications. Though Fort Stevens was not yet armed with cannons by November of 1864, the earthworks were in place; at that time, General Benjamin Alvord, District of Oregon Commander, directed Captain Jordan at Cape Disappointment to dispatch an officer and ten men to the new fort to guard against a possible escalation of Confederate military efforts "*if at the ensuing election Mr. Lincoln is reelected*" (quoted in Hanft 1964: 345). Construction continued until 1865, even as the fort was occupied. The fort was christened in honor of Isaac Ingalls Stevens, former Washington Territorial Governor and Congressman, who had been killed in the battle of Chantilly in September of 1862; Stevens had negotiated many of the treaties with tribes in what became Washington state, including treaties that would shape the future status of the Chinook and others tribes with ties to the Columbia-Pacific region (Hazard

1952). At the time, some 29 platforms were ready to mount artillery around the fort's perimeter; Rodman cannons and 200-pounder Parrott "rifles" were installed at these mounts on the earthwork walls, and munitions structures and other buildings were added beside these emplacements. A portent of things yet to come, a number of buildings at the fort – a residential building, a stable, a blacksmith shop and storage space – were retained on site for the future use of Army engineers (Hansen 1997; Hanft

Figure 11.3 – The "Sallyport" entrance into Fort Stevens' Civil War-era earthworks. Image courtesy Oregon Historical Society.

1980, 1964). As later described by Julia Gilliss, wife of Captain James Gilliss, it was "*a beautiful little earthwork bristling with guns and near as a model, the gravel walks as precise and the grass as green as if they knew they were supposed to do their best*" (Gilliss 1866).

In spite of considerable national dread regarding the possibility of a "Pacific front" emerging in the Civil War, a Pacific theater never fully developed; what did materialize were a few, largely abortive Confederate efforts to raid Union commercial craft, and no part of that intrigue found its way to the Columbia-Pacific region. Since no foreign powers posed a credible threat to the region at the conclusion of the Civil War period, Fort Stevens and the Fort at Cape Disappointment (like others erected for coastal defense by the American military) received no further upgrades to their armament for the next two decades or even longer (Hansen 1997: 7-8). Instead, periodic appropriations for both forts paid to modestly expand support facilities that had not been included in the hasty construction of either facility. With the advent of heavily armored warships and more powerful weapons of the 1870s, earthen forts of the previous decade no longer served as deterrents, and these forts at Cape Disappointment and Point Adams were no exception: within a decade of the Civil War's conclusion, they could have been passed easily and the cities that lay beyond them made vulnerable to attack (Berhow 1999). While neither installation could fend off the most modern of contemporary sea power, they presented an attractive appearance and a modest military deterrent. As noted elsewhere in this document, they were also of some use to ships in distress, serving as lookouts and the venue for mobilizing ocean rescue efforts - especially in the years before the establishment of a lifesaving station at Cape Disappointment in 1877. It was also during this period that the name "Fort Canby" was applied to the fort at Cape Disappointment, through an order from Army command at the Department of the Columbia in Vancouver; this came as a tribute to the only American general killed in the various nineteenth century Indian conflicts, E.R.S. Canby, who died in the Modoc War on April 11, 1873, an event that is still commemorated today at Lava Beds National Monument, on the California side of the Oregon-California border.[130]

The growing obsolescence of these forts was compounded by other, natural forces. The harbor defenses, Fort Stevens in particular, occupied a uniquely changing environment, where the shifting sands would threaten to undermine military forts, only to accumulate in a way that certain gun batteries became partially landlocked and needed to be replaced. As noted in other chapters of this document, Fort Stevens' commanders began to report concerns about the fort being undermined by erosion of Point Adams as early as 1870; by 1875, there were warnings that the entire structure was about to be undermined by this erosion, prompting the construction of a small jetty. The jetty failed and by the beginning of the 1880s, there were those in the military hierarchy who began considering the decommissioning of the fort. Congress responded by approving the survey and development of the first jetty on the Columbia. Between 1884 and 1898, with no military actions anticipated in the region, the Army Corps of Engineers

effectively took over operations at Fort Stevens and used the fort and its facilities as a base for building the south jetty and making other improvements to the Columbia River channel - both to protect the fort and to aid the safe passage of ships across the Columbia River bar. Even when the fort was reactivated for military use in 1898, a Chief Engineer's residence was constructed on the fort site, somewhat east of the Civil war fortifications, to allow continued operations of these engineering efforts in spite of military reoccupation of the facility. There were other environmental challenges too. Blowing sand and salt spray quickly corroded facilities, expediting their obsolescence (In today's parks, signs warn visitors to steer clear of certain parts of the forts, termed "ruins," for safety's sake, reflecting the advanced state of decay that has taken hold of the old forts.) By the time the fort was being reoccupied for military use, sand had accreted so much to the west along the new jetty that Fort Stevens no longer possessed a commanding view - or firing range - into the Pacific Ocean entrance of the bar, and sat increasingly landlocked from these open waters.[131] While the probability of enemy fire was slim in this period, Fort Stevens sat at a decided strategic disadvantage. Lying beyond the range of artillery at Fort Stevens, any enemy warship that ventured into these waters could have put the understaffed Fort Canby out of action without much difficulty or risk (Berhow 1999; Hansen 1997; Hussey 1957).

The Endicott Program and Redevelopment of the Columbia Harbor Defenses

Reconstruction after the Civil War had cast such a shadow over the appropriations process in Congress that it took 20 years after Appomattox for a President to appoint a board to evaluate proposals for new defenses. As Civil War battlements began conspicuously falling into disrepair across the nation, however, President Grover Cleveland appointed his Secretary of War, William C. Endicott, to chair a board composed of military and civilian representatives popularly known as the "Endicott Program." Reflecting the growing international strength and ambitions of the nation, this new federal initiative sought to upgrade coastal forts, in order to provide the United States with the most advanced coastal defenses in the world (and to improve the American Navy's offensive capabilities as well). The Endicott board's report of 1886 recommended a $127 million construction program that would take more than two decades to implement.[132] Of the 27 harbors proposed for refortification in their report, only three West coast ports were included; the three forts at the entrance of the Columbia River were among them, but sat in eighteenth place among national priorities for proposed harbor defense systems. The region was simply too remote to warrant higher prioritization, in their estimation, not only from the population centers of the nation, but also the various anticipated theaters of military action in Europe and beyond. This list was used to prioritize federal military expenditures, leaving the lower Columbia waiting for funding that arrived slower, and in smaller quantities, than some West coast commanders may had hoped or anticipated. In the case of the Columbia River harbor defense, Army planners determined that Fort Stevens would become the

central facility and headquarters of the new defenses, to be reinforced by Fort Canby on Cape Disappointment and a new post on Chinook Point. In spite of its challenges, Fort Stevens benefitted from its relatively large and level grounds, as well as an imminent direct rail link to the transcontinental railroads, which neither of the other two posts possessed. [133] While the plans for the Columbia-Pacific defenses were modest by national standards, they dwarfed anything that had been considered previously on this coast, and revolutionized the configuration of all the lower Columbia forts. Plans included a mix of multiple batteries with mounted guns on "disappearing" carriages, a system of harbor mines that could be fired electronically by cables, and an elaborate complex of supporting facilities on either side of the river (Hansen 1997).

While the vision of the Endicott plan may have been ambitious, in practice its implementation was slow - working down the original list in order of national priority. Lodged in eighteenth place, work on the fortifications at Fort Stevens did not begin until August 1896, with construction beginning at Chinook Point in March 1897; not until 1904 did construction start at Fort Canby. The work, which prioritized Fort Stevens, but also resulted in the first military structures at Fort Columbia, began under the direction of Captain Walter L. Fisk. Fisk worked from plans drawn by the Army Board of Engineers, but with some modifications made in response to local conditions; the cost of arming all three sites during the phase of construction approached $3 million (Hansen 1997; Hanft 1980, 1964).

While proposals for Columbia River fort redevelopment and redeployment had been on the books for years, international events added extra pressures to militarize the coast. While the "close" of America's Western frontier in 1890 brought some consolidation and reduction in the 65 existing military posts, especially in the nation's interior, the Army's growth in less than a decade later focused especially on improvements in coastal defense as national defense was increasingly conceived of in global terms. If the coasts were drawing more attention, the Pacific was growing in its strategic importance in the run-up to the 1898 Spanish-American War, which saw United States military action in Cuba and Puerto Rico, but also included a Pacific front. By 1898, the U.S. was publicly and actively involved in the revolutionary wars of the Philippines, seeking to aid insurrections against (and to ultimately supplant) the Spanish colonial government; conflicts with Spanish, but also German naval forces in the Pacific islands culminated in naval battles in Manila, drawing the United States into the Philippine-American War through 1902, and beginning almost a half century of American occupation of the Philippine island chain. To add to the complexity of America's security posture on the Pacific, gold seekers were now rushing into the Klondike gold fields, placing the United States at odds with Britain over the matter of the boundary between British Columbia and Alaska through the late 1890s. The U.S. Army's size grew from roughly 25,000 to an average of 65,000 over the course of the Spanish-American War, a number that held largely steady until the first rumblings of World War I. In part due to these events, and in part due to the Endicott refortification of the coast, Fort Stevens was reactivated in

1898, with active-duty military forces supplanting some portion of the engineering staff that had maintained the base since the mid-1880s.

All of the construction at the Columbia River forts came from standardized plans developed and deployed around the nation at a time when the Army mobilized for the Spanish-American War. Key to the new forts was the "disappearing gun carriage," an innovation developed by Army officers in 1894.This new technology would serve as the crux of the American seacoast defense system until World War I. Instead of being mounted atop earthworks, guns on this type of carriage were mounted on a concrete foundation, nestled into a protective contour of earth, so that the crews servicing the weapon might remain hidden from the fire of enemy ships. A two-story concrete wall was built into this protective contour, so that guns could be loaded in safety and then raised to fire above the wall through the use of hydraulics, a counterweight, and long levers. The upper levels of these forts held gun carriages behind a protective wall, with the lower story having space for ammunition magazines and other supporting facilities. Extended levers holding the cannon could raise the gun to fire above the wall. When fired, the gun - secured by chains or cables linked to ring wall mounts, many of which are still visible in the coastal batteries today - recoiled and could be instantly dropped out of view. In this way, the gun emplacements were designed (using a principle called the "horizontal crest") to conceal the guns, and indeed the entire fort, from the view of enemy ships so that the disappearing gun's location was not clear from offshore even at the height of combat (Hansen 1997: 8-10). Depending upon local conditions and military necessity, weaponry such as disappearing guns could also be complemented by large mortars or rapid fire guns in fixed positions. Between 1891 and 1903, guns in American seacoast defenses of the Endicott period ranged in caliber from three to twelve inches, while featuring several different types of fixed position mounts or carriages. With a firing range of seven to nine miles, these weapons supplemented the strategically and structurally dominant disappearing carriages. While Fort Stevens, for example, would possess five batteries with disappearing guns in two-story concrete batteries by 1903, it also had guns capable of firing from four different types of fixed carriages. A smaller number of disappearing guns overshadowed fortifications at Cape Disappointment and Chinook Point, while the latter post also boasted three rapid fire fixed guns in a battery that were placed behind a two story concrete "masking parapet" by October of 1900 (Hanft 1980; Hussey 1967).

"Fire control" structures were also built in association with the battery complexes at this time. These served as lookout stations of a sort, identifying the precise location of enemy craft and calling in firing positions to the gun batteries. (At Fort Stevens, both military efficiency and a rapidly changing dune landscape would ultimately prompt the consolidation of smaller fire control stations into a single facility for all fort batteries, located on a sand hill with commanding views near Battery Russell - dubbed "Fire Control Hill"). These fire control structures were also used to operate harbor mines, allowing personnel to observe the planting process and fix the location of each mine,

but also to track the position of enemy ships when mines might be detonated. Only during wartime (such as the short-lived conflict with Spain in 1898, and during the two world wars) were mines actively deployed. Meanwhile, at all three facilities, many of the garrison structures, including enlisted barracks, officers' quarters, and supporting facilities, consisted of simplified wood-frame Queen Anne style buildings erected from standardized Quartermaster Corps plans used at a number of other installations, including those on Puget Sound (Lingo 2008; Bethow 1999; Hussey 1957).

The advent of effectively producing and transmitting electricity gave harbor defenses of the Endicott period capabilities that had not been anticipated only a few years before the development of the Columbia River defenses. Ammunition hoists - still visible throughout the batteries of the three forts from this period - could be electrically powered from munitions storage rooms below to guns sitting topside. So too, underwater mines could be fired with electrical fuse systems. A member of the Board of Engineers, Henry L. Abbott, published the first manuals on the use of mines (either sitting on the bottom or buoyant) that could be fired electrically through a system of underwater cables, which might be set to explode on contact or triggered by an operator. The network of cables terminated on shore in structures called mine (or mining) casemates, usually buried below ground. Under the Endicott program, an electrical mine casemate was constructed at both Fort Columbia and Fort Stevens. Critical to the success of these early installations, then, was dependable electric power, yet these coastal fortifications were built in remote locations away from even the most primitive transmission lines. As was true of many Endicott-era forts, the Army found self-contained power plants necessary; this was true even after commercial electricity became available because the plants could be protected by stout construction and secret locations. While most of the early lighting needs for the garrison buildings at all three forts were met with mineral oil and coal and wood were commonly used for heat, the Army constructed power plants at each installation throughout the Endicott era buildup, supplying almost all of the posts' needs.

The specific details of the Endicott era buildup on the Columbia-Pacific coastline are impressive in their scale and complexity. Clearly, Fort Stevens was the epicenter of construction activity in these years, reflecting military decisions at the national level declaring that facility the core of the Columbia defensive fort system. In 1897, as a response to the Endicott initiative, Fort Stevens began what was the one definitive expansion of its 80 year history. This program consisted of constructing eight concrete batteries and a large number of supporting facilities - indeed, a solid majority of the structures still visible at Fort Stevens date from this period. By this time, Clatsop Spit had progressed so far to the west that the entire Columbia River entrance could not be covered by a single facility, contributing to a decision to divide the defenses between the multi-battery river-front complex and the oceanfront Battery Russell. Facing the river mouth, a short distance to the west of the original Fort Stevens was the West Battery. Completed between 1898 and 1900, the West Battery consisted of constituent

Batteries Walker, Lewis and Mishler, all featuring 10-inch disappearing "rifles" – Walker and Lewis featured guns mounted at conventional disappearing carriages,

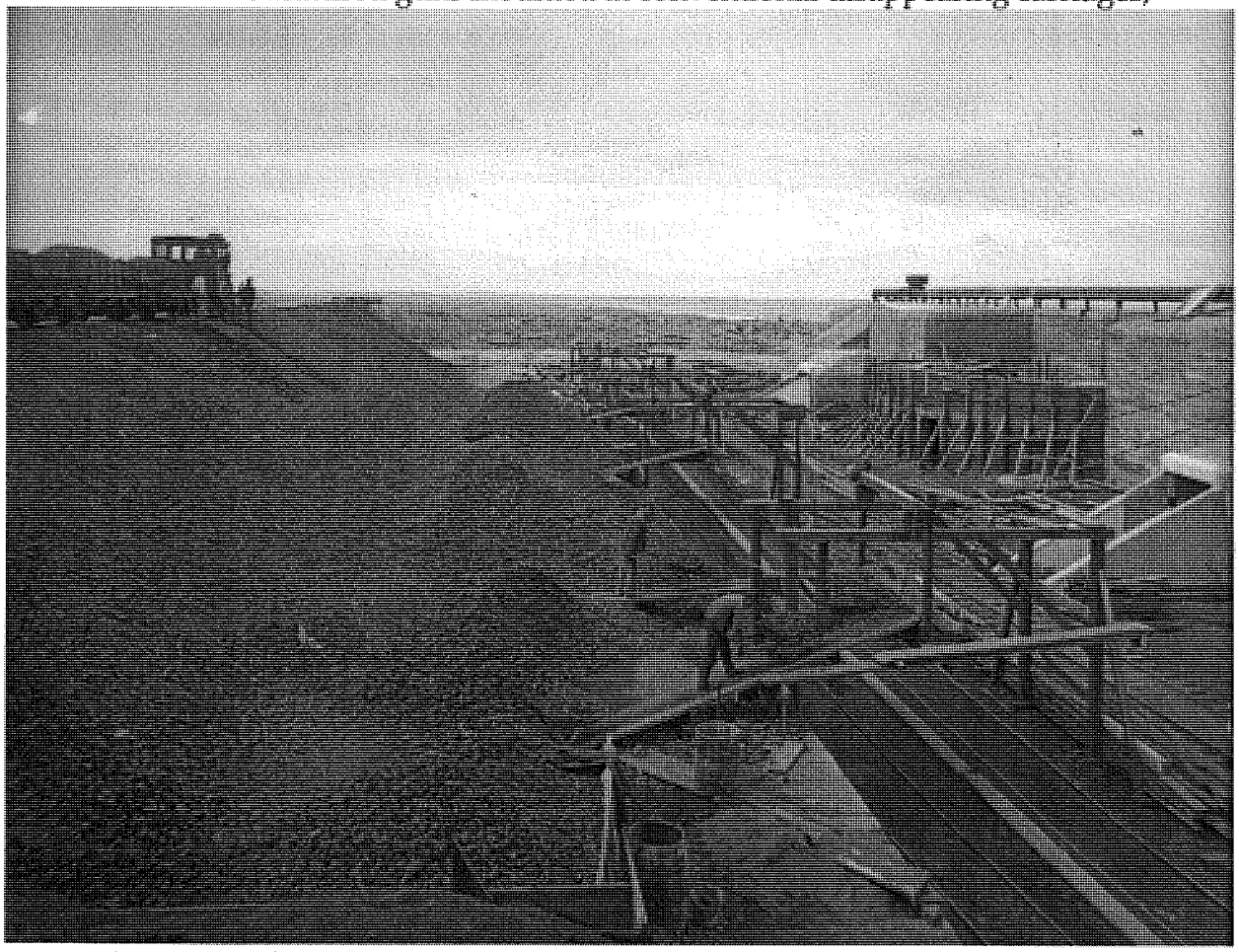


Figure 11.4 – The construction of Fort Stevens' West Battery and associated fortifications between 1897 and 1900 involved the development of wooden molds and metal revetments for its extensive concrete walls, as well as the creation of a "parados" earthwork to protect the batteries from a southerly attack. Photo courtesy Oregon Historical Society.

while those at Mischler sat in unique circular pits allowing a 360-degree range field of fire. A steam plant was built concurrently to support the West Battery, while a parados – a tall defensive earthwork structure hailing from the same Vauban defensive design tradition of the original Civil War Fort – was placed on the south side of the West Battery to protect it from attacks from the rear by land or by sea. The West Battery Command Station, sitting behind and above the battery, was completed in 1899, and by 1911 that station was augmented to include a mine observation facility. The outlying ocean-facing Battery Russell (1904) had disappearing 10-inch guns, similar to those at Batteries Walker and Lewis. Other batteries were built in the core facility fronting the Columbia River mouth: Battery Pratt (1900) featured 6-inch rifles, and its accompanying command station, also completed in 1900 would later serve as a meteorological station

for the entire fort. Battery Clark (1899), the only mortar battery built at the fort, was fitted with 12 inch mortars, and an independent command station was constructed

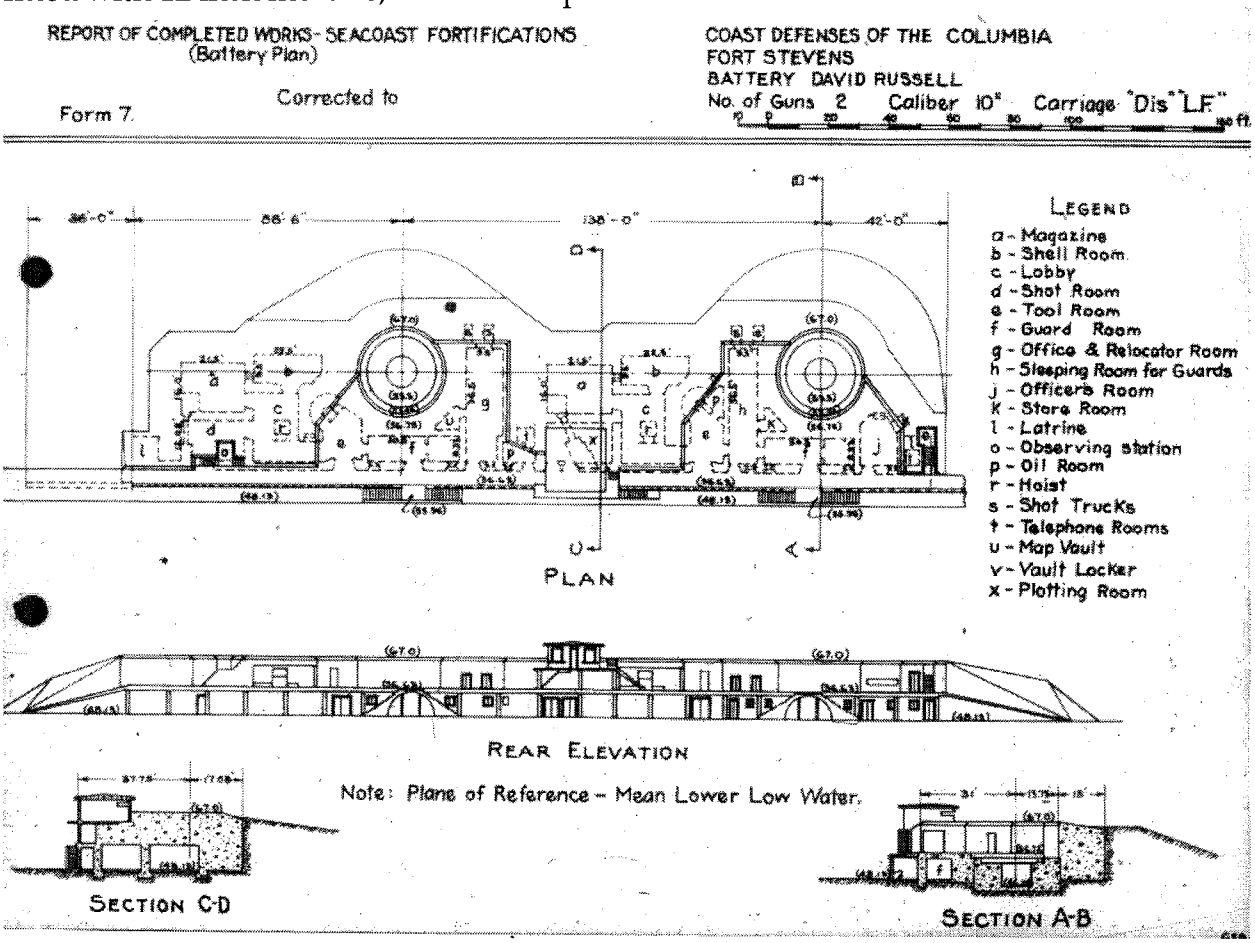


Figure 11.5 – The original plans for Fort Stevens, constructed in 1904, show some of the essential elements of the "Sewell" style construction that characterized almost all of the gun batteries of the Endicott period, including two-story construction with ammunition storage below, and "disappearing" gun mounts in circular emplacements on the second level. Image courtesy Oregon Historical Society.

nearby. Two small caliber rapid-fire batteries, Smur and Freeman (1902), were added to protect mine fields located at the mouth of the river - Freeman being built largely on top of the old Civil War-era Fort Stevens and its earthworks, marking the end of that facility. Mine loading docks were extended into the river, and a torpedo loading facility was added on the eastern edge of the fort by 1900 as well. A central oil-powered power plant was built by 1910, providing electricity for most purposes in the central fort, and a coal yard was added to provide coal for heating buildings. South of the batteries, near the rail spur entering the fort, were the bakery, commissary and artillery engineer buildings, all added around 1900; also built near this entrance was a guardhouse (1908), a hospital, and a mine cable storeroom (both ca. 1910). Non-Commissioned officers quarters, built in 1907-08, were added south of the original Civil War fort site, while a

men's dormitory from this period, built in 1911, now houses the park museum. By the end of this impressive Endicott-era buildup, carried out over a 12 year period, the majority of the buildings known to modern park visitors were in place.

While Fort Canby did not undergo a revolutionary redevelopment of the same scale, it was also retooled to contribute to this new era of coastal defense. Massive emplacements holding disappearing carriages marked a new era at Fort Canby, where the earthworks built during the Civil War had, by 1872, been described as "*rapidly falling into decay*" (Hussey 1957: 26).[134] As at Fort Stevens, during the post-Civil War period, the Army had allowed the batteries there to become obsolete (though several older 15 inch guns there were converted to 8 inch rifled bores in 1883, with more in 1890). The facility was largely derelict, so that by 1904, when the Endicott reconstruction program finally came to Fort Canby, the business directory for Astoria characterized the cape as "*formerly [having] a post there, but only [at present] with a lighthouse and population of 24*" (Polk 1904: 232). Congress finally made an appropriation for the two Washington forts in 1904, as well as additional allotments in 1907 and 1908 to pay for new barracks as well as other buildings.[135] In August of that year, work began on two of the three batteries that would ultimately stand at the fort. The old West Battery was replaced with Battery Harvey Allen, housing three six-inch guns on disappearing carriages, located approximately 1,000 feet north of the Cape Disappointment Lighthouse. Also built in 1906, battery Elijah O'Flyng, with two 6-inch guns in disappearing carriages, occupied the site of the old Center Battery, situated about 1,000 feet east of the lighthouse—on the promontory of the cape's southern tip. Additional garrison structures were added in the lowlands fronting Lake O'Neil and Bakers Bay at this time, in addition to the repair and expansion of older garrison buildings (Hussey 1957).

Under the Endicott Program, the nascent military base at Chinook Point was also developed for the first time. As the Chinook people had appreciated for unknown generations, the point provided a rare, commanding view of the entire river's entrance, from the open ocean to points far upstream. Military planners determined that the site would be suitable for the development of gun batteries, producing a "triangle of fire" across the river's mouth along with the other two forts; it was also seen as suitable for the development of new harbor mining infrastructure. Army construction at the site came in two phases. The first occurred under the auspices of the Corps of Engineers - beginning in 1896, with the construction of a wharf and other fundamental infrastructure, and continuing until fortifications were all but complete at the end of June, 1900. These included four gun batteries, serviced by two power plants, as well as a mine casemate. The construction included two batteries, treated as a single battery for operations purposes, high on the hill near the barracks, and two independent batteries fronting the water at the base of the point. By the mid-point of this construction activity, in the summer of 1898, the fort was largely operational and an 11-man detachment was dispatched to the fort; the fort was officially designated as "Fort Columbia" one year later. At Fort Columbia, the naming of batteries all occurred as a result of one general

order of 1904, with the first two, linked batteries completed in 1898 being named "Battery Ord," numbers one and two, for Jules Ord, a first lieutenant killed on San Juan Hill, Cuba, during the Spanish American War. (The Army designated a single outlying gun as "Battery Ord #3" in 1906.) The disappearing gun battery completed in 1900 and located closer to shore became known as "Battery Murphy," after a captain killed in the Philippines that year. The battery consisting of three fixed guns, also completed in 1900, took the name "Battery Crenshaw" after another captain who died of his wounds in the Philippines that year (Hussey1967; Meaney 1937).

Yet, housing and other facilities at Fort Columbia were inadequate to house a full detachment. Though the military reserve was large, the Engineers determined that it had to be expanded beyond its original footprint, in part to accommodate the development of new structures, but also to secure a sufficient water supply for the growing fort. Some 33 acres was secured from the public domain, and an additional 53 acres from the Northern Pacific Railroad. By 1900, the Corps of Engineers launched a second phase of construction on the expanded reserve, involving the building of plank roads, water reservoirs, pipelines, and other utilities, as well as 14 buildings, including a hospital, an administration building, four different types of quarters for officers and noncommissioned staff coordinated through the Quartermaster General's Office, a guard house, bakery, stable, work shop, store house, as well as oil storage; soon thereafter, the Army Engineers added a post exchange building (which included a bowling alley), a gymnasium, and separate store houses for wagons, ordnance, mines, as well as other items. The steep topography of Fort Columbia meant that only some 25 acres (of the 729 acres in the military reservation) was suitable for building any kind of structure, so the post lacked components such as a parade ground, target range and cemetery, which were relegated to the other two forts. The first permanent garrison - an artillery company – was reassigned from Fort Canby to Fort Columbia in 1903; totaling roughly 100 men and four officers, the approximate size of the garrison into World War I, they arrived just as the forts first and biggest period of construction drew to a close. They activated the mine casemate, began training in the new gun batteries, and settled into the new residential buildings of the fort. Yet construction almost immediately resumed: the original 1898 mine casemate proved to be exceedingly damp and uncomfortable (in part because it contained electrical generating equipment and switching devices) so that it was abandoned by 1907. This led to the Army Corps of Engineers to build a new mine casemate, located further west from the batteries and just behind the rock outcropping on Chinook Point; it was completed in 1911, at the same time that the commanders station for Fort Ord was moved from its position upslope from the battery into a combined fire station facility beside that battery (Beerhow 1999; Hussey1967; Meaney 1937).

In the midst of these ambitious construction projects, new directives regarding military construction methods were arriving from Washington, D.C. President Theodore Roosevelt convened a board chaired by his Secretary of War William Howard Taft in

1905, something intended to provide an update to the Endicott report. Most of the Taft Board's recommendations were technical, but they gave impetus to adding searchlights as part of an integrated plan for harbor defense (U.S. Congress 1906). (Some sources allude to fortifications built after the release of this report through World War I as "Taft Period," though they continued to be developed largely under the prescriptions of the Endicott report - on the Columbia River, the "Taft" period was arguably still guided by the Endicott vision, reflecting the fact that the Columbia defense buildup was occurring so much later than Endicott program developments elsewhere in the country.) Still, at all of the Columbia River harbor forts, engineers installed 30- and 36-inch portable spotlight models with lightly built wooden shelters in the following decade, following the outlines of the Taft program. These lights, designed to spot enemy craft but also to illuminate the harbor to aid mine placement, were replaced by more powerful versions of the lights, with diameters enlarged to 60 inches only a decade later (Beerhow 1999; Hansen 1997).

World War I and its Aftermath

The rise of World War I in Europe put the coast defenses of the Columbia, and indeed the entire nation on a high state of alert. Even before the United States entered World War I, the Army recognized how susceptible "Sewell-type" buildings might be to fire from heavy artillery. This reflected a growing realization of how powerful armored warships had become by the time major conflict had commenced in Europe. In 1914, modern ships possessed the capacity to bombard coastal defenses from beyond the range of the land batteries' guns. Another military board of review convened in 1915 by the administration of President Woodrow Wilson to review the state of seacoast fortifications and recommend changes to what had earlier been produced by the Endicott Program and then the Taft Board. Relatively few of their recommendations were actually implemented given the short duration (18 months) of American involvement in World War I, but several changes did affect the function and appearance of the three forts located near the entrance of the Columbia River (Hansen 1997: 42-43).

While Pacific coast fortifications were low priority for the nation at this time, they were not to be left wholly undefended either as the United States entered the war. Germany maintained its own active naval forces in the Pacific, defending colonial holdings on the Chinese coast, as well as in Samoa, New Guinea, and several other Pacific islands. Allied forces would engage German and Austro-Hungarian forces across the Pacific throughout the war, eventually routing the Central Powers from much of their Pacific holdings. As a result of these events, and the revelations of the Wilson review, the forts were given renewed attention. A possibility of direct hits from naval bombardments on mine casements at Fort Stevens and Fort Columbia spurred the Army to develop a project aimed at strengthening these buildings - principally by thickening the concrete

walls of the existing batteries. Work at Fort Stevens proceeded first, eventually remodeling the harbor mine casemate so that it now possessed the same interior layout as the earlier Sewell-type structure at Fort Columbia. The biggest change was that the Fort Stevens casemate of 1917 now possessed reinforced concrete walls eight feet thick, a roof of the same material five feet through and a covering of sand nine feet deep (Hanft 1980; Hussey 1957).[136]

Still, ironically, the biggest change to the Columbia fortifications resulting from World War I came from Wilson's board of review proposing the concept of having portable guns on railway mounts in the European theater. This prompted the Army to remove a number of large guns from American coastal defenses - especially in the comparatively secure Pacific theater - and ship them to Europe for use in land-based warfare. While the Army retained sufficient guns to keep the Columbia harbor forts operational, several guns were shipped from these forts to Europe's western front. The four guns from Fort Stevens' Batteries Lewis and Walker were dismantled and sent to France to support the western front. At Fort Canby, Battery Harvey Allen's guns were sent to Europe as well; they were replaced by the guns of the very short-lived Battery O'Flyng (1906-18) which was decommissioned at this time. At Fort Columbia, the six-inch guns at Battery Murphy remained in place due to their value in protecting Fort Columbia's minefield, but all three of the eight-inch guns at Battery Ord were removed for service in Europe too - resulting in the decommissioning of Battery Ord after little more than 20 years in service.

Perhaps the biggest role that the Columbia harbor forts played in World War I, other than providing their guns to the effort, was that they were used to help train artillery regiments for service overseas. From a force totaling 20 officers and 450 enlisted men at all three forts just prior to the United States entering the war, the mustering-in process swelled the ranks of artillery units stationed there, whether regular Army or officers and enlisted men of the National Guard.[137] When completed in August 1917, the mustering-in had furnished enough men to largely fill the Columbia River coast defenses' fortifications at their capacity for the first time. The peak total of staffing for all three forts combined reached roughly 2,600 men. All three forts were used for elaborate training exercises, including war games. The Fort Stevens men's dormitory built in 1911 (now the park museum) was converted to a War Games Building, with communications links to the functioning batteries, and served as a focal point of training exercises during the height of the war (Lingo 2008; Hansen 1997: 42-43). At Fort Canby, the development of the jetty in the years immediately preceding World War I, beginning in 1914, brought new life to that fort as it had at Fort Stevens years earlier, though Army Engineers had to work around a fully developed and occupied military facility in this case. As noted elsewhere in this document, World War I also brought a surge of activity in the forests, as Sitka spruce was harvested for airplane manufacturing on the outer coast, and Douglas fir was harvested from the region's interior for ships. The later part of the war also witnessed the arrival of the great

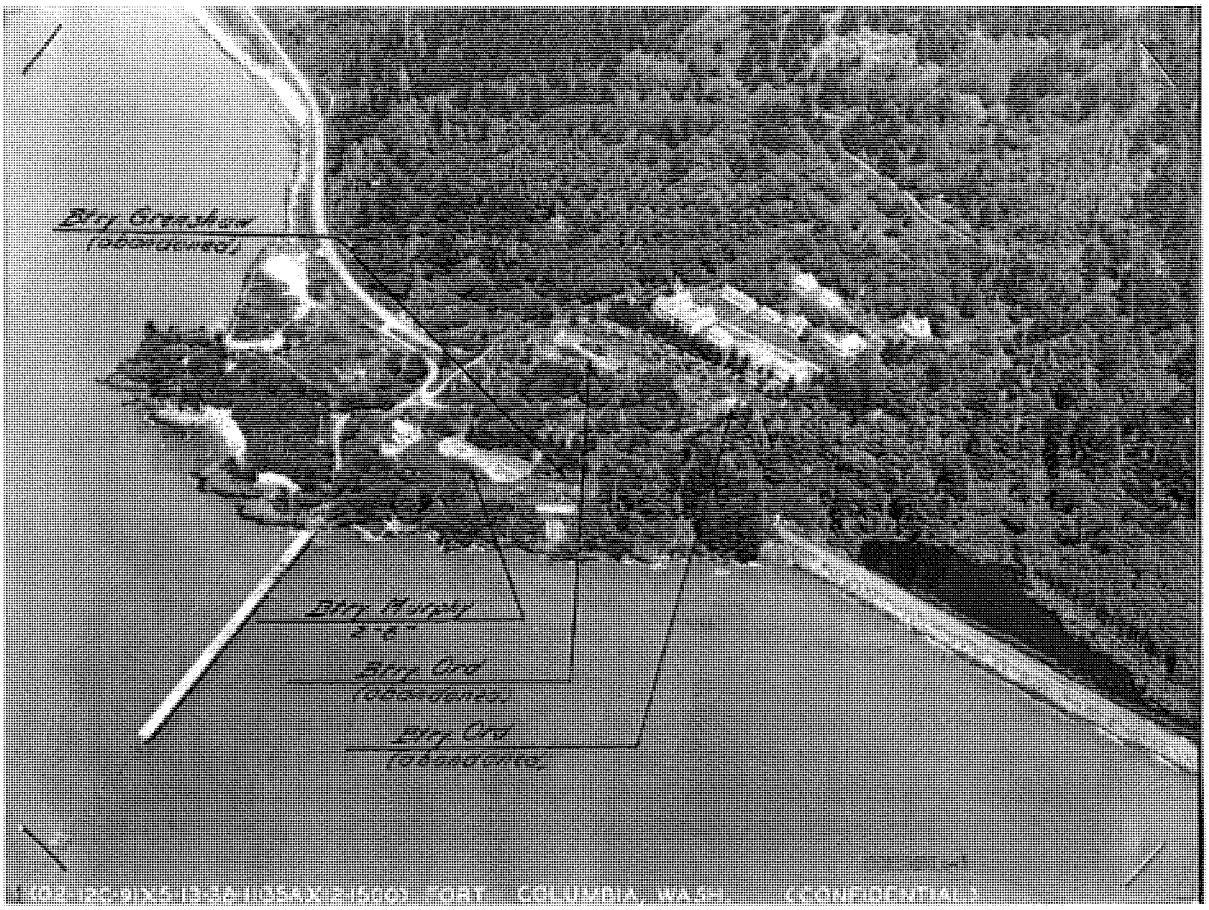


Figure 11.6 - Fort Columbia in 1937, showing the locations of all facilities, including the Endicott-era gun batteries following the World War I decommissioning of Batteries Grenshaw and Ord. From War Department, Fourth Army and Western Defense Command, Coast Defenses of the Columbia (03/17/1941 - 1946) – National Archives and Records Administration.

influenza pandemic on the lower Columbia River, filling the Fort Stevens hospital to capacity, where roughly 50 men would die (Hanpf 1980; hussy 1967, 1957).

The military buildup as part of the "Endicott Program" to strengthen coastal defenses came to an end about the time of American entry into World War I in April 1917. Still, there were a number of structural changes to the forts during the war and immediately thereafter. To better control the harbor, a mine casemate and mine commander's station were added at Fort Stevens by 1918. Searchlights and a small searchlight power station were added at Fort Stevens concurrently, to illuminate the mine operations in the harbor. Also, by the middle of American involvement in World War I, Army commanders around the nation were expressing frustration with the two-story design of the Sewell-type installations, due to the complexity of moving ammunition between different levels of the fort; they expressed a preference for new coast artillery equipped

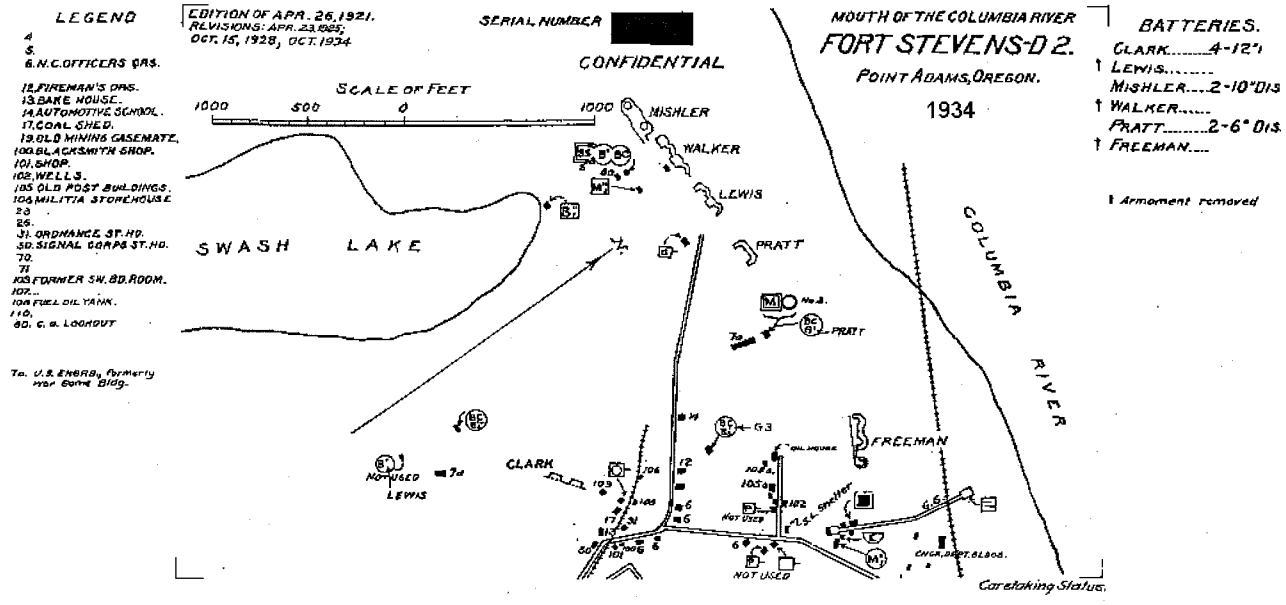


Figure 11.7 – The configuration of Fort Stevens in the years between World War II still significantly reflected the objectives of the late-19th and early 20th century Endicott program, with a number of Sewell type gun batteries oriented toward the mouth of the Columbia River. Image from War Department, Fourth Army and Western Defense Command, Coast Defenses of the Columbia (03/17/1941 - 1946) – National Archives and Records Administration.

with cannons and mortars removed from fixed emplacements and readied for use on mobile mountings. In 1918, four 12 inch mortars from Battery Clark at Fort Stevens were also moved across the river to a new Fort Canby battery for fixed gun emplacements - Battery Guenther – in part to provide better cross-fire and to reduce the complexity of operations at Battery Clark. Battery Guenther was operational by 1922, but its location proved to be subject to landslides and created almost constant maintenance problems (Hansen 1997: 44; Hussey 1957: 30).

As at the end of the Civil War, the end of World War I in November of 1918 prompted a rapid demobilization of these forts (and forts across the nation) as troops returned home and obsolete structures were decommissioned by rapidly thinning fort detachments. state of almost complete inactivity. At the three forts on the lower Columbia, the years following World War I brought a drastic downsizing of full-time staff. One company of 40 men remained on duty at Fort Stevens, which dispatched small caretaker detachments sent to Fort Canby and Fort Columbia. Aside from annual National Guard training exercises that lasted for about two weeks each summer, the contingent of servicemen at Fort Canby declined to as few as two or three over extended periods. Fort Columbia too became a sleepy post, run by one sergeant and one or two enlisted men,

detached from the main artillery company at Fort Stevens (Hansen 1997: 46; Hussey 1957).

Several batteries were decommissioned. By 1920, Batteries Smur and Freeman were deactivated at Fort Stevens. At Fort Columbia, Battery Ord and Battery Crenshaw, already outdated and in poor repair, were scrapped – their guns dismounted and sent to facilities in other parts of the country, their carriages sold to private parties locally. Other support structures, in poor repair or obsolete, were removed over the following two decades. Buildings for outmoded activities were especially targeted, such as stables, blacksmiths' shops, coal sheds, wagon sheds, mine storerooms, wharf houses, and quarters for teamsters. A new mine casemate completed at Fort Columbia in 1921 represented one of the few Army construction projects on the west coast of the World War I period, though the post and many others then fell into almost complete inactivity thereafter. In 1922, Fort Stevens added a communications bunker that reflected the experiences of troops in World War I, consolidating all fort communications functions in a single building that was designed to be gas-proof; a testing facility for cables used for harbor mines was built adjacent.

The main organizational change for forts intended to serve as part of harbor defense systems during this period came in 1924, when the coast artillery went from separate companies of varying sizes (still stationed at Fort Stevens, in the case of the Columbia harbor defenses) to standard regiments. This move reflected an emphasis on mobility and new responsibilities like anti-aircraft protection, rather than manning big guns and mortars in their emplacements. The rapid growth of tactical airpower developed during World War I had rendered the Endicott forts obsolete as the main defenses against potential attacks made inland. Nevertheless, the seacoast fortifications retained some value as bases for training as well as deterrents to enemy ships and submarines as harbor defense systems over the next quarter century (Hansen 1997: 45-46).[138] They remained quiet and largely inactive bases, with skeleton crews: according to one newspaper account from the early 1930s, for example, the men stationed at Fort Columbia often had long gaps in their schedule, giving them plenty of time to herd cows and sell milk to fishermen, apart from the two weeks each summer that the National Guard manned Battery Murphy for training exercises. By 1931, things had become so quiet on the Columbia that the Army's chief of staff, General Douglas MacArthur, recommended "partial disposal" of Fort Canby. The Army took no action on this recommendation, and the post remained armed by one battery of mortars (Guenther) and two batteries of "light" artillery (Allen and O'Flyng) (Hansen 1997: 46-47; Hussey 1957: 31).

Election of President Franklin D. Roosevelt during the depths of the Great Depression in 1932 brought about a succession of programs aimed at stimulating the American economy and putting people back to work. The Civilian Conservation Corps (CCC) job training program was one of FDR's favorites and operated six month enrollment

Figure 11.8 - Fort Canby in 1937, showing the locations of all facilities, including the Endicott-era gun batteries following the World War I decommissioning of Battery O'Flyng. From War Department, Fourth Army and Western Defense Command, Coast Defenses of the Columbia (03/17/1941 - 1946) – National Archives and Records Administration.

periods between 1933 and 1942. The Army recruited unskilled young men as enrollees and operated camps established to complete projects on federal, state, and even private land throughout the country. These camps could remain in place for one or more enrollment periods, depending upon the amount of work needed. The program's peak, in terms of overall numbers, came in 1935 and numbers declined thereafter as the economy improved. At Fort Canby, the Army ran its own camp through 1935-36, employing members of a different CCC company each time. Unlike other camps, where tents or prefabricated barracks had to be erected, along with utility systems, the fort's existing infrastructure allowed Army personnel and the enrollees at Camp Canby to focus almost exclusively on projects. The most enduring consisted of road improvements south and west from Ilwaco, throughout much of what is now Cape Disappointment State Park. As noted elsewhere, Fort Stevens also hosted a CCC camp and crews, who worked diligently to control the shifting sands that often threatened

fort operations, by developing nurseries of beach grass and other plants, and planting the strand from the south jetty to Seaside (Donella Lucero pers. comm. 2013; Carlson et al. 1991; Reckendorf et al. 1985; Hanft 1980).

The National Guard also became a growing presence on the lower Columbia at this time. The National Guard had emerged nationwide during the Spanish-American War when chronically underfunded state militias received federal aid in return for more control by federal military authorities. The Oregon National Guard founded Camp Clatsop (renamed Camp Rilea in 1959) on Clatsop Plains, south of Fort Stevens by 1927. The camp was used for training purposes by Oregon's National Guard, but was also integrated into federal operations, so that National Guard troops from the facility were sent to the three harbor defense forts for part of their training; in turn, Army trainees were able to use Camp Clatsop for small tactical military maneuvers involving equipment or munitions that had the potential to remove vegetation and create destructive "blowouts" in the sand dunes. The practice of using Camp Clatsop for these more damaging operations was intended to avoid any further destabilization of the dune fields around Fort Stevens. Yet, this came at a price: by 1935 the camp had three miles of ocean front with mobile dunes that were migrating toward camp facilities and lakes, requiring an ambitious dune restabilization program overseen by the Civilian Conservation Corps crews stationed at Fort Stevens (Carlson et al. 1991; Reckendorf, et al. 1985:266-67).[139]

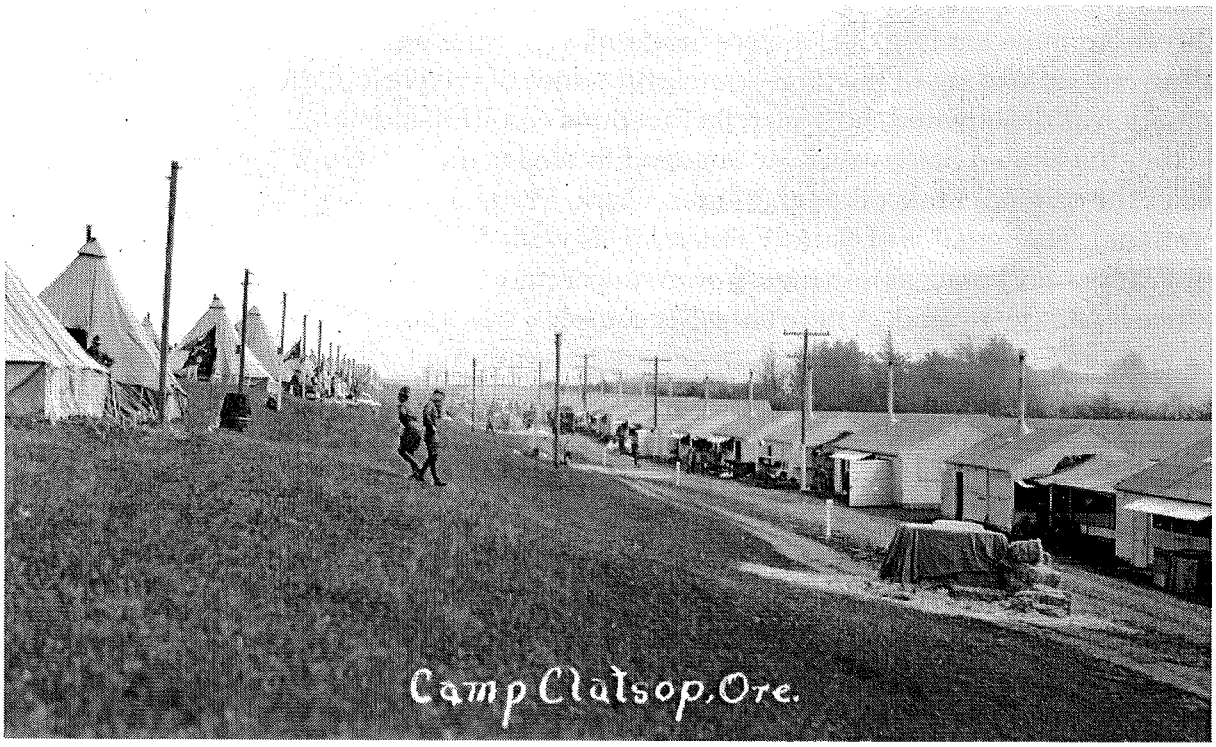


Figure 11.9 – Camp Clatsop, the National Guard base on Clatsop Plains. Later renamed "Camp Rilea," the facility is one of the last remaining military facilities in the region today. Photo courtesy Oregon Historical Society.

The Events of World War II

With war looming in Europe and the Pacific once again in the early days of World War II, the Army began to rebuild and modernize its coastal defenses, reversing the shrinking footprint and the declining relevance of the Columbia River's military posts. Recognizing the growing dangers overseas, Congress authorized a new construction program in September of 1940. At that point Fort Columbia and Fort Canby shared an initial appropriation of $130,000, one largely earmarked to pay for new barracks and other buildings needed for the mobilization and housing of additional troops. This coincided with reactivation of units in the Army's coast artillery as well as the activation of troops from the National Guard (Berhow 1999; Hansen 1997; Hussey 1957).

In terms of weaponry, the Columbia River defenses fell into the second tier of Army priorities. Still, even as the United States was drawn into the war in December of 1941 by a Japanese strike at Pearl Harbor, Hawaii, the Columbia forts received funding for new batteries, searchlights, and support facilities. At Fort Stevens the reactivation and buildup of facilities was abrupt. The defunct gun battery at Battery Mishler was capped with a concrete roof, and its interior halls converted to a combined Army and Navy control post for the entire Columbia River harbor defense - the "Harbor Defense Command Post" and the 'Harbor Entrance Control Post" being the two halves of this operation. Battery Pratt was upgraded to oversee and defend minefield operations at the mouth of the Columbia, and the fort added a special mine loading building, and Endicott-era mine loading docks were modernized on the waterfront to facilitate easy loading and unloading of the large, powerful mines of the period; the Fort Stevens mine casemate was deactivated, however, its functions consolidated at Fort Columbia. By the time that the United Staes was fully engaged in the Pacific theater of World War II, only three of the original Endicott era batteries, Clark, Pratt, and Russell, were still operational. The remains of Battery Freeman, as well as what remained of the original Civil War era Fort Stevens earthwork were unceremoniously leveled at this time to produce a parade ground. A new barracks complex was added south of the original Civil War era Fort Stevens site, and an automotive training facility, fire station, and chapel were constructed immediately adjacent. New, privately-run laundry facilities were housed in a structure on the eastern edge of the fort. At Fort Columbia, meanwhile, the Army added new barracks, officers' quarters, and a recreation building, built from standardized plans issued by the Office of the Quartermaster General. Fort Columbia received new guns, some support structures, an improved mine system, and an expanded casemate for better operational control of the minefields at the Columbia River's entrance.[140] This modernization program led to the Army acquiring 86 acres of additional land that was added to the Fort Columbia military reservation. At Fort Canby, the problematic Battery Guenther was decommissioned by 1942, with battery operations being consolidated at the one remaining battery, Battery Harvey Allen. A

Figure 11.10 – Although the war largely raged thousands of miles away, there were frequent reminders of the Pacific front. Here, a Japanese mine that had drifted across the Pacific to the oceanfront of Fort Stevens is seen in April of 1945. From War Department, Fourth Army and Western Defense Command, Coast Defenses of the Columbia (03/17/1941 - 1946) – National Archives and Records Administration.

variety of freestanding structures - open and "pill box" machine gun emplacements, phone and radio boxes, lookouts, sentry buildings, and others - were added to what was already a diffuse constellation of such sites around the forts' perimeters, where they can still sometimes be seen amidst the encroaching tangle of young coastal forest (Beerhow 1999; Hussey, 1967, 1957).

In the midst of this redevelopment, events on the Pacific would focus national attention on the military preparedness of the Columbia-Pacific region in unprecedented ways. Partially in response to United States bombers successfully attacking outlying Japanese islands from aircraft carriers in spring of 1942, the Japanese navy dispatched a number of long-range, I-class submarines to attack American shipping interests that summer, with the submarines designated I-25 and I-26 being sent to lead the campaign on the coast of the Pacific Northwest. On June 20th, I-26 fired on ships off the northwestern Olympic Peninsula and even a lighthouse facility at Estevan Point, on Vancouver

Island. On the evening of June 21st, the I-25 submarine operating under the command of Commander Meiji Tagami, was able to navigate close enough to Fort Stevens to fire several rounds from its 5.5 inch deck guns. Fort Stevens became the only military installation in the contiguous United States to be attacked by an enemy warship since the War of 1812. The quality of Japanese intelligence about this coast was mixed, and Tagami believed he was firing on a submarine base (an information gap that may also explain I-26's decision to fire on an obscure and remote Canadian lighthouse). Although seventeen shells were reported fired, the number that landed was smaller – as low as nine by some accounts. The shells landed on the Fort Stevens military reservation, most on the south end of the facility near Battery Russell, leaving a number of craters in the sand; the only damage was to a baseball diamond backstop and a power line. The fort did not return fire, as the submarine was out of range of the fort's guns – many still dating from World War I or earlier – and the commander did not wish to give away the fort's exact location. A stone monument was later constructed south of Battery Russell in order to commemorate the episode, and a monument remains on the site (Webber 1995, 1975).

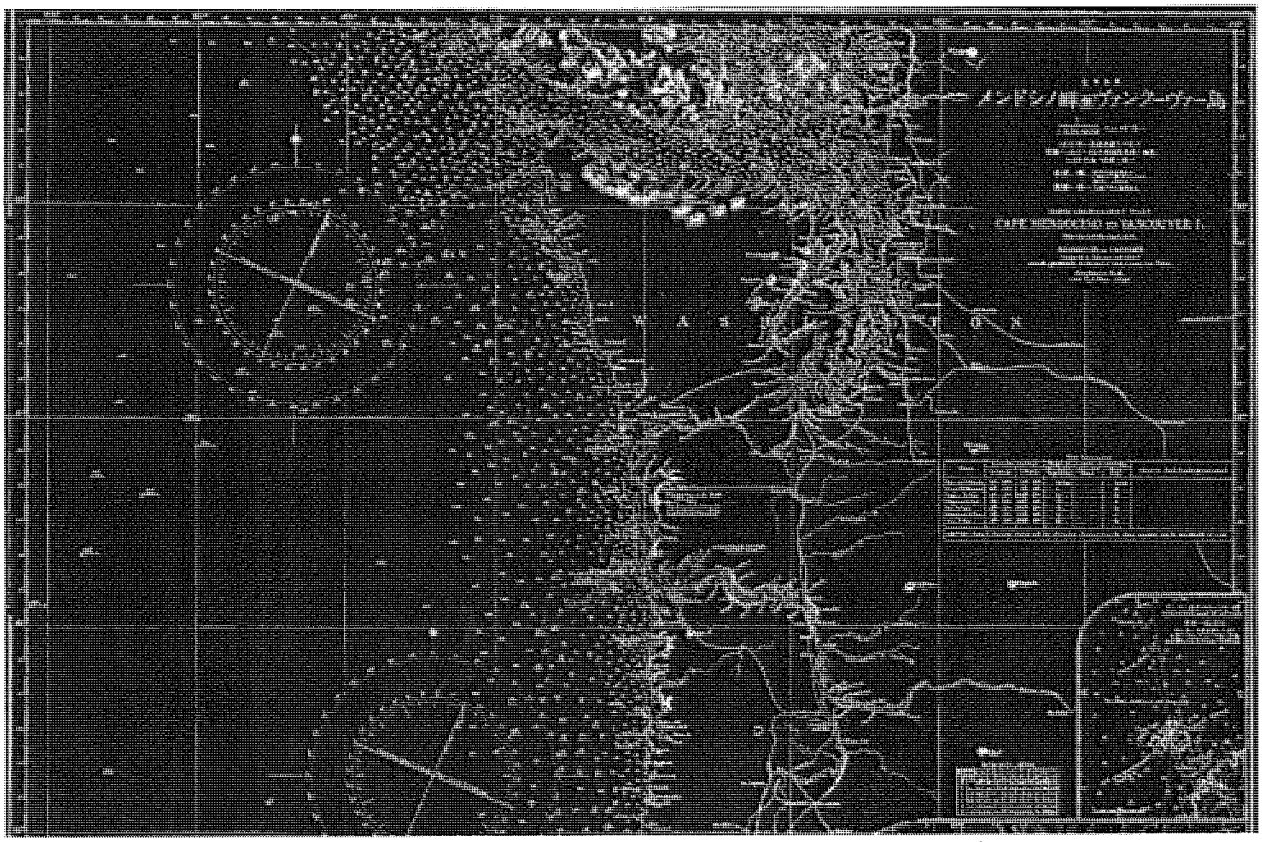


Figure 11.11 – A portion of the Japanese nautical chart of the Pacific Northwest reported to be used by I-26 when shelling the coast of Oregon in June of 1942. A lack of detailed intelligence and navigational information contributed to the attack's very limited success. Image courtesy Oregon Historical Society.

Figure 11.12 – Inspecting a crater from one of the Japanese shells that landed at Fort Stevens in June of 1942. From War Department, Fourth Army and Western Defense Command, Coast Defenses of the Columbia (03/17/1941 - 1946) – National Archives and Records Administration.

In Japan, the attack of the I-class submarines was hailed as a strategic success, a psychological victory of sorts, intimidating the American enemy while providing Japanese naval leadership some level of consolation for the humiliating springtime American attacks on Japanese soil. The Japanese attack certainly had a psychological effect in the United States and Canada, as the newspapers of the time attest, but the effect may have been somewhat different than the Japanese had anticipated. These events prompted the rise of a robust civil defense program in coastal communities that lasted for the remainderof the war (Kann and Kann 1990a, 1990b, 1991). Families set to work building bunkers; indeed, a privately constructed bomb shelter, built right after the attack, sits within the boundary of Fort Stevens State Park, and can be viewed by visitors today. (In Canada, the shelling prompting the darkening of lighthouses along the coast, creating great inconveniences to mariners, fishermen and shipping interests for the duration of the war.) Critical to the Columbia harbor forts, the Japanese attack intensified efforts to fortify the coast. Immediately after the attack, Oregon's Senator Rufus Homan made headlines as he derided the west coast defenses as "*criminally obsolete, woefully inadequate and poorly distributed*" (United Press 1942). Congressional

appropriations were streamlined and the Army hastily approved construction of new six-inch gun batteries for all three forts.

By October of 1942, construction began on Battery 245 at Fort Stevens, Battery 246 at Fort Columbia and Battery 247 at Fort Canby. These were examples of "regelbau" construction, a German military term referencing use of standard designs in bunker fortifications, often involving several linked subterranean rooms and passageways that protected interior spaces even if the entry was under attack. With these bunkered gun emplacements, the Army intended these batteries to protect the Columbia River's entrance by producing a new "triangle of fire" through two six-inch guns, on pedestal or "Barbette" mounts, designed to deliver a 105 pound armor-piercing projectile with a range of 15 miles or more. These guns were sufficiently powerful to deter any enemy ship that might attempt to enter the Columbia, or fire on it from near-shore waters. These batteries had other advantages too. They eliminated the sometimes problematic ammunition hoists found in the older gun batteries of the three forts, since a single level accommodated all of the interior spaces; the design also built on what had been learned about concrete construction and represented great improvement over the Endicott defenses of 40 to 50 years earlier. Improved construction techniques removed condensation that had plagued the older batteries at all three forts; the new batteries also had their own power sources, switchboards, plotting rooms, latrines, air filtration systems, and even drinking fountains. At Fort Stevens, a new rifle range was added in the sandy flats just to the south of Battery 245, allowing soldiers stationed there to train in use of M-1 rifles. The Columbia's south jetty and Jetty A also were militarized for the first time, with the addition of 90mm AMTB (Anti-Motor-Torpedo-Boat) batteries right on the waterfront. Several of the forts' searchlights were moved and improved; to these were added a number of searchlights along the coast, including 22 lights placed at strategic points from Klipsan Beach on the Long Beach Peninsula down to Gearhart, Oregon. Small power plants were added, including plants to support searchlights as well as new radar facilities at these forts. Other lands outside of the forts, such as an added fire control station in Hammond, were placed in military control at this time.[141] The forts also participated in the extension of support facilities beyond the boundaries of the forts - adding some 34 miles of barbed wire laid around strategic points, and supporting the development of beach patrols. Staffing at all three installations had reached a combined total of 2,800 men by 1943, not including the significant civilian support underlying these efforts (Hansen 1997: Hanft 1980; Hussey 1967, 1957).

As part of this rapid mobilization along the coast, the reach of the military also extended to places with no prior military use in what is today Ecola State Park. The Tillamook Head Air Warning Station (AWS Site J-23) was one of the very last pieces of military infrastructure developed in the study area during World War II, and remained in military control just a little longer than the forts. The top of the headland was acquired in 1943-1944 by the federal government and was developed as the site of a U.S.

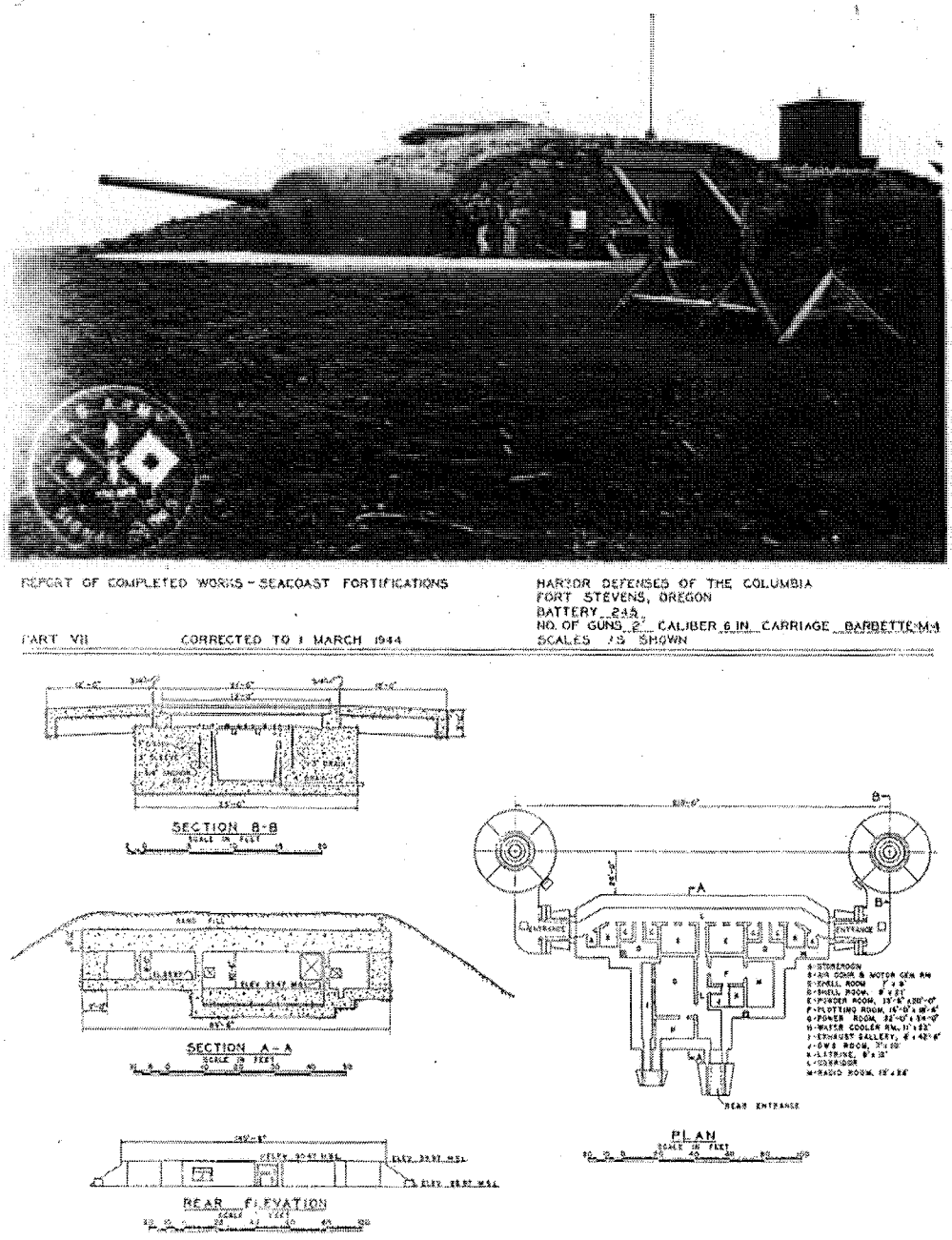


Figure 11.13 – A photo and plan view of Battery 245 at Fort Stevens, constructed rapidly at the height of World War II. The three batteries constructed at the Columbia River forts during this period reflected recent advancements in military standards, including the use of bunkered gun emplacements in a "regelbau" style underground bunker. From War Department, Fourth Army and Western Defense Command; Coast Defenses of the Columbia (03/17/1941 - 1946) – National Archives and Records Administration.

Army radar operations bunker, using early radar to detect the approach of potential enemy airplanes and ships. Sitting just south of the Tillamook Head summit and "Clark's Point of View," the station included a combination of federally-owned acreage and leased lands. In addition to acquiring the former Lighthouse reservation lands, the United State promptly bought fifty acres from Crown Zellerbach for $2,336, as well as leasing one acre from Crown Zellerbach and another 25 acres from the State of Oregon - both leases costing the United States a single dollar (Fanflik 1948). The Tillamook Head Radar Station was code-named "J-23"and was apparently a "Chain Home Low" radar installation of British design, with some portion of the equipment manufactured in Canada.[142] The facility also served as a manual lookout for enemy airplanes and ships. This type of radar facility, also of "regelbau" construction, was ideally located atop steep headlands that gave a commanding position and helped amplify the signal somewhat, with the cliff face below helping to concentrate the signal. The station was one of several along the Oregon coast under the command of the Portland Air Defense Wing, which also included small facilities on Cape Meares, Cape Foulweather, Cape Perpetua, Cape Arago, and Cape Sebastian. On the Washington side of the Columbia, the Seattle Air Defense Wing commanded an array of similar radar installations including one located near Grayland near the northern boundary of Pacific County, as well as at Point Grenville, Cape Elisabeth, Ruby Beach, Cape Flattery, Portage Head, Neah Bay, and points inside the interior waters of Washington (HAER 2005). These facilities were typically constructed by civilian construction companies working under contract by the War Department. Built with intentional inconspicuousness into surrounding slopes, the Tillamook Head radar installation's subterranean bunker is still detectable to passers-by by its six primary vent ports, as well as its two entrances, now both blocked by Oregon state park grates that prohibit human visitors but admit bats. Several buildings, including garrison structures, sat adjacent to this main installation. In a surplus property report by the War Assets Administration, the installation was described in 1950 as consisting of 15 buildings, 14 of which were "*wood frame*," and one described as "*Operations, (underground) concrete, outside dimensions 21' x 80'*" (Fanflik 1950).

The construction of the Tillamook Head radar facility also led to the development of the road to Indian Beach from Highway 101, along the route sometimes known as "Radar Road." A portion of the modern park road between Ecola Point and Indian Beach follows this route, as does the old road grade from Indian Beach to the Tillamook Head summit radar facility, which now serves as a state park trail. (The easternmost part of this road is now a working logging road accessing private timber lands just east of the park.) At the time of road construction, the military determined that the tall timber lining either side of the road from Indian Beach to the summit up the Indian Creek drainage should be removed so that the radar facility would not be cut off from road access in the event of winter tree fall; the long, linear strip of young forest, following the

road through adjacent old-growth, is still clearly visible along this segment of the park road. When this road was developed in 1943-44, the road-builders demolished some significant portion of the Indian Beach village archaeological site (Minor 1991; Ross 1985).[143]

The oral traditions of coastal residents of this period suggest an impressive level of commitment at the civilian level, and hint at the degree to which the war transformed coastal life. There are accounts of horse patrols riding the beaches of Clatsop and Pacific Counties through much of the conflict; some town elders can still identify the locations of stables, sleeping quarters, and even the hay storage racks used to support these operations, which were variously supported by the Coast Guard, the Army and local volunteers. Some describe weapons stockpiles at the Clatsop County airport and other places, creating depots that were suddenly off-limits to the general public. To the south, there are accounts of American bomber aircraft using offshore rocks for target practice, so that the whole scene could be watched with interest from Ecola State Park, and accounts of Highway 101 being closed off so that the Arch Cape tunnel could be crammed with stockpiled munitions. Gas rationing having marooned most Northwest residents in the cities, tourist traffic was negligible. There are accounts of miles of coiled barbed wire and spotlight stations lining the beaches, and of lookout zeppelins flying lazily above the strand - sometimes dragging their tow lines and allowing local children to drag along the beach behind. There are accounts of blackouts, of covered windows and specially designed covers for car lights, which emitted only a thin band of light to avoid drawing the attention of potential enemy craft. There are the usual accounts of bomb shelters and victory gardens and scrap drives. While not yet organized in any one volume, the oral history of this period on the coast is rich and, at the time of this writing, still recoverable.[144]

All three forts were deactivated for military use following the end of World War II due to technological advances emanating from that war - from jet aircraft to nuclear weapons - that made coastal artillery forts obsolete. Even before the war was over, as Japan began its retreat throughout the Pacific, the forts at the mouth of the Columbia were being decommissioned. The last operational old gun battery at Cape Disappointment, Battery Harvey Allen, was being decommissioned by the end of May in 1945. The AMTB guns installed on the jetties were deactivated by July of 1945, barely two and a half years after their installation. Dismantling of the remaining forts began just after the Japanese surrender in August 1945. By March of 1947, when the forts at the mouth of the Columbia had been listed as among 35 Army posts and airfields declared surplus, several older structures had been fully or partially dismantled at all three forts. Further dismantling would continue even as the disposal of the lands proceeded, so that the housing, medical facilities, shops, and other structures built at the bases had largely disappeared before federal authorities conveyed what later became state parks to state and local governments during the mid-1950s. The posts passed into the hands of

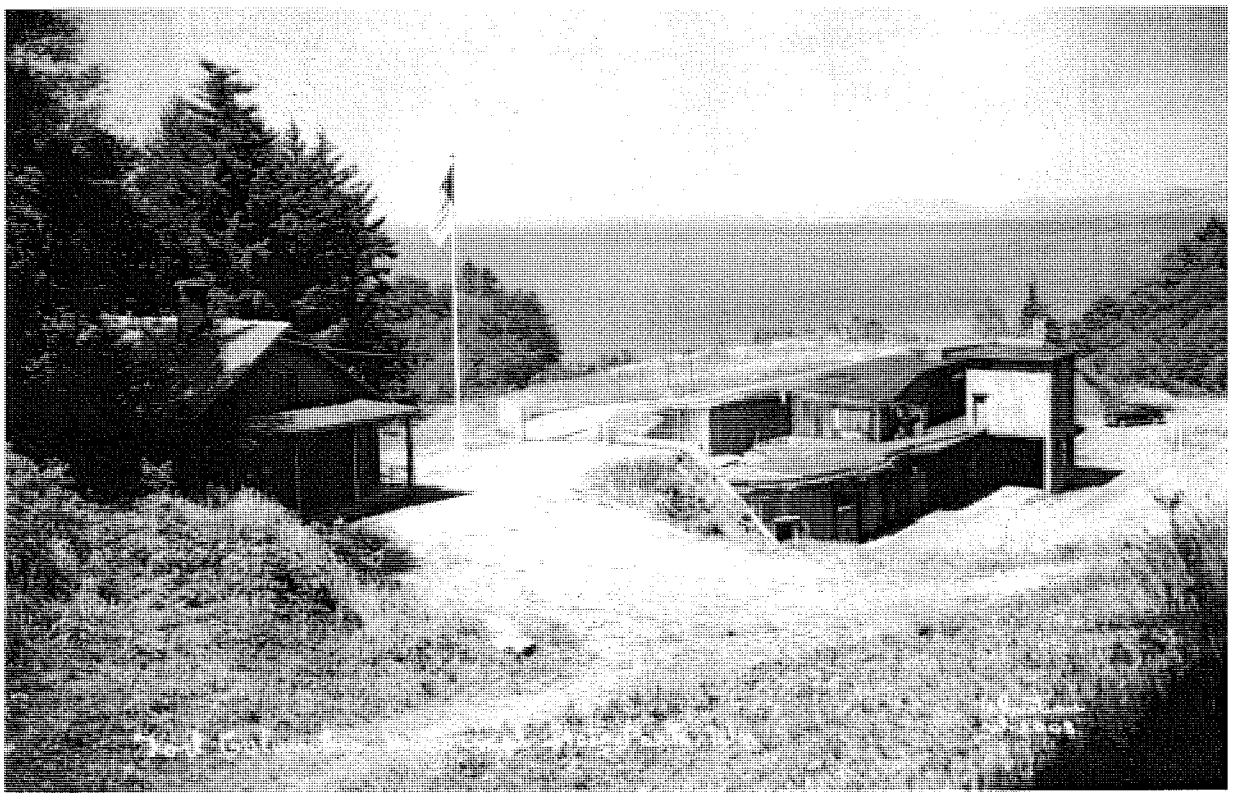


Figure 11.14 – All three forts were declared obsolete, and disposed of as surplus property through the late 1940s. Seen here is Battery Ord, shortly after the transfer of Fort Columbia to Washington State Parks. Cape Disappointment sits in the background – its own Fort Canby transferred to Washington State Parks at roughly the same time. Photo courtesy Washington State Historical Society.

the War Assets Administration in 1947 and 1948. By 1947, the U.S. Army Corps of Engineers took over operations of Fort Stevens, once again using the fort as a base to maintain the mouth of the Columbia River. Almost 492 acres of the Fort Canby reservation went to the Coast Guard at around the same time; the barracks and other salvageable infrastructure were scheduled for sale or removal from Fort Canby, while all Army personnel were vacated from the premises by October 1947 (Hansen 1997; Hussey 1967, 1957). Having wrestled with the specter of obsolescence for much of their existence as forts, they would ultimately succumb to technological changes that would eliminate classic coastal harbor defenses across the entire nation. All three forts would pass to the state park systems on either side of the river in time, a point discussed in later sections of this document. The radar installation atop Tillamook Head was briefly reactivated after World War II and remained active in the late 1940s with upgraded equipment, as the United States retooled old radar installations in response to what was perceived as a growing Soviet threat. The site was decommissioned within only a few years of its extended operation, the land ultimately being acquired by Oregon State Parks to expand Ecola State Park (HAER 2005; Boardman 1956). Of the military facilities

discussed in this document, only Camp Clatsop - now known as Cape Rilea - remains an active military base, serving as a training facility for the Oregon National Guard.

The military history recounted here is a significant story in the region's larger history. The military properties, however, have undergone significant change over time. Civil War era fortifications at Cape Disappointment and Fort Stevens were almost completely subsumed by modernization during the first half of the twentieth century, being demolished to make way for the Endicott-era reconstruction of the batteries at around the turn of the century. Endicott-era gun batteries and associated infrastructure dominate all three fort sites, and are certainly contributing resources in any future National Register nominations that might be completed. Yet, these turn-of-the-century fortifications are in various stages of decay and have not always been preserved in a manner that has protected their "integrity" as that term is employed in the National Register of Historic Places. World War II era construction also obliterated significant portions of the previous military infrastructure, a process that was compounded by the Army's decommissioning of the site and scrapping of all mobile items at the conclusion of World War II. Still, much remains: there are gun emplacements corresponding to the locations of individual batteries, searchlight shelters, power plants, and a variety of other standing structures, in addition to foundations, historical sites associated with military actions, portions of military road systems and many other landscape elements. It is clear that existing National Register nominations could be revised to include the full range and depth of military landscape, much of which is still visible on site. It is also clear that the remnants of these military forts will continue to serve as a cornerstone of public interpretation in these parks for generations to come.

Creating Spaces of Recreation and Conservation In the Columbia-Pacific Region

From the very beginnings of American resettlement on the Columbia-Pacific coastline, people understood the scenic and recreational potentials of this place, with its sprawling beaches, rocky headlands, looming mountains, and views to the Pacific Ocean horizon. Beach resorts were already a widespread phenomenon on the coasts of the American East and Europe; they were known to arriving settlers, who saw potentials for similar development on the beaches of the West. The very remoteness of the coast in the 19th century, and the many barriers to transportation between the coast and the rising cities of the interior Northwest had long posed obstacles to realizing this vision. More than was true of most resource industries, transportation had set narrow parameters for tourism, and yet expanding transportation technologies and infrastructures would eliminate the burden of distance. In its earliest days, tourists were adventurous souls, and disproportionately affluent - having both the money and spare time to reach such a remote place for recreational purposes. Intrepid tourists began arriving on day-long trips by steamship and wagon, which were soon replaced by the railroads, which were replaced just as quickly by the rise of private automobiles. The socioeconomic spectrum represented by the coast's tourists broadened, as the burgeoning middle class of the Pacific Northwest discovered the coast and its tourist institutions became more 'democratic' in outlook. Today, the ubiquity of automobiles and a network of major highways has placed the coast in 'day tripping' range from metro Portland and literally millions of potential tourists.

As the tourists increasingly flocked to the beachfront, to swim, sunbathe, and play in the sand, the entire region experienced a rapid shift of its geographical core - migrating from the small, densely packed industrial settlements on the interior tidewaters to relatively diffuse communities lining the sandy beaches that front the open Pacific. This transition fueled rampant real estate speculation along the beachfronts of the late 19th century, funded in part by the money of local industrialists, a pattern that has arguably persisted and has continued to shape coastal landscapes into the present day. Concurrent with these changes, the people of the Pacific Northwest underwent a fundamental shift in the way that people used and saw the "natural resources" of the coast, reflecting cultural trends both national and international. Throughout the 20th century, a growing number of Columbia-Pacific residents sought to protect scenic and biologically rich landscapes. Especially in those places previously seen as "marginal lands," being too rocky, sandy, or remote for occupation, and often with the backing of tourist interests, they would help create parks and other kinds of protected lands. All of these events would have profound effects on the story of Lewis and Clark National and State Historical Parks.

Like most early history of the region, the early history of tourism intersected with LEWI lands in diverse ways. Travelers along the Columbia often stopped and stayed at Fort George in Astoria through the first half of the 19th century, even if their interests in that place were largely avocational. Elijah White's short-lived hotel development on the promontory of Cape Disappointment in the early 1850s, like those few other contemporaries in the region, provided general boarding for travelers no matter their interests in the area; people who were ostensibly "tourists" stayed at such early and modest hotels alongside ship crews, resource workers, surveyors, and others who passed through the area. Families such as the Latties, on their Seaside lands that included today's NPS Salt Works, operated a guest house for many years in the mid-19th century, feeding and housing people who traveled along the coast for any number of reasons. Indeed, long before any of these events the Native peoples of the coast hosted visitors from myriad tribes who passed through the area for social, ceremonial, and economic purposes; some tribal people today even suggest that the Corps of Discovery were even "tourists" in a sense, and not necessarily tourists of the highest caliber. The question of when tourism actually began in the Columbia-Pacific region could take up volumes, and is more a matter of perspective and definition than it is a matter of firm historical fact.

Figure 12.1 - Prior to the development of railroads in the 1880s, beach tourism was the domain of a handful of hardy souls, such as these Long Beach visitors - willing to travel for a day or more from more urban settings, bringing many of their supplies with them. Photo courtesy Washington State Historical Society.

Yet, certain events were definitive and almost revolutionary. In Seaside, for example, where the Latties' small and somewhat remote guest house was such an important institution, things were beginning to change quickly. By the late 1860s, railroad magnate Ben Holladay would discover the tourist potentials of this area and set modern Columbia-Pacific tourism in motion. Having grown rich running stage lines in the California gold rush and owning the "Pony Express" for a number of years, Holladay moved to Oregon in the late 1860s and worked assiduously to build a new transportation empire in the Northwest. Within just a few years, the brash and confident Holladay would own the Oregon and California Railroad, the Portland Dock and Warehouse Company, the Oregon Transfer Company and the Oregon Steamship Company (which later merged to become part of the Oregon Railroad and Navigation Company - a major player in the development of coastal tourism). By 1871, Holladay had purchased the Lattie family claim and embarked on the development of the first large-scale summer resort in that community, the ostentatious Seaside House, for which the entire community would eventually be named. Here, on lands that included the NPS Salt Cairn site, summer tourists were supplied with food and with entertainments such as storytelling events - all of this supported in part by the Native American community that still lived nearby. Emma Miller provides a description of the halcyon days at the Seaside House based on multiple sources that is salient here:

"[Holladay] maintained a stable of fine horses, barns, and a race track. A foundation was placed in the center of the track; cages of wild animals were on display near the hotel, and tame deer wandered over the grounds. A trap in the river provided fresh fish each day. A flag flew from a flag staff, to be saluted by the firing of a cannon aboard Holladay's steamers as they passed up and down the coast. In that establishment Holladay entertained with a lavishmess which was rare in the pioneer days of Oregon. He brought parties from Portland on his steamers and nothing was too good for the people whose influence or financial assistance he desired. Seaside was looked upon as a "high-fashion" resort and many of the visiting ladies arrived with two or three trunks full of gorgeous clothes." Miller 1958: 254).

With his broad influence in business circles of the region, Holladay used his transportation interests to promote the Holladay hotel in Seaside, and used his hotel in turn to generate business for his fledgling coastal transportation network. The Holladay resort would continue to serve as a center of Northwest coastal tourism well after Holladay's death in 1887. Small clapboard hotels and guesthouses popped up alongside the Seaside House in the narrow strip between the ancient Sitka spruce forest and the strand, many built on lands platted from the old Lattie claim, serviced by wagon and later rail services that had been developed by Holladay and his business associates. In time, this tourist discrict would evolve to become the Seaside "promenade," with its beachfront walkway and shops catering especially to middle-class tourists, modeled loosely on successful east coast beachfront tourist towns like Atlantic City.

Like most very early tourist developments on the coast, the Seaside House was supported by a combination of Columbia River steamers and coastal stage lines that linked tourists, most from the Portland area, to the fledgling resorts of the ocean beach. Unlike most of these early tourist developments, however, Seaside's benefactor happened to own (or have tremendous influence over) a sizeable portion of the region's steamers and stage lines. During this period, with Holladay's influence, the steamship companies of the Columbia established a pattern of carrying passengers to Astoria's waterfront, where they were then transported by smaller boats to wharves connected to crude stagecoach roads leading to the ocean beach. The Oregon Railroad and Navigation Company (OR&N) dock in Astoria, near the site of today's Columbia River Maritime Museum, became the primary terminus for the large river steamers in time, with tourist passengers being brought there by OR&N boats as well as those of competing steamer companies. From here, smaller boats carried passengers and their luggage to smaller docks – with those bound to Seaside landing at various points along the south shore of Youngs Bay (Peterson 2006; Affleck 2000; Timmen 1993; Stewart 1950).

Figure 12.2- Ben Holladay's Seaside House, the opulent hotel that launched the tourist industry of Clatsop County's Pacific coast, as seen in the late 19th century. Photo courtesy Seaside History Museum.

During the early days of Ben Holladay's Seaside House, the Shane family worked with Holladay and the OR&N to run steamers directly from the Astoria docks to the family claim in what is today the Fort Clatsop portion of the park.[145] This was one of several development concepts pursued by the Shanes, and for a brief time the family succeeded in leveraging the development of a dock, a wagon road, and a small stage operation carrying early tourists to Ben Holladay's Seaside resort. Writing in 1900, P.W. Gillette wrote,

"The owners of the property [the Shane family], aided by others, cut out and graded a good wagon road from there to Clatsop plains, and through the Influence of Ben Holladay, the O.R. & N. Co. was induced to run their steamers during the seashore season direct to Fort Clatsop, where the passengers were met by stages to convey them to the seaside resorts. But this route to the seashore was soon abandoned, and the resound of civilization was no longer heard at Fort Clatsop; and I believe it is still silent and alone to this day" (Gillette 1900a).

The road had the advantage of providing a relatively short route to Clatsop Plains and – as the Corps of Discovery appreciated – offered a dry upland landing point along what was a largely marshy and shallow estuarine coastline. Still, the wagon route required the crossing of the low but muddy hills west of Fort Clatsop, as well as a few marshy tidal creeks. The route of the Shanes' wagon road roughly approximated the northern edge of the Fort Clatsop unit, crossing the Skipanon River close to the modern crossing of the Fort-to-Sea Trail. This operation and its wagon road was short-lived, as Gillette suggests, being circumvented by alternative wagon routes – especially steamer docks in Warrenton, near the mouth of the Skipanon River, which offered wagons a straight route, free of hills and running parallel to the creek drainages instead of across them, with large docks and a burgeoning town at its tidewater wharf.[146] Evidence of the original Shane trail is largely absent along its former route, except to the extent that the road was incorporated into later roads and trails, having been long ago overgrown with dense forest.

Similar developments were soon underway on the opposite side of the Columbia River. Through the 1870s and early 1880s, people and goods had traveled from the Long Beach Peninsula to the outside world by a hodgepodge of routes. Some travelers used a preexisting Native American trail to shuttle people and goods by horse or wagon from Ilwaco on the Columbia to Oysterville, on the Long Beach Peninsula, with only a small but dedicated number of recreational visitors attempting this trek. Beginning in 1870, settler Jonathan Stout developed a regular stage line that linked the two towns. From Ilwaco, steamers moved people and goods across the mouth of the Columbia River to Astoria. Meanwhile, on the northern end of the Long Beach Peninsula, steamers brought passengers from wagon roads from the interior Northwest who traveled to Raymond and South Bend at the northeastern head of Willapa Bay, thence traveling by

boat to Oysterville or Tokeland. Both options were slow, but introduced a small number of tourists to the sandy beige beaches of southwest Washington. The small town of Tokeland, and the Tokeland Hotel - the oldest hotel still operating in the state of Washington and a National Register property today - were beneficiaries of this early and somewhat cumbersome arrangement.[147] A beachfront resort sitting on a sandspit on the northern entrance of Willapa Bay, immediately adjacent to the Shoalwater Bay Indian Reservation, Tokeland was in some ways an improbable tourist destination. Yet, with the construction of the Tokeland Hotel (originally the Kindred Inn) in 1885 and the development of other tourist facilities, Tokeland would briefly thrive, hosting visitors from the cities of Puget Sound and also Portland along these routes until rapid erosion washed away sizeable portions of this community and its beach a half-century later.

Figure 12.3 – The wagon between the Columbia River estuary and the early beachfront resorts followed a number of different routes, usually including a long beach trek. For a brief time, the wagons to the Holladay resort met steamships at Fort Clatsop, carrying passengers along a route to the beach, which provided unimpeded passage as far as the Necanicum River– shown here-which could be crossed at low water. Photo courtesy Oregon Historical Society.

The Ilwaco Railway & Navigation Company (IRNC), also known as the Clamshell Railroad, would soon bring dramatic changes to these arrangements. Operating from 1888 to 1930, this little railroad was completely isolated from the larger rail networks of the West, making a small circuit between Ilwaco (and later, Megler) on the Columbia and Nahcotta, Washington on the Long Beach Peninsula. The IRNC was rooted in the operations of a small frontier business, the Ilwaco Steam Navigation Company (ISNC). Arriving on the Long Beach Peninsula in 1872, New York-born Lewis Alfred Loomis was a catalytic partner in this enterprise. After three years in the region, Loomis partnered with Astoria ship captain, J.H.D. Gray, Portland transportation company owner, Jacob Kamm, and Oysterville farmer, John R. Goulter, to form the ISNC. Their company began with a single steamship, the *General Canby*, which was used to ferry passengers and freight between Ilwaco and Astoria. This steam ship, in combination with Stout's Willapa Bay stage line - recapitalized and redubbed the Loomis Stage Line - effectively provided a regular connection between the Long Beach Peninsula at Oysterville and Astoria. Encouraged by their success, Loomis and his partners expanded their steamship line to provide service to Portland, and ultimately purchased the Ilwaco Wharf Company to acquire a landing site in that town, allowing them the option of bypassing Astoria altogether.[148] The partnership continued to expand through the decade ahead, using their direct lines to Ilwaco to secure contracts to deliver mail and a variety of other essential supplies to Ilwaco and the Long Beach area (Ott 2011; CPHM 2009; Jessett 1957).[149]

Throughout the region, the 1880s and 1890s, as the IRNC had developed its infrastructure, competing transportation companies had advanced proposals for various rail lines linking the coast and the interior, bringing a surge of land speculation and development even before these proposals came to fruition. In Washington, the Northern Pacific Railroad extended spur lines into Grays Harbor by 1892 and South Bend on Willapa Bay by 1893. The extension of the Northern Pacific line into the head of Willapa Bay - the only rail line to reach the Columbia-Pacific region by this period - brought a surge of new visitors to the resorts at Tokeland and the northern communities of the Long Beach Peninsula via Oysterville. So too, in Oregon, the Astoria and South Coast Railroad was also making plans for a coastal line south from Astoria to Holladay's Seaside resort, as well as possible links to the Northwestern interior. Loomis, along with ISNC partner Jacob Kamm, recognized that these railroads, entering the region from several directions, posed a threat to their transportation interests on Washington's southwest shore. By 1882, Loomis began to raise capital for the construction of a railway that would be integrated into the company's operations, primarily for the transport of mail. Talk of a new railroad on the north side of the river was met with general excitement, and capital was found on both sides of the river. The Daily Morning Astorian reported in December 19, 1883 that, "*the route selected [from Ilwaco to Oysterville] is an excellent one...and it is reasonable to suppose that the 1st of May will see the conductor at Ilwaco sing out 'All aboard for Oysterville!'*" (1883: 3). In 1884, Loomis commissioned a survey showing feasibility of the railroad project, and by 1887,

Loomis was able to purchase a right-of-way from Ilwaco to the town of Tinkerville, on the Long Beach Peninsula; construction began in spring of 1888 and was complete by July of that year.[150] Accounting for the new railroad portion of their business, the ISNC officially changed its name to the Ilwaco Railroad & Navigation Company (IRNC) later that summer, with Loomis and Kamm becoming its principal managers (Strack 2013; Becker 2012; Jessett 1988, 1957; Feagans 1972).

As in Seaside, the arrival of new transportation linkages to the Columbia River tidewater brought almost instant tourist development. When Tinkerville founder Henry H. Tinker bought the land claim of Charles Reed at that site in 1880, he was apparently already aware of the potential transportation corridor through this land. Though it was largely sand, pine scrub and grassland, Tinkerville was platted to accommodate a booming city well before the boom occurred, and the arrival of the railroad did not disappoint. Tinker provided a depot site along the tracks, and organized the construction of an ornate hotel nearby. With the arrival of the IRNC railroad in 1888, property values in Tinkerville – today's Long Beach – shot upward, rising from roughly eight dollars per acre to two hundred dollars per acre in a matter of months. The size of the town also quadrupled from about one hundred to two hundred cottages between 1892 and 1894. The Tinker hotel and ultimately the whole town was later renamed Long Beach, in part to capitalize on the recreational potentials of that community's greatest natural asset – "The Longest Beach in the World" by some estimations. Tinker's hotel and depot became the nucleus of a tourist community of cottages, boardwalk shops and hotels that spread from this core, along the tracks and toward the beach, in no small part on Tinker's platted lands. The ISNC too began to capitalize on the budding tourist industry, promoting summer beach tourism to drum up new business. While the most revolutionary effects of the railroad were seen in the budding tourist towns of the Long Beach Peninsula, the resource industries of the Peninsula also surged with new life. From the initial Ilwaco/Tinkerville line, the IRNC line continued to grow, and by 1889 a narrow gauge line linked Tinkerville and the wharf at Nahcotta, a premier oyster town and port. The IRNC began to carry large numbers of Willapa Bay oysters from Nahcotta to Ilwaco, where they were shipped aboard the *General Canby* to Astoria - thence to the San Francisco market and beyond. In time, canned clams from Ocean Park, as well as crabs, fish, and cranberries from around the Willapa Bay region would ride the rails of the IRNC (CPHM 2013; Ott 2011 CPHM 2009; Hobbs and Lucero 2005; Jessett 1988, 1957; Feagans 1972).

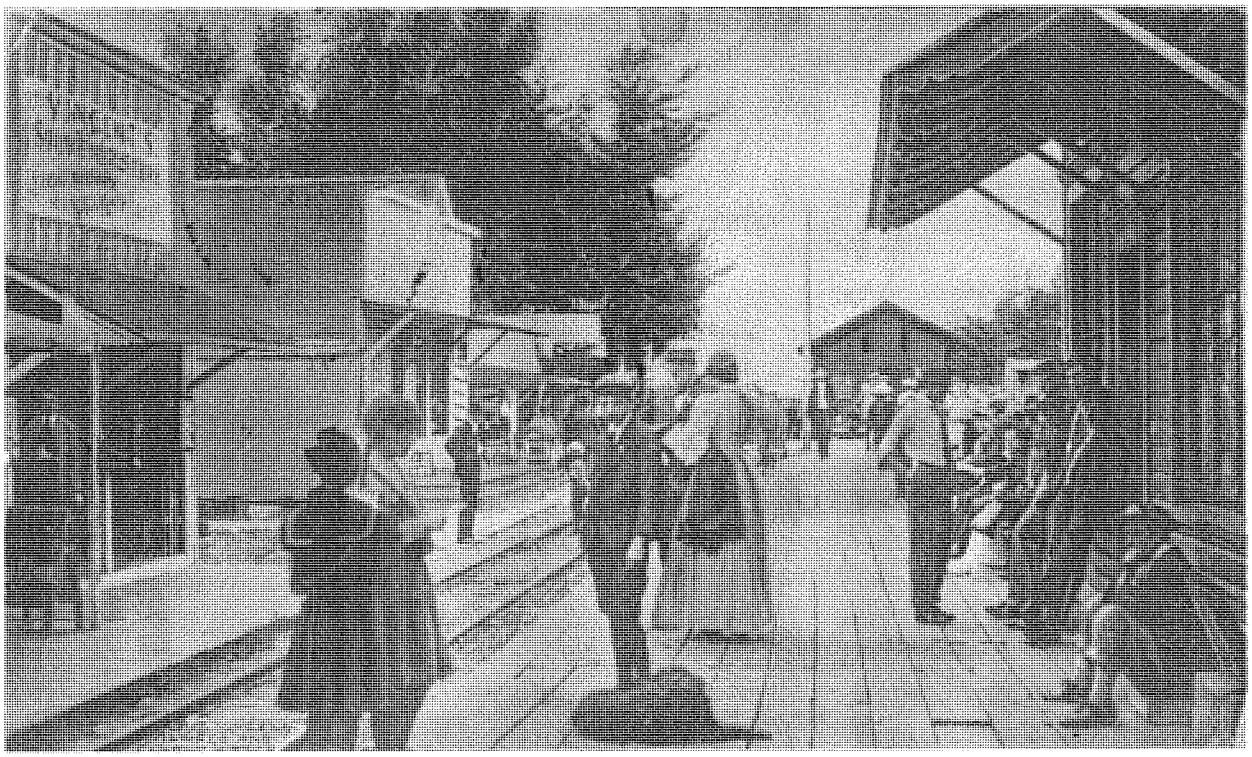


Figure 12.4 – The tourist community of Tinkerville – later renamed Long Beach – first developed along the railroad tracks. The earliest commercial district, sometimes called "Rubberneck Row," developed alongside the Clamshell Railroad depot - visible in the background, circa 1909. Photo courtesy Wikimedia Commons.

By the turn of the century, the Clamshell Railway had become a big business, and even bigger companies began to take note. In 1900, the Oregon Railway & Navigation Company, with its roots in Holladay's enterprises a generation before, had begun buying up stock of the IRNC, and by 1900 had purchased a controlling interest of the IRNC. The OR&N retired Loomis and began to modernize the equipment and rail operations of the company - making them consistent with other OR&N operations and adding lumber shipping services to the Ilwaco operation. Wanting a deeper and less congested terminus that would be accessible through a wider spectrum of tides, the OR&N also determined to move the terminus upstream from Ilwaco. In 1906, the company initiated construction on a 13.4-mile line east along the Columbia River that linked their rails from Ilwaco Junction, just a mile north of Ilwaco, to a new wharf at Megler - its terminus located at today's NPS Dismal Nitch parking area. First called "Cook's Station," this place was later called "Megler Station," and it was briefly among the largest and busiest wharves on the lower Columbia, well-known to the early tourists of the Columbia-Pacific region.[151] The extension of this rail line was no small feat of engineering, involving the development of new rail grades in the spongy tidal margins of the Columbia River, transforming the waterfront of the Station Camp area, and requiring a tunnel to be excavated beneath the military facility at Fort Columbia. (The tunnel is now listed on the National Register of Historic Places as one of several

historic tunnels found throughout the state of Washington.) As part of the Company's arrangements to acquire the tunnel right-of-way, a depot was constructed along the rail line to transport military personnel and goods to the fort above. The costs of this extension seem to have been disruptive to the OR&N, and the Ilwaco rail interests were sold and reorganized in the midst of this extension - becoming the "Ilwaco Railroad."[152]

Under new management, and in spite of a number of engineering and financing challenges, the rail line was completed to the Megler wharf by June of 1908. Two years after its completion, in December of 1910, the entire line was acquired along with 15 other small railroads in Oregon, Washington and Idaho, and placed within the Oregon Washington Railroad & Navigation Company (OWRR&N) - an operation that would ultimately fall under the ownership and management of the Union Pacific Railroad.[153] This consolidation led to changing the name of the original Ilwaco Railroad to the Ilwaco Division (and later Ilwaco Branch) of the OWRR&N. In spite of all these changes, service continued more-or-less without interruption through the 1910s and 1920s, with a train terminus, train turntable, and a ferry dock operating at what is today the NPS Dismal Nitch property, providing access between Washington's southwest coast and the Oregon cities of Portland and Astoria.[154] Certainly there were challenges - small landslides were common along this steep shoreline, and a lawsuit erupted in the late 1920s when it was determined that the turntable sat on Northern Pacific Railroad land. Still, this terminus of a 29-mile, three-foot-gauge railway with no physical connection with any other railroad - the Clamshell Railroad, as it was affectionately called - became the principal link between the tourists of the greater Portland area and the Peninsula, ushering in a golden-age of rail-based tourism that is still celebrated by the local community today.[155] The railroad operated according to the tides, not to an official timetable, as the tides dictated the movement of steamers at either end of its short, but important line. In this capacity, the Ilwaco Railway & Navigation rail was popular with locals and tourists, alike, and played an important role in the lumber, oyster and cranberry industry during its short lifetime.

There were parallel efforts to develop railways to the beaches of the Clatsop County coast too. After a number of proposals to link Seaside and other Clatsop Plains communities to the Columbia River tidewater, a group of local investors led by D.K. Warren - for whom Warrenton is named - were able to pool resources and create the "Astoria and South Coast Railway" (A&SCR). This small railroad extended passenger service from steamer docks on the south side of Youngs Bay, a half mile from Skipanon, to the coastal resort towns of Seaside and Warrenton. This original line was completed between 1890 and 1891, beginning an era of rail-based tourism in Gearhart and Seaside.[156] This rail line almost instantly eclipsed the wagon road networks of the northern Clatsop Plains, while also largely replicating their routes in part. Marshall Kinney, founder of the fish transfer station at Megler Cove, immediately adjacent to the NPS "Dismal Nitch," would also be in the vanguard of this early real estate activity relating to the arrival of this line. In 1888, Kinney had bought out the Phillip Gearhart

Donation Land Claim, and platting and beginning sales of luxury homesites at "Gearhart Park" at the modern location of Gearhart, Oregon. Anticipating the arrival of the rail line, he developed the Gearhart Hotel, the first hotel of consequence in that community and the nucleus of what would – upon the rail line's arrival – become the resort district, as second home owners and hoteliers purchased Kinney's lots adjacent.

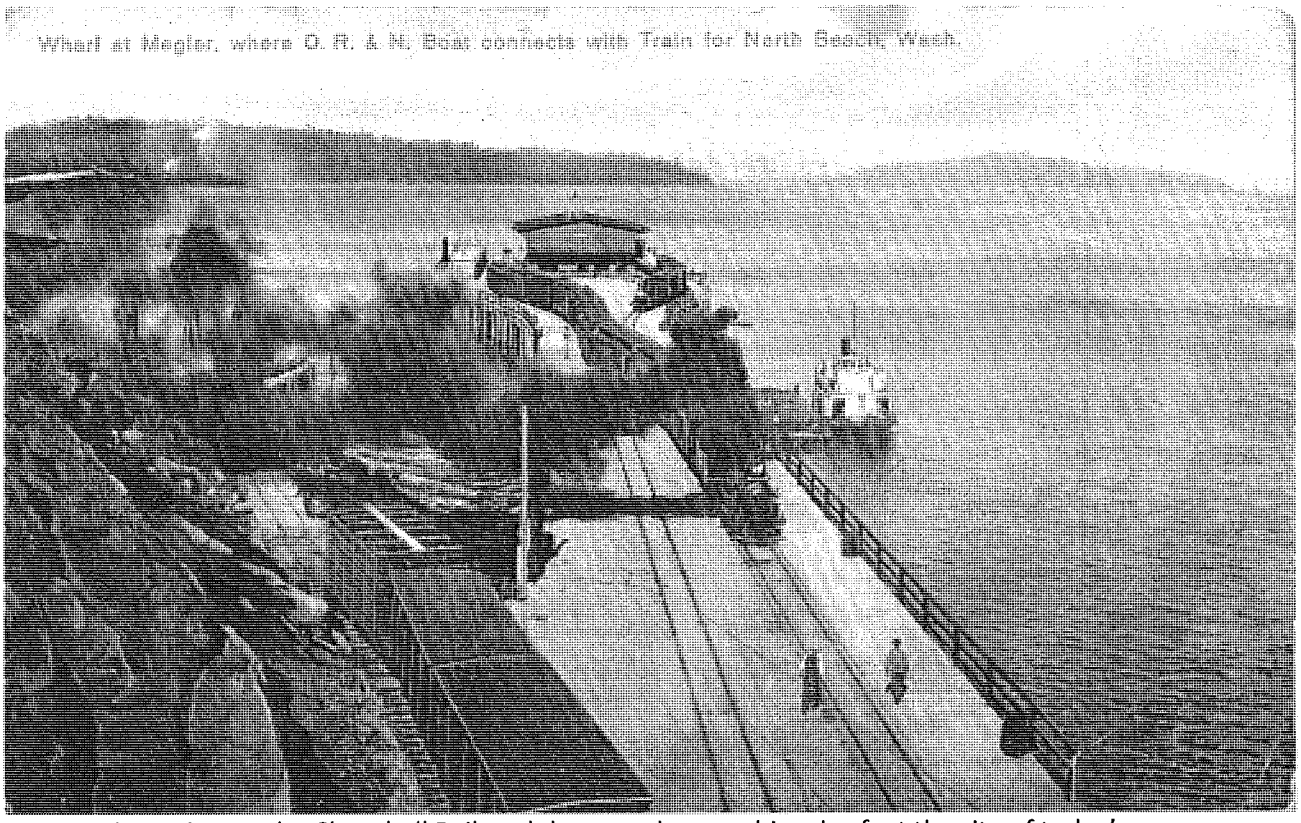


Figure 12.5 – The Clamshell Railroad depot and steamship wharf, at the site of today's Dismal Nitch parking area. Operating between 1906 and 1930, this was the primary point of entry for tourists traveling to Pacific County's beaches. Photo courtesy Columbia Pacific Museum, Ilwaco WA.

Over time, landowners adjacent to these early resorts would plant their own lands to capitalize on the new tourist traffic from the urban Northwest - some increasingly oriented toward mass tourism and some, such as Surf Pines with its "almost-palatial homes" catering to affluent Northwesterners (Miller 1958: 115). As Kinney's case suggested, even the rumors of a rail line could bring rampant real estate speculation. There was speculation that the line would be extended further south along the coast, prompting certain individuals to acquire (mostly through homestead claims) lands south of Seaside, in such places as Cannon Beach and Arch Cape - many of these lands being promptly platted into small lots and sold in urban markets as recreational real estate in imminent railroad towns (O'Donnell 2003; Paulson 2007; Laubaugh n.d.).[157]

Efforts to build a rail line linking this short rail line to the Portland area through the Coast Range encountered myriad obstacles, however, and quickly became bogged down in financial and engineering challenges. This critical link stalled, the small A&SCR underwent changes in ownership, ultimately being incorporated into the Seashore Road Company. In this new guise, the Company turned its attention to the development of local rail lines, constructing a bridge across Youngs Bay, directly connecting Astoria to Seaside by rail, as well as extending a branch line from Warrenton to Flavel.[158] In April of 1895, ubiquitous industrialist A.B. Hammond organized the Astoria & Columbia Railroad (A&CRR) to organize rail development in the region, in a maneuver that would dwarf and, by 1898, absorb, the efforts of the Seashore Road Company. By 1898, under Hammond's management and with the support of Astoria's civic leadership, the A&CRR completed its rail segment connecting Astoria to Northern Pacific Railway tracks in Goble, Oregon, and signed a 99-year lease with the Northern Pacific guaranteeing access from Goble to Portland - instantly linking the coast of Clatsop County to the national rail network for the first time. On May 16, 1898, the first train carried 700 passengers from Portland to Astoria to celebrate the opening of the line (Gordon 2013; Paulson 2007; Miller 1958; ARRPA n.d.).

After changes in ownership, the A&CRR was officially sold to the Spokane, Portland and Seattle Railway (SP&S) in 1911, which operated the coastal line through its subsidiary – another former Holladay enterprise, the "Oregon Traction Company." In addition to spurring the development of the timber industry on the coast, and shipping a large quantity of Columbia-Pacific salmon, the SP&S was highly successful in capitalizing on the tourism potential of the line, actively promoting the coast's scenery and beach resorts. With SP&S promotion, affluent Portlanders began to move to the coast for the summer season, and the working fathers took advantage of the "Daddy Trains," leaving Portland for towns on the coast – Gearhart and Seaside especially - on Saturday and returning for work on Monday. Though the halcyon years of the "Daddy Trains" were in the first three decades of the 20th century, this seasonal pattern persisted in much reduced form through the Great Depression, only disappearing completely in the post-World War II period (Gordon 2013; ARRPA n.d.).

As suggested by these accounts, rail lines brought a flurry of real estate speculation along the ocean coast wherever they went, or were rumored to be imminent, or had even the remotest chance of bringing urban Northwesterners within a short carriage ride of the ocean. Long Beach and Gearhart are instructive examples, but it is fair to say that their experiences set the tone for the entire beachfront of the Columbia-Pacific region. Beginning with the rail development of the 1880s and 1890s, observing the success of these early rail-side tourist towns, the owners of large tracts of land on the outer coast rapidly subdivided their properties into arrangements of so many small lots, in places that had been largely ignored only a few years before. In some cases, longtime land owners, realizing the limited value of their land for agriculture, timber and other

economic purposes, subdivided their families' former land claims to produce potential resort towns; in other cases, people used the Homestead Act and other legal mechanisms to acquire unclaimed lands for the purpose of real estate development. Very quickly, those unoccupied portions of the outer coast - including much of the Long Beach Peninsula, and all ocean beaches of Clatsop County, were being divided up into a patchwork of hypothetical subdivisions. By the early 20th century, even the wind-blown sands on the western portion of the donation James Taylor land claim at Sunset Beach - including everything west of Sunset Lake - had been subdivided into a fine-

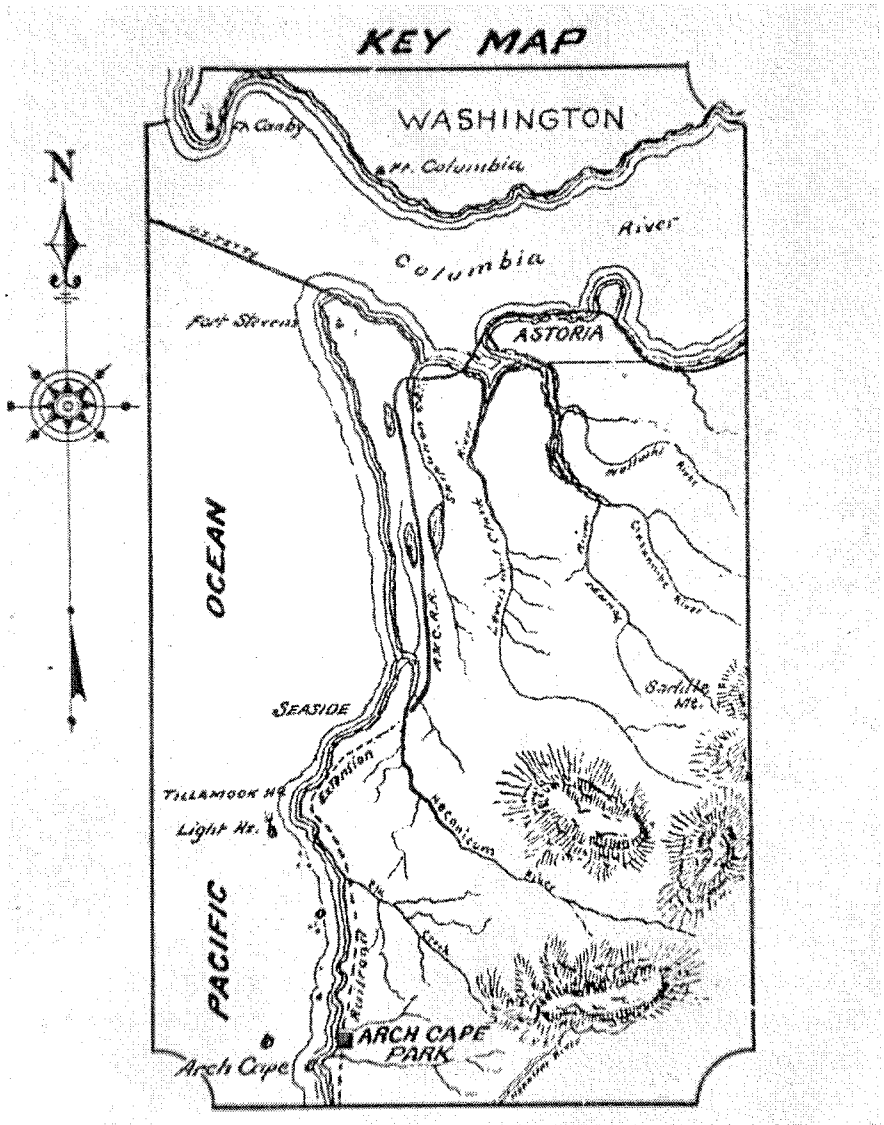


Figure 12.6 – An inset map from the 1908 plat of Arch Cape Park, on the coast of southern Clatsop County – one of several real estate ventures that featured an imagined "Railroad Extension" of the A&CRR tracks over the imposing Tillamook Head cliffs to the elusive beaches south of that headland. Clatsop County Surveyors Office.

grained network of recreational lots oriented toward the beach, while other portions of the land had been acquired by the Astoria Golf and Country Club which was connected to ongoing real estate activity in the area (Miller 1958; Mestker 1930; Lockley 1928).

In practice, some of these impromptu towns soon became the site of actual roads and facilities, but more often existed as a kind of hypothetical town geography in what were, in truth, largely undeveloped forest and dune lands. The configuration and even the names of each partition were strategically designed, some invoking the familiar beach resorts of the eastern United States and event Britain. "Sunset Beach" was among these names, bestowed when the land was subdivided for promotion and sale in that location. Lots in such partitions were often configured so that many buyers might have potential ocean views from their purchased properties, and streets were sometimes thin but dense to allow a profusion of coveted "corner lots" - all enhancing the value of these endeavors. Less scrupulous developers sometimes platted lots on unbuildable parts of their property - down cliff faces, into bays, and onto blowing sand fields - these lots often bought sight-unseen by city people on the basis of vague maps, they created legal headaches for years to come. (Seen in a certain light, they were fanciful: the 50-by-100 foot lots of the initial Seal Rock Beach plat - now Cannon Beach - extended a fine grain of lots across unvegetated dunes and onto broad swaths of the beach concealed at high tide, as well as all of the Chapman Point headland's cliff faces - its promotional literatures showed spindly rope bridges linking these lots to fine pavilion overlooks perched atop the offshore rocks at what would become Ecola State Park.) Many of the marginal lands platted in this manner ultimately found their way to county or state governments in lieu of taxes, being questionable as homesites and ultimately becoming a tax burden on the land promoters or the unfortunate souls who had purchased these lots.[159] Many partitions - especially those of well-capitalized ventures - featured blocks of lots punctuated by lands set aside for promenades, waterfront parks, greenways, rail-side merchant districts, and many other elements meant to present these hypothetical communities attractive as resort towns. Maps of these grand towns, as imagined and depicted by their developers, often accompanied brochures sent to Portland, Seattle, and other urban places, being used as part of their larger land promotion efforts. In truth, surprisingly few of these grand parks, merchant rows, and other features were ever constructed, as lots were developed slowly and somewhat haphazardly within many of these platted communities, stalled by events such as the Great Depression but also by the hard realities of land markets and rough coastal terrain. Still, ironically, the arrangement of these subdivisions today continues to shape the configuration of the coast's towns - with oddly conspicuous gaps in development where grand promenades were once planned, and densely packed roads with superabundant corner lots, for example, reflecting the unrealized visions of 19th century land promoters. Long after their departure, the land speculators continue to shape the land (Meinig 1999; Reps 1992; MacColl 1976).

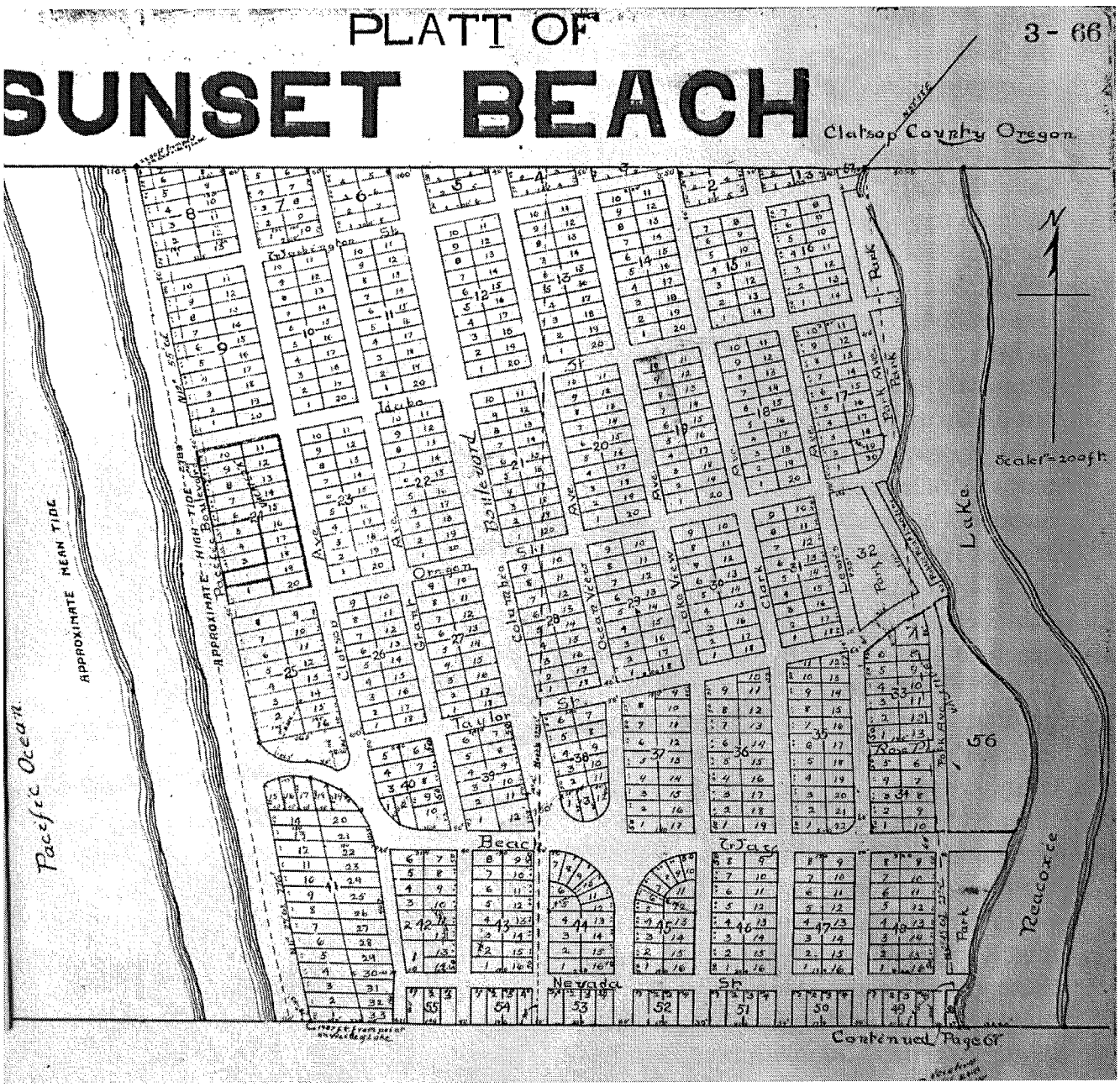


Figure 12.7 – The original plat of Sunset Beach – one of several lining the beachfronts of the region – which laid the foundation for an imagined tourist mecca that now lies partially within the Sunset Beach State Recreation Site - a LEWI park. Wide boulevards lead to the beach and a central commercial district, while streets are named for Lewis, Clark, and 19th century landowner James Taylor. Most of the community was never developed. Clatsop County Surveyors Office.

Soon enough, the era of rail-based tourism would come to an end, as automobiles brought an even larger number of tourists, spread more diffusely along the coast. In spite of a paucity of federal funding, the 1920s witnessed unprecedented highway development along the Oregon and Washington coasts as the state governments sought to improve the very limited access to these areas. In Oregon, inspired by the "Get Oregon out of the Mud" campaign, highway development leapt forward in the 1910s and 1920s. By 1916, Highway 30, the "Lower Columbia River Highway 2W" ran from Portland to the coast along the Columbia River, almost immediately cutting into the business of the passenger steamer and rail routes along the Columbia. The 1920s marked a period of dramatic expansion along the Roosevelt Highway lining the Oregon Coast.[160] Similar developments were underway in the state of Washington: by 1923, the state had developed new state Highways 9 and 12, linking the Pacific Coast to the Puget Sound, and by 1926 these were linked into a coastal leg of Highway 101 with connections to the Long Beach Peninsula. By the Depression era, Works Projects Administration (WPA) funding supported the improvement of several of these older highways, including widening projects and new bridges, as well as the completion of other highway segments leading to the coast. With this federal support, a number of key linkages, long anticipated by state and local authorities, were finally completed with the aid of federal dollars and labor. By 1937, the state of Washington extended Highway 12B from Ilwaco to the Megler dock, further transforming the shoreline of what are today the Station Camp and NPS Dismal Nitch properties, while converting the Fort Columbia rail tunnel into a passageway for private automobiles. Similarly, in the early 1940s, the state of Oregon would finish construction of the coastal section of Highway 101 south of Cannon Beach. Originally planned as a low-traffic detour from the main highway, allowing motorists to behold the impressive scenery of Neahkanie Mountain, this would soon be used as a thoroughfare, allowing expeditious travel to and from the Columbia-Pacific region from the larger Oregon coast. Launched as a combined CCC and WPA project in 1933, completion of the "Wolf Creek Highway" through the Oregon Coast Range was accelerated to support military mobilizations in 1941; being redubbed the "Sunset Highway," Highway 26 was a fully functioning public highway not long after the War's end, allowing what is still the most direct and rapid route of transportation between Portland and the coast. The effects of these highway developments, most occurring over the course of a 20-year span, would be revolutionary along the coast, bringing unprecedented opportunities for development even as it undermined the old transportation monopolies of the rail and steamship companies (Blakeley 2006; Boardman n.d.).[161]

While the development of so many roads represented good news to many of the region's tourists, and to many coastal resort businesses as well, they also marked the death knell of the tourist railroads. Bypassed by the use of personal automobiles, the Clamshell Railroad operated at a loss through much of the late 1920s; the Union Pacific added ferry service from the Megler wharf to Astoria by 1927 in an effort to salvage the wharf's operations, even as other companies began competing ferry operations that

threatened to undermine this business. (This effort emerged amidst what was sometimes termed a "ferry war" in the late 1920s, which witnessed the development of several competing ferry operations along the north shore of the Columbia River estuary - not only at the Megler wharf, but also on the waterfront of McGowan, at today's Station Camp.) Still, by October of 1929, the Union Pacific applied to the Federal Interstate Commerce Commission (ICC) to abandon the original Ilwaco Railroad. As explained by the Union Pacific's magazine at the time, *"This historical miniature road, with no physical connection with any other railroad, has outlived its usefulness to the public after 42 years of service [due to] the substantial improvement of main highways"* (Hays 1930: 15). The ICC granted permission by July 12, 1930, and on September 9th of that year the last train rolled down the narrow gauge Ilwaco Branch to the Megler terminal. The land and right-of-way was sold almost immediately, in part to help offset the railroad's considerable losses. The site would be converted to a ferry wharf, allowing automobile traffic to and from Astoria - a function that continued until July of 1966 when the Megler Bridge was completed.[162] Almost all of the old railroad wharf infrastructure was demolished through the 20th century, with the construction of Highway 12B as well as the development of a Washington Department of Transportation wayside at the site. The Seaside spur of the SP&S line fared little better. In spite of a slightly longer lifespan - thanks to rail connections to the urban Northwest and a host of "Daddy Train" loyalists - this line was eventually discontinued by 1952. The rail line was ultimately sold to Portland & Western Railroad, and much of the railroad and its tracks were decommissioned in the decades that followed.[163] In Seaside, the former rail grade has recently been redeveloped into a public trail and park; so too, the City of Astoria has recently overseen the redevelopment of its waterfront portion of the SP&S track as a tourist destination, complete with passenger trolley service within the downtown waterfront area (Strack 2013; Ott 2011; WADAHP 2010; CPHM 2009; Leahy 2005; Bonham 1991; Jessett 1988, 1957; Feagans 1972; Shaw et al 1949; Hays 1930).

The decline and ultimate disappearance of the tourist railroads had diverse effects on the character of the tourist towns in the Columbia-Pacific region. As business had been in decline, each of the local railways had made efforts to expand their market; not only were fares reduced, but these companies increasingly sought to market coastal tourist desinations beyond the affluent clients that had once been their mainstay. So too, the commercial districts at the terminal ends of these rail lines - Seaside and Long Beach, especially, so dependent on rail-based tourism, developed shops and services to cater to middle-class beachgoers who had traditionally been overlooked by the tourism boosters of the 19th century. As rail-based tourism lagely disappeared, and an increasingly diverse range of tourists came to the coast on new highways, these two towns in particular were well-suited to capture a broad segment of the tourist market - a trend that only intensified as middle-class Portlanders began to flock to the coast in unprecedented numbers in the post-World War II era. In contrast, communities such as Gearhart and Cannon Beach increasingly became second-home communities to comparatively affluent Portlanders, who sometimes actively resisted these populist

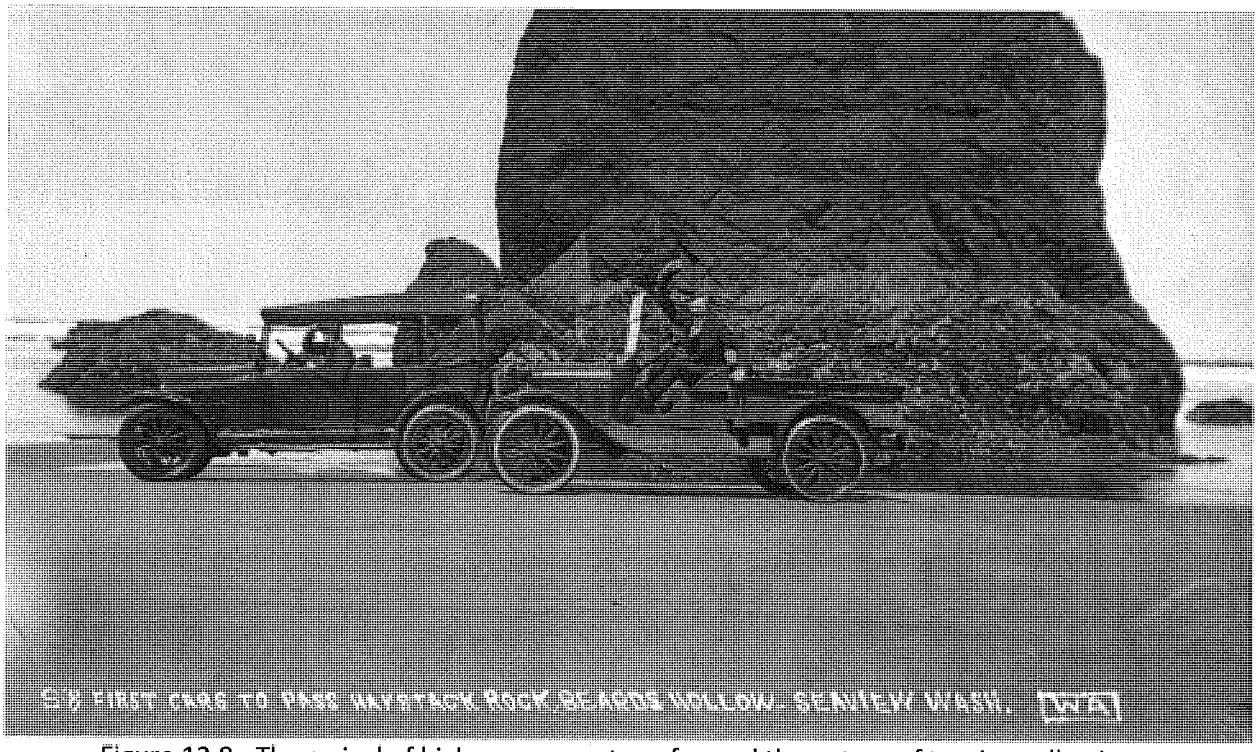


Figure 12.8 - The arrival of highway access transformed the nature of tourism, allowing unprecedented access to different parts of the coastline – such as Beard's Hollow, near the northwestern base of Cape Disappointment - to an unprecedented number of people.

models of tourist development and sometimes sought to limit the scale and character of tourism-oriented development. These patterns, rooted in the 19th century history of the coast, are still apparent to some degree in the differences between these communities today.

The arrival of so many tourists along the shoreline of the Columbia-Pacific region in the early 20th century would have diverse influences on the process of park-making, contributing in time to the formation of Lewis and Clark National and State Historical Parks. Certainly, the idea of creating a historical park or monument at Fort Clatsop had been longstanding. As noted elsewhere, visitors to the Columbia-Pacific region sometimes set out in search of the fort site during the 19th century on impromptu historical tours. The growing accessibility of the coast, however, coupled with growing regional interest in the commemoration of Pacific Northwest history, gave this effort new urgency. In 1899, the newly formed Oregon Historical Society dispatched a team led by Olin Wheeler, and including Portland lawyer and Chief Coboway's grandson, Silas Smith, to find the Fort Clatsop site, the Seaside salt cairn, and other locations from the Lewis and Clark expedition. Community support for some sort of commemorative treatment, and even acquisition of the site was increasingly strong. As P.W. Gillette, a frequent proponent of this idea, observed:

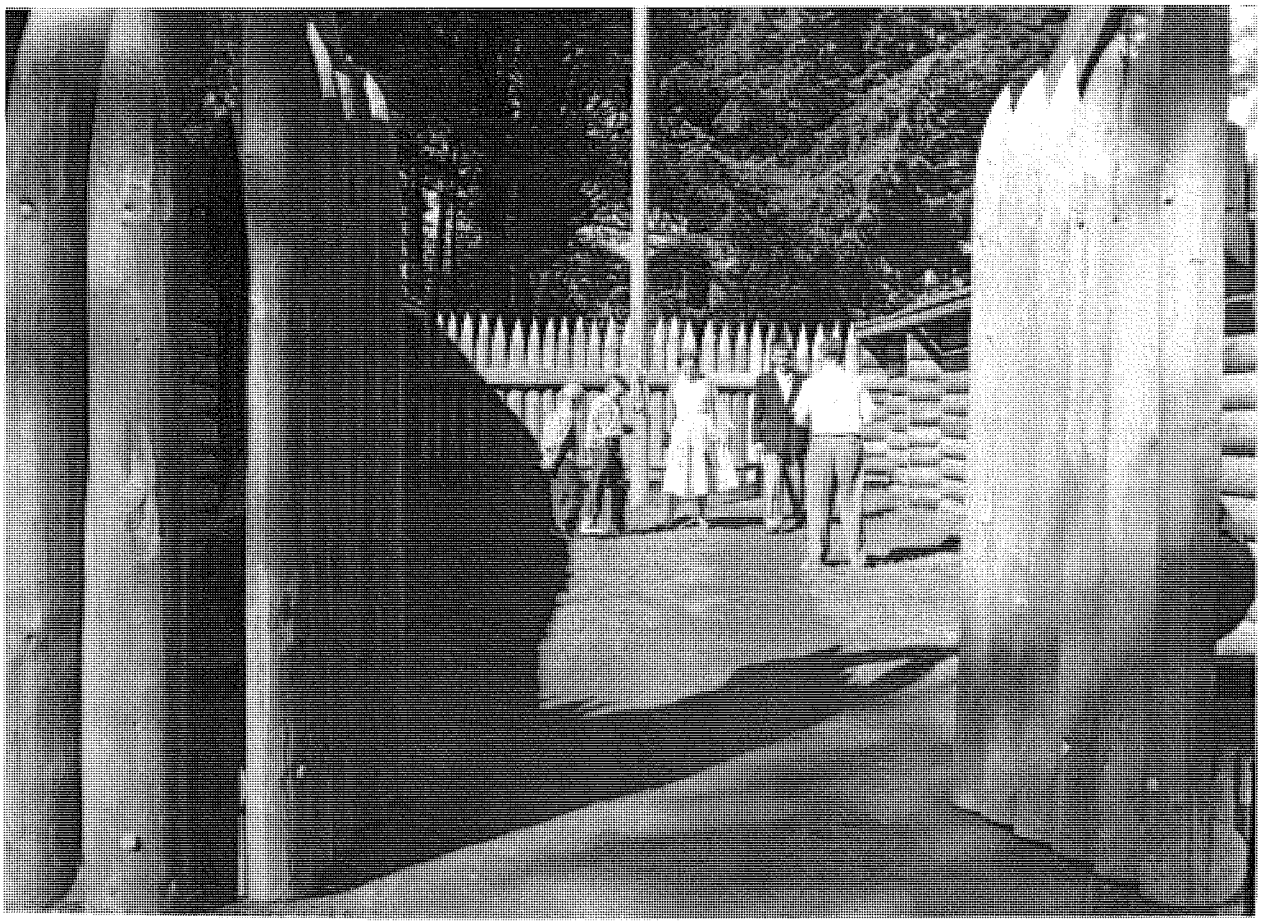


Figure 12.9 – The Fort Clatsop replica, based on William Clark's sketches, became a popular historical tourist attraction almost immediately after its construction in 1955. The original replica burned to the ground in an accidental fire in late 2005, prompting the development of a new replica on the site in early 2006. Photo courtesy Oregon Historical Society.

"I believe the state of Oregon should possess herself of Fort Clatsop, and keep it forever in commemoration of the spot on which the flag of the United States was first planted on the Pacific coast, and of that marvelous exploration of Lewis and Clark which did so much to establish our claim and secure to the United States this vast Northwestern empire" (Gillette 1900a).

The expedition's members were able to interview local residents about the location of sites from the Lewis and Clark expedition, including Jennie Michel, the Clatsop elder who identified the Salt Works site. In time, these efforts led to the gradual public acquisition of both the Fort and the Salt Works sites, beginning with a 1928 purchase of Fort Clatsop lands by the Oregon Historical Society, and leading to National Monument status in 1958, some thirty years later.[164] In 1955, to mark the sesquicentennial of the

Corps of Discovery, a coalition of volunteers constructed a replica of the original fort, and the Lions Club constructed a replica of the Salt Works, both based on William Clark's journal sketches (Daily Astorian 2007; Brown 2006; Cannon 1995).[165]

Yet, surprisingly early in the history of the coast, there were efforts to create parks based on their natural and scenic values - a trend that would come to reshape the region over the course of the 20th century. Admittedly, many of these earliest conservation and park-creation efforts in the region did not fully come to fruition. Prominent among these was a popular effort to declare Saddle Mountain a national park in the early 20th century, well before that mountain's incorporation into a park of any kind.[166] Inspired by the recent creation of national parks surrounding other prominent and scenic landmarks in the West such as Crater Lake (designated as a national park in 1902) a number of Clatsop County residents, including a good many tourist promoters, began to actively advocate for such status for the highest peak in the Columbia-Pacific region. Supporters pointed to the mountain's stunning views of the Pacific Ocean and mouth of the Columbia River from the top on clear days, as well as their desire to preserve examples of standing ancient forest at the mountain's base as timber speculators were moving into these interior lands; some - hunting interests among them - also advocated the park as a permanent reserve for deer and elk that were believed to be imperiled in this rapidly developing northwest corner of Oregon.[167] The land had few competing uses at the time, and civic organizations from many parts of northwestern Oregon came to the support of the concept, in part due to its potential to spur tourist-based economic development - a progressive position, which took hold on Oregon's north coast even before the 1916 creation of the National Park Service. The Oregon congressional delegation agreed, and together these interests worked as a united front to promote the creation of a national park.

As a first step to park creation, proponents succeeded in getting the unappropriated lands around Saddle Mountain temporarily withdrawn from the public domain for the creation of the proposed national park in November 1908. Bills to establish the park on the 1,920 acre withdrawal were successfully passed by the United States Senate in 1909 and 1910, but foundered in the House Committee on Public Lands both times - in part because of uncertainties about funding for park access and maintenance.[168] With changes made to address these concerns, Senator George Chamberlain of Oregon introduced another national park bill for Saddle Mountain in 1912, which passed the Senate and again died in the House.[169] Still undeterred, Chamberlain introduced yet another bill in March 1913, but it met the same fate.[170] At this point park supporters faced a lapse of the temporary land withdrawal, though President Woodrow Wilson intervened on behalf of the national park concept, renewing the withdrawal by executive order so Chamberlain and other members of the Northwestern congressional delegation had time to try yet again. Still faced with an intransigent House, Chamberlain amended the bill authorizing establishment of Saddle Mountain National Park to one granting land for a park to the state in March 1914.[171] Not only did it attract

support from a number of civic organizations in Clatsop County just as before, but also an open letter of support from the Oregon Geographic Names Board signed by its president W.G. Steel - also the founder and superintendent of Crater Lake National Park. Among the proposed park's many benefits, Steel predicted, was that the trees embraced by the grant *"will assist in reforesting the great areas which have been, or will be, denuded by the lumbermen and fires"* (Oregon Journal 1914)

Chamberlain's bill of 1914 granting Saddle Mountain to Oregon as a park and reserve also failed: specifically, within a week of Chamberlain introducing his 1914 park legislation, a business partner of A.B. Hammond - Mr. A.M. Smith, an investor publicly implicated in the Oregon railroad grant land frauds a decade or so earlier - had come forward with land scrip from the Northern Pacific Railroad grant of 1864. Smith wrote to the federal government's General Land Office to inform them that, with this scrip, he had just acquired rights to unsurveyed lands on Saddle Mountain from the Northern Pacific for $2,500.[172] This left the federal government with only 802 acres of the original grant; this was ultimately transferred to the state of Oregon through a bill finally passed by Congress on August 11, 1916 (Armstrong 1965: 182). Oregon had never reserved or operated any state parks up to that time. Instead, the land grant lay fallow with the State Land Board, even after the Northern Pacific "donated" another 600 acres of rocky land near the mountain for park purposes.[173] Establishment of Saddle Mountain State Park did not come about until private parties made another donation of 1,280 acres in November 1928.[174] Their donation went to the Oregon State Highway Commission, which possessed authority to acquire and develop parks for the traveling public, despite being more than seven miles from the nearest highway (Merriam 1992: 219-20; Armstrong 1965: 128; Portland Oregonian 1928). This Saddle Mountain land came just prior to appointment of a full-time state parks superintendent for all of Oregon, Samuel Boardman. With highway commission support, Boardman eventually orchestrated the transfer of the 1,400 acre grant from the State Land Board in December 1935 after having initiated park development by the Civilian Conservation Corps. The park has never been included within the NPS umbrella, but is clearly linked to the history of the LEWI parks in many different ways and may yet be integrated into the interpretive mandates of these parks (Merriam 1992: 219-20; Armstrong 1965: 128; Portland Oregonian 1928).[175]

Other park concepts would soon follow, as visitors became more familiar with the scenic opportunities and challenges of the coast. Among the consequences of road development into the Columbia-Pacific region was that the "negative externalities" of resource extraction were becoming more visible to visitors and policymakers, including a growing number of individuals with no direct personal interests in local natural resource industries. Ironically, this would even lead to the launching of one of the nation's premier state park systems. In late summer of 1919, Assistant Secretary of the Interior and National Park Service Director, Stephen Mather and his ally in national conservation efforts, Madison Grant, petitioning Oregon's governor, Ben Olcott, to

consider the advantages of developing a state park program. Olcott remained unconvinced. Yet, as retold by Thomas Cox, in his book, *The Park Builders*, a trip to Clatsop County, just east of today's Ecola State Park, transformed Olcott's position on the matter:

"a trip to the coast did for Ben Olcott what Mather and Grant had been unable to do, and new life surged into the movement. Olcott, who was deeply interested in the state's developing highway system, had journeyed across the Coast Range to inspect the Cannon Beach-Seaside road (later U.S. 101).Crown-Willamette Paper Company was logging the dense virgin forest that flanked the route, and the scarred, barren hills left at roadside shocked the state's chief executive. On his return to Salem, Olcott wrote to William Pierce Johnson, president of Crown-Willamette, and urged that his firm hold off cutting timber alongside the Cannon Beach-Seaside road until equitable arrangements could be made for its preservation. Johnson's reply expressed general agreement with Olcott's desire to maintain roadside beauty. The correspondence, released to the press by the governor's office, received wide circulation" (Cox 1988: 36).

Governor Olcott's comments on the issue were bold for the times:

"The preservation of forest beauties is a matter of deep concern to the lumber industry. And it is not my intention or wish to deprive private owners of valuable lands of those things which they have acquired by rightful and legal process. This move is not backed by socialistic intent, now any propaganda to disturb the progress of an industry. Rather, I find the timber owners generally eager and willing to cooperate. But it would be wrong to ask them to surrender vast tracts of valuable timberlands without just compensation, nor do I believe it could be done. In fact, vast tracts are not needed to carry this plan to fruition. Isolated tracts tucked away in pretty nooks; virgin stretches of forest along highways, to be retained of sufficient width to leave the beauties of the landscapes unimpaired; new plantings of trees, shrubberies and foliage along the highways, all of these things can be accommodated without too great expense and without arbitrary confiscation of property...

"This matter should not be cast lightly aside. While the hand of man has done much and is doing much to make Oregon a great state, the hand of God fashioned here in the primeval wilderness an ideal earthly paradise which we must preserve as nearly intact as possible without impeding the ordinary progress of civilization" (Olcott 1921).

The Governor launched a successful bill to develop what became the Oregon state park system, under the direction of the state's Highway Department, and hired a special committee to investigate the issue, including real estate investor, L.A. Lewis, who would later sell a portion of his holdings to create Ecola State Park, and Mary Kinney (whose brother-in-law had founded the fish transfer station at the NPS Dismal Nitch, platted Gearhart, and many other things) (Olcott 1921).[176] From Olcott's response to the Clatsop County scenery question in the weeks that followed, the Oregon State park

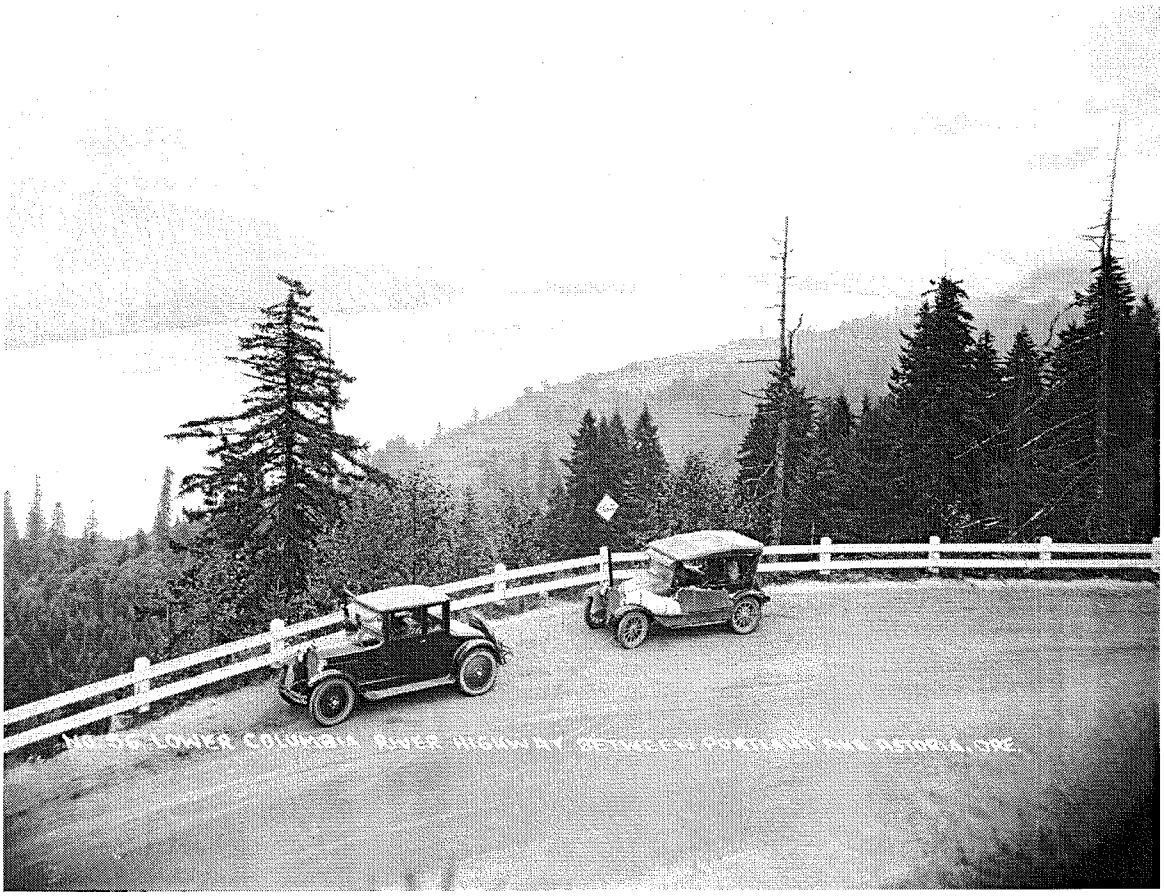


Figure 12.10 – Bradley State Wayside, overlooking the Columbia River, in the 1920s – one of the scenic byways developed along Oregon State Highway 30 as part of the early roadside beautification efforts. Overseen by the Oregon State Highway Department this effort would evolve to become the Oregon State Park system. Roadside beautification initiatives for the Columbia River corridor, launched by such figures as John B. Yeon, would set a precedent for coastal highway and park development in the decades that followed. Photo courtesy Oregon Historical Society.

system was born, starting as a widely supported roadside beautification movement centered on the preservation of roadside scenery and the development of waysides along the rapidly expanding state highway system (Oregon State Planning Board 1938).[177] In time, an Oregon Highway Department wayside designer and roadside tree planter from east of the Cascade Range - Samuel Boardman - was hired to oversee the small division of that department that would grow to become Oregon State Parks.[178]

Among all of the parks within the LEWI umbrella, it was Ecola that was protected for quintessentially scenic reasons - with the considerable involvement of Boardman, this park was in many respects the culmination of the forces set in motion by governor Olcott's park-making initiative. Certainly, the scenic values of the rugged Ecola

shoreline had been long appreciated by travelers along this coast - from William Clark, who beheld there "*the grandest and most pleasing prospects which my eyes ever surveyed,*" to those 19th century figures such as P.W. Gillette, who remarked that he "*was delighted with the scenery along the beach. High mountains of rocks projecting in the ocean – magnificent – and pyramids of rock standing in the sea, beautiful works of Neptune and home to sea fowls*" (Gillette n.d. - July 8, 1863). Collaborating with beneficent land owners in the late 1920s and early 1930s, Boardman would see the grand potential of this place to become, in his terms, one of the "crown jewels" of Oregon's new park system. The families that were instrumental in this process – the Glisan, Flanders, Minott and Lewis families – were in fact a tight circle of extended family and friends. All were members of "Portland society," the men of the group having been part of the Portland Chamber of Commerce and other civic institutions, most being part of the prominent Couch, Glisan, and Flanders families – pioneer settlers and benefactors of early Portland– for whom streets are still named in the center of that city today.[179] This extended family had acquired title to the shoreline from Indian Beach to the vicinity of Chapman Point – lands formerly set aside as U.S. lighthouse reserve, temporarily occupied with a few small lifesaving structures, but declared surplus and made available for private purchase after the completion of the Tillamook Rock lighthouse in the late 19th century. These families had acquired these lands and developed grand ocean-view homes at Ecola Point by the beginning of the 20th century, very near today's principal parking lot at Ecola State Park, and these served as their bases of operations for considerable adventuring and exploration along the northern Oregon coast in the early years of the 19th century (O'Donnell 2006; Glisan 1909; Gainor Minott pers. comm. 2009). [180]

These families' involvement in the creation of Ecola State Park represented a striking early example of private philanthropic efforts involving land conservation for the public good. With ample wealth, guided by strong family traditions of philanthropy and *noblesse oblige*, witnessing the effects of the Great Depression, and having acquired the land from the public trust only a few decades before, these families resolved to give their lands as a park to the citizens of Oregon. Representatives of each family – Florence Glisan Minott, Caroline and Louise Flanders, L.A. Lewis, and Rodney Glisan – placed their holdings in common, creating the "Ecola Point and Indian Beach Corporation," with the intention of donating their shared lands to the new state parks system for public benefit. They agreed to give up their impressive beach homes at Ecola Point to do so. Negotiating on behalf of the group was the celebrated outdoorsman and civic activist, Rodney Glisan. A Portland based attorney, Glisan was an energizing representative of the group – a former city council President, he had also been active in the Portland Rowing Club, the Mazamas and other mountaineering organizations, and was active in many other Pacific Northwest civic and conservation organizations of the early 20th century.

Guided by similar visions and values, Glisan and Boardman developed a congenial professional relationship that would foster a smooth and constructive negotiation of

terms. Together, all parties agreed to transfer most of the families' holdings – representing the initial 451-acre core of Ecola State Park, from its southern boundary to Indian Beach. The extended family consisting of the Glisans, Minotts and Flanders agreed to donate their land outright, though Lewis – a longtime real estate investor, in rapidly declining health – opted to sell rather than donate his share in the company. They agreed to have their own homes dismantled to make way for public facilities in the park's core. In exchange, these families retained tracts for their personal use on the southern end of the park, building new second homes there above Crescent Beach and Chapman Point. Boardman agreed that the park would maintain trails and utility access for the benefit of these families; clearly touched by their sacrifice for the public good, Boardman also worked independently to build a stone monument, still visible in the park today, commemorating the generosity of the families that had donated their lands and their homes for the purpose (Merriam 1992: 175-77).[181] Ecola State Park became an Oregon state park – one of the most visible and popular in the Pacific Northwest - in 1932, only two years before Glisan's unexpected death. As summarized by Samuel Boardman,

"The 450-acre nucleus of Ecola State Park came through the gifts and purchase of the Ecola Point and Indian Beach Corporation of which Rodney L. Glisan, Florence G. Minott, Caroline Flanders and Louise Flanders owned forty-nine percent of the stock and L.A. Lewis, fifty-one percent. The first four gave, without solicitation, their share of the 450 acres which included substantial summer homes. To Mr. Lewis the state paid $17,500 for his share. We have had many gifts of a recreational nature, but never one that so involved pure sacrifice of such a beautiful setting and lovely homes. Would that every visitor could know of the origin of the park through the generosity of Mr. Glisan, Mrs. Minott and the Misses Flanders" (Boardman 1956).

Having secured this donation, Boardman promptly began his efforts to both develop and expand the park, spurred on by local civic and tourist interests, as well as the support of entities such as the State Planning Board. Support for park expansion was remarkably popular among the newspapers and civic organizations of the day, who arguably saw no comparable competing economic uses of this rugged headland – least of all at the height of the Depression – and viewed the preservation of Tillamook Head as contributing to the growing tourist economies of the towns sitting near its base. As the Oregon Planning Board (1934) noted, Tillamook Head was *"a scenic feature upon which much of the property values and resort patronage of these communities have been indirectly predicated."*[182] In addition to reaching out to private timber interests regarding possible land sales adjacent to the donated core of the park, Boardman began actively negotiating for Oregon State Park acquisition of the former lighthouse reservation lands at the summit of Tillamook Head, plans that were temporarily put on hold when those government lands were put into military use at the onset of World War II (Boardman 1956, n.d.).

Figure 12.11 – An early Oregon State Park image of Ecola State Park as seen from Ecola Point – the location of the park donors' homes prior to the creation of the park in 1932. The Civilian Conservation Corps developed trails and other facilities in the decade that followed. Photo courtesy Oregon Historical Society.

The Great Depression would be critical to the formation of the early Oregon park system in particular. Land values were depressed, allowing Boardman to begin acquiring park lands from enthusiastic sellers and agencies in possession of defaulted properties. Oswald West State Park, portions of Saddle Mountain State Park, and other Clatsop County state park lands were secured in this unique context. Moreover, during the height of the Great Depression, the Civilian Conservation Corps would have a role in reshaping most of the units of what is today Lewis and Clark National and State Historical Parks. CCC crews helped reshape the land at the military facilities on both sides of the river, improving roads at Cape Disappointment, but also planting European beach grass and other dune stabilizing vegetation at that facility as well as Fort Stevens and the shoreline of what would become Sunset Beach State Recreation Site. The CCC

also turned their attention to Ecola State Park and Saddle Mountain State Park.[183] With Boardman's intercession, CCC camps were built at both parks to support these efforts. At Ecola State Park, CCC crews participated in several deployments between the years of 1934 and 1941, constructing trails or maintaining historic ones, developing the park road from Cannon Beach, constructing barbeque pits of local beach stone and building picnic tables and caretakers' buildings (Armstrong 1965; Tilden 1962; Boardman 1954, n.d.). Regrettably, a massive 125-acre landslide largely obliterated the core CCC-constructed facilities in 1961 and the remaining CCC-era infrastructure was not maintained with attention to historical character, so that little remains of the CCC legacy in Ecola's landscape today.[184]

Environmental conservation measures would come in other forms during the Depression, including the development of National Wildlife Refuges in the Columbia-Pacific region. The region was (and remains) wildlife-rich, with sea mammals and birds both breeding in, and migrating through, the coastal zone. In Oregon, the boldest wildlife refuge concept of the Depression era centered on the development of the Oregon Islands National Wildlife Refuge. This effort was inspired in no small part by the development of Three Arch Rocks refuge a generation earlier; at those offshore rocks, in nearby Tillamook County, photographers William Finley and Herman Bohlman had witnessed the wanton shooting of seabirds for plumes and for sport, as well as the commercial harvesting of sea lions (for commercial oils) and bird eggs (sold as a fishy alternative to chicken eggs). Based on Finley and Bohlman's efforts, Theodore Roosevelt had arranged for the protection of these rocks in 1907. Inspired by this example, Franklin D. Roosevelt would agree to expand those same protections to all islands and offshore rocks along the entire 320-mile-long coast of the state, creating Oregon Islands National Wildlife Refuge by executive order in 1935. In Clatsop County, this new refuge encompassed all of the rocks immediately offshore from Ecola State Park (the Tillamook Head, Ecola Point and Bird Rocks) as well and Castle Rock in Arch Cape. (The Oregon Islands National Wildlife Refuge became a designated wilderness area under the provisions of the Wilderness Act in 1978).[185] In Willapa Bay, with its sprawling intertidal areas, visited by an impressive diversity of resident shorebirds, as well as migratory waterfowl traveling along the Pacific flyway, Roosevelt saw other opportunities for preservation. Employing the provisions of the Migratory Bird Treaty Act of 1918, Roosevelt authorized the purchase of Willapa Bay lands for bird conservation using money raised by the Migratory Bird Hunting Stamp Act of 1934. He signed the executive order authorizing the Willapa Harbor Migratory Bird Refuge in 1937. Being expanded in the late 1960s and early 1970s as part of the nationwide conservation movement, this refuge, renamed the Willapa National Wildlife Refuge, would manage lands on Leadbetter Point, on the northern end of the Long Beach Peninsula, as well as two refuges protecting intertidal marshes on the lower Columbia estuary: Lewis and Clark National Wildlife Refuge and the Julia Butler Hansen National Wildlife Refuge. All of these refuges are managed today by the U.S. Fish and Wildlife Service (Wilson 2010; Mathewson 1987).[186]

The Great Depression had other effects that would reconfigure the tourist landscapes of the Columbia-Pacific region. In those beach towns founded or platted in the optimistic years of the late 19th and early 20th centuries, community dreams of a Columbia-Pacific tourist mecca stalled. Tourism persisted, albeit feebly, through the Great Depression; even as the economy rebounded in the World War II era, wartime gas rationing and the militarization of the waterfront prevented a sizeable number of potential tourists from finding their way to the beach. Though the development of roads to the coast allowed unprecedented access, many of the region's tourist towns lingered in a sort of suspended animation from the late 1920s through the 1940s, their economies and their main street landscapes far funkier than any real estate promotion might have anticipated. The end of World War II would bring an abrupt rebound, however, as returning soldiers and their "baby boom" families began to explore the coast with renewed interest and affluence. Automotive traffic on the coast skyrocketed, more than doubling its wartime totals by the end of the 1940s, and increasingly steadily ever since (Deur 1994).

The surge in automotive tourism would bring growing interest in state and national park development on the coast. The decommissioning of U.S. military sites at the end of World War II presented a unique opportunity to accommodate those interests, ultimately playing a critical role in the development of the network of federal and state lands that now represents Lewis and Clark National and State Parks. Almost all of Cape Disappointment State Park, Fort Columbia State Park, and Fort Stevens State Park, as well as portions of Ecola State Park, became parks as part of this abrupt conversion of lands from military and recreational uses at the end of the War. As of 1947, the U.S. Army announced that the three cornerstone military facilities at the mouth of the Columbia were obsolete, bypassed by the rapidly developing military technologies of the time. At the conclusion of World War II, the U.S. War Assets Administration (replaced by the U.S. General Services Administration (GSA) in 1949) was given responsibility for disposing of the properties. The communities at the mouth of the Columbia, having watched the forts struggle for decades to upgrade their facilities to limited success, were not surprised by these developments and generally supported the conversion of military lands to park use.

By the late 1940s, there were slow but ongoing discussions between the federal government and Washington State Parks regarding the possible acquisition of the two Washington military forts for use as state parks. In contrast to Oregon's breakneck pace of park development in the pre-war years, Washington's state park system was relatively small, but preparing for a period of rapid expansion prompted in part by the post-War surge in automotive tourism. The park system was lean, and increasingly eager to add scenic places such as Cape Disappointment and Fort Columbia to their holdings - especially in the southwestern corner of the state, which represented a veritable "black hole" in the state's park system up to that time. In many respects, the

park's nascent status simplified the process of acquisition of the surplus military lands, which occurred in a rather bureaucratic "slow motion transfer," apparently with little objection or fanfare. Local governments, newspapers, and nonprofits had already been lobbying in favor of park acquisition of these lands since 1947, when they were first declared surplus – spurred along by even more eager promotion on the south side of the river relating to Fort Stevens. Washington State Parks was formally approached by the U.S. General Services Administration (GSA) regarding the availability of the lands at Fort Columbia in March of 1950. The Washington State Park Commission agreed to

Figure 12.12 – After the decline of tourism through the Great Depression and World War II, tourists effectively rediscovered the ocean coast in the post-War era, with newfound affluence and a highway system that had been much upgraded in the intervening years by WPA and military efforts. These visitors to the Washington coast stand near Beard's Hollow, with Cape Disappointment in the background. Photo courtesy Oregon Historical Society.

sign the transfer agreement, and in June of 1950 the Commission voted to accept the property as a State Park. Several land transfers were involved: the first deed to the property is signed in June of 1950; in June of 1954 the Commission dedicated the museum in the barracks, and signed another deed transferring additional portions of land - including the mine casemate and switchboard. A final land transfer from the GSA was approved by the Commission in May of 1958 and the third (and apparently final) deed was signed in June of 1958. Washington State Parks did not add visitors facilities to the park until the latter half of the 1960s (Alex McMurry, pers. comm. 2013; Louter 2010; Cox 1988; Hoyt et al. 1949; Boardman n.d.).[187]

The acquisition of Fort Canby - while a little more complex due to the site's many historical uses - followed similar lines. An initial deed to the State of Washington from the GSA was signed in 1957, transferring portions of the fort property to the state; a series of subsequent deeds were signed through the 1960s, reflecting the relatively complex pattern of land ownership at Cape Disappointment up to that time. Through this process, the state acquired park lands on the northern part of the cape, including the lands around the North Head lighthouse, as well as a strip of land extending west across the point from the modern visitors' center. The federal government, not wanting to depart with certain strategic lands and assets, retained a portion of the headland, which was transferred to the ownership of the Bureau of Land Management (BLM); the BLM, in turn, allowed for a long-term lease of those lands to the State of Washington for park use. The Army Corps of Engineers retained the southern portion of the Cape, including the Columbia's north jetty and adjacent beaches, but also allowed these lands to be managed as part of the new state park. Land transfers have continued into recent times, involving no less than 16 different parcels, involving 11 state, federal, or local government agencies, all contributing to the expansion and consolidation of the park. As at Fort Columbia, Washington State Parks did not begin developing new infrastructure, including campsites and visitor facilities, on the property until roughly 1966 (Alex McMurry, pers. comm. 2013).

The acquisition of Fort Stevens, while initiated even sooner than the Washington proposals, did not go quite as smoothly. By 1946, well before the GSA had even formally announced Fort Stevens' availability, Sam Boardman was beginning to petition for acquisition of the fort by Oregon State Parks. As he observed in one of his early reports on the matter, "*The idea of converting this former military reservation into an Oregon state park has much to commend it. The site itself is historic, in surroundings that are identified with the earliest written history of the Northwest...there is a wide choice of buildings for any and all needed park purposes, and ample cleared land for further development or the installation of any specialized park features...If surf bathing is desired, there is a splendid beach on the outside of the spit*" (Boardman 1947: 6-7). Like Cape Disappointment, the proposed park in truth contained a complex patchwork of federal, state, and county land ownerships, reflecting the complex history of the site, as well as a garbled pattern of land ownership associated with the accretion of new lands since jetty construction in the late 19th

century. The newspapers and civic organizations of the northern Oregon coast – from the Astoria Chamber of Commerce, the Warrenton grange, local Kiwanis Clubs, the editors of the Astoria Daily Budget and the Oregonian, and many others – were soundly behind the proposal, actively lobbying the state government and Oregon's congressional delegation to foster the transfer of the fort to the State of Oregon for park use. The State Highway Commission, whose approval was required for all new park acquisitions, did not agree. Overwhelmed by Boardman's ambitious park-building efforts of the last two decades, apparently wary of the gargantuan maintenance responsibilities associated with the old fort facilities, and unclear on its public value, the Commission soundly rejected Boardman's formal proposals to acquire the land – not once but twice. Moreover, matters of ownership were complex: the Army Corps of Engineers still wished to retain facilities and access rights as inholdings in the proposed park and – as with Cape Disappointment – it was unclear that the federal government was willing to relinquish control to such a strategically sensitive location. The GSA abandoned the idea of a simple transfer of the properties to Oregon State Parks and by 1949 was appraising the fort property for a possible auction sale. State negotiations on the matter continued even after Boardman's death. The City of Hammond, supportive of a park proposal and concerned about alternative uses of the land, stepped in to acquire those lands on the town's borders that were available for sale from the GSA; by the mid-1950s, Hammond transferred some of the key portions of the fort – including the northern batteries – to the state for park use. Clatsop County also transferred lands to the State of Oregon in the 1950s to augment the proposed park. (This tumultuous history produced a patchwork of ownerships that persist on the land today, with private ownership of historical fort houses, and late-20th century subdivisions sitting a stone's throw from certain facilities such as Battery Clark.) As at Cape Disappointment, the federal government opted to retain a large portion of Fort Stevens, but the State of Oregon was able to secure a long-term lease of fort lands for development of Fort Stevens State Park; various state and county lands on the perimeter of this federal land were transferred to the State to expand the park on its margins. As on the north shore, the Army Corps of Engineers retained those areas adjacent to the south jetty, but in time agreed to provide enduring recreational access to the jetty and other Corps lands as part of the larger park. The State of Oregon began its own dune stabilization efforts on the cape, and by the late 1950s was developing new tourist facilities – parking lots, public toilets, and some modicum of interpretive signage – on the former fort site (Merriam 1992; Boardman 1956, n.d.). [188]

The Oregon State Highway Commission was more sympathetic to Boardman's efforts to acquire the surplus radar station and adjacent lands on the top of Tillamook Head, as these were scenic properties, contiguous with an existing state park at Ecola. Boardman's efforts to acquire the surplus government property on the headland prior to the War established a precedent, and the transaction was completed with relative ease following the final federal disposal of those properties. Less than a year after the end of World War II, Boardman notified the War Assets Administration's real estate

division in Portland of the state's interest in acquiring the military lands on top of Tillamook Head: *"Lot 3 would give control of the Head proper to the state and facilitate the future recreational development of the area. I desire to file an application for the aforementioned lot 3 if and when it becomes surplus property"* (Boardman 1946).The Seattle Regional Office of the War Assets Administration declared Tillamook Head AWS to be surplus property in March 1948 (Fanflik 1948). However, the action was withdrawn the following month by the Office of the District Engineer of the War Department, *"in view of the continued need for the Tillamook Head Radar Site J-23, Oregon by the Department of the Air Force."* All lands and facilities of Tillamook Head AWS were restored to active status under the jurisdiction of the Air Force (Hoffman 1948). In 1951, the state made another attempt to acquire Tillamook Head AWS when the Oregon State Highway Commission filed an application for surplus property with a justification for priority transfer based on the lot's intended use as a *"public park, public recreational area and/or historical monument"* (State of Oregon Highway Commission 1951). The state bought the lot in 1952, which included 50 acres of fee-owned land, 45.79 acres of easement, 17 buildings, and utilities. The purchase price of $2,195—half the fair market value—reflected the "50 percent public benefit allowance" allowed by the War Assets Administration and its successor GSA (War Assets Administration 1952). At the same time, Boardman negotiated with Crown Zellerbach for the sale of adjacent timber lands to the park, including some portion of those lands that the company had leased to the federal government as part of the radar station. By the end of that decade, Boardman had finally achieved his minimal vision for Ecola State Park, having acquired the outer arc of Tillamook Head from Crescent Beach to the southern edge of Seaside for the State of Oregon. Boardman noted to Fred Andrus of the Astorian Budget newspaper that he wanted to expand the park further, but negotiations with Crown Zellerbach had stalled: *"I needed more but the Corporation wouldn't sell. I have my foot in the door and we can press to the east at some later date."*[189]

Through the mid-20th century, and into its later decades, tourism rebounded in the beachfront towns of the coast. In places, the success of beach-based tourism actually began to match the visions of early town promoters - driven not by rail access, but by automotive tourists, especially those making relatively brief trips to the coast by highway from the burgeoning metropolitan areas of Portland, Seattle, and even Vancouver, B.C. A number of communities experienced a revitalization of their old downtowns, their rail lines long ago dismantled, their through highways often rerouted to produce inviting pedestrian districts. In an effort to match tourist expectations and match a certain coastal archetype, many communities began to refashion their commercial districts in New England themed coastal architecture, with an abundance of nature imagery in signage and landscaping (Deur 1994). In certain settings, residential architects also experimented with these themes and others - integrating native woods, adopting New England elements or rustic lodge architecture, and nestling homes sympathetically into the unique natural landscapes of the coast. A major catalyst for this effort in architectural circles was John Yeon, a celebrity Portland architect, and son of

timber magnate and philanthropist, John B. Yeon (who, among many other accomplishments, was a leading figure in the development of the parks and scenic byways of the Columbia River Highway in the Columbia Gorge). Through the 20th century, John Yeon had acquired parcels of land in the Columbia-Pacific region with the intention of developing showcase houses that capitalized on native architectural movements, developing a regionally distinctive Northwest modernist style that sought to integrate residential structures elegantly into their natural surroundings.[190] One of the parcels he acquired for this purpose included Chapman Point and the adjacent dunes just beyond the southern end of Ecola State Park, lands that he ultimately did not develop. Following John Yeon's death in 1994, his heirs sold the dune lands to private buyers with the aid of a real estate brokerage, securing development rights that were contingent upon their agreeing to place Chapman Point into permanent conservation status. This land was designated as the John Yeon State Natural Site and placed in Oregon State Park management, effectively extending the preserved portion of Ecola State Park southward, to the northern edge of Cannon Beach. Meanwhile, John Yeon's brother, Norman Yeon, developed his own elegant beach home, just south of what is today the Sunset Beach terminus of the Fort-to-Sea Trail. While John Yeon apparently had no direct input on the design of Norman Yeon's house, the house nonetheless displays many design elements characteristic of John Yeon houses - not the least of these being the graceful integration of the house footprint into the natural contour of the stabilized dunes, fronting a small dune lake. Norman Yeon had willed this beach home for the benefit of the public; following his death, with the aid of the North Coast Land Conservancy and the Trust for Public land, his house was transferred to the management of Lewis and Clark National Park, becoming one of the LEWI parks by 2009 (Longenecker 1995; Vaughan and Ferriday 1974).[191]

The rebound of tourist towns was, in truth, not uniform. Bay-front towns, often with an abundance of old industrial infrastructure and no ocean beach access, came relatively late to the tourist trade, capitalizing on niche tourist markets, their historical buildings, and a kind of gritty authenticity that is elusive on the beachfront. In some cases, even the beach towns were hamstrung by natural causes: the beaches and dunes had continued their slow westward march, in the same vexing process that had made Clatsops move their villages periodically over the last 3,000 years, now much accelerated by jetty construction and Soil Conservation Service plantings. Many of the beachfront towns found themselves landlocked - the large beachfront homes of Gearhart and Long Beach increasingly sat a long march through the dunes to the sea. Today, the truly beachfront towns, where one can spy the sea from main street, are few: one could walk from the mouth of the Columbia along the beach southward and not see any congregation of structures resembling a town until reaching the Necanicum estuary, in spite of the large and bustling communities concealed a short distance behind the dunes along this entire reach. To the north, the formerly beachfront main strip of Long Beach lies surprisingly hidden behind European beach grass and shore pine on low sloping banks of sand. While providing pleasant solitude to beachgoers, the

situation is not quite what these town' founders had in mind. This has favored tourism development in those few towns still possessing direct views and easy access to the beach, such as Cannon Beach and Seaside, with its beach-front promenade. In turn, it has hindered tourist development in places further north, such as Warrenton, where tourists may pass through but do not always linger for long to appreciate the scenery.

With all of this sand, issues of beach access became increasingly critical - not only to individual tourists, but to the integrity of the ascendant tourist economy. As with the matter of state parks, events in the Columbia-Pacific region significantly shaped the broader national and state histories of public beach access. Efforts to privatize the beaches began almost as soon as early tourist promoters completed sketching their plat maps, showing private lots extending to what were, in truth, beaches and dune fields. In both states, there had been efforts to fence off private beach lands, resulting in pushback from not only recreational users but the many people who had relied on the beaches for transportation. Especially on the Oregon side of the border, where headlands and rugged mountains confined travel to the strand, access to the beaches had long been required to transport people and goods between communities prior to the completion of state highways. The issue was of particular concern to Oregon's progressive Governor, Oswald West, who frequented Oregon's north coast and witnessed the effects of early beach privatization efforts on tourist mobility firsthand. (The matter was also of personal importance to Governor Oswald: he would build his beach home, perched in front of Haystack Rock in Cannon Beach, here it was only accessible by beach from the wagon road terminus at Ecola Creek.)[192] In 1911, Governor Oswald West would issue a declaration that the beaches of Oregon were public highways, necessary for unobstructed public transportation. This effort earned him national attention, as well as the admiration of President Theodore Roosevelt, who praised West as *"a man more intelligently alive to the beauty of nature...and more keenly appreciative of how much this natural beauty should mean to civilized mankind, than almost any other man I have ever met holding high political position"* (Roosevelt 1911).

Over a half century later, the stretch of beach just below Oswald's former beach house would become the center of legal challenges that would extend the scope and precedent of Oswald's legacy - making Oregon's beaches a national model for public access. Cannon Beach motel owner William Hay sought to exercise exclusive claims to the beach in front of his family's hotel in mid-town Cannon Beach; as an outcome of ambitious 19th century lot division and promotion, the Hay property line technically extended from the broad sandy beach from the Hay house to Haystack Rock. In 1967, noting that beach transportation had been eclipsed by highways and the dry sand areas above mean high tide were impassible by vehicle, Hay constructed a fence around the beach above the mean high tide line and sought to expel beach visitors who were not paying guests of his hotel. The state demanded that Hay remove the fence, but he refused to relent, resulting in public protests and even a widely-publicized airlift of

Figure 12.13 – Oregon Governor, Oswald West – a prominent figure in the Progressive-era coastal conservation, riding his horse on Chapman Point, on the southern end of Ecola State Park, in what is now the John Yeon State Natural Site. Photo courtesy Oregon Parks and Recreation Department.

Governor Tom McCall to the beachfront by helicopter. In response, the Oregon legislature passed the "Oregon Beach Bill," which McCall signed into law in July of 1967. The law, which survived seven separate lawsuits by developers and landowners in the following five years, ensured public access to the high tide line in perpetuity based on the century and a half of prior public use of these areas; the law was based on the legal doctrine of "*adverse possession to the broader common-law definition of use by custom, cementing into place public ownership of all of Oregon's beaches*" (Thoele 1998: 350-352). (The beach controversy had other, initially unintended consequences, including the 1968 addition of Haystack Rock to the Oregon Islands National Wildlife Refuge.) As with Oswald West's proclamation over a half century before, this move would draw national attention, establishing the legal foundations for the use of the beach along the entire coast of Oregon, but also influencing legal opinion and precedent regarding beach access in other states (Love 2003; Thoele 1998; Merriam 1992; Cox 1988; Oregon State Parks 1977).

Today, the pressures for tourist development and conservation have definitive, and sometimes competing, influences on the landscapes of the Columbia-Pacific region. As the old town plats are filled in, real estate interests look to new lands beyond the towns' margins, for development opportunities. The grand period of state park creation now largely a thing of the past, nonprofit organizations have played an increasingly central role in land conservation initiatives. Often working alongside local governments and land management agencies, non-profits have worked to set aside scenic and biologically significant places - often expanding preexisting parks and refuges on their margins.

Figure 12.14 – Oregon Governor Tom McCall enjoyed broad public support for his initiative to protect public access to the state's beaches. In 1968, McCall would pay a visit to the contested Cannon Beach shoreline between the Hay motel and Haystack Rock, as would a number of different demonstrators supporting legal action to defend public access rights. Photo courtesy Oregon Historical Society.

Especially since the 1970s, The Nature Conservancy has had a role in this process – helping to add the Ellsworth Creek Preserve on Willapa Bay to the Willapa National Wildlife Refure, and to set aside Columbia estuary lands outside the National Wildlife Refuge system to Blind Slough Swamp and Robert W. Little Preserve, for example. In the late 1980s and early 1990s, Ecola Park was effectively expanded eastward through land purchases involving The Nature Conservancy, Oregon State Parks, Cavenham Industries, and major private donors including the Feldenheimer family - partially realizing Boardman's wish to "*press to the east*" from the Ecola cliffs with the addition of the Elmer Feldenheimer Reserve.[193] Local and regional nonprofits have played growing roles as well; growing rapidly since the 1990s, the North Coast Land Conservancy is now the single largest landowner in the Seaside area, excluding timberlands beyond the city limits, and has aided in public fundraising efforts to set aside protected lands in many parts of Clatsop County – including the Norman Yeon property and other places adjacent to the LEWI park units. Founded in 1990, the Columbia Land Trust has purchased lands along the Columbia estuary, often for habitat restoration purposes, including lands within view of the riverfront units of Lewis and Clark National and State Historical Parks; this organization has helped pioneer new approaches to conservation that protect working landscapes, such as the conservation of farm lands that continue to be working farms but have active restoration of salmon and waterfowl habitat. In recent years, the region has witnessed efforts to expand conservation

initiatives to the seas, including proposals for the development of National Marine sanctuaries– one of the first successful proposals in the Pacific Northwest leading to the development of a sanctuary offshore from Oswald West State Park at the south end of Clatsop County. Though state park development has been comparatively modest in recent times – a victim of shrinking budgets, rising property values, and sometimes complex political realities – these agencies do sometimes take the lead on particularly important and popular proposals. The Oregon Park and Recreation Department's 2004 acquisition of the Sunset Beach State Recreation Site in support of public beach access from the LEWI parks is perhaps the most recent and prominent example.

The history of recreation and conservation runs deep in the Columbia-Pacific region – deeper than is commonly appreciated. With the urban population of the Pacific Northwest growing by leaps and bounds, tourism has become a premier industry in the Columbia-Pacific region, eclipsing most of the older resource industries in its reach and its economic influence. There are more people living in day-tripping range of this coast today than lived in the entire Pacific Northwest when the likes of Ben Holladay and Henry Tinker began promoting their fledgling beach resorts in Seaside and Long Beach – with the ease of transportation and communication, the coast is integrated into the social fabric of the urban Northwest in ways that would have been unimaginable to those men. Development pressures from tourism are mixed blessings for coastal communities, a each town tries in different ways to embrace the economic advantages of tourism while retaining the integrity of resident communities and landscapes. Efforts to protect natural landscapes from further development and to rehabilitate or even replicate historical buildings and neighborhoods are all significantly influenced by these changes.

As the preceding pages attest, the LEWI parks provide ample opportunity to share these historical events with the public – from the early history of rail-based tourism and tourist promotion, to the history of the conservation and parks movements. Still, surprisingly little remains of the historical landmarks associated with these events, due to the very newness of the park's recreational uses, and to the loss of key landmarks to time, the elements, and progress. The CCC infrastructure at Ecola State Park was largely lost to landslides and the elements, while the landmarks of the Clamshell railroad were largely obliterated to make way for later transportation developments at what became the Dismal Nitch and Station Camp units of the park. The fort structure at Fort Clatsop is a recent replica, built to replace the 1955 replica that burned to the ground during the 2005-06 bicentennial; the Salt Works also presents visitors with a historical replica. So too, there was little opportunity for tourist development at Cape Disappointment and Fort Stevens until the second half of the 20th century. The parks, themselves, are testament to these stories. Situated at these parks, visitors have the opportunity to encounter this history – a history that continues to be written; in these places, they might see the cornerstone places, if not necessarily historical "properties," that have defined this aspect of Columbia-Pacific history.

13: Toward a Conclusion: The Historical Landscapes of Lewis and Clark National and State Historical Parks

From the slow-moving tidewaters of Willapa Bay and the Columbia River estuary, to the rugged, wave-pounded headlands at Cape Disappointment and Tillamook Head, the Columbia-Pacific region has experienced dramatic changes since the time of Lewis and Clark. The members of the Corps of Discovery might still recognize the region, but the differences would be mind-boggling indeed. The large and powerful Native American nations of the region, the river-mouth masters of a sprawling trade network that encompassed much of the Pacific Northwest, have been much reduced in their scale and centrality, supplanted by international economies and territorial ambitions that spread abruptly from the Atlantic shores to this distant corner of the globe. Native people have persisted, and have had much more influence over the region's cultural and economic life than is sometimes appreciated - yet their traditional territories, so carefully mapped by Lewis and Clark, are no longer their own, by and large, their former village sites – many of them still known and valued by modern Native people – have been reoccupied by a succession of military forts, canneries, railroads, highways, cities, and even parks.

These changes were set in motion by an international scramble for territorial claims to this coast of which Lewis and Clark were a part – on one of the last coastlines to be explored or effectively claimed by European peoples. The empires of Britain, Spain, the United States and Russia all converged on the Columbia-Pacific coast in this bid for colonial dominance, seeking to stake claim its lands and waters, but also to realize the tremendous profits of its furs. In time, their efforts would establish a lasting Euro-American foothold on the Columbia-Pacific coast, while bringing some of the most fundamental human and environmental characteristics of this coast in Lewis and Clark's time – from Native American chieftainships to the keystone communities of sea otters – nearly to the brink of extinction. The fur trading empire that took shape in the wake of Lewis and Clark's visit would transition to the harvest of interior animals, the North West Company and Hudson's Bay Company tapping into Native American trade networks of the inland Northwest to monopolize the coast's trade in beaver and other furs that were still shipped to the world through the lower Columbia. Diseases introduced during this period would carry away more than 90% of the Native population yet, less than two decades after the worst of these epidemics, American expansion would push aside British fur trading interests, bringing new people, guided by different economic and political ambitions. There is no doubt about it: by the time the first homesteaders arrived in the mid-19th century, this was already a dramatically different place than what had been described by Lewis and Clark less than 50 years before.

As American settlers arrived in the region from places such as the American Northeast and Midwest, they encountered environments that were in many ways unfamiliar. Dune fields and dense forests challenged their dreams of agricultural homesteads, prompting a rapid turnover of certain lands and experimentation with alternative mixed economies that increasingly involved the harvesting of fish and timber. Fishing and timber harvesting both ran deep in the region, presaged by Native American barter economies, taking form as commercial offshoots of Hudson's Bay Company operations that sought to augment, and perhaps offset the decline of, the fur trade on the lower Columbia - selling Columbia River salmon and timber in such places as colonial Hawaii. The California gold rush would give American settlers their first markets for these goods, sparking the explosive growth of these two parallel industries. From its gold rush roots, the salmon canning industry would reshape the cultural geographies of the lower Columbia through the final decades of the 19th century, bringing Chinese laborers in abundance to work in the factories, and Scandinavian fishermen to ply the waters for fish. The industry would rise with meteoric speed, only to falter in the early 20th century, in the face of declining fish runs and labor standoffs, cannery owners moving a sizeable portion of their operations north in search of better catches and bigger profits - especially in the productive waters of the Alaskan fishing frontier. Similarly, timber production rose with great speed, centered on waterfront mills, where logs could be towed by boat with ease. Logging in the Sitka spruce zone of the outer coast was often hindered by a lack of markets and access, but certain key events - the harvesting of timber for airplane manufacturing in World War I, and later for paper products - would prompt the industrialization of these forests in time. Here too, Scandinavian labor has played a key role, even as the industry and the forests that it has relied upon have changed dramatically in the intervening years. At each step in the region's economic development, industrial entrepreneurs have brought immigrant laborers to the Columbia-Pacific, and each successive wave of immigrants - Chinese or Scandinavian, for example, and more recently Mexican-American - has made their own mark on the region. In historical terms, some of these immigrants, such as the Scandinavians, had strong incentives to stay, while others, such as the Chinese immigrants, had strong incentives not to. Each little industrial revolution brought new labor needs, and new people, each group adding its own layer to the region's cultural geography in succession.

The imprint of certain groups, and certain historical moments, may have been fleeting in the Columbia-Pacific region, where dampness, salt spray and a predilection toward wooden construction have conspired to shorten the lifespan of many historical landscapes. Those portions of the industrial infrastructure associated with fishing and logging that could be salvaged for other uses quickly was, and what remained often rotted away - leaving few intact landmarks in today's parks that emerged from those industries. Within the Lewis and Clark National and State Historical Parks, it is perhaps the monumental landscapes associated with navigation and national defense that have

endured, and have occupied the lands with its most prominent historical landmarks. At Fort Columbia, Fort Canby and Fort Stevens, a triad of military forts once produced a "triangle of fire," dominating and defending the mouth of the Columbia River from the Civil War era until the dramatic events of World War II. Concrete bunkers, gun batteries, and a vast assortment of supporting structures - most dating from the beginning of the 20th century - still persist at these places in various stages of disrepair, as testament to this period in the nation's military history. Nearby there are the navigational structures - the Cape Disappointment and North Head lighthouses, but also the three major jetties of the Columbia's mouth. These are historical structures that still function by design over a century after their creation - among the few landmarks that are at once of historical and utilitarian value in the LEWI parks.

In time, the natural resources of the coast have taken on new forms of significance. As the tourist industry emerged from its early rail- and steamship-based infancy in the late 19th century into its automobile-dominated manifestations in the 20th century, the region's identity changed too. The demographic, economic, and social core of the Columbia-Pacific region - once situated firmly in the region's tidewater industrial towns - has slowly migrated westward to embrace the resort towns of the ocean coast. While the tourist industry has relied heavily on the natural world for its appeal, its persistence relies on a model of resource use that is comparative passive, and not extractive. With its aesthetic proclivities, tourism has sometimes complemented, and sometimes competed with, the longstanding resource industries. The Columbia-Pacific region has been compelled to reevaluate its identity as its tourist towns become more regionally influential, but also ever more integrated into the urban spheres of metropolitan Portland and Seattle, with a combined population in the millions - cities whose residents not only visit the coast in ever-increasing numbers, but also own a growing portion of the land base as second home owners and even as "telecommuters," residing on the coast for portions of the year. Here, tourism is perhaps a "resource industry," but it is a resource industry of a very different sort, where unmodified natural landscapes have a certain monetary value and the aesthetic preferences of urban people increasingly shape the landscapes and economies of the coastline. In this context, especially in Clatsop County, the Columbia-Pacific region has been the venue for some of the more decisive moments in Pacific Northwest conservation history through the 20th century - including the development of Oregon's state park system and rules mandating public access to the ocean beaches in perpetuity. When that prominent early visitor, William Clark, looked out across the region from Tillamook Head in January of 1806 and "*beheld the grandest and most pleasing prospects which [his] eyes ever surveyed*" he clearly appreciated some of the same virtues that would inspire later coastal visitors, even if, perhaps, he could not have imagined the ways that this scenery would mobilize road-building, town-building, park-making, and various statewide policy innovations in the two centuries to come.

The National Register implications of this research are many. The existing nominations for all of the park units might benefit from some level of revision and elaboration, aided in part by the information in this document. The appendices providing context statements for Cape Disappointment and Fort Columbia are meant to facilitate the updating of those parks' National Register nominations. The former park's nomination, from 1975, is thorough for its time, centering on Cape Disappointment's role in the history of European exploration and military fortification on the lower Columbia River; the attached appendix adds themes and a level of detail that could be used to revise that nomination to good effect. The Fort Columbia's existing nomination, an early National Historic Landmark nomination, focuses almost exclusively on the importance of that landmark (which may, in truth, be misidentified) in the 1792 "discovery" of the Columbia by Robert Gray. The attached appendix includes a number of themes, including Chinook use of the site and Euro-American attempts at early settlement, as well as the site's considerable military history, that are likely to be included in the preparation of a Naitonal Register nomination for that site. Fort Stevens, too, might benefit from a revision of its very brief 1971 nomination, which focused on military structures: an attached appendix provides some guideposts for this effort, which might incorporate such themes as Clatsop Native American history, early Euro-American settlement, lifesaving and navigation facilities, and perhaps even the early history of park development in the mid-20th century – all themes that are relevant to the site on which Fort Stevens now sits, but are not included in the original nomination.

The National Park Service will need to revisit the National Register documentation for the park in light of the mid-2000s park expansions, as well as the information provided in this study. While there are no new properties within NPS management that are expected to meet the integrity standards of the National Register within the expanded park footprint, it is likely that a revised Fort Clatsop nomination is in order and will include new themes within its context statement to reflect the broader history and events that have occurred there over time. In the Fort Clatsop portion of the park, the National Park Service would be justified in adding references to the use of the Netul Landing area for Spruce Production Division operations during World War I, as well as the later use of that site as a log dump facility by private rail- and later truck-based logging operations. This document, as well as documents recently developed by the park's interpretive volunteers and staff, will provide guideposts in that effort. References to 19th century homesteading and the early development of tourist facilities can be added too, accentuating the story of the Shane farm, their brief collaboration with rail magnate Ben Holladay to develop a steamer dock and wagon road on the property, and later efforts to develop a Fort Clatsop memorial park on the site (including the 1955 replica and its 2005-06 replacement). Native American use and occupation of the site as well as the 1850s Moore sawmill, while thinly documented, may also warrant inclusion in such a nomination's general historical narrative.

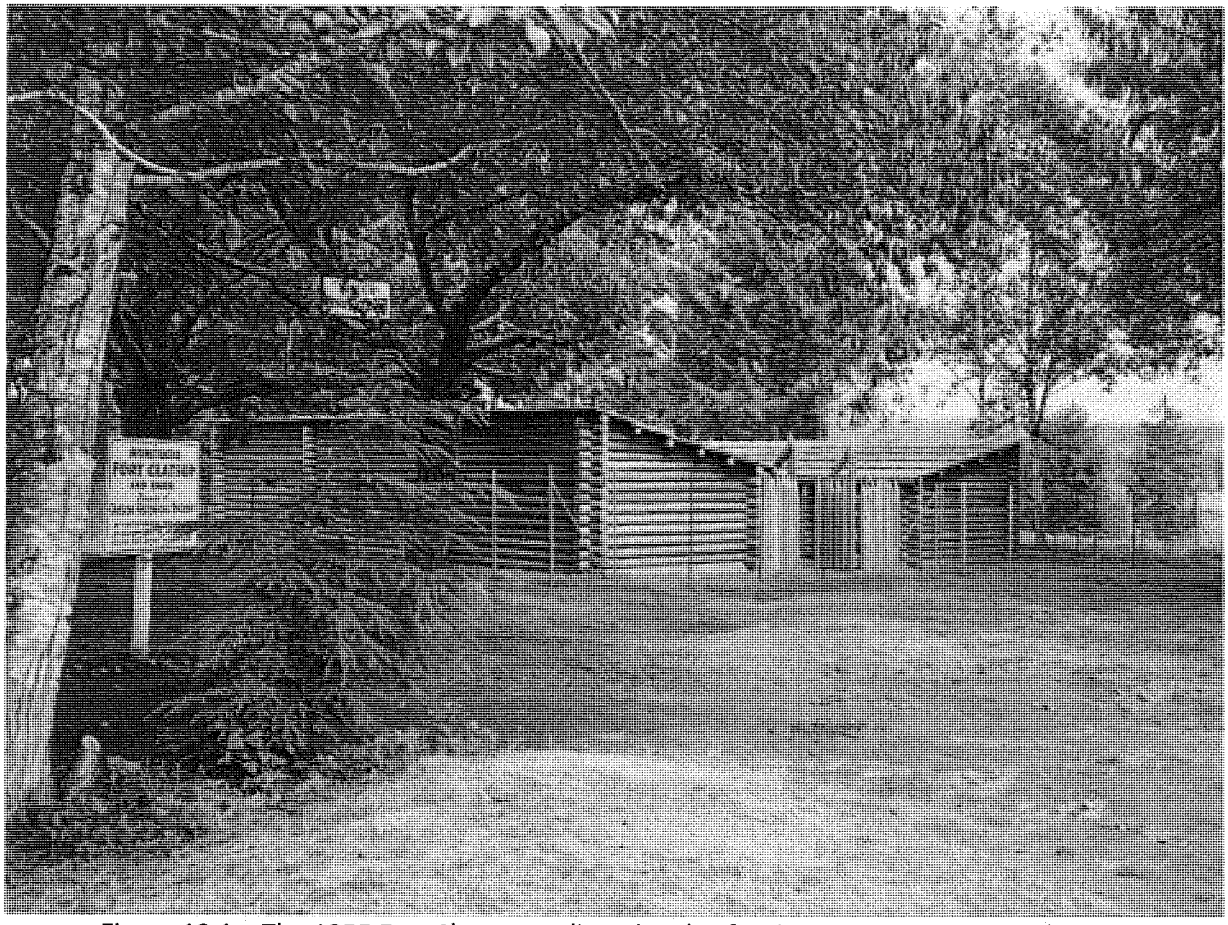


Figure 13.1 – The 1955 Fort Clatsop replica, shortly after its construction. Fort Clatsop and the Lewis and Clark story remain central to the park's interpretive and management mandates. In the broader regional history outlined in this document, dating from both before and after Lewis and Clark's visit, visitors might see connections with the experiences and observations of the Corps of Discovery in the winter of 1805-06. The current fort – the second replica on the site – may not be National Register eligible at this time, but the Fort Clatsop site still has its own rich history worthy of documentation and commemoration. Photo courtesy Oregon Historical Society.

No additional information would be required to update that portion of the existing 1988 Fort Clatsop nomination relating to the Seaside Salt Works – little has changed there since the late 1980s. The Fort-to-Sea Trail, meanwhile, only approximates the trail used by Lewis and Clark, as well as the Clatsops and the 19th century settlers and travelers, and relates only indirectly to the story of transportation between the Fort Clatsop area and the Pacific coast beaches. It remains an important interprevie tool for the park, as well as a recreational resource. While there are many sites of historical significance along the Fort-to-Sea Trail, none of these lands are in NPS ownership; they are likely to be of interpretive value, but the public lands along its length do not independently warrant inclusion in a revised Fort Clatsop nomination. The National Register status of the newly-acquired Yeon property would rest largely upon the matter of the Yeon

house's architectural significance, which is beyond the scope of this document (but is currently being evaluated for the NPS by architectural historians familiar with Yeon's biography and architectural influences).

As part of its recent expansion, the NPS also acquired the "Dismal Nitch" rest area on the north side of the Columbia River. This site could be included within a revised Fort Clatsop nomination. While the Lewis and Clark associations with the site remain ambiguous, and are likely unsupported by historical evidence, the Dismal Nitch rest area does have its own unique history that is worthy of mention in a revised nomination. Most significantly, the site served as the terminus of the "Clamshell Railroad," where the narrow-gauge railway reached its steamboat wharf; the railroad served as the cornerstone of Pacific County's early tourist industry and contributed to the development (or persistence) of a number of Long Beach Peninsula communities. There are no resources in NPS management warranting National Register status, as the facilities have been largely demolished, the former rail terminus and wharf site now being occupied by the Dismal Nitch parking lot. Dismal Nitch was also a minor landmark within the booming salmon canning industry of the latter 19th century - situated between fish receiving stations for decades, and serving as safe harbor to small-scale gillnetters working the prime fish netting grounds just offshore. Fish weirs, fish wheels, gillnets, and any number of other technologies were employed on, or very near this cove. No associated structures persist, save a few pilings in the river shallows, and it is unlikely that these would warrant independent National Register listing; still, these features, and the fishing history that they represent, provide an outstanding opportunity for public education and interpretation, from the convenient vantage point of the Dismal Nitch rest area.

The two remaining Oregon State Parks within the LEWI umbrella - Sunset Beach State Recreation Area and Ecola State Park - have their own histories that may warrant broader Oregon Parks and Recreation Department (OPRD) interpretation. In the case of Ecola State Park, OPRD might consider revisiting their National Register status. Ecola's archaeological sites have been listed on the National Register in the course of a broader OPRD effort to document and nominate archaeological sites in their many Oregon coast state parks. As at the three military parks addressed in the attached appendices, Ecola State Park might be well represented by a cultural landscape nomination that would account for its Native American occupation and use, its Lewis and Clark history, early efforts to develop lighthouse facilities, the development of a World War II radar installation in its boundaries, and its prominent role within the history of state park development within the 1920s and 1930s - including the nascent conservation movement and the use of Civilian Conservation Corps crews to develop the first park infrastructure. Unfortunately, the combined effects of building demolition, massive landslides, and uneven attention to historical properties' integrity have left few enduring resources that might speak to this history - save perhaps archaeological sites, military infrastructure, and a few historical sites that are linked to the Lewis and Clark

story but have no material manifestations. In truth, the information contained in the current document may ultimately prove to be of greater value to interpretation than to any National Register nomination effort.

The current report had cast its net broadly but not always deeply: with its topical and temporal breadth, it has only 'scratched the surface' of the region's available historical record. The overarching goal of this document has been to provide a basic introduction to the regional history and to set the context for understanding the contexts that shaped the landscapes now sitting within the constituent units of the Lewis and Clark National and State Historical Parks. With ten or more units, owned by multiple state and federal partners, this admittedly does not leave much room for subtle nuances and fine-grained details. More detailed studies are certainly warranted, based on the findings of the current document, and would yield a variety of benefits for the visitors to these parks, as well as the interpreters and resource managers who host them.

At the time of this writing, several studies are in the planning stages that might help accomplish these goals. An investigation of the history of the Yeon property, especially focusing on the architectural history of the site, was launched by that land's acquisition and is sure to add considerable depth to our knowledge of that site; this study may also clarify whether a National Register nomination is warranted for that property and, if so, what it might contain. A Traditional Use Study has been proposed for the park, involving not only the review of the published and archival record of the Native American tribes associated with the park's many sub-units, but also the direct involvement of these tribes in contributing any information that they may wish to share. This might prove an invaluable source of cultural information that will clarify not only the historical Native American use of these lands, but their enduring use and significance today. As such, such an investigation can help not only to identify additional resources, such as archaeological resources, deserving of protection, but might also help determine whether there are places within these park sub-units - most of them possessing a rich Native American history - that warrant the designation as "Traditional Cultural Properties." If undertaken with due sensitivity, oral history research with interested Native American interviewees, either as part of this study or undertaken independently, has the potential to yield benefits to Native American communities in addition to parks and park visitors. The process of tribal consultation associated with such an undertaking may also yield its own rewards, helping the tribes and the agencies to identify issues of mutual concern and possibilities for future collaboration.

Other studies, proposed or underway with the aid of LEWI partners at the Washington State Historical Society, have the potential to expand our knowledge of the north shore of the Columbia in a variety of ways. A study of the location of Clark's Dismal Nitch, currently underway, is likely to conclude that the actual Dismal Nitch location lies to the east of the current NPS rest area, based on a variety of historical clues. Another

study, proposed but not underway at the time of this writing, would involve a detailed review of the changing landscapes of the northern Columbia River estuary bank from European contact to the present day - sorting out the exact chronologies and locations of human occupation in more detail than what was attempted in the current document, and clearing up such mysteries as the changing location of the landmarks called "Chinook Point" through the 19th and early 20th centuries. Yet, there are a variety of other specialized studies that might be considered based on the findings of this study that have not yet been formally proposed. Park sub-unit histories - written specifically about individual sub-units of LEWI, and with greater depth and cohesion that what can be provide here - would clearly be of value to park interpreters and to the visiting public alike. Such histories could be compiled readily, using some of the same sources and methods employed in the current report, and drawing on the considerable expertise of local historians. Focused guides for interpreters, or for the public, based on such content are likely to be well-received. Also, while the NPS has been involved in a modest amount of oral history research with, for example, logging operators who used the Netul Landing log dump in the 20th century, there are other communities whose stories would provide a welcome window onto the history of park lands and resources: there are, for example, many people still alive who remember the circumstances of World War II on this coast, but their knowledge is, in all honesty, a steadily diminishing resource as that generation grows older and many pass from the scene, their recollections unrecorded. Collaborative research with the Columbia-Pacific Heritage Museum's growing oral history program on such an effort might be one appealing option for pursuing such research.

Other opportunities have presented themselves in the course of this research that span somewhat beyond the immediate interests of the National Park Service, but would be of great value to its partner state parks. For example, while there are a number of detailed histories of the development of the Oregon State Park system (e.g., Merriam 1992; Talbot 1992; Armstrong 1965; Boardman 1954), the history of Washington state parks has received relatively cursory treatment, making it exceedingly difficult for interpreters, researchers, or resource managers to provide a statewide context for parks on the north side of the river (cf. Washington State Parks and Recreation Commission 1988). The partner agencies of LEWI would be performing a very valuable service in advocating for such a broader study, which could be readily developed based on available archival sources.

Regardless of whether the National Park Service and its state park partners choose to pursue further research, it is clear that these agencies will continue to explore the history of the Columbia-Pacific region for many years to come. Through a series of historical developments, some of them representing mere happenstance and some involving more methodical efforts, many of those places most critical to the history of the Columbia-Pacific region have come into these agencies' management. These parks are among the few places in the region where one might still walk, and behold the

natural landscape as it was seen by generations before. They are some of the few places where one can engage well-preserved cultural landscapes – military forts and lighthouses, for example – dating from much earlier periods of our shared history, and might yet learn from them. These agencies now bear the responsibility of managing those landscapes for the benefit of future generations. Moreover, through these agencies' mandates for historic preservation and public education, they have together inherited the responsibility – and the privilege – of telling the stories of Columbia-Pacific history to park visitors. It is our sincere hope that this document will aid these parks' already robust interpretive programs in this important task.

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Notes

[1] Boas (1901: 221) notes that even the Cathlamet "*used to go inland to hunt elks. In the fall of the year they used to go to Saddle Mountain. When elks were seen on the prairie of Saddle Mountain they were all killed.*" Taylor (1974b) notes the use of elk drives off of cliffs in southern Clatsop County.

[2] John Harrington's Nehalem interviewees noted that "*kids went to highest places to get power - Maybe they went on top of Tillamook Head to get their song*" (Harrington n.d.).

[3] As Warre and Vavasour (1909: 71) noted, "*There is one small stream of spring water on the Cape, and two on the connecting neck of lands, but they are not of very good quality.*" Native American settlement was situated near these water sources, and an absence of predictable water explains in part the relatively diffuse pattern of settlement described on the headland otherwise.

[4] Broughton referred to Middle Village as "Village Point" in 1792; by 1839, sources have established the name "Chenoke Point." The name "Chinook Point" was commonly employed for the beaches and the village complex centered on Middle Village (e.g., U.S. Coast and Geodetic Survey 1859: 398-99) but only later was reapplied to the modern site of Fort Columbia. The U.S. Coast and Geodetic Survey (1859: 399) suggests of this place that "*the Indian name is Nóse-to-ilse.*" In late November, 1813, Alexander Henry (in Coues 1897 2:754) found the three villages on Chinook Point empty, or mostly so. Presumably these had been abandoned for the winter, a pattern noted by many travelers, including Lewis and Clark.

[5] A settlement called "ucmuyáqxan" or "Utsumuekhan" is sometimes reported for the site of Fort Columbia, but this reference is difficult to disentangle from references to Middle Village. See Weathers (1989: 24, 31), Wilson et al. (2009), and Appendix A of the current report.

[6] As Meares recounted of his visit to the mouth of Willapa Bay,

We had concluded this wild and desolate coast was uninhabited; but this opinion proved to be erroneous, for a canoe now came off to us from the point with a man and a boy. On their approach to the ship they held up two sea otter skins...We then fastened several trifling articles to a cord, and threw them over the side of the ship, when they were instantly seized by the boy and delivered to the man, who did hesitate a moment to tie the otter skins to the cord, and waved his hand as a sign for us to take them on boat, which was accordingly done (Meares 1791).

[7] As recounted in the Vancouver journals,

October 21st: The Discovery having put to sea without making any signal to the Chatham, Mr. Broughton very judiciously concluded that I was desirous that he should explore and examine this opening on the coast; and in order that no time should be lost in carrying this service into execution, he proceeded at two in the afternoon with the first of the flood and a strong gale at S.W. up the inlet, keeping the Village point [Chinook Point], which lies S. 70. E. five miles from cape Disappointment, well open with a remarkable projecting point, that obtained the name of Tongue Point [near Astoria, Oregon], (on the southern shore, appearing like an island). The depth of water here was not less than four fathoms, and as they approached the deserted village [Chinook Point] the depth increased to six, seven, and eight fathoms. The wind by this time obliged them to bring to, for the purpose of double reefing the topsails, and whilst thus engaged, the rapidity the flood tide impelled them into three fathoms water, before sufficient sail could be made on the vessel to render her governable. By this

means she was driven on a bank of sand, where the strength of the stream, preventing an anchor being carried into deep water, she remained aground until high tide; when they hove into ten fathoms with the greatest of ease, and there rested for the night. Mr. Broughton had, for his guidance thus far up the inlet, a chart by Mr. Gray, who had commanded the American ship Columbia; but it did not much resemble what it purported to represent. This shoal, which is an extensive one lying in mid-channel, having completely escaped his attention (Vancouver 1801: 53).

On October 22, Broughton took the cutter, a small boat stored on the *Chatham* for shallow-water travel, to explore the mouth of the Columbia. The crew of the *Chatham* traveled first to Middle Village, and then to Point Adams, now within Fort Stevens State Park:

Mr. Broughton proceeded with the cutter and launch to examine the shores of its southern side. He first landed at the deserted village, on the northern shore, and on the eastern side of Village point [Chinook Point]; which he found a good leading mark for clearing the shoals that lie between it and cape Disappointment, carrying regular soundings of four fathoms. From this point he passed over to point Adams [now in Fort Stevens State Park], the starboard of S.E. point of entrance into this inlet. . . . Point Adams is a low, narrow, sandy, spit of land, projecting northerly into the ocean, and lies from cape Disappointment, S. 44 E. about four miles distant (Vancouver 1801: 53).

Traveling along the southern shore, the crew noted extensive villages and groups of burial canoes while naming various landmarks, including Youngs River, named for British Admiral Sir George Young, an uncle to Broughton. On October 23, the party explored the mouth of the Lewis and Clark River, in the vicinity of Fort Clatsop, a place that apparently struck the crew as rich in resources and aesthetically pleasing in a manner that would be echoed 13 years later by Lewis and Clark. Again, quoting Vancouver,

From the banks of the river [Lewis and Clark River] a low meadow, interspersed with scattered trees and shrubs, extended to the more elevated land. This was of easy ascent, and was agreeably variegated with clumps and copses of pine, maple, alder, birch, poplar, and several other trees, besides a considerable number of shrubs, greatly diversifying the landscape by the several tints of their autumnal foliage. The marshy edges of the river afforded shelter to wild geese, which flew about in very large flocks; ducks were in abundance, as were the large brown cranes before noticed in the more northern parts of New Georgia (Vancouver 1801: 55).

[8] The Russians recruited one of Cook's crew, Joseph Billings, to sail for Russia in 1785, but logistical challenges limited the trip to a brief and belated search of Alaska. Alexander Baranov continued to oversee Russian-American Company operations from the 1790s until 1818, by which time the British and, to a lesser extent, Americans were already firmly in control of the mouth of the Columbia. Shelikov's son-in-law, Nicholas Resinov, briefly forged a Russian-Spanish alliance with the intention of repelling the British, French, and Americans, but died unexpectedly in 1807.

[9] As Ronda (1984) suggests, "*For reasons that are now unclear, Lewis and Clark never visited this village nor had any recorded contact with its leaders.*"

[10] The name is still used for that creek today after many years' hiatus, as well as being formerly applied to the town of Cannon Beach. The creek was also long known as "Elk Creek" locally, and that name was also applied to the town post office. The creek's name was formally changed to Ecola

Creek as an outcome of the 1955-56 Lewis and Clark Sesquicentennial. Since the founding of the state park in 1932, the name Ecola has been applied to the Oregon State Park immediately north of town, incorporating those lands traversed by the Corps en route to the whale (McArthur 1992).

[11] Contemporary tribal representatives note that the concept of "theft" by their Native hosts reflected a misrepresentation of concepts of ownership among the Corps of Discovery. Within the tribes' perspective, all of the resources harvested and utilized by the Corps during their stay were the property of the host tribes, who had been allowing access to those resources out of sympathy for the Corps' apparent impoverishment. The taking of a few elk would be compensatory for this sharing in the tribes' view; the taking of a canoe by a guest without prior agreement and repayment, by contrast, would have been understood as genuine theft (Ray Gardiner pers. comm. 2011, Richard Basch, pers. comm. 2012).

[12] Though the events of 1811 would be transformative, it is important to note that there was a prior attempt to construct a fort on the lower Columbia, only one year before. In that year, an expedition led by the American Winship brothers, Abiel, Jonathan and Nathan, arrived board the *Albatross*. They attempted to build a fort and gardens to support the growing ship-borne fur trade, while also seeking to bolster American claims in the face of what they perceived as a threat of Russian expansion. They started building their compound upstream from our study area, near Clatskanie. Being flooded by the Columbia and repelled by Native communities of the area, they returned home unsuccessful (see Jerzyk 1940).

[13] See Carey (1922: 211-12), who described the debacle in the greatest detail in comparison to other accounts and included the burial. Hussey (1957: 11) made the thinly substantiated claim through his source Lucile McDonald, "State Seeks to Acquire Fort Canby..." that the ship's captain Jonathon Thorn wanted the Cape Disappointment vicinity as the site for Astoria. No other source mentions this, and, in any event, this decision was that of the company partners, who surveyed the south side of the river and selected the present site for Astoria.

[14] His duties in Astoria complete, the captain of the *Tonquin*, Lieutenant Jonathan Thorn, ventured north to Nootka Sound to trade furs with the resident Nuu-chah-nulth. In the course of trade – probably on Clayoquot Sound, south of Nootka - Thorn tried his hand at trading. Unhappy with the prices requested for pelts, he insulted a Nuu-chah-nulth chief, ordering him off the ship and then tossing pelts in the chief's face to express his dissatisfaction. The tribe withdrew, returning later and attacking the ship, killing most on board. One survivor, James Lewis, coaxed a number of Nuu-chah-nulth onto the ship and then ignited the powder room, killing himself and many tribal members. In the end, only one member of the *Tonquin's* crew remained – this was Lamazee (or George Ramsey) reported to be the half Clatsop or Chinook man, who ultimately made his way back to Astoria to report the incident. Shortly after his return, a large flotilla of Kwakwaka'wakw canoes arrived at the mouth of the Columbia, throwing the residents of Astoria into a panic. Soon, though, it became clear that these northern tribes were guests of the Chinook, staying in the Baker Bay villages to trade and share in the season's salmon fishing (Seton 1993; Franchère 1851).

[15] Both the HBC and North West Company had sought to exploit divisions between tribal populations in order to maintain the upper hand. At Fort George, George Simpson noted,

"The great people of the Village are constantly at variance with each other, arising chiefly from jealousy of the attentions shewn them at the Fort; these misunderstandings are never attended with

serious consequences we therefore keep them alive as by that means we know all that passes and have them in a certain degree under our control" (Simpson 1931: 104).

[16] Though Concomly was a Chinook leader and clearly of Chinook ancestry on his mother's side, various sources suggest that he was born and raised through much of his youth among his father's Quinault tribe on the central Washington coast. See, e.g., Rubin 1999: 23, 231.

[17] Hussey has suggested, similarly, that

"By marriage to the daughter of a chief or other prominent Indian, the European trader was often able to assure himself of the friendship and commerce of that man, his family, and his village, tribe, or group. Such a connection could sometimes also preserve the trader's scalp from unfriendly Indians. A native wife helped her husband learn the language of her group and kept him informed of local events related to his business. Equally important was the knowledge of wilderness lore among native women" (Hussey 1991: 266-67).

Some men, appealing to tribal traditions allowing polygamy, sought to maintain wives in multiple tribes for strategic advantages. Charles Wilkes wrote of encounters with Michel La Framboise, a prominent French employee of the HBC, who had arrived on the *Tonquin* as part of the Astoria party: "He has travelled in all parts of the country, and says that he has a wife of high rank in every tribe, by which means he has insured his safety" (Wilkes 1845: 349).

[18] For example, from the north, Quinault people still have oral traditions recalling visits by their ancestors to the fort in a manner recorded by Curtis:

"In summer the Quinault made ocean voyages to the Chinook country, stopping the first night out at Tshels (Point Hanson), and the second at Cape Shoalwater, and on the following evening rounding into the estuary of the Columbia. The Clatsop village Nu'smá'spu [Chief Walluski's village], on Youngs bay south of Astoria, was a favorite rendezvous for visitors from the north, on account of its nearness to the trading-post. Here the Quinault gave Makah canoes, slaves, dentalium shells, sea-otter skins, beaverskins, otter-skins, baskets, and a variety of coarse grass (probably bear-grass), in exchange for the goods of the white traders" (Curtis 1913: 11).

From the south, descendants of Tillamook chief Illga report that he "was a great trader, often taking canoe trips to the fort at Astoria to trade beaver pelts for trade goods from around the world," stopping at places such as the villages at Adam's Point (Fort Stevens) and the mouth of Ecola Creek along the way (Deur 2008: 35).

[19] Most, though probably not all, slaves were distinguished from the free people of the Columbia by the absence of a flattened head. Many early writers noted that "*The slaves... are not allowed to enjoy the benefit of this strange deformity; consequently their heads are left in their natural state*" (Lee and Frost 1844: 102).

[20] On this differentiation between race, class, and employment in the HBC, Kardas asserted that

"Almost all Whites and half-breeds were laborers or middlemen. Iroquois served frequently as bowsmen on canoes and probably spent the majority of their time traveling local runs. Natives served locally as interpreters, apprentices and laborers. Owhyees during the early years were used as middlemen; later they were more often employed as woodcutters, and laborers and a few are also

designated as "pigherds." Since men were called up for various jobs as needed, even these assignments are tentative. From the mid-1840's onward increased emphasis on farming and lumbering kept most of the men near the fort" (Kardas 1971: 214-15).

[21]Hussey (1957: 11) cited T.C. Elliott (1918: 181-87) and McDonald, "State Seeks to Acquire Fort Canby..." 2, even though the entire episode merited nothing more than a footnote in Carey, *History of Oregon*, 247, who omits mention of Cape Disappointment in referencing the American captain's actions. He stated only that the captain (James Biddle) posted *"some sort of a notice upon the river bank, making claim apparently to more than mere property [Fort George] in question."* Carey does not mention the actions by the British at Cape Disappointment. Fort George went back to the Americans as a condition of the peace treaty of 1815. Gray, *History of Oregon*, 20, quotes the British order restoring Fort George to the United States; F. Hickey, Captain of the HMS *Blossom* to J. Keith of the Northwest Company on October 6, 1818. The McDonald account of these events is also summarized in David P. Hansen's nomination of the Cape Disappointment Historic District, listed August 15, 1975, section 8, page 2.

[22]Though Nathaniel Wyeth had a clear bias against his competitors, the HBC, his accounts on this point may still be instructive:

"With the consolidation of the Northwest and Hudson's Bay Companies in 1821, the establishment of headquarters at Fort Vancouver, and the effective administration of Dr. John McLoughlin as Chief Factor west of the Rocky mountains British interests developed at a wonderful rate. It was claimed on the floor of congress that "shares in the Hudson's Bay Company, which originally were of the value of 20 pounds each, were now selling in the market at the enormous price of 200 pounds sterling." And again "that shares of that company have risen from sixty to two-hundred and forty pounds sterling." With the growth of English interests on the Columbia English claims to sovereignty grew apace. American operations were confined to irregular incursions by fur-trading parties and to traffic carried on with natives from the decks of vessels brought into the inlets of the coast. The British were establishing posts and extending a well-organized, lucrative and strongly supported trade" (Wyeth 1899: xv).

[23]Visiting Fort George on April 12th 1824, John Scouler found that the site was almost completely abandoned:

"To-day we landed (well craved) at Ft. George, & were received in a very polite manner by Mr. McKenzie, the only gentleman at present at the fort. He informed us that the other gentlemen were employed in building a new fort, about 80 miles further up the river, at Point Vancouver, & Ft. George had been ceded to the Americans by the treaty of Ghent, & they were expected to take possession of it very soon" (Scouler 1905: 165).

[24]These American claims were dubious, in the sense that aboriginal title to Cape Disappointment had not been cleared, nor was there any recognized right by the Americans to the cape, though retroactive laws (such as the Donation Land Claim Act passed by Congress in 1850 or those related to preemption) since title was not vested in the United States until after the treaty negotiations with Great Britain had been ratified by the U.S. Senate. The date of Ogden's "purchase" is in Hussey (1957: 13) as derived from T.C. Elliott, "Peter Skene Ogden, Fur Trader," *Oregon Historical Quarterly* 11 (September 1910), 261-262.

[25] In 1812, Ross Cox (1832: 116) – one of several travels to report visiting the fort - noted, "*I visited Fort Clatsop, and found the logs of the house were still standing and marked with the names of several of the party.*"

[26] The exact number of dead in this attach is a subject of disagreement in the literature. Some sources suggest that the death toll was negligible, while others suggest that this was a major defining event in Clatsop history, effectively killing their traditional leadership. In the latter category, missionary John Frost noted in 1840,

"*...the Clatsops and indeed all the Indians in this region, have properly no chiefs; they having all passed away. The last chiefs of the Clatsops having been killed by the Hudson bay company for the real or supposed murder of some of their men, which were thrown on this shore from one of their vessels, which was wrecked on the coast*" (Frost 1934:140-41).

Oregon Historical Society interviews from 1899 with Clatsop woman, Jennie Michel seem to corroborate Nehalem-Tillamook accounts of the attack recorded by Franz Boas' student, May Mandelbaum Edel in 1931 (Deur and Thompson n.d.). These suggest large numbers of casualties, and significant impacts upon the tribal population. Oral traditions regarding this attack persisted in some Clatsop, Tillamook, and Chinook families, and the story of this attack anecdotally appears to be of great importance to some Clatsop descendants today.

[27] Written accounts suggest a growing fatalism among some tribal members as their numbers continued to decline. For example, deSmet attributed a lack of new construction of houses among the lower Columbia Chinookans to this kind of despondency:

"*The smallpox is the principal disease that alarms the natives; they are in continual dread of it, and imagining that they have a short time to live, they no longer build the large and convenient cabins to which they were formerly accustomed*" (deSmet 1847: 123).

[28] In 1859, the U.S. Coast and Geodetic Survey reported, "*Chinook Point was the special location of the once powerful tribe of Chinook Indians and here the celebrated one eyed chief Concomly held sway. The tribe has dwindled to less a hundred persons - men women and children*" (U.S. Coast and Geodetic Survey 1859: 398)

[29] Sanler supposedly supported himself by operating a small vessel carrying freight on the lower river and resided midway between the future site of Ilwaco and the cape, at "Saul's Point," likely within the present state park. Hussey (1957: 14 n15) quoted McDonald on these details. The ovens are mentioned in the *Report of the Superintendent of the U.S. Coast Survey, Showing the Progress of the Survey during the year 1862;* 37th Congress, 2nd Session, House Executive Document 22, Serial 1165 [contains report for 1858], 358.

[30] As succinctly summarized by Dietland Muller-Schwarze (2011: 162), "*Afraid of the United States's control of the Pacific Northwest, the company launched a scorched-earth policy in the early 1820s to exhaustively trap all valuable fur animals, mainly beavers. They believed that the value of the land to immigrants would be greatly deprecated without beavers. Thorough extirpation of beavers was to create a "fur desert" or cordon sanitaire.*"

[31] A few of these early families located to places that were part of the Lewis and Clark story and are still within the bailiwick of NPS interpretive mandates. For example, the Gervais family was the only

family living in Cannon Beach at the Ecola village site during this period. The father, Ed Gervais, was the son of a French fur trapper tied to the fort at Astoria, and his mother was a daughter of Clatsop chief Coboway, while his wife Nancy Gevais was Nehalem. As reported by Gillette in 1863, "We reached Elk Creek at 10 a.m. I took a lunch with E.A. Jarvis, a half breed, who lives in an Indian hut, and has a squaw for a wife" (Gillette n.d. – July 9, 1863). They later moved to Seaside, joining other Native people at the community sometimes called "the Indian Place" near the modern Seaside High School (Deur 2008; McChesney 1969).

[32] Cannon (1995), Weathers (1989), Miller (1958), Lyman (1903), and Bancroft (1890a, 1890b), for example, provide good overviews of the lives of individuals who settled on park lands; the bibliography of the current report abounds with other sources containing biographical information on this well-documented period in regional history. Local historical societies and museums also maintain files regarding most of the individuals mentioned in this section.

[33] P.W. Gillette reports that he and an adjacent claimant, Thomas Scott, built a single cabin in the tiny forest clearing at the boundary of their lands. They both resided there during the laborious process of "proving up." They drew a line through the middle of the cabin and mostly resided on their respective sides of the line:

"The line running through the middle of the house enabled us to fulfill the requirement of the Donation law, that each claimant should reside upon his own land" (Gillette n.d. – January 14, 1861).

[34] There are many other aspects of White's biography that would warrant mention in a complete account. Born in New York in 1806, the year the Corps of Discovery returned home from the Columbia-Pacific region, White was a trained physician, who joined the Lee mission to Hawaii in 1836-37. Arriving in Oregon in 1837, White ultimately had disagreements with Lee (who later founded the Clatsop Plains Mission), departing with that mission and embarking on a number of different enterprises. He led the first sizeable wagon train over the Oregon Trail, consisting of 112 people, in 1842, then embarked on his work as an Indian Sub-Agent later that year. He participated in various meetings leading to the creation of the provisional Oregon Territorial government in Champoeg, and was given the task of carrying a petition from that government to U.S. Congress seeking to formalize American territorial status. By 1861, after the conclusion of his ventures at Cape Disappointment, he was assigned another Indian Agent position and departed for California (Hussey 1967b; Gray 1870).

[35] Meanwhile, a short distance upstream, the NPS Dismal Nitch area, so steep and lacking flat lands, was not the center of early settlement, only being reoccupied after the homesteading era for the construction of a fishing station.

[36] W.W. Raymond was part of an early and locally famous contingent of settlers – including Elbridge Trask - who arrived on Clatsop Plains in 1843. He served for a time as an Indian agent, administering the Clatsops residing in the area from his home on Tansy Point, and was somewhat infamous for his mismanagement of that temporary subagency (see Deur 2005). Indiana-born B.C. Kindred came to Oregon in 1844 and settled on Point Adams by 1845. His family was reported to still be occupying what remained of their original claim in 1889 (North Pacific history Company 1889).

[37] Indeed, Fort Clatsop's original location was determined by memory of its remains in an 1899 Oregon Historical Society expedition involving Carlos Shane, Silas B. Smith, Preston Gillette and others (See Shane 1900, Smith 1900).

[38] See English and English (1993). A number of homesteaders in rural areas would sometimes buy "town lots" near Astoria and other communities – to be used as a foothold in the town and sometimes as an investment. So too, urban dwellers sometimes acquired homestead claims to be used as hobby farms or recreational outposts. Olney and Adair are two prominent examples of this phenomenon.

[39] Though Taylor was not as widely known as Olney within the state, he was nonetheless the subject of various biographical writings, by virtue of his pioneer status and reputation as a solid character. As told to Fred Lockley by his son, Edward Taylor,

"My father, James Taylor, was born in Pennsylvania in 1809. When father was fourteen years old he went with his parents to Ohio. When he was twenty-one he taught school. Later, with his brother William, he ran a trading post in the Indian country. My father was married in Ohio in 1841. My mother's maiden name was Esther D'Armon. Father was appointed register of the land office at Lima, Ohio, in 1843. In the spring of 1845 father bought four wagons and some oxen and started with his wife and baby and a band of loose cattle for the Willamette valley. At The Dalles he met Samuel K. Barlow, who was building the Barlow road around the base of Mount Hood. He left his wagons at The Dalles, packing part of his goods on packing horses and driving his loose cattle around the south side of Mount Hood. They reached Oregon City on October 10, 1845. He and A. L. Lovejoy went into partnership and built a mill, which was washed away by the high water. Father had struck out for the shores of the Pacific, so he decided to go as far west as he could. He came to the mouth of the Columbia and found a settler who had taken a six hundred and forty acre claim, which he was willing to sell, so father bought it.

"When father came down to Clatsop plains he found that W. H. Gray, Ton Owens, R. W. Morrison and a few others had already settled here. The Astoria Golf and Country Club now owns part of father's original donation land claim. During the Cayuse Indian war father was stationed at Fort Waters. At the conclusion of the war he came back to Oregon City and reentered the sawmill business with A. L. Lovejoy and Medorum Crawford. The high water in the winter of 1849-50 carried the mill and their lumber away. The provisional legislature of 1848 appointed father director of the proposed mint. When Governor Lane arrived at Oregon City in 1849 to become the first governor of Oregon territory, he would not allow the territory to run a mint, so the mint was operated privately, my father being one of the owners. They coined something over fifty thousand dollars in gold dust into five dollar and ten dollar "Beaver" gold pieces.

"In 1851, when I was about three years old, we moved back to Clatsop plains. Father shipped stock to Victoria and to the Fraser river country. In 1856 father bought Sam C. Smith's claim in Astoria on Young's bay and Smith's point, which is now known as Taylor's Astoria. I was about seven years old when I started to school in the old pioneer Presbyterian church on Clatsop plains. Later I went to the parish school in Astoria, taught by Rev. Mr. Hyland and his wife...[after moving to Idaho at age 18] I came back to Astoria and went to fishing for the cannery. In those days the owners of the canneries agreed to take all the fish you could catch, at twenty-five cents each. I built two boats. I hired a helper to go with me in one and I rented the other. About a dozen of us young chaps in Astoria hired a house and a cook and kept a bachelor's hall. We made good money catching salmon at twenty-five cents

each. Many's the salmon I have turned in for twenty-five cents that weighed from fifty to sixty pounds" (in Lockley 1928: 792-94).

[40] Gillette further notes that "*Mr. Lattie is a half breed Indian, who keeps a public house, and many resort thither, some for the ride, some to behold the scenery, and others to feast upon the fish...that is always found upon his table. His house is [located] ¼ of a mile of the ocean on the southern end of Clatsop Plains*" (Gillette n.d. – June 1, 1861).

[41] Gillette noted that members of his circle often hunted the meadows and estuaries: "*They are very plentiful on the moors, and are easily taken at high water in spring tides*" (Gillette n.d. – February 8, 1861).

[42] Later, when he had successfully if incrementally cleared a larger area, he would marvel at the results:

'When I look around me, and see the acres of this mighty timber that I have destroyed with my own puny arms, I am quite surprised. The man who clears an ace of this land, builds himself a monument that will exist as long as the country is in the hands of a civilized race. Many of us build such monuments, but alas: how few of us will leave our names inscribed upon them. And how few will be remembered". (Gillette n.d. – February 15, 1861).

[43] Gillette was no exception: "*Each year I enlarged the boundaries of my small farm a little. As fruit growing was the most profitable business in the country, I kept planting trees as fast as I could get land cleared*" (Gillette n.d. – January 14, 1861).

[44] Soil fertility has limited grass output on many of these operations so that, as highways took shape, a number of farmers have shipped hay and other feed to the coast to support grazing livestock.

[45] Preston W. Gillette was born in Ohio in 1825. He arrived in Oregon in September of 1852, and my March of 1853 settled his Donation Land Claim on the Lewis and Clark River. He sold his land in 1867, moving to Portland, where he married and made a small fortune in real estate investments. He died in 1905.

[46] Domestic varieties of the cranberry have been cultivated for commercial purposes for nearly 200 years in the United States, beginning in coastal New England. Commercial harvesting began in Cape Cod, Massachusetts, around 1816, spread to the Pine Barrens in southern New Jersey about 1835, and to the central portion of Wisconsin in 1853.

[47] One Long Beach Peninsula resident, however, attempted to cultivate native wild cranberries for mass consumption. John P. Paul, a carpenter by trade, planted wild vines on part of his property in 1869 but abandoned his efforts in 1878, after nearly a decade without success (Weathers 1983: 52).

[48] Charles McFarlin was the first to cultivate cranberries commercially in Oregon, setting out vines in Coos County in 1885 that were brought from his native Massachusetts. McFarlin, a Cape Cod grower, and his brother had developed the McFarlin variety of cranberry from wild vines. The McFarlin variety had larger berries than the native Oregon bog cranberry but did not ripen until October. McFarlin preferred earlier ripening varieties like the Black Veil and the Black Diamond so

that he could get his berries to market ahead of east coast competitors. W.C. King of Sandlake, Oregon, started growing cranberries in 1893 and, by the turn of the century, was considered the "cranberry king" of Tillamook County (Allen 2006).

[49] Cranberry production had stalled in the Northwest for a variety of reasons. Absentee landowners, particularly in the Long Beach region, accounted for a large number of marshland owners. Preparation of marshland for commercial harvesting required a tremendous first-year investment of money and labor, and the investment could not be recouped for four to six years. Eastern vines imported for planting often developed mildew and pest infestations during shipping or, once planted, could not withstand Northwest climate and soil conditions. The demand for cranberries was limited to the Thanksgiving-Christmas holiday season, and the market was already adequately supplied by established bogs in the Northeast and Midwest (Weathers 1983: 46).

[50] Sinclair guided the state legislature in awarding funds to Washington State College (now Washington State University) to establish the Cranberry Investigations Laboratory at Long Beach in 1923. Horticulturalist D.J. Crowley was named director of the laboratory, later renamed the Cranberry and Blueberry Extension Unit. Crowley's major contribution to horticulture was in the area of frost injury prevention. After a few years of experimentation, Crowley developed a method to prevent frost damage using a sprinkler system. Crowley's idea was initially met with resistance because using water to prevent frost damage seemed counter intuitive to most growers. Today, however, sprinkler systems have become standard equipment for commercial cranberry growers and other fruit growers around the world. Crowley's contribution has been recognized by a cranberry variety named in his honor (Allen 1999: 13-14). When Washington State University moved to close the station in 1993, west coast cranberry growers formed the Pacific Coast Cranberry Research Foundation to purchase the facility. Washington State University continues to support the staff at the Long Beach Research and Extension Unit, and growers farm the bogs and maintain the buildings (Weilepp 2004: 2).

[51] Cranberry Canners, Inc., a growers' cooperative, formed the Cranberry Army Pool in 1943 to encourage its growers to pledge the sale of a portion of their annual crop to the government as part of the war effort (Cranberry Canners, Inc. 1943: 1). The cooperative issued certificates that read, "This is to certify that [grower's name] is a member of the Cranberry Army Pool and has pledged [XX] per cent of his 1943 crop to cooperate with the nation-wide effort that is being made by Cranberry Canners, Inc. to supply our Armed Forces with Cranberry Products" (Pacific Coast Cranberry Research Foundation 2004: 3).

The resulting increase in demand for cranberries during the early 1940s significantly expanded production on Long Beach Peninsula and other locations. Cranberry harvesting season is in September and October, and the earliest method was dry harvesting, that is, picking the berries from dry vines, by hand. Prior to World War II, the market for fresh cranberries was limited to Thanksgiving and Christmas, since berries harvested in the fall would spoil if stored any longer. Even though growers kept them in drying trays, moisture still damaged some before they could be sold during the holiday season (Pacific Coast Cranberry Research Foundation 2004: 3). Cranberry Canners, Inc. in Grayland, Washington, developed a dehydrator to dry freshly picked berries so they could be shipped to armed forces around the world, and reconstituted for use. This process allowed more fresh berries to be sold during and after the harvest period, and reduced fruit loss in storage (Pacific Coast Cranberry Research Foundation 2004: 3). Dry harvesting by hand was very slow and labor intensive, and the wartime shortage of manual labor prevented growers from keeping up with the increased demand (Pacific Coast Cranberry Research Foundation 2004: 3). Under the headline,

"Pickers wanted to help harvest cranberry crop; twenty growers pledge to sell to government; yield expected to be very good," one Pacific County newspaper reported in 1943 that,

> Harvesting of the peninsula's main crop of cranberries will get underway Monday, growers announced this week, appealing to everyone to spend all possible time in the bogs. Picking of Early Blacks and Centennials already has started, but the bulk of the peninsula's 400 acres will not be ready until next week...D.J. Crowley of the state college experiment station reports...the 1943 crop has possibilities of yielding 50 per cent more than last year. Growers are urging anyone wanting to pick to contact them and make arrangements for transportation if desired. A special appeal is made to experienced scoopers and pickers as they will be most valuable in getting the crop harvested. Pickers will be paid 45 cents a measure, which is an attractive price with the heavy set of berries ...All peninsula members of Cranberry Canners, Inc. have signed the Cranberry Army Pool, pledging their crop to the government. Other growers who wish to join the pool must first join the co-operative for the duration (Pacific Coast Cranberry Research Foundation 2004: 3).

While brining an increase in demand for cranberries, the war also reduced the pool of potential labor to harvest the crop. This prompted growers to experiment with new methods to make harvesting more efficient, leading to the development of a variety of innovative equipment for picking and sorting (Pacific Coast Cranberry Research Foundation 2004: 3). Two types of harvesting machines evolved around Long Beach during and following World War II. One was designed to pick berries directly from dry vines. The other type dislodged berries from vines after the bog was flooded and the berries floated to the surface where they were "corralled." Today the latter method, called wet harvesting, is used almost exclusively on the Long Beach Peninsula, whereas growers in the Grayland area prefer dry harvesting methods (Pacific Coast Cranberry Research Foundation 2004: 6).

[52] Cranberry Canners, Inc., a cooperative of cranberry growers, was established in 1930 by the merger of three cranberry companies on the east coast. Cranberry Canners, Inc. became the National Cranberry Association in 1946, and then Ocean Spray Cranberries, Inc. in 1959. Cranberry production remained limited in Oregon until 1946, when the National Cranberry Association extended membership to Oregon growers (Allen 2006), and opened its first Oregon facility in Bandon the following year (Oregon Department of Agriculture 2001).Ocean Spray has processing plants in the three growing regions: several on the east coast and in the Midwest, and one in unincorporated Markham, Washington, near Aberdeen (Weathers 1983: 60). Markham is the location of Ocean Spray's plant used for processing sweetened dried cranberries and cranberry sauce, with an annual output of 20 million pounds of sweetened dried cranberries and 1.2 million cases of cranberry sauce (Ocean Spray Cranberries, Inc. 2013a). All west coast growers in the Ocean Spray cooperative send their berries to the Markham processing plant. Smaller receiving stations are located on the Long Beach Peninsula; in Bandon, Oregon, and in British Columbia (Weathers 1983: 59). According to the U.S. Department of Agriculture's National Agricultural Statistics Service, Oregon and Washington are respectively the fourth and fifth largest producers of cranberries in the United States, after Wisconsin, Massachusetts, and New Jersey. Oregon grows 5 percent and Washington grows 2 percent of the nation's supply (Boston Globe 2013). Among the 173 growers in Oregon, there are currently 2,500 acres under cultivation, and harvest yield is about 40 million pounds of fruit per year (Ocean Spray Cranberries, Inc. 2013b). Most of Oregon's cranberries are produced in the Bandon area where the McFarlin variety is still popular (Allen 2006). Oregon's largest export market is Japan, which began to show an interest in cranberry products once the

nutritional benefits of the berries became more widely recognized (Oregon Department of Agriculture 2001).

[53] In a 1993 study researchers sought to identify remnant habitat approximating conditions prior to Euroamerican settlement along the floodplain of the lower Columbia River. About 143 river miles were examined in both Oregon and Washington, between Bonneville Dam and the mouth of the river, as well as lower portions of several rivers (Christy and Putera 1993: 10). The study found that,

"Elymus mollis (American dunegrass community). This species was once the dominant native grass on coastal foredunes. Although it was planted sparingly in dune stabilization programs beginning in 1916, it has been largely displaced throughout its range by the more aggressive European beachgrass (Ammophila arenaria), the species most commonly used for stabilization.

Festuca rubra (Red fescue dune community). Red fescue was a common sod-forming grass of open, stabilized sand dunes on the outer coast. It was the dominant grass on the Clatsop Plains at the time of settlement, but overgrazing and trailing by livestock destroyed the sod and caused new dunes to form. Like American dunegrass, it was planted occasionally for dune stabilization, but has been displaced largely by the more aggressive European beachgrass" (Christy and Putera 1993: 10).

Nearly a century after the first efforts at dune stabilization in the Pacific Northwest, Sand Island, Oregon, contains perhaps the last remaining, unstabilized sand dunes on the lower Columbia River. West Sand Island hosts the only example of coastal sand dunes stabilized with native vegetation on the Columbia River. Such vegetation is very rare elsewhere because introduced species have displaced native grasses (Christy and Putera 1993).

[54] As Weathers notes,

"McGowan operated a business in Portland for many years before moving to his claim permanently around 1861. From the start McGowan engaged in salmon salting and established the earliest salmon packing company in the state" (Weathers 1989: 40).

[55] In the 1920s, the water quality of the bay declining from mill effluent, the oyster farmers of Willapa Bay began to use the Japanese "Pacific oyster" (*Crassostrea gigas*). The highly invasive Saltmarsh cordgrass, *Spartina alterniflora* from the Atlantic coast of America, used as a medium for shipping imported oyster stock would later overrun vast areas of the Willapa shoreline, continuing to be a highly invasive species today. The early development of oystering was hugely important on Willapa Bay, but had broader implications: these early oyster operations and common law arrangements for tideland claims contributed to Washington state tidelands law after the state was founded in 1889. By the early 20th century, oysters bound for the Portland market were sometimes shipped from Long Beach Peninsula communities by rail to the Megler dock before being loaded onto boats – one of the few direct connections between the industry and park lands. The oyster industry has continued to be robust on Willapa Bay, and it remains one of the major production areas nationally (Espy 1977; Swan 1857).

[56] Some sources suggest that the Humes' expectations of Columbia River salmon runs were exaggerated by what were record high salmon numbers in the 1860s, caused in part due to the

decimation of local Native American groups, which had reduced fishing pressure along the river in the preceding decades (Friday 1994).

[57] Rudyard Kipling famously described the Chinese factory workers of the lower Columbia in grim, almost hypnotic prose, riddled with the racist values of his time: *Only Chinamen were employed on the work, and they looked like blood-besmeared yellow devils as they crossed the rifts of sunlight that lay upon the floor. When our consignment arrived, the rough wooden boxes broke of themselves as they were dumped down under a jet of water, and the salmon burst out in a stream of quicksilver. A Chinaman jerked up a twenty-pounder, beheaded and detailed it with two swift strokes of a knife, flicked out its internal arrangements with a third, and case it into a blood-dyed tank. The headless fish leaped from under his hands as though they were facing a rapid. Other Chinamen pulled them from the vat and thrust them under a thing like a chaff-cutter, which, descending, hewed them into unseemly red gobbets fit for the can.*

'More Chinamen, with yellow, crooked fingers, jammed the stuff into the cans, which slid down some marvelous machine forthwith, soldering their own tops as they passed. Each can was hastily tested for flaws, and then sunk with a hundred companions into a vat of boiling water, there to be half cooked for a few minutes. The cans bulged slightly after the operation, and were therefore slidden along by the trolleyful to men with needles and soldering-irons who vented them and soldered the aperture. Except for the label, the "Finest Columbia Salmon" was ready for the market. I was impressed not so much with the speed of the manufacture as the character of the factory. Inside, on a floor ninety by forty, the most civilized and murderous of machinery.
Outside, three footsteps, the thick-growing pines and the immense solitude of the hills. Our steamer only stayed twenty minutes at that place, but I counted two hundred and forty finished cans made from the catch of the previous night ere I left the slippery, blood-stained, scale-spangled, oily floors and the offal-smeared Chinamen" (Kipling 1891).

[58] Salmon stop eating and begin to live on stored adipose tissue as they move into freshwater, so that they are often dilapidated and the meat quality much diminished by the time they reach their destination; while many fish may still be in marketable condition well into their journey, those fish at the river's mouth are almost invariably in good condition, creating strong incentives to early cannery owners to concentrate operations on the estuary.

[59] Nearly all the early Finnish migrants to the town were young men, most of them single. Of the 173 Finns living in Astoria in 1880, only 18 were female (Hummasti 2002: 139). The practice of employing women in the Astoria salmon canneries apparently began as early as 1878, and women would have expanding roles in the years ahead.

[60] While the most productive areas were concentrated around the mouth of the river, gillnetters from the butterfly fleet could be found as far upriver as The Dalles-Celilo area. Gillnet fishing was a highly successful means of salmon fishing, however. For example, according to records from the 1892 fishing season, the commercial fishery harvested 2.5 million salmon, including 916,833 Chinook salmon, 464,926 steelhead and 63,505 coho salmon. Of the salmon harvested that year, roughly half came from gillnet fishermen (Allen 2006; Johnson 1997; Tucker 2003). As noted, these fishermen often competed with the fish packers in the region, because the packers frequently controlled the seines, traps and wheels also used to fish salmon. While these other technologies were rather large operations, gillnetting required only an owner/operator and possibly a

crewmember or two (Martin 1994:17). Gillnetters worked in rough conditions, battling the elements especially around the dangerous mouth of the Columbia. It was not uncommon for fishermen of the butterfly fleet to sustain injuries or drown (Tucker 2003; Andrews and Larsen 1959).

[61] The US Fish Commission commented on the variety and styles of cans and labels used in the 1895 pack,

In the early days of canning, the labels were severely plain and were put on the cans by white women. By 1895 very few women were so engaged and Chinese labor monopolized every part of the work connected with the canning of salmon. Much attention is given to variety and styles in cans and labels, which yearly show improvement in style and design. Sixteen varieties of cans were used in the pack of 1895 (Wilcox 1896: 587).

[62] The fishing industry of the Pacific states as a whole engaged more than 17,300 persons in 1895; percentages by state were as follows: California 27.5%, Oregon 36.5%, Washington 36% (Wilcox 1896: 575). Of that number, just over 3,300 persons were employed in the 47 canneries of the US Pacific coast. The percentage of fisheries workers employed in canneries, and the total number of canneries were, by state: California 6% in four canneries, Oregon 59% in 26 canneries, and Washington 35% in 17 canneries (Wilcox 1896: 580). Over 12,300 persons of the Pacific states were engaged in fishing in 1895, more than half of whom fished the Columbia River. The capital invested throughout the region was $4,647,324, of which 70% ($3,264,630) represented the business of the Columbia River. The aggregate catch was 86,774,000 pounds, with a value to the fishermen of $2,438,000. Of these amounts 46,405,000 pounds, worth $1,810,000, were taken on the Columbia River. The yield of Chinook salmon was upward of 38,000,000 pounds and that of silver salmon 22,000,000 pounds (Wilcox 1896: 577-78).

Nearly a decade later, the fishing industry journal *Pacific Coast Fisheries*, described the primacy of fishing in Washington's economy in 1902,

"Measured by the value of its annual output, the fishing industry is the greatest industry in Washington. The total value of the product of the fishing industry for the year ending November 30, 1902...is greater than the total coal output of the state...greater than the total value of the lumber output, and slightly exceeds the value of the great wheat crop of Eastern Washington. These four industries are the most important ones followed in this state, and their order of importance is: fisheries, wheat raising, lumber manufacturing, coal mining...and that too despite the fact that the persons employed in the [fishing] industry were employed on the average of not above 60 days during the year" (Pacific Coast Fisheries 1903b: 7).

[63] On the general outline of McGowan's early history as a cannery town, Weathers notes,

"McGowan changed over to canning salmon around 1884 when he admitted his four sons as partners and changed the name of the business to McGowan and Sons. The settlement that grew up around company holdings was known as McGowan in honor of the owner. A post office was established on March 7, 1901, and continued in operation until April 15, 1939. In 1904 McGowan built and paid for a church near his cannery. The church was dedicated as St. Mary's Catholic Church on May 20, 1906, and is still a north shore Columbia River landmark" (Weathers 1989: 39).

[64] Appelo (1966) notes that Megler was born in Germany in 1839, moving to New York as a child to live with an uncle after the death of his parents, where he learned to be a tinsmith. He fought in the Civil War, then moved to Astoria to assist his brother who ran a hotel there. He soon entered the cannery business, and later became a longstanding Washington state legislator, representing Pacific and Wahkiakum counties.

[65] Kinney was Iowa born, raised in Oregon's Willamette Valley, but reputed to have entered the salmon business after witnessing first-hand the high prices being paid for salmon in London England markets.

[66] Chinese quarters are sometimes mentioned in reference to the Megler operation, but little specifics were recovered in the course of this research (Jeff Smith pers. comm. 2013).

[67] Appelo's (1966: 14) interviewees suggested that

"the place known as Megler was a fishing station built by Marshall Kenney (of Astoria) in 1880 and was taken over by Megler in 1883. This he always called Hungry Harbor, so named from it being a thoroughly landlocked piece of deep water and the fishermen used to run in there out of the wind to cook their coffee and eat their lunch."

[68] According to an article in *The Oregonian* appearing a year after the formation of the CRPA, with an investment of two million dollars the CRPA acquired the Astoria canneries of J.W. and V. Cook, B.A. Seaborg, J.O. Hanthorn & Co., Fishermen's Packing Company, Elmore & Co., M.J. Kinney, and George and Barker (Oregonian 1900:8). Elmore's Astoria plant served as the main canning location, whereas the other canneries were used for purposes such as office space and cold storage (USNPS n.d.). Hammond and his agent, Edwin Stone, served on the first board of directors of the company, along with Elmore, George H. George, J.O. Hanthorn, B.A. Seaborg, J.W. Cook, M.J. Kinney, Hammond, T.B. McGovern, C.W. Fulton, G.C. Fulton, and William Gosselin. William Barker served as superintendent of the canneries until his brother, Fred Barker, replaced William when he died in 1913. George replaced Elmore as manager upon his death in 1910 (Martin 2013).

[69] In 1878, Elmore had first entered the Columbia River canning industry, partnering with Joseph Hume in the development of a new cannery in Astoria. Elmore bought out Joseph Hume's interest in their shared venture and proceeded to build a second cannery on the lower River by 1881.

[70] Smaller rudders replaced large sailing boat rudders, the centerboards of the butterfly fleet boats were removed, shaft logs were "plastered" on, and a protective "basket" was rigged around the propeller (Andrews and Larsen 1959). Eventually, sails were entirely removed as the gasoline-powered boats rendered them unnecessary. The new boats were more cost-effective, because they could make more "drifts" than the sail-rigged butterfly fleet boats. By 1931, bowpickers were equipped with a power roller in the bow, which rendered a crew unnecessary and allowed gillnetters to run a one-man operation (Martin 1994:16).

[71] While the Humes and their cannery owning peers generally moved north, into the rich fishing waters of the north, a few cannery owners also moved south to untapped waters between the Columbia and San Francisco Bay. R.D. Hume, for example, famously developed a sprawling cannery complex at the mouth of the Rogue River, at Gold Beach, on the south coast of Oregon (Dodds 1959).

[72] In the early years of the CRPA, also known as "The Combine," a fair amount of tension arose within local communities regarding the organization. As *The Oregonian* reported in the winter of 1900, long-time cannery operators in Astoria were dissatisfied with the way that the CRPA was performing and affecting their business. The CRPA's inability to control cannery output and prices, they suggested, forced cannery owners, such as Seaborg, Kinney, Hanthron, George and Barker, off the Columbia and into the Puget Sound, causing over one million dollars in investments to move from Astoria to that area (Oregonian 1900:8). Editorials of the day also railed against the involvement of Hammond, a businessman with ties to the East, in effectively shifting the administration of the Columbia River salmon canning industry to New York investors and managers instead of Portland (Martin 2009; Oregonian 1900).

[73] The lead author has conducted research with Alaska Native elders who can still clearly recall the use of these boats in such places as the lower Kvichak and Naknek Rivers, as well as the larger Bristol Bay estuary of which they are a part. In some cases, Native fishermen operated these boats much later than most, as more affluent, usually non-Native fishermen began to gain access to modern, motorized boats. In some cases, the use of such boats was extended by regulations prohibiting motorized boats in certain protected waters. Native peoples were central to the early cannery efforts in these places, where Native populations were still high but local non-Native populations were often sparse (see Deur 2013).

[74] Transamerica Corporation acquired a controlling interest in 1946, and in 1959 the CRPA division of Transamerica partnered with Wards Cove Packing Company, becoming the largest salmon packer in the world. In 1960, this company changed its name to Bumble Bee Seafoods, Inc. after Hawaii-based seafood giant, Castle & Cooke, acquired the company through a merger (Bumble Bee Foods, LLC. 2012; Martin 2013, 2009). The company continued to undergo structural changes in the 1970s, moving its headquarters from Astoria to San Francisco in 1975; two years later, the company acquired a tuna cannery in Puerto Rico, a fishing base operation in Ecuador, as well as Harbor Industry cannery in San Diego. Today, the company operates out of San Diego as Bumble Bee Foods, LLC. and is owned by Lion Capital, LLP (Bumble Bee Foods, LLC. 2012). Though the company has moved away from its original home and shut down Astoria canning operations in 1980, the history of the CRPA is still visible there. In 2003, Bumble Bee employees established the Hanthorn Cannery Foundation at the former Hanthorn Cannery, which houses Astoria's Bumble Bee Cannery Museum; this is the the oldest cannery building still standing on the Columbia River, and indeed the oldest waterfront structure still standing in Oregon ("Astoria Oregon" n.d.; Martin 2013). In order to continue to preserve the rich salmon canning history of the Columbia River, the Foundation is also currently attempting to create an interpretive center and a Cannery Woman's Memorial Park in Astoria ("Astoria Oregon" n.d.).

[75] The exact antiquity of the remaining piers remains ambiguous, though they do largely match the general configuration described in the 1943 CRPA insurance reports for the site and may largely date from early CRPA ownership of the site.

[76] Elsewhere, P.W. Gillette noted,

"In 1852, R.M. Moore built at Fort Clatsop the largest steam saw mill then in Oregon. The mill stood on the bank of the river about 500 feet east of the Lewis and Clark fort. In cutting down timber for the mill, a bullet was found in one of the trees with 48 rings of annual growth outside of it, marking the exact number of years since they were there. Large quantities of lumber were shipped from this mill. I have seen five vessels loading lumber there at one time. It might not be amiss to mention the name of William Irwin, the nephew of R.M. Moore, and afterwards governor of California, who worked this mill.

He was "Bill" Irwin then and drove an ox team, cut saw logs, and did all sorts of work around the mill." (Gillette 1896).

[77] Some early logging operations used "jack screw" logging, cutting down trees to serve as rollers for trees that would be felled subsequently, rolling with gravity down to tidewater – a practice later refined into the "skid road."

[78] To be sure, the landscapes of early industrial logging, harvested and most replanted, abound throughout the study area and make up the better part of Clatsop, Pacific and Wahkiakum Counties. Other landscapes of industrial forestry can be seen, associated with these developments. In places where donkeys once pulled trees on low leads across the forest floor, this sometimes pulled away the topsoil; as a result, Red alder – a tree with nitrogen-fixing root nodules, uniquely capable of occupying disturbed soils – often extend in radial patterns, spider web-like, centered on the site of the originally donkey, for example. Here too, these landmarks have stories to tell.

[79] Initially, many of the region's small-scale lumbermen were not interested in following Benson's innovative model. According to daughter Alice:

Donkey engines had been profitably used in California for a number of years, but in the Northwest the engines had so far not been successful. Old-timers shoot their heads and said, "It is heresy to log with steam instead of oxen." Despite the warnings and evidence to the contrary from other camps, Father was convinced that steam was practical (Allen 1971:29).

After several successful years, other timber companies began following Benson's trend, building logging railroads into the small valleys of the Pacific Northwest previously untouched by the industry. In fact, the lower Columbia River estuary was one of the most heavily logged regions in Oregon by 1900, and by 1905, Washington produced the highest levels of lumber production in the country, while Oregon was a close second (Abbott 2004; Tucker 2002).

[80] These initial cigar rafts were assembled in the Wallace Slough near Clatskanie and brought to sea in the summer to begin the journey south to California. The rafts moved at a pace of no more than sixty miles a day, but they also carried freight such as shingles, telephone poles and finished lumber on their decks (Binus 2004; Crawford 2008). While Benson took a great risk in experimenting with this new technology, ultimately, his invention of ocean-ready log rafts saved his company about $150,000 dollars a year, with two to six rafts arriving in San Diego each year (Crawford 2008; Flores and Griffith 2002a). Benson was an inspiration to other loggers along the lower Columbia River, however as a 1906 issue of the *Oregon Daily Journal* reports:

"The immensity of the stake that Benson is playing for is expected to tempt others into the hitherto untried field of ocean rafting of sawlogs. Others have in a measure succeeded in rafting piling by ocean from the Columbia River to the south coast, but never before has the sawlog project been attempted. Mr. Benson has had the courage to invest a large sum of money at San Diego in a sawmill plant that will be practically worthless should the ocean rafting industry prove unsuccessful. The large element of chance in the undertaking will, it is believed, deter others for a few years, at least" (*Oregon Daily Journal* 1906: 5).

[81] Upon retiring from the timber industry in 1911, Benson sold off a significant portion of his assets, choosing to turn his attention to civic matters in Portland and the Columbia Gorge. He was

instrumental in the development of a number of hotels as well as contributing to the Multnomah Falls Recreation Area and the Columbia River Highway – a National Historic Landmark of tremendous regional importance.

Between 1909 and 1911, Benson decided to retire from the lumber business. He began selling off all of his landholdings in Clatskanie and San Diego at the price of $4.5 million (Abbott 2013; Binus 2004; Oregon Historical Society 2009). According to a 1916 article in the *Sunday Oregonian*, upon his retirement, "*Mr. Benson had title to one of the largest and finest bodies of timber in the state, his total holdings aggregating more than 45.000 acres, lying in almost a compact body in Columbia County*" (Sunday Oregonian 1916: 5). In his retirement, Benson oversaw construction of the Benson Hotel and the Columbia River Gorge Hotel near Hood River, Oregon. Benson was also instrumental in the creation of the National Historic Landmark, the Columbia River Highway, a 100-mile route that allowed for automobiles to travel from the mouth of the Columbia River, through the Cascade Range and into eastern Oregon. Benson also purchased 400 acres of land in the Gorge near Multnomah Falls and Wahkeena Falls in order to establish public parks in the area. Additionally, Benson donated twenty bronze drinking fountains to Portland after Prohibition came to the city in 1916. In 1916, Benson donated $100,000 to the Portland School District to build Benson Polytechnic School, and Portland State University is home to another of Benson's landmarks, the Simon Benson House. Constructed just after 1900 on the corner of SW 11th and Clay in downtown Portland, the house was moved in January of 2000 to its current home at 1803 SW Park on the Portland State University campus, where it houses the PSU Alumni Association and the university visitor center (Portland State University 2013; Oregon Historical Society 2009; Flores and Griffith 2002b, 2002a; Horn 1965; Oregon State Parks n.d.).

[82] Today, Clatsop County has the most consolidated private land ownership among all 36 counties in Oregon – in 1991, just four companies controlled half of its 533,000 acres – while across the river, Pacific and Wahkiakum counties display a similarly concentrated pattern of land ownership.

[83] In addition, Congress allowed for an "indemnity" limit another 10 miles wide on each side of the primary grant, so that land "lost" due to preexisting claims or government reservations within that limit could be taken by the railroad inside the added strip. Through a legislated amendment signed into law on May 31, 1870, the Northern Pacific was granted a "second indemnity" strip of 10 miles in certain places where land could not be taken by the railroad in either the primary or "first indemnity" strips. This second line also affected western Washington and northwestern Oregon, but not until 1910 or so—almost 50 years after passage of legislation authorizing the initial grant.

[84] To be fair, the fixed price discouraged settlement on these lands, or the sale of such lands to settlers, since it amounted to no less than double the cost of government land available through the Homestead Act of 1864 and other public land laws.

[85] A government report by the Bureau of Corporations assembled charts and maps compiled from field work during the period of 1907 to 1910 and subsequently printed a three-part document that described the degree of concentrated timber land ownership in the Pacific Northwest and compared it with other forested regions of the United States. Its characterization of Washington and Oregon was that most private ownership of timber was held by Weyerhaeuser and a few other large concerns. At one point in the report, its authors used testimony from residents to provide a picture of the local situation at that time:

"Weyerhaeuser absolutely controls all the timberland in [Pacific County]. They are a hard company to deal with. You cannot cross their land without paying them about what the land is worth. In the southern part of the county they will not sell any of the timber" U.S. Department of Commerce (1914a: 14).

[86] Oregon led the nation in use of the Timber and Stone Act, where it contained fully 30 percent of the total acreage disposed of in this way, or 3.8 million acres. To apply for land under the Timber and Stone Act, a claimant only needed was to sign an affidavit at the time of application stating they intended to "appropriate it to his own exclusive use and benefit." Fully one-tenth of all private ownership in Oregon was patented in this way, mainly because a timber claim involved no residence or even pretense of one and the transaction involved only cash. Despite the provision for "exclusive use and benefit," the courts ruled that a person could sell their claim between initial filing and issuance of the patent. This allowed some people to double their investment in 90 days, especially in areas where lumber companies or timber brokers were actively buying. More than four-fifths of the acreage (3.08 million) purchased under this legislation in Oregon came during the boom decade of 1900-09 (O'Callaghan 1979).

[87] In truth two of these "scripper acts" directly affected the study area, beginning with a rider on an appropriations bill passed in 1897. It contained a provision that any tract located within a federal forest reserve (later known as "national forest") covered by a "bonafide unperfected claim" could be relinquished by an owner who might then select "in lieu" any tract open to settlement. Lieu selections often came in blocks outside of forest reserve boundaries, usually unsurveyed lands that private timber cruisers had identified as far more productive than what the government wanted to retain as forest reserves. The "forest lieu" provision was changed to allow acquisition of only surveyed lands on March 3, 1905. A second measure passed as part of the appropriations act in 1898 allowed the Northern Pacific to take any odd-numbered section not valuable for mineral or stone, in any state or territory in which its railroad grant existed when the NPRR relinquished its rights in any unsurveyed sections within its original grant, upon which there was a valid claim. Even more generous was the act establishing Mount Rainier National Park in 1899, where the NPRR gave up its sections located inside the park and in the adjacent Pacific Forest Reserve in order to receive "in lieu" any nonmineral lands situated in any state through which the railroad passed. All three acts allowed the Northern Pacific and other entities to sell their rights to lieu lands through "scrip" that, in turn, became a popular way to buy timber. Syndicates organized for the purpose of buying timber land in virtually unlimited quantity, were waiting as the scrip became available, having already had the vast tracts of forest cruised to find the choicest parcels.

A fourth means to obtain timber land still in the public domain proved to be a favorite way for the syndicates or "rings" to "block up" holdings and thus increase land values, by including them in larger chunks so that the chances of logging became greater and protection costs dropped. More evident in Oregon than in Washington, it involved selling school lands (sections 16 and 36 in every township) for $1.25 per acre. When this was done within areas that became national forest, "school indemnity" represented an easy way to acquire "base" from which to make lieu land selections on public domain still open to "settlement." This method also stimulated a type of land fraud where schemers acted on inside information about boundary locations of the forest reserves so that they could quickly purchase prime school sections.

[88] The Oregon Central was purchased by Ben Holladay in 1870 and then merged with the Oregon & California Railroad.

[89] Hammond's line was later swallowed by the Northern Pacific in 1907, which combined with the Great Northern to complete the Spokane, Portland and Seattle (SP&S) line that ran along the north bank of the Columbia to Pasco and then to Spokane. As for the Astoria & Columbia River Railroad, Hammond negotiated a 99 year lease for use of the NPRR track from Goble to Portland. Without a land grant as incentive, Astorians provided Hammond with 3,000 acres near Astoria and 1,500 acres at Flavel to cover construction costs. The railroad discontinued passenger service in 1952; Corning (1956: 14).

[90] Most of Smith's holdings were assembled by use of the Timber and Stone Act, but some of it fraudulently, according to Puter and Stevens (1908: 33).

[91] Two separate groups of investors were delineated in the Bureau of Corporations' volume, *The Lumber Industry, Part 1*, (1913: 94). One group of timber land owners in Clatsop County were intermediate-sized companies, at least in 1914, with each landowner (there were 17 of this category statewide) having from 5 to 13 million board feet nationally. The other group was dispersed over a wider area of the county than any of the first three: these were smaller-scale landowner companies (there were 38 statewide) which could claim in the neighborhood of between 3.5 and 5 billion board feet nationwide.

Putting these figures into context, the U.S. Geological Survey paper titled *The Forests of Oregon* in 1902 provided the only reliable estimates of volume for that time, but placed Clatsop and adjacent Tillamook counties as having the two highest average stands of merchantable timber per acre of any in the state. Clatsop placed second (at 37,400 board feet per acre, as opposed to 39,500 in Tillamook), but fourth overall (at 16.7 billion board feet) despite being a relatively small county by Oregon standards. The investigators described it as covered by forests, where little cutting had been done, and the burned areas (although numerous) were small [in contrast to Tillamook County] and collectively amounted to less than five percent of county area (U.S. Dept of Commerce 1914a, 1914b; Gannett 1902: 18).

[92] Prior to the strike, Congress established the Aircraft Production Board in May of 1917 to oversee all issues pertaining to combat aircraft production. According to an August 1917 article in *The Timberman*, the Board then formed with War Emergency Spruce Council, which then formed the Pacific Aircraft Spruce Production Board. In May of 1917, the Board sent Major Charles R. Sligh, a furniture manufacturer turned military serviceman from Grand Rapids Michigan, to Portland in hopes of garnering an understanding of the spruce situation in Washington and Oregon. Though Sligh did not report back on the labor disagreements in the industry, he did suggest that government intervention would be necessary in order to meet the lumber needs of the Allies (Tonsfeldt 2013; Crosman 2011).

[93] While the entire Pacific Northwest region was crucial to the success of the SPD, the lower Columbia River region played a vital role in the Division. The SPD headquarters, which housed Disque and his staff, were located at the Yeon Building in downtown Portland. (This building was constructed in 1911 according to a design by John Baptiste Yeon, father of the celebrity architect John Yeon and his brother Norman, the original owner and builder of the Yeon House now managed as part of LEWI.) Spruce soldiers stationed at the headquarters were lodged in downtown Portland, as well. The Vancouver Barracks, located in Washington across the Columbia River from Portland, was the location of the military command for the SPD. Just over a month after the formation of the SPD, the Vancouver Barracks transformed into the location of the Cut-Up Plant, a main Division spruce sawmill (Evans and Williams 1984:6). Construction of the plant began in mid -December of

1917, and by February 7, 1918 the facility opened with a ceremony, which Disque attended along with his wife. The plant acted as a re-manufacturing mill that cut cants and flitches of spruce, fir and Port Orford for airplane manufacture. While remanufacturing mills were common at the time, the Vancouver Cut-up Plant was unique in that it represented a rare instance of the military taking part in industrial production (Tonsfeldt 2013).

Vancouver Barracks was important not only for the Cut-up Plant, but also the role it played in soldiers' lives during the War. SPD officers and soldiers were stationed at Vancouver Barracks at all times, and tents and temporary structures were set up as accommodations for them. Additionally, spruce squadrons used the Barracks for induction services, medical purposes, uniforms, pay and a variety of other needs (Tonsfeldt 2013:54). In addition to the Vancouver Barracks, SPD soldiers were scattered throughout the lower Columbia River region in a variety of different camps. For example, the Clatsop District of the SPD had 3,342 solider assigned to it as of November 1918 (Evans and Williams 1984:A-2).

[94] Disque sought to counter the influence of the IWW in various ways, including the creation of a separate union that promoted patriotism and cooperation between mill workers and mill owners, as well as loggers and lumbermen. This new union, formed in 1917, was dubbed the Loyal Legion of Loggers and Lumberman, or the "4Ls" (Military Order of the World Wars 2011:9; Williams 1999:7). Captain Maurice E. Crumpacker, an attorney from Portland, was put in charge of the new union. Though both laborers and management rejected of the 4Ls at the onset, Disque's power of persuasion plus strong nationalist sentiments led to broad public support of the union within six months of its formation, and by October of 1918, the 4Ls had 125,000 members. In the end, the union outlasted the SPD by twenty years (Military Order of the World Wars 2011:9).

[95] Four of the thirteen railroads were constructed with the intention of them becoming permanent railroads line, including SPD Railroads 11 and 12 of Lincoln County, Oregon and SPD Railroads 5 and 1 in Washington (Evans and Williams 1984:13).

[96] Meanwhile the Colorado Midland, having delivered a significant portion of the company's equipment to the USRA and retooled their organization almost entirely to support the war effort, collapsed and its assets sold in auction shortly after the war (Kaminsky 1989).

[97] Lands immediately west of the Netul Landing log dump, meanwhile, are reported to have been acquired by an Ole Nygaard at around the same time (Metsker 1930).

[98] The Crown-Zellerbach Corporation was a titan in the papermaking industry of the twentieth century, and its presence in the Pacific Northwest shaped both the economic and physical landscape of the region. Both halves of the Crown-Zellerbach Corporation were rooted in California-based resource businesses of the 1870s. Zellerbach Corporation formed as a timber company in 1924 in San Francisco, then in 1927 merged with its own paper board industries (Adams 1951b:85; Crown Zellerbach Corporation 1998). Crown-Willamette itself was a conglomerate of California and Oregon timber interests formed during roughly the same period. Zellerbach merged in 1928 with Crown Willamette Paper Company, becoming one of the largest timber and paper companies and the second largest paper manufacturer in the United States. The new corporation now had assets amounting to almost $100 million, including over 350,000 acres of timberlands and the capacity to manufacture 1,450 tons of finished paper each day in paper mills located throughout the Northwest. The company manufactured building materials as well as wrapping paper, paper bags, newsprint, and other paper items (Harvard College 2012). Crown Zellerbach became a publicly

traded company on the New York Stock Exchange in 1928, only 10 months before the beginning of the Great Depression (Harvard College 2012). The company languished during the Depression years, like many other firms, due to dramatic declines in demand for construction materials and other timber products. The paper industry, in total, saw a 44 percent decline in sales, and Crown Zellerbach reduced employee wages by 10 percent (Center for Columbia River History 2013).

[99] The exact succession of company ownership is difficult to disentangle based on records reviewed in the course of this study – a separate owner, the Lewis and Clark Narrow Gauge Railroad is also sometimes listed as an independent entity in some accounts, perhaps as a holding company for railroad assets subsidiary to the larger interests of these timber companies.

[100] A fourth fire, occurring in the summer of 1951, is sometimes considered to be the final "Tillamook Burn." In 1978, thirty years to the day after the passage of the reforestation bond bill, Governor Tom McCall designated the burned lands in state ownership to be a part of the Tillamook and Clatsop State Forests, which now consist in no small part of former Tillamook Burn lands (Wells 1999; Kemp 1967).

[101] Crown Zellerbach purchased large tracts of foreclosed lands in the Columbia-Pacific region, as well as in other parts of the Northwest and the American South. Crown Zellerbach also participated in early experiments with industrial-scale reforestation on their Clatsop Tree Farm (Adams 1951b:95). By the 1950s, the Clatsop Tree Farm, located in Clatsop County, extended from Tillamook County to the south to the Columbia River on the north, and the Pacific Ocean in the west to near the summit of the Coast mountain range in the east. While Douglas fir production in the interior portion of the County supplied building materials, some portion of their Clatsop County operations supplied the growing pulp and paper industry – especially the coastal spruce and hemlock forests (Wahkiakum County Eagle 1965:7; Crown Zellerbach Corporation 1958). By 1958, the company had a total of twelve certified "tree farms" in the region. Northern Oregon was home to four of them, including Clatsop, E.P. Stamm Tree Farm in Columbia County, Tillamook Tree Farm in Tillamook County and Lincoln Tree Farm in Lincoln County. Southwest Washington was home to two: Pacific Tree Farm in Pacific County and Cathlamet Tree Farm in Wahkiakum County. In total, the company had 425,000 acres in seven Oregon farms and 230,000 acres in five Washington farms – roughly the apex of its ownership, in 1958 (Zellerbach Corporation 1958:13). Crown Zellerbach opened up the industrial timberlands of the area, many for the first time, building vast networks of logging roads, mills, and other logging infrastructure throughout the region – effectively dominating local timber production from the 1950s through the mid-1980s.

[102] To underscore the dynamism of recent ownership, it is worthwhile to review the recent history of the former Crown-Zellerbach lands, which have represented between 140,000 and 175,000 acres of Clatsop County - the largest single ownership in the County. In 1985, the Oregon assets of Crown-Zellerbach were lost to a hostile takeover by wealthy British industrialist, Sir James Goldsmith; Crown Zellerbach was dissolved in 1986, with assets divided between James River Company and Goldsmith's privately-held Cavenham Industries, with most Clatsop County lands going to the latter. The new owner, Cavenham Industries, was soon consolidated into a resource extraction conglomerate with Hanson Industries, becoming Cavenham-Hanson in 1990. For the duration of these operations, the company continued to operate both cardboard and lumber production facilities, but harvested very little timber on their Clatsop lands. Cavenham-Hanson's lands were then sold to Hancock Lumber in the mid-1990s. Willamette Industries soon acquired the majority of Hancock's Clatsop County lands in 1996, but by the end of that decade those lands were later acquired in a takeover by Weyerhaeuser. Weyerhaeuser sold most of these lands to the Campbell

Group in 2009, except certain parcels that were retained or traded with other timber companies such as Stimson Lumber Company. Campbell Group, an investment company with only a small forestry staff, has since been restructured and the ownership of this majority stake in Clatsop County's timberlands is once again in flux at the time of this writing.

[103] The story of each of these shipwrecks is rich and deserves more attention than can be provided here. Each has connections with people, places and events mentioned elsewhere in this document. A lifeboat from the Hammond lifesaving station was dispatched to rescue the crew of the *Peter Iredale*, for example, and these men later recuperated at Fort Stevens. The *Shark's* mission to the Oregon Territory, its ownership then contested between the United States and Britain, involved surveys and other actions meant to support the American side of that debate. Following the wreck, the crew of the *Shark* was taken back to the fort at Astoria; while recuperating there they carved their names on a local landmark known as "Shark Rock," which sits a short distance west of the fort site to this day amidst modern downtown commercial development. The cannons from that ship drifted as far south as the cape at Hug Point, on the north end of modern Arch Cape, were buried by sand, and some portion of them recovered in 1898 near the outlet of what is today known as "Shark Creek"; the post office of Arch Cape was named for these cannons, and that name was later applied to the town of Cannon Beach, a few miles to the north. In 2008, two additional cannons were discovered in the same general location, being recovered and since studied by the Oregon State Historic Preservation Office and others (Shine2008; O'Donnell 1996; Gibbs 1973).

[104] The National Park Service "Summary Context for NHL Nominations" (n.d.: 1) explains the Fresnel lens and its significance: "*The Fresnel lens, developed by August Fresnel, a French physicist, consists of a collection of glass prisms held together in a beehive shape by a brass frame. The light rays are bent by the prisms into one horizontal sheet of light which in a fixed lens shows a steady light and in a revolving lens, produces a flash or characteristic. These lenses were produced in seven standard orders or sizes, numbered one through six. Orders one through three were used in larger coastal lights, while four through six were used in harbor or bay lights.*"

[105] A first order Fresnel lens arrived at the site in 1855, but did not operate until October 1856 because the lantern section of the lighthouse had to be modified to install the lens since the original plans called for a smaller lighting system. Invented by a French company in 1822, this type of lens with its multiple prisms slowly replaced an earlier system of lanterns throughout the United States over the following four decades, one where thin copper frames held the lanterns together and enclosed small panes of glass used to project the light. As installed, the Fresnel lens used at Cape Disappointment had initially seen service starting in 1841 at Navesink Lighthouse in New Jersey. The U.S. Lighthouse Board ordered it shipped around Cape Horn to the Columbia River entrance, where the newly built lantern housed the lens for 42 years. Dimensions of the lens were 140 inches high and 77 inches in diameter, illuminated by a five-wick oil system (Lucero and Hobbs 2009).

[106] This is a large topic, only addressed briefly here. The Territorial Act of 1848 that established the Oregon Territorial Government and, thus, created the Oregon Territory, also authorized $15,000 for the lighthouse at Cape Disappointment in the present state of Washington. During the same period, President Millard Fillmore, in February of 1852, declared by executive order that all the public land lying within 1 ½ miles of the southern point of Cape Disappointment be withdrawn from sale or grant, and reserved for military purposes (Rodgers 1886). The Executive Order set apart 540 acres of public lands located north of the southernmost point of the cape for military purposes. Another executive order on December 27, 1859, took 48 acres of the military reservation and made it a lighthouse reserve. These nearly simultaneous efforts at the mouth of the Columbia, both to protect

navigation and defend the river, set in play competing land uses between the US Department of Treasury and US Department of War. Rather than subtracting from the initial reservation, the General Land Office added some acreage to the military reserve so that their combined total reached 588 acres in March 1863. When legislation authorized construction of a lighthouse at North Head a little less than three decades later (on February 15, 1893), the War Department and Treasury Department (which housed the U.S. Lighthouse Board) attempted to sort out their respective jurisdictions on the cape. With three Civil War era batteries located near the Cape Disappointment Lighthouse, officials in the two departments agreed that the military should have jurisdiction over both reservations, apart from four small tracts reserved exclusively for lighthouse use (Washington State Office of Archaeology and Historic Preservation 1975; Hussey 1957).

Development of the lighthouse reservation and the establishment of a military installation leap-frogged each other through the end of the nineteenth century. Early military efforts to fortify the mouth of the Columbia included the installation of smoothbore cannons at Cape Disappointment in 1862. The post and fortifications were constructed the following year, and the fort was activated in April 1864 (Weathers 1989 Washington State Office of Archaeology and Historic Preservation 1975). The commander of the US Volunteers of the District of Oregon, headquartered at Fort Vancouver, immediately began lobbying to have the lighthouse and fog bell relocated, "*I enclose a letter for Major R.S. Williamson of Engineer Corps, on the subject of the removal of the Light House at Cape Disappointment to a better and safer position, considering the danger of injury (in its present position) from the discharge of heavy cannon*" (Alvord 1864). Friction continued and in 1886, the Fort Canby Post Commander made a case to the Assistant Adjutant General at Vancouver Barracks for the relocation of the "*light-house life saving and signal establishment*" which warrants quoting nearly in full:

"I desire to invite the attention of the Department Commander, especially to the occupation of sites for the buildings used by their employes within the limits of the military garrison and post, without first obtaining authorization of the War Department to said sites.

"These establishments of stations are all located at this place by superior authority in their respective services and are entitled to suitable sites for their proper purposes and for the use of their employes, but the selection should be regulated. The tendency is to concentrate all buildings in the small cove at the foot of the hill near the wharf—to crowd together in this small place, interfering unnecessarily with each other and endangering all in case of fire in any one. It is apparent to all here that there should be some effective, recognized control on the ground to prevent this, and, this post having been selected as a permanent one for the concentration of all Artillery troops in the vicinity for instruction purposes, it is evident that the few available building sites along the only military road to the wharf should be retained for store-house and garrison purposes...

"The tract of land over which control is thus assumed by another department is that part of the Military reservation which is most valuable and necessary for Military purposes. The fortifications, magazines, powder house, Commissary and Qr.Mr's. store-houses, stables, woodsheds, shops guard-house, wharf, barracks, N.C.O. quarters and military roads are all located out it. The War Department has for years been building on this tract of ground and improving it with roads and bulkhead. The new hospital, and Ordnance store-house and bulkhead to cost $18000 are projected on it.

"It appears a conflict of authority is slumbering here, to be raised at any moment. I report the facts and respectfully request that the question be authoritatively settled (Rodgers 1886).

Despite such requests to remove nonmilitary operations from the reservation, the lighthouse and life-saving station remained. A new bell house had to be built in 1871 after a gun blast from a nearby battery shattered the old one. The station's fog bell proved ineffective because it could not be heard adequately by mariners from a suitable distance. The bell's service at Cape Disappointment was discontinued in 1881 and it was transferred to West Point Lighthouse on Puget Sound. A massive 15-inch Rodman cannon at the fort was seldom fired because the concussion of the blast threatened the glass in the nearby lighthouse. The cannon was relocated in 1893 to the fort's Center Battery. The life-saving station, originally built on piles in the bay, was moved to its present site at Fort Canby in 1920. This uneasy relationship between the competing interests at Cape Disappointment continued until Fort Canby was deactivated in 1947 (Lighthouse Friends 2013; U.S. Coast Guard 2001; Washington State Office of Archaeology and Historic Preservation 1975).

[107] This includes most of 6N10W, SW ¼ of Section 31 – totaling 160 acres, minus some offshore areas (GLO n.d.).

[108] Nehalem elder Clara Pearson reported to John P. Harrington: "*The sea lions did not like it at all when they put the lighthouse on Til. Rock, they wd. Swim around the rock and look, and finally they started a sleeping place at dehontatch [Ecola Point]...that rock had been their bed for countless generations...sometimes the sea lions went and tried to climb up there and sometimes the whites would shoot them and kill a lot of them thus*" (in Harrington n.d.: 454).

[109] The disposal planning report noted, "*It has been administratively determined that no appraisal will be required at this time because of the difficulty in contracting with an appraiser experienced in the type of property and the inaccessibility of the property*" (Merrifield 1958). Another report declared, "*Fair market value, considering location, is zero*" (in Miller 1958). In preparing to dispose of the light station, the Public Buildings Service reported,

"*The difficult access to the subject property will limit prospective purchasers. Range of possible uses could include an A.E.C. [Atomic Energy Commission] Test Station, Radio or T.V. Transmission Antenna Site, or a Radar Site" (Merrifield 1958). The recommendations for disposal were (in order of priority): US Navy, Oregon State Parks Division, and public offering by a sale of sealed bid (Merrifield 1958). The Navy, Oregon State Parks, and the National Park Service all declined to acquire the property. It was purchased for $5,600 through public auction by the Academic Economic Coordinators for "marine and scientific research*" (Gunn 1958).

The AEC, as the organization called itself, comprised over 50 members, and its five-member advisory board consisted of five Las Vegas businessmen from the construction and engineering industries (Gunn 1959). AEC's stated purpose of marine and scientific research failed to materialize and the facility passed into more than 20 years of disuse under a succession of private owners with ambitions for enterprises such as a novel gambling casino (Eternity at Sea Columbarium 1981: 4). In 1980 the lighthouse on the basalt outcrop was bought by Mimi Morissette and a group of investors for $50,000. The interior was adapted as a repository for crematory remains but the business lost its license in 1999, halting further placement of remains (Yardley 2007).

[110]The lightships patrolling the river bar included the *Columbia River Lightship No. 88* that was superseded by *Columbia River No. 604*, which retired in 1979.

[111] In 1941, as the country became involved in World War II, the Navy ordered the Coast Guard to set up lookout posts at ten lighthouse stations along the Washington and Oregon coasts. These posts employed twelve-inch signaling lights operated by crews of four signalmen on a twenty-four hour basis. The signal crews' mission was to identify enemy submarines, and report enemy aircraft and the landing of enemy ships, in addition to other missions. To avoid infiltration by enemy ships, the Coast Guard ordered beacons and lighted buoys extinguished. This measure contributed to shipwrecks, such as that of the *SS Mauna Ala*, which, unaware of the light shutdown, raced directly into Clatsop Beach on December 10, 1941 (Kann and Kann 1990).

[112] Lighthouses, lightships, buoys, and beacons have aided ships in finding the entrance to the Columbia, but familiarity with the bar was, and continues to be, critical to a safe crossing. Local Native Americans and, later, members of the Hudson's Bay Company, served as the earliest pilots to meet ships and provide assistance across the Columbia bar. As the town of Astoria became established, experienced mariners would sail (and later steam) out beyond the breakers in their pilot boats and wait to guide arrivals across the bar for a fee. In 1846 the State of Oregon established the Oregon Board of Pilot Commissioners, which provided for formal licensing of the pilots. All vessels engaged in foreign trade are required to employ a state-licensed Columbia River bar pilot when making the crossing (Columbia River Bar Pilots 2010).

[113] The first U.S. Coast Guard unit established in the Pacific Northwest was the U.S. Revenue Cutter Service's *Jefferson Davis*, sent to the Puget Sound in 1854 to prevent smuggling. At this time, revenue cutters were at the disposal of customs collectors in the Pacific Northwest and elsewhere. The custom collectors also performed duties such as documenting vessels, supervising lighthouses, steamboat inspections and administering marine hospitals. In addition to custom's related responsibilities, the *Jefferson Davis* also aided in the transportation of government officials and rescue missions at sea (Nelson 1994; Noble 1989).

[114] He was also, among many other things, the person for whom Lane County Oregon was named, and a key opponent to the ratification of the Tansy Point treaties with the tribes of the Columbia-Pacific.

[115] In an effort to streamline government operations, the Revenue Cutter Service and the Life-Saving Service amalgamated in 1915 to create the US Coast Guard. In 1939 the Lighthouse Service merged into the Coast Guard, and in 1946 the Coast Guard absorbed the Bureau of Inspection and Navigation. The Coast Guard continued under the Department of Treasury until 1967, when it was transferred to the Department of Transportation, and in 2003 transferred again to the Department of Homeland Security (US Coast Guard 2012b; Weathers 2001; Noble 1989).

Assuming the motto of the Revenue Cutter Service, *Semper Paratus* (Always Prepared), the Coast Guard was established as "*a military service and a branch of the armed forces of the United States at all times*" (*38 Stat. L., 800*). Upon the declaration of war or when the President directs, the Coast Guard operates under the authority of the Department of the Navy. All Coast Guard stations, including those at the Columbia's mouth, were placed under the direction of the Navy by executive order from January 1917 to the close of World War I in November 1918. During both World War I

and II, the Coast Artillery implemented additional fortification by placing mines at the mouth of the river. Today all mines have been removed or deactivated due to seepage (Willingham 1983: 125).

Prior to World War II the Coast Guard conducted neutrality patrols under the US neutrality act of 1939, and was assigned the mission of port security the following year. With US involvement in the war, the Coast Guard was again ordered to operate as part of the Navy. Coast Guard vessels, such as *USCGC 402,* joined the Harbor Defenses of the Columbia under the direction of the Navy. By April 1942, 26 coastal lookout posts and 13 lifeboat stations serviced the entire coastline, and guardsmen were armed with a range of weaponry. Principally between 1943 and 1944 Coast Guard beach patrols were conducted via horseback (Kann and Kann 1990: 30). Throughout the war the Coast Guard played an important role in defense of the mouth of the Columbia, as well as continued its safety missions in the region.

[116] As further technological advances reshaped helicopter technology during the Vietnam War era, these were reflected in Coast Guard fleets. In 1973, the two original helicopters were replaced with three HH-3F Pelican helicopters. The air station continued to grow and advance and, in May of 1983, it gained two HU-25 Guardian fanjets, and in 1987, three HH-65A Dolphin helicopters replaced the Pelican helicopters. In May of 1995, three HH-60J Jayhawk helicopters replaced the HH-65A Dolphins and HU-25 Guardians.

[117] Initially the National Motor Lifeboat School classes were meetings of surfmen stationed primarily along the Washington and Oregon coasts, but eventually the classes were developed into a systematic curriculum taught by permanent instructors assigned to the center. In 1980 the motor lifeboat school became a national training center, and is the only school for rough-weather surf rescue in the country. Over the years students from the US Coast Guard as well as the Canadian Coast Guard and Norway's Royal National Lifeboat Institute have taken courses at the center (US Coast Guard 2012a)

As of 2006, the station at Cape Disappointment had 50 assigned crew members, responding to between 300 and 400 calls for assistance every year.

[118] Andrew A. Humphries was a prominent Union General in the Civil War; as part of the Army of the Potomac, he was involved in the major battles at Antietam, Fredericksburg, and Gettysburg, later assuming the relatively calm but strategically important Chief of Engineers position, overseeing the development of harbors, forts and other facilities throughout the rapidly expanding nation through the 1870s. Also somewhat famous for his scientific writings on the hydrology and sediment dynamics of the Mississippi River, he was relatively well suited to oversee engineering matters relating to the Columbia River mouth at this time.

[119] In September 1877 C.W. Holt reported to Col. Wilson in the Engineers' Portland office that conditions at installations on the north side of the river were also in need of attention:

"*I have to say I have just arrived from Cape Hancock L H* [Cape Disappointment Lighthouse] *and in looking at the breakwater I find that it has changed very much since you were here last week. The water has broken over the wall and the banks washed in from the wall and back a distance of about 55 feet from the face of the wall...At ordinary low tide the water is within a very few feet of the wall which is being undermined and sinking while the top layers of stone are being carried in by the effect of the surf and drift*" (CW Holt 1877).

[120] As Robert N. Holt wrote from Fort Stevens on Christmas Day, "*I have to report that the very high tides of Thursday washed over the beach filling the lake or pond to overflowing and on Thursday evening or night the water cut through the sand on the beach about 500 feet south west of the flume*" (R.N. Holt 1881c).

[121] Capt. J.W. MacMurray at Fort Stevens, for example, made appeals to the Assistant Adjutant General of the Department of the Columbia,

"*For defense at the mouth of the Columbia, a well armed battery at Fort Stevens has superior advantages. Ships must cross the bar of the Columbia with closed ports and at great risk in the tortuous channel and heavy breakers under fire from guns of Fort Stevens, which from a central point would command the channel for a distance of nearly nine miles, at a range varying from 1000 to 8000 yards, and through an arc of almost 180 degrees*" (MacMurray 1882).

[122] When fully retrofitted, it was described as "*Chinook, sea dredge (steel), 5658 tons, 445 ft (length) x 49 ft 2 in (breadth) x 30 ft (depth), built 1892 in Belfast, Ireland, estimated cost $300,000*" (Bureau of Navigation 1904: 416).

[123] A.B. Leckenby's son, Harry N. Leckenby of Seattle, described the earliest stabilization work in a letter to KJR Radio Station,

"*I was listening to the Western Farm and Home Hour today, and was very much interested in that portion of their program relating to picket fences and dune grasses used in the control of shifting sands on the Oregon coast. I understood the speaker to say that the first work that was ever done on this was done by Mr. Harry Schoth... [M]y father, Mr. A.B. Leckenby, at the request of Mr. Judkins, who was then special emmigration and land agent for the O.R. & N. railroad, did a considerable work in the control of sand dunes at Gearhart and Seaside, Oregon, in the years 1897-8-9, and also... a particular friend of my father's, Mr. Edwin Johnson, who owned the Portland Seed Company, bought the tide lands at the north end of the Seaside, Oregon, and by the systematic installation of picket fences, added to the actual livable area of Seaside many acres located in the northern end of the city*" (Leckenby 1937).

[124] Maintenance of the Columbia River jetties is an ongoing struggle. Extensive repairs were needed in 1931, for example, because waves had lowered the elevation of the outer end of the south jetty. Additional major reconstructions have been required on several occasions since then. In recent years, frequent and large storms have accelerated wave damage to the jetties, thereby jeopardizing navigational safety. Outer sections of the jetties have eroded away, other sections are at risk of breaching, and receding beaches have exposed greater portions of the jetties to wave damage. Congress funded interim repairs to the north jetty that were completed in 2005. Interim repairs to the south jetty were conducted in 2006-07. At the time of this writing, the Corps of Engineers is evaluating the reliability of the jetties to identify the optimum methods for long-term rehabilitation. Construction for a complete jetty rehabilitation project has been estimated to require $400-470 million in federal appropriations over 20 years, creating political hazards in addition to those of a navigational nature (Columbia River Channel Coalition 2012a).

[125] In truth, the configuration of the dredged channel is complex. The outer channel is 2,640 feet wide and some 55 feet deep. The bar channel is dredged to a depth of 55 feet in the northern three-

quarters, and to 48 feet in the southern quarter. The channel then narrows to 600 feet wide and 43 feet deep (Columbia River Channel Coalition 2012b; Columbia River Bar Pilots 2010).

[126] While often cited as an "Executive Order," Fillmore's was responding directly to Conrad's February 24th letter and his February 26th reply is not ordinarily listed among Presidential Executive Orders. In truth, Fillmore replied with a statement that was brief, and to the point: "Approved February 26, 1852" (in U.S. Senate 1878: 2).

[127] P.W. Gillette's June 18, 1861 diary entry mentions the Shubrick near Fort Clatsop: *"I there found the steamship Shubrick, a government vessel, & the first steamship that has ever been in the Lewis and Clark"* (Gillette n.d.). Originally used in the Lighthouse Board vessel, to aid in the operations at the Columbia River bar, the ship had been placed in the Revenue Cutter Service by late summer of 1861 to support the war effort.

[128]On these matters, Hussey (1957: 22) cited letters between R.E. DeRussy and G.W. Elliot, July 4, 1863, as well as one sent by J.G. Totten to R.E. DeRussy, July 10, 1863, both in the Corps of Engineers, Portland District Defenses, Mouth of the Columbia River Letterbook, microfilm copy, Oregon Historical Society, Portland.

[129] W.W. Raymond was part of an early and locally famous contingent of settlers – including Elbridge Trask - who arrived on Clatsop Plains in 1843. He served for a time as an Indian agent, administering the Clatsops residing in the area from his home on Tansy Point, and was somewhat infamous for his mismanagement of that temporary subagency (see Deur 2005). Indiana-born B.C. Kindred came to Oregon in 1844 and settled on Point Adams by 1845. His family was reported to still be occupying what remained of their original claim in 1889 (North Pacific history Company 1889).

[130]From Portland *Oregonian*, February 20, 1875, and Evan Miles, Military History of Fort Canby, a manuscript compiled between December 21, 1874, and July 13, 1909, cited in Hussey (1957: 25).

[131] This material is synthesized from a variety of sources cited in the chapter of this document addressing navigational improvements to the river mouth. Important among these are Hansen 1997; Reckendorf, et al. 1985; Hanft 1980; Office of the Chief of Engineers 1899; Casey 1876; and Miller 1875.

[132] The "Endicott Report" is formally entitled *Report of the Board of Fortifications or Other Defenses Appointed by the President of the United States under the Provisions of the Act of Congress Approved March 3, 1885,* House Executive Document 49, 49th Cong., 1st Sess. (Washington, DC: Government Printing Office, 1886).

[133] Built in 1899, the Warrenton-Flavel line of the Astoria &Columbia River Railroad line effectively linked Fort Stevens to the national system of Northern Pacific (Laubaugh n.d.; Wolford 2011). Fort Stevens had a large government wharf, which connected to the rail link. In 1907, the Hammond spur of the Astoria & Columbia Railroad accessed the Fort Stevens Station, which helped to link the fort with other areas in the region. The Fort Stevens Post Office was in use between 1899 and 1949 (Hansen 1997; Hanft 1980).

[134]Hussey quoted from 42nd Cong., 2nd Sess., House Executive Document 1, Part II, 71.

[135]This evidently spelled the end for the Lifesaving Station and boiler house on Baker Bay, as indicated by Hussey, A Short History of Fort Canby, 28-29. He cited the Portland *Oregonian* of June 14, 1931, and the Ilwaco *Tribune* of June 24, 1949, among his sources.

[136] Changes to the mine casemate at Fort Columbia came later, but were less stout and generally limited to the existing envelope. Completed in 1921, this amounted to concrete walls now two to three feet thick, as well as a reinforced concrete and steel roof five feet through, and overlain with earth.

[137] This reached a total for all three forts of 127 officers and 2,574 enlisted men by June 1918; "Fort Stevens," p. 2 in http://fortwiki.com/Fort_Stevens, accessed October 29, 2013.

[138] This move largely stemmed from publication of the *Report of the Board of Review of the War Department to the Secretary of War (November 26, 1915) on the Coast Defenses of the United States, the Panama Canal, and the Insular Possessions*, House Document 49, 64th Cong., 1st Sess. (Washington, DC: Government Printing Office, 1916).

[139] This mobilization of the dunes contributed to the burial of a former Clatsop village site beneath the dune field. As described by Meriwether Lewis' journals, this village consisted of *"houses and about 12 families of the Clatsop Nation, we crossed to those houses, which were built on the S. exporsur of the hill, Sunk into the ground about 4 feet the walls roof and gable ends are of Split pine boards, the dores Small with a ladder to decend to the iner part of the house...those people treated me with extrodeanary friendship"* (Lewis, December 9, 1805)

[140] Most mine operations had been consolidated from Fort Stevens and went to the casemate at Fort Columbia in 1937. The Army had long recognized that the control cable at Fort Stevens could be seen during low tides and the mine plotting room there lacked protection and concealment. To correct these deficiencies, the Army deployed a new mine system and expanded the casemate at Fort Columbia beginning in 1941. The addition included gas proofing equipment, a power house for the searchlights on Chinook Point, and two entry tunnels. They added reinforcement to the casemate, most notably in the form of a cap composed of stone rubble intended to detonate any bomb or shell before it could penetrate the earth covering. Meanwhile, the Army converted the Columbia River minefields from buoyant devices to larger ground mines, each holding 3,000 pounds of high explosive (Lingo 2008; Hansen 1997).

[141] The war brought unprecedented resources into the war effort. As part of the Columbia River Harbor Defenses on the Oregon side, there was the "Columbia River Harbor Defenses" which included the Fort Stevens Military Reservation (2,826 acres), the one acre Hammond Fire Control Station, as well as the 39 acre Columbia Beach Military Reservation and the 15,000 acre Camp Clatsop, both in Warrenton (USOCE 1945). The Fort Stevens Military Reservation also was responsible for commanding the operations of facilities elsewhere on the coast, including the 32 acre Coos Bay Fire Control Station. The 59 acre Tillamook Head Radar Station, administered as part of a separate chain of radar stations along the Pacific coast, functioned largely independently of the Columbia River Harbor Defense system.

[142] A Memorandum dated November 6, 1942 from Headquarters IV Fighter Command, Office of the Commanding General, "New Code Designation of Radar Stations." Station "J-23" a CHL-588 (Chain Home Low, a Canadian built British radar) radar station was located at Tillamook Head. Certain military websites suggest that the site was instead a "ground control intercept radar" installation (a

SCR-516 or SCR-588 facility), though this is not the terminology used in military documents of the day.

[143] As Oregon State Park Superintendent, Samuel Boardman noted, "*the Army built a road from Cannon Beach to the Head. When they came to the Indian village location the midden mound was leveled to the ground, though the road location missed it entirely*" (Boardman 1956).

[144] These accounts are derived from common and mostly verifiable accounts of World War II-era coastal residents gathered by the lead author; notes on specific interviews are in the author's possession.

[145] Since the early 1860s, a small number of steamers had entered and sometimes landed on the tidewater of the Lewis and Clark River from the Astoria waterfront. P.W. Gillette suggests that the first steamer – the famous *Shubrick*, the lighthouse tended that was enlisted for Revenue Cutter Service during the Civil War and targeted by Confederate privateers for hijacking - arrived on the river in June of 1881. Gillette and his contemporaries often mention a "landing" on the west side of the Lewis and Clark river estuary near Fort Clatsop when people traveled across that river, but provided few specifics about its functions and exact placement.

[146] Holladay's interests, including but not limited to the OR&N, owned various vessels that traveled the Columbia, and it is likely that these were Holladay steamers making landfall at the Fort Clatsop wharf. While exact evidence is thin in the sources consulted, there is circumstantial evidence suggesting that the small steamers used by the OR&N for the Ilwaco operations - *T.J. Potter* and *Ocean Wave* – may have been among the boats landing at this site (Jeff Smith, pers. comm. 2013).

[147] The hotel was placed on the National Register in 1978, and reopened as a rustic inn in the early 1990s.

[148] This line linked Astoria and Portland, remaining separate from other ISNC operations until the 1880s, when rising demand motivated Loomis and his partners to add the *T.J. Potter* and *Ocean Wave* to directly link Portland to Ilwaco, instead of Astoria.

[149] Specifically, during this time, Loomis won the contract for carrying mail between Astoria and Olympia, Washington, as well as took over Stout's stage route on the Long Beach Peninsula. With these new attainments, Loomis used the *General Canby* to shuttle mail from Astoria, across the mouth of the Columbia River, to Ilwaco. Mail was then transported along the coastline by the horse-drawn stage for thirteen miles before crossing the mile-wide peninsula to arrive at Oysterville. From Oysterville, the mail traveled by another of Loomis's steamers to North Bend, across Shoalwater Bay. The mail route finally reached Olympia after travelling on two more stages and a steamer. Though the route was complex, Loomis effectively fulfilled the mail contract and, building the mail service atop preexisting transportation services, achieved a level of financial success as a result of this contract (Jessett 1957: 145-46).

[150] Nahcotta was chosen as the final destination, because shipping proved easier there, as the water was deeper than at Oysterville (Becker 2012). The ISNC began track construction before the flatcars and locomotive arrived in town. The company laid the first tracks from the Ilwaco wharf to the depot, and the engine shed, water tank and turntable – parallel in construction to those at the Megler wharf - were built in close proximity. The ISNC purchased all of their rolling stock second-hand from the Utah Northern Railroad. A Baldwin Mogul locomotive, originally constructed in 1879,

acted as the first locomotive for the rail (Jessett 1957: 146). Construction of the rail moved forward, and by July 12 of 1888, 4.1 miles of narrow gauge line were completed by the ISNC between Ilwaco and Tinkerville, Washington, now called Long Beach (Strack 2013). With the opening of the line on July 19, both the towns of Ilwaco and Tinkerville held banquets, and attendees were ushered down the new rail on flatcars equipped with benches and canopies to celebrate (Strack 2013; Becker 2012; Jessett 1988, 1957; Feagans 1972).

[151] As Weathers notes, "*The Ilwaco railroad bought the deep water site for their terminus around 1906 and initially called it "Cook's Station". When the first train arrived at the train terminus and ferry dock in 1908 the name had been changed to Megler Station. Automobile traffic finally forced the Ilwaco railroad to discontinue train service on September 9, 1930. Ferries operated by Fritz Elfving and later the Oregon Department of Highways continued to serve the Megler to Astoria run until July 29, 1966, when the last regular ferry operation ceased with the opening of the Astoria Bridge*" (Weathers 1989: 40).

[152] The change in ownership officially occurred on June 12, 1907. At this point, the rail consisted of 15.26 miles of track (Strack 2013; Feagans 1972).

[153] The Union Pacific had financial interests on both sides of the river, sometimes emerging from the purchase of competing enterprises. By 1898, the Union Pacific Railroad purchased a majority share of the Oregon Railway and Navigation Company, giving the Union Pacific unparalleled influence on the lower Columbia; at this time the ORNC was renamed as the Oregon-Washington Railroad and Navigation Company and became a subsidiary of the Union Pacific until 1936, when the subsidiary was fully absorbed into the UP.

[154] The ferry dock sat at the eastern end of today's parking lot; the rail depot sat adjacent, somewhat to the west of the dock, while the rail access and turntable was centered on the western end of today's parking lot. There were two parallel rails in this wharf area, allowing trains to come and go with the aid of the turntable. Many of the pilings offshore from the Dismal Nitch parking lot are related to this operation, including those on the eastern end of the lot, which were piers and "dolphins" that helped to direct and stabilize the steamers and, later, ferries that used the site.

[155] Somewhat less affectionately, it was known by nicknames such as "Irregular Rambling" and "Never-get-there Railroad" (CPHM 2013).

[156] Some have suggested that, in the years after Holladay's passing, Gearhart sought to market itself as a summer resort for affluent Portlanders, while the A&SCR and Holladay's successors in the Seaside hotel business attempted to promote a more populist view of Seaside, in an effort to foster a broader spectrum of visitors - a distinction that might still detectable in the communities' identities even today. By 1902, Seaside's two halves, Seaside and West Seaside, sitting on opposite sides of the Necanicum River, boasted a summertime population of between five and ten thousand residents, and by 1907 the rail line had been extended to the south "Holladay" end of town. The new rail system's arrival into the region also promoted industrial developments in the two "Seasides." While tourism may have been the impetus for the rail line, its presence also fueled the development of small industry, including box factories and other small mills. By 1913, the two Seasides officially merged, growing together into a single community (Paulson 2007; Mille 1958).

[157] Plat maps, and indeed the entire pattern of modern lot divisions in certain coastal communities south of this railroad's ultimate terminus, such as Arch Cape, are still oriented toward this imagined railway today.

[158] Following completion of the Seaside segment, rail promotes had immediately prioritized railroad construction linking Seaside to Hillsboro. The initial plan was to connect the two towns via a 71 mile route that followed the Lewis & Clark River and the Nehalem River over the coastal mountain range, including ambitious plans for a 1,500 foot-long tunnel near Saddle Mountain. Work on this extension proceeded haltingly in 1891 and 1892, but consistently suffered from changes in rail ownership and financial troubles (Laubaugh n.d.). In March of 1892, the company was reorganized into the Astoria and Portland Railway, and construction began with the boring of an 1100-foot summit tunnel. Quickly, however, financial troubles dogged the effort, and its ownership changed again, becoming the Seashore Railway, or Seashore Road Company in May of 1893. The new company continued the rail services between Youngs Bay and Seaside, but developed no further until the intervention of A. B. Hammond (Wolford 2011).

[159] Some portion of the Sunset Beach lands, undeveloped, were apparently later lost for taxes to Clatsop County, which sold them in turn to the Oregon Parks and Recreation Department. The exact circumstances of county ownership are unclear from the written record consulted, however.

[160] Linking older roads and trails, this new highway was tied together by the Roosevelt Highway's classic bridges, designed by Conde McCullough. A gifted engineer, McCullough developed most of Oregon coast's bridges, with growing art nouveau sensibilities, between 1921 and 1936 in his role as Oregon Department of Transportation Bridge Division Director. Two of his earliest projects were in Clatsop County, very near Fort Clatsop, including the old Young's Bay Bridge (completed in 1921) and the Lewis and Clark River Bridge (completed in 1924) (Blakeley 2006; Hadlow 2001).

[161] Construction on Highway 26 began as early as January 1933, at the height of the Great Depression. Originally called the "Wolf Creek Highway," members of the WPA and CCC both collaborated on its construction, developing bridges and grading along significant portions of the route. Construction efforts were intensified as the prospect of military action in the Pacific became clear to federal authorities and portions of the highway were opened for public access by September 19, 1941, on the eve of American entry into World War II. The route was used to transport military equipment and supplies between the Portland area and the coast through the war, but was not fully functional as a public highway along its entire route. In January of 1946, the highway was renamed for the 41st Infantry Division of the United States which was also known as the "Sunset Division." Originally mobilized from Fort Lewis, Washington to protect the outer coasts of Oregon and Washington in World War II, the Sunset Division was later sent to the Pacific theater where its troops saw considerable action against Japanese forces in New Guinea (Battle of Buna-Gona), the Philippines, and elsewhere; the Sunset Division later participated in the occupation of Japan, being stationed on the northern island of Honshu. By 1949, the highway was completed for public use, providing an unimpeded and efficient roadway between Clatsop County and Portland. Linked into the State highway system, the Sunset Highway connected Highway 101 (the Roosevelt Highway) to the Portland area, Oregon's vast interior, and the intermountain West; today the highway extends as far east as Ogalalla, Nebraska, where the it intersects with Interstate 80 (Clatsop County Historical Society n.d.).

[162] Construction on the bridge began in November of 1962; taking almost four years of construction, the bridge was completed in late August of 1966; highway departments and private transportation interests retooled their infrastructure in anticipation of the change through the 1960s.

[163] The SP&S merged with Burlington Northern in 1970, in an era of contracting freight and passenger service. Much of the original A&CR segments have been abandoned or sold (Gordon 2013). In 1997 the 91.77-mile segment between Portland and Tongue Point was sold to Portland & Western Railroad. Shortly after, the final portion of 5.04 miles of track between Tongue Point and Astoria were purchased by the City of Astoria, the downtown segment being redeveloped for tourist purposes. The remaining 25 miles between Portland and Wauna is used to store surplus freight cars. In 2003, as part of the Lewis & Clark Bicentennial Commemoration, the train service between Astoria and Portland reopened for the first time since 1952. The train operated for three seasons, concluding in 2005 (Astoria n.d.). Several events were influential in closing this line, however, including a landslide near Brownsmead and a washout at Knappa (ARPA n.d.).

[164] The Oregon Historical Society acquired the fort and assisted in developing the replica fort there, managing the area for historical interpretation with the support of various local organizations until its transfer to the National Park Service. This history is addressed in detail in other NPS reports (specifically Cannon 1995, 1994) and is not repeated here.

[165] The Salt Works was incorporated into the National Monument in 1978. See Lewis and Clark Trail Heritage Foundation 1974.

[166] As home to some 325 taxa, Saddle Mountain is the highest point (at 3283 feet) in the study area. With its double peak and a "saddle" between, the official name was bestowed by Lt. Charles Wilkes, commander of the United States Exploring Expedition, in 1841; Lewis and Clark referred to the potential elk hunting there, describing it as "*ruged and uneavin*" in December 1805, but did not provide a name. Of tremendous importance to the Native American tribes of the lower Columbia and vicinity, the mountain has been widely seen as a creation site of great and enduring power (OPRD 2010; Sayce 2010; Merriam 1992).

[167] C.W. Fulton (United States Senate) to J.R. Garfield, Secretary of the Interior, November 2, 1908 in Boardman (n.d).

[168] Introduced by Charles W. Fulton of Oregon, S. 7372 was passed by the Senate on February 1, 1909, but failed to emerge from the House Committee on Public Lands. Similarly, S. 5629 introduced by Senator George Chamberlain of Oregon also passed the Senate on March 15, 1910, but again did not leave the House Committee on Public Lands for a floor vote. The temporary withdrawal took place on November 11, 1908 (Merriam 1992: Boardman n.d.).

[169] Senate passage of the bill (S. 2186) occurred on March 21, 1912. Its failure in the House took place despite a favorable report from the War Department, whose representatives thought the view from the summit of Saddle Mountain had merit from a military standpoint; Astoria *Budget*, April 15, August 5, and August 21, 1912 (Astorian 1912).

[170] Chamberlain introduced S. 531 on April 9, 1913.

[171] A second withdrawal occurred by executive order on April 18, 1913. Chamberlain changed his bill authorizing establishment of a national park to a grant to Oregon for a state park on March 12, 1914.

[172] Details are provided in correspondence between "A.M. Smith and G.W. Shirley, Grand Rapids – Oregon Timber Company to Commissioner, General Land Office, March 20, 1914" (in Boardman n.d.)

[173] The likely reason behind the donation was that the 600 acre parcel stemming from the Northern Pacific Railroad grant was tied up by the attempt of Smith and Shirley to secure title by means of so-called location "rights" through scrip. In any event, the total of 1,400.96 acres went to the State Land Board until a state park could be established by the Oregon State Highway Commission at Saddle Mountain.

[174] Both Armstrong (1965) and Merriam (1992) recounted subsequent land acquisitions, so that 2,911 acres of park land existed as of 1992.

[175] The CCC reports are in RG 79, Stack 150 (35:22:4), Box 120, NARA II, College Park, Maryland. Logging during the 1920s greatly reduced the older forests that once surrounded Saddle Mountain, as did fires in 1936 and 1939. Reforestation of the native Douglas-fir, Sitka spruce, western hemlock, and alder was nevertheless generally successful. The park is officially dedicated as a state natural area, the highest level of protection given under the Oregon Natural Heritage Act (Armstrong 1964: 183). Until the Sunset Highway opened from Portland just after World War II, most visitors had to go through either Seaside or Tillamook to reach the park. Attendance then increased enough to build a small overnight camp consisting of six tent sites in the early 1950s, a number eventually increased to ten. Most visits to what is now Saddle Mountain State Natural Area are day use, however, something that has roughly doubled (to almost 56,000 in 2011) over the past half century (White et al. 2012: 19; Armstrong 1965: 183).

[176] The larger context of those comments are as follows:

"The preservation of forest beauties is a matter of deep concern to the lumber industry. And it is not my intention or wish to deprive private owners of valuable lands of those things which they have acquired by rightful and legal process. This move is not backed by socialistic intent, now any propaganda to disturb the progress of an industry. Rather, I find the timber owners generally eager and willing to cooperate. But it would be wrong to ask them to surrender vast tracts of valuable timberlands without just compensation, nor do I believe it could be done. In fact, vast tracts are not needed to carry this plan to fruition. Isolated tracts tucked away in pretty nooks; virgin stretches of forest along highways, to be retained of sufficient width to leave the beauties of the landscapes unimpaired; new plantings of trees, shrubberies and foliage along the highways, all of these things can be accommodated without too great expense and without arbitrary confiscation of property.

"Some state agency should be the directing head in these endeavors, and I believe that the state highway commission, working in cooperation with the forestry department, the proper body to be clothed with necessary powers.

"This matter should not be cast lightly aside. While the hand of man has done much and is doing much to make Oregon a great state, the hand of God fashioned here in the primeval wilderness an ideal earthly paradise which we must preserve as nearly intact as possible without impeding the ordinary

progress of civilization...One large company, the Crown Willamette Paper Company, immediately ceased cutting of timber along the Seaside-Cannon Beach Highway in Clatsop county and I understand is marking time pending action of your honorable body. That road probably accommodates more tourists than any other single road in the state during the summer season and on that road is demonstrated very forcibly the difference between natural timber beauties and the naked stretches left after logging operations with modern machinery have denuded the hillsides. So marked is the difference I venture to say no person passes over the road but comments upon it. That is a single instance. Hundreds of others present themselves. The highway department has cooperated in keeping the executive office advised as to these things and that department I am certain would throw itself into assisting in the work with whole-hearted energy" (Olcott 1921).

[177] An unusually wide and densely forested Highway 101 state right-of-way runs through the area seen by Olcott today, apparently connected to these events.

[178] Arriving from Colorado, Samuel Boardman had founded a homesteaded east of the Cascades near the community that now bears his name. Having mixed success farming in this very arid part of the state, he began to take extra work planting shade trees at scenic waysides for the state's Highway Department in the early decades of the 20th century. He was hired as Oregon began to develop its state park system as a branch of that department, focusing on the protection of roadside scenery and wayside development (Boardman 1956; Boardman n.d.).

[179] Though the point is often overlooked in conventional historical accounts, this was an extended family. Glisan and Minott were brother and sister; their mother was a member of the Couch family. Caroline and Louise Flanders were sisters, and apparently second cousins to the Minotts and Glisans; they were also daughters of John Couch Flanders, for whom Flanders Street is named in Portland. (John Couch Flanders was named for his uncle, former sea captain, John C. Couch, Glisan and Minott's grandfather). The Couch, Flanders, Glisan and Minott families were all involved in the Portland Chamber of Commerce and the Glisan and Flanders men were prominent attorneys in the city. They were of New England ancestry and the families had been early homesteaders in the Portland area. Meanwhile L.A. Lewis was also on the Portland Chamber of Commerce; working in retail, mining and banking, he became prominent in Portland real estate in the first decades of the 20th century, serving as director of the Pioneer Real Estate Company and the Lewis Investment Company, as well as resource firms including the Columbia Mines Company. The records of his real estate interests are held in the University of Oregon Libraries' Special Collections. He was also the national "Grand Exalted Leader" in the "Benevolent and Protective Order of Elks" in 1947. The Lewis, Glisan, Minott and Flanders families were reported to be fellow adventurers on the coast, exploring its many beaches and headlands on extended hiking trips by the first decade of the 20th century (Glisan 1909; Yale University 1905).

[180] In truth, the land ownership patterns at Ecola were complex in the early 20th century, reflecting the circuitous process of federal lighthouse planning relating to Tillamook Head, as well as the interests of both timber companies and second-home owners in these properties. In 1910, a U.S. Lighthouse Reserve still sat on the westernmost tip of Tillamook Head. The interior lands of Tillamook Head were largely owned by H.E. Noble, an investor in timberlands. The southern shoreline – from Indian Beach to Chapman Point - was owned by the Glisan, Flanders, and Lewis families, who would ultimately contribute portions of their lands to the State of Oregon for the creation of a park; the Minotts, who are listed as partial owners at the time of park creation, were part of the Glisan family. There was little development in the park other than the homes of these families. Rodney Glisan (1909) mentioned a "Sea Lion hunter's trail" descending to the rocky shore

near Ecola Point. In the 1930s, much of Ecola State Park was largely situated within tracts of timberlands owned by Willamette Paper Company – which owned much of the southwestern county timberlands - with smaller tracts owned by small private investment firms. The "Ecola Point and Indian Beach Company" owned the immediate shoreline from just north of Indian Beach to the north face of Chapman Point at that time (Metzger 1930, 1910, Glisan 1909; Gainor Minott pers. comm. 2009).

[181] Descendants continue to own homes on the park's southern boundary to this day. As an outcome of negotiations for the land purchase, State Park staff maintained a trail leading from their homes to Crescent Beach, through the southern end of the park. Still maintained by park crews today, this trail is known locally as "Gainor's Trail" in reference to Minott descendent Gainor Minott who continued to occupy the family's home at the trailhead until her death – which occurred during the writing of this document; Minott could still recall many details of Boardman's negotiations with her family surrounding the donation Ecola State Park from her childhood, which have contributed to the current account (Gainor Minott, pers. comm. 2009).

[182] Specifically, in 1934, the Oregon State Planning Board reported of Tillamook Head,

"This high forested promontory is conspicuous from the Clatsop beaches and is a scenic feature upon which much of the property values and resort patronage of these communities have been indirectly predicated. The preservation of the Head in its natural condition is important for this reason as well as for the conservation of the recreational resources existing within the area...The transfer of this unused lighthouse reserve to the state and acquisition of Tillamook Head would complete this park unit and insure the conservation of a valuable recreational area" (Oregon Planning Board 1934).

[183] Civilian Conservation Corps activities, beginning in 1935, included the development of the seven-mile long entrance road still in use today. Over the next four years, enrollees built an entrance road from the nearest highway, a 2.5 mile trail from the parking area that climbs 1,600 feet to the top of Saddle Mountain, as well as several other major improvements (Merriam 1992: 219-20; Armstrong 1965: 128; Portland Oregonian 1928). As Oregon State Parks Superintendent, Samuel Boardman would note,

"During the CCC movement in Oregon, a camp of two hundred boys was set up for the development of Saddle Mountain Park [building roads, bridges, and trails, planting trees and conducting surveys]. The park wouldn't have become a reality if it hadn't been for the regulations of the CC agenda to construct roads" (Boardman 1952).

[184] Cumulatively, in part due to its exposed and unstable geology, the cultural resources of Ecola are modest, considering the extent to which they were developed by the mid-20th century. In 1961, several days of heavy rains had saturated the soils of Oregon's north coast, contributing to a landslide that slumped roughly 125 acres of the park westward into the Pacific. Damaged were the core portions of the park, including portions of the Ecola Point village complex archaeological site and a significant proportion of the CCC facilities. An entire lake on Ecola Point, sometimes used by boating visitors, disappeared almost overnight. No single event has ever had such a disastrous effect upon the cultural resources of the park since its genesis in 1932. The scarp at the head of the slide can still be clearly seen to the east of the Ecola Point parking lot, and the slide area continues to exhibit younger trees and muddy, unsettled slopes compared to the adjacent terrain (North and Byrne 1965).The archaeological sites at Bald Point have eroded dramatically in recent decades,

while petroglyphs reported at Indian Beach early in the park's history are no longer visible due to erosion, vandalism, or both.

[185] U.S. Congress established the parallel National Wildlife Service managed Washington Islands Wilderness in 1970 under Public Law 91-504, but this only included the rocky northern Pacific coast of Washington.

[186] Willapa National Wildlife Refuge added Leadbetter Point in 1968, the turbulent sandspit tip of the Long Beach Peninsula; lands to the south of this preserve were acquired by Washington State Parks, to produce Leadbetter Point State Park. The point is named for Lt. Danville Leadbetter of the 1850s Coast Survey. Later additions to the Willapa National Wildlife Refuge Complex included the 1972 addition of the Lewis and Clark National Wildlife Refuge, extended from just upstream of Tongue Point near Astoria to the vicinity of Skamokawa. Set aside to protect some 33,000 acres of complex intertidal, water and shoreline – including islands, sand bars, mud flats and tidal marshes on the Columbia estuary – added initially to protect shorebird habitat for ducks, tundra swans, and Canadian geese. Also added in that year was the Julia Butler Hansen National Wildlife Refuge for the Columbian White-tail Deer, established in 1972 in Cathlamet; largely to protect the Columbia white-tailed deer, which was endemic to the Columbia riparian and had come close to extinction (though the reserve clearly had other values for fish, waterfowl, amphibians, and a diverse range of other species). The reserve was named in honor of Hansen (1907-88), a woman raised locally, who went on to be a member of the Washington State House of Representatives, followed by over six terms in the U.S. Congress, as well as other high public offices.

[187] These reviews of deed transfers for Fort Columbia and Fort Canby are based on a detailed review of files available in the Washington State Park files in Olympia by Alex McMurry, Cultural Resources specialist for that agency.

[188] This account of Fort Stevens' turbulent transfer to State of Oregon management is synthesized from a compilation of Boardman's correspondence from 1946-1949 regarding the status of the proposed park lands at Fort Stevens from the files of Oregon Parks and Recreation Department in Salem. Key correspondents include William Whipple, J.W. Miles, Robert Hickson, O.E. Walsh, and Dick Darnielle (U.S. Army Corps of Engineers), James Hogg (Astoria Kiwanis Club), Frederick Hetzel (Astoria Chamber of Commerce), and A.Walter Norblad (Oregon 1st District U.S. Congressman). (Boardman n.d.). State parks brought their own Scotts broom planting programs, often making arrangements with local growers to produce nursery stock that was planted on shifting dunes (Boardman n.d.)

[189] Samuel Boardman, Oregon State Parks to Fred L. Andrus, the Astorian Budget, November 28, 1947. In Boardman (n.d.).

[190] Yeon was also influential in prompting Oregon State Parks to improve public beach access in various ways; see Talbot (1992:97).

[191] The acquisition of the Yeon property by the National Park Service occurred concurrently with the current research; the property is still being assessed, while much of the written record regarding the transfer of both the Norman Yeon property on Clatsop Plains and the John Yeon property in Cannon Beach has not yet become part of the public record. Much of the discussion here, by necessity, is based on a series of informal interviews by the lead author rather than a thorough written record. Points of reference in this narrative include the accounts of personal

friends of the Yeon family still living in the area (e.g., William Itman and Andrew Kerr, pers comm. 2012), City of Cannon Beach planning staff (Rainmar Bartl, pers. comm. 2011), agency and non-profit staff who participated in the transfer of the Norman Yeon property from his estate, via the Trust for Public land to the National Park Service (e.g., Neal G. Maine pers. comm. 2011; David Szymanski pers comm. 2012), and professional architectural specialists who have been recruited to assess the site since its acquisition (e.g., John Goodenberger, pers. comm. 2011).A full study of the site's history and architecture is pending at the time of this writing.

[192] This log house – faintly visible in the middle distance from Ecola Point – was determined to be National Register eligible. However, an arsonist burned it to the ground in the 1990s; the current house on the site is an exact replica. Oswald West State Park, one of the Oregon coast's larger state parks, sits, on the southern end of Clatsop County and is also visible from Ecola Point. This park, originally named Short sand Beach State Park, is named for him; Samuel Boardman tried unsuccessfully to develop this into a much larger park of national consequence, by adding to it most of the large mountains visible from Ecola State Park to the south of Cannon Beach – an initiative that has recently been resumed by non-profit conservation organizations.

[193] Some portion of the lands originally given to the state of Oregon for the creation of a Saddle mountain park were transferred to Crown-Zellerbach in the course of these negotiations, ostensibly to offset the loss of stumpage revenue to Clatsop County. The Elmer Feldenheimer State Natural Area was named after Elmer Feldenheimer, an Oregon-based outdoorsman at the request of his family, who provided substantial financial support for the transaction. There are no public facilities on these lands, and no plans to provide access in the future; an extended moratorium on public facilities on these lands was a condition to their acquisition (Merriam 1992; Boardman n.d.).

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Land and Life in the Lower Columbia Region

Appendices

Appendix A:

ASSOCIATED HISTORIC CONTEXTS FOR FORT COLUMBIA STATE PARK, WASHINGTON

Appendix B:

ASSOCIATED HISTORIC CONTEXTS FOR CAPE DISAPPOINTMENT STATE PARK, WASHINGTON

Appendix C:

AN OVERVIEW OF THEMES FOR A POSSIBLE FUTURE NATIONAL REGISTER NOMINATION REVISION AT FORT STEVENS STATE PARK, OREGON

Appendix D:

PATHWAYS FROM EUROPE, ASIA AND THE AMERICAS:
THE CONTEXT OF IMMIGRATION ON THE COLUMBIA-PACIFIC

Appendix A:

ASSOCIATED HISTORIC CONTEXTS FOR FORT COLUMBIA STATE PARK, WASHINGTON

Introduction

As a unit of Lewis and Clark National and State Historical Parks, Fort Columbia State Park consists of 593 acres and is centered on Chinook Point and Scarborough Hill, a promontory above the Columbia River. The park encompasses more than a mile of freshwater shoreline on the river's north bank, but Fort Columbia is also one of the most intact coastal defense sites in the United States. Located eight miles from where the river pours into ocean waters, Chinook Point forms a conspicuous landmark when seen from the water. Above the point rises Scarborough Hill that rises 840 feet above the point, at the western edge of some hills separating the hamlets of Chinook and Megler. They also help give the shoreline between Fort Columbia and the river's mouth at Cape Disappointment the shape of a reverse "J," so that Chinook Point and Scarborough Hill above it, once served as bearing points for navigation. Like Cape Disappointment to the west, there is an occupational sequence at Chinook Point that began in Holocene time (from 10,000 years ago to the present) and possibly beforehand. Reconstruction of native culture and life during the prehistoric period is difficult anywhere along the lower Columbia River, however, due to a combination of unfavorable environmental factors and historical events.

In order to update the existing Chinook Point Historic District nomination listed in 1978, this context statement is focused on the period between Robert Gray's "discovery" of the Columbia River in 1792 and formal dedication of Chinook Point as a registered national historic landmark in 1965. It is important to note that the national historic landmark designation by the Secretary of the Interior in 1961 came prior to passage of the National Historic Preservation Act by Congress in 1966. The NHL designation (which is intended to commemorate Gray's raising of the American flag at Chinook Point to claim possession of the Columbia River basin for the United States as nationally significant) came without specified boundaries. The Chinook Point Historic District listed on the National Register of Historic Places in 1978 thus partly redressed a problem created by the earlier NHL designation with a historic district consisting of 286 acres having statewide significance apart that portion associated with Gray, which retained its NHL status. This meant that the district maintained its association with the Gray discovery, making it consistent with the NHL, but was larger, yet also configured in reference to U.S. Highway 101 and within the former military reservation transferred to the Washington State Parks and Recreation Commission in May 1950.[1]

The themes in this context statement expand upon the two summarized in the district nomination. They begin with Chinook prehistory and numerical decline during the contact period, a theme where human use of Chinook Point is briefly sketched as largely that of a summer village site inhabited by its namesake group. This section draws upon archaeological and ethnohistorical information generated, for the most part, nearby—not least at the prominent Middle Village/Station Camp site about one kilometer to the east of Chinook Point. Although the national historic landmark designation and a subsequent listing of historic district were focused on Euro-American "exploration" as it pertains to Chinook Point, this context statement

aims to better frame the visits of the *Columbia Rediviva* and the Corps of Discovery led by Lewis and Clark with the broad patterns of American history by splitting these into sub-sections within a larger stream of initial contacts between newcomers and native peoples. Settlement, whether through perfecting a land claim or the subsequent squatting on an otherwise unoccupied military reservation, furnishes something of a bridge between the themes of exploration and coastal defense. Fort Columbia, as such, spans a 50 year period and can be sub-divided into an initial fortification effort lasting two decades, followed by a modernization effort begun in 1937 that continued through World War II. It is by a fifth theme, one covering Fort Columbia as a state park, but is included only as a way to capture postwar changes at the site—while also calling for work that might better contextualize Washington state parks as a whole and any park developments within them, as precursor to identification and evaluation of historic properties.

Theme 1: Pre-contact and contact history at Chinook Point

The name "Chinook" is associated with this headland, though it is reported to be derived from a Chehalis word for the inhabitants (cinúk) on Baker Bay. Native people at Chinook Point are reported to have called the headland "No's-to-ils" and the hill behind it "No'si-misp," while the summer village associated with the future site of Fort Columbia has been cited as "ucmuyáqxan" or "Utsumuekhan."[2] Compliance surveys for cultural resources at Fort Columbia have so far yielded negative results, more or less in line with observations made by an archaeologist in 1960.[3] He expressed the hope that interpretation of the people who lived at Chinook Point at the time of Lewis and Clark's visit in 1805, as well as their predecessors, could be based on the archaeology of Fort Columbia. The building of fortifications there, however, destroyed a site that could have yielded considerable archaeological information, as might one or two localities nearby. Within the contact period there is but one single map reference from 1839, whereby a cluster of houses labeled "Chehalis Village" appeared on the shoreline directly north of the Chinook Point headland, perhaps indicating a temporary village occupied by visiting fishermen.[4] In any event, river currents have since washed away much of the beach that once flanked Chinook Point. This made the headland's harder core more prominent, as erosion claimed more than 136 acres of shoreline between 1864 and 1949.[5]

Formal archaeological survey conducted within the boundaries of Fort Columbia State Park has thus yielded little in the way of pre-contact artifacts, nor contributed all that much to a broader understanding of how native peoples have lived on the Columbia River's north bank, less than ten miles from the river's mouth. Research on the lower Columbia by investigators affiliated with universities only began in the late 1940s, with archaeological excavations not getting underway until a decade later. There are also some general problems with reconstructing occupation patterns through pre-contact cultural resources in what is almost a coastal environment. Soils along the river are subject to repeated flooding, slumping, and deflation, but can also be acidic, so rates of decomposition will accelerate. Subsidence and burial of low-lying landscapes due to subduction zone earthquakes are yet another factor in the scarcity of riverine archaeological evidence, even if ethnohistorical accounts establish that native presence along the Columbia River as exceptionally dense in comparison to the hinterland or most other regions of North America.[6]

Despite these problems, intensive archaeological within the lower Columbia basin has generated a functional typology of sites, with winter villages, summer villages, shellfish gathering camps, as well as fishing/hunting camps.[7] Questions remain over what dictated the occupation of summer versus winter villages, but that typology also led to development of a

cultural sequence for the area. The latter is presented as three phases, which are correlated to the broader Paleoindian/Early Archaic stage of Pacific Northwest prehistory (10,000 – 6,000 years before present), Middle Archaic (6,000 – 2,000 years BP), and Late Archaic (2,000 – 200 years BP). The phase corresponding to Late Archaic sites is the Ilwaco, which is split into sub-phases at roughly the year 1050 CE. It is the Ilwaco 2 sub-phase that runs to 1775 CE (or the end of "prehistory" on the lower Columbia), which accounts for approximately 90 percent of all precontact archaeological sites in the somewhat similar environment of the Oregon coast.[8] While Fort Columbia has yet to yield much in the way of precontact, or even historical, archaeological information about indigenous ways of life, the Middle Village/Station Camp/McGowan site (45PC106) is virtually adjacent to the state park on Chinook Point. Survey and testing there clarified current understandings of a sophisticated native culture and its trade networks, adding substance to a proposal for an interpretive park at Station Camp.[9] It is therefore possible that Fort Columbia might contribute to that knowledge in view of its proximity to Station Camp, references in the ethnohistorical record, and acreage where no archaeological surveys or testing has yet been done.

Chinookan, Salish, and Athabaskan-speaking peoples occupied the lower Columbia basin and immediately adjacent drainages prior to European contact and in the early decades of the contact period. It can safely be asserted, however, that Chinookan-speaking people dominated the riverbanks and estuarine areas, though they often intermarried with Salish speakers, in particular the Chehalis in the case of the lower Chinooks. The Chinookan languages are part of the Penutian family, one that stretches from southern California to southeast Alaska, but it shares this territory with ten other language families such as the Salish. Chinookan languages have two branches: lower or coastal (Chinook proper), as distinguished from the upper branch that is variously depicted, but is sometimes described as extending upriver from Grays Bay and Tongue Point to The Dalles. Differences between the two lower Chinookan languages (that of the Chinook proper and the Clatsops located across the river) are apparently dialectical. Their territorial assignment is rough, but stems from the Lake Holocene (3,000 years ago to the present). The Chinook proper have traditionally occupied territory from Willapa (also known as Shoalwater) Bay to the Columbia River's mouth at Cape Disappointment, then past Chinook Point to Grays Bay. Clatsop territory, by contrast, went from Point Adams south to Tillamook Head and then east to Tongue Point. Both territories "blurred" somewhat on their margins, where they shared villages and resource territories with adjacent tribes.[10]

With tidal salinity reaching roughly 25 miles upriver, the Columbia estuary is essentially a coastal environment that offered a great abundance of food, especially in comparison with the hinterland. Because of this, native inhabitants were situated in the middle of larger trade networks made possible by the river corridor. Cumulatively, the lower Columbia possessed one of the most densely inhabited native regions north of Mexico. The north bank, for example, had an almost continuous string of habitations running from Cape Disappointment to Dismal Nitch, just beyond Point Ellice.[11] Smallpox epidemics devastated Indian populations throughout the Columbia basin as well as elsewhere in the Pacific Northwest, just as Europeans began to make contact in 1775 and continued into the 1830s. These outbreaks shifted the balance of power and territorial control just as Lewis and Clark or other explorers made their way by land to Chinook Point and other places near the mouth of the Columbia.[12] With infectious diseases also including measles, venereal complaints, viral influenza, and possibly malaria, Indian numbers on the lower Columbia to barely more than 100 by 1885. Reconstructing aboriginal lifestyles is therefore difficult, even if some ethnographic data is available on these people and their cultural systems.[13]

Summary of Context Theme: Archaeological evidence of precontact human occupation within the present boundaries of Fort Columbia State Park is not extant, but several sites nearby confirms a Chinook presence along this part of the Columbia River. Environmental factors and repeated ground disturbance from Euro-American activities like building fortifications have seemingly wiped away the residue of an Indian presence on Chinook Point, but additional study of park lands may yield new finds, if only those isolates separated from former village or camp sites. Some inferences about long-term precontact use might nevertheless be made from surrounding areas and food resources known to be available in prehistoric times.

Associated Property Types

Name of Property Type: Archaeological Properties

Description: Within a theme of precontact and contact history at Chinook Point, there could be several types of archaeological resources. These might include occupation sites such as villages, short-term encampments, hunting blinds, or catch sites associated with fishing. Artifacts and organic material that can be tested for DNA evidence might also be related to this theme. None of these types of properties or associated artifacts are so far evident at Fort Columbia. The foregoing narrative on the place of prehistory and the early contact period is included only as a brief overview in support of the larger *historic* context statement. Future evaluation of National Register eligibility under Criterion D is, in any event, outside the scope of this study and will be left to professional archaeologists who can better assess this resource type for the information it can yield.

Theme 2: Exploration on the lower reach of the Columbia River, 1775-1846

First contacts with European and American traders, 1775-1804

The first recorded sighting of the Columbia River came by a ship sailing under the Spanish flag in 1775, though its commander chose not to enter. Bruno de Heceta y Dudagoitia, a Basque navigator, must have seen Scarborough Hill at that time, but it cannot be identified on his map of the river entrance.[14] While Heceta bestowed names on topographic features at the river mouth, the next recorded account (by Englishman John Meares, sailing under Portuguese colors) in 1788 dismissed the idea of a great river and left but one name that stuck, "Cape Disappointment." The idea that the Columbia's estuary was somehow just a bay induced Captain George Vancouver of the Royal Navy to sail past the river entrance on April 27, 1792. He wrote, "*Not considering this opening worthy of more attention, I continued our pursuit to the N.W. being desirous to embrace the advantage of the breeze and pleasant weather, so favorable to our examination of the coast.*"[15]

Given Vancouver's maritime experience and his orders to examine and survey the Pacific shore of North America from 30 to 60 degrees north latitude, it seems strange that he put so much stock in the somewhat dubious observations of Meares. While Vancouver in his ship *Discovery* confirmed much of what Meares had seen from Puget Sound, he also missed the entrance of the Fraser River, preferring to dismiss Spanish reports in the affirmative.[16] It did not take long for an American ship, the *Columbia Rediviva* to cross the Columbia River bar first—on May 11, 1792. Commanded by Robert Gray of Boston, the *Columbia Rediviva* was a trading vessel whose owners expected a good return on the furs Gray sold in China.[17] The Americans wanted to buy otter pelts and salmon to replace their stores, so the ship sailed to a point offshore from a principal village that Gray understood to be called "Chenooke." It lay to the east of what is now called Chinook Point and may periodically have shifted to various locations between the present hamlet of McGowan and Point Ellice.[18] About May 15, 1792, the ship went to Grays

Bay, where it temporarily went aground on a shoal. Crew members extricated the *Columbia Rediviva* and went back to what is now known as "Chenooke." After an unsuccessful attempt to leave the river on May 18, Gray then anchored off Chinook Point.[19] At that juncture several crew members including Gray made landfall "to view the country and take possession." They reportedly raised an American flag there, but also planted some coins under a large "pine" tree, with one member of the party noticing "much clear ground, fit for cultivation and the woods mostly clear from underbrush."[20]

Despite being a civilian, Gray made a map of the estuary so that the ceremony at Chinook Point represented an act of "discovery" within the more important question of which nation could establish its jurisdiction over the region. Spain, Russia, Great Britain, and the United States all had competing claims by exploration at the end of May 1792, but questions of sovereignty rested on whether a competing nation could show actual and visible occupation. This is why the dispute between Great Britain and the United States over the Columbia River basin (the so-called "Oregon question" over what constituted occupation) persisted until 1846.[21]

While Gray made needed repairs on his ship at Nootka Sound during the summer of 1792, word reached Vancouver about the American discovery. The British commander thus began revising his survey of the Pacific coastline and, on October 19, reached the Columbia River bar. With his flagship being far too large for crossing the bar safely, Vancouver sent the HMS *Chatham*, an armed brig, under Lieutenant W.R. Broughton's direction to survey the river. Broughton reconnoitered with Vancouver next at Monterey, California, about a month later. In the interim Broughton and the *Chatham* traveled more than a hundred miles upriver, affixing British names to mountain peaks and riverine features, such as the rather fluid designation of "Chenoke Point."[22] Since Vancouver intended to lay claim for the Crown to the entire region, the commander understandably disparaged previous exploration conducted by Americans and Spaniards. He and Broughton, however, ignored the fact that the *Chatham* traversed a waterway already densely occupied on both banks by Chinookan peoples. Broughton, in fact, put the name "Chenoke" on his map for the main Indian settlement located a mile or so east of the present Chinook Point and called the headland "Village Point."[23]

Other ships passed over the bar and into the Columbia basin during the years immediately following Broughton's visit, but most sailed no further than the sanctuary afforded by Baker Bay. These vessels responded to economic incentives created by the trade in furs, the goods purchased from Indians on the Pacific coast, then sold to Chinese merchants. This trade nevertheless brought diseases that eventually decimated the Chinooks as well as other indigenous peoples. It also meant traveling into a river basin with no delta, where channels shifted, as did the shoals. Waves, wind and current could make for a lethal combination—something that claimed the lives of five crew members in a small boat from the American brigantine *Hazard* in 1798. They followed what could be untold numbers of Indian canoes lost at the mouth of the Columbia prior to European contact.[24]

The main importance of what is now Fort Columbia State Park to navigation and further exploration from ships of that period was that of a landmark, or what later became known as Scarborough Hill. In the era of dead reckoning and before reliable charts, the hill's prominence could easily be discerned from a distance. Not only did it rise sharply 840 feet in one-third of a mile, but the southern and western slopes were covered by grass, ferns, and low shrubs—this appearance being in stark contrast to the great coniferous forests surrounding the hill. No other rise anywhere in the vicinity possessed this peculiar feature, something that frequently recommended the hill as a bearing mark when navigating the river entrance.[25] Conversely, the

hill also served, at least in aboriginal times and the early contact period, as a lookout point and signal station since approaching Indian canoes or ships could be seen from great distances.[26]

The Corps of Discovery at Chinook Point, 1805

Arrival of an expedition at Cape Disappointment by land from across the North American continent in November 1805 marked the furthest point west reached by an official delegation from the United States to that time. As catalyst, President Thomas Jefferson chose Meriwether Lewis and William Clark as leaders before the group departed from St. Louis in May 1804. This "Corps of Discovery" had, as its most basic purpose, a commercial one—to try and find a route from the source of the Missouri River to a suitable tributary of the Columbia—as a way of tapping the lucrative fur trade. At least that served as an excuse to ask Congress for an appropriation of $2,500 to fund the expedition, one officially aimed at exploring a newly acquired territory known as "Louisiana" that had been purchased from France in 1803. Beyond its vaguely described boundaries, much of it and "Oregon" to the west were largely unknown to both Europeans and Americans living on the eastern seaboard. Beyond its potential value in terms of still untapped resources, the Louisiana Purchase served as an excuse for Jefferson to form a Corps of Discovery that might eventually push the new republic's borders even further west, or at least serve as a friendly neighbor. President Jefferson had become concerned about British plans for the Northwest Coast, ever since Alexander Mackenzie had become the first European to cross the continent by land north of Mexico in July 1793 and then published an account of his expeditions to the Arctic Ocean and then Bella Coola on the Pacific Ocean in 1801. Jefferson read Mackenzie's book in 1802 and took note of the author's suggestion for the British to seize control of "Oregon" by building forts and financing them through the fur trade. He thus charged Lewis and Clark with reporting on key geographical features over their entire route, as well as navigable waterways, possibilities for agriculture, but also potential sites for forts and trading posts.[27]

At the time that the Corps of Discovery passed by Chinook Point, it formed the eastern limit of Baker Bay (as it still does), but projected further into the river than at present and was flanked to the northwest and southeast by a greater amount of sandy beach and low-lying marsh. Some observers likened the former Chinook Point as having the character of an elbow, at which the shoreline changed direction.[28] Lewis and a small advance party likely went by Chinook Point en route to Cape Disappointment from what the Corps of Discovery called "Station Camp" on November 14, 1805. There is some uncertainty due to the lack of journal entries by Lewis, but Clark mentioned his traverse to the ocean via Chinook Point and Cape Disappointment on November18. After proceeding from Station Camp along a sandy beach for roughly a mile, Clark and his companions came to "*a point of rocks about 40 feet, from the top of which the hill Side is open and assend[s] with a Steep assent to the tops of mountains, a deep nitch and two Small strems [are] above this point.*"[29] They crossed over what is now the state park again on November 20 during their return from Cape Disappointment to Station Camp.

Their stay on the Columbia's north bank lasted until the following day, when the Corps of Discovery crossed to the south shore on November 21, 1805. The group spent that winter at Fort Clatsop, located on a tidal creek Lewis called the "Ne-tul" (now Lewis and Clark) River, a name derived from a preexisting Clatsop place name. This lasted until March 23, 1806, all the while failing to spot a ship that might relieve them of the uncertainties surrounding a return trip overland.[30] Their journeys partway across the continent and then back again largely put an end to the search for a "Northwest Passage," an imaginary all-water route from inland North America to the Pacific Ocean. The Corps of Discovery did, however, propel the western fur trade forward

and support American territorial claims. It even laid the foundations for commercial enterprises involving American settlement on the Pacific coast.[31]

Chinook Point's role in the struggle for control, 1806-1846

Establishment of Fort Astoria by the Pacific Fur Company in 1811 represented a private venture, one financed by a German immigrant to the United States, John Jacob Astor, who settled in New York. Astor wanted to develop a string of trading posts along the Missouri River, but intended to also connect them with others placed at strategic points all the way down the Columbia. Near where the latter met the Pacific Ocean, he hoped to run an emporium for his fur trade and commercial interests on the west coast. Astoria went to the British, however, after only two years of operation. It had been sold by its owners to the Northwest Company in 1813, thus preempting any British efforts to take the fort by force. The next recorded visit to Chinook Point occurred during this two year period, mainly because the Northwest Company's chief surveyor and geographer, David Thompson, decided to cross the river for some sightseeing on July 18, 1811. Thompson had been involved with trying to wrest control of the Columbia River basin for the Crown by being the first European to see its headwaters in what later became known as British Columbia. He then became the first person to explore the waterway down to its confluence with the Snake River, followed by a trip down to the Columbia's mouth in order to show the Pacific Fur Company they had competition.[32] During this day in July, Thompson examined the Indian dwellings at Station Camp with several companions, but then climbed a nearby peak. He described going up "*a green hill where we gratified ourselves with an extension [sic] view of the Ocean and the Coast south'd.*"[33] On his map of the area, Thompson designated the as-yet unnamed Chinook Point as "Pt. Komkomle" after the Chinook leader, who Lewis and Clark had presented a peace medal in November 1805.[34]

As Fort Astoria changed its name to Fort George in 1813, it triggered the next recorded visit to Chinook Point. A partner in the Northwest Company, Alexander Henry, wanted to see the Columbia bar from the summit of Scarborough Hill. After passing by three deserted Indian villages in November of that year, he and some companions started their climb. "*We ascended the Chinook hill, or Red Patch, from the top of which we had an extensive view,*" Henry declared, describing the hill as "*covered with course grass, weeds and ferns.*"[35] The Northwest Company was subsumed under the Hudson's Bay Company in 1821, and four years after their merger, the HBC abandoned Astoria in 1825. Traders and even some naturalists (such as John Scouler, David Douglas, and John Kirk Townsend) continued to visit Chinook Indian villages near Station Camp, throughout the 1820s, but there is no record that any of them wandered over to Chinook Point and the hill behind it.[36]

One of the few specific references to Chinook Point (apart from the occasional mention of it by sailors as a navigational mark or bearing point for anchorages) during this period came in May 1830, when the HBC brig *Isabella* attempted to enter the Columbia. Her captain mistakenly thought Chinook Point was Cape Disappointment, so that the ship went aground and became a total loss.[37] Another epidemic that swept over the Columbia River that summer proved more cataclysmic to the Indians. Many villages, including the ones where Concomly and most of the Chinooks lived, were decimated. One HBC clerk, who had barely recovered in the fall of 1830, wrote that "*it is no unusual thing to see two or three dead bodies, in a short excursion along the river.*"[38]

With this epidemic as backdrop, the name "Chenook Point" was finally fixed, perhaps as a memorial, on maps to indicate the headland—rather than a more general name for the wider area that included the Indian villages and shoreline all the way to Point Ellice. It was first

evident on a U.S. Navy chart of 1836 by W.A. Slacum, a convention followed on another map three years later by Sir Edward Belcher of the Royal Navy.[39] A chart of the lower river in 1841 by the commander of the United States Exploring Expedition, Charles Wilkes, put the name "Chinook Hill" on maps for the first time, though the U.S. Coast Survey replaced it with "Scarborough Hill" by 1858.[40] The chart represents something of a footnote in the accomplishments of the "U.S.Ex.Ex.," largely because Wilkes subsequently succeeded in swaying government officials in Washington, DC to have diplomats press for American control of Puget Sound. These talks culminated in the international boundary set at 49 degrees north latitude under the terms of the Oregon Treaty with Great Britain, signed on June 15, 1846. The treaty put an end to any lingering questions as to which nation had jurisdiction over the area that eventually became Oregon, Washington, and several other states.[41]

Summary of Context Theme: Exploration by Europeans (especially the British) and Americans played a vital role in understanding the entrance to the Columbia River for the purposes of expansion, first with the fur trade, and then as part of the United States from 1846 onward. As a distinctive part of the lower river, Chinook Point factored into the first American claim on the region, and then in the initial land-based expedition from the eastern states, that of the "Corps of Discovery" in late 1805. It is for the former reason that the Secretary of the Interior, due to the landfall made by Captain Robert Gray and his men on May 18, 1792, designated Chinook Point as a national historic landmark on July 4, 1961. The site's association with the Corps of Discovery allowed for it to become part of a federal and state partnership called "Lewis and Clark National and State Historical Parks" in 2004. It has only a minor association with other facets of the exploration theme, most notably in the role of Scarborough Hill as an early aid to navigation and as a peak climbed by two key figures in the Northwest Company.

Associated Property Types

Name of Property Type: Archaeological Properties associated with Exploration

Description: Archaeological resources relating to the theme of exploration include campsites, tree carvings and blazes, debris from food procurement, and historic period artifacts. These resources, if they are extant, will not be evaluated in this study. It is, however, recommended that any historical archaeological resources be evaluated by professional archaeologists for their National Register eligibility under Criterion D.

Name of Property Type: Historic Properties associated with Exploration

Description: Properties associated with exploration include documented trail routes, vistas, and campsites. Explorers of the late eighteenth and early nineteenth centuries left little in the way of tangible structures that can be easily grouped and identified as a distinct property type. Several explorers nevertheless traveled on or near Chinook Point and/or Scarborough Hill, named features, described them in journals, and mapped their locations. The visit by Robert Gray and his men, followed by the Corps of Discovery more than 13 years later, are especially notable at Chinook Point. The former is a basis for the earliest American claim to the Pacific Northwest, while the latter is part of Lewis and Clark's westernmost overland travel after crossing much of the continent.

Significance: Chinook Point and Scarborough Hill are of national significance under the National Register's Criterion A, for their association with Euro-American colonial exploration and westward expansion. Their significance in relation to Gray's landfall is captured only to a limited extent in the nomination of the Chinook Point Historic District, as listed on the National Register of Historic Places in 1978. Lewis and Clark's association with the listed historic district

is completely omitted in the nomination, as are other facets of Euro-American exploration in relation to Chinook Point and Scarborough Hill—most of which possess only local significance. In all cases, the associations were brief, with only some of them consequential, and are related to the specific events that make the properties eligible under Criterion A.

Registration Requirements: Properties eligible under the theme of exploration are very likely to have been included within a 286 acre district that embraces not quite half of the state park. In order for other properties or features to be eligible for listing, they must be associated with Gray's landfall at Chinook Point, Lewis and Clark's route of November 14-20, 1805, or other significant exploration involving either Chinook Point or Scarborough Hill. It must be possible to document the property's association with an expedition's route, as well as its integrity. In regard to the National Register, the latter is composed of seven aspects: location, setting, design, workmanship, materials, feeling, and association. Some of the aspects are more germane than others for a trail route or campsite, such as the original location of a property, and its environmental setting or vistas.

Theme 3: Early Settlement and Land Tenure at Chinook Point, 1846-1896

During the period that the Oregon Country remained disputed territory between the United States and Great Britain, several ideas were launched in Congress to strengthen and establish American claims by actual occupation. Senator Lewis V. Linn of Missouri introduced a bill in 1842 that permitted land claims without prior survey by actual settlers in the Oregon Territory.[42] It became law in 1850 and was known as the Donation Land Law for the Oregon Territory. This piece of legislation came in response to two events. First was the signing of an international treaty with Great Britain in 1846, which gave lands that eventually became the states of Oregon, Washington, and Idaho to the United States. The California Gold Rush that began in 1848 proved to be the trigger for this bill, as many new arrivals left Oregon in pursuit of quick wealth, so much so that Congress felt the need to create an incentive for agricultural settlement in what they perceived as largely vacant territory.

The Oregon Donation Act of September 27, 1850 provided a way to legitimize prior claims for those settlers eligible to use it, as the legislation allowed for granting and perfecting title without first negotiating and then ratifying treaties with Indian nations in order to clear aboriginal title. In its original form, the donation act allowed certain white males or Indians of mixed blood to claim 320 acres each without cost (if single and could prove their intention to marry within one year after arrival) and an additional 320 acres in their wife's name, if married.[43] For this to occur, the claimant had to remain on the land for four years. Its popularity prodded Congress to extend the law beyond the original expiration date of December 1853 for another two years, amending the terms to allow settlers to buy their claim for $1.25 per acre after two years of successive residence on the land.

Of the 990 donation land claims filed within what is now the State of Washington over the five year period allowed by the law, 61 of those were granted land patents (title) in what became Pacific County, and 13 in adjoining Wahkiakum County.[44] Unlike many made further up the Columbia River or along its inland tributaries like the Willamette, claims along the coast or near the Columbia's entrance to the Pacific Ocean generally did not make for the best—or even viable—agriculture. Many quickly failed as farms and sometimes lay abandoned for years while their owners tried to subdivide their claim in the hope of a future buyer. On Chinook Point, a Hudson's Bay Company employee and native of England, James Scarborough, began the process of settlement by marrying a Chinook Indian, Ann Elizabeth, at Fort Vancouver in 1843.

Scarborough held a number of maritime positions with the HBC and began establishing a farm at Chinook Point after his marriage. Before retiring from the company in 1850, however, he also alternated between commercial salmon fishing and piloting mail steamers over the Columbia River bar in addition to his agricultural pursuits. Scarborough built a house at Chinook Point even before filing a donation land claim of 640 acres (643.20 as finally patented), whereby the United States Land Office recognized an effective occupation date of May 1, 1846.[45]

At least one visitor recorded having seen the farm before the Scarboroughs claimed under the donation law. In June 1848 a passing minister noted that Scarborough had "*a fine clearing which runs up on to the hill. His Indian wife cultivates the land.*"[46] Five years later another account described the general character of Scarborough's farm as possessing "*excellent fruit trees, and a large herd of cattle.*"[47] Any sort of large scale farming in the vicinity, however, had been ruled out by chief factors John McLoughlin and Alexander Kennedy of the HBC almost three decades earlier [in 1824] when they examined Chinook Point in conjunction with moving operations away from Fort George (Astoria) and choosing a more suitable site for agriculture upriver.[48] Once the Scarboroughs died (Ann in July 1852 and James in February 1855), the property quickly fell into disuse, even after being sold to another former HBC employee and his Indian wife. Perhaps its main value by that point lay in the fruit trees and ornamental shrubs growing on the property, but the buyers remained at Chinookville some distance from the Scarborough claim.[49] The property's male owner (Rocque Ducheney) died in a fight between fishermen and a salmon packing company, an event that preceded his wife's remarriage in the fall of 1863. By that time she and her new husband had become receptive to an offer made to purchase the property at Chinook Point.[50]

What followed resulted in a shift from some past agricultural use of the donation land claim to something of a token designation as a military reservation. No actual development as such occurred until the summer of 1897, something that can be explained by a delay in the Army's acquisition of this property (purchase was not fully consummated until March 1867), but also a lack of any perceived threat to the coastline and lower Columbia basin. Only temporary defenses (earthworks) were erected at two other sites (Fort Stevens at Point Adams and what later became known as Fort Canby at Cape Disappointment) on each side of the river entrance during the Civil War. Neither of those posts saw action over the course of that conflict. Building permanent fortifications at the mouth of the Columbia River could thus be deferred indefinitely. In the interim, modernization of existing coastal defenses—let alone developing new ones for a site like Chinook Point—had to wait until Congress began to appropriate funding again in the 1890s.[51]

What importance the military attached to these three sites lay in the fact that not only was Portland upriver, but the Army had also established its headquarters in the region at Fort Vancouver. It therefore maintained some interest in keeping Chinook Point and other strategic places available for defensive use. Lack of fortification there led to a problem with squatters by 1869, but only during fishing season. Two years later the commander at Fort Stevens asserted that the Scarborough claim was unoccupied, so the Army then leased the property to a nearby resident for at least two years beginning in 1872, at an annual rent of one dollar.[52] The annoyance of having squatters at Chinook Point did not completely disappear until the Army began building fortifications in 1897, as Chinese fishermen erected a house there earlier in the decade. It had become enough of a landmark for the Army to refer to the place as "Chinaman" (instead of "Chinook") Point on its maps as late as 1906.[53]

Summary of Context Theme: As a way of connecting the themes of exploration and coastal defense in chronological narrative, attempts at settling Chinook Point and the larger area as a donation land claim centered on Scarborough Hill had few lasting effects. The point and hill are poorly suited for crops apart from limited use for fruit trees and ornamental shrubs where gun batteries subsequently built by the Army since most of the claim's topography is too steep for anything but marginal pasture on poor soils. Both short term and long term residences of settlers and squatters were thus confined to a narrow area near the river, where the Army leveled and then developed gun batteries, mine casemates, and other infrastructure beginning in 1897.

Associated Property Types

Name of Property Type: Archaeological Properties associated with early settlement and subsequent land tenure

Description: Archaeological resources associated with the theme of early settlement and land tenure at Chinook Point include building remnants and artifacts dated to the period of 1846 to 1896. These resources, if they exist, will not be evaluated in this historic context statement. It is, however, recommended that any historical archaeological resources be evaluated by professional archaeologists for their National Register eligibility under Criterion D, and possibly A, if indeed a case for association with the broad patterns of American history can be made. Currently there is as yet no evidence from prior surveys that artifacts or other resources associated with this theme exist, but the study area of Fort Columbia State Park is adjacent to the Station Camp Unit of Lewis and Clark National Historical Park that contains a large and complex site (45PC106) that has undergone extensive archaeological investigation.[54]

Registration Requirements: It is possible that properties eligible under the theme of early settlement and land tenure at Chinook Point could be located outside the 286 acre historic district at Fort Columbia State Park that was nominated in 1977 and listed a year later. In order for properties or features to be contributing resources within the district or eligible for listing if located outside of it and within the state park, they must have an association with the Scarboroughs, their immediate successors, or possibly Chinese occupation of the site during the period of significance. It must be possible to document that occupation and the integrity of any archaeological resource. In reference to the National Register, the latter is composed of seven aspects: location, setting, design, workmanship, materials, feeling, and association. Some of these aspects are more germane than others if found eligible under Criterion D, especially if the resource is found below the existing ground surface.

Theme 4: Fortifications and Military Occupation at Chinook Point, 1896-1948

Beginning as early as 1794, nascent coast fortification in the United States has been divided into three distinct periods by military historians extending through the 1850s. The Civil War furnished a watershed for such fortification, in that masonry towers of the third period (or "system") suddenly gave way to cheaply built earthworks with gun emplacements, which were virtually abandoned by 1880 or even earlier. Two sites chosen to guard the Columbia River's mouth (on Cape Disappointment and Point Adams) reflected the haste that fortifications could be built during the Civil War, yet saw no action. They are also part of a larger pattern of construction lasting into the 1870s, where incomplete military fortification fell into disrepair and virtual abandonment. Forts established in San Francisco Bay and Puget Sound constituted higher priorities for funding when Congress finally appropriated money for coastal defense again, as part of implementing the "Endicott Program" after 1885, but Army installations at the mouth of the Columbia began to fill out by the late 1890s and construction continued well into the first

decade of the twentieth century. At that point the Army could activate artillery batteries and a mine casemate at Chinook Point, which were supported by the first garrison structures completed in 1903. Many of the latter are similar to the simplified wood-frame Queen Anne buildings erected from standardized Quartermaster Corps plans at other installations on Puget Sound, or at Fort Stevens across the river.[55]

The military buildup that began at Fort Columbia on Chinook Point in the last years of the nineteenth century as part of implementing the so-called "Endicott Program" to strengthen coastal defenses came to an end about the time of American entry into World War I in April 1917. A new mine casemate completed at Fort Columbia in 1921 represented one of the few Army construction projects on the west coast of the World War I period, though the post and many others then fell into almost complete inactivity thereafter. With storm clouds of World War II on the horizon, the Army tried to update Fort Columbia and other coastal defenses, so that this installation received new guns, some support structures, and an expanded casemate for better operational control of the minefields at the Columbia River's entrance. The modernization program led to the Army acquiring 86 acres of additional land to be added to the Fort Columbia military reservation, but most of it was declared excess to actual needs in 1947—an action that set the stage for eventual transfer of the post to the Washington State Parks and Recreation Commission.[56]

The Endicott Program and Coastal Defenses at Chinook Point, 1897-1917

What might probably be hailed as the seminal suggestion for how the Columbia River might be defended from Chinook Point came as early as the winter of 1845-46, when lieutenants Henry J. Warre and M. Vavasour reported on possible sites as part of British military planning when jurisdiction over the Oregon Country had yet to be settled. The international treaty signed subsequently between Great Britain and the United States rendered their recommendations largely moot, though the pair stated that Point Ellice and Chinook Point could possibly be fortified for "temporary" purposes. They judged Chinook Point too high and steep to effectively place guns, while also being vulnerable from the river.[57] A clouded title to the Scarborough Donation Land Claim limited what the Army could achieve in building defenses at the river mouth to earthworks at Cape Disappointment and Point Adams during the Civil War period. Troops billeted at both of these partly completed fortifications took turns keeping a very loose watch on the property once the Army had control of Chinook Point in 1867. It nevertheless lay largely deserted and practically abandoned for most of the next three decades. The west-facing slope of Scarborough Hill, which had once been a bald maintained by periodic Chinook burning, began slowly reverting to a forest.[58]

Army construction at the site came in two phases, with the first under the auspices of the Corps of Engineers from December 1896 and ran until work on fortifications substantially complete at the end of June, 1900. A second phase, one centered on building of roads, utilities, and residential structure through the Quartermaster General's Office, immediately followed and ran through the middle of 1907. Both phases came through appropriations approved by Congress for coastal defense, as part of a post-Civil War initiative started when President Grover Cleveland appointed his secretary of war to chair a board composed of military and civilian representatives known as the "Endicott Program," for Secretary of War William C. Endicott. The board's report of 1886 recommended a $127 million construction program that took more than two decades to implement. Of the 27 harbors described in their report, the three forts at the

entrance of the Columbia River sat in eighteenth place among their priorities for proposed harbor defense systems.[59] In the case of the Columbia River harbor defense, Army planners considered Fort Stevens, located on Point Adams, to be at the center, but to be reinforced by Fort Canby on Cape Disappointment and a new post on Chinook Point.[60]

Although smaller in scale than Fort Stevens, the fortifications at Chinook Point were to possess the same mix of multiple batteries with mounted guns on disappearing carriages, a battery of fixed guns behind a parapet, and mines that could be fired electronically by cables that terminated in a concrete bunker called a casemate. Work on fortifications at Fort Stevens began under the direction of Captain Walter L. Fisk in August 1896, at Chinook Point in March 1897, but not until 1904 did construction start at Fort Canby.[61] Working from plans drawn by the Army Board of Engineers, but with some modifications by Fisk in response to local conditions, the cost of arming all three sites during the phase of construction approached $3 million.[62]

Two Army officers produced the basic design for a disappearing gun carriage in 1894, something that subsequently represented the crux of American seacoast defense until World War I. Instead of fixed guns in Civil War-era earthworks, guns on a disappearing carriage were mounted on a concrete foundation in combination with a protective contour of earth, so that crews servicing the weapon might remain hidden from fire by enemy ships. In addition to a foundation, the Army used concrete for a two story wall so that guns could be loaded in safety and then raised to fire above the wall through the use of hydraulics, a counterweight, and long levers. The upper story held carriages behind a protective wall, with the lower story having space for ammunition magazines. Extended levers holding the cannon could surmount the wall, and yet the gun emplacements could be designed (using a principal called "horizontal crest" to reveal nothing from the view of enemy ships indicating a disappearing gun's position.[63]

Depending upon local conditions and military necessity, weaponry such as disappearing guns could also be complemented by large mortars or rapid fire guns in fixed positions. Between 1891 and 1903, guns in American seacoast defenses of the Endicott period ranged in caliber from three to twelve inches, while featuring several different types of fixed position mounts or carriages. With a firing range of seven to nine miles, these weapons supplemented the dominant role disappearing carriages played. While Fort Stevens, for example, possessed five batteries with disappearing guns in two-story concrete batteries by 1903, it also had guns capable of firing from four different types of fixed carriages. A smaller number of disappearing guns overshadowed fortifications at Cape Disappointment and Chinook Point, while latter post also boasted three rapid fire fixed guns in a battery that were placed behind a two story concrete "masking parapet" by October, 1900.[64]

The advent of effectively producing and transmitting electricity gave harbor defenses of the Endicott period new capabilities. Not only might ammunition hoists be electrically powered in the gun batteries, but perhaps more importantly, underwater mines could also be thus fired. A member of the Board of Engineers, Henry L. Abbott, published the first manuals on the use of mines (either sitting on the bottom or buoyant) that could be fired electrically through a system of underwater cables, which might be set to explode on contact or triggered by an operator. The network of cables terminated on shore in structures called mine (or mining) casemates, usually buried below ground. "Fire control" structures were also associated with mines, in that they be utilized to observe the planting process and fix the location of each mine, but also to track the position of enemy ships. Only during wartime (such as the short-lived conflict with Spain in 1898) were mines actively deployed. They might otherwise be stored on shore, having been planted for practice and then retrieved.[65]

Given how the Army's plans to fortify Chinook Point included batteries for disappearing and fixed guns, as well as a mine casemate, it had to develop a garrison infrastructure there during the early construction phase. This included a wharf and approach starting in December 1896, in addition to siting temporary quarters for work crews, offices, and a cement plant.[66] Clearing and excavating a site for the first gun battery could thus begin in March 1897, with the major concrete work completed by September. Located about 100 feet above the river on Scarborough Hill, the battery with two disappearing eight-inch "rifles," some 23 feet in length, was virtually finished in June 1898.[67] Meanwhile, work had begun on another battery, this one holding just one (instead of the two standard) eight-inch disappearing gun, in August 1897. Standing a short distance southeast of the other battery, this one (according to local tradition) occupied a spot associated with the since-vanished Scarborough residence.[68] Although substantially completed by May 1898, the second battery lacked an operational gun, since an experimental carriage had not yet reached Chinook Point. The mine casemate, a subterranean concrete structure finished in March 1898, rounded out the work that the Army had contemplated with their first allotment of funds. This prompted the commander at Fort Stevens to send a detachment of 11 men to Chinook Point in July 1898, for the purpose of guarding the new fortifications.[69]

They did so as the Spanish American War raged in Cuba, something that reached a swift conclusion, but did not interfere with subsequent allotments aimed at building more fortifications on Chinook Point. Two new projects thus began almost simultaneously in April 1899, with both of them situated further downslope and just east of the mine casemate. One battery featured two six-inch disappearing guns with barrels 23 feet in length, while the other employed a concrete "masking parapet" to hide three rapid fire three-inch fixed guns having a barrel length of almost 13 feet.[70] Their construction had finished by the end of October 1900, but also included installation of small two power plants to service the three batteries with disappearing guns.[71]

Although the nascent post received the name "Fort Columbia" on July 13, 1899, it could not be garrisoned without building additional infrastructure.[72] The Army first had to secure an adequate water supply through some additional land acquisition. A first parcel of 33 acres came through an executive order, simply reserving a part of the public domain lying along the eastern edge of the Scarborough claim for military purposes. Three lots totaling 53 acres had to be purchased from the Northern Pacific Railroad, at about the same time as the name "Fort Columbia" became official.[73] A delay of more than two years followed before funds could be secured to build a 800,000 gallon reservoir about 175 feet above the post, in addition to pipelines, plank roads, and walks on the post.[74]

The Army meanwhile moved ahead with construction of 14 buildings, with funding from another allotment of $102,000 obtained through the Quartermaster Corps. All of the construction came from standardized plans developed at a time when the Army mobilized for the Spanish American War of 1898 and continued to fight in the Philippines for several years thereafter. The Army's size thus grew from roughly 25,000 to an average of 65,000, a number that held steady throughout the first decade of the twentieth century.[75] While the close of a western frontier in 1890 signaled some consolidation and reduction in the 65 existing military posts, the Army's growth in less than a decade later allowed for some expansion, especially in coastal defense. The steep topography of Fort Columbia meant that only some 25 acres (of the 729 acres in the military reservation) was suitable for building any kind of structure, so the post lacked components such as a parade ground, target range and cemetery. It was not built to function alone, either, but as an interconnected part of a trio dedicated to harbor defense. The

first garrison arrived as a company of artillery from Fort Canby on Cape Disappointment during the latter part of June 1903, just as the first spate of building quarters and supporting structures drew to a close. For most of the next 14 years (or until the United States entered World War I), the garrison at Fort Columbia usually numbered approximately 100 men and four officers.[76]

Garrisoning Fort Columbia came at a time when coast artillery soldiers no longer had to live in casemates rather than barracks, and followed the general trend toward improved conditions that prevailed in seacoast defense after 1885.[77] Their barracks at Chinook Point accommodated 100 men and was by far the most expensive building of the 14 finished in 1903, accounting for almost one-third of the total allotment from the quartermaster. Apart from the barracks, the list of wood frame structures at Fort Columbia in this earliest construction phase included a hospital, an administration building, four different types of quarters for officers and noncommissioned staff, a guard house, bakery, stable, work shop, store house, as well as oil storage.[78] More building followed, especially in 1905 and 1906, when a total of 11 additional structures were erected from several allotments amounting to more than $53,000. These paid for three dwellings intended to serve as additional quarters, but also a post exchange building (something that also featured a bowling alley), gymnasium, and separate store houses for wagons, ordnance, mines, as well as other items.[79]

What seemed to unify the appearance of wooden structures at Fort Columbia during these two short bursts of construction activity had to do with the Army's simplification of the Queen Anne style popular at the time through its standardized plans. As balloon-framed buildings, these were similar to their contemporaries erected at Fort Stevens, as well as Fort Worden and Fort Casey on Puget Sound.[80] For the most part, they had been worked into the existing contours of Chinook Point and arranged along a simple road grid with no real landscape plan.[81] Still, Fort Columbia and other Army posts of the period have been described as "military parks." This came in response to a need for improved sanitation and convenience that planners associated with permanent forts, as opposed to temporary cantonments intended to shelter large numbers of recruits during the Spanish American War that led to disease outbreaks and unnecessary deaths while soldiers waited for transportation to Cuba.[82] The Quartermaster General's Office also worried about increased expense during this period, since on a national basis, construction costs jumped 36 percent from 1902 to 1905, and then another 12 percent in 1906. Using local material, such as wood in the Pacific Northwest, could contain some of these costs (as an alternative to more expensive and less readily obtainable brick or stone), as might revising standardized building plans in order to eliminate wasted space by creating smaller structures.[83]

The Army regulations of 1904 stated that posts should be made attractive, but failed to provide further guidance as to what made for an attractive post. Into this vacuum came city planning ideas, as the Quartermaster Corps worked to improve living conditions at the permanent forts that resulted from post consolidation of the 1890s. One of them originated from the Beaux Arts movement, which emphasized formal site plans, where building layouts were arranged symmetrically around an axis. While the topography of Chinook Point confined buildings to a small area that made Fort Columbia appear as if it had been hollowed out of the forest, the most prominent wood frame structures were placed along three parallel lines. Fortifications and other buildings had, by contrast, been located in reference to where the landscape allowed for them.[84]

Despite being substantially complete by the end of 1906, portions of the Army's building program at Fort Columbia also responded to developments further afield. President Theodore Roosevelt convened a board chaired by his secretary of war William Howard Taft in 1905, something intended to provide an update to the Endicott report. Most of the Taft Board's

recommendations were technical, but they gave impetus to adding searchlights as part of an integrated plan for harbor defense. Just as they had at Fort Canby, engineers installed 30- and 36-inch portable models with lightly built wooden shelters between 1910 and 1912. These were replaced by more powerful versions of the lights, with diameters enlarged to 60 inches, around the time of World War I.[85]

Apart from a small house intended for one married soldier built sometime around 1908, the other changes to Fort Columbia that occurred prior to World War I were confined to fortifications and utilities. When both the Spanish American War and the Philippine Insurrection that followed it finally concluded, the Army could finally provide names for the four batteries of the newly garrisoned Fort Columbia. All of them came in one general order of 1904, with the first two batteries completed in 1898 named for Jules Ord, a first lieutenant killed on San Juan Hill, Cuba, during the Spanish American War. In order to draw a distinction the two batteries, the Army designated the single gun as "Battery Ord #3" in 1906.[86] The disappearing gun battery completed in 1900 and located closer to shore than Battery Ord became known as "Battery Murphy," after a captain killed in the Philippines that year. The battery consisting of three fixed guns, also completed in 1900, took the name "Battery Crenshaw" after another captain who died of his wounds in the Philippines that year.[87]

Modifications to the batteries began in 1908, when Battery Ord #3 was reworked, mainly as a way to try and make a single gun emplacement better fit into the defensive scheme; a more modern disappearing gun carriage took its place before being removed entirely in 1917.[88] The original mine casemate of 1898 proved to be exceedingly damp and uncomfortable (given how it contained electrical generating equipment and switching devices) that it was abandoned by 1907. This led to the Army Corps of Engineers to start building a new mine casemate in 1909, one located further west from the batteries and just behind the rock outcropping on Chinook Point. Completed in March 1911 for a little over $5,000, this structure reflected ideas of engineer J.S. Sewell, who developed prototypes of lightly constructed and thus economical buildings for the harbor defenses of Portland, Maine in 1904-05. Instead of naval bombardment, "Sewell construction" responded to the greater perceived threat posed by fire, and so opted for cement plaster over expanded metal lath. The new casemate contained four distinct rooms, one each for storage batteries, an electric engine, operations, and a dormitory with space for several cots.[89] A mine command station, a two-story structure located above the residences on Scarborough Hill, was also connected to operations in the casemate. Built of concrete, its observation room was located directly over a plotting room, where the Army used telephones to communicate with other parts of the harbor defense. The Army also erected a small Sewell-type dormitory next to the station at roughly the same time.[90] One other significant change in fortifications occurred in 1911, when the commander's station for Battery Ord shifted from the small concrete and steel structure built above the fort on Scarborough Hill in 1900 to an addition constructed in the battery. This function could now be combined with a plotting room, an essential part of "fire control," a term for the targeting of enemy ships.[91]

The Army considered having dependable electric power with which to make harbor defenses crucial, though most coastal fortifications were built in remote locations away from even the most primitive transmission lines. As common features of the Endicott-era forts, the Army found self-contained power plants necessary, even after commercial electricity became available because the plants could be protected by stout construction and secret locations. At Fort Columbia, a plant was built in 1898 with the intent of using a steam boiler and engine to drive the electric generating set that could charge a storage battery located in Battery Ord. While

most of the early lighting needs for the garrison buildings were met with mineral oil, the absence of steam equipment at the power plant was countered a 25 kilowatt gasoline powered generator. By the end of 1911, the power plant contained a new 25 kilowatt generator, which supplied almost all of the post's needs.[92]

Even before the United States entered World War I, the Army recognized how susceptible "Sewell-type" buildings might be to fire from heavy artillery. This was really part of a larger concern about how powerful armored warships had become by the time major conflict had commenced in Europe. In 1914, modern ships possessed the capacity to bombard coastal defenses from beyond the range of their opponent's guns. Another board of review convened in 1915 by the administration of President Woodrow Wilson to review the state of seacoast fortifications and recommend changes to what had earlier been produced by the Endicott Program and then the Taft Board. [93] Relatively few of them were actually implemented given the short duration (18 months) of American involvement in World War I, but several changes did affect the function and appearance of the three forts located near the entrance of the Columbia River.

A possibility of direct hits from naval bombardments on mine casements at Fort Stevens and Fort Columbia spurred the Army to develop a project aimed at strengthening these buildings. Work at Fort Stevens proceeded first, eventually resulting in a casemate with the same interior layout as the earlier Sewell-type structure at Fort Columbia. The big difference was that the Fort Stevens casemate of 1917 now possessed reinforced concrete walls eight feet thick, a roof of the same material five feet through and a covering of sand nine feet deep.[94] Changes to the mine casemate at Fort Columbia came later, but were less stout and generally limited to the existing envelope. Completed in 1921, this amounted to concrete walls now two to three feet thick, as well as a reinforced concrete and steel roof five feet through, and overlain with earth.[95]

The biggest change to the fortifications at Fort Columbia that resulted from World War I came from the board of review pointing to the usefulness of having portable guns on railway mounts. This led to coastal defenses becoming a source of heavy weapons, as the Army removed guns from disappearing carriages for the purpose of supporting infantry rather than fighting warships.[96] While the six-inch guns at Battery Murphy remained in place due to their value in protecting Fort Columbia's minefield, all three of the eight-inch guns at Battery Ord were removed for service in Europe during World War I.[97] Strangely enough, this removal of ordnance coincided with heightened activity at all American coastal forts during World War I, though this largely served a training function. From a force totaling 20 officers and 450 enlisted men at all three forts just prior to the United States entering the war, the mustering-in process swelled the ranks of artillery units stationed there, whether regular Army or officers and enlisted men of the National Guard.[98] When completed in August 1917, the mustering-in had furnished enough men to staff Fort Columbia's fortifications at their capacity for the first time.[99]

Postwar Disarmament to Reactivation for World War II, 1918-1948

Following the armistice of November 1918, demobilization reduced coastal fortifications in the United States (as well as American military installations in general) to a state of almost complete inactivity. At the three forts on the lower Columbia, the years following World War I brought a drastic downsizing of full-time staff, supplemented for short periods by the training of National Guard units. For Fort Columbia, this meant a sleepy post run by one sergeant and one or two enlisted men, detached from the main artillery company at Fort Stevens. According to one newspaper account from the early 1930s, these men had plenty of time to herd cows and sell

milk to fishermen, apart from the two weeks each summer that the National Guard manned Battery Murphy for training exercises.[100]

Dismantling of Battery Ord continued almost immediately after the armistice, since one of the service magazines had gotten wet due to leaks when the blast apron settled. By April 1919, all three gun carriages were sold as junk.[101] Long standing doubts about the utility of Battery Ord #3 led to the conversion of its interior switchboard room for the fire control communications system in 1921, and subsequent burial so that only the top remained visible.[102] The outmoded guns and carriages of Battery Crenshaw met a similar fate to those of Battery Ord, except that the three-inch "rifles" were dismounted and shipped to Fort Stevens for transfer to the Watervliet Arsenal near Albany, New York, in July 1920. All of the carriages were sold to a private party in Astoria about six weeks later.[103]

The main organizational change for forts intended to serve as part of harbor defense systems during this period came in 1924, when the coast artillery went from separate companies of varying sizes (still stationed at Fort Stevens, in the case of Fort Columbia) to standard regiments. This move reflected an emphasis on mobility and new responsibilities like anti-aircraft protection, rather than manning big guns and mortars in their emplacements.[104] The tactical airpower developed during World War I rendered the Endicott forts obsolete as the main defenses against potential attacks made inland. Nevertheless, Fort Columbia and other seacoast fortifications retained some value as bases for training as well as deterrents to enemy ships and submarines as harbor defense systems over the next quarter century.

Reduction in the number of buildings at Fort Columbia also came with post World War I inactivity. It began with selling the gymnasium, reported as being in poor shape during 1922, for salvage roughly two years later. Seven other structures, most of them built in response to prevailing conditions at the turn of the twentieth century, were removed over the following 16-year period. These included stables, the blacksmith shop, coal shed, wagon shed, mine storeroom, wharf house, and quarters for teamsters.[105] An Army map of the post from 1934 showed the wharf as "practically destroyed," whereas the narrow gauge railway that connected Megler with Nahcotta in 1909 had been replaced by a federal highway in the early 1930s and subsequently became known as "U.S. 101."[106]

This trend of reducing the footprint of Fort Columbia and other military posts was reversed once the Army began to plan for modernizing coastal defenses in the late 1930s. Congress authorized a new construction program in September 1940, one year after World War II started in Europe and East Asia. At that point Fort Columbia and Fort Canby shared an initial appropriation of $130,000, one largely earmarked to pay for new barracks and other buildings needed for the housing of additional troops.[107] This more than coincided with activation of units in the Army's coast artillery and the Oregon National Guard, resulting in completion of a barracks to house 45 men in March 1941.[108] An officer's quarters for 10 men and a recreation building at the post followed in October, with all three structures being again built from standardized plans issued by the Office of the Quartermaster General.[109] The lack of suitable construction sites presumably forced the Army to remove the post exchange built in 1907 under a contract. At that point the post's staffing amounted to four commissioned officers, six noncommissioned officers, a hundred enlisted men, and forty-five national guardsmen.[110]

American entry into World War II accelerated implementation of the Army's modernization program for coastal defenses, something that included new six-inch gun batteries for all three forts. These fortifications had been prompted by a Japanese submarine's "bombardment" of some shells, which fell harmlessly at Fort Stevens on the night of June 21,

1942.[111] None of the forts returned fire, supposedly because the submarine remained beyond the range of their guns. Construction of Battery 246 at Fort Columbia started in October 1942, in conjunction with batteries numbered 245 at Fort Stevens and 247 at Fort Canby. As examples of "regelbau" construction, a German military term referencing use of more standard designs in fortifications, the Army intended these batteries to protect the Columbia River's entrance by producing a "triangle of fire" through six-inch guns designed to deliver a 105 pound armor-piercing projectile with a range of 15 miles or more. Battery 246 eliminated the sometimes problematic ammunition hoists, since a single level accommodated all of the interior spaces, the design also built on what had been learned about concrete construction and represented great improvement over the Endicott defenses of 40 to 50 years earlier.[112] Only 45 of the 87 batteries planned by the Army at that point were ever finished, however, and most of those completed came late in the war. The battery at Fort Columbia remained unfinished even after its guns arrived, but these were not mounted.[113]

Modernization also included better control of the Columbia River's minefield. To that end, all mine operations had been consolidated from Fort Stevens and went to the casemate at Fort Columbia in 1937. The Army knew the control cable at Fort Stevens could be seen during low tides and the mine plotting room there lacked protection and concealment.[114] To correct these deficiencies, the Army deployed a new mine system and expanded the casemate at Fort Columbia. The addition included gas proofing equipment, a power house for the searchlights on Chinook Point, and two entry tunnels. They added reinforcement to the casemate, most notably in the form of a cap composed of stone rubble intended to detonate any bomb or shell before it could penetrate the earth covering. Work on the 10 x 50 foot addition began in November 1941 and before construction finished on January 31, 1943, the crews placed another three feet of earth over the rubble, then graded and planted the resulting hill to make it look natural from the air.[115] As for larger mine system, another project during the summer of 1944 concealed the mine cables so that they did not lay exposed on the river bank during tidal changes. Meanwhile, the Army converted the Columbia River minefields from buoyant devices to larger ground mines, each holding 3,000 pounds of high explosive.[116] Deactivation of the minefields came in June 1945 and a month before the Army completed one last project at the casemate, another addition that held a 20 x 23 foot plotting room.[117]

The Army's modernization program also meant that the two searchlights at Fort Columbia moved from their shelters at other locations. These devices remained at a 60-inch diameter, the standard size since World War I, and were mounted in the middle of new concrete shelters situated north of Chinook Point.[118] A controller booth built in 1945 replaced controllers previously located in Battery 246 (Searchlight 11) and the mine command station (Searchlight 12) and manifests how specialized harbor defenses had become on the Columbia River. The searchlight numbers come from a larger scheme that included 22 lights placed at strategic points from Klipsan Beach on the Long Beach Peninsula down to Gearhart, Oregon, at the south end of the Clatsop Plains.[119]

Battery Murphy's guns became Fort Columbia's first casualty in the post war era, as the Army order for their disposal came just after the Japanese surrender in August 1945. By the time the fort and its two companions at the mouth of the Columbia had been listed as among 35 Army posts and airfields declared in March 1947, several older buildings at Fort Columbia no longer existed. These included the oil house (1903), the ordnance storehouse (1905), a vehicle shelter (1906), and an officer's quarters (1907).[120] The War Department stripped Fort Columbia of its

armament as part of demobilization, and the post passed into the hands of the War Assets Administration on March 31, 1948.[121]

Summary of Context Theme: Unlike Fort Stevens and Fort Canby, there is no Civil War layer of development to have been subsumed by subsequent work on fortifications and other structures at Fort Columbia. As a compact and relatively complete post that largely dates from the period of 1897 to 1917, early twentieth century harbor defense is probably best highlighted among the three posts at Fort Columbia, even though Fort Stevens is considerably larger. Like the other two forts, changes in coastal defense that took place during World War II can also be seen on Chinook Point. Certain aspects of these defenses, such as the new mine casemate and Battery 246, represent clear examples that extend into the latter period, even if other Army infrastructure from World War II no longer exists or can be seen only in the form of a concrete shell.

Associated Property Types

Name of Property Type: Archaeological Properties

Description: Archaeological resources associated with the theme of fortifications and military occupation at Chinook Point can include a large number of historic period artifacts, including those associated with weaponry, post operations, and support facilities such as building remnants, or transportation routes such as roads and trails. Such resource, if they are extant, will not be evaluated in this study. It is, however, recommended that any historical archaeological resources be evaluated by professional archaeologists for their National Register eligibility under Criterion D, as likely to yield information important in history.

Name of Property Type: Above-ground properties associated with Coastal Defense

Description: Garrison buildings, concrete gun emplacements, as well as a wide range of fortifications and associated infrastructure can be included in this property type. In the case of Fort Columbia, there are remnants of batteries for disappearing gun carriages in addition to fixed guns, including one (Battery 246) where guns have been mounted as part of a relatively recent restoration project.[122] The river's minefield is also represented by the new mine casemate, which evolved from one built during the Spanish American War, to another constructed in a different location that eventually controlled all of the mine defenses on the Columbia River by the time American forces entered World War II. Pieces of other period defenses, such as the remnants from searchlight installations, are located north and east of Chinook Point. What is perhaps the most evocative of an early twentieth century Army post persists in the form of 13 (of which 12 are wood frame) garrison buildings located on Scarborough Hill.[123]

Significance: Extant properties identified in the nomination (13 garrison structures and three gun batteries—Ord, Murphy, and Crenshaw—are likely to possess statewide significance as part of harbor defenses for the Columbia River from 1897 to 1947. They appear to meet National Register criterion A, being associated with events that have made a significant contribution to the broad patterns of American history, and criterion C, by embodying the distinctive characteristics of a type, period, or method of construction that represent a significant and distinguishable entity whose surviving components may lack individual distinction. In this respect, the buildings are indicative of the simplified Queen Anne structures built by the Army from standardized plans issued by the Quartermaster Corps, while the batteries and power plant are remnants from the late Endicott period of coastal fortifications. Other properties associated with coastal defense built after World War I (a group that includes the new mine casemate, Battery 246, as well as remnants of a switchboard, two searchlight shelters, fire command and mine command stations, and a searchlight controller booth) may be at least locally significant

and thus could be the subject of an amended nomination for Chinook Point. Although Fort Columbia never came under direct enemy fire, it possesses some importance in understanding United States coastal defense during both world wars, especially as a training center for artillery units.

Registration Requirements: Not all of the properties eligible for the theme of fortifications and military occupation at Chinook Point appear to be included as part of properties listed as a district in 1978. This seems to be the result of applying the 50-year threshold to exclude the World War II-era properties, which at the time lacked the criteria consideration of exceptional significance needed to circumvent that threshold for these potentially contributing resources. Although some components in each contributing resource are missing, damaged, or sometimes heavily deteriorated due to prevailing weather patterns and Fort Columbia's proximity to the Pacific Ocean, a credible case may very likely be made for amending the district nomination of 1977. The amended nomination should have a larger number of contributing resources, though the total acreage of the district, as currently listed, appears to be adequate. In addition to being significant under criteria A and/or C, any new contributing resource must also retain (at least to some extent) the seven aspects of integrity: location, setting, design, materials, workmanship, feeling, and association. The significance and integrity of individual contributing resources has been previously been contextualized at a national level for military posts, structures built from the Quartermaster General's standardized plans in general, and coastal defense; a statewide context study of these contributing resources will also be useful in drafting an amended nomination.[124]

Theme 5: Fort Columbia as a state park, 1949-

Apart from mention that the extant artillery barracks (originally finished in July 1903) had been converted into a museum in 1954, the district nomination of 1977 made no reference to events or changes that occurred once the War Assets Administration transferred the Army post on Chinook Point to the Washington State Parks and Recreation Commission.[125] State parks in Washington go back as far as 1913, though the years before World War II were plagued by impediments to their growth—with some needlessly imposed by the legislature and Governor Roland H. Hartley.[126] Nevertheless, the Great Depression brought work relief programs and assistance from the National Park Service to assist Washington with developing a nascent park system. Fueled partly by the postwar transfer of the Army's military posts, state parks in Washington grew to a system-wide total of 55,000 acres by 1950. A decade later, its 75,500 acres exceeded the combined total of both its neighbors (Oregon and Idaho), while more than seven million people visited state parks in Washington.[127]

Transfer of Fort Columbia occurred after the NPS conducted an investigation of its suitability as a "historical monument," a process involving an inventory of assets and a documentation effort aimed at placing them in context.[128] Most of the World War II era buildings had disappeared at this point, either through actions by the Army or the War Assets Administration. In any event, transfer of Fort Columbia to state parks took place on May 12, 1950, and over the following six decades, this unit has operated almost entirely within the "envelope" left by the Army.[129] Some adaptive rehabilitation has occurred, however, beginning with conversion of the barracks, but also extending to other structures. Notable among them is Battery 246, which served as a civil defense emergency operating center during the Cold War period, but by 1994, could boast newly acquired six-inch guns mounted on a Barbette carriage.[130] One room of Battery 246 contains an interpretive display, with another near the

power plant, and the commanding officer's quarters is a museum depicting the period when it served as a residence. Two other buildings have been converted to overnight vacation rentals (the hospital and the steward's house), while another is a day-use rental (the ordnance storehouse), and still others are maintenance shops (the storehouse, and fire apparatus house), as well as public restrooms (the guardhouse). About five miles of hiking trails also provide pedestrian access to more remote parts of the park.[131]

For Fort Columbia to be eligible for the National Register, where state parks could factor into making properties eligible under Criterion A and/or Criterion C, further study is needed on how the system of state parks evolved in Washington, as well as the types of development that took place within individual units. If this context is created, then the changes that have occurred during this period at a park like Fort Columbia can then be evaluated in regard to significance and integrity. To lessen the chances that any one project might constitute an adverse effect on a property listed on, or eligible for, the National Register, state parks staff consult with the Washington SHPO (Department of Archaeology and Historic Preservation) in much the same way their federal counterparts do. At Fort Columbia, it is possible that the existing district nomination could be amended to increase the number of contributing resources, but it is unlikely that those resources will include properties originating from the state parks organization rather than the military because they are not architecturally distinctive or historically significant.[132]

Appendix B:

ASSOCIATED HISTORIC CONTEXTS FOR CAPE DISAPPOINTMENT STATE PARK, WASHINGTON

Introduction

Cape Disappointment State Park, as a unit of the Washington State Park system, and a constituent part of the larger Lewis and Clark National and State Historical Parks, covers 1,882 acres on the far southwestern corner of Washington State. It fronts both the Pacific shore and the Columbia River's mouth, being located across from Clatsop Spit, on the Oregon side. Geologically, the bulk of this cape is part of the Crescent Formation in the Tertiary Period's Eocene epoch (55.8 to 33.9 million years ago), first emerging as part of a chain of submarine volcanoes. These features collided with North America's western continental margin and are exposed today as pillow lavas, columnar jointed basalt, with some massive flows. They are also overlain by a variety of Quaternary (2 mya to the present) deposits, including those from fluvial, terrace, and estuarine sources in addition to shoreline sediments and landslide material. Coastal landforms found at Cape Disappointment, such as dune ridges, sand spits, beaches, and estuaries are, however, post-Pleistocene (10,000 years ago or less) in age, emerging in the time since continental ice sheets melted and the sea level rose to the present shoreline. The sequence of human occupation at Cape Disappointment thus starts with these events.

In relatively recent times, the park environment has also been affected by construction of the North Jetty in 1913-17, resulting in the accretion of sand and the development of broad beaches – especially between the jetty and North Head. This buildup has been countered to a lesser degree by erosion of beach in other places, such as in the vicinity of the park's campground. The dynamic nature of shoreline at Cape Disappointment is also evident along the Columbia River, where the shipping channel at its mouth must be maintained by dredging. A portion of the park also fronts Baker Bay, which is more protected than either the ocean beach or river mouth.

Facing Baker Bay is where the town of Ilwaco (population 750) can be found. Located just north of Cape Disappointment State Park, Ilwaco has something of a tourist-based economy, one slightly tempered by a remnant fishing industry and retirees who live there seasonally. On the ocean side of the peninsula containing Cape Disappointment State Park, the traditionally tourist based communities of Long Beach (population 1,300) and the adjacent (but unincorporated) Seaview. They are only a mile or so further from the park than is Ilwaco and located along a highway corridor that serves other small settlements, which thrive primarily on tourism, but to a much lesser degree on agriculture (through cranberry farms) and fishing.

Going north on the Long Beach Peninsula, state route (SR) 103 serves Oceanside, Klipson Beach, and the unincorporated town of Ocean Park before switching over to Nahcotta and Oysterville on the Willapa Bay side of the peninsula, and then terminating in the Leadbetter Point State Park Natural Area. Access from the south and east of Cape Disappointment State Park is provided by the US 101 highway corridor. Many park visitors cross the bridge over the Columbia River from Oregon, and then continue toward Cape Disappointment by way of Chinook Point and Fort Columbia. Fewer of them take the more circuitous SR 4 from Wahkiakum County and then Naselle (in Pacific County) on SR 401, or US 101 from the north,

which leads motorists initially from more populous centers located on Puget Sound or Grays Harbor through gateways like Raymond and South Bend.

In order to adequately update the existing Cape Disappointment Historic District nomination listed on the National Register of Historic Places in 1975, a broader context statement is needed to document all themes important to park lands. The past 225 years is the focus of this broader context statement, organized in a sequence that relates historical eras to assigned themes. This is intended to create a framework where some manifestations of the past are recognized as contributing resources in a district comprised of 1,800 acres (720 ha). This represents about 95 percent of the park's total acreage, though some of these resources overlap with adjoining federal land administered by the U. S. Coast Guard. The goal is to prepare historic contexts that park managers can use for future nominations to the National Register of Historic Places (NRHP) for properties not adequately documented or currently documented that are eligible and under their jurisdiction. Currently a historic district at the park is listed in the NRHP (1975) but it does not address all of the periods of human occupation and development that physically exists today on park lands.

The themes begin with Chinook pre-contact history, as an attempt to sketch human use of Cape Disappointment from 10,000 years ago to the first recorded European contact in 1775. A second theme, "Euro-American exploration," for the purposes of this context statement, begins with Basque mariner Bruno Heceta discovering the Columbia River entrance and continues until ratification of the "Oregon Treaty" between the United States and Great Britain in 1846. This theme is divided into three sub-themes and then summarized before property types are described and evaluated. Attempts by Americans to settle Cape Disappointment during the brief period that followed the treaty represents a third theme, but one only notable as a wedge between 1846 and a presidential order declaring a military reservation in early 1852. The effort to fortify Cape Disappointment ran parallel with those aimed at aiding navigation at the mouth of the Columbia River. Both themes can be divided into three sub-themes in order to capture broader contexts and technological changes over the past 150 years, but also in reference to what transpired on the Oregon side of the river. A sixth theme, that of Cape Disappointment's continuing significance to Chinook people, is included but only as part of making a case for additional ethnographic work that might support nomination of the cape as a traditional cultural property.

Theme 1: Chinook pre-contact and contact history at Cape Disappointment

As a central part of Chinook territory since "time immemorial," Cape Disappointment belongs to the Pacific coast, since tidal salinity reaches roughly 25 miles up the Columbia River. The coastal environments of the Columbia River estuary offered food in great abundance, especially in comparison with the interior. So too, native inhabitants of the Lower Columbia region were situated in the middle of larger trade networks made possible by the river corridor.[133] Cumulatively, this region possessed one of the most densely settled Native populations north of Mexico. The first written record of Chinooks using the cape as an observation post goes back to 1796, when crew on the British ship *Ruby* noted people watching the vessel from the basalt cliffs.[134] One seasonal village site was located nearby, within the present state park, but also formed part of an almost continuous string of permanent habitations running from Waikiki Beach and the isthmus to Dismal Nitch.[135] Smallpox epidemics that raged from 1775 onwards through the 1780s preceded direct contact with Europeans, but devastated Indian populations throughout the Columbia basin as well as other portions of what became western Oregon and Washington. Mortality in this and another epidemic of 1801-02 have been

estimated to be up to 40 percent of the total Chinookan population each time, so observations of the Chinook by Lewis and Clark are likely skewed by the effects of this disease.[136] Later epidemics, continuing into the 1830s and 1840s, would continue to compound these demographic effects.

Linguistically, Chinook is part of the Penutian family, something that stretches from southeast Alaska to southern California, though it shares this territory with ten other language families.[137] Chinookan languages have two branches: lower or coastal (Chinook proper), as distinguished from the Upper Chinookan group that goes up the Columbia River from Grays Bay and Tongue Point to beyond the site of Portland to the upper Columbia Gorge. Lower Chinookan languages can be divided into two, based on dialectical differences between Chinook proper and the Clatsops located across the river. The Chinook (whose name for Cape Disappointment has been reported as "Kah'eese") occupied territory from Willapa (or Shoalwater) Bay down to the Columbia's mouth, and then east to Grays Bay, but also including the Naselle River drainage.[138] Clatsop territory, on the south side of the lower Columbia River, went from Point Adams to Tillamook Head, and then east to Tongue Point but also included three river basins: Youngs, Lewis and Clark, as well as the Necanicum.

Apart from this territorial assignment, one that stems from the late Holocene (or roughly 3,000 years ago to the present), there is archaeological evidence tying the Chinooks to Cape Disappointment. There are some problems, however, with reconstructing occupation patterns with precontact cultural resources in this essentially coastal environment. Soils along the river entrance and adjoining coastline are subject to repeated flooding, slumping, and deflation; they are also highly acidic, accelerating rates of decomposition. Changing sea levels over the past 10,000 years (that is, since the early Holocene) present yet another problem, with rising levels accelerating erosion and thus affecting archaeological evidence in headlands, marine terraces, and sand dunes. Although erosion (and development) has seriously impacted a number of coastal sites in Washington and Oregon since the 1930s, sea levels have been relatively stabile for the past 2,000 years. Subduction zone earthquakes and resulting tsunamis are yet another factor in the resulting scarcity of archaeological sites, since they are accompanied by subsidence and burial of low-lying landscapes.[139]

Due to Cape Disappointment's location, it served as the site of a Chinook summer village to a large extent focused around fishing, and field camps used for specific food collection purposes year round. The summer village (Noxsxa' itmlts or walmln) is closely related to the main summer village site of McGowan/Station Camp near Fort Columbia.[140] Chinook use of the Fishing Rocks site at Cape Disappointment began no less than a thousand years ago and both artifacts and faunal remains have been found there, attesting to its long period of use and occupation. The Fishing Rocks site was a field camp where sea birds, shellfish, salmon, deer, and elk were harvested and processed.[141] Other precontact sites reported from Cape Disappointment State Park include a since destroyed shell mound , an artifact scatter, as well as fire-cracked rock and shells associated with the cooking and processing of shellfish.[142]

While fishing and hunting activities are of enduring importance to the Chinooks and other tribes of the Lower Columbia, these are not the sole reasons for this area's uniquely dense population. *Sagittoria latifolia* (wapato) and waterfowl abounded in the shallow brackish and fresh water, so that more or less permanent summer villages of native peoples came to be situated near the largest wapato wetland - most being many miles upstream from Cape Disappointment. The earliest European visitors on the Lower Columbia reported the presence of wapato, making it a cornerstone of their diet, and even identified Baker Bay just east of Cape

Disappointment as containing swampy ground good for obtaining the starchy tubers that served as a key starch food for Chinookan people and substituted for bread and potatoes for visiting Europeans.[143]

Chinook occupation of sites along the river has been estimated to date from at least three or four thousand years ago, this assertion having been based on the tools and other remains found near Cape Disappointment as well as other sites.[144] In terms of cultural sequence, this places the Chinook sites at Cape Disappointment by no later than the Late Archaic. Within the Lower Columbia basin, the Late Archaic corresponds to the Ilwaco Phase, which is split into two sub-phases at roughly the year 1050 CE.[145] The Ilwaco 2 sub-phase ran until 1775 (or the end of Chinook "prehistory"), a period corresponding to approximately 90 percent of all precontact archaeological sites in the similar environment of the Oregon coast.[146]

Summary of Context Theme: Human occupation of Cape Disappointment likely stretches back millennia, though archaeological evidence at the site can only confirm a more recent Chinook presence there. The high incidence of fog, wind, and exposure to the elements, in addition to changes wrought by Euro-American activities like repeated ground disturbance, are limiting factors and have worked to severely reduce what archaeology might have otherwise rendered about precontact lifeways there. Some inferences about long-term use can nevertheless be made from surrounding sites and food resources known to be available in prehistoric times. As for the contact period, the rapid decline of distinctly Chinook populations due to variety of introduced diseases led to mergers with other native groups throughout the nineteenth century. By the early years of the twentieth century, Chinook proper passed essentially out of use in favor of adopting the Chehalis language on the lower Columbia, including Cape Disappointment. The Chinook people have not passed from the scene, however, as the tribal entity headquartered in Chinook, Washington, petitioned for federal recognition in 1979, citing Chinookan ancestry and descent from Chinook signers of the unratified 1851 Tansy Point treaty.

Associated Property Types

Name of Property Type: Archaeological Properties

Description: Archaeological resources associated with the theme of Chinook Precontact History at Cape Disappointment include occupation sites, short-term encampments, hunting blinds, and catch sites. Artifact types, such as projectile points, and organic material that can be tested for DNA evidence, may also be related to this theme and potentially eligible for listing in the NRHP. The evaluation of these properties and their associated artifacts goes beyond the scope of this project but is presented here to support the larger *historic* context statement. Future evaluation for National Register eligibility would be considered under Criterion D and is left to archaeologists who might assess sites for the information they may yield.

Theme 2: Exploration at the mouth of the Columbia River, 1775-1846

A. *Initial contacts with Europeans, 1775-1804*

In its broadest terms, exploration by Europeans [and North Americans] is part of a larger worldwide expansion through trade and warfare that took place over a period of roughly four centuries. It could rightly be called an era of conquest, but included abundant opportunities for individuals representing European kingdoms and eventually American republics to enrich themselves. They did so by finding new sources of raw materials, but also served as precursors to the movement and settlement of people in new lands, at first in colonies. The Pacific Northwest lay at the periphery of European territorial control until the 1770s, when the first

newcomers appeared to assess the possibilities of trade and eventual settlement. As it had elsewhere, furs proved to be a catalyst in bringing ships to the Columbia River, to be followed by groups of settlers. Establishing effective control became necessary after "discovery," so that treaties could be negotiated between newcomers and indigenous peoples, but also between rival nation states such as Great Britain and the United States.

During the earliest period of European exploration on the Northwest Coast of North America, Cape Disappointment was an important landmark, passed by all early travelers on the lower Columbia and critical to the rediscovery and navigation of the river's mouth. It is not remembered precisely when the Chinooks first encountered Europeans, though the cape is on record as of August 17, 1775.[147] The Basque navigator Bruno de Heceta y Dudagoitia, sailing under the Spanish flag, named the Cape Disappointment headland "Cabo San Roque."[148] Heceta sailed away and seemed to have found a port, but his ship reached the Columbia River Bar, where strong currents convinced him "that a great quantity of water rushed from this bay on the ebb of the tide."[149] The viceroy of New Spain had charged Heceta with exploring the area north of Alta California to assert Spanish claims to the Northwest Coast and to ascertain whether the British or Russians were encroaching on Spanish claims to all of North America.[150] The next recorded visit to the vicinity came on July 6, 1788, when Englishman John Meares approached the river bar, but remained at greater distance than Heceta, staying three miles from shore. Aware of Heceta's claims regarding a river discharging into the sea at this point, Meares asserted that no such river existed; Meares bestowed the name "Deception Bay" on Heceta's "Bahia de la Asumpcion," and replaced "Cabo San Roque" with "Cape Disappointment."[151] Fellow Englishman George Vancouver relied upon the Meares account and similarly dismissed a great river's existence on April 27, 1792, when he saw Cape Disappointment and the opening south of it, supposedly "Deception Bay."[152]

The first known ship to have entered the river basin crossed its bar on May 11,1792, a mere two weeks after the presence of the river had been discounted by Vancouver. Captain Robert Gray of Boston commanded the *Columbia Rediviva*, which entered the river on this date sailed some ten miles upriver to anchor at what is today known as Grays Bay.[153] Before departing the river they named the river "Columbia" for their ship on May 18 or 19, having supposedly landed on the north bank at Chinook Point. There Gray and his crew raised the American flag to claim possession for the United States, also planting some coins under a large "pine" tree. Gray substituted the name "Cape Hancock" for Meares' Cape Disappointment, but this name did not persist. The American proved to be more successful in naming "Point Adams" for what Heceta named "Cabo Frondoso" located on the opposite, (south) bank of the Columbia River.[154]

Word of Gray's discoveries reached Vancouver at Nootka Sound (on what is now Vancouver Island) as Gray made needed repairs for the *Columbia Rediviva* there in the summer of 1792.[155] Vancouver thus began revising his survey of the coastline south of Nootka Sound, reaching the Columbia River Bar on October 19. Since his ship *Discovery* seemed too large to cross safely, Vancouver dispatched the smaller *Chatham* under Lieutenant W. R. Broughton's command to enter uncharted waters of the river that Chinooks called "Yakaiti-wimahl." The most obvious result came in a plethora of British names subsequently affixed to river features, beginning with Baker Bay next to Cape Disappointment—named for the master of the brig *Jenny*, which had anchored there as the *Chatham* entered the river.[156] Broughton continued upriver more than a hundred miles, reaching a feature later called Cottonwood Point (and nearly opposite the future town site of Corbett, upstream from modern Portland, Oregon, and

Vancouver, Washington) to survey the river and claim the entire region for Great Britain prior to turning back in order to rendezvous with Vancouver at Monterey, California, in November 1792. Vancouver subsequently made a point of disparaging both the Spanish and American exploration in his account of Broughton's river voyage, and in his "discovery" narrative, downplayed the fact that this British ship traversed a waterway already densely occupied on both banks by Chinookan peoples, divided by their speech into what the Europeans later called Clackamas, Multnomah, Cathlamet, and Lower Chinook.[157]

Other vessels entered the Columbia River in the years immediately following Broughton's visit, though most ventured no further than the sanctuary of Baker Bay. The Spanish schooner *Mexicana* experienced difficulties with the Chinooks in 1793 and quickly departed, though its commander supposedly charted the river entrance.[158] Another ship, the *Phoenix of Bengal*, spent the winter of 1794-95 in Baker Bay, but left little evidence of its residence on shore. Crew from another ship, the *Ruby*, killed numerous waterfowl in the marshes around McKenzie Head, a knob bordering the ocean between Cape Disappointment and North Head, during the autumn of 1795. They reputedly planted vegetable seeds on a small island next to the shore, leaving the results to be discovered more than a half century later.[159] The *Ruby* left the vicinity in January 1796; the ship's log noted Indians could be seen watching from the top of Cape Disappointment as it crossed the bar in rough seas.[160] Evidence of a later visit by an American vessel, the *Guatimozin* of Boston, dates from February 1804—when a crew member carved his name and the date on a tree located near the shore of Baker Bay.[161] These ships responded to the economic incentives created by the trans-Pacific fur trade, one where fur merchants in London and Boston purchased furs from Indian tribes on the Pacific coast for sale to Chinese markets, but this trade also brought diseases that decimated the Chinooks and other indigenous groups.

Not all of the ships visiting the Lower Columbia River during this period could report a safe passage over the bar. Five crew members in a small boat from the American brigantine *Hazard*, for example, died in 1798 because of the potentially lethal combination of waves, wind, and current. They followed what are untold numbers of Indian canoes no doubt lost at the mouth of the Columbia prior to European contact, and sailors, reputed by Chinook oral tradition to have washed ashore at or near Cape Disappointment as early as 1700.[162]

B. *Lewis and Clark with the "Corps of Discovery," 1805-06*

The arrival of newcomers to Cape Disappointment by land from across the North American continent in November 1805 marked the furthest point reached by an expedition funded by the United States Congress to that time. President Thomas Jefferson played the catalyst, having chosen Meriwether Lewis and William Clark as leaders before the group departed from St. Louis in May 1804. This "Corps of Discovery" had, as its most basic purpose, a commercial one—to try and find a route from the source of the Missouri River to a suitable tributary of the Columbia. At least that served as the excuse to ask Congress for an appropriation of $2,500 for the expedition, one aimed at exploration of U.S. territory known as "Louisiana" and purchased from France in 1803. Even beyond its vaguely defined boundaries, there lay a region labeled as "Oregon," one still largely unknown. With an eye toward eventual territorial expansion, Jefferson also charged Lewis and Clark with reporting on key geographical features over their route, the navigability of waterways, and possibilities for agriculture, potential sites of forts and trading posts. Jefferson added to the list, but for scientific and even humanitarian

reasons. These included the making of detailed route maps, investigations of plant and animal life, but even more importantly—in-depth observations about Indians encountered along their path to the Pacific Ocean.[163]

Lewis and a small advance party reached Cape Disappointment by land via Beards Hollow from what they called "Station Camp" on November 14, 1805. There is some uncertainty due to a lack of journal entries by Lewis, though Clark mentioned this traverse to the ocean via Cape Disappointment. Clark's journal is more definitive, as he wrote a description of the cape in his journal, camping with 11 others from their party along the Pacific shore a short distance north of McKenzie Head on the night of November 18, 1805.[164] Clark and the others set out to explore northward over the following day, first sighting their way from North Head. They proceeded about ten miles to a point north of the future town site of Long Beach and then returned to the Wallacut River that evening.[165]

Their stay on the north bank of the Columbia lasted another week, when the party crossed to the south shore on November 21, 1805. They spent that winter at Fort Clatsop, located on a tidal creek Lewis called the "Ne-tul" (now Lewis and Clark) River, derived from a preexisting Clatsop place name. The party spent the next three months (until March 23, 1806) based at their encampment, all the while never spotting a ship that might relieve them of uncertainties connected with a return journey overland.[166] In addition to producing what was then the largest compendium of scientific data regarding Northwestern North America, the expedition largely put an end to the search for a "Northwest Passage," an imaginary all-water route from the Missouri River to the Pacific Ocean. It did, however, propel the western fur trade forward and gave support to American territorial claims, along with sparking an interest on the part of some for establishing an American settlement on the west coast.[167]

C. *Cape Disappointment's role in the struggle for control, 1806-46*

The establishment of Fort Astoria in 1811 came as a private venture, financed by a German emigrant, John Jacob Astor, who settled in New York. Astor wanted to develop a string of fur trading posts along the Missouri River and extending to the mouth of the Columbia, where he hoped to have an emporium for the Pacific coast fur trade. He sent a ship, the *Tonquin*, in advance of an overland party in order to establish the company's keystone post "Astoria" before his explorers arrived with furs, so that the *Tonquin* might subsequently continue toward China on a trade mission. The ship's arrival at the Columbia Bar on March 22, 1811, was ill-fated when its captain decided to launch boats intended to sound the channel in advance of the *Tonquin*'s entry to the river. This folly cost the lives of eight men, one of them Native Hawaiian, who was buried where one of the boats containing his body had come ashore. His fellow Hawaiians dug a grave in the sand of the beach that became known as "Waikiki" in honor of their homeland.[168] Just northwest of it is McKenzie Head, named in honor of Donald McKenzie, who led the first contingent of Astor's overland party to reach their destination on January 10, 1812.[169]

After only two years of operation Astoria went to the British, having been sold by its owners to the Northwest Company in 1813, preempting British efforts to take the fort by force. Ships from both nations continued to enter the Columbia after Lewis and Clark left for the United States, with at least one per year hailing from Boston until the British sloop of war *Raccoon* arrived to change the name of Fort Astoria to Fort George in 1813.[170] With cessation of open hostilities between the United States and Great Britain in 1815, the Columbia River Basin still remained beyond the effective control of either nation. This did not stop the captain of a U.S. sloop of war, the *Ontario*, from saluting the American flag at Cape Disappointment in

1818 and reiterating Gray's earlier claim by posting a notice on a tree there, asserting American territorial control. Two months later officers on the HMS *Blossom* supposedly conducted similar proceedings on the same spot, even though the main event took place in Astoria, as "Fort George" went back to the Americans.[171] Any significance that the fort had to the fur trade at the time diminished considerably in 1823, when operations of the Hudson's Bay Company moved upriver to Fort Vancouver.[172] The fort at Astoria continued to serve as a fur trading depot of minor importance, supporting Fort Vancouver's operations, through the 1840s.

During the period between 1818 and 1841, when the first non-Indian shack was erected at Cape Disappointment, the site served two functions. It continued to be used as a field camp, presumably for fishing, by the Chinooks and sometimes by visiting tribal communities such as the Chehalis. Chinook numbers plummeted from 400 or so counted by Lewis and Clark in 1805, to reported numbers as low as 30 or 40 a quarter century later; the reduction was so dramatic that one European observer counted 112 Indians living near the river's mouth in 1834, but most were Chehalis.[173] Meanwhile, the main function that Cape Disappointment had for the newcomers was that of a lookout from which men were sent to watch for ships attempting to enter the river, or to see if winds and the bar were right for vessels attempting to leave. This could help prevent disaster, but four ships (three British, one American) wrecked on the bar over a period of 13 years with the worst loss of life being 26 who went down with the British bark *William and Ann* in February 1828. Rumors of Clatsops killing survivors (something later disproved) led to the HBC compounding the tragedy by destroying an occupied Clatsop village on Point Adams by cannon fire.[174]

The other three ships went down in the "Graveyard of the Pacific" without any deaths, with one (the *Peacock*) lending its name to a shoal it struck 1.5 miles southwest of Cape Disappointment. Two vessels in the United States Exploring Expedition had wallowed outside the bar before their commander, Charles Wilkes, decided to explore the calmer waters of Puget Sound. Despite Wilkes having afterward ordered his second in command to arrive at Astoria no later than May 1, 1841, the *Peacock* and a smaller schooner did not reach Cape Disappointment until July 18. A faulty chart of the river entrance doomed the *Peacock*, but all of its crew escaped because of a rescue organized by an African-American servant to a purser aboard one of the American ships anchored in Puget Sound. From the bluff of Cape Disappointment, John Dean recruited a boatload of Chinook Indians led by a native pilot, Old George, who also directed the schooner over the bar. The *Flying Fish* could thus join the castaways at the first landing beach north of the cape.[175] The only remnants of the rescue that could be seen at this site in 1858 were ovens, but an African American cook from the *Peacock* named James Sanler (also called "De Sauls," "DeSaule," "Santos," or "Saul") also built a shack on Cape Disappointment after this episode and resided there until 1846.[176]

Undeterred by the wreck, Wilkes had his men complete a chart of the lower river and the first report on the rivers and harbors of the Pacific coast two years later (in 1843) as a precursor to work by the United States Coast Survey. A number of observers had meanwhile recognized the strategic importance of Cape Disappointment, but this proved inconsequential in treaty negotiations between the United States and Great Britain because Wilkes convinced officials in Washington DC, to have diplomats press for American control of Puget Sound. These talks culminated in the international boundary being set at 49 degrees north latitude under the terms of the Oregon Treaty, signed on June 15, 1846. A lag in the negotiations becoming public knowledge led to an attempt by the HBC in February 1846 to secure Cape Disappointment through purchase. Chief Factor Peter Skene Ogden spent a total of $1,000 of his own funds in

order to extinguish any claims that Sanler and two other Americans had to the cape, even if these were dubious ones.[177] The company's intention involved establishment of a trading post and "Pilot's Lookout" at Cape Disappointment, so it subsequently reimbursed Ogden. The treaty of 1846 still legally protected HBC claims to land and property until June 1859, but the lower Columbia's fur trade had been in decline since 1840 or even before. Terms of the treaty also showed the company to have lost its wager that the river might serve as the international boundary between the United States and its northern neighbor.[178]

Summary of Context Theme: European and American exploration played a critical role in understanding the entrance to the Columbia River for the purposes of expansion, first with trade and then as part of the United States from 1846 onward. As part of the river's mouth, Cape Disappointment is a central part of both maritime trade and exploration, as well as the initial territorial claims of the United States and Great Britain. It also directly factored into American land-based expeditions from the eastern states, beginning with the "Corps of Discovery" in 1805, so much so that the site has been judged to be nationally important as a complement to Fort Clatsop National Memorial. Although Fort Canby State Park was not transferred to National Park Service administration, it became part of a federal and state partnership called the "Lewis and Clark National Historical Park" in 2004, and then renamed "Cape Disappointment State Park," to reflect the surviving journal entries of William Clark. Cape Disappointment is also a landmark of importance to the history of European exploration, something that started 30 years prior to Lewis and Clark with Bruno Heceta in 1775 and including the first ship to cross the bar in 1792, when Captain Robert Gray's *Columbia Rediviva* provided the river's English name. The cape also had a lesser role in the failed attempt of the Hudson's Bay Company to control the region north of the Columbia River, but more importantly influenced Charles Wilkes of the United States Exploring Expedition—whose report favored Puget Sound over the river as place for major maritime installations, and thus influenced boundary negotiations that culminated in the treaty of 1846 with Great Britain.[179]

Associated Property Types

Name of Property Type: Archaeological Properties associated with Exploration

Description: Archaeological resources associated with the theme of exploration include campsites, tree carvings and blazes, debris associated with food procurement, plant cultivation, and historic period artifacts. These resources, if they are extant, will not be evaluated in this study. It is, however, recommended that any historical archaeological resources be evaluated by professional archaeologists for their National Register eligibility under Criterion D.

Name of Property Type: Historic Properties associated with Exploration

Description: Properties associated with exploration include documented trail routes, vistas, and campsites. Explorers of the late eighteenth and early nineteenth centuries, however, left little in the way of physical structures that can easily be grouped and identified as a distinct property type. They nevertheless traveled on or by Cape Disappointment, named features, described them in journals, and mapped their locations. The visit by Lewis and Clark to Cape Disappointment is especially notable, as their movements on November 18 and 19, 1805, can be reconstructed through William Clark's journal and represent the expedition's westernmost travel. Some of the route associated with this journey from Station Camp to Cape Disappointment and north to Long Beach can be visited within the state park, as can the beaches associated with the crews from ships such as the *Tonquin*, *Ontario*, and the *Peacock*.

Significance: These properties are nationally significant under National Register criterion A for their association with European colonial exploration, westward expansion, and

science, within the broader patterns of American history. Their national significance in relation to Lewis and Clark is captured only to a limited extent in the nomination of the Cape Disappointment Historic District, as listed on the National Register of Historic Places on August 15, 1975. Other facets of the district's national significance, especially as they relate to the theme of exploration, were imperfectly documented on the original nomination. It is possible that the properties are also significant under criterion B for their association with the lives of important people, but to be eligible under Criterion B, Cape Disappointment has to be identifiable with the person. This list of explorers includes Bruno Heceta, John Meares, Robert Gray, Meriwether Lewis, William Clark, James Biddle, Charles Wilkes, and Peter Skene Ogden. In all cases, the associations were brief and no work of theirs persists apart from journal entries, but they are consequential, and are related to the specific events that make the properties eligible under Criterion A.

Registration Requirements: Properties eligible under this theme of exploration are already included within a 1,800 acre district nominated in 1974, something that encompasses virtually all of the state park. In order for other properties or features to be eligible for listing, they must be associated with Lewis and Clark's route of November 18-19, 1805, or other significant explorations involving Cape Disappointment. It must be possible to document the property's association with an expedition's route outside of the present state park and its integrity. In reference to the National Register, the latter is composed of seven aspects: location, setting, design, workmanship, materials, feeling, and association. Some of the aspects are more germane than others for a trail route or campsite, such as original location of a property, and its environmental setting or vistas. National Park Service planners, for example, have described Cape Disappointment as retaining a high degree of integrity in a relatively unspoiled landscape that includes old growth trees and significant landforms that Clark described in his journal. Although there are some changes, especially those due to sand accretion after construction of jetties at the mouth of the Columbia River, the major landmarks observed by the "Corps of Discovery" are still evident from Cape Disappointment.[180]

Theme 3: Early Settlement on Cape Disappointment, 1846-1852

Although the earliest settlers established some basis for the United States to claim effective control over what became the states of Oregon, Washington, and Idaho in treaty negotiations, those claims had a somewhat nebulous legal basis. Without Indian treaties (to ostensibly clear aboriginal title) followed by survey, most early settlers had nothing more than the status of squatters. When the gold rush in California led to a movement of people away from the Oregon Territory starting in 1848, Congress enacted legislation that permitted land claims of 640 acres or less without prior survey as an incentive for settlers to remain in the Pacific Northwest. Preexisting British claims were not compensated, at least initially, something that clouded titles at Cape Disappointment and several other strategically important areas in the region.

A hewn-log "warehouse" measuring 40 feet by 60 feet at a story and a half high resulted from Ogden's purchase during the summer of 1846.[181] An employee of the HBC, described as Metis from the Red River Settlement in what is now Manitoba, had some months earlier erected a house next to it. According to one local resident writing more than a century later, a Fisk Keplin or Kipling remained at Saul's Point until 1854 or somewhat thereafter, but the company structure fell into disuse by 1858.[182] At this point its main value to the HBC took the form of a

claim for compensation once President Millard Fillmore declared most of Cape Disappointment to be a military reservation in 1852. On Ogden's original purchase price of $1,000, the company subsequently valued its property there at $14,600, an amount presumably paid by the United States as part of a legislated settlement reached with Great Britain in 1869.[183]

These early attempts at settlement also featured in promotion of "Pacific City" at the site. This scheme began with an American missionary named Elijah White, who secured a suspect claim of 640 acres made by John E. Pickernell during the period before the international treaty of 1846 that assigned lands between 42 and 49 degrees latitude to the United States. White played an important role in the early history of Indian-white relations in the Oregon Territory, serving as a *de facto* Indian agent to various Northwestern tribes on behalf of the United States government even before the U.S. had secured uncontested territorial rights to the region. White settled upon Pickernell's claim in November 1849, after inducing the latter to relinquish his interest. A nearby resident of Chinook Point, a man named Washington Hall, surveyed and platted the town of Pacific City, joining White in what was clearly a speculative real estate venture, but White never perfected title.[184] Congressional passage of the Oregon Donation Act on September 27, 1850 provided such an opportunity, given how the legislation provided 320 acres to each qualified settler, provided they reside upon and cultivate the land for four consecutive years.[185] White sold a number of lots and blocks in early 1850, including several to two brothers by the name of Holman; with White's support, one built a hotel off-site and subsequently had it placed at Pacific City.[186] By doing so, James D. Holman consequently became White's partner in promoting the town, which grew to 75 residents before President Fillmore declared much of the area a military reservation by executive order on February 20, 1852.[187]

What allowed White and Holman to attract potential residents came largely in the form of a petition circulated in 1850 to have Pacific City made the port of entry and delivery rather than Astoria, at that time still not platted nor incorporated. Although 250 people reputedly signed the petition, the government commission sent to select sites for ports of entry in 1851 did not concur.[188] On the land taken for use as a military reservation, Holman eventually submitted a claim to the government for some $28,000 as compensation for his hotel, as the value of improvements made on land for which he held no title. Other holders at Pacific City simply removed their structures, but Holman chose to abandon the hotel upon dissolution of the town, after which the building burned.[189] By 1858, the U.S. Coast Survey reported that the settlement once called "Pacific City" consisted of only two or three houses along with a sawmill just north of the cape on the shore of Baker Bay.[190]

The government, meanwhile, proved slow to act on specifying boundaries of the military reservation. President Fillmore's order simply declared "*all land lying within one and a half miles of the cape's southern point*," something originally calculated to contain about 540 acres.[191] A recommendation that prompted the President's order had come from the commander of the Army's Pacific Division as early as October 1849, one that the Chief of the Army Engineers reiterated as part of the aforementioned special government commission charged with selecting sites for ports of entry, forts, and lighthouses.[192] About that time the U.S. Coast Survey opened an "ox-team road" to the top of Cape Disappointment, while charting the river entrance that built upon previous work by both American and British parties.

Summary of Context Theme: As something of a "bridge" between the themes of exploration and coastal defense, attempts at European settlement of Cape Disappointment are of little lasting consequence. The cape is poorly suited as a town site, as both the Hudson's Bay Company and early residents discovered. The executive order by President Fillmore declaring

military reservation in 1852 did not prove to be problematic, as White failed to secure clear title to what he called "Pacific City." Most structures could simply be moved or easily demolished, and thus provided few signs of anything more than short-term residence.

Associated Property Types

Name of Property Type: Archaeological Properties associated with Settlement

Description: Archaeological resources associated with the theme of early settlement on Cape Disappointment include building remnants and artifacts dated to the time period. Evaluating these resources, if they exist, is beyond the scope of this project. It is, however, recommended that any historical archaeological resources such as household items, construction debris, or artifacts specifically tied to this time period be evaluated by professional archaeologists for their National Register eligibility under Criterion D, and possibly A, if indeed a case for association with broad patterns of American history can be made. Currently there is as yet no evidence from previous surveys that artifacts or other resources associated with this theme exist.[193]

Registration Requirements: Properties eligible under the theme of early settlement will likely be already included within the boundaries of the district nominated in 1974. In order for other properties or features to be eligible for listing, they must be associated with the Hudson's Bay Company occupation at Cape Disappointment or Pacific City. It must be possible to document the property's association with either of these attempts at settlement and show that it has integrity. The latter is composed of seven aspects: location, setting, design, workmanship, materials, feeling, and association. In regard to these attempts at early settlement, any properties will be archaeological, if they exist at all.

Theme 4: Coastal Defense at Cape Disappointment, 1852-1948

Fortification of coastline in the United States began as early as 1794 and can be divided into three distinct periods or "systems" (as military historians called them) through the first half of the nineteenth century. The Civil War furnished something of a watershed in this regard, since tall masonry with towers for mounting guns of the third system gave way to earthworks with gun emplacements built inexpensively and then virtually abandoned by the 1880s. Two sites chosen to guard the Columbia River's entrance (Fort Canby and Fort Stevens) reflected the haste in which fortifications could be erected during the Civil War period. They are part of a larger pattern of construction that lasted into the 1870s, where fortifications were rarely finished and then fell into disrepair and virtual abandonment by 1885. When a new program aimed at providing the United States with the most advanced coastal defense in the world began to be implemented during the 1890s, the installations at the mouth of the Columbia appeared nowhere near the top of a list used to prioritize expenditures for what was then called the "Endicott Program." New gun batteries and associated improvements effectively remade Fort Canby on Cape Disappointment (as well as Fort Stevens and the new Fort Columbia on Chinook Point) into fortifications that reflected new military technology during the first decade of the twentieth century. They were re-worked again, as were other coastal fortifications in the United States, after World War I to reflect new advances in weaponry, but then transferred as excess property at the end of World War II.

Fortifications at the mouth of the Columbia River are documented in two detailed studies that appeared 40 years apart. These show that the only above-ground remnants of Fort Canby are gun emplacements corresponding to four batteries, two searchlight shelters, a searchlight power plant and a base end station complex, in addition to portions of a road system serving

Cape Disappointment State Park. Activities at Fort Canby are intimately tied to the weaponry and operation of two other installations near the river entrance, Fort Stevens and Fort Columbia. Fort Canby is, however, one of the smaller coastal fortifications located in the State of Washington.

A. *An unnamed military installation, 1852-1874*

Despite an executive order that established a military reservation at Cape Disappointment in February 1852, exactly ten years elapsed before Congress approved a fortification bill that appropriated $100,000 to be put toward all defenses at the mouth of the Columbia River. Two engineers then selected three sites (Cape Disappointment, Chinook Point, and Point Ellen near Point Adams on the Oregon side) and prepared surveys, drawings, and recommendations for approval by their superiors in Washington, DC.[194] For the most part, these measures resulted from fear of a possible British intervention in the American civil war on the side of the Confederacy, as well as continued uncertainties over British and American territorial claims in northern Puget Sound; these proved sufficiently serious to spur construction of three batteries on the southernmost tip of Cape Disappointment in 1863-64. Considered to be the most important among the three sites to fortify, it is not surprising that the first "temporary" earthworks were erected at the cape—especially since the site possessed the advantage of already being owned and controlled by the Army.[195]

Activated on April 5, 1864, the fort on Cape Disappointment consisted of the three batteries and some wood frame garrison structures located north of the fortifications along Baker Bay. The batteries reflected advances in Civil War weaponry, such as the rifled gun, so that masonry forts were made obsolete by projectiles from newly developed cannon technology. Earthen forts proved to be more resistant to canon fire, by contrast, but also easier to build and repair.[196] With the advent of heavily armored warships and more powerful weapons of the 1870s, earthen forts of the previous decade no longer served as deterrents. The forts on Cape Disappointment and Point Adams could now be passed easily and the cities that lay beyond them made vulnerable to attack.

Since no European or Asian power posed an active threat during the post-Civil War period, the fort on Cape Disappointment (like others erected for coastal defense by the American military) received no further upgrades to their armament for the next two decades or even longer.[197] Instead, periodic appropriations for the cape and its neighbor across the Columbia, Fort Stevens, paid for more support facilities. Neither installation could fend off the most modern of contemporary sea power, but they presented an attractive appearance, while also being of some use to ships in distress especially in the years before the establishment of a lifesaving station at Cape Disappointment in 1877. The name "Fort Canby" came as a tribute to the only American general killed in the various nineteenth century Indian conflicts, E.R.S. Canby, who died in the Modoc War on April 11, 1873. This name became official through an order from the Army command at the Department of the Columbia in Vancouver.[198]

B. *The Endicott Program to World War I at Fort Canby, 1875-1920*

Reconstruction after the Civil War cast such a shadow over the appropriations process in Congress that it took 20 years after Appomattox for a President to appoint a board to evaluate proposals for new defenses. Chaired by the Secretary of War William C. Endicott, the board of Army, Navy, and civilian representatives recommended a $127 million construction program for

seacoast defense in its report of 1886. Implementation under the direction of the U.S. Army Corps of Engineers can be characterized as slow motion for the 27 harbors listed in this report. Lodged in eighteenth place, work on the Columbia River did not begin until 1896. Most of the new batteries at that point were slated for Fort Stevens, to be followed by Fort Columbia on Chinook Point in 1897.[199]

Two Army officers produced the basic design for a disappearing gun carriage in 1894, something that subsequently served as the crux of American seacoast defense until World War I. Instead of an earthwork, guns on this type of carriage needed to be mounted on a concrete foundation in combination with a protective contour of earth, so that the crews servicing the weapon might remain hidden from fire from enemy ships. In addition to a foundation, concrete was used for a two story wall so that guns could be loaded in safety and then raised to fire above the wall through the use of hydraulics, a counterweight, and long levers. The upper story held gun carriages behind a protective wall, with the lower story having space for ammunition magazines. Extended levers holding the cannon could surmount the wall, and yet the gun emplacements could be designed (using a principle called the "horizontal crest") to reveal nothing from the view of enemy ships that indicated the disappearing gun's location.[200]

Massive emplacements holding disappearing carriages marked a new era at Fort Canby, where the earthworks built during the Civil War had, by 1872, been described as "rapidly falling into decay."[201] The Army allowed batteries there to become obsolete, though several older 15 inch guns there were converted to 8 inch rifled bores in 1883, with more in 1890. By 1904, when the Endicott "program" of reconstruction finally came to Fort Canby, the business directory for Astoria characterized the cape as "formerly [having] a post there, but only [at present] with a lighthouse and population of 24."[202] In August of that year, work began on two batteries so that six inch guns could be mounted in new emplacements during the fall of 1906. The old West Battery gave way to Battery Allen with three guns, located approximately 1,000 feet north of the Cape Disappointment Lighthouse. Battery Elijah O'Flyng, with two guns, occupied the site of the old Center Battery, situated about 1,000 feet east of the lighthouse—on the promontory of the cape's southern tip. Extension of the river's entrance through jetty construction, however, over the next decade made these batteries obsolete since warships lying beyond the range of mortars at Fort Stevens could put Fort Canby out of action.[203]

In addition to making the river entrance further away, another problem plagued batteries with disappearing carriages. Having two story emplacements meant that ammunition had to be conveyed by some kind of mechanical hoist, something that greatly complicated service to the gun. By the middle of American involvement in World War I, Army commanders expressed a preference for new coast artillery equipped with cannons and mortars removed from fixed emplacements and readied for use on mobile mountings. They thus ordered the shipment of guns in Battery Allen so that these could be used overseas on railway mounts. In 1918, however, four 12 inch mortars from Battery Clark at Fort Stevens were transported to Fort Canby and situated on low ground behind the tip of Cape Disappointment. Named Battery Guenther, its location proved to be subject to landslides and created a maintenance problem.[204]

Despite the problems with ordnance, Fort Canby gained considerable infrastructure from the funding that eventually flowed from the Endicott report printed in 1886. In addition to the appropriation of $118,000 for the two batteries in 1904, allotments in 1907 and 1908 paid for new barracks as well as other buildings.[205] A board convened by President Theodore Roosevelt in 1905 was headed by his secretary of war William Howard Taft, and mainly served as an update to the Endicott report. Most of this board's recommendations were technical, but they

gave impetus to adding searchlights as part of an integrated plan for coastal defense. Engineers consequently completed several specialized shelters of 30 and 36 inch lights at Fort Canby, in addition to other measures, by 1912. In choosing a lightly built wood frame structure open on the seaward side, panels could be rolled into place to enclose the shelters when light was not required.[206] Perhaps the biggest role Fort Canby played in World War I was that it, along with the two other Columbia River forts, helped train artillery regiments for service overseas. The peak total of staffing for all three forts combined reached roughly 2,600 men.[207]

C. *Work Relief and World War II at Fort Canby, 1921-1948*

A dramatic decrease in activity at this and the other two forts on the Lower Columbia followed after the armistice of November 1918. One company of 40 men remained on duty at Fort Stevens, with caretaker detachments for Fort Canby drawn from it. Aside from annual National Guard training exercises that lasted for about two weeks each summer, the contingent of servicemen at the fort declined to as few as two or three over extended periods.[208] The main organizational change for seacoast forts on the Columbia and elsewhere came in 1924, when the coastal artillery force went from separate companies of varying sizes (depending upon local requirements) to standard regiments. This move reflected an emphasis on mobility and new responsibilities like anti-aircraft protection, rather than manning big guns and mortars in their emplacements.[209] By 1931, things had become so quiet on the Columbia that the Army's chief of staff, General Douglas MacArthur, recommended "partial disposal" of Fort Canby. The Army took no action on this recommendation, and the post remained armed by one battery of mortars (Guenther) and two batteries of "light" artillery (Allen and O'Flyng). The latter were so designated because their six inch guns had become outmoded in comparison with newer 12 and 16 inch cannon that could fire at vessels located from 17 to 28 miles away.[210]

Election of President Franklin D. Roosevelt during the bottom of the Great Depression in 1932 brought about a succession of programs aimed at stimulating the American economy and putting people back to work. A job training program called the Civilian Conservation Corps was one of FDR's favorites and operated six month enrollment periods between 1933 and 1942. The Army recruited unskilled young men as enrollees and operated camps established to complete projects on federal, state, and even private land throughout the country. These camps could remain in place for one enrollment period or multiple ones, depending upon the amount of work that host agencies had for the enrollees. As funding became tighter near the end of the 1930s, another factor was added in regard to the number of camps--how much influence local politicians could exert in securing companies of enrollees for their districts. The program's peak, in terms of overall numbers, came in 1935 and numbers declined thereafter as the economy improved.

At Fort Canby, the Army ran its own camp (designated as A-5) for three enrollment periods (April – October 1935, November – March 1936, and April – October 1936), employing members of a different CCC company each time.[211] Unlike other camps, where tents and/or prefabricated barracks had to be erected, along with utility systems, the fort's existing infrastructure allowed Army personnel and the enrollees at Camp Canby to focus almost exclusively on projects. The most enduring consisted of road improvements south and west from Ilwaco, throughout much of what is now Cape Disappointment State Park.[212] Newspaper publicity, at least in April 1936, focused instead on the drowning of one enrollee in Baker Bay and the release of three others from suspicion of murder.[213]

With war looming once again, the Army planned to modernize seacoast defenses so that Congress could authorize a new construction program in September 1940. Forts Canby and

Columbia shared an initial appropriation of $130,000, earmarked to build new barracks and other buildings needed for the housing of additional troops.[214] In terms of weaponry, Fort Canby and the other Columbia River defenses fell into the second tier of Army priorities. They nevertheless received new batteries, searchlights, and support facilities while staffing at all three installations reached a combined total of 2,800 men by 1943.[215]

Although activated, batteries Allen and Guenther served only a training function, but the Army also built a more modern battery (247) at McKenzie Head in 1943. As an example of "regelbau" construction, a German term referencing use of more standard designs in fortifications, Battery 247 eliminated ammunition hoists since a single level accommodated all of the interior spaces. Drier interiors resulted from better waterproofing and ventilation, along with heating. Its construction displaced two searchlights of a World War I vintage, so that two new ones were installed on North Head in concrete reinforced structures. Also at that site the Army erected a power plant for the searchlights, as well as a base end station a short distance away. The latter consisted of three buildings having different functions: one controlled both searchlights, another operated a radar set, while the third aimed guns of Battery 247 and two others (246 and 245) located beyond Fort Canby that were also built by the Army during the war.[216]

Other types of war-time installations at Fort Canby are not extant. These included some 34 miles of barbed wire laid around strategic points, as well as an anti-motor torpedo boat defense in the form of a battery called AMTB #1. This was located near Jetty A and consisted of two 90 millimeter guns on a fixed carriage in addition to two 90 millimeter guns on a mobile carriage.[217] Deactivation of AMTB #1 came in July 1945, barely two and a half years after its installation. The War Department declared Fort Canby, along with the two other forts that represented coastal defenses on the Columbia River, excess to its needs in March 1947 in addition to other posts and airfields. At that point almost 492 acres of the reservation went to the Coast Guard. Barracks and other salvageable infrastructure were scheduled for sale or removal from Fort Canby, while all Army personnel vacated from the premises by October 1947.[218] This meant that the housing, medical facilities, shops, and other structures built on the shores of Lake O'Neil and Baker Bay disappeared well before federal authorities conveyed the bulk of what later became a park to the State of Washington during the mid-1950s.[219]

Park infrastructure added by the state beginning in the 1960s has added yet another layer to a larger landscape that still holds 218 acres retained by the Coast Guard at Cape Disappointment. Because historic properties are not yet 50 years of age, the standard for assessing a property's significance, no evaluations of properties under this theme of State Park Recreation will be addressed in this historic context statement. Likewise, evaluation of properties associated with the Coast Guard station and infrastructure will not be completed because they do not meet the age requirements, either. It is, however, recommended that the United States Coast Guard conduct an evaluation of any historic properties that remain under their exclusive control when the fifty year threshold is reached. On land administered by the Washington State Parks, it is possible that future revision of the Cape Disappointment Historic District nomination might include infrastructure such as the Lewis and Clark Interpretive Center built during the 1980s, or perhaps associated interpretive media highlighting the Corps of Discovery. If nothing else, recreational development under state park auspices could be added to the list of themes in an updated context statement.

Summary of Context Theme: Nineteenth century fortifications at Fort Canby were almost completely subsumed by modernization during the first half of the twentieth, starting with a

reconstruction of the batteries in 1904. World War II era construction at Cape Disappointment then obliterated much of the previous military infrastructure, a process that accelerated with the Army abandoning the fort in 1948. Yet this installation holds two distinctions, one being that Battery Allen was the last disappearing gun battery to be manned in the United States, while Battery Guenther is known as the nation's last seacoast mortar battery to have been built.[220] Armament and infrastructure at Fort Canby (both existing and not extant) moreover reflect several broad patterns in American coastal defenses between the Civil War and World War II, but better and more complete examples persist at other sites. While several incomplete examples of batteries and World War II infrastructure persist within Cape Disappointment State Park, other remnants such as Battery Guenther lie beyond its boundaries.

Associated Property Types

Name of Property Type: Archaeological Properties

Description: Archaeological resources associated with the theme of coastal defense can include a large number of historic period artifacts including those associated with weaponry, post operations, and support facilities such as building remnants or transportation routes like roads or trails. In addition to Fort Canby serving as a military base over an 85 year period, it is possible that some resources could be associated with Camp Canby and projects undertaken by the Civilian Conservation Corps in 1935-36. Both military and civilian resources, if they are extant, will not be evaluated in this study. It is, however, recommended that any historical archaeological resources be evaluated by professional archaeologists for their National Register eligibility under Criterion D.

Name of Property Type: Properties associated with Coastal Defense

Description: Earthworks, concrete gun emplacements, as well as a myriad of other fortifications and associated infrastructure can be included in this property type. In the case of Fort Canby, what is represented are remnants of batteries for disappearing gun carriages, fixed guns, mortars, and anti-motor torpedo boats that span a period of 1904 to 1945. Added to these resources (not all of which are located within the state park) are the remains of World War II searchlight shelters, a searchlight power plant, and a base end station complex. Missing from the array of World War II resources are components of the river's mine field, this being shared between Fort Stevens and Fort Columbia. Also absent are housing or other service structures, since they were removed as excess property while the Department of War deactivated Fort Canby.

Significance: Extant properties are likely to possess statewide significance as part of defenses for the Columbia River during World War II. They appear to meet National Register Criterion A, with those in the existing nomination being significant at the statewide level. Other properties (such as the searchlight shelters, power plant, and base end station at North Head) are locally significant. Although Fort Canby never came under enemy fire, it possesses some importance to U.S. defense during World War II as a training center for artillery personnel.

Registration Requirements: Not all of the properties eligible for listing under the theme of coastal defense seem to be included within the district nomination that was listed in 1975. Battery Guenther is not on state park property and there are similar questions concerning Battery O'Flyng. Many of the components in each resource are missing, damaged, or heavily deteriorated due to the cape's weather conditions. Integrity, especially in regard to materials, remains a problem for these resources throughout the park. In order for other properties or features associated with coastal defense to be eligible for listing (especially if they are located outside of the existing state park), they must be associated with coastal defense between 1862

and 1946. In addition to being significant under criterion A or D, they must also retain (at least to some extent) the seven qualities of integrity: location, setting, design, materials, workmanship, feeling and association.

Theme 5: Navigational Aids at Cape Disappointment, 1853-1967

Providing aids to navigation in the form of lighthouses along the coastlines of the United States has been a federal responsibility since 1789. Located all on the eastern seaboard, their numbers grew from 70 in 1822 to 256 over the next 20 years, and still more (to 331) in 1852. Complaints about the nation's "system" for aiding navigation had become intense enough, however, for the Congress to order an investigation that commenced in 1851. This resulted in expanding the number of lighthouses, applying new technology such as Fresnel lenses, and eventually professionalizing personnel. Aids to navigation thus expanded over the next sixty years to include not only lighthouses, but lightships, buoys, fog signals, small lights of various kinds, and jetties. By the time that lighthouses and functions like lifesaving were centralized under the U.S. Coast Guard in 1939, the number of navigational aids under federal control reached some 24,000 nationwide. Most of the lighthouses have since been automated and many of the actual structures have been transferred to organizations specializing in historic preservation. Meanwhile, lifesaving has remained the province of the Coast Guard, which took over for the old U.S. Lifesaving Service in 1915.

Due to their cost and the engineering expertise required to build them, the first jetties along U.S. coastlines did not appear until the 1820s. They have a broad definition, but are generally structures employed in pairs from riverbanks in continuation of riverine channels at their mouth into deep water, or intended to form basins as ports along the coast. Another type of jetty, that of extending wing dams from opposite river banks are sometimes used to constrict a wide channel. In large projects, jetty construction is combined with dredging, but only after considerable survey and study usually conducted over many decades. The U.S. Army Corps of Engineers has administered evaluation, construction, repair, and maintenance of jetties and breakwater structures since the mid-nineteenth century, under authority granted by the General Survey Act of 1824.

A. *Construction and operation of lighthouses, 1853-1898*

Lineal predecessors to the first lighthouse at the mouth of the Columbia River go as far back as 1812, when members of the Astor Party put a white flag and burned several trees at night on Cape Disappointment for their supply ship, the *Beaver*. Three decades later a notch had been created by cutting the tops of tall trees on the crest of Cape Disappointment, so as to serve as a bearing for vessels steering toward the river's mouth—something still included in official sailing directions issued by the United States Coast Survey in 1850.[221] The shifting shoals, which brought about continual changes in the north and south river channels, prompted the Coast Survey to advise all ship captains in 1858 to wait for a pilot to help them across the bar.[222]

By that time a lighthouse on Cape Disappointment, situated about 100 feet below the crest, was in operation.[223] Construction of the tower started in 1853, but experienced some delay once the ship carrying heavier items for the lantern went aground at the river's entrance in September of that year.[224] As one of the first eight lighthouses authorized by Congress on the west coast, completion of the fireproof tower had to wait until 1854, when the contractor's second shipment of materials finally arrived. Without a light, however, the structure was not yet operational. A first order Fresnel lens arrived at the site in 1855, but did not operate until

October 1856 because the lantern section of the lighthouse had to be modified to install the lens since the original plans called for a smaller lighting system.[225] Invented by a French company in 1822, this type of lens with its multiple prisms slowly replaced an earlier system of lanterns throughout the United States over the following four decades, one where thin copper frames held the lanterns together and enclosed small panes of glass used to project the light. As installed, the Fresnel lens used at Cape Disappointment had initially seen service starting in 1841 at Navesink Lighthouse in New Jersey. The U.S. Lighthouse Board ordered it shipped around Cape Horn to the Columbia River entrance, where the newly built lantern housed the lens for 42 years.[226]

An "ox-team road" built by the Coast Survey in 1851 provided access to the lighthouse on Cape Disappointment, but the steep terrain dictated that the keeper's residence be constructed downhill from the tower, about halfway to Baker Bay. Completed in 1854, this dwelling represented another change from the original plans that called for a combined lighthouse and residence. Situated on the more sheltered side of the cape, this house expanded in May 1865 to provide room for the keeper's two assistants.[227]

The Coast Survey designated Cape Disappointment as one of the foggiest places in the United States by the early 1850s, it being plagued by the equivalent of more than 100 days of fog every year. This resulted in placement of a bell weighing 1,600 pounds on the northwest side of the tower and lantern in 1856, along with a building that housed its striking mechanism. This device did not prove satisfactory, since the bell could not be heard by mariners for any distance, so the bell was removed from Cape Disappointment in 1881.[228]

At 53 feet in height and 220 feet above mean sea level, the lighthouse on Cape Disappointment remains in use. The greatest number of physical changes to the structure came with the light, as a fourth-order Barbier and Benard lens replaced the first-order Fresnel in 1898, so that the latter could be moved to the newly constructed North Head Lighthouse located two miles northwest of the cape. This effectively made the cape lighthouse into a harbor beacon, one that was automated in 1962. The fourth-order lens remains in the lantern, but is no longer used.[229] Other changes affected an adjacent structure erected in 1856 as a work room as well as for oil storage, but it gave way to another wooden building having the same purpose in 1873. Plans to connect a fireproof addition to the tower for these functions were implemented in 1899, thereby eliminating the wood structure.[230]

Lighthouse and military functions at Cape Disappointment remained intertwined throughout the nineteenth century, even though separate reservations had been approved for each. The Executive Order of February 20, 1852, set apart 540 acres of public lands located north of the southernmost point of the cape for military purposes. Another executive order on December 27, 1859, took 48 acres of the military reservation and made it a lighthouse reserve. Rather than subtracting from the initial reservation, the General Land Office added some acreage to the military reserve so that their combined total reached 588 acres in March 1863. When legislation authorized construction of a lighthouse at North Head a little less than three decades later (on February 15, 1893), the War Department and Treasury Department (which housed the U.S. Lighthouse Board) attempted to sort out their respective jurisdictions on the cape. With three Civil War era batteries located near the Cape Disappointment Lighthouse, officials in the two departments agreed that the military should have jurisdiction over both reservations, apart from four small tracts reserved exclusively for lighthouse use.[231]

Construction of the North Head Lighthouse began in 1897, with the contractor eventually incurring so much in late penalties that they scarcely "broke even" for the project. When completed in April 1898, the tower stood 65 feet high, with its base atop the basalt cliff located

almost 200 feet above sea level. It went into service a month later, some three months after the first-order Fresnel lens had been moved from the Cape Disappointment Lighthouse, along with its five-wick oil lamp. The contract also included erection of a workroom attached to the tower, two oil houses located east of the main structure, a keeper's residence, a duplex to house assistant keepers, a barn and some smaller outbuildings. All of the original buildings in this complex survive, with the only real changes coming in the form of two lens replacements. Electrification in 1937 allowed for substituting a fourth-order lens for the first-order Fresnel, so that mariners could identify North Head through a signature of flashes and eclipses. The U.S. Coast Guard fully automated this lighthouse in 1961.[232]

The two lighthouses and fog bell were, by no means, the only aids to navigation at Cape Disappointment. Buoys had to be installed and maintained, something that the *Shubrick* (a steam-powered lighthouse tender, which visited the Lewis and Clark River and was famously targeted for hijacking by Confederate privateers during the Civil War) initiated in 1859.[233] A need to identify remote and perilous areas with light was served by lightships, which were small and specialized vessels intended to patrol in areas not adequately served by lighthouses. Usually found along rugged and dangerous shorelines, these vessels regularly run the risk of wrecking or being struck by other boats. A total of four lightships nevertheless patrolled the Columbia River Bar from 1892 until 1979, when new technology rendered them no longer necessary. To put their service into some kind of national perspective, 179 lightships were built between 1820 and 1952. In 1909, at roughly their height of use in the United States, 46 were deployed on the east coast, as opposed to only five along the opposite shoreline.[234]

One of the lightships assigned to the Columbia River Bar ran aground on Cape Disappointment in 1899, yet could be re-commissioned for the same duty just 17 months later. Having a lightship at the bar remained important enough four decades later that during World War II they were not withdrawn, as was the case elsewhere along U.S. coastlines. These vessels and other navigational aids made passage over the bar safer, but did not eliminate the danger of shipwrecks, nor the need for lifesaving expertise to remain close at hand.[235]

B. *Lifesaving efforts at Cape Disappointment, 1877-1967*

Efforts to rescue crew and passengers from shipwrecks or vessels in distress have been associated with the Cape Disappointment Lighthouse, even after a station built for this purpose had been erected on the shore of Baker Bay. Those efforts somewhat paralleled lifesaving trends along both North American coastlines during the nineteenth century, beginning as they did, through volunteers. During the period when the Coast Survey first determined a location for the lighthouse on Cape Disappointment, Congress also set a precedent of providing funds for lifesaving equipment. Beginning in 1848, the U.S. Revenue Marine (eventually renamed the U.S. Revenue Cutter Service) administered stations for this purpose, though the first few (all on the east coast) were run like a volunteer fire department, but with no one in charge nor any standards.[236] The situation slowly improved, initially by hiring the first full-time keepers at these stations, and then in 1871, by Congress appropriating $200,000 for more stations and paying surfmen who could form an organization of boat crews. By 1878, the U.S. Life Saving Service became a separate bureau within the Treasury Department and had three categories of stations: lifesaving, lifeboat, and houses of refuge.[237]

A lifesaving station has been associated with Cape Disappointment since November 1877, though it was originally built under the auspices of the U.S. Revenue Marine in nearby Ilwaco. During the decade prior to its construction, lifesaving missions depended upon

volunteers organized by Captain J.W. Munson at the Cape Disappointment Lighthouse. The lighthouse still served as primary lookout for all lifesaving efforts in the area, yet it took until 1882 to finally have a full-time crew at the station. Another station opened at Hammond on the Oregon side of the river in 1889, something that remained in service until 1967. The U.S. Coast Guard (created in 1915, when the Revenue Marine Service and the Life Saving Service merged) then consolidated all lifesaving at Station Cape Disappointment by building a new facility on the cape when Hammond closed. It is located just beyond the state park boundary and includes the only institution in the United States aimed at training for rough water surf rescue, and is called the National Motor Lifeboat School. Operated by the Coast Guard since 1968, the school and station on Cape Disappointment are part of a wider network that includes an air rescue facility in Warrenton, Oregon.[238]

C. *Jetty construction at the mouth of the Columbia, 1885-1939*

As a way to maintain shipping channels, the construction of jetties represents a considerable ongoing expenditure in the form of maintenance and repair. The North Jetty is closest to Cape Disappointment and responsible for the "growth" of Fort Canby (now Cape Disappointment State Park) westward, but is also intimately tied to a jetty extending from Point Adams on the Oregon side. Both jetties have had the effect of moving the river entrance further out to sea, and in combination, represented the largest structures of their type on Earth when they were completed in 1917.

The South Jetty came first, as part of making the Columbia River Bar safer for navigation by creating a more stable channel and protecting Fort Stevens from an eroding shoreline. Construction began in 1885 and consumed a decade, yet the desired channel depth had not been achieved. Dredging needed to be done, and in 1903, the U.S. Army Corps of Engineers proposed to extend the South Jetty another 2.5 miles. This added to the four miles of jetty already built, upon which the Corps initiated a project to reclaim spits. They introduced European beach grass to help bind the sand, something continued by the Soil Conservation Service as a CCC project three decades later.[239]

Engineers soon proposed a north jetty, but construction did not begin until almost a decade later, in September 1913. This work coincided with completion of the extension to the South Jetty, a structure built through use of a narrow gauge railroad trestle (or "falsework") system and large boulders quarried from sites 100 miles upriver.[240] Construction of the North Jetty followed a similar procedure and, when completed in May 1917, went for 2.5 miles southwest of Cape Disappointment. A channel depth of 40 feet had finally been achieved in 1918, but could not be maintained without continuous dredging and intermittent repairs to the jetties. By 1940 the sand accretions from these two jetties were largely responsible for increasing the size of the Fort Canby Military Reservation to 1,664 acres.[241] One additional structure, one dubbed "Jetty A," came about in 1938-39 and initially extended a half mile into the river just east of Cape Disappointment.[242]

Summary of Context Theme: Aids to navigation played a crucial role in developing the economy of the Columbia Basin and its primate city, Portland. Along with dredging, construction of two jetties made it possible for the largest ships then operating in the Pacific to cross the river bar in all but the worst weather and at every tidal stage. Lighthouses and lightships are perhaps more emblematic and despite automation, sit closer to the center of historic preservation efforts. Both lighthouses in the Cape Disappointment Historic District are still among the 500 active (though automated) lights along U.S. coastlines. Although not in the

historic district, the Coast Guard's station on the cape takes a preeminent role in maritime lifesaving efforts, mainly because of its position in a major shipping channel that has been rated as the world's third most dangerous river entrance. It is, however, among at least three major coastal hazards in the Pacific Northwest, as the northern tip of Vancouver Island and Cape Flattery on the Olympic Peninsula also make a justifiable claim to the title "Graveyard of the Pacific." Few places can also supply a more dramatic view of ships crossing a river bar than can the Cape Disappointment Lighthouse, which is accessible by means of a trail that follows an old road to the light.

Associated Property Types

Name of Property Type: Archaeological Properties

Description: Archaeological resources associated with the theme of navigational aids can include those historic period artifacts associated with lighthouses and support structures, including residences, as well as the lifesaving station once situated on Baker Bay. It is possible that some resources could be associated with jetty construction, such as pilings. These resources, if they are extant, will not be evaluated in this study. It is, however, recommended that any historical archaeological resources related to this theme be evaluated by professional archaeologists for their National Register eligibility under Criterion D.

Name of Property Type: Aids to Navigation

Description: Extant properties related to navigational aids that lie within Cape Disappointment State Park include the North Head Lighthouse, as well as the residences and outbuildings there, along with the North Jetty. The Cape Disappointment Lighthouse is also part of the existing historic district and has the distinctions of being the oldest lighthouse in Washington State as well as the oldest functioning one on the west coast of the United States. Placed in their national context, these two lighthouses are two of 640 surviving towers, and among the 200 extant towers built of masonry.[243] Moreover, the Coast Guard Station on the southwest side of Baker Bay may be eligible for the National Register in a future revision of the district nomination, but the station's construction date of 1967 places it outside the 50 year threshold most often utilized to judge whether a property meets the National Register criteria for significance and integrity. It would require having exceptional significance in order to be eligible for the NRHP. Were it to be included in the district, the station might supply a tangible reminder that the mouth of the Columbia River has seen more than 2,000 shipwrecks and is only fractionally less dangerous than when Heceta sighted it in 1775.

As part of aiding navigation along this part of the Pacific coast, properties in the existing Cape Disappointment Historic District are features in a larger system that includes the Oregon side of the Columbia River. This is especially true in relation to the jetties, which help to create a navigational channel some 2,600 feet wide at the west end and then narrow to 600 feet within the jetties, yet the two structures are never closer than two miles from each other. Bereft of a delta, the river current has been likened to a "fire hose" so that sea conditions near its mouth can go from calm to life-threatening in a matter of minutes given changes in wind and ocean swell. This, along with an often rocky shoreline like the one at Cape Disappointment, creates hazards for vessels of all sizes.[244] One navigational aid of the past, Lightship WAL-604 "Columbia," was retired in 1979 but attained national historic landmark status just a decade later, on December 20, 1989. It remains in Astoria, but is not all that far from the air rescue station in Warrenton. There a fleet of helicopters remains on stand-by, and often provides the means for bar pilots to board ships when the need arises.

Significance: It can be inferred from the nomination listed in 1975 that both lighthouses are contributing resources in the district that meet National Register criteria A and C.[245] Both are of statewide significance, not least due to the age of the lighthouse on Cape Disappointment, but also the superb integrity of the lighthouse complex on North Head. Apart from the Cape Disappointment Lighthouse serving as lookout for earlier lifesaving efforts, there are no extant structures in the district associated with sea rescues before 1967. The North Jetty is eligible under Criterion C, though the existing National Register bulletin for evaluating engineering works is focused on seven types of aids to navigation, but to the exclusion of jetties.[246]

Registration Requirements: The properties eligible for listing under the theme of aids to navigation are already included within a 1,800 acre historic district, which encompasses most of the state park. In order for other properties or features for listing, they must be associated with measures taken at the mouth of the Columbia to improve passage over the river bar. Not only must it meet at least one of the significance criteria, but also embody qualities ascribed to integrity: location, setting, design, workmanship, materials, feeling, and association. The North Jetty is described in the significance section of the existing nomination form as a "monument to coastal engineering," yet is not included in the section describing the district. This is a minor oversight, common at the time before forms included a section on the number of contributing and noncontributing resources, but the jetty's construction has somewhat compromised the setting of McKenzie Head. Accreted sand has made McKenzie Head into a knoll surrounded by land, rather than sea. As noted previously, this has had a somewhat deleterious effect on properties associated with the theme of European exploration.

Theme 6: Cape Disappointment as a traditional cultural property

Apart from brief mention in the existing historic district nomination of 1974 that Indians had probably used the "point" from "time immemorial," the documentation for the Cape Disappointment Historic District lacks any reference to the cape's enduring significance to the Chinook people.[247] It is well established in their oral tradition, the rocks being created from the activities of supernatural beings, and used (for the most part) on a seasonal basis for fishing and perhaps other pursuits over the course of centuries. Settlement there appears to be comparatively sparse, but Cape Disappointment was close to very large Chinook villages in historic times. Uses for ceremonial purposes, medicinal plant gathering, and other cultural purposes are rumored locally, but as yet largely undocumented in existing ethnographic or historical literatures. The Chinook are known for a traditionally sedentary living pattern, having relatively little conflict over land with other coastal groups. As part of their aboriginal territory, the Chinook hold over Cape Disappointment permitted visitors such as Salish-speaking peoples who also fished there alongside their Chinook hosts. Contemporary Chinook Tribe members are known to still visit Cape Disappointment and have played a role in recent interpretive development regarding the cape and its cultural history. As one of the few major landmarks in Chinook territory that still looks much 'as the ancestors saw it' in precontact times, Cape Disappointment is anticipated to have pronounced cultural significance and to serve as a venue for Chinook cultural activities.

Ethnographic work is needed to document the beliefs and practices associated with the cape's ongoing significance to Chinook people in order for the site to be eligible for the National Register as a traditional cultural property. This is needed to demonstrate that the cape possesses an integral relationship to traditional cultural practice or beliefs. There also needs to be a

demonstration that the condition of Cape Disappointment allows for the relevant relationships to survive.[248]

Appendix C:

An Overview of Themes for a Possible Future National Register Nomination Revision at Fort Stevens State Park, Oregon

At the beginning of the current research, the National Park Service (NPS), Portland State University (PSU) and representatives of the Oregon Parks and Recreation Department (OPRD) met to determine the processes and products that would guide this study. In the course of those meetings, all parties agreed to abide by the specific recommendation of OPRD relating to National Register responsibilities: i.e., that this study would include information that would aid in the interpretation of Oregon State Parks, and might aid in future National Register nominations, but would not involve the development of a National Register nomination or its constituent elements, such as a context statement, comparable to what has been provided in Appendices A and B. The NPS instead proposed that, in addition to the content of the report, we provide a short summary of themes that might be included in a National Register nomination for Fort Stevens State Park, using the cultural landscape approach represented by Appendices A and B, if OPRD chose to produce a revised nomination for that park.

Theme 1: Clatsop Pre-Contact and Contact History at Point Adams

A revised National Register nomination for Fort Stevens is likely to address the prominence of Point Adams as a center of Clatsop settlement since time immemorial until the construction of the military Fort Stevens in the early 1860s. The history of Clatsop use and occupation at Point Adams is so rich that it would be possible to break this theme into separate sections or subsections, outlining pre-contact and post-contact Native American themes.

Prior to European contact, the village at Point Adams was central to Clatsop society, economy and identity. The name of the village, sometimes rendered as *Tlatcep* or *Neakilaki*, "place with pounded salmon," was the origin of the larger tribe's name, reflecting its centrality within Clatsop society. Sitting very close to what became the center of the military Fort Stevens, the village had a prominent geographical position on the mouth of the Columbia and was visited by other tribes from throughout the Pacific Northwest for the purposes of trade (including the exchange of dried, pounded salmon), ceremony, and social gatherings. The oral traditions of several tribes suggest this function. Many of the ancestors of modern Native Americans who identify as Clatsop descend from this village.

At the time of initial contact, the village becomes a landmark of significance. Many early European explorers and traders mention sighting this village, and some visit the village directly for purposes of trade – acquiring sea otter furs and other goods from the village's inhabitants. Residents of this village are part of the Clatsop population encountered by Lewis and Clark in the winter of 1805-06, and while their journal entries are ambiguous on the subject, it appears

that members of the Corps of Discovery visit the Point on more than one occasion. The village becomes especially prominent in this regard within the accounts of the early traders at Astoria (or "Fort George"), which is founded in 1811 and continues to operate intermittently through the late 1840s. The village is famously bombarded in 1829 by a Hudson's Bay Company ship after the wreck of the *William and Ann*, a British ship bringing goods to Fort Vancouver; the attack was prompted by rumors that the Clatsop had killed survivors, later found untrue. The attack was subsequently justified by HBC Factor John McLoughlin to his superiors on the basis of the Clatsops having retained some of the goods that washed ashore, and the need of the HBC to maintain a firm security posture in the region. Accounts vary as to the number of Clatsops killed; the Clatsops at Point Adams later fortify their village with a wooden palisade, mentioned by authors such as Charles Wilkes, in part, apparently, in response to the attack.

In August of 1851, the Clatsop headmen sign a treaty with United States treaty negotiator, Anson Dart, in which they are promised Point Adams as a reservation, in exchange for ceding claims to most of the lands and resources of their traditional homeland. This treaty is not ratified, leaving the Clatsops' legal status unclear and allowing for encroachments on their lands. Settler, W.W. Raymond establishes a Donation Land Claim to the east of the Point and becomes a local Indian agent. In 1862-63, the Army Engineers, under the command of George Elliott, occupy the Cape, citing authorities in a February 1852 executive order by President Millard Fillmore calling for the development of military forts at the Columbia River mouth. The Clatsops, under the leadership of Chief Tostom (or "Tostow") – one of the Tansy Point treaty signers – agrees to relocate, moving away from the village to a location south of Warrenton. The tribe continues to visit the fort site perimeter in the years ahead, as allowed, in light of the enduring cultural significance of the area and opportunities for plant and animal harvest outside of the fort compound. Regrettably, fort development contributes to the elimination of the "integrity" measures required for National Register status, both on the basis of archaeological criteria (the village and associated burials and other features have been subsumed by fort structures) and on the basis of Traditional Cultural Property criteria (which might be revisited, but seem improbable based on a century and a half of displacement).

Theme 2: Exploration at the mouth of the Columbia River, 1775-1840s

While Point Adams did not always receive the same degree of prominent attention given to the large and imposing Cape Disappointment headland by early explorers and navigators, Point Adams was mentioned and occasionally visited during this period, as American, British, Spanish, and even Russian navigators attempted to claim this coast (and its fur trade wealth) for their respective nations. The materials on this theme presented in appendices A and B would be admissible here. The point is mentioned in the journals of Bruno de Heceta on August 17, 1775, being dubbed "Cabo Frondoso" or "leafy cape," alluding to its dense forest vegetation. The site is mentioned in the accounts of various explorers, including Robert Gray, the first non-Native person to view and visit the river aboard his ship, *Columbia Rediviva*; crossing the bar of the Columbia in May of 1792, and naming the river for his ship, Gray also named the point "Point Adams" in honor of the American President in office at that date, John Adams. A prominent landmark at the mouth of the west's largest river, Point Adams and its Clatsop village are mentioned and mapped by almost every explorer who follows, beginning with Broughton and the

1789 - 1797
Geo. Wash.

crew of George Vancouver later in the summer of 1792, and continuing through the era of exploration that arguably ends with the Wilkes Expedition in 1841. As noted above, the village and the Point are mentioned ambiguously in the Lewis and Clark journals and are also mentioned frequently in the fur trade accounts of the period – especially from the founding of the fur trading post at Astoria (1811) through the end of the Hudson's Bay Company dominance on the lower Columbia in the late 1840s. There is arguably even less in the way of contributing resources than is the case with Native American occupation; evidence of historical archaeology is absent in the sources consulted – being ephemeral even in the 19th century and largely obliterated by the construction of the military fort.

Theme 3: Early Settlement on Point Adams, 1840s-1860s

While early non-Native settlement was negligible on Point Adams, due both to the prominent Clatsop settlement on the point through the mid-19th century and the relatively early history of military occupation, this theme may warrant attention, either independently or as a component of one of the two preceding themes. By roughly 1850, Frederick Schwatka and his family had occupied a portion of Point Adams and constructed a home and farm there. They were removed during the development of Fort Stevens in the early 1860s and later approached the U.S. Senate Committee of Claims for compensation for their loss, but were denied – in part because of the ambiguous legal status of their claim. The early Fort Stevens military reservation also included portions of lands acquired through Donation Land Claims by Oregon Trail pioneers B.C. Kindred and W.W. Raymond. Situated with his home near Tansy Point, Raymond became a temporary Indian agent to the Clatsops; some sources suggest that Clatsop dissatisfaction with Raymond's management was one of several factors contributing to their relocation off of Clatsop Plains to mixed tribal communities north and south of Point Adams.

Theme 4: Coastal Defense at Fort Stevens, 1852-1948

Among all of the themes addressed in a possible revised National Register nomination, this is the one that would require the most detailed treatment, in light of the long history of Fort Stevens as a military installation. Fortunately, OPRD has tremendous resources to aid in this task, including a skilled park Historian, a longstanding park museum, and the vast written resources of the U.S. Army to guide this process. The nomination would likely be divided into no fewer than four subsections on this theme, including subsections focusing on the Civil War-era development of the fort, the vast Endicott Program redevelopment of the installation, the changing role of the fort during World War I, and the remobilization of the fort during World War II.

The first subsection would address the early development of the Fort Stevens military reservation. This section might start with a discussion of the tensions along the U.S.-Canadian border in the late 1840s and early 1850s, as the Oregon Treaty of 1846 pushed the British north of the 49th parallel and the Hudson's Bay Company began its gradual move of lower Columbia assets to Victoria and other British Columbia fur trading outposts. To set this context, one might mention the 1845 proposal of British spies Warre and Vavasour in establishing military strongholds on Point Adams and other landmarks around the Columbia River mouth in the event

of a war with the United States over this territory. However, Millard Fillmore's February 1852 executive order calling for the militarization of the Columbia River mouth and designating military reservations at Point Adams and Cape Disappointment would mark the likely temporal starting point for this theme. A National Register nomination might note the 1852 order was not accompanied by funding, so that the fort site sat largely unaffected for a full 10 years, in spite of the rising concerns of military leadership regarding the coast's vulnerability to attack and the attentions of the likes of Secretary of War, Jefferson Davis, before his departure to become President of the Confederate States of America. Civil War tensions, and rising concerns about a potential British alliance with the Confederate states prompted the funding of the Columbia River forts by Congress in 1862. Under the direction of Captain George Elliott, the Army Engineers built the original Fort Stevens fortification between 1863 and 1865; the fort was manned in 1864, even before it was fully operational, due to concerns about Civil War vulnerabilities, and especially potential raiding by Confederate privateers hoping to fund their war effort with West coast gold. The original triangular Vauban earthwork, with Rodman and Parrott "rifles" was the centerpiece of this original fort, accompanied by garrison buildings and other wooden structures – none of which are extant today. As will be discussed in the subsequent Lifesaving and Navigation theme, Fort Stevens largely fell into disuse for military purposes after the Civil War, while the earthwork fortification was nearly undermined by rapid coastal erosion at the mouth of the Columbia River, prompting some discussion of the fort's abandonment in military circles; the fort was placed in the control of the Army Engineers to allow the construction of the Columbia River south jetty in 1884-1898.

The period from 1897 through roughly 1911 witnessed the next phase of military use and occupation of the fort, involving the rapid development of facilities as part of the "Endicott Program" and its "Taft program" amendments. Fort Stevens represented the epicenter of construction activity in these years, reflecting military decisions at the national level declaring that facility the core of the Columbia defensive fort system. In 1897, as a response to the Endicott initiative, as well as growing Pacific strategic interests relating to the Spanish-American War, Fort Stevens began what was the one definitive expansion of its 80 year history. The Fort was reactivated in 1898, and continued to be fully garrisoned throughout the Spanish-American War and much of its subsidiary conflicts in the Philippines, into the early 1900s. The Endicott-era building program consisted of constructing eight concrete "Sewell" type batteries and a large number of supporting facilities – a solid majority of the structures still visible at Fort Stevens date from this period. By this time, Clatsop Spit had progressed so far to the west that the entire Columbia River entrance could not be covered by a single facility, contributing to a decision to divide the defenses between the multi-battery river-front complex and the oceanfront Battery Russell. Completed during this period were the West Battery (built 1898-1900) consisted of constituent Batteries Walker, Lewis and Mishler, as well as a steam plant, command station, and parados earthwork. This also included Battery Pratt (1900), Battery Clark (1899 - the only mortar battery built at the fort), and an independent command stations for these batteries. Two small caliber rapid-fire batteries, Smur and Freeman (1902), were added to protect mine fields located at the mouth of the river – Freeman being built largely on top of the old Civil War-era Fort Stevens and its earthworks, marking the end of that facility. This also included Battery Russell (1904) facing the open Pacific Ocean. The Columbia river forts began to focus on the use of mines to protect the harbor entrance of this time as well. Mine loading docks were extended into the river, and a torpedo loading facility was added on the eastern edge of the fort by 1900 as

well. A central oil-powered power plant was built by 1910, providing electricity for most purposes in the central fort, and a coal yard was added to provide coal for heating buildings. South of the batteries, near the rail spur entering the fort, were the bakery, commissary and artillery engineer buildings, all added around 1900; also built near this entrance was a guardhouse (1908), a hospital, and a mine cable storeroom (both ca. 1910). Non-Commissioned officers quarters, built in 1907-08, were added south of the original Civil War fort site, while a men's dormitory from this period, built in 1911, now houses the park museum. By the end of this impressive Endicott-era buildup, carried out over a 14 year period, the majority of the buildings known to modern park visitors were in place.

During the next proposed phase, World War I and its aftermath, Fort Stevens shifted its emphasis to a military training facility. A barrack building was converted to a War Games Room, and artillery regiments received training in the Endicott-era forts. There was a modest "Pacific front" in World War I, largely centered on German colonial possessions in the Pacific islands and coastal ports of China, so that the fort retained most of its harbor defense functions, including a mine casemate and several artillery batteries. However, the most definitive structural changes to the fort involved the removal of guns so that some portion of the Columbia River harbor defense artillery could be shipped to Europe and mounted to rail cars for use in the European land war. The four guns from Fort Stevens' Batteries Lewis and Walker were dismantled and sent to France to support the western front, and those forts were decommissioned. Four mortars from Battery Clark were moved across the river to Fort Canby's Battery Guenther, in part to offset the loss of guns at that fort. After the war, the fort languished and some portion of its obsolete facilities decommissioned, including Batteries Smur and Freeman. The garrison at Fort Stevens was reduced to a skeleton crew.

World War II brought a rapid remobilization of troops stationed at Fort Stevens. Even before American entry into the war, the U.S. Army had opted to upgrade facilities. The defunct gun battery at Battery Mishler was capped with a concrete roof, and its interior halls converted to a combined Army and Navy control post for the entire Columbia River harbor defense – the "Harbor Defense Command Post" and the 'Harbor Entrance Control Post" being the two halves of this operation. Battery Pratt was upgraded to oversee and defend minefield operations at the mouth of the Columbia, and the fort added a special mine loading building, and Endicott-era mine loading docks were modernized on the waterfront to facilitate easy loading and unloading of the large, powerful mines of the period; the Fort Stevens mine casemate was deactivated, however, its functions consolidated at Fort Columbia. The remains of Battery Freeman, as well as what remained of the original Civil War era fort Stevens earthwork were unceremoniously leveled at this time to produce a parade ground. A new barracks complex was added south of the original Civil War era Fort Stevens site, and an automotive training facility, fire station, and chapel were constructed immediately adjacent. New, privately-run laundry facilities were housed in a structure on the eastern edge of the fort.

In the midst of this redevelopment, events on the Pacific focused national attention on the military preparedness of the Columbia-Pacific region in unprecedented ways. Partially in response to United States bombers successfully attacking outlying Japanese islands from aircraft carriers in spring of 1942, the Japanese navy dispatched a number of long-range, I-class submarines to attach American shipping interests that summer, with the submarines designated I-

25 and I-26 being sent to lead the campaign on the coast of the Pacific Northwest. On the evening of June 21st, the I-25 submarine was able to fire several rounds at Fort Stevens from its 5.5 inch deck guns. Fort Stevens became the only military installation in the contiguous United States to be attacked by an enemy warship since the War of 1812. The shells landed on the Fort Stevens military reservation, most on the south end of the facility near Battery Russell, leaving a number of craters in the sand. The fort did not return fire, as the submarine was out of range of the fort's guns – many still dating from World War I or earlier – and the commander did not wish to give away the fort's exact location. A stone monument was later constructed south of Battery Russell in order to commemorate the episode.

The Japanese attack intensified efforts to fortify the coast, and by October of 1942, construction began on Battery 245 at Fort Stevens, with two six-inch guns (complementing a triad that included Battery 246 at Fort Columbia and Battery 247 at Fort Canby – creating a "triangle of fire" around the Columbia River mouth). Anew rifle range was added in the sandy flats just to the south of Battery 245, allowing soldiers stationed there to train in use of M-1 rifles. The Columbia's south jetty was also militarized for the first time, with the addition of 90mm AMTB (Anti-Motor-Torpedo-Boat) batteries right on the waterfront. Several of the forts' searchlights were moved and improved, and several ancillary structures were added throughout the military reserve. Still, obsolete Endicott-era batteries were being decommissioned over the course of the war, so that by early 1944, only Battery Russell remained; by the end of that year, even Battery Russell had been decommissioned, as the Japanese threat diminished, leaving only Battery 247, the AMTB batteries, and mine operations fully functioning by the end of the war.

Theme 5: Navigational Aids at Fort Stevens, 1875-1960s

The Columbia River bar has always been treacherous, and Point Adams has long served as a navigational landmark for people navigating the lower Columbia and adjacent coastline. To aid in navigation, the federal government added lighthouses, lightships, jetties and other infrastructure that would be admissible as part of a National Register nomination for Fort Stevens.

By the late 1860s, erosion was beginning to push back the bank near the new Fort Stevens military earthwork, and by the 1870s post commanders were warning that this erosion might completely undermine the fort – prompting some discussion of its abandonment. In response, the Army Engineers determined to construct a jetty along the south shore of the Columbia River mouth. The construction of minor revetments began by 1876, but by the early 1880s had been breached, placing the fort once again in the path of the widening river mouth. In 1884, with no immediate military threats on the horizon, the fort was placed in the control of the Army Engineers to develop the south jetty. Work on the monumental jetty began in April 1885 and lasted no less than ten years.

Construction began with the development of supporting facilities at Fort Stevens, such as construction offices, workshops, and a government wharf where stone from upriver could be loaded from ship to rail cars. The Army Engineers then constructed a narrow-gauge railway trestle (or "falsework") with double tracks into the water, and gradually extended this line as the project progressed, using a specially designed pile driver that operated from the end of the

completed trestle section. Small steam locomotives and a fleet of flat-bed dump cars hauled out building materials, principally the rocks that were dumped in a growing line west-by-northwestward into the sea. Large basalt stones for the jetty were quarried roughly 100 miles up the Columbia and barged down to the wharf at Fort Stevens for transfer to the railway cars that carried them along the trestle and dumped them over the side. The trestle and the jetty foundation was formed by driving pilings deep into the seabed. Fascines - bundles of brushwood 18 feet long and one foot in diameter – were secured on the sea floor to form a 40-foot-wide "mattress" to minimize erosion of the sea bottom on which the jetty would rest. Today's landscape still exhibits many of these structures – not only the completed jetty, but the old rail trestle and other fragmentary infrastructure can be seen on the land, weathered by wind and sea for over a century. There are also a number of structures and facilities related to jetty maintenance that date from after the 1898 regarrsioning of the Fort Stevens, at which time the Army Engineers maintained modest offices and operations on the margins of the military fortifications. Also, as the Army Engineers had predicted, large deposits of sand began to build up around the jetty by the late 19th century. In time, these sands accumulated to form Clatsop Spit, Trestle Bay, and other landmarks that still make up a sizeable portion of Fort Stevens State Park. Blowing sands continued to plague the fort for years to come, prompting the development of a Civilian Conservation Corps camp at Fort Stevens – specializing in the propagation and planting of European beach grass, shore pine, and other species that helped to stabilize the sand dunes, which still dominate the vegetation of the western portion of the park today.

A lighthouse was also added to Point Adams, at Fort Stevens, in 1875; sitting south-by-southwest of the military fortifications, this was an integrated facility, with a two-story keeper's quarters built directly into the base of the light tower. With the construction of this light, the mouth of the Columbia was effectively framed by the river's two sentinels – the Cape Disappointment lighthouse on the north and the Point Adams lighthouse on the south. The light was plagued by shifting sands, requiring the construction of sand fences and other infrastructure. The 1892 commissioning of the lightship *Columbia* replaced the functions of this light, and the 1899 extension of the south jetty at the Columbia River's mouth placed it some distance inland from the sea; together, these events all but eliminated the need for this facility. A light was also constructed at Desdemona Sands in 1902, in part to account for the reduced visibility, and ultimate decommissioning, of the Cape Adams lighthouse. After years of disuse, the light was burned down in early 1912 by order of the Secretary of War, this was done both to eliminate fire hazards and to make space to develop new gun emplacements at Fort Stevens – eventually becoming the site of the fort's Battery Russell.

In spite of the many navigational aids at Point Adams and other landmarks around the Columbia River's mouth, there have been numerous shipwrecks on Point Adams. Some portion of these would likely figure into a National Register nomination for Fort Stevens. A nomination might enumerate all of these wrecks, or focus on those that have been of particular historical importance or have left enduring shipwreck debris within the park's boundary; by these standards, a nomination might include, at minimum, the 1829 *William & Ann* wreck, as well as the 1906 wreck of the *Peter Iredale*. Wreckage from the latter ship is still visible on the ocean beach of the park, and is a popular tourist attraction today.

Theme 6: The Recreational Period at Fort Stevens: 1947-1960s

While the early development of Fort Stevens State Park largely occurred within the last 50 years, and is therefore not especially relevant to National Register standards, this history may also be of relevance to a larger cultural landscape nomination in years to come. By the end of World War II, the U.S., Army determined that the military base at Fort Stevens was obsolete, in light of the technological realities of modern warfare. The fort's lands were declared surplus by 1947, and management turned the fort over to the War Assets Administration for disposal. A portion of the fort's facilities – those close to, or of use to jetty management – were quickly turned over to the U.S. Army Corps of Engineers. Oregon State Parks Superintendent, Samuel Boardman began to communicate with the War Assets Administration as early as 1946, regarding his interest in acquiring all or part of the fort lands for use as a state park. The War Assets Administration was supportive, and the proposal had the enthusiastic support of a wide spectrum of the local community – with various local civic organizations and newspapers writing formal letters of support. However, the Oregon Highway Commission, which maintained authority to approve park purchases, denied Boardman's request to acquire these lands on two separate occasions. Boardman had been acquiring state park lands at an impressive rate prior to this time, and the Board appears to have resisted the acquisition due to concerns about the state's maintenance burden generally (state-wide) and their concerns about the vast fiscal and maintenance responsibilities associated with the management of a large and recently decommissioned military fort.

The state park plan stalled, a significant portion of the fort site was transferred to various local and state agencies, other portions being retained by the Bureau of Land Management and the U.S. Army Corps of Engineers. Through a series of negotiations, local governments – especially the City of Hammond and Clatsop County, which had acquired portions of Point Adams – as well as a coalition of state and federal agencies ultimately consolidated most of their fort lands: by 1955, these entities had placed most of the former fort in Oregon State Parks' control, through property transfers, sales, or leases, to form Fort Stevens State Park. The former War Games Building was converted to a museum, with extensive volunteer support; the development of most tourist trails, parking lots, interpretive signage, and other facilities occurred through the 1960s and 1970s. While this theme is important in telling the overall human history of Fort Stevens State Park, there do not appear to be any resources – buildings, structures, sites, or objects – that are present in the park, with physical integrity, that would be National Register eligible at this time. Most of the extant resources in the park are significant for their association with the military era of the park's history.

APPENDIX D:

PATHWAYS FROM EUROPE, ASIA AND THE AMERICAS: THE CONTEXT OF IMMIGRATION ON THE COLUMBIA-PACIFIC

Many different peoples converged on the lower Columbia River and adjacent coasts in the years following the mid-19th century agricultural resettlement of the region. It is true that many economic and social institutions, such as new businesses, churches and traditions, first appeared in the region through the initiative and investment of people hailing from New England and the Midwest – a point commonly made in written local histories of the Columbia-Pacific region. Yet, the laborers who were often part of these institutions, and arrived in the region en masse, were often from very different places. Like the French-Canadians, Iroquois, Cree, Native Hawaiians and others who had worked at Fort George for British managers a few generations before, these people often arrived with second-class standing, some passing through briefly and others staying for the long term - together contributing a remarkable but often underappreciated diversity to the Columbia-Pacific region.

Local histories, both here and elsewhere, often give a romantic cast to the immigration story, accentuating the appeal of the region's salubrious and mild climate, its abundant natural resources, its scenic virtues, economic opportunities, and social freedoms. And, to be fair, each of these factors have contributed in some way to the story of immigration on the Columbia-Pacific. Yet, the immigrant experience also has a very pragmatic side, reflecting the complex interplay of various economic pushes and pulls – declines in overseas labor markets, for example, increasing demand in thinly populated parts of the American West, and potential immigrants' limited access to information regarding their opportunities abroad. In some respects, the mass migrations to the United States that occurred in the 19th and early 20th centuries can be understood in very general terms as a shift in labor reserves, and a case could be made that this is true of the modest migrations of the past fifty years as well (Kero 1980). To understand community diversity in the study area, it is important to consider who came to the region and why, who came but did not stay, who was invited to come and who was not supposed to come at all. The details of immigration are found in personal family stories, but it is the larger regional, national and international context that informs a regional history. To fully understand what prompted people to leave their countries and what drew them to the study area, it is necessary to understand the forces at play between nations and around the world. Some of the major immigrant groups of the past century and a half. Space and time require that only some of the more numerous populations will be discussed here. This is not to say that these other groups were unimportant. In fact, the opposite is true of some of our smaller immigrant groups – the emigrants from Holland who brought their knowledge of dike construction, for example, or the families from the former Yugoslavia who brought generations of fishing knowledge from the Adriatic Sea to the Columbia-Pacific. Still, we direct our attention to the foreign-born populations that appear most prominently in the census data for the Columbia-Pacific region from 1870 forward, especially the English, German, Irish, Scandinavian, and Chinese.

Those who came from Western Europe

Between 1820 and 1920, roughly 60 million Europeans set sail for the New World, with its resource abundance and labor scarcities. From the late 1840s through the late 1870s, European intercontinental emigration averaged about 300,000 people per year. The numbers rose to a crescendo just as the Columbia-Pacific region was beginning to develop: the total leaving Europe more than doubled in the final two decades of the 19th century, and rose to over a million people per year after the turn of the century. The United Kingdom provided the primary emigration stream to the United States in the first half of the century, followed by Germany. A rising tide of Scandinavian and other northwestern European emigrants joined these streams by the mid-1800s. All of these came to be known as the "old" emigrants, building on the largely northern European character of early American settlements; they were joined in the 1880s by the "new" emigrants hailing from primarily southern and eastern Europe (Hatton and Williamson 2005: 51).

Prior to this period, during the second half of the 18th century, population growth across Europe had been increasing rapidly, growing without pause up to the 20th century. European famine and revolution may have helped push the first great mass migration in the 1840s but it was the underlying economic and demographic fundamentals of the labor market that made each subsequent surge of European emigration bigger than the previous one up to the time of World War I. In some countries, such as Great Britain, peak population growth was correlated with the rapid economic and demographic changes associated with the industrial revolution. In many parts of Europe, especially where urbanization, economic inequality or government policies prohibited subsistence-level agriculture, communities were threatened by overpopulation and mass poverty (Hatton and Williamson 2005; Kälvemark 1980: 29).

On the other side of the North Atlantic, meanwhile, America's rapid economic growth and territorial expansion often created labor shortages. A relatively free movement of labor through European emigration to America presented one means of alleviating the work force imbalance that existed across the Atlantic. (Indeed, economists Hatton and Williamson (2005: 7) estimate that, had there been no U.S. immigration from any foreign source between 1870 and 1910, the 1910 labor force would have been about 27 percent smaller and insufficient to meet the fundamental economic needs of the nation). The leaders of industry in the United States maintained a generally, if sometimes awkwardly, pro-immigration stance (and lobbied in support of this position in national political circles) as immigration not only increased the availability of labor but also substantially reduced its cost. Thus, the nations of Europe and the United States together had strong incentives to maintain a relatively free movement of labor from the former to the latter. As a result, in virtually every European nation, restrictions on emigration were abolished in the first half of the 19th century and people were allowed to migrate relatively freely with the exception of military men (Kälvemark 1980: 30). Political and ideological factors varied among European countries, and each nation can be characterized by unique circumstances and policies but, in general, emigration was a transitional phenomenon, at once alleviating the dangers of overpopulation and widespread poverty in Europe and enhancing the economic development of the United States (Kero 1980, 1974).

Again, immigrants arriving prior to 1880 came largely from western and northern Europe but, beginning in the early 1880s, the dominant source of immigrants shifted to southern and eastern

Europe and non-European countries. In Europe, industrial and agricultural revolutions had moved west to east and north to south across Europe, creating the conditions that spurred mass intercontinental migration from Europe to the United States that moved southeast across the continent. So too, as industrialization in northern Europe increased so did wages, and emigration had become less attractive for many of the old centers of emigration. This shift in the countries of origin, as well as the sheer numbers of immigrants arriving each year into the late 19th and early 20th centuries, caused increasing concern within the U.S. over the ethnic and national mix of the population. In 1907, a special congressional commission on immigration, known as the Dillingham Commission, began a statistical review of immigration and released a report of its findings in 1911. Immigrants arriving prior to 1880 – those largely from western and northern Europe – were termed "old" immigrants by the Dillingham Commission. Those arriving after 1880 – primarily from southern and eastern Europe and non-European countries – were termed "new" immigrants. A high proportion of the "new" immigrants migrated on a temporary basis, coming for the purpose of supplementing the family income in Europe, and then returned home. According to the Dillingham Commission, most of these "new' immigrants were unskilled laborers with a high illiteracy rate who were drawn to manufacturing industries in larger urban areas. The division between "old" and "new" immigrants was somewhat artificial, though, as the Finns were also considered "new" immigrants, yet they generally followed the pattern of Scandinavian migration, working in forestry, mining, and agriculture. Finns, the report noted, had an extremely high literacy rate and returned to Finland in the same ratio as Scandinavian immigrants, that is, roughly one in five (Baines 1994; Norman 1988).

Immigration law in the United States became more restrictive after World War I, reflecting in no small part continued fears about the racial mixture of the nation. National quotas for immigration took form in 1921, limiting the annual number of immigrants from a specific country to three percent of the number from that country who lived in the U.S. in 1910. The quota was reduced further in 1924, and again in 1929. Deteriorating U.S. market conditions provoked increasingly restrictive policy reactions as the United States acted to defend the economic interests of its unskilled labor force (Hatton and Williamson 2005; Norman 1988).

In this light, the following sections examine in more detail the migration experiences of the leading European source countries for immigrants arriving in the Columbia-Pacific region: Germany, Britain, and Ireland in western Europe, and the Nordic countries of Norway, Sweden, Denmark, and Finland. Although Scandinavian immigrants came in substantial numbers from all three countries to the Columbia-Pacific, particularly from 1880-1900, Finnish immigration became predominant from 1900 to 1940 – a phenomenon that is treated in greater detail at the end of the section on Nordic immigration.

Immigration from Germany, Great Britain and Ireland

British, German, and Irish immigration was among the earliest to the United States and the earliest to the Columbia-Pacific region. The findings of the Dillingham Commission demonstrated that in 1854, as Oregon Trail settlers were making their way to the Columbia-Pacific region, half the immigrants to the United States arrived from Germany, and over a third arrived from Britain and Ireland. In 1882, those three countries combined accounted for more

than half of America's immigrants. Yet, their numbers tapered off rapidly thereafter: by the early 20th they would be a very small part of the overall immigrant pool. By 1907, just three percent of immigrants were from Germany and nine percent from Ireland and Britain, being replaced by Austria-Hungary (26%), Italy (22%), and Russia (20%) (Norman 1988: 28).

Migration across imperial Germany's borders was intimately related to the transformation of that nation from an agrarian state with a dynamic industrial sector into an industrial state with a strong agricultural base. Mass migrations were shaped by this economic and demographic transformation, culminating in the passage of the Emigration Bill of 1849. Under this law, German overseas emigration remained open, allowing for essentially free and self-regulating outmigration in response to social and economic opportunities, except that German laws maintained tight controls against young men emigrating to escape military duty (Bade 1980). Southwest Germany was the main source of overseas emigration during the first and second emigration waves in the nineteenth century (1845-1855 and 1865-1873 respectively), while during the third emigration wave (1880-1893) most overseas emigration originated in the northeast. In the southwest, the most important push factor for emigration was the constant splitting of farms due to the custom of equal division of lands among heirs. In the northeast, large estates were predominant and the right of inheritance among small farmers was completely different; the farmland was usually not divided but taken over entirely by the oldest son. In either case, these practices tended to result in the displacement of smaller, poorer landowners (Bade 1980).

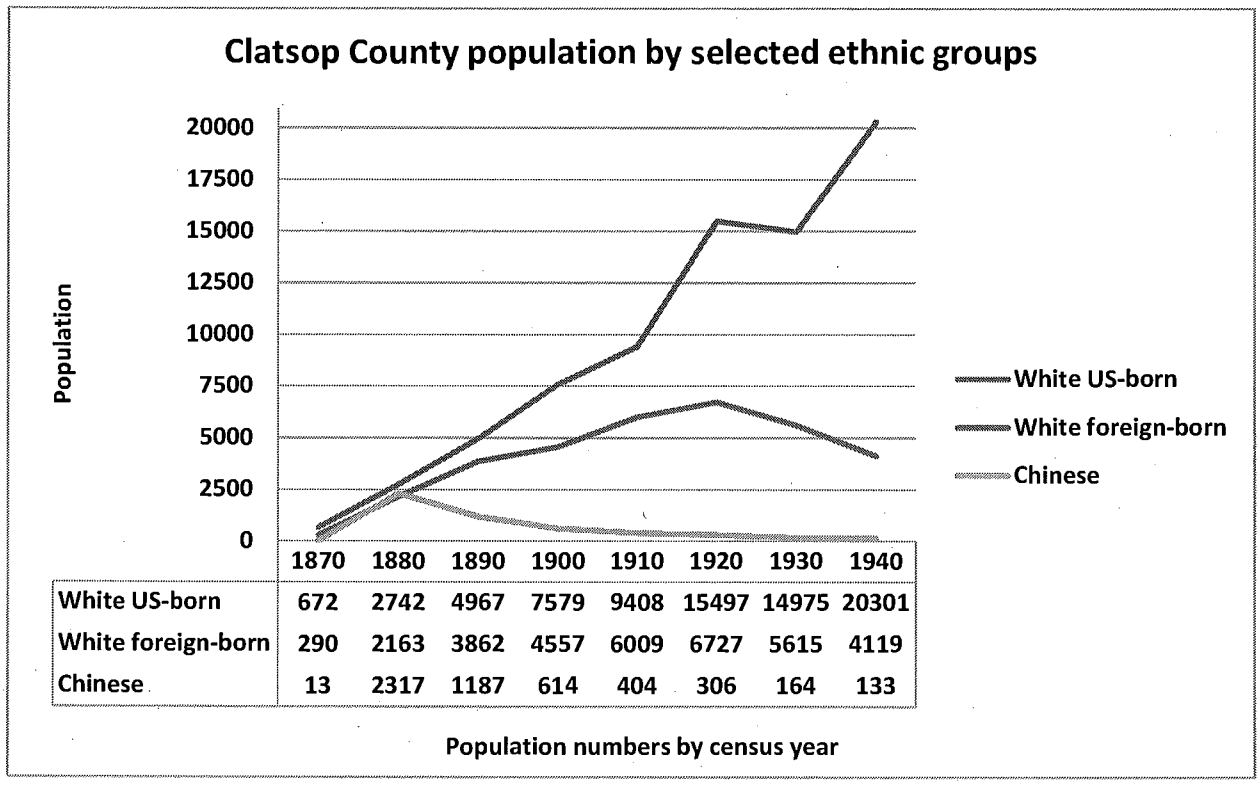
Beginning in the late 1870s, agricultural industrialization combined with the forces of population growth and uneven land distribution to create a crisis for small farm owners. Modernization of agrarian economies, the decline of wheat prices due to competition on the world market, and the advance of the threshing machine in the wheat-producing areas contributed to riveting changes in agrarian labor markets. During the 1870s and 1880s, many independent German farmers faced a choice between economic ruin or emigration to the United States. Many emigrated, hoping to earn enough money in what was anticipated to be temporary American industrial employment to return to Germany and buy the farm they had lost (or unsuccessfully tried to obtain) at home (Bade 1980). Yet, in the final two decades of the 19th century, German emigrants from agricultural areas left their rural way of life, never to find it again. Instead they became permanently enmeshed in the urban industrial economies of the United States. A few moved into agricultural occupations in America, a few within our study area, but this was largely the exception. Only slightly more than 20 percent of the German-born population in the United States lived on farms by 1920 [Bade 1980: 364-65]). Following a final surge in migration through the 1880s, there was a precipitous drop in the number of German immigrants to the U.S., culminating in the American economic bust of the 1890s, especially the Panic of 1893. Moreover, Germany was simultaneously entering an economic boom period in the lead-up to World War I; by the 1880s the German mining industry began to compete with the United States in attracting migrants, and by the mid-1890s German industry was able to absorb most of the available skilled and unskilled labor in that nation. By 1893, Germany ceased to be a significant country of emigration (Bade 1980).

Similar processes shaped British migration through the 19th century. In Great Britain the move towards technologically-intensive large-scale farming greatly increased farm output but made

many agricultural workers redundant. Some moved to the fast-growing industrial areas of Great Britain in search of work, but others opted to emigrate to Australia, New Zealand, Canada, South Africa and the United States. In the single century between 1820 and 1920, over 2.5 million people emigrated from England to the United States. On the whole this emigration was voluntary and without government assistance. Unlike other groups of emigrants, a large number of the English who went to America stayed in agricultural occupations, acquiring lands through direct purchase or through mechanisms such as Donation Land Claims. The United States also attracted migrants from England with technological skills such as industrial weaving, bringing labor but also sometimes technical specialists and even management and accounting staff to support nascent American industries (Hatton 1995: 407).

In the early 19th century, of course, both Great Britain and the United States laid claim to the Oregon Country, including the Columbia-Pacific region. Unable to agree on the location of the boundary between American and British lands, the two nations signed the Treaty of Joint Occupancy on October 20, 1818 (Drury 1973). Thus, the British citizens who settled in the study area prior to the 1846 Oregon Treaty, which places the boundary at the 49th parallel, were technically no more "immigrants" than U.S. citizens there (though, over time, American dominance seemed ever more a foregone conclusion). The 1870 U.S. census, which includes British-born immigrants from before and after the Oregon Treaty, shows that the English were the second largest immigrant group in Clatsop County, which was also home to larger numbers of German- and Irish-born immigrants – a pattern consistent with national trends for the 1860s.

The population history of 19th century Ireland is widely regarded as unique. Similar to other northern European countries, the Irish population experienced a surge beginning by the 1780s and increasing rapidly into the 19th century. Even though the rate of population increase was probably comparable to England's, the greater part of the Irish population growth was in rural areas. Population increase ended, and began to reverse in the mid-1840s with the Great Famine, associated with the failure of the potato crop, which continued over the course of several years.[249] These events were compounded by similar pressures as other northern European countries, including increasingly mechanized commercial agriculture and enduring traditions of inheritance that granted land ownership to individual, and usually eldest, sons. In the second half of the century, each census in turn indicated a drop in population, reflecting in no small part a flood of emigration to North America and to Britain, in particular, as well as to Australia. The Irish population continued to fall until the mid-1930s, when emigration finally tapered off and the population stabilized. The pull of North America came from urban labor markets. Many Irish immigrants in the United States could be classified as laborers (based on the initial jobs they expected to find at their destinations) but all were not unskilled. In the United States they were over-represented in occupational groups like urban laborers, servants, miners and construction workers. A small number of Irish immigrants found their way to the Columbia-Pacific region, largely in these kinds of positions. Permanent return migration from North America was much less common in the case of Ireland than among many other immigrant groups of the early twentieth century (Johnson 1995).



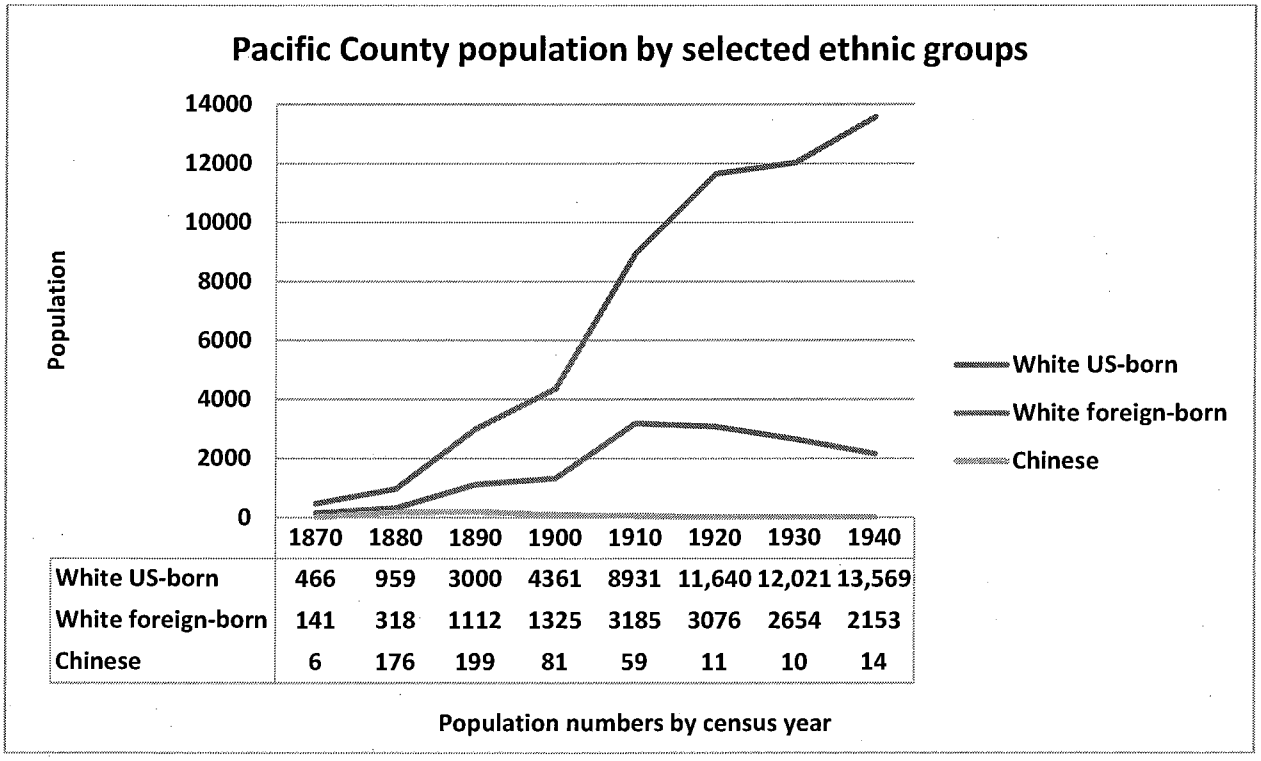
	1870	1880	1890	1900	1910	1920	1930	1940
White US-born	672	2742	4967	7579	9408	15497	14975	20301
White foreign-born	290	2163	3862	4557	6009	6727	5615	4119
Chinese	13	2317	1187	614	404	306	164	133

Graph A.1: Clatsop County Population by Selected Ethnic Groups, 1870-1940.

Immigration from the Scandinavian Countries

Among all of the ethnic groups to arrive in the Columbia-Pacific region and maintain an enduring, distinct identity, the Scandinavian countries perhaps stand alone. (Although the term "Scandinavia" conventionally refers to the countries of Norway, Sweden and Denmark, the Nordic nation of Finland is included in this discussion as well.) Participating in logging, fishing, and farming in the late 19th century, migration of these peoples continued well into the 20th century; even today, Scandinavian festivals, products, and identities are among the most visible elements of the "ethnic landscape" of the Columbia-Pacific region. The arrival of so many Scandinavians also brought certain religious traditions in the Columbia-Pacific region, including a relatively large preponderance of Lutherans and Lutheran churches – a pattern that has diminished somewhat, but is still detectable in the region's pattern of religious affiliation today (Welborn 2011).

Even though there are significant differences among the Scandinavian countries, over the centuries they have shared much common history. All had dominant majority populations and Lutheran state churches that helped forge linkages between religious and national identities. The peasants had been legally free in Norway, Sweden, and Finland since the Middle Ages, and in Denmark serfdom was abolished in 1788. There



	1870	1880	1890	1900	1910	1920	1930	1940
White US-born	466	959	3000	4361	8931	11,640	12,021	13,569
White foreign-born	141	318	1112	1325	3185	3076	2654	2153
Chinese	6	176	199	81	59	11	10	14

Graph A.2: Pacific County Population by Selected Ethnic Groups, 1870-1940.

were democratic elements to their political cultures: populism, and the role of the peasant, were often seen as integral to the larger identity of these nations. Thus as Kjeldstadli (2011: 7-8) suggests, the nineteenth-century cultural nationalism of the Scandinavian countries was Lutheran, populist and democratic compared to other European nations of the time. And, in addition to their ethnic and political similarities, the Scandinavian countries represented an area with a high degree of linguistic similarity with the exception of Finland and the sparsely-populated Saami north.

The patterns of Scandinavian immigration were significantly shaped by events in early to mid-19th century Europe. The Napoleonic Wars (1803-1815) had radically altered the political borders of the Scandinavian countries: the 1814 Treaty of Kiel detached Norway from Danish control, and Norway found itself under the Swedish monarch in a political union that lasted until 1905. Finland, a part of the Swedish kingdom since the Middle Ages, became a Grand Duchy under the Russian Czar from 1809 until 1917. Despite their new, imposed loyalties, both Norway and Finland had rather autonomous positions in their relationships with Sweden and Russia respectively. This produced political change (in some places a political vacuum) as well as fostering permissive emigration laws that set the stage for the waves of emigration to come. Sweden liberalized emigration policy beginning in 1846, citing political and ideological values of emigration in building national economies, respecting an individual's right of self-determination, and alleviating the risk of overpopulation. Of particular concern were the same trends in rural communities seen in other European nations, including a surplus, landless labor pool displaced by mechanization, the rise of commercial agriculture, and traditional inheritance laws. Sweden's landless rural population, in particular, was of concern, having increased

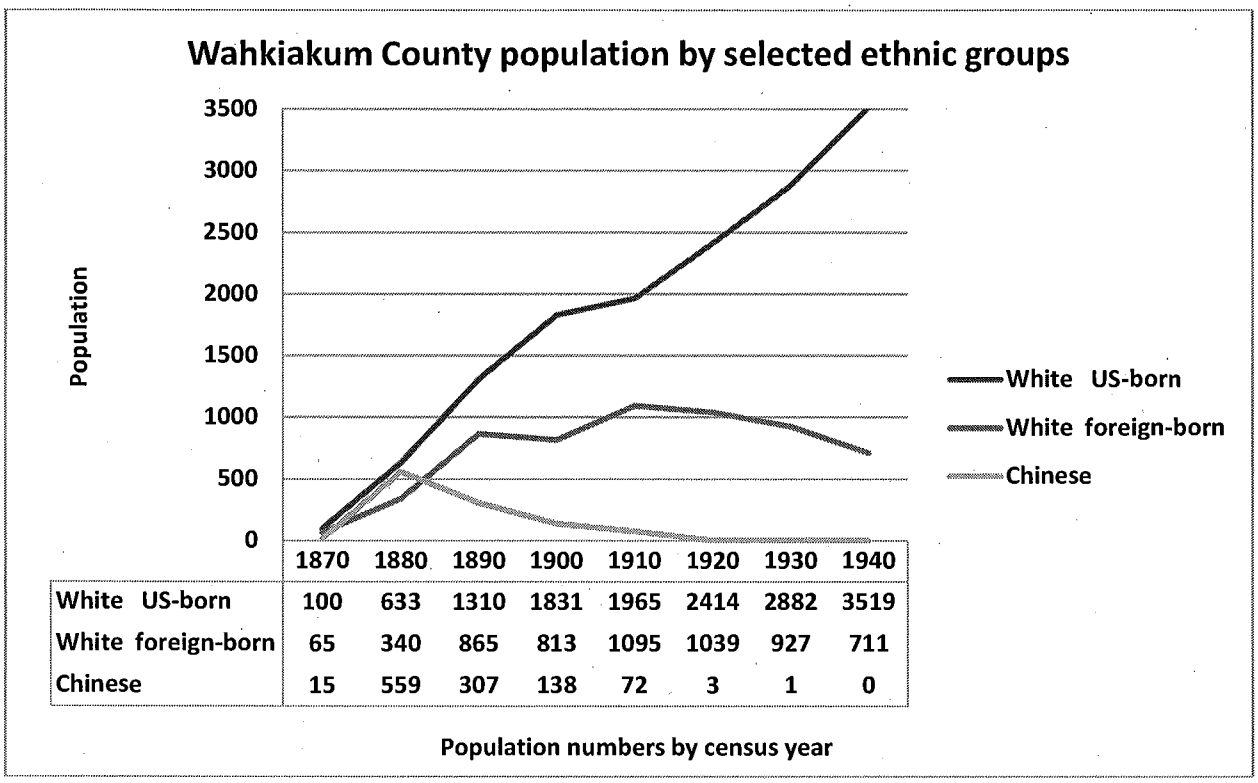
fourfold between 1751 and 1850, placing a burden on economic and charitable institutions of the time (Kälvemark 1980: 31). Laws liberalizing migration within and between countries were introduced in Norway in 1839 and 1842, Denmark in 1857, and Finland in the 1860s and 1870s (Norman 1988). Across the Scandinavian countries, the initial phase of emigration by country varied accordingly: 1830s-1840s in Norway, 1840s-1850s in Sweden, 1850s-1860s in Denmark, and 1860s-1870s in Finland. The flexibility of these national laws allowed for entire families to move together, a practice that was more common among Scandinavians than some other nationalities – especially in the early years of emigration. Mass emigration from Norway started earlier than in the other Scandinavian countries, with yearly migrations beginning in 1836. From 1836 to 1845, nearly half of all Norwegian emigrants came from Telemark County in the south-central region of the country, a region that continued to be a primary source of emigrants through the 1860s. Swedish emigration occurred across several generations and covered a longer time span than that of most European emigrant groups. The geographical distribution of Swedish emigrants also was more even across the country, although there was little significant emigration from the northernmost counties until the very late 19th century. Emigration from Denmark involved families from throughout the nation, with no one area contributing disproportionately (Barton 2002; Norman 1988).

On a per capita basis, when compared to other European countries, emigration rates of the Scandinavian countries were disproportionately high. These countries represented three percent of the total European population but five percent of the total European emigration of the 19th and early 20th centuries. Emigration from Norway and Sweden to the United States was especially sizable between 1840 and 1930; only Ireland experienced heavier emigration in relation to its total population. The most intense periods of emigration from Scandinavia were 1866–1873, 1879–1893 (peaking in 1882), followed by a smaller pulse of movement in 1901–1905. In Finland the pattern occurred later, with two-thirds of the emigration occurring after 1900, with a peak in 1902 (Barton 2002; Norman 1988). In total, roughly 2.5 million emigrants would leave the Scandinavian countries in the 19th and early 20th centuries. Swedes and Norwegians went primarily to the United States (97.6% and 95.6% respectively). America was the primary destination for Danes as well (87.9%) but, more so than other Scandinavians, Danes also migrated to Australia, Africa, and Latin America - especially Argentina. Finns also headed mainly to the U.S. (93% 1901-1923) (Norman 1988).

Early Norwegian and Swedish emigrants, those departing in the 1840s-1850s, left almost exclusively for the purpose of obtaining and farming land. This was land that they typically had to buy, often using federal purchasing authorities for recent immigrants. Under the U.S. Preemption Act of 1841, government land was sold through auction at the fixed rate of $1.25 per acre. The Homestead Act of 1862 offered 160 acres at no cost above the registration fee to any American citizen, as noted elsewhere in this document, but also contained provisions allowing for claims by immigrants declaring their intent to become a citizen. After a land claim had been cultivated for five years, the claimant received full right of ownership. Establishing a farm cost about $1,000 in equipment and animals, thus many immigrants first worked in lumbering, mining, and other industries before procuring farmland (Norman 1988).

Figure A.1 – Unlike many other immigrant populations, Scandinavian immigrants often arrived in the region in extended or nuclear families, contributing to that community's tendency to take up permanent residence in the region. Many entered into a mixed economy, involving men participating in commercial logging and fishing, while the larger family maintained farms and household-based cottage industries. Hamlet Oregon, 1908. Photo courtesy Oregon Historical Society.

A large proportion of those Scandinavian immigrants who ultimately settled in the Pacific Northwest were "second-stage" immigrants, having settled first in large numbers in other states. Most notably, these immigrants had spent time in Minnesota, Wisconsin, Illinois, and Iowa – places that also offered work in farming and lumbering, fostering the development of large and enduring Scandinavian populations. Like the initial emigration process, re-emigration often occurred within networks based on a common background in the home country. A typical pattern was for migrants from the same community or county back home to settle first in the same community in America. During second and third stage migration, members of these American communities tended to migrate west and to regroup in the same secondary communities. Among those who first went to the Midwest, secondary migration in a westward direction often followed downturns in the U.S. economy. The 1893 recession, for example, stimulated interest in the Pacific Northwest among Norwegians in the Midwest, prompting considerable migration westward. In some cases, it is clear that Scandinavians – Swedes and Norwegians in particular – aided their new employers in lumbering, fishing, and other professions in recruiting Scandinavian labor from both the "old country" and Midwestern settlements – a process that compounded this "chain migration" effect of Scandinavian immigrants to the Northwest (Runblom 1988; Hale 1980; Dahlie 1970).[250]



	1870	1880	1890	1900	1910	1920	1930	1940
White US-born	100	633	1310	1831	1965	2414	2882	3519
White foreign-born	65	340	865	813	1095	1039	927	711
Chinese	15	559	307	138	72	3	1	0

Graph A.3: Wahkiakum County Population by Selected Ethnic Groups, 1870-1940.

Once in the Pacific Northwest, many Scandinavians settled on the Columbia River estuary, as well as Puget Sound, with smaller outposts especially in the coastal Northwest. After arriving in the Northwest, most Scandinavians worked in agriculture, forest industries, and fishing – bringing professional skills associated with their homeland to similar resources and environments in the new world. Farming skills for rainy, high-latitude lands with challenging soils, for example, was already part of most Scandinavian farmers' skillset, and many emigrant families brought with them experience in mixed coastal economies that also included lumbering and ocean fishing. The Dillingham Commission's 1911 report indicated that Norwegians especially, and Swedes to a lesser extent, were strongly committed to farming, and this was particularly true in Washington. The Commission studied data on forty nationalities engaged in the forest industry and reported that, of the total number employed, one-fourth were Scandinavians, and they were three times as numerous as the Japanese, who ranked second in employment in the woods industry. An estimated 10,000 Scandinavians were employed in Washington's timber industry in 1900. Many Norwegians and Swedes took mill jobs as a means of accumulating capital to buy farmland. Encountering the considerable challenges of farming in this area, many opted to maintain an active role in the timber industry even after acquiring such land – resulting in a kind of mixed economic arrangement that still persists in remnant form among some Scandinavian families on the Columbia-Pacific today. Scandinavian men were eagerly sought out as mill labor, but also for tree-felling and other woods work; usually starting as labor for companies and factories owned by non-immigrant businessmen, they would only gradually, and with much effort, begin to take on managerial roles in lumbering through the early 20th century. Some portion became independent "gyppo" loggers, or developed their own small

companies to work on the margins of larger national-scale milling companies in time. One can still see evidence of these trends on park lands, such as in the history of Nygaard log sorting near Netul landing, or the Larson family mill operations operating immediately outside of Fort Clatsop's lands (Hale 1980; Dahlie 1970).

So too, Scandinavian immigrants played a cornerstone role in the fishing industry. The peak in the salmon canning industry on the Columbia-Pacific was timed perfectly to the chronology of Scandinavian immigration. Scandinavian men, Norwegians and Finns in particular, were eagerly recruited to man seine boats and other maritime fishing operations – as company employees, but also as independent operators who sold to canneries. Many Scandinavians – Swedes, Norwegians, and Finns, but also occasionally Danes and even Saami workers – were also involved in fish processing and other support operations through much of the late 19th and early 20th centuries. The Dillingham Commission's investigation of the fishing industry showed that Scandinavians represented by far the largest proportion in the regional umbrella labor group for fishermen, the Fisherman's Protective Union, with nearly 45 percent of that organization's membership in 1908 (Dahlie 1970: 69-70).

Yet, as salmon fishing declined, Scandinavians stayed in the area, and continued fishing. By the early 1940s in Washington and Oregon, Norwegians dominated the dog fish and soupfin shark fisheries, for example, and were the majority fishermen in the small but growing tuna and sardine industries as well (Arestad 1943: 4, 7-8). In the early 1940s, the fishing cycle for Norwegian fishermen in the Washington-Oregon region was described by Arne Antonsen, manager of the Fishermen's Cooperative Association:

From late spring until early autumn the 750 boats and 1,500 fishermen catch an average of some 6,000,000 pounds of salmon annually. After the regular salmon fishing season is over, about 250 of the sturdier boats augment their crew of two with a third man and go fishing for albacore tuna off the Washington and Oregon coasts. The average annual catch of tuna is about 12,000,000 pounds. When this season is over, some 250 boats of the fleet fish for dogfish and soupfin shark because of the livers. Since the fishing for tuna and livers began a few years ago, the fishermen have found employment for the months during which they otherwise were idle or were forced to seek other employment (Arestad 1943: 11).

Of those Scandinavian immigrants who arrived in the region, a number ultimately returned home – producing international linkages between families that persist into the present day. Roughly 20% of Scandinavians ultimately returned home to Europe, a rate that was on par with other northern and western European countries during the same period. Between 1875 and 1930, 178,000 Swedes (18%) returned from America; during roughly the same period, there were also 155,000 Norwegians returning (19% before 1940), and 20-23% of Finnish immigrants (Kero 1980: 63; Kjeldstadli 2011: 9).

Finnish immigration at the mouth of the Columbia River

Finns began to migrate to America in significant numbers in the 1890s, later than the majority of migrants from Scandinavia. Finnish immigration followed the general European pattern in which an early, small-scale migration of families traveling together gave way to large-scale emigration predominately of individuals. Between 1870 and 1914, more than half of Finnish emigrants came from Vaasa province in the Ostrobothnia region of west-central Finland, and a third from Southern Ostrobothnia province – most originally worked in small-scale farming supplemented by work in other extractive industries, usually logging and fishing. Their reasons for leaving, like those of other Nordic migrants, were largely economic, relating to rural "surplus labor" as well as the decline of key national industries such as the service and tarring of wooden ships.[251] With immigration beginning so late, there were few options to participate in American land grant programs, but there was an ample need for labor in the U.S. American recruitment of Finnish labor, begun in the 1870s, was stalled by a general prohibition on oversees labor recruitment by the United States in the 1880s (although in Canada it continued into the 20th century). Still, those early recruitment efforts helped spread "America fever," alongside strategically published letters to newspapers extolling the experiences of early Finnish immigrants to America. There were also books such as *Suomalaiset Amerikassa* (Finns in America) by Akseli Järnefelt which was published in 1899 in Helsinki, and devotes a chapter to each of the states receiving large numbers of Finns arriving in the United States. The chapter on Oregon and Washington is well-illustrated with photographs of abundant salmon catches, Finnish homesteads, and Finns enjoying the outdoors. Towns on both sides of the Columbia, particularly Astoria, Deep River, and Naselle, are featured prominently (Hummasti 2007; Heikkilä and Uschanov 2004; Lewis 1993; Kero 1980).

More often than with other Scandinavian immigrants, 19th century Finnish immigrants moved to America individually and as laborers. They were largely from rural areas, with only about six percent from cities, and were generally categorized as "unskilled laborers." Nearly 65 percent of emigrants leaving Finland during 1869-1914 were men, and about 60-70 percent of migrants traveled with financial assistance from individuals or banks in Finland, or from overseas sources (Heikkilä and Uschanov 2004: 8; Kjeldstadli 2011: 8; Kero 1980: 55). Later waves of Finnish emigration, beginning in 1900, were larger, and involved a broader spectrum of Finnish communities, such as Oulu Province. These later migrations included many socialist leaders from southern and southeastern Finland, fleeing Czarist repression of their political activities beginning in 1907. Between the peak years of 1900 and 1915, 225,000 Finns immigrated to the U.S., and both the U.S. and Canada received additional large influxes in the early 1920s. Even after the establishment of national quotas in 1921, immigration numbers remained high: fourteen thousand Finnish immigrants came to the U.S. in 1923. The following year the United States sharply restricted immigration by reducing quotas further, which began to have noticeable effects on Finnish immigration (Lewis 1993: 125).

In the Pacific Northwest, Finns made their homes west of the Cascades, primarily along the lower Columbia River in Clatsop and Columbia counties in Oregon, and in Pacific, Wahkiakum, Cowlitz, and Clark counties in Washington. As with other Scandinavian immigrants, most Finnish migrants at the mouth of the Columbia arrived only after they had first settled elsewhere in America. Astoria became a major Finnish community in part due to a two-stage migration

from the upper Midwest by two groups– one from Erie, Pennsylvania in 1873, and the other from Ashtabula, Ohio in 1875.[252] Large numbers of these second-stage migrants in Astoria and other communities near the mouth of the Columbia originally came from the Finnish rural counties of Kaustinen and Kälviä. Another ethnically Finnish, migrant group came to Astoria by way of Norway. Finns had been moving to northern Norway across their shared border since the mid-1700s, primarily to work in mining and fishing as well as logging. Many Finns had learned about opportunities in North America through the mass migration from Norway in 1850-1870. The first significant groups of Finns came to the U.S. in the 1860s from northern Norway, recruited by mining companies in the Great Lakes region. Many of these Norwegian Finns were drawn to Astoria, perhaps because of their fishing experience, and made up a sizeable share of the Finnish population of the Astoria area. Eventually the reputation of Astoria and the lower Columbia region reached Finland and began to draw immigrants directly from the old country. First-stage migration chains again developed and, according to one report, in 1914 "train car loads" of people were arriving in northwest Oregon from Finland (Hummasti 2002).

Figure A.2 – A Finnish Socialist picnic in 1922. Socialist sympathies were strong in certain segments of the Finnish immigrant community, especially those segments that had been forced to emigrate from Czarist-occupied Finland prior to the concurrent Russian Revolution and the Finnish declaration of national independence in 1917. Socialist events in Astoria and other lower Columbia communities were an important part of the region's social life, and served as a venue for the organization of unions and cooperative movements in the fishing, farming, and the timber industries. Photo courtesy Oregon Historical Society.

During the first part of the 20th century, Astoria became the largest Finnish settlement west of the Mississippi River, earning it the nickname "Helsinki of the West." The largest single concentration of Finns settled in Uniontown, often called Finntown, on the western edge of Astoria. A fair number of Swedes and Norwegians also lived in Uniontown, although many lived in other districts such as Upper Town, on the up-river end of Astoria. From Astoria, Finns gradually fanned out along both banks of the Columbia, and small Finnish communities grew on the Oregon and Washington sides, in such places as Ilwaco, Knappton, and Naselle. By 1920 ethnic Finns made up about a fourth of the population of Astoria, the largest town on the lower Columbia; in that year, Washington ranked sixth among the states for number of Finnish inhabitants, and Oregon ranked ninth. Finnish ethnicity persists to this day, and sizeable Finnish populations are still detectable in census data pertaining to the communities of the Columbia River estuary (Jacob 2005; Heikkilä and Uschanov 2004; Hummatsi 2002).

Strong leftist sympathies set many Finns apart from both the "old" and "new" immigrants to America. Many Finns, displaced from Russian Finland by czarist intimidation for their leftist leanings prior to the Russian Revolution, became active in the American socialist and communist circles upon their arrival on the Lower Columbia. Conflict between the more conservative "Church Finns" and the progressive "Socialist Finns" often divided the immigrant community through the early 20th century Still, with a strong communitarian tradition and a certain number of socialists in their ranks, the Finnish community was particularly instrumental in the development of important and popular business cooperatives in the region, including the Union Fishermen's Cooperative Packing Company to support the organization of fishermen in the 1890s and the Consumers' Cooperative Dairy to provide a venue for shared production, marketing and distribution of dairy products in the 1910s. The Finns of the lower Columbia also developed keystone cultural associations. The Finnish Brotherhood, a benevolent society and fraternal organization, was founded in Astoria in 1886 and gained popularity throughout the region. Two other voluntary organizations, the church and the socialist club, became cultural mainstays of Finnish society in America. Most Finnish communities in the area had one, if not both, of these organizations operating in their midst (Hummasti 2002; Kero 1980).

Today, the descendents of Scandinavian immigrants are distributed broadly throughout the communities of the Columbia-Pacific region. Formerly, these immigrants resided in relatively sequestered neighborhoods alongside lumbering and fishing towns, such as Astoria's "Finntown" neighborhood, as well as on floodlain farms nearby. These neighborhoods retained hints of traditional Scandinavian folk architecture, including single gabled houses – the Finns in particular including saunas as outbuildings. Usually within a generation of arrival, Scandinavian families were becoming seamlessly integrated into the social fabric of the larger Columbia-Pacific region. While maintinaing a fairly high degree of ethnic identity – manifested by shared work traditions, cuisine, and events such as Astoria's annual Scandinavian Festival – the daily lives of Scandinavian immigrant families soon became largely indistinguishable from those of their Euro-American neighbors. Today, the Scandinavian imprint is significant. Yet there are no longer neatly defined, ethnically Scandinavian neighborhoods, and the languages and cuisines of Scandinavian are mostly brought out for special occasions only, as modern descendents of these immigrants live lives that are largely integrated into the American mainstream.

Those who came from Asia

Studies on immigration from Asia to the mouth of the Columbia document large populations of Chinese and Japanese immigrants, most of whom arrived in the late 19th century and for a variety of reasons did not stay more than one or two generations. Arriving especially for jobs in the fishing industry, these populations also played a critical role in the development of early agriculture and in other enterprises. High immigration numbers from China to the United States, particularly in the West, became extremely controversial in the late 1800s, resulting in a variety of exclusion laws that prompted all but a few families to leave. However, we include brief discussions of other Asian populations here too. Included in the nineteenth century term "Asian labor," often used in reference to the peoples in the Columbia-Pacific are emigrants from India (especially Punjabis) and Filipinos, small yet significant immigrant communities that were particularly visible in northwestern Oregon (Ogden 2012). This section examines the immigration and settlement patterns in the study area of these different Asian immigrant groups.

Immigration from China

In the latter half of the nineteenth century, large numbers of Chinese emigrated to the Americas, Southeast Asia, Australia, New Zealand, and the Caribbean Islands. The majority of those bound for North America went to California and Hawaii. Large-scale Chinese immigration to the United States began shortly after the California gold rush in 1849, and continued at an uneven rate until 1882, when it was drastically reduced by passage of the Chinese Exclusion Act. The two principal sources of employment for Chinese until 1870 were the mining industry and railroad construction. In California each of these industries at their peaks (gold mining 1852-1855 and construction of the transcontinental railroad 1868-1870) accounted for a temporary sharp rise in immigration (Mei 1984: 224).

Initially most Chinese immigrants in Oregon came from California and settled in rural areas of the state, working as miners and agricultural laborers, and later joined the teams of workers who built Oregon's railroads. In 1860, 420 of the 425 Chinese reported residing in Oregon lived west of the Cascades, and 370 of those 420 were miners (Powell 1990: 6). Introduction of a direct shipping line between Hong Kong and Portland in 1868 brought many Chinese immigrants directly to Portland (DeWolfe 1996: 362). The effects of these simplified immigration pathways were profound in the Columbia-Pacific region through the final decades of the 19th century: in 1870 there were only 13 Chinese residents of Clatsop County according to the U.S. census, for example, but by 1880 this number had increased to 2,317 – making their numbers almost equal to the number of American-born "white" residents of the County (Corbett and Corbett 1977: 75).

Among the population of American immigrants from China during this period, most hailed from a few counties near the Pearl River delta in Guangdong province in southern China—the counties of Yangjiang, Enping, Kaiping, and Xinning—sometimes collectively known as Siyi. Over half the Chinese who immigrated to the continental United States by 1882 came from the Siyi region and, of this group, a majority came from Xinning county (Mei 1984). It is overly simplistic to attribute emigration to any single cause. Chinese emigration to the United States was a highly complex phenomenon, involving changes in the United States, China, and global

markets of which they were a part. Those parts of China that were home to most of the U.S.-bound emigrants were undergoing rapid and drastic socioeconomic change in the mid-19th century. They were areas with a large impoverished population, near seaports where foreign trade was well-established—places such as Guangzhou, Hong Kong, and Macao. (Mei 1984).[253]

By the late nineteenth century, agriculture in these areas was gradually shifting to the production of cash crops for commercial sale. This process caused an increasing separation of peasants from the land as growing numbers of small landowners were forced to sell all or part of their holdings and become tenant farmers, hired hands, or urban workers Dislocation and government weakness in China were worsened by a series of shocks, including the Opium Wars with Britain (beginning in 1839) and large-scale peasant revolts such as the Taiping rebellion (1850-1864). Social unrest was directed as much against the inept and oppressive Qing government as against foreign intruders. Because of the constant warfare in southern China, the social and economic effects of the mid-19th century floods and droughts of the Pearl River delta region were considerably magnified. In Guangdong province, these events had disastrous results, combining with a number of other factors that would displace rural peasants from the land: commercialization of agriculture, imperialist invasions, competition from foreign imports, domestic uprisings, and land disputes. The combined effects of all these elements were especially noticeable in Guangdong, whose port of Guangzhou made it a major center of contact with the West, and the primary means of emigration for the majority of Chinese coming to the western United States (Mei 1984).

Simultaneously, the rapid expansion of Western colonialism (chiefly by Great Britain, France, Spain, Portugal and the United States) to all continents in the 19th century created a demand for labor to help develop the economies of newly annexed or colonized lands. The gradual abolition of slavery around the world also arguably affected local labor shortages. Because China was at the time politically dominated by Western powers and economies, Chinese laborers had developed certain desirable skills (such as construction or excavation work in hilly terrain), and because the cost of Chinese labor was very low, China was widely considered a good source of labor by the industrialists of the age. The Chinese were in demand overseas for their labor power, though, and not for their persons; in other words, they were sought primarily to develop lands, but were often not welcome to settle those lands. Meanwhile, the American pattern of large-scale labor recruitment for labor-short territories resulted from the nature of development within the United States. Specifically, while much of the eastern part of the country had a rapidly developing economy by the nineteenth century, the western territories were still being acquired in stages and contained abundant resources without much local labor. Unlike certain other lands acquired by expanding Western powers, the Columbia-Pacific region did not have a large (nor especially eager) local Native population remaining who might somehow be recruited to participate in the region's rapid industrialization.

The U.S.-China relationship began with anxious efforts by American merchants to open China's market. The first American commerce ship to reach Canton, *Empress of China*, arrived in August 1784. Immigration from China did not occur in significant numbers, though, until the early 1850s. Discovery of gold at Sutter's Mill, California in 1848 initiated that state's Gold Rush, and news spread across the Pacific as well as across the United States. Many men in China were familiar with excavation work in hilly terrain and immigrated to California in increasing

numbers to work in the mines. American shipping firms that stood to make large profits from the trans-Pacific traffic advertised in China as a means of increasing immigration. These companies, through their agents and middlemen in China, often exaggerated the chances of getting rich quickly in the mines in order to induce potential immigrants to buy tickets (Mei 1984: 238). In 1862 a circular distributed by a middleman for an Oregon firm offered steamship tickets for $54, almost double the actual cost. Chinese middlemen also benefited, earning potentially three to five times what the average railroad worker was paid in California. The real wealth in the immigration business accrued not to the arriving laborers but often to the shipping firms, brokers, and labor recruiters (Mei 1984: 241). Legislative developments only increased the possibilities for such immigration, and such abuses, in the years that followed. The Burlingame Treaty in 1868 allowed citizens of the United States and China to migrate from one country to the other. Between 1848 and1851, 325 Chinese had come to the United States; in 1852, some 20,000 arrived. By the early 1870s, Chinese men constituted more than 25 percent of all placer miners from California to the Dakota Territory. In Oregon more than 60 percent of the miners were Chinese (Liu 2003; Zhu 1999: 44).

The Chinese immigrants to the United States were generally poor men of rural background, the majority of whom had worked as hired hands, sharecroppers, or small agricultural landowners in their home country. To fund the cost of immigration, a traveler and his family may have pooled finances or used the credit-ticket system. Under this system, the cost of ship passage was advanced to an immigrant by a middleman or labor recruiter, and the laborer then had to repay his debt from his earnings after finding employment in the United States. The total debt upon arrival (immigration papers, fare, and interest on loans) could easily exceed ten years of wages at home. During the height of immigration for railroad construction, railroad companies sometimes paid for passage of impoverished workers who otherwise could not afford the fare (Mei 1984).

Early Chinese immigrants to Oregon were miners who moved from California into Oregon's southern counties with the discovery of placer mines in the Rogue Basin and vicinity. By the 1860s, this was already resulting in significant Chinese immigration into the state. According to the 1870 U.S. census, Oregon had a total population of 90,923, with the largest single minority being the Chinese community, who numbered no less than 3,330 - most of whom resided in Grant, Jackson, and Josephine counties, with just thirteen residing in Clatsop County. Most early Chinese immigrants to Oregon were drawn by placer mining, even though the Oregon constitution barred Chinese from holding mining claims. Many white claim-holders, however, sold their claims to Chinese miners once the gold was largely played out. Chinese miners became especially adept at the technique of "reworking" abandoned claims, and often had surprising success sifting through mining tailings to recover gold missed by Euro-American miners in such places as the Rogue Basin and Blue Mountains (Chinese Consolidated Benevolent Association 2007; Corbett and Corbett 1977).

Beginning in the 1860s, Oregon's efforts to build major rail lines provided a demand for Chinese labor. Railroad companies sought to connect Oregon to the first transcontinental railroad in San Francisco, and to link to the second transcontinental rail line in Washington. These companies initially had an official "whites only" hiring policy but low-wage, reliable Chinese labor proved irresistible. In 1870, 3.1 percent of Chinese working in Oregon were railroad workers. By 1879, four rail lines under construction in Oregon employed several hundred Chinese laborers, all

brought to the state under contract from California and China. By 1889, 19 percent of the Chinese working in Oregon were employed in railroad construction, most of them in Wasco County (Chinese Consolidated Benevolent Association 2007; Corbett and Corbett 1977).

On the coast, the great spike in Chinese population would come in the 1870s as salmon fishing and canning became a keystone industry. The 1870 population of Pacific County, Washington, included six Chinese immigrants, while fifteen lived in Wahkiakum County, Washington. In 1880, the Chinese immigrant population numbered 9,510 in Oregon as a whole, 2,317 in Clatsop, 176 in Pacific, and 559 in Wahkiakum counties. In Wasco, Clatsop and Multnomah counties in 1870, the average age of all Chinese was 26.3, with the 20-to-30 age group accounting for 51.6 percent of the population – reflecting the vastly disproportionate number of young men going overseas for work. Many married Chinese men working in the Astoria canneries had left wives and families behind in China. Of the 2,317 Chinese people listed in the 1880 Astoria census, only 25 (or a little more than 1%) were female. Because there were so few Chinese women in the lower Columbia region, the Chinese population had little chance to grow or even to sustain itself except through immigration, contributing to various other barriers to lasting settlement in the region (Chinese Consolidated Benevolent Association 2007; Keith 1983; Corbett and Corbett 1977).

Table A.1. Occupations of Chinese Men in Astoria, Oregon, 1870-1910

Occupation	**1870**	**1880**	**1900**	**1910**
Cannery workers	0	1639	332	91
Entrepreneurs (barber, tailor, merchant, etc.)	0	65	52	57
Professional/skilled laborers (physician, butcher, etc.)	0	10	0	0
Cooks	7	52	23	3
Small business employees	0	49	30	23
"Unskilled laborers"	6	283	124	7
Total	**13**	**2098**	**561**	**181**

(Friday 1994: 197. Sources: US Census Bureau, Manuscript Schedules of the Population Census, Clatsop County, Oregon, 1870, 1880, 1900, 1910)

Between the census of 1870 and that of 1880, substantial changes occurred in the type of work done by Chinese immigrants in the lower Columbia region. In the mid-1870s, during a time when the salmon-canning industry was rapidly expanding in both Clatsop and Multnomah counties, a Portland newspaper, *The Morning Oregonian*, noted on page two that "*the new canning establishment of A. Booth & Co. ...employs a force of 180 men, mostly Chinamen, at average wages of about one dollar per day*" (Corbett and Corbett 1977: 75). While canneries provided the primary source of employment in Astoria, some Chinese immigrants had other roles (in 1870 there were no Chinese working in the fish canning industry, but in 1880, some 31.4 percent, or just under one-third worked in canneries.). There was also significant work in "urban" professions, especially in Astoria, where many Chinese immigrants worked in laundries, as domestic servants, as gardeners, and as cooks (See Table A.1).[254] Especially during the 1890s

and early 1900s, a number of Chinese in the Astoria community had saved enough earnings from their cannery work to open small businesses. Examples of two very successful Astoria companies were the labor-contracting Hop Hing Lung Company, which started in 1889 and supplied laborers to at least eighteen canneries, and the Lum Quing Grocery Company, established in 1908 (Coe 2011: 55, 67).

One of the most significant but least appreciated contributions of Chinese immigrants is in agriculture. In western Oregon and Washington, Chinese workers filled the demand for hard manual labor for clearing farm land. Beginning as early as the 1860s, farmers hired them to clear the land of trees and rocks, and prepare it for growing crops and orchards. Without their cheap labor, farmers could not have afforded the cost of "grubbing" the land."[255] Many Chinese had an even more direct connection to agriculture by growing produce for market. Chinese truck farms around Portland, Astoria and other cities flourished due to the generations of farming experience carried over from China. In 1878, Seth Lewelling of the Llewelling Brothers nursery in Milwaukee, Oregon, developed the Bing cherry and named it for his Chinese nursery foreman, who cultivated the test rows (Chinese Consolidated Benevolent Association 2007; Powell 1990). Chinese labor in the Columbia-Pacific was similarly important in the development of early commercial agriculture, involving early production and shipping of cheese, hay, and vegetables such as peas and beans from the farms of Clatsop Plains in particular (Miller 1958).

The geographical distribution of the Chinese population was uneven throughout the Columbia-Pacific region, but was especially linked to the distribution of canneries. The Astoria Chinese community depended on the canneries for its economic base. In 1880 1,639, or 78.1 percent, of Astoria's Chinese worked in the plants. Meanwhile, communities like Ilwaco had relatively small Chinese communities.[256] Small groups of residential structures, associated with canneries operations and occupied by Chinese labor, been reported in the vicinity of Fort Columbia, Station Camp, and the NPS Dismal Nitch wayside; these structures were typically demolished during the decline of the salmon canning industry in the early 20th century, and no remanants of these structures exist today.

Exclusion laws

By 1868, when the Burlingame Treaty was signed, more than 10,000 Chinese immigrants had arrived in the American West. The Burlingame Treaty established reciprocal and most-favored-nation rights, including immigration, between the United States and China (Liu 2003: 152). Chinese laborers performed work important to the local white population throughout the West, being concentrated in salmon canning, domestic service such as cooking, and other manual labor. This lessened competition with white job seekers, resulting in a dual labor system that was a region-wide phenomenon - one in which white workers largely occupied the higher-paying skilled positions, and the nonwhite workforce held the most menial and lowest-paying jobs (Coe 2011: 16). However, competition for work increased throughout the depression years of the 1870s.

Whether competition for the jobs commonly held by Chinese workers was real or perceived is open to debate. In April 1879, Oregon settler David Newsom (1972: 224) wrote,

I cannot see why the Chinamen should not do our rough work, such as white men will not do. It seems nearly certain that grubbing and clearing up our large acreage of brush lands in western Oregon will be done by the Chinese hereafter, as it has been for eight or ten years past. But if white men enough can be had to do this work in quick time, they should have the job, if they will do it.

Yet, a number of racially-inflected anti-Chinese sentiments shaped the political dialogue on the immigration issue, nation-wide certainly, but also within the local politics of the Columbia-Pacific region.[257]

Figure A.3 – The rapidly growing population of Chinese nationals on the lower Columbia – growing to the point that their numbers roughly matched those of native-born American citizens in the region by the 1880s – created a multiethnic community that dissolved almost as quickly as Exclusion Laws created pressure to leave the region and the nation. Of growing concern to immigration opponents then, as in more recent times, was the number of children born in the country who might thereby qualify for citizenship, explaining the presumably unsympathetic caption of this late-19th century photo of Astoria-area schoolchildren, "Oregon Native Sons." Photo courtesy Oregon Historical Society.

Some suggested that Chinese labor competed with the rising tide of American-born labor in the West, producing localized job scarcity. [258] A common complaint increasingly leveled at Chinese immigrants in the West, too, was that they weakened local economies by sending remittances overseas to their families in China (Corbett and Corbett 1977: 84-85). According to one contemporary observer, however, thirty dollars per year was the approximate remittance sent back to China by many immigrants, a considerable sum in China at that time. Thirty to forty dollars was enough to buy grain and other necessities for one year for a family of one adult and two or three children. It was a significant, although not an enormous, sum to the recipients (Mei 1984).

Another argument made against Chinese workers was that they returned to China with large sums of American-earned savings that were thereby denied to local economies. In 1876, when over 200,000 Chinese had emigrated to the United States (most of them to California), an open letter from the Six Companies, a 19th –century benevolent organization for Chinese in the United States, admitted that most immigrants were unable to return to China because they had overestimated their own prospects in the United States. The Chinese population of California that year was estimated to be approximately 148,000 and, according to annual immigration statistics, only about one-fourth of the immigrants, at best, who came were able to return to China (Mei 1984: 238-39).

With these kinds of political arguments significantly coloring the immigration debate in 1880, President Rutherford Hayes sent James Angell, president of the University of Michigan, to China to negotiate the terms of a new treaty. The Angell treaty modified the Burlingame treaty, restricting Chinese labor immigrants with the argument that Chinese laborers did not successfully assimilate into American culture. The treaty was a turning point in U.S.-China relations with respect to immigration; it ended open Chinese immigration and uncoupled American trade interests from the immigration issue, opening the door for Chinese exclusion laws (Liu 2003: 153). Congress then passed a series of exclusion laws from 1882 to 1902 to curb Chinese immigration – focusing especially on the forced exclusion of immigrant laborers, though making certain provisions for a continued presence of immigrant merchants. Between the mid-19th century and 1940, the Chinese population in the United States declined by nearly half, from over 140,000 to 75,000 (Coe 2011; Liu 2003: 155).[259] There were several of these "Exclusion Laws" directed at Chinese immigration, which are outlined in Table A.2.

Yet, news of the pending legislation reached China and prompted a sudden emigration to the United States, producing a temporary surplus of Chinese labor that delayed the act's impact. Many recently immigrated Chinese made their way to Astoria, where 40 percent of them reported to federal census takers in 1900 that they had immigrated during the two years prior to the Exclusion Act of 1882 (Friday 1994: 57).

Table A.2: Primary United States Treaties and Laws Affecting Chinese Immigration

Year enacted	Name of treaty or federal act	Description
1868	Burlingame Treaty	Established reciprocal and most-favored-nation rights, including immigration, between United States and China. The treaty "cordially recognize[d] the mutual advantage of free migration and emigration of their citizens and subjects respectively from the one country to the other, for purposes of curiosity, of trade, or as permanent residents."
1875	Page Act (18 Stat. 477)	The first federal immigration law, this act prohibited entry of immigrants deemed "undesirable," a classification that specified Asian contract laborers and Asian female prostitutes. Overzealous enforcement effectively barred nearly all Asian female immigrants.
1880	Angell Treaty	Allowed for the limitation—but not the total prohibition—of immigration by Chinese laborers, Chinese merchants were exempted from the limitation.
1882	Chinese Exclusion Act (22 Stat. 58)	Prohibited skilled and unskilled Chinese laborers from entering the US for a ten-year period, banned Chinese immigrants already in the US from becoming citizens, and allowed for deportation.
1888	Scott Act (25 Stat. 476)	Prohibited re-entry to the US by Chinese laborers who visited China, even if holding official documents permitting return. The act denied re-entry to 20,000 Chinese who were abroad when the law was passed.
1891	Immigration Act (26 Stat. 1084)	Created dual system of immigration administration by exempting Chinese from administration under newly created office of the Superintendent of Immigration, and continuing enforcement of Chinese immigration by Bureau of Customs.
1892	Geary Act (27 Stat. 25)	Renewed 1882 Chinese Exclusion Act for another ten-year period and added requirement that Chinese possess certificates of residence to be carried on their person at all times.
1893	McCreary Amendments	Added six months to deadline for Chinese to register for residence certificates, and excluded fishing, mining, laundry, and street/door-to-door vendors from the exempted categories of merchants.
1902	Geary Act (32 Stat. 176)	Renewed the Chinese Exclusion Act indefinitely, and extended it to US territories and possessions, including the Philippines, where Chinese had immigrated and lived since the 17th century.
1917	Asiatic Barred Zone Act (39 Stat. 874)	As part of the Immigration Act of 1917, extended the Chinese Exclusion Act to all other Asians (except citizens of the Philippines and Guam, who were under American jurisdiction), imposed English literacy test on immigrants over 16 years of age.

1924	Asian Exclusion Act (43 Stat. 153)	As part of the Immigration Act of 1924, specifically targeted Asian immigrants, essentially guaranteed they would never qualify for naturalization or land ownership.
1943	Magnuson Act (57 Stat. 600-1)	Repealed previous Chinese exclusion acts, permitted some resident Chinese immigrants to become US citizens, continued to ban ownership of property and businesses by ethnic Chinese, created a disproportionately low entry quota of 105 new visas per year.
1946	Luce-Celler Act (60 Stat. 416)	Extended privilege of naturalization to Asian Indians and Filipinos, and established a quota of 100 immigrants per year for each group.
1952	McCarran-Walter Act	Extended privilege of naturalization to Japanese, Koreans, and other Asians, revised all previous laws and regulations regarding immigration, naturalization, and nationality, collecting regulation into one comprehensive statute.
1965	Immigration Act (79 Stat. 911)	Overturned entry quota on Chinese immigrants set by Magnuson Act and established equitable formulation of immigration quotas for all countries.

In the Northwest, the canning industry's ability to sustain high levels of Chinese labor in the canneries was curtailed by the series of Chinese exclusion laws beginning in 1882. All labor matters aside, Astoria's canning industry began to decline in the late 1880s, largely as the result of over-fishing. By the 1910s, the canning industry had relocated almost entirely to Alaska and Puget Sound, heavily reducing the working-class Chinese population in Astoria. The 1920s saw the improvement and proliferation of a fish-butchering machine invented in 1903, derisively called the "Iron Chink," that replaced some of the highest-paid cannery workers. The Chinese who remained in the 1920s faced new job competition from Japanese workers for the few remaining cannery positions (Coe 2011). Most who stayed in cannery work moved on, following cannery employment to the new epicenters of salmon fishing in British Columbia and Alaska; a significant number, opting to leave cannery employment altogether, had already returned to China by this time.

Following this transition, the Chinese population of the Columbia-Pacific region shrank abruptly, and those who remained were typically not manual laborers. Exclusion laws that provided special exemptions for Chinese immigrant merchants and job discrimination for non-cannery work created a demographic shift in the Chinese population on the lower Columbia, particularly in Astoria. Laborers declined sharply while a small merchant class persisted in urban settings. A few Chinese merchant families remained in Astoria, but the larger portion of the Chinese merchant population relocated to Portland (Coe 2013). In 1880 only 17.5 percent of Chinese in Oregon lived in Multnomah County, but by 1900 that percentage had increased to 75.4 (DeWolfe 1996: 362). Local Chinese cannery workers, numbering around two thousand at the peak in 1886, dipped to about one hundred between 1910 and 1920, and fell by 50 percent again in the following decade. Single men, mobile and often eager to relocate to new work prospects, were especially quick to leave; often, those who remained were families, representing male shopkeepers, as well as their wives and children, who often assisted in maintaining family

businesses. The very small remaining Chinese population – representing only a few extended families – was at once somewhat segregated socially but integrated into the economy and civic life of Columbia-Pacific towns. Not so numerous to maintain distinctive Chinese districts or "Chinatowns," these families increasingly resided as small and visible minorities within communities and neighborhoods largely consisting of Euro-American residents. Some of these families persist in the region today, and are prominent in the service and retail sectors of the local economy, reflecting longstanding local traditions and the historical trajectories of Chinese immigration and exclusion laws of the late 19th and early 20th centuries.

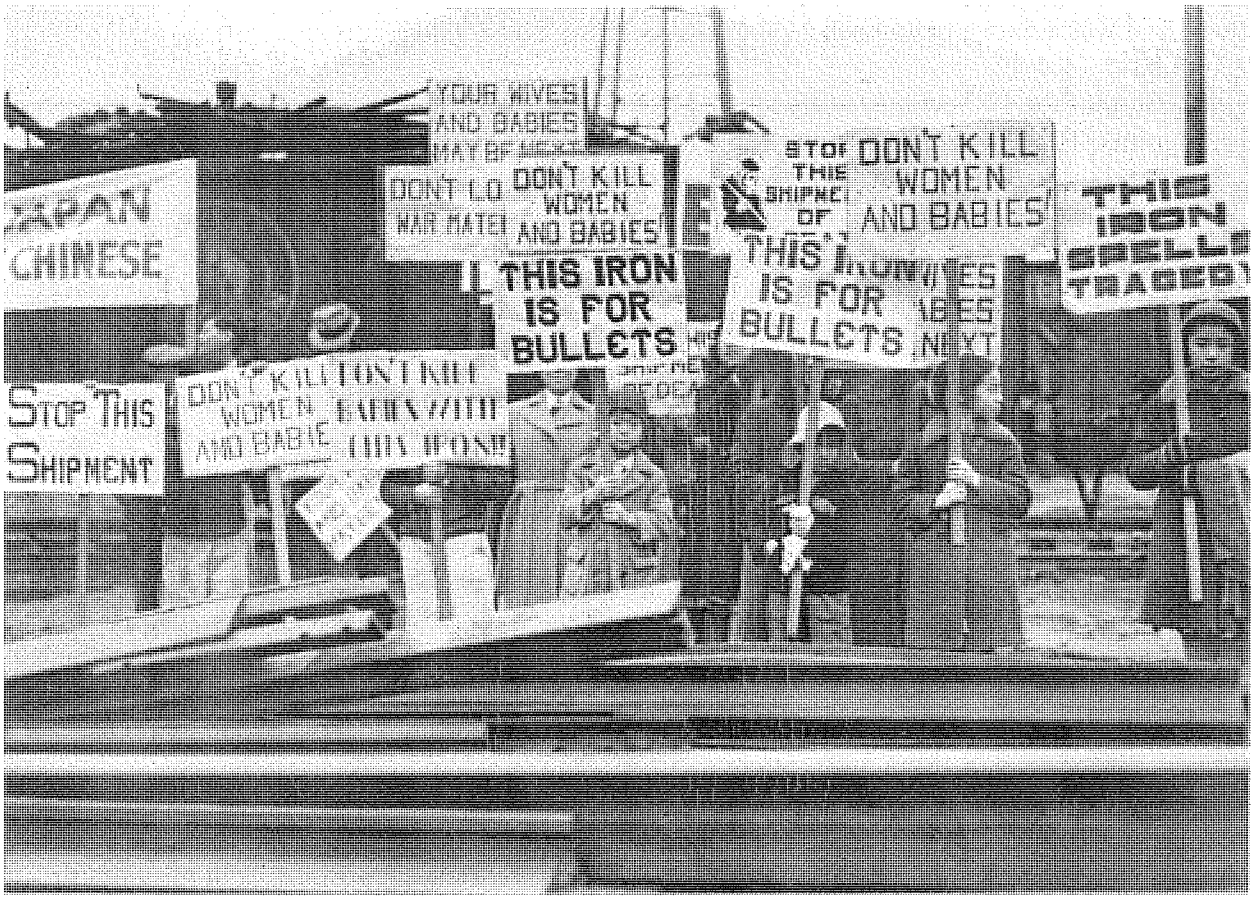


Figure A.4 – In spite of Exclusion Laws and other pressures to leave, the small number of Chinese immigrants and their descendents continued to play a role in the communities of the lower Columbia, some owning business and participating in various aspects of community life. Here, a portion of the local Chinese-American community protests the shipment of metal scrap through the Port of Astoria circa 1939. This scrap was being sold to Japan, which had invaded and occupied northern China beginning in 1937 – one of several campaigns that led to the events of World War II. Photo courtesy Oregon Historical Society.

Immigration from Japan

Even though Japanese immigration to the Columbia-Pacific region occurred in much lower numbers than Chinese immigration, the two are very much interconnected. The Chinese exclusion acts of the 1880s began to reduce the number of Chinese laborers available in the region, yet the demand for reliable, cheap labor persisted in certain industries. This opened the door to Japanese contract labor. The first known Japanese immigrants to Oregon arrived in 1880 and, when direct steamship service was established between Portland and Kobe, Japan in 1887, Japanese immigrants began to arrive in Oregon in increasing numbers. The overwhelming majority of these early Japanese residents were males, either laborers or students. They came to America usually with a specific economic or educational goal, intending to return to Japan when their goal was achieved (Johnson 1996; Azuma 1994; Yausi 1976).

By the turn of the 19th century railroads had become a major source of employment for Japanese immigrants. The Chinese Exclusion Act of 1882 created a labor shortage for rail companies and, correspondingly, opportunities for Japanese workers. Because of Japanese labor-contracting businesses that had taken shape in Portland to support local hop picking and railroad work, Japanese immigrants from Hawaii and Japan began arriving in larger numbers in the early 1900s.[260] Portland became a major distribution center for Japanese railroad workers throughout the Pacific Northwest, hired by the Southern Pacific; Oregon Short Line; Oregon Railway & Navigation Company; Astoria and Columbia River Railroad; Chicago, Burlington and Quincy; and the Santa Fe Railroad. The number of Japanese railroad workers in Oregon doubled between 1896 and 1906, from 600 to 1,221, most of them concentrated in the northwestern part of the state. Between 1905 and 1907, the Japanese made up about 40 percent of the total railroad labor force in Oregon (Azuma 1994).

Japanese seasonal workers were sent from Portland to salmon canneries and sawmills in Oregon, Washington, and Alaska. As the region's Chinese population rapidly decreased in number after 1882, many Japanese assumed the jobs the Chinese had formerly held. The 1890 census shows a Japanese population of only twenty five in Oregon, with twenty of those residing in Portland; by 1900, 2,522 Japanese lived in Oregon, including some 38 residing in Clatsop County (U.S. Census 1900; Johnson 1996: 178). Japanese were also employed in service industries, particularly hotels and restaurants, or as domestic servants. A very small number were able to start their own businesses, including hotels, restaurants, shops, and general merchandise stores – renting, rather than owning, the properties required to develop these businesses in response to legal prohibitions on Asian immigrant land ownership (Johnson 1996; Azuma 1994). In the summer of 1909, with the involvement of Portland's contract labor services, 500 Japanese were sent from Portland to work in salmon canneries. In the same year, Oregon's sawmills employed some 200 Japanese workers. By 1920 there were 4,151 Japanese residing in Oregon, most of them living in or near Portland, Hood River, and Astoria (Azuma 1994; Yasui 1976: 238). Most of the 450 Japanese immigrants who lived in Clatsop County were employed by the lumber mills or the canneries in Astoria, Flavel, and Westport. A few Japanese operated soft drink places, cheap restaurants, and lodgings in Astoria. The population was largely male, there were few families, and they generally owned no land (Yasui 1976).

Table A.3: Selected Anti-Asian Territorial and State Laws in Oregon and Washington

Year enacted	Description
1857 (ratified 1859)	Oregon state constitution denies voting rights to "Negroes," "mulattos," and Chinese; denies right of citizenship to Chinese and blacks; bars Chinese who immigrated to Oregon after constitution adopted from holding land or mining claims
1863	Washington territorial law bans Chinese from testifying in court cases involving whites
1864	Washington territorial law enacts poll tax for Chinese
1886	Alien Land law bars Asians from owning land in Washington Territory
1915	Washington State law bars Asian immigrants from taking "for sale or profit any salmon or other food or shellfish"
1921	Washington State Alien Land act prevents non-citizens and those ineligible for citizenship from owning or leasing land. Chinese, Japanese and other Asians were the only immigrants ineligible for citizenship
1922	Washington State passes additional alien land restrictions against Asians
1923	Oregon State passes Alien Land law similar to Washington's 1921 act
1937	Washington State amends Alien Land law
1945	Oregon State passes ancillary measure to Alien Land Law to further restrict Asian land ownership and leasing

The fact that Japanese workers were willing to work longer hours, often at lower pay, created tension with white laborers and white-dominated labor unions, which feared work and pay standards for all laborers would be pushed downward. A 1904 resolution of the Oregon Federation of Labor called for restrictions on Japanese employment, including the prohibition of Japanese from all public works. A 1907 report by the Oregon Bureau of Labor advocated restrictions on further Japanese immigration, referring to Japanese laborers as a menace to white workers, particularly because of their lower standard of living.[261] Still, during the First World War anti-Japanese attitudes were held in check, primarily because of treaty alliances between the United States and Japan (Johnson 1996).

Yet, the mood of the majority would soon change. After three abortive attempts, the Oregon State Legislature passed an alien land bill in 1923. The Ku Klux Klan and the Federation of Patriotic Societies significantly influenced the agenda of the 1923 legislature, and Governor Walter Pierce had earlier made it publicly known that he favored Japanese exclusion and measures preventing Japanese ownership of land. Oregon's Alien Land Law, passed during that legislative session, prevented "aliens ineligible for citizenship" (i.e., the Japanese and Chinese) from owning land, and was similar to Washington's 1921 Alien Land Law (Yasui 1976: 247).

The growing hostilities toward Japanese and Japanese-Americans culminated with internment during World War II. The forced evacuation of the Oregon Japanese occurred in May 1942. Residents of the Portland area were the first to be uprooted from their communities. By May 5, under an army exclusion order, Japanese residents of the coast had been moved into the North Portland Assembly Center. Within two weeks, Japanese from Gresham, as well as from Washington, Clackamas, Columbia, and Clatsop counties, were also brought to the center. Four months later 2,318 Japanese and Japanese-Americans were transported by train to the Minidoka Relocation Center in Idaho; a few hundred were sent to centers in Tule Lake, California, and Heart Mountain, Wyoming. The Japanese of Hood River and Marion counties were taken to an assembly center in Pinedale, California, and then transferred to Tule Lake. When the mass removal was completed, the Minidoka internment camp had 65.3 percent of Oregon Japanese and Japanese Americans, Tule Lake held 32.2 percent, and Heart Mountain had the remaining 2.5 percent (Azuma 1994: 351). A 1945 amendment to the Oregon Alien Land Law forbade Japanese immigrants returning from these camps to own or lease agricultural lands, contributing to the decision of many of these immigrants to not return to the Columbia-Pacific region. In 1988, the United States Congress and President developed and passed legislation – the Civil Liberties Act – that apologized for the internment, stating in the legislation that government actions had been based on "race prejudice, war hysteria, and a failure of political leadership."

Immigration from India

Beginning in the late 1890s, British Columbia attracted thousands of men from India in search of work. Most were from Punjab; some were Muslims and Hindus, but the vast majority was Sikh. In 1908, Asian Indian immigration was essentially banned in British Columbia, and large numbers of Asian Indians began immigrating to the United States from western Canada as well through direct migration from other countries. Between 1904 and 1911, more than 6,000 Asian Indians immigrated to the United States, residing almost exclusively on the West Coast from British Columbia to California (Bhatt and Iyer 2013: 23; Ogden 2012: 167-68).

In the early 20th century, hundreds of men from Indian (referred to at the time as "Hindus") worked in Oregon along the Columbia River. The largest community developed in Astoria but smaller communities existed in The Dalles, Hood River, Bridal Veil, Winans, Portland, St. Johns, Linnton, Goble, Clatskanie, Rainier, John Day, and Seaside. They worked primarily on farms, at dinking and other land reclamation projects, and in millwork along much of the lower Columbia (Ogden 2012). Astoria's community of immigrants from Indian is estimated at around a hundred people, mostly men, at its peak in 1910, and most were employed by the Hume Lumber Mill. In the 1860s, the Hume brothers established the hugely profitable salmon-canning industry in the region, centered in Astoria. The Humes expanded and diversified their holdings, starting a lumber mill in 1903, which was bought by A.B. Hammond in 1908. Hammond employed some 600 people of different nationalities, initially traveling directly to India to recruit laborers. Direct recruitment quickly became unnecessary, however, as Indian immigrants began arriving in Astoria, largely from western Canada. Many lived along the waterfront near the mill in a row of bunkhouses dubbed "Hindu Alley." This neighborhood and apparently all of its structures are no longer extant (Ogden 2012: 176-77).

Many of Astoria's Asian Indians left the United States in 1914 to return to India to participate in India's nationalist movement, as the local paper explained, "*for the purpose of joining in the revolution that is expected to ensue, while England is involved in the war with Germany.*" But it was the Hammond Mill fire in 1922 that caused most remaining Indian Asians to leave Astoria (Ogden 2012: 179).[262] Today, there is no independent Indian Asian community in the Columbia-Pacific region associated with this early immigration, though there may be individuals and families in northwestern Oregon that do descend from the Hindu Alley community.

Those who came from Latin American countries

The Johnson-Reed Act of 1924 effectively ended the period of federally permitted mass immigration to the United States. For the next 40 years, immigration policy was defined by a national-origins quota system that allocated an annual number of visas based on the composition of the U.S. population in 1920. The number of immigrants was fixed at 15,000 per year in 1929 and, within these quotas, visas were allocated under a system of preferences that favored professional and skilled workers, as well as the goal of uniting families. The quota system, developed in response to Asian and European immigration, did not apply to non-U.S. citizens of North and South America. The policy was simplified in 1952, but continued to favor very heavily immigration from the countries of northern and western Europe (Britain, Germany and Ireland were allocated 71 percent of the visas), and virtually excluded immigration from Asia. The system was racially based and was heavily criticized as discriminatory. The primary intention of the 1965 Immigration and Nationality Act, responding to this critique, was to abolish the national-origins quota system and to establish new criteria for the admission of immigrants (Wareing 1978).

These circumstances shaped the context of what would become the next wave of labor migrations, especially involving men from Mexico and Central American countries. Mexican people have migrated to the Northwest since the early 1800s, but there were few discernible pockets of Mexican population throughout the 19th century due to their high level of mobility. Immigration from Latin America may seem to be a uniquely modern phenomenon but the forces of industrialization observed in the latter half of the 20th century in Mexico and Central America are much like those of the early industrialization across Europe that bred European emigration in the late 19th century. Changing agricultural economies, political and economic disruptions, and the emergence of "surplus" labor in Latin America provided considerable incentives for laborers to entire sectors of the American economy with high labor demands due to their remoteness from large American labor pools or their sheer difficulty (Hatton and Williamson 2005).

During World War II, wartime mobilization and the demands of accelerated production created a labor shortage that directly affected the Northwestern agriculture industry. In 1942 an informal farm labor agreement between Mexico and the United States known as the *bracero* accords permitted the use of Mexican seasonal labor as an emergency wartime measure. The *bracero* program was the turning point in Mexican migration to Washington and Oregon as temporary contract labor was systematically recruited directly from Mexico. Unprecedented numbers of Mexicans, as well as Mexican-Americans from the southwestern U.S. states, arrived in the

Northwest largely to work in the region's agricultural sector (Gamboa 1981). The *bracero* program continued for twenty years until it was terminated in 1964. Simultaneously, the 1965 immigration act put the United States' first legislated numerical limit on Western Hemisphere immigration and required an immigrant to have a job before entering the country. This new policy, coupled with the end of the *bracero* program and a continued expansion of labor demands in the United States, was a prime cause of an increase in illegal immigration from Mexico (Fairchild and Simpson 2004; Wareing 1978).[263]

U.S. census categories have long included categories of "foreign-born white" and "native- born white," as well as categories reflecting the socio-biological concept of race. But changing and fluid concepts on ethnicity make it difficult to compare population numbers across decades in a strict statistical sense. This is well-illustrated by changes in the census category that includes Mexican immigrants and internal Mexican-American migration in the United States; the census has attempted to measure the prevalence of Spanish surnames (starting in 1950), Spanish language use (1970), "Hispanic" identity (1980), and "Hispanic or Latino" identity (2000). In 2010, the category of "two or more races" was added to the single-race categories. These census categories cut across race, language, ancestry, and nationality, and are made more complex by the fact that census-data categories do not always "fit" the psychological and cultural realities of the social group being described (Slatta and Atkinson 1984: 108).

In 1950, Pacific County had a population of 16,558, and U.S. Census figures for the "foreign-born white population" include one Mexican immigrant and five others from Latin America. Although Wahkiakum County's total population was much smaller at 3,835, the Latino immigrant numbers were similar: one Mexican immigrant and two others from Latin America. Clatsop County had a population of 30,776 with five Mexican immigrants and nine other Latin Americans (while Finland continued to be the source of the largest immigrant group).

By the 1980s and 1990s, many business owners in the Columbia-Pacific region were beginning to recruit Mexican-American labor in unprecedented numbers – sometimes traveling to nearby metropolitan areas, or even visiting Mexico, to recruit potential workers. As with other ethnicities, this fostered a "chain migration" of certain Mexican populations, as some of the laborers recruited early in this process served as the conduit for inviting additional labor to the area. Certain laborers that entered the tourist industry in the late 1980s and early 1990s, for example, hailed from Chiapas and other southern, tropical parts of Mexico, and this population had apparent ethnic linkages to Mayan groups in that region; later in the 1990s, men and sometimes families from central Mexico were becoming more common. Unlike the historical concentration of recent immigrants in industrial settings, this new Mexican immigrant population has been disproportionately settling in tourist towns, where their labor has been critical to that industry. Cannon Beach, for example, has consistently had a proportionally higher Mexican population reported in recent censuses than other Clatsop County communities, with the reported Mexican-American proportion of the community averaging above 10% of the total population since the early 1990s. These transitions are suggested by general statistical evidence, though somewhat ambiguously. By 1990, the U.S. Census had developed the recording category of "Hispanic origin," which applied to both foreign-born and U.S.-born citizens, which makes the numbers not statistically comparable to those of 1950. For descriptive purposes, though, it is worth noting that Pacific County's population of 18,882 included 433 Hispanics, of whom 345

were of Mexican origin (of ambiguous immigration status). The population of Wahkiakum County had declined to 3,327 and included a group of 71 Hispanics comprising 61 Mexicans. The overall population of Clatsop County increased to 33,301 with 748 Hispanics of whom 525 were Mexican. Just twenty years later, in 2010, the total populations of all three counties had increased, and the respective Hispanic population of each county had grown by varying degrees: Pacific County population was 20,920 with a Hispanic population of 1,677 (roughly 8%); Wahkiakum County population was 3,978, including 108 Hispanics (a little under 3%), and the population of Clatsop County was 37,039, with 2,838 Hispanics/Latinos (a little under 8%).[264] While this trend may seem novel to many residents of the Columbia-Pacific region, it is clear that these numbers are proportionately lower than prior waves of immigration, and continue a history of immigrant labor with deep historical roots in the region.

The Columbia River Quarantine Station

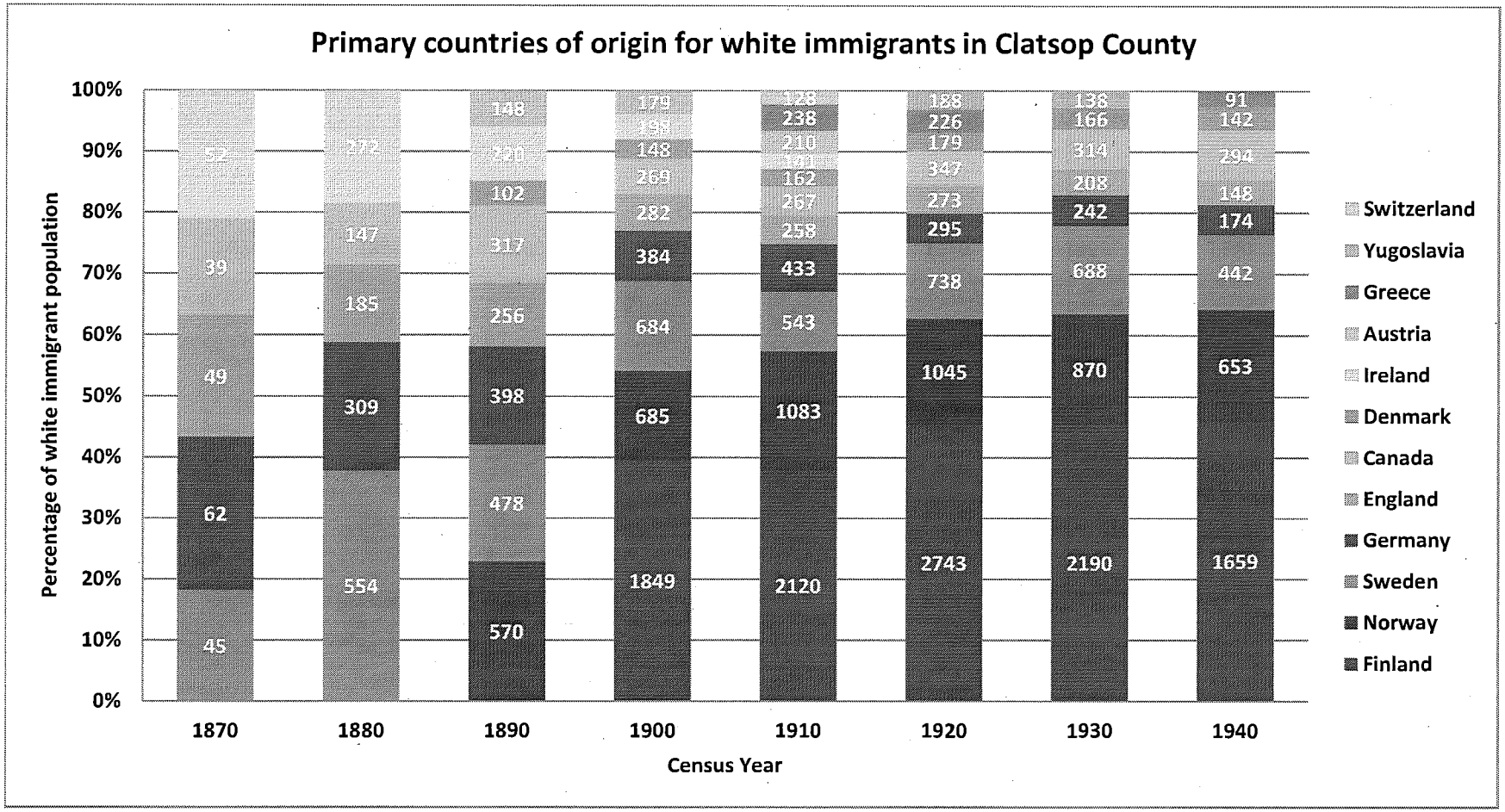
With immigration numbers at an all-time high in the late 19th century, Congress enacted a national quarantine law in 1889 to prevent the introduction of contagious diseases from ships and shipboard passengers. In 1891, federal legislation mandated inspection of all arriving ships and immigrants, stipulating the exclusion of "*all idiots, insane persons, paupers or persons likely to become public charges, persons suffering from a loathsome or dangerous contagious disease, and criminals*" (Anderson 2002: 39). A public health inspector was located in Astoria but ships with infestation or disease found on board were sent 275 miles north to Port Townsend, Washington for fumigation. A deserted cannery near Knappton, Washington, was selected for the site of a quarantine station due to the existing wharf buildings, deep channel, and the sparse population in the vicinity. The United States government purchased the site for $8,000, and the Columbia River Quarantine Station was established on May 9, 1899, administered by the Marine Hospital Service (MHS). Initially the station included a disinfecting building and detention quarters; a hospital with isolation wards to accommodate 20 patients was added in 1912 (Anderson 2002: 39-40; Weathers 1979).

The main offices of the MHS were located in Astoria. Ships crossing the Columbia bar first anchored at the port of Astoria where an immigration official and a public health physician checked for infestation and communicable diseases. If deemed necessary, the ship proceeded immediately to Knappton Cove for fumigation. The vessel was sealed off and sulfur was burned in large pots placed throughout the ship. The fumes killed rats and other vermin, a process that took 48 hours. The sulfur pots were replaced with cyanide gas in 1929. Passengers who were diseased or suspected to be so were detained in isolation, within the buildings of this facility including the "pesthouse" building, which was operational from 1912 through 1938.

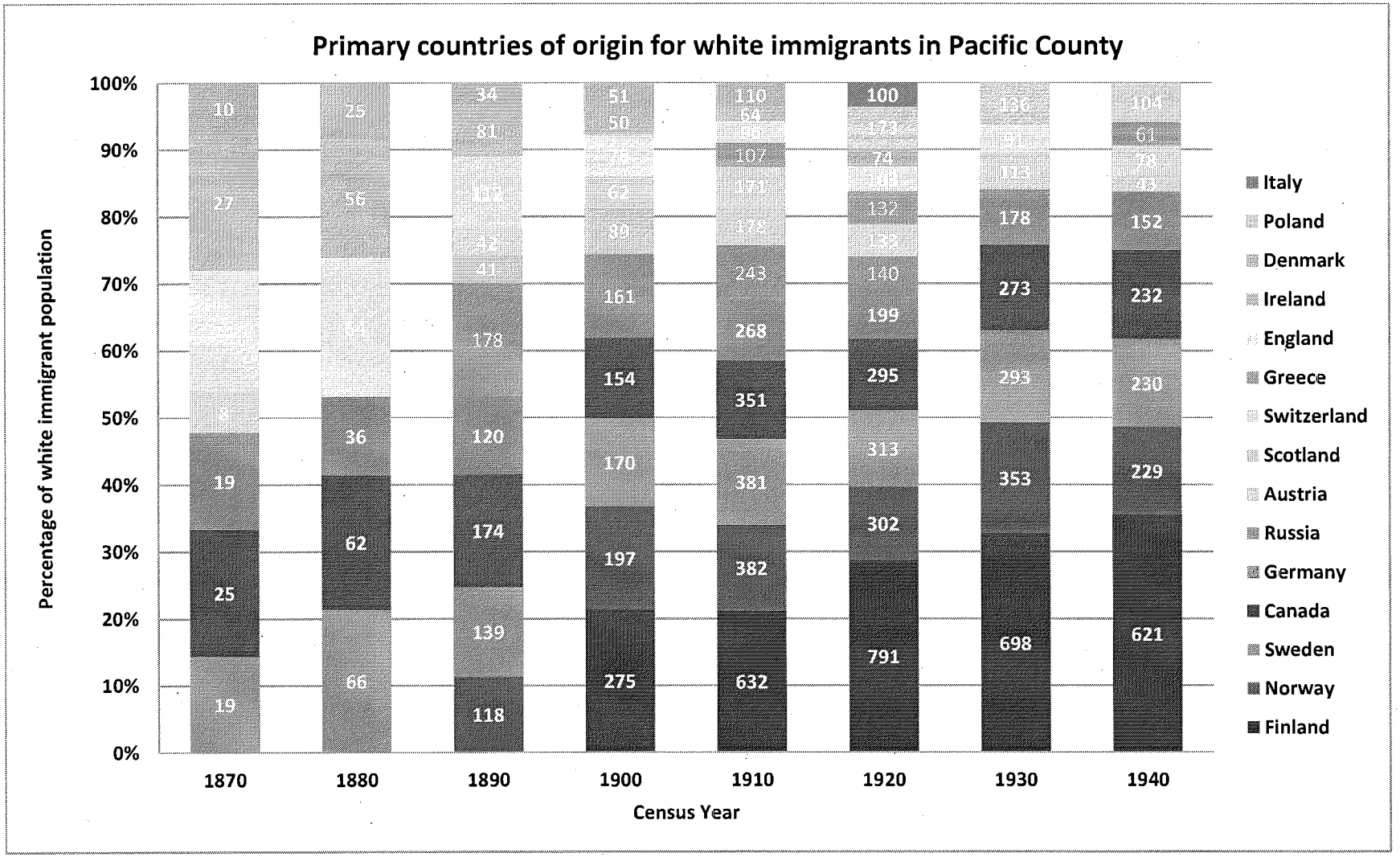
Ships from around the world came to the lower Columbia. The year the station opened, ships arrived from Germany, Britain, Norway, Russia, France, Japan, and Peru—in all, 97 sailing vessels and 35 steam vessels were inspected, and 6,120 people went through health inspection at the Knappton facility (Anderson 2002: 47). A public health bulletin distributed in 1912 titled, "A word to ship captains about quarantine," admonished captains to keep clean ships and provide clean food and water:

"*[E]veryone has a horror of catching plague, cholera, yellow fever, smallpox, jail fever [typhus], or leprosy. When a person catches any one of these diseases even his friends consider him loathsome (and so he is), and the first thing they say is, 'Take him at once to the pesthouse.'...So quarantine is here to stay, and it costs money to operate it...[I]t is up to you captains of vessels*" (US Department of Treasury 1912: 1).

Due to changes in health practices and a decline in immigration numbers, the Columbia River Quarantine Station closed in 1938. Declared surplus, the land was later purchased by private owners, who own the land to this day and maintain a small museum dedicated to the history of the Quarantine Station. In 1980 the Quarantine Station was added to the National Register of Historic Places, based on a 1979 nomination by Larry Weathers (1979). The site today centers on the former "pesthouse" or "lazaretto" (hospital) facility, constructed in 1912, which today houses the Knappton Cove Heritage Center museum. This facility still contains certain original pieces of hospital equipment, furnishings, supplies, medical records, and the like – most available for public viewing. A small number of related outbuildings, formerly used for offices and storage, still sit on the property adjacent to the pesthouse, but are occupied and used for modern purposes, are not being managed or maintains as "historical structures," and are not accessible to the public. The majority of the original quarantine station facility, including all docks and offshore facilities, were demolished in the 20th century.



From U.S. Census data, 1870-1940. All countries providing 2% or more of the total immigration are listed.
(1870 & 1880 Sweden figures include Norway; 1870 & 1880 England figures include Wales; 1890 Russia figure probably includes small percentage of Finns)



From U.S. Census data, 1870-1940. All countries providing 2% or more of the total immigration are listed.
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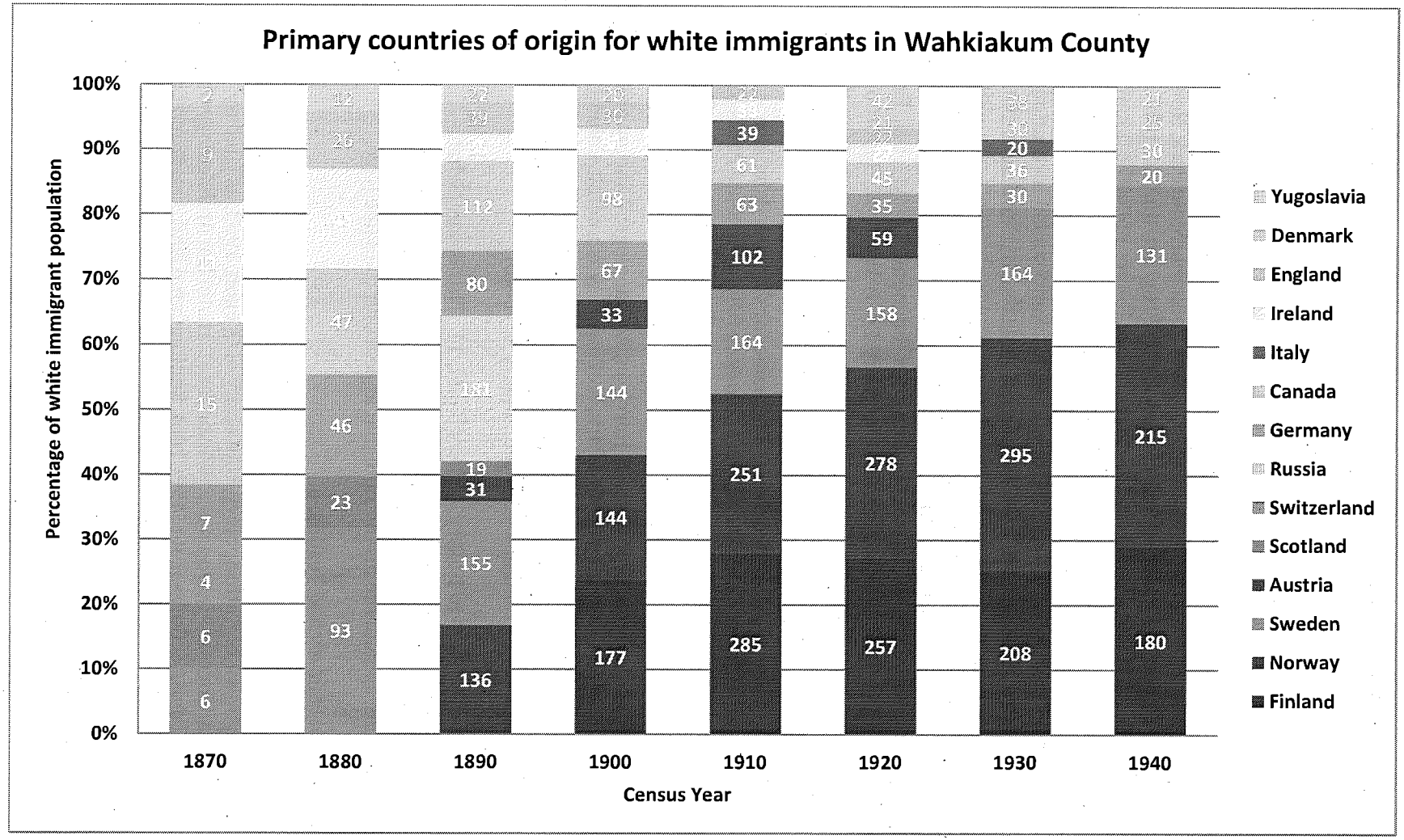

From U.S. Census data, 1870-1940. All countries providing 2% or more of the total immigration are listed.
(1870 & 1880 Sweden figures include Norway; 1870 & 1880 England figures include Wales; 1890 Russia figure probably includes small percentage of Finns)

Notes

[1] Charles N. Snell, Site of Exceptional Value, Chinook Point, Washington, draft of August 17, 1964, Present Appearance section of datasheet, page 6, FOCL 146, Folder 8, Chinook Point NHL 1965, LEWI Archives. Cecil McKithan, Chinook Point, National Register nomination form, October 10, 1977, Section 10 Geographical Data.

[2] The names for the point and hill appear in Shawn Lingo, Fort Columbia State Park, New Mine Casemate Historic Structure Report, Historic Preservation Program, University of Oregon, November 2008, 1, as cited from Larry Weathers, "Place Names of Pacific County, *The Sou'wester* 24: 1-4 (1989), 24, 31. The names of the village site are from Michael Silverstein, "Chinookans of the Lower Columbia," in Wayne Suttles (ed.), *Handbook of North American Indians*, Volume 7: Northwest Coast (Washington, DC: Smithsonian Institution Press, 1990), 534. The other name is from Edward S. Curtis and cited in David Ellis, et al., "Lower Columbia Chinook Villages: Named Sites from contemporary observers or multiple sources," under heading 18 "Chinook" village and region. The names "Nóse-to-ilse" initially appeared in the U.S. Coast Survey, Report of the Superintendent, Serial 1165, House Executive Document 22, 1858, 398-399, as cited in note 20 of Raymond E. Hoyt, et al., Fort Columbia, Chinook, Pacific County, Washington, WAA Registry No. H-Wash-82, Report on Application of Washington State Parks and Recreation Commission for Transfer of Surplus Properties for an Historical Monument (1949), 14. This name also appears in narrative from John A. Hussey, Fort Columbia, WAA Region 11, Part II, Historical Values, Fort Columbia, 22, FOCL 146, folder 13, LEWI Archives. The name for Chinook Point also appears in Hussey, *Chinook Point and the Story of Fort Columbia* (Olympia: State Parks and Recreation Commission, 1957), 13, as "Nose-to-ilse." This name first appeared in the Coast Survey Report of 1858, 366.

[3] The compliance surveys are referenced in Brian F. Harrison, Archaeological Survey and Testing at the Proposed Station Camp Interpretive Park, McGowan, Washington, Columbia Diachronic Services, Inc., 2005, on page 36, with a reference on page 139. A pronouncement about at least one site in the park came from R.S. Kidd, University of Washington, Fort Columbia Archaeological Survey, Preliminary Report, January 1, 1960, i.

[4] Hussey, Historical Values, 23, also in Hussey, *Chinook Point*, 11. This is somewhat contradicted by the map that appears in Harrison, Archaeological Survey and Testing, 233.

[5] Hussey, Historical Values, 17, and see his footnote that appears on the same page.

[6] Harrison, Archaeological Survey and Testing, 6.

[7] Rick Minor, Aboriginal Settlement and Subsistence at the Mouth of the Columbia River, Ph.D. dissertation, Department of Anthropology, University of Oregon, 1983, as cited by Harrison, "Archaeological Context," in Douglas C. Wilson, et al., Historical Archaeology of the Middle Village: Station Camp/McGowan Site (45PC106), Station Camp Unit, Lewis and Clark National Park, Pacific County, Washington, June 22, 2009. Vancouver, Washington: NCRI Report No. 1; also in Harrison, Archaeological Survey and Testing, 38-39.

[8] Ibid. The estimated number of coastal sites tied to the second part of the Late Archaic is in C. Melvin Aikens, et al., *Oregon Archaeology* (Corvallis: Oregon State University Press, 2011), 218-219.

[9] Douglas C. Wilson, "Middle Village: Chinook Indian Culture Revealed through Historical Archaeology of a Site where Lewis and Clark Camped," *Columbia* (Summer 2012), 4-9; Harrison, Archaeological Survey and Testing, 134.

[10] Silverstein, "Chinooks," 533.

[11] Silverstein, "Chinooks," 534.

[12] William G. Loy, et al., "Epidemics, Wars, and Reservations," in *Atlas of Oregon* (Eugene: University of Oregon Press, 2001), 16-17.

[13] Brian F. Harrison, "Ethnographic and Historical Context," in Douglas C. Wilson et al., Historical Archaeology at the Middle Village, 12.

[14] Hussey, in Hoyt, et al., Report on Application, 21; verbatim in *Chinook Point*, 14.

[15] Carey, *History of Oregon* (Portland: Pioneer Historical Publishing Company, 1922), 121. Meares' failure to find the great "River of the West" has been attributed to a preconceived doubt about the reliability of Heceta's account and a justifiable dread of the Columbia bar. The fact that his ship flew Portuguese colors might furnish another reason, in that Meares engaged in trade with China despite the Crown's monopoly given to the British East India Company.

[16] Carey, *History of Oregon*, 124.

[17] Carey, *History of Oregon*, 135. During this voyage, Gray circumnavigated the globe, becoming the first American captain to do so.

[18] Hussey, Historical Values, 21. He cited J. Neilsen Barry, "Columbia River Exploration, 1792," *Oregon Historical Quarterly* XXXIII (March 1932), 36-37.

[19] Hussey in Hoyt, et al., Report on Application, 21.

[20] Carey, quoting John Boit—who also remarked at that moment, "none of the natives came near us."

[21] Carey, *History of Oregon*, 136. While "discovery" is a factor in establishing a territorial claim, there was nothing governmental in Gray's voyages, as Carey stated. He cited Faulke, *International Law*, Vol. 1, 305-308. Spain's claim to the Oregon Country was extinguished by the treaty of 1819, which established the limit of its territory at 42 degrees north latitude. Russia made something of an indefinite claim to the extreme north, but relinquished claims south of 54 degrees, 40 minutes north latitude in 1825; Carey, *History of Oregon,* 464-467. The Anglo-American dispute is summarized in Thomas C. McClintock, "British Newspapers and the Oregon Treaty of 1846," *Oregon Historical Quarterly* 104:1 (Spring 2003), 96-109.

[22] Hussey, Historical Values, 30. Other names included Youngs Bay, Tongue Point, Grays Bay, Puget Island, as well as the great peaks of Hood, St. Helens, and Rainier. Hussey cited T.C. Elliott, "The Log of HMS Chatham," *Oregon Historical Quarterly XVIII* (December 1917), 231-243, on this point.

[23] Broughton took possession of the region on the north bank of the Columbia at Cottonwood Point, nearly opposite of the future town of Corbett, Oregon; see Carey, *History of Oregon*, 143-145. Vancouver's account appeared in 1798; *Voyages of Discovery to the North Pacific Ocean and Round the World, in which the Coast of Northwest America has been carefully examined and accurately surveyed [1790-95],* Volumes I and II (New York: DaCapo Press, 1967). The reference to "Village Point" was made by Vancouver, entry for October 22, 1792.

[24] The *Hazard* itself was not affected, returning to the river in 1801. For a list of shipwrecks, see John Harrison, "Ship Wrecks," Northwest Power and Conservation Council, October 31, 2008, as posted on their website at http://www.nwcouncil.org/history/shipwrecks, accessed April 4, 2013.

[25] Hussey, Historical Values, 15. He made the point again in Hussey, *Chinook Point*, 5-6. The hill was also described this way by the U.S. Coast Survey more than 50 years later; see "Chinook, Chinook Point, and Scarboro Hill, Washington," 7, in http://columbiariverimages.com/Region/Places/chinook_point.html, accessed August 22, 2013.

[26] Hussey, Historical Values, 22, 27. He also made this point again in Hussey, *Chinook Point*, 13.

[27] Lewis even blazed a prominent tree on his route along the Long Beach Peninsula from Cape Disappointment in emulation of Mackenzie; Richard Dillon, *Meriwether Lewis,: A Biography* (New York: Coward-McCann, 1965), 214. For a short account of Mackenzie's feats, see "Alexander McKenzie biography" in the on-line Oregon History Project biographies at http://www.ohs.org, accessed August 21, 2013.

[28] Hussey, Historical Values, 17.

[29] Clark, quoted directly from Hussey, Historical Values, 31. Oddly enough, this passage does not appear in Bernard DeVoto's edited volume of the journals (Boston: Houghton Mifflin, 1953) for the date. The quote is apparently drawn from Ruben Gold Thwaites (ed.) *Original documents of the Lewis and Clark Expedition, 1804-06*, Volume II, (New York: 1904-05), 211-251. The dates of Lewis' and Clark's journey over Chinook Point also appear in Harrison, Ethnographic and Historical Context, in Wilson, et al., 21. Patrick Gass, a member of the Corps of Discovery and Clark's party, called it "Point Open Slope" in his diary; Hussey referenced Gass, *A Journal of the Voyages and Travels of the Corps of Discovery...*(Pittsburgh, 1808), 241.

[30] Trading ships arrived often enough so that some Chinooks could speak and understand some English words, but controversy still persists over whether the American brig *Lydia* entered the Columbia during the party's stay at Fort Clatsop (as DeVoto had it in a note; see

Journals, 293) or in April, after they departed; David Lavender, *The Way to the Western Sea: Lewis and Clark Across the Continent* (New York: Doubleday, 1988), 398-400.

[31] Eric Jay Dolin, *Fur, Fortune and Empire: The Epic History of the Fur Trade in America* (New York: W.W. Norton, 2010), 176-77.

[32] Stewart H. Holbrook, *The Columbia* (New York: Rinehart and Company, 1956), 40-55.

[33] Thompson, quoted in Hussey, Historical Values, 31, cited as T.C. Elliott, "Journal of David Thompson," *Oregon Historical Quarterly* XV (June 1914), 105.

[34] Hussey, Historical Values, 31-32. Presentation of the medal is noted in DeVoto, (ed.) *The Journals of Lewis and Clark*, 289. There is no, so far as is known, direct association of Chief Concomly with Chinook Point, though Hussey recounted a tale where the old chief supposedly referred to a large rock atop Scarborough Hill and said "As long as that rock remains in place, no one shall question the power of me or my people." Shortly after his death in 1830, a group of Clatsops, assisted by some Tillamooks, rolled the rock into the gully behind the peak, thereby costing the Chinooks their legendary symbol of power; Hussey, *Chinook Point,* 24.

[35] Hussey, Historical Values, 32, quoting Henry's journal through Elliott Coues (ed.), *New Light on the Early History of the Greater Northwest...*(New York, 1897), volume II, 753-755.

[36] Hussey, Historical Values, 27, 32-33. The Scouler reference is in F.G. Young (ed.), "Dr. John Scouler's Journal of a Voyage to Northwest America," *Oregon Historical Quarterly* VI (1905), whereas the most accessible reference on Townsend's visit is a 1978 reprint through the University of Nebraska Press of his *Narrative of a Journey across the Rocky Mountains to the Columbia River* (Philadelphia, 1839).

[37] Hussey, Historical Values, 33. He cited a letter from John McLoughlin to Governor and Commission, Fort Vancouver, October 11, 1830. For the reference to Chinook Point in navigation, see Hussey, *Chinook Point*, 16.

[38] Francis Ermatinger, quoted in Jack and Claire Nisbet, "Concomly," HistoryLink.org Essay 10042 in Cyberpedia Library, http://www.historylink.org, accessed August 5, 2013. The quote is in Lois Halliday McDonald (ed.), *Fur Trade Letters of Francis Ermatinger* (Glendale, California: Arthur H. Clark Company, 1980), 140. Another source about the epidemic's severity is one cited by the Nisbets; this being a letter from David Douglas to William Jackson Hooker, October 11, 1830, *Companion to the Botanical Magazine* 2 (1836), 148.

[39] Harrison, Archaeological Survey and Testing, 233. Slacum's "Chart of the Columbia River for 90 miles from its mouth," is at the Oregon Historical Society in Portland, and several other repositories. See also Historical Technical Report, Chinook Indian Tribe, Inc., 11 (page 58 of 418) in USDI-Office of Federal Acknowledgment, Summary under the Criteria and Evidence for Proposed Finding Against Federal Acknowledgment of the Chinook Indian Tribe, Inc. (1997) at http://www.bia.gov/cs/groups/xofa/documents/text/idc-001487.pdf., accessed November 14, 2013.

[40] Harrison, Archaeological Survey and Testing, 234. See also U.S. Coast and Geodetic Survey, *Showing the Progress of the Survey during the Year 1862;* 37th Congress, 2nd Session, House Executive Document 22, Serial 1165 [contains the report for 1858] (Washington, DC: Government Printing Office, 1862), 360, 365-366.

[41] Nathaniel Philbrick, *Sea of Glory: America's Voyage of Discovery, The U.S. Exploring Expedition, 1838-1842* (New York: Viking, 2003), 259-266, 339-345.

[42] P.W. Gillette, "Pioneers of Clatsop: Reminiscences of an old Settler," Portland *Oregonian*, January 18, 1896, reproduced by the Federal Writers Project in March 1934, copy in the Oregon State Library, Salem.

[43] 99 Stat. 496. If single, men could claim 160 acres under this law, if over 21 years of age.

[44] Those numbers appeared in Margaret Riddle, "Donation Land Claim Act, spur to American settlement of Oregon Territory, takes effect September 27, 1850," p. 3, HistoryLink Essay 9501, August 9, 2010, www.historylink.org, accessed August 22, 2013. Of the claims in what became the Washington Territory, roughly a third fell in what are now just two counties—Thurston (234), followed by Pierce (108).

[45] Hussey, *Chinook Point*, 17-18. This was more or less reiterated in more detail by Hussey, Historical Values, 33-34. Their donation land claim is listed as no. 37 in the Washington Territory on a Metsker map of 1927; the adjacent property on their eastern boundary was listed as J.M. McGowan no. 38.

[46] Hussey, Historical Values, 34. He quoted from E. Ruth Rockwood, "Diary of the Reverend George H. Atkinson, D.D., 1847-1858, Part II," *Oregon Historical Quarterly* XL (June 1939), 173. According to the undated "A Military History Sketch of Fort Columbia," (pp. 2-3), Scarborough had "quite a large number of acres of his land cleared by the Indians," resulting in "a considerable fruit farm and orchard," so that strawberries and fruit were raised at the site of Fort Columbia. A more thorough assessment of agricultural potential appeared on page 11; its author identified only melons, corn, and wheat as failures.

[47] Hussey, Historical Values, 35. He quoted from James G. Swan, *The Northwest Coast, or Three Years' Residence in the Washington Territory* (New York, 1857), 101.

[48] Hussey, Historical Values, 32; McLoughlin to Governor and Committee, Fort Vancouver, October 6, 1825, in E.E. Rich, ed., *The Letters of John McLoughlin to the Governor and Committee, First Series, 1825-38* (Publications of the Champlain Society, Hudson's Bay Company Series IV, Toronto, 1941), 4-5. The HBC moved operations to Fort Vancouver in 1825.

[49] An administrator of the Scarborough estate in 1855 assigned a value of $800 to the land claim, and by April 1856 it had been sold for $1250 to Rocque Ducheney (and his wife Mary Rondeau); Hussey, Historical Values, 36, see citations on that page for probate records and the deed record book references.

[50] This is not to say that negotiations with the couple were easy; Hussey, Historical Values, 37, 39-41; summarized in Hussey, *Chinook Point*, 20.

[51] Hussey, Historical Values, 38-41, and summarized in Hussey, *Chinook Point*, 20-22. At the time that the Army planned to erect earthworks on the lower Columbia, they considered Cape Disappointment most important, then a site on the Oregon side as second priority. This turned out to be Point Adams, due to the government already owning land there, instead of Point Ellen per the Corps of Engineers' recommendation in 1862. Chinook Point placed third at this point, due to being privately owned.

[52] Hussey, Historical Values, 41-42; also reiterated in Hussey, *Chinook Point*, 23.

[53] Shawn Lingo, Historic Structure Report, New Mine Casemate, Fort Columbia State Park. Term Project, Historic Preservation Program, School of Architecture and Allied Arts, University of Oregon, November 2008, 2-3. The Chinese population at this locality did not completely disappear once the Army began building fortifications, as it issued two revocable licenses to one Chinese man, Lum On, to operate a laundry at Fort Columbia in 1904, while another, Lee Sam, was in the business of gardening that year, both licenses having been granted by the post commander; A Military Historical Sketch of Fort Columbia, Washington [1909], 5, Record Group 77 (U.S. Army Corps of Engineers, Civil Works Project Files, Box 41, Fort Columbia Historical Property Record Books (1902-07, 1942) National Archives, Pacific Alaska Region, Seattle.

[54] For more on this, see Douglas C. Wilson, et al., Historical Archaeology at the Middle Village: Station Camp/McGowan Site (45PC106), Station Camp Unit, Lewis and Clark National Historical Park, Pacific County, Washington, June 22, 2009, NCRI Report No. 1 issued through Fort Vancouver National Historical Site. Furthermore, a local newspaper reported findings made at Fort Columbia in 1903 of historic period human remains and various relics; Chinook (Washington) *Observer*, April 3, 1903, as cited in Hussey, Historical Values, 37, note 77. Whether subsequent ground disturbance associated with military occupation has destroyed other artifacts associated with early settlement is anyone's guess.

[55] Shawn Lingo, "Chinook Point and Fort Columbia, with a short history of American Coastal Defense," Historic Structure Report, New Mine Casemate, Terminal Project, Historic Preservation Program, University of Oregon, November 2008, 3-4, 7-8; see also Hussey, *Chinook Point*, 25-26. More detailed work of a national scope is Mark A. Bethow (ed.), *American Seacoast Defenses: A Reference Guide* (Houston: CDSG Press, 1999). There is an even larger draft report for all Department of Defense installations ranging in age from 1790 to 1940 produced by R. Christopher Goodwin, et al., aimed at a national historic context [statement] for the Baltimore District of the U.S. Army Corps of Engineers, see especially volume 2, Property Types, March 1994, copy at the Washington State Parks office in Olympia. Probably of greater direct value in contextualizing coastal defense properties in the state parks of Washington is David M. Hansen, Never Finished: The National Coast Defense Program in Washington State, June 1997, copy in the National Park Service office, Seattle. A complementary study produced on the west coast that focused on standard plans for military installations is Paul Chattey, et al., Context Study of the United States Quartermaster General Standardized Plans, 1866- 1942, for the U.S. Army Environmental Center, Environmental Compliance Division, November 1997, copy at the Washington State Parks office in Olympia.

[56] The figure is in Hussey, *Chinook Point*, 25; parcels were described in Hussey, "Historical Values," 43-44.

[57] Joseph Schafer, "Documents Relative to Warre and Vavasour's Military Reconnaissance," *Oregon Historical Quarterly* 40:1 (March 1939), cited in Hussey, "Historical Values," 33. The pair recommended permanent batteries be built at Cape Disappointment and Tongue Point.

[58] Historic Preservation Program, Resources Development Division, Washington State Parks and Recreation Commission, Fort Columbia State Park, Cultural Landscape Report, Analysis and Recommendations, June 2001, 3-4.

[59] Hansen, Never Finished, 10-11. The so-called "Endicott Report" was titled *Report of the Board on Fortifications or other Defenses Appointed by the President of the United States under the Provisions of the Act of Congress Approved March 3, 1885*, House Executive Document No. 49, 49th Congress, 1st Session (Washington, DC: Government Printing Office, 1886. Only 3 of the 27 harbors were on the west coast (San Francisco Bay, Columbia River, and San Diego); Puget Sound was added to the program in 1894.

[60] Hansen, Never Finished, 11.

[61] Hansen, Never Finished, 11-12.

[62] Lingo, Historic Structure Report, 7, citing Marshall Hanft, *Fort Stevens: Oregon's Defender of the River of the West* (Salem: Oregon State Parks and Recreation Branch, 1980), 135. The Board of Engineers consisted of G.H. Mendell, Henry L. Abbott, Harry M. Robert, Peter C. Hains, and G.L. Gillespie, which reported to the Secretary of War on April 20, 1895; A Military History Sketch of Fort Columbia, Washington, [1909], 5, op. cit., copy at the Washington State Parks office in Olympia. Fisk also used "mimeographs," or documents meant to update field engineers on new practices or equipment; Hansen, Never Finished, 12.

[63] Hansen, Never Finished, 8-10. More detail about the nomenclature of coastal artillery cannon, carriages, and batteries of the period is in Berhow (ed.), *American Seacoast Defenses*, 150-161.

[64] Hussey, *Chinook Point*, 25; "Battery Crenshaw," http://fortwiki.com/Battery_Crenshaw, accessed October 29, 2013.

[65] Lingo, Historic Structure Report, 10; and "Submarine mines in United States harbor defense," http://en.wikipedia.org, accessed October 29, 2013. A guide to Army controlled mines of the period is also in Berhow, *American Seacoast Defenses*, 105-149.

[66] Hussey, *Chinook Point*, 24; Hussey, "Historical Values," 43. According to the Army's record book (A Military Historical Sketch of Fort Columbia, 8), the wharf cost $10,372 and measured 50 by 94 feet, with the approach being 20 by 1928 feet, with the falsework piling and wood floors measuring 3 by 12 feet. Although Hussey mentioned a railroad at this stage, the Columbia Valley Railroad, a narrow gauge short line linking Megler (a boat landing located across from Astoria) with Nahcotta on the Long Beach Peninsula, did not

apply for permission to cross the post and dig a tunnel until 1907; A Military Historical Sketch, 9.

[67] Hussey, "Historical Values," 43; "Battery Ord," http://fortwiki.com/Battery_Ord, accessed October 29, 2013. The project still lacked a steel cover on the battery's observation station, as well as electric wiring and lamps.

[68] Hussey, "Historical Values," 35. He drew this from both a local account by a man named Williams, who wrote an account titled *Chinook By the Sea* and thus also located the vanished Scarborough barn to be some 60 yards west of the house, but a War Department map of the area in 1862 as well.

[69] Hussey, "Historical Values," 43; Lingo, Historic Structure Report, 14.

[70] "Battery Murphy," and "Battery Crenshaw," both http://www.fortwiki.com, accessed October 29, 2013. Hussey's accounts provide only the barest details of both batteries. The fixed guns were mounted on balanced pillar carriages, which permitted the gun to be kept hidden behind a low parapet until needed for service, when it could be elevated on a pillar using a racheting mechanism; August Gene Grulich and David M. Hansen, et al., Coast Defense Component, Washington State Parks Historic Properties Condition Assessment, Volume Six, Fort Columbia and Fort Canby, 1997, Battery Crenshaw narrative.

[71] A Military Historical Sketch, 6. Battery Murphy and two of the three gun emplacements in Battery Crenshaw had been completed by June 29, 1900, but Crenshaw's third gun and the power plants came afterward.

[72] Hussey, *Chinook Point*, 26.

[73] Hussey, "Historical Values," 43-44. The 33 acre parcel was obtained by Executive Order of May 8, 1899, whereas the deed dated July 31, 1899 came in consideration for $212.60 paid by the Army to NPRR; reference in Pacific County Deed Record Book No. 34, MS, 209-210, as cited by Hussey, "Historical Values," note 101.

[74] An allotment of $21,651 paid for the water and circulation systems; Q.M.C.O. 176678, October 1, 1902.

[75] Chattey, et al., Context Study, 38-39. The number did not include those in the National Guard, a body formed during the Spanish American War from what had been often poorly funded and equipped state militias.

[76] Hussey, *Chinook Point*, 26; Hussey, "Historical Values," 45. He referenced the staffing figure as coming from Edward S. Meany, *History of the State of Washington* (New York, 1937), 342.

[77] Goodwin, et al., National Historic Context, 40.

[78] At $32,915, the barracks cost more than the next most expensive structures (the hospital and a duplex for officer's quarters) combined; A Military Historical Sketch, 6-7.

[79] A Military Historical Sketch, 7-8. See also in the same package of documents the attached sheets for buildings 16-28.

[80] Lingo, Historic Structure Report, 7; Chattey, et al., Context Study, 39. To some extent this is also true with Fort Vancouver. As with many of the so-called "styles" in the nineteenth and early twentieth century United States, the American derivations of earlier English types and often bear little resemblance to eighteenth century predecessors. For a short summary of Queen Anne's more elaborate expression, see John J.G. Blumenson, *Identifying American Architecture: A Pictorial Guide to Styles and Terms, 1600-1945* (Walnut Creek, California: Altamira, 1995), 62-63. Architectural styles by their nature are imprecise, as designers usually took inspiration (or in many cases, copied) from preceding styles. The Queen Anne style, for example, borrowed elements of earlier Georgian and Federal styles; Chattey, et al., Context Study, 31-33.

[81] Historic Preservation Program, Cultural Landscape Report, 5.

[82] Goodwin, et al., National Historic Context, 69-71; Paul Chattey and Terri Taylor, Fort Lewis Garrison Historic District, nomination to the National Register of Historic Places, June 2003, Section 8, 15-16.

[83] Chattey, et al., Context Study, 39. This document provides sources such as Erna Risch, *The Quartermaster Corps: Organization, Supply, and Services,* Vol. 1 (Washington, DC: Office of the Chief of Military History, U.S. Army), 582; and Bethanie C. Grashof, A Study of U.S. Army Family Housing Standardized Plans, Volume 1 (Atlanta: College of Architecture, Georgia Institute of Technology, 1986), 34.

[84] Historic Preservation Program, Cultural Landscape Report, 5; Chattey, et al., Context Study, 39-40.

[85] Hansen, Never Finished, 39; Grulich and Hansen, Fort Columbia and Fort Canby, narratives for Searchlight 11 and Searchlight 12.

[86] General Order No. 194, W.D. 1904. Initially this applied only to the two guns of the first battery, with the other battery consisting of a single gun named for another lieutenant, William C. Neary, who also died in Cuba. All three guns became known as "Battery Ord" by G.O. No. 20, in 1906.

[87] Ibid., noted in the General History of Fort Columbia [1909], as part of A Military Historical Sketch, 2a-2b.

[88] Grulich and Hansen, Fort Columbia and Fort Canby, narrative for Battery Ord #3. The Buffington-Crozier carriage, which made the gun battery something of a prototype, was removed in favor of a standard M1896 carriage; the M1888MII gun remained.

[89] Hansen, Never Finished, 37; Lingo, Historic Structure Report, 14-15.

[90] Unlike the other command stations of this period, which went to the Sewell-type of construction, the concrete material made the building unusual and reflects the importance of the minefield; Grulich and Hansen, Fort Columbia and Fort Canby, narrative for Mine

Command Station. Details of the dormitory are drawn from Lingo, Historic Structure Report, 15.

[91] Grulich and Hansen, Fort Columbia and Fort Canby, narratives for Battery Ord and the Fire Control Station.

[92] Ibid. See narrative for the Power Plant.

[93] Hansen, Never Finished, 42-43.

[94] Lingo, Historic Structure Report, 15-16.

[95] Lingo, Historic Structure Report, 17.

[96] Hansen, Never Finished, 43-44.

[97] Hansen, Never Finished, 44. He stated that the guns from Battery Crenshaw were also removed at this time, but this was not accomplished until 1920; notes appended to General History of Fort Canby, op. cit., Battery Frank Crenshaw, 4E; see also "Battery Ord," page 1 in http://fortwiki.com/Battery_Ord, accessed October 29, 2013. Additional information is in Grulich and Hansen, Fort Columbia and Fort Canby, narratives for Battery Ord and Battery Ord #3.

[98] This reached a total for all three forts of 127 officers and 2,574 enlisted men by June 1918; "Fort Stevens," p. 2 in http://fortwiki.com/Fort_Stevens, accessed October 29, 2013.

[99] As of July 15, 1908, this was calculated to be a total of about 15 officers and 350 enlisted men; figures for all but Battery Crenshaw are in General History of Fort Columbia, op. cit., 4a-4c.

[100] Hussey, *Chinook Point*, 27; Hussey, "Historical Values," 45-46, citing the Portland *Oregonian* of June 14, 1931, as to the activities of the artillery detachment. All three forts were placed under a caretaking detachment in October 1921, which at first consisted of five officers, one warrant officer, and sixty-one enlisted men. At one point thereafter, the number of enlisted men dropped to forty, while detachments at Fort Canby and Fort Columbia had two men each. Their number began to increase again in 1935; "Fort Stevens," p. 3 in http://fortwiki.com, accessed October 29, 2013.

[101] "Battery Jules Ord," in General History of Fort Columbia, as part of Fort Columbia Record Book no. 1, op. cit. See note 12 for complete citation.

[102] Grulich and Hansen, Fort Columbia and Fort Canby, Battery Ord #3 narrative.

[103] Battery Frank Crenshaw, in General History of Fort Columbia, 4-E; see also "Battery Crenshaw," pp. 1-2, http://fortwiki.com, accessed October 29, 2013. Watervliet is an active arsenal with a museum and has been a National Historic Landmark since 1966.

[104] This did not alter the fact, however, that permanently emplaced guns had greater accuracy than the towed or rail-mounted canon; Hansen, Never Finished, 47.

[105] Building inventory for House Lighting, June 21, 1922, attached to General History of Fort Columbia, in Record Book No. 1, op. cit. The gymnasium (building 25) had been noted as sold and salvaged on the individual sheet for building data and repairs. The post buildings subsequently removed are numbered (in the order given) as 12, 14, 16, 21, 23, 24, and 28.

[106] "Fort Columbia – D1, Chinook Point, Washington," page 4, in http://cdsg.org/HDCRdata/columb.htm., accessed August 5, 2013. The overall highway scheme assumed motorists would take the ferry from Astoria to a landing on the Washington side, this varied depending on the period; a connection between Megler and Naselle (SR 401) was not completed until after World War II. Harrison, in Archaeological Survey and Testing, 33-34, used several sources to piece together a chronology of how the railroad eventually gave way to a slowly improved highway by the time trains stopped on September 10, 1930; he cited Lucille McDonald, *Coast Country: A history of southwest Washington* (Portland: Binfords & Mort, 1966), 103, on the last point.

[107] Berhow, *American Seacoast Defenses*, 12; Hussey, "Historical Values," 46. To place this in some sort of financial perspective, total Quartermaster projects as of December 5, 1941 came to $1.82 billion. Camps, cantonments, and ordnance plants when combined together made up $1.29 billion of this figure, while harbor defenses consumed only $26.5 million; Chattey, et al., Context Study, 65-66.

[108] Hussey, "Historical Values," 46; Building inventory sheet for Barracks (numbered as T-100).

[109] There is some reason to believe that the trio were temporary buildings, given their numbering as T-100, T-110, and T-120 respectively; building data sheets appended to the General History of Fort Columbia, op. cit.

[110] Noted in the Record of Equipment and Condition of Buildings for Fort Columbia, June 30, 1941; appended to the General History of Fort Columbia.

[111] This attack provided Fort Stevens with the distinction of being the only stateside military installation fired on by enemy alien combatants since the War of 1812. The number of shells fired varies (ranging from 9 to 17), depending on which account is cited.

[112] Improved construction techniques removed condensation that had plagued earlier fortification. The battery had its own power source, switchboard, plotting room, latrine, air filtration system, as well as even a drinking fountain; Grulich and Hansen, Fort Columbia and Fort Canby, narrative for Battery 246.

[113] Hansen, Never Finished, 48-49; see also Hussey, "Historical Values," 47. There is additional information in "Battery 246," 1-2, http://fortwiki.com, accessed October 29, 2013.

[114] Lingo, Historic Structure Report, 17; Hansen, Never Finished, 49.

[115] Lingo, Historic Structure Report, 17-20; he cited the U.S. Army, Supplement to Harbor Defense Project, Harbor Defense of the Columbia, Annex D – Underwater Defense, 1944.

[116] Lingo, Historic Structure Report, 20-21. The contemplated change in type of mines undoubtedly led to removal of the mine store house (building 23). Lingo cited the Corps of Engineers, Report of Competed Works, Harbor Defenses of the Columbia, Fort Columbia, Washington, Mine Casemate, Supplemental Report, Part II, September 1, 1945. The conversion to ground mines is also noted as "Underwater Defense Project," in the Fort Columbia Record Book No. 2 (AR 90-50, 4 November 1942), copied with General History of Fort Columbia and Record Book No. 1, see note 12 for full citation.

[117] Lingo, Historic Structure Report, 21. The Army planned another addition, for a switchboard, but this component was not undertaken due to the war's end in August 1945. During the war, the old casemate had served as a plotting room once the Army remodeled it and added gas-proofing equipment that diminished the dampness of this structure. Other changes during the war took place at the mine command station atop Scarborough Hill, as the lower floor was expanded to the rear and covered over; a covered entrance was also built.

[118] When not in use, a set of six panel doors could be utilized to close the front of each shelter; Grulich and Hansen, Fort Columbia and Fort Canby, narratives for Searchlight 11 and Searchlight 12.

[119] Grulich and Hansen, Fort Columbia and Fort Canby, narrative for the SL Controller Booth. "Searchlight Numbers and Location," in Fort Columbia Record Book No. 2, op. cit., 5-6; see also project for searchlight installation in the Artillery District of the Columbia (11A and 11B in Record Book No. 2) for details of the fixed lights with locations described.

[120] Buildings 15, 20, 26, and 30, which do not appear on the list included as part of Raymond E. Hoyt, et al., Fort Columbia, Chinook, Pacific County, Washington, WAA Registry No. H-Wash-82; Report on Application by Washington State Parks and Recreation Commission for Transfer of Surplus Property for an Historical Monument, Appendix b. The order to dispose of the guns in Battery Murphy came on August 24, 1945. The guns were salvaged on September 14, 1945; "Salvage of Obsolete Armament," in Fort Columbia Record Book No. 2.

[121] Hussey, "Historical Values, 48; the WAA was a temporary branch of the General Services Administration.

[122] Two of the six vintage guns remaining in the world came to Fort Columbia in 1994 from a U.S. Army base in Argentia, Newfoundland.

[123] There is some discrepancy between the count given in the nomination (13) as opposed to current tallies (12) by state parks or park-related websites. The difference is the power plant (1898), built below ground and just east of a road separating two rows of wood-frame buildings. The other 12, with their original building numbers, are: the barracks, #9, (1903), administration building, #4 (1903), double officer's quarters, #2/#3, 1903, Commanding or single officer's quarters, #1, (1903), hospital, #8, (1903), non-commissioned staff quarters, #5/#6, 1903, storehouse, #13, 1903, fire apparatus house, #22, (1905), sergeant first class

quarters, #7, (1903), non-commissioned staff quarters, #18/#19, (1905), guardhouse, #11, (1903) and ordnance storehouse, #20, (1905).

[124] These studies, all previously cited in this paper, are: Goodwin, et al., National Historic Context (1994); Chattey, et al., Context Study of U.S. Quartermaster Plans, (1997); Berhow, et al., *American Seacoast Defenses* (1999); and Hansen, Never Finished (1997).

[125] Cecil McKithan, Chinook Point, Nomination to the National Register of Historic Places, October 10, 1977, Section 7. Apart from identifying contributing resources, this nomination seems to have been undertaken for the purpose of providing boundaries for the national historic landmark designated by the Secretary of the Interior on July 4, 1961. This could account for why the district nomination is very generous, at 286 acres.

[126] Thomas R. Cox, *The Park Builders: A History of State Parks in the Pacific Northwest* (Seattle: University of Washington Press, 1987), 57-78. These difficulties culminated in State Parks Superintendent (of Oregon) Sam Boardman publicly accepting the offer of Beacon Rock (on the Washington side of the Columbia River) as a way to shame the legislature in Olympia into creating a state park there.

[127] Cox, *The Park Builders*, 121-122. This trend has continued, as the total number of units and state park acreage in Washington as of 2002 continued to exceed those of Oregon and Idaho combined; Ney C. Landrum, *The State Park Movement in America: A Critical Review* (Columbia: University of Missouri Press, 2003), 70, 262-265. Washington, however, has lacked the detailed administrative histories produced for Oregon and a few other states, however.

[128] The NPS provided assistance to states with developing their parks until 1960 or so, and this set precedents in the field of historic preservation. It is why John Hussey, a NPS historian who worked from the Region 4 office in San Francisco, did so much documentation work throughout the western states and even in Canada.

[129] The date is in Hussey, *Chinook Point*, 30.

[130] Barbette is the most common type of gun carriage, where the gun can recoil on the plane from which it is fired, by utilizing machined sliding surfaces. The gun remains visible after firing; U.S. [Army] Adjutant General's Office, *Modern Guns and Mortars* (Washington, DC: Government Printing Office, 1895).

[131] "Fort Columbia State Park, Heritage Site" brochure printed by the Washington State Parks and Recreation Commission, 2010; "Fort Columbia State Park," http://en.wikipedia.org/wiki/Fort_Columbia_State_Park, accessed October 29, 2013. More changes are expected after initial stabilization work at the new mine casemate; Lingo, Historic Structure Report, 21. Stabilization measures for other fortifications at Fort Columbia are listed in Grulich and Hansen, Fort Columbia and Fort Canby.

[132] This is at least according to the direction given in the National Register Bulletin 16A, *How to Complete the National Register Registration Form*. As Cox noted in *The Park Builders* (235-236), Washington state parks are largely unstudied as a system, though there is material on individual units, particularly those developed by the Civilian Conservation

Corps with NPS assistance during the 1930s. Post war development is perhaps an enticing subject for scholars, as it likely is elsewhere.

[133] Ruth Kirk and Richard D. Dougherty, *Archaeology in Washington* (Seattle: University of Washington Press, 2007), 75-82.

[134] T.C. Elliott, "The Journal of the Ship Ruby," *Oregon Historical Quarterly* 28 (September 1927), 258-280; cited in John A. Hussey, A Short History of Fort Canby, as excerpted from Hussey, Portion of Fort Canby Military Reservation, Near Ilwaco, Pacific County, Washington, report on application by Washington State Parks and Recreation Commission for transfer of surplus Federal properties for a historical monument, June 1957, Region Four, National Park Service report, 45 pages.

[135] The village is identified as "NOKSKA' ITM ITHLS" in the nomination by David Hansen that resulted in listing Cape Disappointment Historic District in 1975. Subsequent work by Michael Silverstein, however, names the site as walmlm ("rotten wood"), see Silverstein, "Chinookans of the Lower Columbia," in Wayne Suttles (ed.) *Handbook of North American Indians*: *Volume 7, Northwest Coast* (Washington, DC: Smithsonian Institution Press, 1990), 534.

[136] William G. Loy, et al., "Epidemics, Wars, and Reservations," in *Atlas of Oregon* (Eugene: University of Oregon Press, 2001), 16-17. The dates vary somewhat Brian Harrison cites in his "Ethnographic and Historical Context," in Douglas C. Wilson, et al., Historical Archaeology of the Middle Village-Station Camp/McGowan Site (45PC106), Station Camp Unit, Lewis and Clark National Park, Pacific County, Washington, June 22, 2009, 12.

[137] The name "Chinook" is derived from "Tainuk," given by their Chehalis neighbors to the north, a group from the mutually unintelligible Salish language family.

[138] Silverstein, "Chinooks," 533.

[139] Brian Harrison, "Environmental Context," in Wilson, et al., 7. See also Rick Minor and Wendy C. Grant, "Earthquake-Induced Subsidence and Burial of Late Holocene Archaeological Sites, Northern Oregon Coast," *American Antiquity* 61:4 (1996), 772-781.

[140] Harrison, "Ethnographic and Historical Context," in Wilson, et al., 18-20. The former name is from Verne F. Ray, "Lower Chinook Ethnographic Notes," *University of Washington Publications in Anthropology* 7:2 (May 1938), 39; a map appears on page 37. A translation of the second name appears in Silverstein, "Chinooks," 534; it has a somewhat similar spelling in work by Franz Boas and Edward S. Curtis, each of whom assert this to be the Chinook name. See also David Ellis, with Henry Zenk and Robert Boyd, "Lower Chinookan Villages: named sites from contemporary observers or multiple sources," [n.d.], 4, or village #15, internet source?

[141] Harrison, "Archaeological Context," in Wilson, et al., 32. Referencing, R.E. Greengo's testing of the site in 1959, it fit both categories of a shellfish gathering camp and a hunting/fishing camp in the functional typology presented in Rick Minor's 1983 dissertation at the University of Oregon (page 81), as presented by Harrison, op. cit., 33-34. A more complete list of artifacts at the Fishing Rocks site (45PC35) is in Harrison,

Archaeological Survey and Testing of the Proposed Station Camp Interpretive Park, McGowan, Washington, report to the National Park Service (2005), 36.

[142] Harrison, "Archaeological Context," in Wilson, et al., 35; also USDI-NPS, Lower Columbia Lewis and Clark Sites, Boundary Study (2004), 28. The latter referenced an inventory by Archaeological Investigations Northwest, Inc. in 2002 (see appendix G).

[143]Melissa Darby, "The Intensification of Wapato (*Sagittoria latifolia*) by the Chinookan People of the Lower Columbia River," in Douglas Deur and Nancy J. Turner (eds.), *Keeping It Living: Traditions of Plant Use and Cultivation in the Northwest Coast of North America* (Seattle: University of Washington Press, 2005), 194-201. See also a summary in Kirk and Dougherty, *Archaeology in Washington*, 79.

[144] Rick Rubin, "The People of Olden Times," in Dick Pintarich, *Great and Minor Moments in Oregon History* (Portland: New Oregon, 2003), 20; excerpted from a larger work by Rubin, *Naked Against the Rain: The People of the Lower Columbia River, 1770-1830* (Portland: Far Shore Press, 1999).

[145] Harrison, "Archaeological Context," in Wilson, et al., 34. The cultural sequence here is that presented by Rick Minor in his Aboriginal Settlement and Subsistence at the Mouth of the Columbia, Ph.D. dissertation at the University of Oregon, 1983.

[146] C. Melvin Aikens, et al., *Oregon Archaeology* (Corvallis: Oregon State University Press, 2011), 218-19. Minor adds an "ethnographic phase" of 1775 to 1851 to the Ilwaco 2 sub-phase; cited in Harrison, "Archaeological Context," in Wilson, et al., 34.

[147] Franz Boas presented a first contact narrative from the Indian perspective in his volume on Chinookan peoples, but it is unclear which explorer they describe; Boas, *Chinook Texts*, U.S. Bureau of Ethnology, Bulletin no. 20 (Washington, DC: Government Printing Office, 1894), 277-278.

[148] Hussey, A Short History of Fort Canby, 7.

[149] Charles H. Carey, *History of Oregon* (Portland: Pioneer Historical Publishing, 1922), quoting Heceta, 77-78.

[150] Other historians contend that Heceta recognized "Bahia de la Asumpcion" and "Entrada de [H]Ezeta" as the river mouth, but his crew were weak and suffering the effects of scurvy; "Cape Disappointment, Washington," http://columbiariverimages.com/Regions/Places/cape_disappointment.html., accessed March 25, 2013. Evidently Heceta may have been unaware that spruce tips brewed into beer could alleviate the symptoms of scurvy, as was known by his contemporary, James Cook, who missed both the river's mouth and the Strait of Juan de Fuca on his voyage of March 1778, when Cook saw Yaquina Bay and Cape Perpetua on the Oregon coast. Another has expressed the belief that Heceta's crew suffered from smallpox, with their three landfalls resulting in the first epidemic to strike Indians of the region; Robert Boyd, *The Coming of the Spirit of Pestilence: Introduced Infectious Diseases and Population Decline Among Northwest Coast Indians, 1774-1874* (Seattle: University of Washington Press, 1999).

[151] Carey, *History of Oregon,* quoting from Meares (*Voyages Made in the Years 1788 and 1789 from China to the Northwest Coast of America)*, 107. The failure to find the great "River of the West" has been attributed to a preconceived doubt about the reliability of the Heceta account and a justifiable dread of the Columbia Bar. The fact that his ship flew Portuguese colors might furnish another reason, in that Meares engaged in trade with China despite the Crown's monopoly given to the British East India Company.

[152] Carey, *History of Oregon*, 21; Vancouver wrote "sea had now changed from its natural to river colored water; the probable consequence of some streams falling into the bay, or into the ocean to the north of it through the low land. Not considering this opening worthy of more attention, I continued our pursuit to the N.W...." *Voyage of Discovery to the North Pacific Ocean and Round the World, In Which the Coast of Northwest America has been carefully examined and accurately surveyed* [1790-95] Volume I, 209-210 [New York: Da Capo Press, 1967]. The bar was thus open, but passed unrecognized.

[153] Raymond E. Hoyt, et al., Report on Application by Washington State Parks and Recreation Commission for Transfer of Surplus Properties for an Historical Monument, December 1949, WAA Registry No. H-Wash-82, 21.

[154] William S. Hanable, English fur trader John Meares named Cape Disappointment on July 6, 1788, HistoryLink.org essay, December 2, 2003, http://www.historylink.org, accessed March 27, 2013. Hanable referenced L.W. Wright, *Lewis and Dryden's Maritime History of the Pacific Northwest* (Seattle: Lewis and Dryden Printing, 1895) as his source. See also Carey, *History of Oregon*, 140-141, quoting from Gray's log and the journal by crew member John Boit.

[155] Gray told the Spanish commandant of Nootka about his discovery and even sketched a map for him, something later conveyed to Vancouver; Eric Jay Dolin, *Fur, Fortune and Empire: The Epic History of the Fur Trade in America* (New York: W.W. Norton, 2010), 154.

[156] Broughton also named Youngs Bay, Tongue Point, Chinook Point, Grays Bay, Puget Island, as well as the great snowcapped peaks Rainier, St. Helens, and Hood. The latter were named for members of the admiralty or gentry.

[157] According to Carey, *History of Oregon*, Vancouver's account was indicative of how British authorities chose to consider how discovery of the river might shape the claim on it by the various European nation states: *"The discovery of this river we were given to understand is claimed by the Spaniards, who call it Entrada de [He]Ceta, after the commander of the vessel who is said to be its first discoverer, but who never entered it; he places it at 46 degrees north latitude. It is the same opening that Mr. Gray stated to us in the spring, had been nine days off the former year, but could not get in, in consequence of the outsetting current. That in the course of the late summer he had entered the river, or rather the sound, and had named it after the ship he then commanded. The extent Mr. Gray became acquainted not more than fifteen miles from Cape Disappointment, though according to Mr. Gray's sketch it measures thirty-six miles. By his calculation its entrance lies in latitude 46 degrees 10 minutes, differing materially in these respects from our observations."* Vancouver, *Voyages*, Volume II, 74.

[158] Hoyt, et al., Report on Application, 22; see also note 51 on that page.

[159] Hussey, A Short History of Fort Canby, 9; he cited Lucile McDonald, "State seeks to acquire Fort Canby Area for Park Use," Seattle *Sunday Times*, June 24, 1956, Magazine section 2; and T.C. Elliott, "The Journal of the Ship *Ruby*," *Oregon Historical Quarterly* 28 (September 1927), 258-280.

[160] Ibid.

[161] Hussey, A Short History of Fort Canby, 8. Other visits of 1797, 1798, 1801, 1802, 1803, 1804, and 1805 are noted in W.H. Gray, *A History of Oregon, 1792-1849* (Portland: Harris and Holman, 1870), 14.

[162] John Harrison, "Ship Wrecks," Northwest Power and Conservation Council, October 31, 2008, posted on http://www.nwcouncil.org/history/shipwrecks accessed April 4, 2013. The *Hazard* itself was not affected, returning to the river in 1801.

[163] Seamus Coven, *Lewis and Clark and the Route to the Pacific* (New York: Chelsea House, 1991), 13-27; Carey, *History of Oregon*, 167-168; Bernard de Voto (ed.), Introduction in *The Journals of Lewis and Clark* (Boston: Houghton Mifflin, 1953), xxxvii-lii. The purpose and legacy of the expedition is both complex and subject to multiple interpretations; see, for example, Kris Fresonke and Mark Spence, *Legacies, Memories and New Perspectives* (Berkeley: University of California Press, 2004).

[164] Hussey, A Short History of Fort Canby, 10; DeVoto, *Journals*, 286-288.

[165] Ibid.

[166] Controversy still swirls around whether the American brig *Lydia* entered the Columbia River during the party's stay at Fort Clatsop (as DeVoto has it in a note, see *Journals*, 293), or in April, after they departed; David Lavender, *The Way to the Westward Sea: Lewis and Clark Across the Continent* (New York: Doubleday, 1988), 398-400. It is also presented in Dolin, *Fur, Fortune and Empire*, 367-368.

[167]Dolin, *Fur, Fortune and Empire*, 176-177.

[168]Carey, *History of Oregon*, 211-212. He described the debacle in the greatest detail in comparison to other accounts and included the burial. Dolin, in *Fur, Fortune and Empire*, provided a succinct account, but without mention of the Hawaiians, whereas a website on Cape Disappointment links the name with this event, and is presumably derived from Larry J. Weathers, "Place Names of Pacific County," *Sou'Wester* centennial edition, 24:1-4 (1989); http://columbiariverimages.com/Region/Places/cape_disappointment, on page 9, accessed April 11, 2013. Hussey (in A Short History of Fort Canby, 11) made the somewhat unsubstantiated claim through his source Lucile McDonald, "State Seeks to Acquire Fort Canby..." that the ship's captain Jonathon Thorn wanted the Cape Disappointment vicinity as the site for Astoria. No other source mentions this, and, in any event, this decision was that of the company partners, who surveyed the south side of the river and selected the present site for Astoria.

[169]Carey, *History of Oregon*, 230. Men from the *Tonquin* had previously established "Astoria" on Smith Point, or "Point George."

[170] Gray, *History of Oregon*, 15-19. These were: the *Vancouver, Pearl,* and *Lydia* (1806); *Hamilton* and *Hazard* (1807); *Derby* and *Guatimozin* (1808); *Pearl* and *Vancouver* (1809); *Albatross* (1810); *Tonquin* (1811); *Beaver* (1812); and *Albatross* (1813).

[171]Hussey, A Short History of Fort Canby, 11. He cited T.C. Elliott, "An Event of One Hundred Years Ago," *Oregon Historical Quarterly* 19 (September 1918), 181-187; and McDonald, "State Seeks to Acquire Fort Canby..." 2, even though the entire episode merited nothing more than a footnote in Carey, *History of Oregon*, 247, who omits mention of Cape Disappointment in referencing the American captain's actions. He stated only that the captain (James Biddle) posted "*some sort of a notice upon the river bank, making claim apparently to more than mere property [Fort George] in question.*" Carey does not mention the actions by the British at Cape Disappointment. Fort George went back to the Americans as a condition of the peace treaty of 1815. Gray, *History of Oregon*, 20, quotes the British order restoring Fort George to the United States; F. Hickey, Captain of the HMS *Blossom* to J. Keith of the Northwest Company on October 6, 1818. The McDonald account of these events is also summarized in David P. Hansen's nomination of the Cape Disappointment Historic District, listed August 15, 1975, section 8, page 2.

[172]The Northwest Company, initially a rival to the Hudson's Bay Company, still controlled Fort George until 1821, when it merged with the HBC; Gail Wells and Dawn Anzinger, *Lewis and Clark Meet Oregon's Forests: Lessons from Dynamic Nature* (Portland: Oregon Forest Resources Institute, 2001), 69.

[173]Hussey, A Short History of Fort Canby, 14. He quoted McDonald, "State Seeks to Acquire Fort Canby," on Indian use of Cape Disappointment in 1841 (as a fishing camp); Cassandra Tate, Cape Disappointment State Park, 2-3.

[174]Hussey, A Short History of Fort Canby, 12; Carey, *History of Oregon*, 413 note 6. The total number of wrecks of a 220 year period exceeded 2,000 with 700 fatalities. Navigational guidebooks have justly ranked the Columbia River Bar as the third most dangerous in the world; Nathaniel Philbrick, *Sea of Glory: America's Voyage of Discovery, The U.S. Exploring Expedition, 1838-1842* (New York: Viking, 2003), 263-264.

[175]Philbrick, *Sea of Glory*, 272-275. Dean also presented the captain of the *Peacock* with orders from Wilkes to survey the river. Much of the expedition's scientific collection was lost aboard the *Peacock* when it ran aground on the shoals.

[176]Hussey, A Short History of Fort Canby," 13-14. Sanler supposedly supported himself by operating a small vessel carrying freight on the lower river and resided midway between the future site of Ilwaco and the cape, at "Saul's Point," likely within the present state park. Hussey quoted McDonald on these details in A Short History, 14 note 15. As for the ovens, these are mentioned in the *Report of the Superintendent of the U.S. Coast Survey, Showing the Progress of the Survey during the year 1862;* 37th Congress, 2nd Session, House Executive Document 22, Serial 1165 [contains report for 1858], 358.

[177]Dubious in the sense that aboriginal title to Cape Disappointment had not been cleared, nor was there any recognized right by the Americans to the cape, though retroactive laws (such as the Donation Land Claim Act passed by Congress in 1850 or those related to

preemption) since title was not vested in the United States until after the treaty negotiations with Great Britain had been ratified by the U.S. Senate. The date of Ogden's "purchase" is in Hussey, A Short History of Fort Canby, 13, as derived from T.C. Elliott, "Peter Skene Ogden, Fur Trader," *Oregon Historical Quarterly* 11 (September 1910), 261-262.

[178]Dolin, *Furs, Fortune and Empire*, 285. HBC operations at Fort Vancouver faded after 1846, especially once the United States established a military post called "Camp Columbia" immediately adjacent to the company's fort in 1849. The HBC had 200 employees at Fort Vancouver in 1846, with Fort Victoria on Vancouver Island a distant second at 35, but the former dropped precipitously by the time of the California Gold Rush. Their move north officially came in 1859; Douglas Deur, *An Ethnohistorical Overview of Groups with Ties to Fort Vancouver National Historical Site* (Seattle: USDI-NPS, 2011), 126-127, 138-139.

[179]Philbrick, *Sea of Glory*, 259-266.

[180]USDI-NPS, *Lower Columbia Lewis and Clark Sites, Boundary Study* (Seattle: Government Printing Office, 2004), 77.

[181]Harrison, "Ethnographic and Historical Context," in Wilson, et al., 24.

[182]Hussey, A Short History of Fort Canby, 14-15, quoted for the most part from McDonald, "State Seeks to Acquire Historic Fort Canby..." 2.

[183]T.C. Elliott, "Peter Skene Ogden..." as cited in Hussey, A Short History of Fort Canby, 14 in note 15. The total settlement for 14 parcels located south of the demarcated boundary line at 49 degrees north latitude reached $650,000; Carey, *History of Oregon*, 279.

[184]Hussey, A Short History of Fort Canby, 15; see also Report to accompany S. 290, 45th Cong., 2nd Sess, House of Representatives report no. 197; in Index to the House legislation for the sessions of the 45th Congress (Washington, DC: Government Printing Office, 1878), part of the letter to the Secretary of War.

[185]In an odd contravention of past procedure, there was no requirement to first clear the land of aboriginal title, something usually done by treaty. American officials pursued what became the unratified Tansy Point treaty of 1851 on the Oregon side of the river in part of rectify this oversight.

[186]Hussey, A Short History of Fort Canby, 16. An example of the recording of such sales was White's affidavit for the purchase of a block for $500 by Wilson Blain on April 20, 1850, Mss 1277, Elijah White Papers, Oregon Historical Society. White's early career was outlined by Rowley, Dictionary of Oregon Biography, February 21, 1941, Mss 2821, Box 2, OHS.

[187]House Report No. 197. Hansen in the Cape Disappointment Historic District nomination has a date of February 26; see section 8, page 3; also Hussey, A Short History of Fort Canby, 16-17.

[188]Harrison, "Ethnographic and Historical Context," 24; and Hussey, A Short History of Fort Canby, 16. Astoria was platted after Lexington (now part of Warrenton) in 1854 and incorporated in 1856.

[189]House Report No. 197.

[190]*Report of the Superintendent, U.S. Coast Survey*, 357-367.

[191] Hussey, A Short History of Fort Canby, 17. The House report, however, placed the reservation at 620 acres. No plat was filed until 1859, when an additional reservation for a lighthouse was made within the military reservation.

[192] Hussey, A Short History of Fort Canby, 16-17; derived from Leslie M. Scott, *History of the Oregon Country* (Cambridge: Harvard University Press, 1924), volume I, 237. The Army report of 1849 is General Persifer F. Smith, Commander of Pacific Division, U.S.A., in 31st Cong., 1st Sess., Senate Executive Document 47, Part I, 75-108. The Chief of Army Engineers report appeared in 37th Cong., 2nd Sess., House Executive Report 86, 421.

[193]USDI-NPS, Fort Clatsop National Memorial Final Boundary Study (Seattle: Government Printing Office, 2006), 28.

[194] Hussey, A Short History of Fort Canby, 21.

[195]Hussey, A Short History of Fort Canby, 22; he cited letters between R.E. DeRussy and G.W. Elliot, July 4, 1863, as well as one sent by J.G. Totten to R.E. DeRussy, July 10, 1863, both in the Corps of Engineers, Portland District Defenses, Mouth of the Columbia River Letterbook, microfilm copy, Oregon Historical Society, Portland.

[196]Mark A. Berhow, *American Seacoast Defenses: A Reference Guide* (Houston: CDSG Press, 1999), 8.

[197]David M. Hansen, Never Finished: The National Coast Defense Program in Washington State, Context Statement for the Coast Defense Component, Washington State Parks Historic Properties Condition Assessment, June 1997, 7-8.

[198]Portland *Oregonian*, February 20, 1875, and Evan Miles, Military History of Fort Canby, a manuscript compiled between December 21, 1874, and July 13, 1909, cited in Hussey, A Short History of Fort Canby, 25.

[199]Hansen, Never Finished, 11-12. The so-called "Endicott Report" is titled *Report of the Board of Fortifications or Other Defenses Appointed by the President of the United States under the Provisions of the Act of Congress Approved March 3, 1885,* House Executive Document 49, 49th Cong., 1st Sess. (Washington, DC: Government Printing Office, 1886).

[200]Hansen, Never Finished, 8-10.

[201]Hussey, A Short History of Fort Canby, 26; quoted from 42nd Cong., 2nd Sess., House Executive Document 1, Part II, 71.

[202]R.L. Polk Company, *Astoria Directory*, volume 3 (1904), 232; the gun conversion was described in Hussey, A Short History of Fort Canby, 27.

[203]Hussey, A Short History of Fort Canby, 28-29; reiterated in Hansen, Cape Disappointment Historic District nomination, section 8, page 5. This point is also made in Berhow, *American Seacoast Defenses,* 11, and Hansen, Never Finished, 42.

[204]Hussey, A Short History of Fort Canby, 30; Hansen, Never Finished, 44.

[205]This evidently spelled the end for the Lifesaving Station and boiler house on Baker Bay, as indicated by Hussey, A Short History of Fort Canby, 28-29. He cited the Portland *Oregonian* of June 14, 1931, and the Ilwaco *Tribune* of June 24, 1949, among his sources.

[206]Berhow, *American Seacoast Defenses*, 10; Hansen, Never Finished, 39. The Taft Board's report is titled *Report of the National Coast Defense Board...on the Coast Defense of the United States and Insular Possessions*, Senate Document 248, 59th Cong., 1st Sess. (Washington, DC: Government Printing Office, 1906).

[207]Hansen, Never Finished, 44. He cited Marshall Hanft, *Fort Stevens: Oregon's Defender at the River of the West* (Salem: Oregon State Parks and Recreation Branch, 1980), 231.

[208]Hussey, A Short History of Fort Canby, 30; Hansen, Never Finished, 46. The National Guard came about during the Spanish-American War when chronically underfunded state militias received federal aid in return for more control by federal military authorities.

[209]Hansen, Never Finished, 45-46. This move largely stemmed from publication of *Report of the Board of Review of the War Department to the Secretary of War(November 26, 1915) on the Coast Defenses of the United States, the Panama Canal, and the Insular Possessions*, House Document 49, 64th Cong., 1st Sess. (Washington, DC: Government Printing Office, 1916).

[210]Hussey, A Short History of Fort Canby, 31; Hansen, Never Finished, 47.

[211]These covered enrollment periods 5, 6, and 7, respectively, and involved companies 2645 (period 5), 938 (period 6), and 3225 (period 7). Information extracted from an on-line CCC Legacy database, with lists from Oregon and Washington augmented by compiler Gerald W. Williams, CCC Camps in the Pacific Northwest, 1933-42, edition of October 27, 1987, author's files.

[212]Donella Lucero, Washington State Parks, e-mail message to Douglas Deur, April 9, 2013.

[213]The Sam Grina drowning was reported in the Oakland (California) *Tribune* on April 19, 1936, 3; while the freeing of three enrollees appeared on the front page of the same paper on April 30.

[214]Berhow, *American Seacoast Defenses*, 12, also note the citations, 16; Hussey, A Short History of Fort Canby, 31; Hansen, Never Finished, 48.

[215]Hansen, Never Finished, 49, cited Hanft, *Fort Stevens*, 266.

[216]Historic Property Condition Assessments for Fort Canby, in August Gene Grulich, et al., Coast Defense Component, Washington State Parks Historic Properties Condition Assessment, Volume 6: Fort Columbia and Fort Canby, 1997, file copy at Washington State Parks office in Olympia.

[217]Hussey, A Short History of Fort Canby, 32-33.

[218]Portland *Oregonian* March 29, 1947, and Seattle *Sunday Times* October 19, 1947, cited in Hussey, A Short History of Fort Canby, 34.

[219]Hansen, Cape Disappointment Historic District, section 7, page 2. The acreage is in Hussey, A Short History of Fort Canby, 34. A list of drawings with dates from 1900 to 1946 provides some idea of the fort's infrastructure at the end of World War II; it is among other files for Cape Disappointment State Park at the Washington State Parks office in Olympia.

[220]Hussey, A Short History of Fort Canby, 28; Hansen, Never Finished, 50.

[221]Hussey, A Short History of Fort Canby, 18-19.

[222]*Report of the Superintendent of the U.S. Coast Survey,*[1858], 359.

[223]Its location evidently stemmed from a recommendation made by Lieutenant William McArthur, Captain of the Coast Survey vessel *Ewing* in 1846; Donella Lucero and Nancy L. Hobbs, *Lighthouses of the Cape* (Ilwaco: the authors, 2009), 2. This contradicts Hussey (A Short History of Fort Canby, 17), who stated the location was chosen in 1850.

[224]Hansen, Cape Disappointment Historic District nomination, section 8, page 3; and Hussey, A Short History of Fort Canby, 19. A shift toward purchase and installation of Fresnel lenses for the lantern is likely explained by formation of the U.S. Lighthouse Board, which oversaw construction of the first towers on the west coast. Evidently the original plans for this lighthouse were submitted and approved without reference to a Fresnel lens, something that the board had installed in all lighthouses by the start of the Civil War; USDI-NPS, *Lighthouses: An Administrative History* in http://www.cr.nps.gov/maritime/light/admin, accessed January 16, 2013.

[225]Lucero and Hobbs, *Lighthouses of the Cape*, 3-4.

[226]Dimensions of the lens were 140 inches high and 77 inches in diameter, illuminated by a five-wick oil system; Lucero and Hobbs, *Lighthouses of the Cape*, 11-12.

[227]Lucero and Hobbs, *Lighthouses of the Cape*, 18-19. The residence no longer exists.

[228]Lucero and Hobbs, *Lighthouses of the Cape*, 4-15.

[229]As stated in the USDI-NPS, Summary Context for NHL Nominations (n.d., 1): "*The Fresnel lens, developed by August Fresnel, a French physicist, consists of a collection of glass prisms held together in a beehive shape by a brass frame. The light rays are bent by the prisms into one horizontal sheet of light which in a fixed lens shows a steady light and in a revolving lens, produces a flash or characteristic. These lenses were produced in seven standard orders or*

sizes, numbered one through six. Orders one through three were used in larger coastal lights, while four through six were used in harbor or bay lights."

[230]Lucero and Hobbs, *Lighthouses of the Cape*, 2-9.

[231]Hussey, A Short History of Fort Canby, 18.

[232]Lucero and Hobbs, *Lighthouses on the Cape*, 23-29. For more detail about this lighthouse, see University of Oregon Historic Preservation Program, North Head Lighthouse Condition Assessment, June 2008,which has an 82 page report as part of that summer's Pacific Northwest Preservation Field School.

[233]Ed Nelson, "History of the Coast Guard in Clatsop County," in *Cum-tux* 14:3 (1994), 2-9.

[234]The lightships patrolling the river bar included the *Columbia River Lightship No. 88* that was superseded by *Columbia River No. 604*, which retired in 1979.

[235]David H. Grover, *The Unforgiving Coast: Maritime Disasters of the Pacific Northwest* (Corvallis: Oregon State University Press, 2002).

[236]Dennis L. Noble, A Legacy: The United States Life-Saving Service, as part of http://www.uslife-savingservice.org, 2, accessed July 18, 2013.

[237]Noble, A Legacy, 3.

[238]See http://www.uscg.mil/history/articles/PACREA_ColumbiaRiver_History.asp , accessed March 18, 2013. As of 2006, the station at Cape Disappointment had 50 assigned crew members, responding to between 300 and 400 calls for assistance every year.

[239]Information drawn from a working paper titled "Jetties and Dredging," which includes references such as Columbia River Maritime Museum, "The Columbia River Jetties," *Quarterdeck Review*15:2 (1988), 4-5; Lewis A. McArthur, "The Pacific Coast Survey, 1849-50," *Oregon Historical Quarterly* 16:3 (1915), 246-274; and Frederick G. Young, "Columbia River Improvements," *Oregon Historical Quarterly* 9:1 (1908), 79-94.

[240]The process started with making a falsework of driven piles built along the path of the jetty so that railroad tracks could be laid on the falsework. The next step was to dump massive chunks of rock from the cars on either side of the trestle, eventually making the jetty from 28 to 32 feet above mean low water, so that the North Jetty eventually contained roughly three million tons of rock; Hansen, Cape Disappointment Historic District nomination, section 8, page 6.

[241] Hussey, A Short History of Fort Canby, 18. He made the point that the acquisition of five small parcels located north of the original reservation line also contributed to this figure, having cited [U.S. Army] Corps of Engineers, Report of Excess Real Property, Fort Canby, January 26, 1955.

[242]R.E. Hickson and F.W. Rudolf, "History of the Columbia River Jetties," *Proceedings of the First Conference on Coastal Engineering*, Council on Wave Research, (1951), 283-298,cited in

Hansen, Cape Disappointment Historic District nomination, Section 9, page 2. Hickson and Rudolf is likely the most complete reference about building both jetties; see chapter 32 in http://journals.tdl.org/icce/index.php, accessed October 17, 2013.

[243]The statistics are from USDI-NPS, "Summary Context Statement for NHL Lighthouse Nominations," National Register of Historic Places program bulletin, n.d. [1997], 3-4.

[244]Wikipedia, "Columbia Bar," in http://en.wikipedia.org/wiki/ColumbiaBar, accessed April 14, 2013. Sources cited include those from websites of the Columbia River Bar Pilots, U.S. Coast Guard, and the Oregon State Marine Board.

[245]For additional detail about the applicable areas of significance in each case, see James P. Delgado and Kevin J. Foster, *Guidelines for Evaluating and Documenting Historic Aids to Navigation*. National Register Bulletin 34 (Washington, DC: USDI-NPS, Interagency Resources Division, 1992), 6-7. It is possible that artifacts associated with the Cape Disappointment Lighthouse and the nonextant subsidiary structures like the keeper's residence might be eligible under Criterion D.

[246]These are manned lighthouses, unmanned lighthouses, sound signals, range lights, daymarks, lightships, and buoys; Delgado and Foster, *Guidelines for Evaluating and Documenting Historic Aids to Navigation*, 2. Remnant pilings associated with the North Jetty, an automobile ferry dock, and Jetty A have been identified and evaluated as not eligible for the National Register due to lack of integrity; David M. Hansen, Identification and Evaluation of Remnant Pilings, Cape Disappointment State Park, Pacific County, Washington, January 31, 2006, 18. A copy of this report is at the Washington State Parks office, Olympia.

[247]Hansen, Cape Disappointment Historic District, section 8, page 1.

[248]Patricia L. Parker and Thomas F. King, *Guidelines for Evaluating and Documenting Traditional Cultural Properties*, National Register Bulletin 38 (Washington, DC: USDI-NPS, Interagency Resources Division, 1989); see also Paul R. Lusignan, "Traditional Cultural Places," *The George Wright Forum* 26:1 (2009), 37-44. A traditional cultural property at Cape Disappointment should not be confused with the ongoing struggle by the Chinook for federal recognition, or the status they have with the State of Washington; Cassandra Tate, Cape Disappointment State Park, http://www.historylink.org, accessed March 27, 2013.

[249] The potato blight first struck in September 1845, and reappeared in July 1846, producing a complete failure of the crop and the worst suffering in 1847. Although the failure was not so severe in 1847, a shortage of seed potatoes and partial crop failures in later years extended food shortages through the winters of 1848 and 1849. The effect was heightened by the spread of infectious diseases as well as illnesses associated with malnutrition. In August 1847, at the peak of the famine, more than three million people per day were fed in government soup kitchens (Johnson 1995).

[250] In both Washington and Oregon, Swedish and Norwegian immigrants outnumbered the Danes by approximately the same ratio as in the nation as a whole. The region continued to attract large numbers of Norwegians and Swedes but the Pacific Northwest never became an area of equal importance for Danish emigrants. Although 1882 was the peak year for

immigrants from Denmark, Sweden and Norway to the United States, the largest waves of Danes generally arrived after those of the Swedes and Norwegians. This pattern was repeated in migrations to the Pacific Northwest, and relatively few Danes were able to establish an economic presence in the region before members of the other national groups had largely saturated local labor markets (Hale 1980; Dahlie 1970).

[251] Relative overpopulation occurred in part because of legislation designed to encourage population growth, coupled with developments in health care and progress in agricultural techniques. Farms were traditionally inherited by only one son so that the other children of the family were predestined to form a new landless proletariat. Nonagricultural labor opportunities were minimal due to a lack of industrial centers within the country. Until the mid-nineteenth century, tar production for shipbuilding was a profitable industry. In the mid-1850s, though, the world shifted from the wooden ships that relied on tar to steamships made of steel, creating a "tar crisis" in Finland (Hummasti 2007; Heikkilä and Uschanov 2004; Kero 1980).

[252] The U.S. destinations of Finnish immigrants were quite similar to those of immigrants from other Nordic countries, primarily: Michigan, Minnesota, Wisconsin, Ohio, New York, Massachusetts, Montana, Washington, Oregon and California (Kero 1980: 54). However, there were some differences in settlement preferences between Swedish-speaking Finns and Finnish-speaking Finns. Between 1870 and 1925, an estimated 20 percent of the 300,000 emigrants from Finland to the U.S. were Swedish Finns (or Finland Swedes) from Ostrobothnia (Lewis 1993: 126). Both groups immigrated to the same localities in Minnesota and Michigan, but Washington, California, Colorado, and Utah attracted proportionately more Swedish-speaking than Finnish-speaking Finns (Kero 1980: 53). Usually people from the large emigration areas in Finland tried to settle together in the same areas in the United States. Emigrants from Isokyrö, for example, settled in Ashtabula, Ohio (Heikkilä and Uschanov 2004: 8). Second-stage migrations to places such as the Pacific Northwest from the Upper Midwest were often spurred by downturns in the U.S. economy. The depression of the 1870s compelled many Finnish immigrants to leave the localities to which they had originally come in order to look for farms and work in other parts of the country. Finns were especially interested in Minnesota homestead lands but some went as far as Oregon and Washington to farm (Kero 1980: 56).

[253] The first Opium War (1839-1842) between Great Britain and China marked the coming of Western imperialism to China. Industrial growth was hampered even more by the effects of foreign wars and economic competition. The first Opium War ended with the Treaty of Nanjing, the first in a series of treaties that have become known as the unequal treaties. The Nanjing treaty provided for the establishment of five treaty ports, one of which was Guangzhou, known historically as Canton, and located in the province of Guangdong. China also ceded Hong Kong to Great Britain, and that city's new status as British territory (versus Chinese territory open to foreigners) allowed it to become a major center of Chinese emigration within a decade (Mei 1984).

[254] Though the percentage of Chinese employed as common laborers remained about the same (28.7 percent in 1870 and 23.1 percent in 1880), there was a marked decline in the proportion of Chinese working in laundries between the censuses. In 1870 22.5 percent of working Chinese were involved in laundry work; by 1880 this percentage had dropped to 6.6. Similarly the proportion of Chinese employed as domestic servants dropped

appreciably during the decade, from 16.9 to 2.5 percent, and those working as cooks dropped from 9.3 percent in 1870 to 5.1 percent in 1880 (Corbett and Corbett 1977: 82).

[255] In a letter to the editor of *The Oregonian* dated July 28, 1880, settler David Newsom (1972: 239) writes about uncleared lands in the Willamette Valley,

I...set down the aggregate acreage at 60,000 acres. These brush lands are exceedingly rich and productive. They are situated within and adjacent to the well settled parts of these counties, generally well watered and rolling. The Chinese have been paid about ten dollars per acre for grubbing and 85c per cord for cutting the grubs into cord wood.

Generally speaking, Chinese immigrants throughout the West constituted a second-tier labor force, accepting the kind of work most white men preferred not to do. In a column titled, The Chinese Question, published in the October 6, 1876 issue of *Pacific Christian Advocate*, David Newsom (1972: 205) describes work done by Chinese men in Oregon,

There are hundreds of thousands of acres of the very best arable lands in Western Oregon that remain untilled. Why is it so? The reason is, that those lands are more or less set in brush. At the rates charged heretofore by our men for grubbing out and preparing those lands for the plow, the owners could not afford it. And not more than one man out of every ten who pass around hunting for work, will look a mattock or blade square in the face. And wood-chopping, rail-splitting, ditching, wood-sawing, washing, cooking, and a dozen other sorts of work, must be hired done. And...the most important point to us on this coast is, the lack of female 'helps' in the kitchens...And nearly all the cooking and drudgery in the hotels and boarding houses are done here by Chinese. Chinamen are scattering out all over Western Oregon grubbing and clearing up the brush lands ready for the plow, at one-half the rates charged by the whites.

[256] In the last decade of the nineteenth century, Ilwaco had five hundred to six hundred residents, but no Chinese immigrants appeared in the census until 1900. In that year, ten Chinese immigrants lived in Ilwaco. The opening of a small cannery in the first decade of the twentieth century created employment for approximately two dozen Chinese. By 1910 thirty-one Chinese, including twenty cannery hands and a cannery foreman, lived in the town (Friday 1994: 79).

[257] For example, or the Chinese, Lewis and Clark River settler P.W. Gillette blathered in one editorial, "*They are notoriously and grossly immoral; all are idoliters [sic] and worship idols and are more superstitious than the American Indian*" (Gillette 1899). Somewhat more genteel racism abounded in polite Lower Columbia society. To cite one of many possible examples, a 1905 advertisement in the *Columbia River Sun* newspaper, printed in Cathlamet, Washington used racial loyalties as the foundation for advertising campaigns: "*Patronize White Labor -- The Troy Laundry in Astoria does the finest and best work*" (Columbia River Sun 1905: 2).

[258] Historians Chris Friday and Alexander Saxton argue there is a distinction between industries that employed Asian laborers who directly displaced European-Americans, such as railroad construction, and industries in which the employment of Asian laborers, especially where labor was in short supply, expanded the opportunities for European-American laborers also employed by these industries. The latter, as Friday argues, was the case with the salmon-canning industry (Ogden 2012: 195 n52).

[259] In 1859 Oregon was the first state admitted to the union with an explicitly anti-Chinese constitution. Like African-Americans and those of mixed ancestry, Chinese were barred from citizenship, and explicitly excluded from both the right to vote and to own property.

Historically labor demand and recruitment efforts have brought laborers to the Columbia-Pacific region from other parts of the country as well as from around the world. The presence of several communities was barred by the Oregon constitution. Given the context of the time of its passage, just two years prior to the Civil War, the exclusion was not unique. President James Buchanan signed the Oregon Admission Act on February 14, 1859, admitting Oregon to the Union with a constitution typical of the northern border states before the Civil War—antislavery but also explicitly anti-black and "mulatto" (that is, of mixed black and white ancestry). In an effort to set aside political conflicts grounded in the status of slaves and the rights of freed blacks, the first state constitution barred blacks from entering the state. The state legislature passed laws to discourage blacks and other minorities from residing in Oregon, and to ensure those who did were politically weakened. H.B. 62, for example, was passed in 1862 and required that "*each and every negro, Chinaman, kanaka [Pacific Islander] and mulatto, residing within the limits of this state shall pay an annual poll tax of five dollars, for the use of the County in which such negro, Chinaman, kanaka and mulatto may reside.*" The county sheriff was assigned to collect the tax and allowed to charge mileage to the offender (Richard 1983a, 1983b).

In spite of this, Oregon's Chinese population increased from 1880 to 1910, and Portland was home to the second largest Chinatown in the West. From Astoria's inception, it was markedly international, and in 1910 nearly half of Astoria's 9,600 residents were foreign-born, including large communities of Chinese, Finns, and Asian Indians (Ogden 2012: 176). Beginning in the late nineteenth century, Chinese immigrants in the United States faced unprecedented legislative obstacles. The 1875 Page Act had been designed to prevent immigration of Asian contract laborers and female prostitutes, but did not have the sweeping impact of the exclusion acts passed between 1882 and 1904 that explicitly denied the immigration of all Chinese who did not fit into certain non-laboring categories. The initial Chinese Exclusion Act in 1882 changed the United States into a nation defined by immigration gatekeeping. The act was originally designed as a ten-year measure, but was extended for another decade by the 1892 Geary Act. Congress added ten years again in 1902, and then passed a permanent extension in 1904. Various other acts, such as the 1888 Scott Act and 1891 Immigration Act, also served to tighten the restrictions on immigration eligibility and complicate the travel requirements for Chinese already in the United States. The Immigration Act of 1924 for the first time instituted quotas based on national origins, bringing Chinese exclusion to its pinnacle, and extending exclusion policy to include Asians in general (Coe 2011: 8-9). The exclusion acts were overturned in 1943 by the Magnuson Act, but the same act created a disproportionately low entry quota for Chinese of 105 new visas per year. This quota stood until the passage of the 1965 Immigration Act, which established an equitable formulation of immigration quotas for all countries.

[260] The basic pattern for Japanese labor contracting in Oregon was established in 1891 when a group of seven Japanese immigrants from Okayama Prefecture came to Portland with the promise of railroad work. All were under contract to pay back travel expenses by working. Upon discovering no jobs existed, the group went to a local Japanese restaurant founded just two years earlier and asked for help. The restaurateur provided the immigrants with meals on credit and found work for them on hop farms. They were followed by a second group of thirteen from Wayakama Prefecture. The restaurateur arranged through a Japanese labor contractor for all twenty immigrants to work on the railroad. A labor supply line was created that brought Japanese laborers to work on the Oregon Short Line, a subsidiary of the Union Pacific Railroad. Although Japanese section hands were not paid as well as their white counterparts, rail work in the 1890s paid $l to $1.10 a day – considerably more than what could be earned for agricultural labor (Azuma 1994).

[261] Japanese laborers typically were paid at the low end of the pay scales. In the lumber industry Japanese laborers sometimes came into direct competition for jobs with white workers, even though many lumber mills refused to hire Japanese at all (Johnson 1996: 178). Around 1909, for example, Japanese carpenters in Oregon sawmills were paid between $1.65 and $2 a day, and their white counterparts earned between $2.75 and $3.50 a day (Azuma 1994: 318).

[262] A group of Asian Indian men in Portland formed the Hindustani Association of America in 1912, and, a second chapter was formed in Astoria later that year. The groups' stated aims were: "receipt of vernacular papers from India, importation of youth from India to America for education and with a view to devoting their lives to 'national' work in India, and weekly meetings to discuss politics" (in Ogden 2012: 186).

[263] The Mexican Migration Project found that migrants to the Pacific Northwest are less likely to be illegal, earn less in the United States than other Mexican migrants, and make more frequent and shorter trips to the United States than other Mexican migrants (Fairchild and Simpson 2004; Wareing 1978).

[264] In the United States, the Hispanic/Latino group is predominantly of Mexican origin, with much smaller numbers of Cubans, Puerto Ricans, and other immigrants from Latin America. "Hispanics" in 1980 composed 2.5 percent of Oregon's total population and 3.0 percent of Washington's. These figures show increases for both states over 1970 when the Spanish-language population represented 1.65 percent of Oregon's total and 2.1 percent of Washington's. Although some of this increase may be due to more complete reporting, there is little doubt that the Hispanic community grew considerably during the decade 1970-1980. Overall, the combined Hispanic population of Oregon and Washington increased 19 percent during the 1970s, from 5,500,554 to 6,765,261, surpassing increases of the general population (Slatta and Atkinson 1984: 109).