

# Columbia County Crown Zellerbach Trail

## Resource Characterization

**\*\*DRAFT\*\***

### THE SETTING

#### **General Overview**

Columbia County, named for the Columbia River, was created in 1854 when Washington County (to the south) was divided in half. It covers 647 square miles and is bounded on the north and east by the Columbia River, on the west by Clatsop County, and on the south by Washington and Multnomah Counties. The Lewis and Clark expedition explored this area in 1805 and camped along the county's Columbia River shoreline on their way **to and from** the Pacific Ocean.

Columbia County is fortunately situated along approximately 62 miles of the Columbia River. The Columbia River is a major route of ocean-going vessels and is a popular fishing, boating and windsurfing river. The southern county line is approximately 30 minutes from downtown Portland, the largest metropolitan area in Oregon. The western county line is approximately 50 minutes from the Pacific Ocean and the world renowned Oregon Coast.

The low mountainous Coast Range defines the topography of the region. Elevations vary from sea level to 2000 feet and there are significant slopes, ravines, and water depressions throughout the county. The climate of the area is dominated by cool, moist marine winds coming off the Pacific Ocean. Winters are wet and relatively mild and summers are dry and warm. Rain usually begins in earnest in mid-October and continues through the spring months. Warmer and drier weather, associated with gradually lengthening high pressure systems, begin in June and continue through September. Winter temperatures are typically 40-50° in the day and 30-40° at night. Summer temperatures average 70-80° in the day with nighttime lows of 50-65°. Annual precipitation ranges from 40 inches on the Columbia River flood plains and terraces to over 100 inches in the higher elevations of the Coast Range.

Milton served as the county seat until 1857 when it was moved to St. Helens. St. Helens was founded in 1848 and took its name from the nearby Mt. St. Helens volcanic peak. The primary industries of Columbia County are agriculture, lumber, fishing, and tourism. The extensive stands of old growth timber, which had attracted many of the early settlers to the area, were completely logged over by the 1950s. Second growth timber provides the raw material for local lumber and paper mills today.

## Natural Resources

### *Geology*

#### The Coast Range

About 200 million years ago, the North American plate began drifting westward and exotic volcanic islands of the Pacific began to collide and weld to the northwest margin of the continent. The present day Oregon Coast Range was formed about 50 million years ago from this type of activity. It resulted in an elongated geologic province situated along the Pacific Ocean between the Columbia River to the north, the Willamette Valley to the east, and the Klamath Mountains to the south.

#### The Columbia River Plateau

Columbia County is contained within a region geologists refer to as the Columbia River Plateau, a 164,000 square kilometer area that includes portions of northeast Oregon, southwest Washington, and western Idaho. The Columbia River Plateau was created over time from six to seventeen million years ago by a series of basalt flows. Seventeen million years ago, cracks in the earth's surface began spewing molten basaltic lava. The basalt oozed in large quantities from fissures with moderately fluid magma. This made it impossible for volcanoes to form at the site of the fissure. Instead the lava flowed away from the fissures and covered large areas of land.

Columbia River basalt consists of about 300 individual lava flow layers. The largest layer is referred to as the Grande Ronde Basalt flows which make up 85 percent of the Columbia River basalt's total volume. The Grande Ronde Basalt flows occurred from about 16.5 to 15.5 million years ago, originating in eastern Washington and Oregon. As it flooded the regions lowest areas, it filled canyons and permanently altered the Columbia River's path on several occasions. Today, these flows are exposed along the cliffs of the Columbia River Gorge.

These flows were also responsible for changing the course of the Columbia River. Over seventeen million years ago, the Columbia River flowed from its origin in British Columbia over Washington State and turned west in northeastern Oregon. It passed through the Cascade Range and met the Pacific Ocean north of present day Newport, Oregon. Basaltic lava flows over the course of the next five million years changed the course of the Columbia River many times, gradually pushing the river north. Each new channel of the river was destroyed by the next flow. Crown Point represents a lava flow that filled a previous Columbia River channel about fourteen and a half million years ago.

### *Vegetation*

Columbia County is abundant with a variety of vegetation. Forested hillsides include mature/second growth, young coniferous forest, and managed forest lands. Pastures and farmlands contain grasses, small shrubs and a mix of native and planted deciduous and coniferous trees. Meadows and wetlands contain wildflowers, willows, reeds, hay and other grasses. Riparian areas contain uniquely adapted vegetation typically found alongside stream and river corridors such as cottonwoods, alders, bushes, shrubs, etc.

### *Fish and Wildlife*

The Columbia River estuary and its associated bottom lands are habitat for large numbers of wintering waterfowl and shore birds. Many kinds of fur-bearing animals, including mink, muskrat, beaver, otter, raccoon, skunk and fox abound along the county's streams and wetlands. Timber producing forested woodlands provide habitat for elk and deer, especially along the edge of clear-cut areas. Lowland and woodland areas of the county provide a variety of habitat types that support large numbers of resident and migrating birds at different times of the year. These include raptors such as bald eagles, hawks, and owls; waterfowl such as geese, ducks, loons, and herons; songbirds such as warblers, finches, bluebirds, blackbirds, robins, thrushes, wrens, nuthatches, and chickadees; and others such as jays, flickers, bats, hummingbirds, ruffed grouse, swallows, and woodpeckers. Additionally, the Columbia River flood plain provides habitat for the rare and endangered white-tailed deer in Oregon.

Many streams in Columbia County provide spawning and rearing habitat for anadromous fish, including salmon, steelhead trout, and cutthroat trout. Adult anadromous fish destined for the Columbia River system annually travel upstream and young fish travel downstream to the ocean.

### *Scenery*

Columbia County is a place of majesty and grandeur. Some areas are tightly contained within dense forest and views are restricted; other areas open up to beautiful pastoral views of open meadows, agricultural operations, and forested mountainsides. Wildlife is abundant and climate conditions keep vegetation green all year long. Human activity is evidenced by features such as houses and outbuildings, railroad tracks, roads and highways, transmission lines, timber harvest activity, agriculture, and tourism support.

## CULTURAL RESOURCES

Over time, people living in and traveling through Columbia County have hunted, fished, mined, and harvested plants and timber. They built trails, railroads, roads, camps, and towns. People have connected with the spiritual, as well as the physical qualities of this landscape.

### **Cultural History**

#### *Native Americans*

A variety of Native American groups inhabited and utilized regional areas along the Columbia River for thousands of years before European settlement. Their territories were often associated with river drainages and watersheds. The Chinook and Clatskanie Indians were the primary people that occupied Columbia County.

The Chinook Indians, relatives to the Clatsop tribe, lived along the banks of the Columbia River and the coast of the Pacific Ocean. They were superb canoe builders and navigators, masterful traders, skillful fishermen and planters. They lived in large wooden plank houses and slept on reed mats over raised boards. Short in stature, the Chinooks also were characterized by flat

foreheads. From their proximity to Astoria and their intimate relations with the early traders, the Chinook soon became well known, and their language formed the basis for the widely spread 'Chinook Jargon', a limited trade language that facilitated expanded communication between Indians, settlers, and among Indians of different groups.

The Clatskanie Indians primarily occupied densely forested uplands and associated small prairies where they could subsist on deer, elk, edible roots, and berries. Their territory included the Upper Nehalem drainage and the headwaters of the Klaskanine and Clatskanie Rivers. They lived in lodges of split cedar poles covered with bark and furnished with rush mats. They intermarried with their Chinookan and Salish neighbors along the Columbia River. When they occupied lowland areas they seem to have used the Nehalem River valley, and occasionally the south shore of the Columbia River between the mouth of Clatskanie River and Scappoose Creek. The Clatskanie people used short nosed canoes and their fishing equipment included spears, weirs, and traps.

The Clatskanie originally lived in the flat lands bordering the Chehalis River in Washington State. As game became scarce and their food supply diminished, they left the area, heading south, and crossed the Columbia River to occupy the hills traditionally occupied by the Chinook Indians. After driving away the more peaceful Chinook people, the Clatskanie established themselves within the Clatskanie-Westport area, and extended their numbers into the head of the Nehalem.

#### *European Settlement and Immigration*

Captain Robert Gray, commanding the *Columbia Rediviva*, landed on Columbia County's timbered shoreline in 1792. Thirteen years later, the Corps of Discovery expedition, led by Lewis and Clark, traveled and camped along the Columbia River shore in the area in late 1805 and early 1806.

The Chinooks were accustomed to European goods and white traders, so their first encounters with the expedition were peaceful. On October 26, 1805, two Chinook chiefs and several men came to the expedition's camp to offer gifts of deer meat and root bread cakes. The captains responded by presenting the chiefs with medals and the men with trinkets. Other Chinook villages along the banks of the river offered similar receptions to the expedition as they approached the Pacific Ocean and the mouth of the Columbia River.

The Clatskanie's had a reputation for demanding tribute from those who passed through their territory and are rumored to be the tribe which attacked the fort of Lewis and Clark in 1805-1806.

In 1810, Captain Nathan Winship established the first settlement in Columbia County along the Columbia River (across from what is now known as Oak Point, Washington). Because of the unfriendliness of the Clatskanie Indians and local flooding, however, Winship was forced to abandon this location and relocate further down river.

The first settlement of the Hudson's Bay Company in Oregon was at a farm in Scappoose in the 1830's. They found the Clatskanie so warlike and formidable that the company's men dared not

pass along the river in groups of less than sixty armed men. More and more settlers continued moving in, spurred by the Land Donation Act of 1850. Eventually diseases and epidemics (such as smallpox) reduced the tribe from a population believed to be almost 3,000 to fewer than ten. It is believed that the surviving Indians moved north for their own safety, to be adopted by another tribe. The Clatskanie tribe has since become extinct.

As immigration increased in the mid-1840s, lasting settlements began to appear throughout the Oregon and Washington territories. The Yakima Indian War (1855-1859) drove many Washington Territory residents south of the Columbia River and helped boost the population of Columbia County, particularly St. Helens and Columbia City. A lumber mill was established in the St. Helens area in 1844 and the first town site was started in 1847. The town of St. Helens grew rapidly with a heavy influx of settlers in the early 1850's. As a port for the Pacific Mail Lines, St. Helens flourished – rivaling nearby Portland.

The earliest recorded Euro-American use of Columbia County was by the fur traders from the Hudson's Bay, Northwest and Astoria Companies. After the fur traders, came the homesteaders who established farming communities along the river valleys. In 1898, the Astoria-Portland Railroad was completed. Then, in 1918, the Columbia River Highway was completed, linking Portland to Astoria.

## **CZ Logging Road History**

By 1900, the supply of old growth timber in the United States was virtually exhausted in the east and mid-west and the focus of the logging industry shifted to the south and far west. Two logging brothers, Simcoe and Fred Chapman, moved to Oregon in 1901 and incorporated the Chapman Timber Company. In 1905 they opened a logging camp and named it Chapman, Oregon located a few miles northeast of the present day City of Scappoose. Shortly thereafter, they incorporated the Portland and Southwestern Railroad and began constructing the rail line in 1906. This railroad was built for the sole purpose of transporting timber and grew out into the woods in a spurt-like fashion as the railroad explored its way up the valley. It was never the purpose to build a 'proper' railroad from place to place.

Originally, the Portland and Southwestern planned to build the railroad from a shipping terminus on the Willamette Slough (now called Multnomah Channel) all the way to the Pacific Coast at Nehalem. The general procedure was to purchase the right-of-way, construct a segment of the rails, log the land, then build a camp and move on to open up other areas. There were a total of nine such camps built along the railroad during its use. Many local landowners consented to the building of the railroad through their property in hopes that it would eventually connect to Vernonia, Oregon, and points beyond.

This build-and-log method significantly slowed the railroad construction process. The first eight miles was completed from the Multnomah Channel up to the base of the hills two miles beyond Chapman, which had a population of 400 people at that time. Unfortunately, the terrain beyond Chapman was more difficult. The grade was steeper and construction costs were higher. It proved too expensive for the Chapmans so they sold out to Henry Turrish in 1910.

By the time Henry Turrish bought the railroad, the decision to cross the divide of the Coast Range was imminent. Building the railroad directly over the top of the divide was not practical so planning for a tunnel began. Switchbacks over the divide would have been impossibly slow and it was necessary to have a fairly uniform grade. The tunnel was planned and built in the narrowest point in the divide. As it was, the grade approaching the tunnel reached as much as ten percent. Work began on the tunnel in 1910, eight years before the tracks reached its eastern portal in 1918.

The Nehalem Divide Railroad tunnel is located on the grade between Chapman and Pittsburg, Oregon, straddling the divide of the Coast Range between the East Fork Nehalem River drainage and the North Scappoose Creek drainage. The tunnel is 1,712 feet long and consists of a series of arches (or ribbing) made of 12" x 12" wooden timbers. Laggings made of 4" x 6" boards connected the arches. Struts were used along the floor of the tunnel to support the walls and complete the structure. Excavation was done by hand and carried out simultaneously from both ends.

Nearly one million board feet of timber were used to construct the tunnel at a cost of approximately \$250,000. The tunnel was completed in 1920. The next year, the track was extended three miles beyond into the timber rich Nehalem Valley. The total length of the railroad line at this time was 14 miles.

While the tunnel was under construction, a group of lumbermen from Eau Claire, Wisconsin, purchased Turrish's holdings and reorganized the whole operation as the Nehalem Timber and Logging Company. The tunnel and rail line were in use until 1943. During this period it changed ownership twice more. The Clarke & Wilson Lumber Company succeeded the Nehalem Timber and Logging Company in 1927. They, in turn, were succeeded by the Crown Zellerbach Corporation in 1944. The railroad was extended during this time up along the Nehalem River with several off-shoots into the woods. It terminated just beyond Oak Ranch Creek.

The Crown Zellerbach Corporation discontinued rail use in the corridor, pulled up and salvaged the tracks and ties, and converted the railroad to a logging road. They considered renovating the tunnel and using it for their log trucks, but the cost was prohibitive. Use of the tunnel was discontinued and a new road was built over a different pass around that section. Crown Zellerbach originally considered constructing the logging road over the same pass as the tunnel, but their surveyor said it could not be done.