



MOUNTAINS TO SOUND GREENWAY

NATIONAL HERITAGE AREA

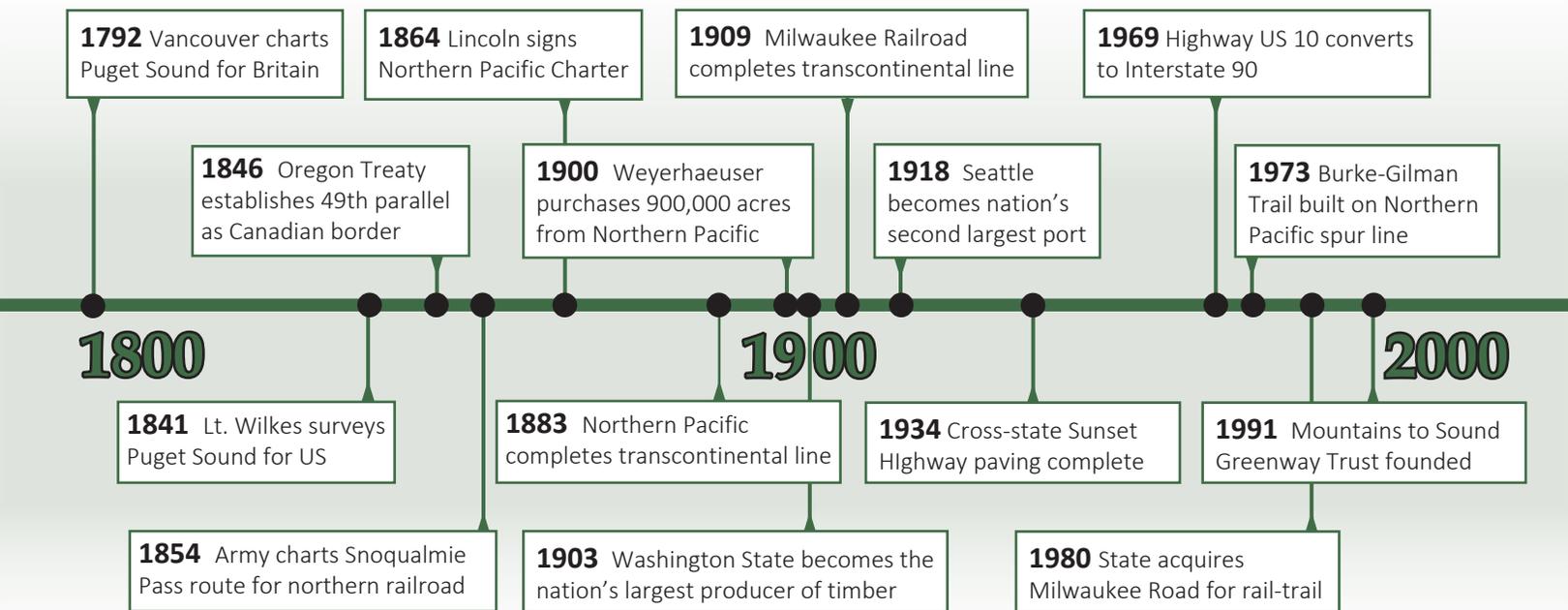
FEASIBILITY STUDY ADDENDUM

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*The proposed **Mountains to Sound Greenway** National Heritage Area is a historic transportation corridor where native travel routes, pioneer wagon roads, intercontinental railroads, original state highways, and modern interstates are layered through time over a rugged mountain crossing in the northwest corner of our nation. The completion of the Northern Pacific Railway through the Cascades was the final link in America’s era of transcontinental railroad construction following the Civil War. Today, the historic routes of transcontinental railroads and the rugged terrain they conquered define the proposed Heritage Area. The construction of these railroad lines across the Cascades, coupled with the largest land grant in American history, led directly to a large-scale timber industry, created a new portal for Asian trade, and opened up a unique and distinctive region of the United States for commerce, transport, settlement, and national inclusion. These events had a physical impact on the landscape that remains today, visible in navigable railroad beds now often used as trails, and the checkerboarded forests from the land grant. The railroads and the Northern Pacific land grant helped shaped the culture of the area, giving rise to a region defined by its entrepreneurial spirit and deep connection to the landscape.*



THE MOUNTAINS TO SOUND GREENWAY: THE NATION'S FINAL LINK

The historical narrative that has developed around the Mountains to Sound Greenway reaches back to North America's earliest nomadic peoples – themselves our earliest link to Asia. The setting for this story starts at Puget Sound in Washington State, the second largest estuary in the nation, and travels eastward over Snoqualmie Pass to cross the Cascade Mountains, a steep north-south mountain range just 40 miles inland that cuts Washington State in half. Near this pass, Snoqualmie Falls became the crossroads where the Coast Salish tribes would gather and trade with Native Americans from the Midwest Plains who traveled on foot over the pass.

European explorers were quick to observe the potential military and trade value Puget Sound offered to a young nation. In the late 1700s, upon arriving to this area by sea, Captain George Vancouver was deeply impressed by the timbered shores he charted and remarked upon “the unassisted fertility that nature put forth.” Others, too, noted the area's sheltered deep-water ports, proximity to Asia and its lush forests of valuable timber.

In 1841, an American expedition under the command of Lieutenant Charles Wilkes was dispatched to Puget Sound to survey and solidify America's claim to the area, which resulted in the US-Canadian border being set at the 49th parallel. Puget Sound belonged to the United States; yet the region remained an isolated, frontier outpost for many decades.

The steep Cascade Mountains posed a formidable challenge for any overland travel from the east. In 1853, US military scouts were commissioned to survey a route for the country's northern continental railroad and finally located a route through Snoqualmie Pass using historic Native American footpaths. But actually laying tracks to Puget Sound would take decades more. Early settlers and entrepreneurs had to resort to innovative feats of engineering to navigate and settle the rugged landscape, then access the area's vast natural wealth. They built underground hydroelectric projects, long-distance electric railroads, and ambitious tunnels.

Once in operation, the northern transcontinental railroads changed the patterns of American commerce. Freight sent around Cape Horn – one of the most hazardous shipping passages in the world – could now travel overland directly to Puget Sound. And goods bound from newly opened markets in Asia could take advantage of one of the few deep, safe harbors afforded by America's Pacific coast. Freight shipped from the major ports of China and Japan



The railroads faced significant geographical obstacles in building routes across Washington's Cascade Mountains. The tunnels and trestles, like the Hull Creek Trestle pictured here in 1907, built to carry the railroad tracks through the steep and rocky terrain, were considered engineering marvels. *Courtesy Museum of History & Industry.*

could save hundreds of nautical miles by arriving at the Port of Seattle. Once in the United States, railroads charged by the mile, making the freight lines between Seattle and the Atlantic states an even more attractive proposition. Finally, a direct rail route to Puget Sound enabled telegraph, mail, and monetary wire transfers, integrating the Pacific Northwest into the commerce of the nation.

The timber industry, above all, was transformed when the Northern Pacific Railroad crossed the Cascades. With the last rail tied on the Northern Pacific, the nation's largest land grant was complete: forty million acres in a checkerboarded swath from the Great Lakes to Seattle were transferred into private ownership – two percent of the landmass of the contiguous United States. In the Cascades, timber from the railroad grant lands fueled the growth of industrial logging in Washington. Land-grant timber also helped develop trade with Asia. Railroads could save money shipping timber to the east coast by filling their boxcars with American wheat, cotton and cattle bound for Asia on the westbound trip to Puget Sound.

Today, the cultural landscape of the Snoqualmie Pass region is defined by the path of railroads and transportation routes that co-evolved over the course of the nineteenth and twentieth centuries, from railroad spur lines to adjacent highway and interstates. The landscape is visibly marked by the checkerboard land grants whose boundaries are still discernable on mountainsides. The settlement patterns of railroad towns and timber camps can still be traced down from the mountains east and west of Snoqualmie Pass. The legacy of heavy industrial timber harvesting and innovative forest management can be found in the public and private forests that have evolved from the railroad land grants. The scenic corridor once proudly touted by railroad company promotional brochures is now home to thousands of miles of trails and natural areas conserved as recreational and cultural treasures. Taken together, this assemblage of cultural and historic resources tells the unique story of how a railroad portal through Snoqualmie Pass, combined with the wealth of its surrounding forests and nearby harbors, shaped domestic and international commerce, as well as the region's way of life and its conservation values.

THE NORTHERN PACIFIC RAILROAD: A TRANSCONTINENTAL CONNECTION TO PUGET SOUND

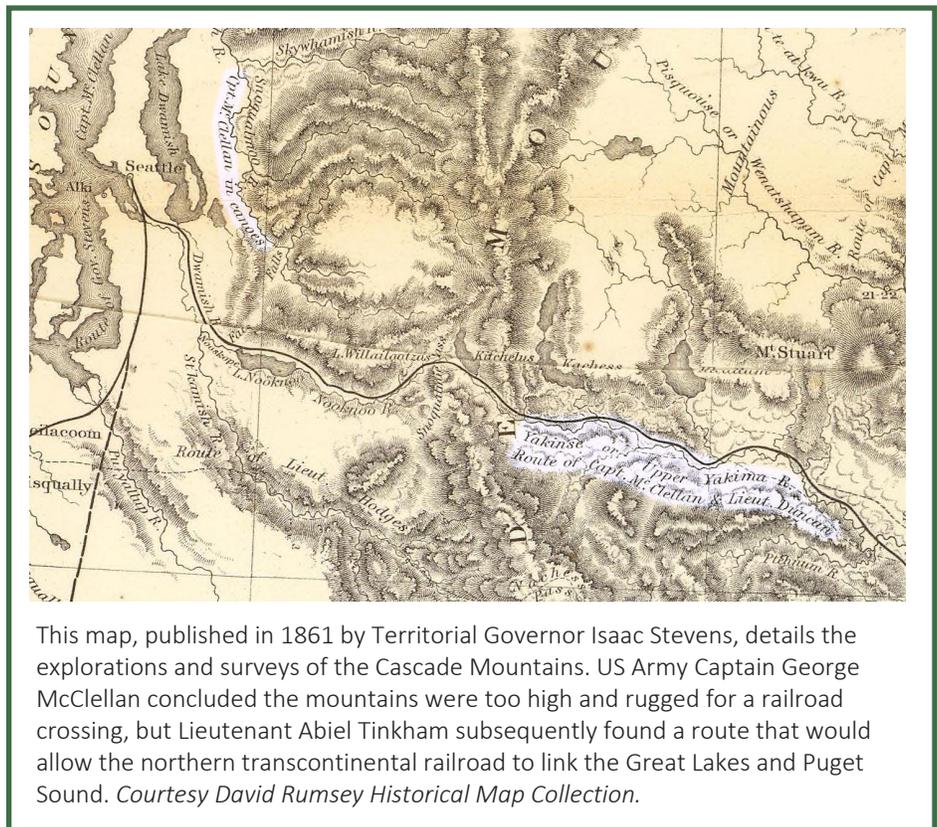
When Abraham Lincoln signed the Northern Pacific charter in 1864, he projected the nation's ambitions from the Great Lakes to a terminus on Puget Sound. His gaze was beyond the struggle of the Civil War to an American pathway for immigration and commerce that would reach across the continent. In the new age of steam and telegraph, the transcontinental railroads and their land grants reshaped America like no endeavor before. The stipulated terminus on Puget Sound would also cement the newly drawn American - Canadian border, ending any disputes of ownership of Washington Territory and the deep harbors on Puget Sound.

Thousands of years before European settlement, footpaths in and around Snoqualmie Pass linked the Coastal Salish tribes with the native people of the Columbia Plateau, and ultimately to an intricate trading network that reached the tribes of the great plains. In the eighteenth century, European explorers looking for advantageous trade routes along the Pacific Coast recognized the strong value of Puget Sound's deep harbors and tall timber. Ownership of Puget Sound and all lands north of the Columbia River, now the western half of Washington State, remained contentious between the British and Americans until the Oregon Treaty of 1846 established the 49th parallel as the national boundary. A stronger presence on Puget Sound would hold the British above the 49th parallel. Driven by the desire to open up a profitable Asian trade route and to access the vast timber of the Cascades, entrepreneurs and military strategists alike saw a northern transcontinental railroad through the Cascades to Puget Sound as a national priority.

To connect the country over land, Congress commissioned a series of three transcontinental railroad surveys in 1850. A survey of the northern route was organized first, covering the swath of country stretching from St. Paul to the Pacific Coast. US Army Captain George McClellan was initially assigned the task of finding a route through the Cascades. After combing the Cascades from Fort Vancouver on the Columbia River all the way north to the Canadian border, McClellan concluded that the mountain range was too steep for a railroad crossing. The Cascades formed a steep wall of volcanic rock rising quickly from Puget Sound, with few opportunities for the gentle grades required by a railroad line.

Additionally, soaking rains made for unstable slopes and the region's heavy snowfall would make winter travel a dangerous proposition. The next year however, Lieutenant Abiel

Tinkham, guided by Yakama Indians, traced a line over the Cascade Mountains and down to the small town of Seattle on Puget Sound, identifying Snoqualmie Pass as the best point of passage through the Cascades.



This map, published in 1861 by Territorial Governor Isaac Stevens, details the explorations and surveys of the Cascade Mountains. US Army Captain George McClellan concluded the mountains were too high and rugged for a railroad crossing, but Lieutenant Abiel Tinkham subsequently found a route that would allow the northern transcontinental railroad to link the Great Lakes and Puget Sound. *Courtesy David Rumsey Historical Map Collection.*

With a route identified, there were pressing reasons to move forward. While the Oregon Treaty had resolved some tensions around the location of the Canadian border, there remained a concern among many in Congress that the British were interested in moving south. Many, including General Ulysses S. Grant, one of the original incorporators of the Northern Pacific Railroad, saw the northern route as essential to military security.

Other incorporators saw great potential in capturing trade from Asia. By 1858, China and Japan had been opened up for trade as a result of the Opium Wars and the Harris Treaty, respectively. America was finally in a position to compete with Great Britain, the Netherlands and France for Asia's most coveted commodities: tea, porcelain, and silk. But first, the United States needed a strong foothold on the Pacific.

A railroad cut straight through the rugged Cascades would provide the shortest route linking the maritime commerce of the Great Lakes and the East Coast to the shores of Puget Sound – and from there the harbors of Alaska and Asia. Territorial Governor Isaac Stevens, an ardent proponent of the Snoqualmie Pass route, noted, “the prevailing winds are such, that vessels coming from Asia have to make our coast near the entrance of the Straits de Fuca.” The open waters of Puget Sound would be a rare and welcome sight to a sailing ship looking for safe harbor on the Pacific coast. The exposed coasts of Washington and Oregon, including the roiling Columbia River, offered little in the way of refuge or safe passage for merchant vessels.

Two transcontinental railroads were eventually built through the Snoqualmie Pass area, the pioneering Northern Pacific Railroad completed in June 1887, and the Chicago, Milwaukee, St. Paul, and Pacific Railroad (Milwaukee Road) in 1909. The Northern Pacific took two decades to complete

from the creation of its charter to its inaugural run. The company weathered multiple bankruptcies, one of such size it ignited a national financial panic. The Milwaukee Road was privately financed at a cost of nearly \$250 million—far above its initial estimate of \$60 million.



The 1.86-mile tunnel through Stampede Pass was perhaps the most arduous section of the Northern Pacific's transcontinental route. It replaced a series of switchbacks, shown here, that were often snowbound and always steep, with grades as high as 5.6 percent that required the two most powerful locomotives in the world. *Courtesy Washington State Historical Society.*

Both lines faced formidable technical challenges, particularly in crossing the Cascades. Passage over the crest came only with mastery of hard-rock tunneling and construction, snow removal and avalanche management, and locomotive power.

Heavy snowfall at Snoqualmie Pass led the Northern Pacific to select nearby Stampede Pass for its summit tunnel. Although only a few miles south, peak winter snow accumulations at Stampede Pass were less than at its northern sister, Snoqualmie Pass. However, the elevation gain at Stampede Pass had its own challenges.

While most mainline railroads would avoid a grade over three or four percent, the surveyed route over Stampede Pass clocked in at 5.6 percent. It took two 2-10-0 Decapod steam locomotives, the strongest in the world and the first successful use of these trains in America, to pull a five-car train across the pass — at an average speed of six miles per hour. The train crews drew hazard pay for this dangerous crossing. In 1889, the same year Washington became a state, the 1.86-mile Stampede Pass tunnel was complete, bringing the railroad’s grade down to a still-formidable 2.2 percent.

With construction complete, the Northern Pacific aggressively marketed the advantages and marvels of moving west, spurring waves of immigrants who came to log, mine, and farm the new Washington State. However, the company had little interest in passenger fares. It was the industry and trade that these migrants could generate upon arrival that helped guarantee the long-term success of the transcontinental railroads. On the Northern Pacific, where the railroad tunneled through the Cascades, there was the opportunity to ship timber to points east and then return the freight cars westward with goods on their way to Asia via the ports on Puget Sound. It worked. The timber industry, spurred by the wealth of the Northern Pacific land grant, took off, and US exports of timber and other agricultural products to Asia grew exponentially. By 1916, Seattle was the leading port on the Pacific in dollar value of goods shipped. Within two years, it was the second largest port in the nation, second only to New York.

A stronger infrastructure for domestic transportation had its benefits for national defense as well. During World War I and World War II, the railways proved their military value, as predicted by General Ulysses S. Grant. The railroads moved troops, equipment and supplies across Snoqualmie Pass to the many forts, naval bases, and plane and shipbuilding facilities on Puget Sound. The railroads proved particularly adept for moving heavy coastal artillery overland. With advent of war with Japan, Puget Sound’s role in coastal defense was greatly magnified and Washington’s industrial base quickly turned its energies to national defense. A year after Pearl Harbor, manufacturing in Seattle had increased four-fold — all in service of the war effort.

Sampling of Northern Pacific Cultural Resources

- Ellensburg Northern Pacific Passenger Depot*
- Downtown Ellensburg National Register Historic District*
- First Railroad Addition Historic District*
- King Street Station*
- Bothell Northern Pacific Depot
- Salmon Bay Great Northern Railroad Bridge
- Stampede Pass Tunnel
- Wilburton Trestle

*National Register of Historic Places

THE MILWAUKEE ROAD: “A MODERN ROAD TO THE ANCIENT EAST”

The Milwaukee Road largely followed in the path of the Northern Pacific, but chose the original transcontinental survey route over Snoqualmie Pass. The Milwaukee Road provided the shortest, lowest-cost route for freight, and with its high-speed electrified trains, passenger travel was a comfortable, soot- and smoke-free ride. The mainline of the Milwaukee Road contains a string of historic sites and stories, including the 2.3-mile Snoqualmie tunnel, now open to public use as part of Iron Horse State Park.

The Milwaukee Road was completed in 1907, with the Snoqualmie Pass tunnel and full electrification completed in 1919. The grades traversed by the Milwaukee Road as it climbed through Snoqualmie Pass were modest compared to Stampede Pass, and the railroad solved the difficulties presented by heavy snowfall through the use of an electric rail system. Electrification provided much more power for trains climbing steep grades in the cold where coal engines were sapped of power.

Sampling of Milwaukee Road Cultural Resources

- Issaquah Depot*
 - Snoqualmie Depot*
 - Snoqualmie Pass Tunnel*
 - South Cle Elum Rail Yard*
 - South Cle Elum Bunkhouse*
 - Union Station*
 - Cedar River Watershed Cultural Landscape
- *NRHP

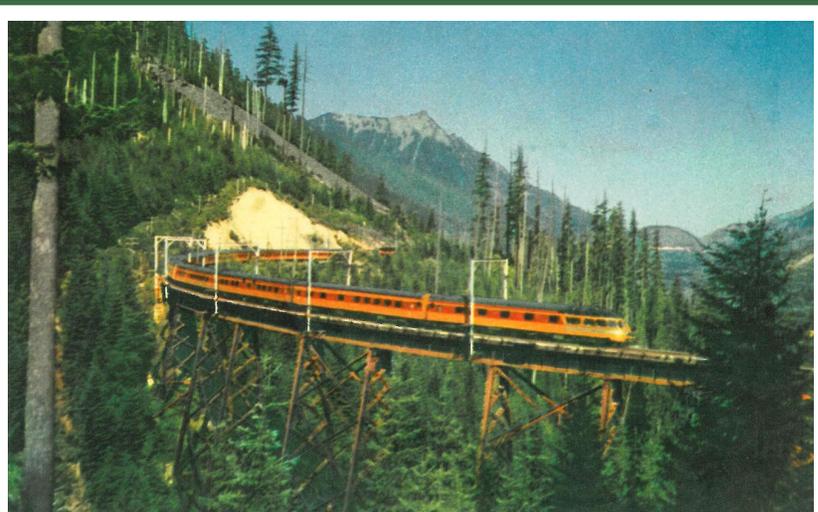
The Milwaukee Road was the only transcontinental railroad to operate on electricity and to recycle power. Trains coasting downhill used their motors like generators to cut speed and return power to the supply system. Electric power came from a series of substations that took advantage of the region’s coal and innovative hydropower. Newspapers chronicling the Milwaukee Road’s electrification celebrated “the mountain torrent” that had conquered steam, while the railroad advertised the “Marvel of White Coal: Feeding the giant electric locomotives of these thousand-ton steel trains is a torrential energy, sprung from the mountain waterfalls.”



Electric power gave the engines of the Milwaukee Road an edge against the steam-powered locomotives of the Northern Pacific, whose engines were sapped by cold temperatures crossing the Cascade Mountains. *Courtesy Walter Page.*

Of all the trade coming across the Pacific, silk was the most valuable. After gold and silver bullion, raw silk was the nation’s most precious rail commodity. The high-speed electric trains of the Milwaukee Road were the ideal vehicle for shipping silk to textile mills in the east. In the late 1920s, Japanese silk came to Seattle on fast steamships and was sent by express train to New York, arriving 91 hours later in specially sealed cars with armed guards.

The Milwaukee Road also did well marketing to tourists. In paintings, photographs, and railroad advertising the image of a passenger locomotive winding through snowcapped mountains has become an icon of the American West. For the northern transcontinental lines, it was the high passes of the North Cascades and the sudden drop to the waters of the Pacific that created the final chapter in their dramatic western journey. The Milwaukee Road advertised it as “some of the most bewildering scenic splendor of the western world.”



The Olympian Hiawatha, pictured here near the crest of the Cascades, was a popular passenger route from 1947 to 1961. With its “Skytop” sleeper-lounge observation cars and “Super-Domes,” which allowed for car-length, panoramic viewing, the Olympian Hiawatha was a powerful train designed for the Milwaukee Road’s outstanding scenery. *Postcard by W.A. Krueger.*

The railroads commissioned thousands of works by artists and photographers that illustrated the natural and sometimes romanticized landscapes of the far west, and the proposed heritage area in particular. Photographers like Asahel and Edward Curtis, Darius Kinsey and William Henry Jackson captured striking panoramas of the North Cascades for the lavish marketing brochures and posters used by the railroads to promote western tourism in their lines. The North Cascades and Mount Rainier were perhaps the most familiar subjects during the golden era of railroad publications and tourism advertising.

THE NORTHERN PACIFIC LAND GRANT: A WEALTH OF TIMBER

The modern timber industry in Washington State is an offspring of the Northern Pacific land grants of the 19th century. Prior to the railroads, logging in the Pacific Northwest was limited to a slow harvest of trees within reach of the area’s waterways. Railroads brought steam engines and spur lines to the dense forests of the Pacific Northwest. The Northern Pacific land grant also led to the privatization of federal land in massive quantities suitable for corporate timber management. Companies like Weyerhaeuser Corporation, which bought more than 1 million acres of land from the Northern Pacific, transformed logging into the state’s largest industry. This scale of land management later led Weyerhaeuser to experiment with reforestation and sustained-yield harvest, which eventually became the industry standard.

From early on, explorers, entrepreneurs and settlers understood the bounty of the Cascades to be in its timber. An inventory of forest land written for the 1880 US Census promised that the western Cascades, “ill adapted in soil and topography to agriculture, will retain a permanent forest covering long after the other great forests of the continent have disappeared.” Early conservationists who visited the area, including John Muir and Theodore Roosevelt, commented on the abundance of the region’s timber, seeing in the forests the future of a “permanent industry.”

Sampling of Industrial Timber Cultural Resources

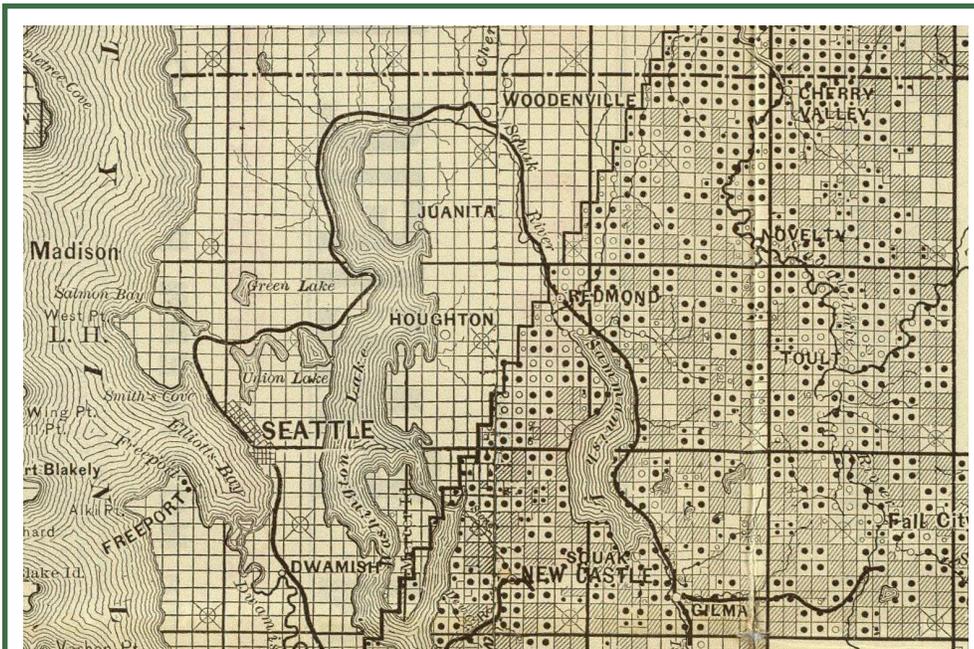
- Cabin Creek Historic District*
- Snoqualmie Falls Lumber Co. Power Plant
- Snoqualmie Old Growth Log Pavilion
- Preston Mill Site
- Hiram Chittenden Locks and Lake Washington Ship Canal*
- Selleck Historic District
- Preston Mill Site
- Historic Casland
- Historic Kerriston

*NRHP

The Northern Pacific was one the first companies to convert this promise into large-scale profit. The Northern Pacific’s authorizing legislation provided no public financing to build the rail line; instead the railroad received a massive federal land grant to underwrite its expenses. For every mile of railroad completed in Washington, the company received 25,600 acres of checkerboarded square-mile sections in a corridor forty miles on either side of the track. This land could then be sold and the profits used to pay for construction, or in some cases, kept to be logged by the railroad company itself. As the company promised prospective investors, “These magnificent fir forests, adjacent to the Northern Pacific Railroad, are not only the wonder of travelers, but, what is more the present point, they constitute an element

of vast wealth to the Company, and hence of security to its creditors.”

It was the largest land grant in American history: forty million acres – an acreage larger than New England – were set aside for the Northern Pacific in the 1870s and 1880s. As the Northern Pacific crossed the Great Plains, it quickly sold off its grant lands to individual settlers. In the Cascades, the railroad saw



This 1888 map depicts the one-square-mile sections granted to the Northern Pacific Railroad that are available for sale to settlers. The checkerboard land ownership pattern established by the land grant exerted a considerable force on the development of the timber industry in the region. *Courtesy David Rumsey Historical Map Collection.*

an opportunity to hold onto the wealth of the thick stands of timber for themselves or to be sold in larger transactions to timber corporations. Prior to the railroads, most federal land grants to individuals were no larger than 160 acres – an area too small to sustain an ongoing timber operation. The Northern Pacific land grant changed this equation, opening the door to industrial-scale timber harvesting in the thick conifer forests of the Cascade Mountains.

The Northern Pacific Railroad kept much of the timber land on the western end of their land grant. Their corporate heir to these land holdings is now Plum Creek Timber, with its corporate offices in Seattle, which to this day is still the largest private land owner in the nation and one of the largest timber producers. But the Northern Pacific also sold off big chunks of forest. In 1900, Northern Pacific sold 900,000 acres of this land grant in Washington State to timber magnate Frederick Weyerhaeuser – the largest private land transaction in American history at that time. He established the Weyerhaeuser Timber Company and immediately began expanding and consolidating his holdings; by 1903, he owned over 1,500,000 acres of timberland in Washington.

By 1905, timber was pouring out of the forests of the railroad grant lands, and Washington State was the nation’s leading producer of timber. Timber from the Northwest helped rebuild San Francisco after the 1906 earthquake, and built barracks, ships and airplanes for World War I. In 1907, the University of Washington established a forestry program, and the state followed soon thereafter with the creation of a state forest fire protection association and a state forestry commission. Seeing the degree to which harvest was being scaled up on private lands, the federal government began to set aside large swaths of land into forest reserves. In 1908, the Snoqualmie National Forest was established, with its southern boundaries weaving in and around the land-grant checkerboard surrounding Snoqualmie Pass.

Most of Washington’s early timber industry focused on the harvest of Douglas fir and cedar. But the advent of World War I created strong demand from the United States and her allies for high-quality spruce for aircraft construction. To ensure a steady supply for defense purposes, the US government, working with loggers



North Bend in the Greenway was the site of concentrated military logging in WWI. A “union” grocery and supply store offered deep discounts to Four-L military men. This 1918 poster illustrates the patriotic attitude that drove this era of logging. *Courtesy University of Washington Libraries.*

and timber companies including Weyerhaeuser, organized the Loyal Legion of Loggers and Lumbermen (the “Four-L”) in 1917. Logging companies, including the Cherry Valley Logging Company near the town of Duvall, were taken over by the Four-L Spruce Production Division, with the Army paying a minimal base salary for soldiers whose service to the country was logging.

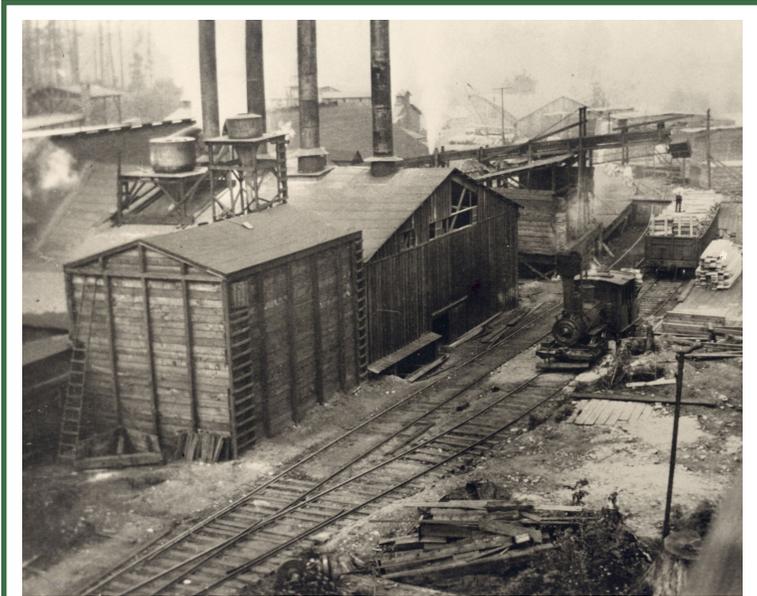
The abundant flow of timber from the railroad land grants spawned ship and aircraft production on Lake Washington and Lake Union. In 1916, William Boeing founded Pacific Aero-Products Co. on Lake Union to take advantage of the region’s spruce supply for airplane construction. Three years later, he used local spruce to build the B-1, Boeing’s first commercial plane. The completion of the Lake Washington Ship Canal and Hiram M. Chittenden Locks in 1917 allowed ships to navigate Lake Union and Lake Washington. The Locks are listed on the National Register, and are one of Seattle’s most popular tourist attractions.

In 1930, Washington State amended its constitution to provide tax incentives to reward landowners with a long-term investment in the land. Unlike the east coast and the Midwest, where logging companies had cleared the land and then moved on, timber companies in Washington State could look forward to cutting a second harvest in a single lifetime and forestry began to be seen as a more sustainable industry. In 1937, Weyerhaeuser launched a new public relations campaign: “Timber is a CROP!” and soon established its first seedling nursery at Snoqualmie Falls, with the radical idea of growing new trees to replant cut acreage across the region. By the second half of the century, plantation forestry had become the industry standard.

SETTLEMENT AND INFRASTRUCTURE: HOW THE RAILROAD BUILT THE GREENWAY

The railroad towns and timber camps that sprang up along the main lines and spur routes around Snoqualmie Pass reflect the engineering and invention required to contend with the region’s rugged terrain and massive timber. Many of these communities show the deliberate hand of company planning, and their ethnic heritage is evidence of the railroad’s aggressive recruitment of immigrants. The growth of Seattle itself, from frontier outpost to Gold Rush boom town, owes its initial development to the migration and commerce of the railroad.

Construction of the railroads spurred much of the development in the region. Workers and their families were needed to mill lumber to build the railroads, mine coal for steam, build and run electric power plants, and manage railroad depots. Once the transcontinental routes were complete, a workforce of railroad engineers were joined by experienced lumbermen. Together, they set about constructing railroad spur lines into the forests and applying steam technology to timber harvest, building a forestry infrastructure unseen in the world before. Where the region’s first generation of timber-men kept close to the shoreline, railroads and their steam



Timber production in Seattle started in 1852, when Henry Yesler built the area's first steam-powered sawmill. A half century later, Washington State was the nation's leading supplier of timber. Pictured here: the North Bend Lumber Company's Edgewick Mill, built in 1906 for logs pulled from the Middle Fork of the Snoqualmie River Valley by railroad. *Courtesy Snoqualmie Valley Historical Museum.*

engines allowed the axe to reach further inland to the thick land-grant forests, which were ripe for profit now that the railroad had satisfied the government's requirements to complete the rail line.

The massive size of ancient cedar and Douglas fir trees slowed the initial cutting of forests within the Heritage Area, but by 1880 railroad engineers and workers began adapting their technology to the timber industry. Spur lines stretched deep into the forests using small, powerful locomotives and monumental timber trestles to overcome the rugged terrain, moving massive logs from clear-cuts to the main railroad lines where they could be shipped to mills and ports on Puget Sound or directly to eastern markets. Over time, more than 100 timber mills were built in the region, seeding dozens

of timber towns along the rail lines, from Casland to Preston and Snoqualmie. Many of these communities still contain remnants of company towns or monuments to timber at their center, and reflect the heritage of the timber industry.

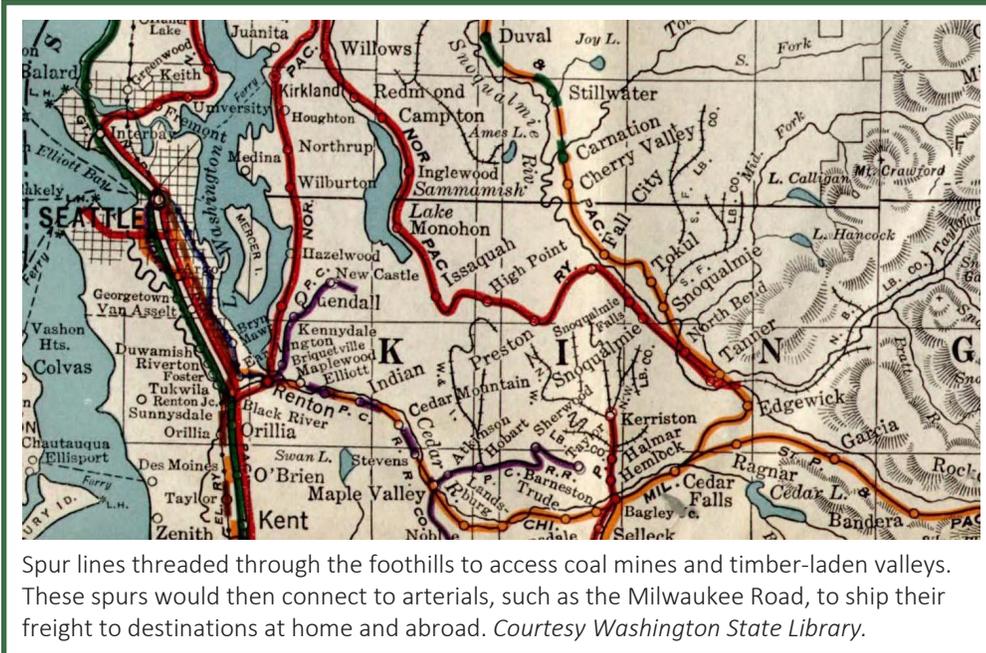
Of the many nationalities that have left their mark in the region, the Swedish are exemplary. August Lovegren, a native of Sweden, took the train to Seattle after the Great Fire of 1889 and built a sawmill off a railroad spur, establishing the town of Preston. The other Swedes that followed to work in the mill formed the Skogsblomman lodge of the Vasa Order of America. Preston is just one example of communities established throughout King County; today, the Nordic Heritage Museum in Ballard, the Swedish Cultural Center in Seattle, and the Vasa Park Resort in Bellevue attest to that heritage.

To ensure a steady supply for their steam engines, the Northern Pacific platted the coal mining town of Roslyn in 1886; the same year, the company opened up offices in Europe and Scandinavia. Immigrants with mining experience came from Poland, Lithuania, and other Eastern European countries to mine coal to operate the railroad. The Roslyn Cemetery has

Sampling of Railroad Settlement Cultural Resources

- Roslyn Cemeteries*
- Roslyn Historic District*
- Ballard Avenue Historic District*
- Preston Community Clubhouse*
- Snoqualmie Falls Cavity Generating Station*
- Snoqualmie Falls Hydroelectric Power Plant Historic District*
- Cedar Falls Hydroelectric Plant
- Landsburg Headworks Historic District

*NRHP



26 separate fields to accommodate the town's varied ethnicities and traditions. The town and the cemeteries are listed as National Historic Districts.

Just down the road from Roslyn, the South Cle Elum Depot serviced trains before the engines made the climb up to Snoqualmie Pass. The rail yard included the depot,

a roundhouse and turn table (one of only three on the Milwaukee Road), a water tower and ash pit, crew housing, and an electric substation built in 1919 to accommodate electrification. Both the depot and substation at South Cle Elum are listed on the National Register. The Cascade Rail Foundation runs a museum, historic café, and rail yard to interpret the story of Milwaukee Road's electrification. Visitors today can even stay in a bed and breakfast whose accommodations include the old bunkhouse and rail cars.

The Milwaukee Road was routed through the Cedar River Watershed to provide access to the workers and residents of Cedar Falls, the site of the country's first municipally owned hydroelectric dam. The railroad town of Moncton, adjacent to Cedar Falls, was home to a hotel, saloon, school, and swimming pool, and also served as a staging area for trains headed east to Snoqualmie Pass. A decade later, Substation #26 was built to accommodate electrification. The Cedar Falls dam continues to operate today, as does the Snoqualmie Falls generating station, which provided another important source of early electrical power to the region.



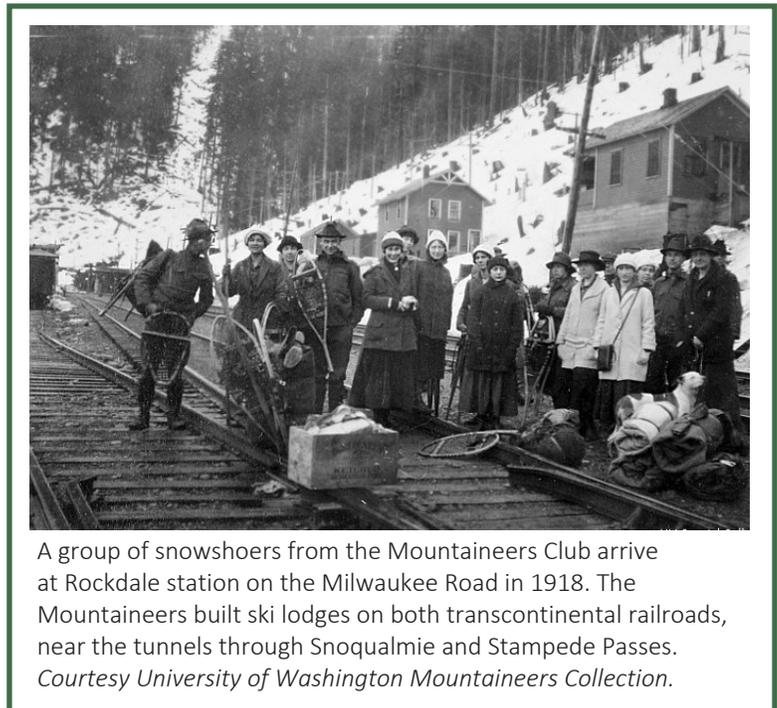
South Cle Elum had one of only three roundhouses on the entire Milwaukee Road (pictured here before electrification in 1919). Now managed by Washington State Parks and the Cascade Rail Foundation, the rail yard, electric substation and restored depot interpret the story of the northern transcontinental railroad. *Courtesy Washington State Archives.*

Built in 1898, the Snoqualmie Falls hydroelectric project was the first electric generating station built entirely underground, and is now recognized as part of the Snoqualmie Falls Hydroelectric Power Plant Historic District. The generator was a source of power for an electric sawmill built by the Snoqualmie Falls Lumber Company, a subsidiary of Weyerhaeuser, in 1917. The company town that was built alongside the mill was constructed to provide family housing for millworkers – a more stable alternative to the “wild west” logging camps deeper in the forests. The construction of the Snoqualmie Falls Mill and accompanying town signaled Weyerhaeuser’s long-term commitment to the local timber industry. Originally conceived as a vehicle for the acquisition and sale of timberland, the Weyerhaeuser Timber Company had transformed itself into a long-term investor in the land, the timber, its manufacturing, and its people.

Mill towns and logging camps sprouted up along the rail lines of the Cascade foothills. On the shores of Puget Sound, a city grew. The Census taken just before the arrival of the railroads found Seattle to be a sleepy little town of 3,533 people. Ten years later, the town’s population had grown fourfold. In 1897, news of gold in the Yukon reached the Lower 48. Prospectors traveled by rail to Seattle and bought a year’s worth of provisions, as required by law, before heading north. Combined with an already-growing trade in timber, shipping and manufacturing, the Yukon Gold Rush added further to Seattle’s rampant growth. By 1910, the city was home to 250,000 people.

RAILROADS AND TOURISM: CREATING A LANDSCAPE FOR RECREATION

The railroads shaped recreation around Snoqualmie Pass by providing transportation out of the city and into the high mountain country. The rail lines served as the backbone of a scenic corridor that encouraged preservation through breathtaking encounter and experience. The intact natural beauty of the corridor became part of the railroad’s product and its preservation became an important part of the company’s profit.



Sampling of Railroad Recreation Cultural Resources

- Mountaineer's Snoqualmie Lodge
- Mountaineer's Meany Ski Hut
- Milwaukee Ski Bowl
- Crystal Hot Springs Resort
- Seattle Municipal Ski Park
- North Bend Ranger Station*
- Camp Waskowitz*
- Carnation Commercial Hotel
- Hotel Redmond

*NRHP

While the railroads carried silk, timber, tea, and wheat, it was tourism that kept the Milwaukee Road in business well into the mid-twentieth century. Promotional pamphlets for the railroad provided lush descriptions about the forested, scenic descent from Snoqualmie Pass to Seattle, and the railroad lobbied hard to maintain these scenic views. The railroad catered to long-distance travelers, as well as local residents.

The earliest outings organized by the Mountaineers Club used the railroads to carry climbers to the trailhead, and later, to club houses that served as ski lodges during the winter and as summer basecamps

for summit attempts of nearby Cascade peaks. Club expeditions often involved dozens of members, and the ranks of the Mountaineers quickly grew as the popularity of these outings soared. Club members were passionate and well-organized, drawing inspiration from the Sierra Club and other like-minded organizations. The Mountaineers quickly became an ardent voice for wilderness protection and forest conservation in a state otherwise dominated by timber interests. The Club went on to play a seminal role in the designation of Washington's three major national parks, as well as conservation initiatives close to Snoqualmie Pass, including the Alpine Lakes Wilderness.

In 1914, the Mountaineers built a lodge at Snoqualmie Pass, a location chosen because of the Milwaukee Road. At Stampede Pass, the Martin ski area along the Northern Pacific Railroad line in Kittitas County served as a skiing destination starting in the early 1920s. The railroad brought skiers from both sides of the mountains up to Snoqualmie Pass. The Mountaineers Club built the Meany Ski Hut at Martin in 1928. The Northern Pacific built a second lodge in 1939 and began actively promoting skiing. The ski area remains in operation today as the oldest ski area and rope tow still operating in the state.

Both the Northern Pacific and Milwaukee Road operated trains through the passes during the winter – 50 years before the highway department was able to guarantee winter access to the mountains. A passenger could board a train at historic Union Station in downtown Seattle and arrive at a whistle stop near Snoqualmie Pass within a few hours. During its heyday, winter recreation at Snoqualmie Pass



In 1938, the Milwaukee Road opened the Milwaukee Ski Bowl, at its Hyak stop near Snoqualmie Pass, accessible by train with night skiing and a lift. This installation of night lighting for the area was the second in the country. *Courtesy Hyak Ski and Snowboard.*

was a proving ground for Olympic hopefuls and a popular destination for national ski jump competitions, which drew thousands of spectators, all traveling by train. In 1934, the City of Seattle opened a Municipal Ski Park at Snoqualmie Pass which, coupled with lodges built by the Washington Alpine Club, the Washington Athletic Club and others, served as cultural centers for generations of local skiers.

During the summer months, climbers and hikers explored the peaks and valleys exposed by the retreating snow. While most summit routes involved establishing a new travel route, the river valleys around Snoqualmie Pass yielded a well-established network of old railroad beds, mine-to-market roads, and logging roads that lent themselves well to a new generation of wilderness explorers drawn by the scenic viewsheds and easy access of the Milwaukee Road corridor.

THE AUTOMOBILE ERA: “INDIAN TRAIL TO INTERSTATE”

The traditions evolving from centuries of transportation patterns are an indelible link across Snoqualmie Pass connecting the eastern and western sides of the state, reaching back in time to America’s earliest peoples and playing an essential role in commerce along what is now the Nation’s longest interstate, extending from Seattle to Boston.

The Milwaukee Road and the Northern Pacific proved the value of a strong transportation connection over Snoqualmie Pass. The automobile was destined to follow – as soon as engineering would allow safe and navigable passage over the rugged Cascades.

The first automobiles crossed Snoqualmie Pass in 1905. Various efforts had been made to improve the original wagon road over the decades, but it was the arrival of the Alaska-Yukon-Pacific Exposition in Seattle in 1909 that spurred a concerted effort – accompanied by state appropriations – to make ready the way for automobile



This photograph by Asahel Curtis shows the narrow Sunset Highway in the 1920s as it skirts along the steep shore of Lake Keechelus at Snoqualmie Pass. *Courtesy Washington State Archives.*

travel to the exposition. Most visible were five vehicles that made the journey from New York as part of a cross-country race sponsored by the exhibition's organizers. They arrived in Seattle 23 days later, covered in mud and reeling from the ruggedness of the mountain crossing at Snoqualmie.

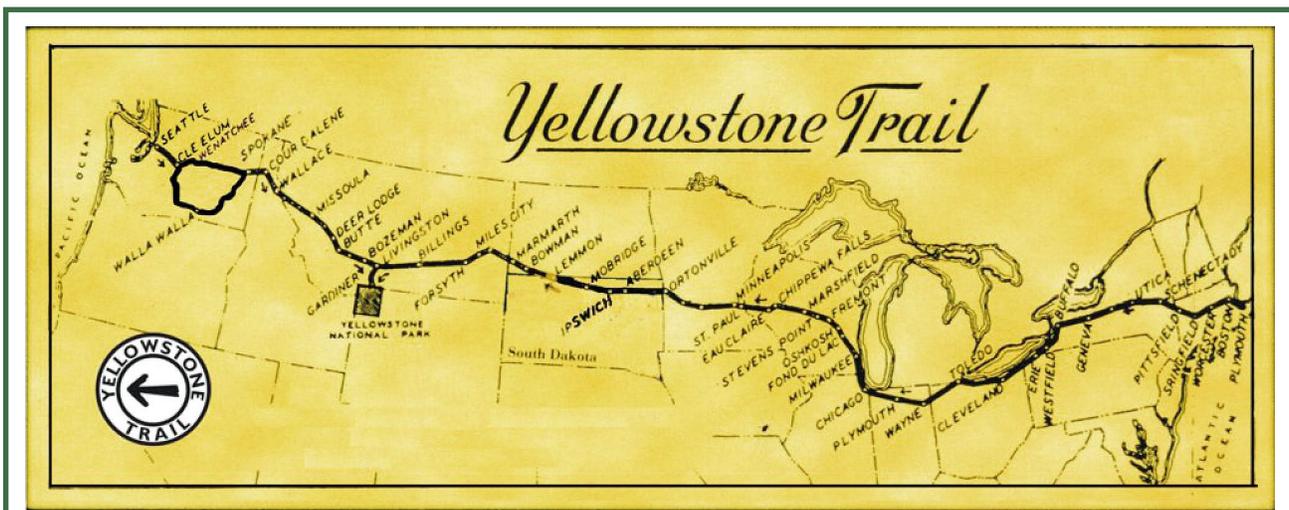
With the automobile quickly gaining popularity as a transportation mode, there was a strong desire to now connect Puget Sound with the rest of the country via a viable roadway. Again, the Cascade Mountains were a major obstacle, but the 1909 New York-to-Seattle car race, which had followed the old wagon road over Snoqualmie Pass, showed promise. Snoqualmie Pass could now be used to connect New York and Seattle not only by railroad, telegraph or steamship, but by the automobile. In 1914, the state of Washington began the development of three cross-state highways, including an east-west route that would run across Snoqualmie Pass and on to the Idaho border where it would connect with other state highways headed to the east coast. In 1915, this route, known as the Sunset Highway, was complete, with new switchbacks at the pass to make the mountains more navigable.

Local residents soon began to flock to the scenic corridor of mountains whose viewshed had been protected by the presence of the Milwaukee Road. Roadside camps, cabins and motels sprung up along the highway. Sunday drivers traveled alongside old railroad routes through forests and farmland, taking in the area's rugged scenery. Many made the journey to Snoqualmie Falls, where a lodge opened in 1916 to provide rest services to tourists arriving by rail and by car.

Sampling of Automobile Cultural Resources

- The Yellowstone Trail - Red Brick Road*
- Lake Keechelus Snowshed Bridge*
- Snoqualmie Pass Wagon Road at Denny Creek*
- Tollgate Farmhouse
- West Snoqualmie River Road Heritage Corridor
- Issaquah-Fall City Road Heritage Corridor
- Carnation Farm Road Heritage Corridor

*NRHP

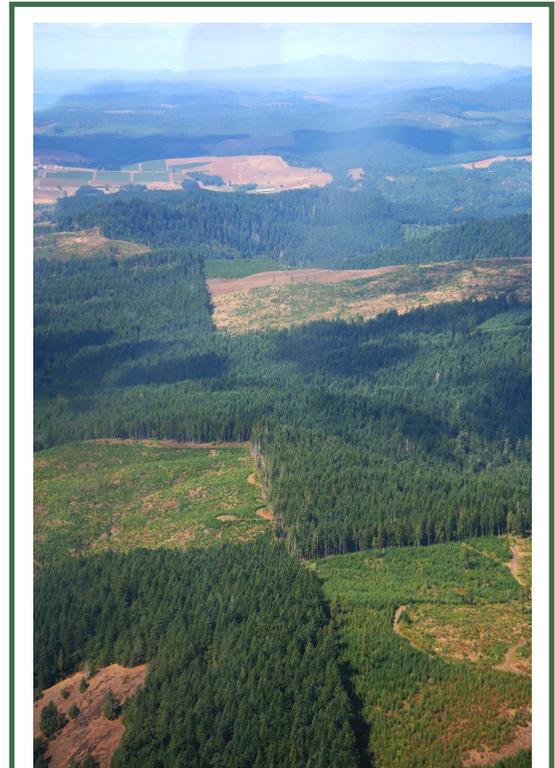


In 1912, the Yellowstone Trail Association located a route, encouraged road improvements, and promoted tourism along a transcontinental automobile route, the Yellowstone Trail. It became a leader in stimulating tourist travel to the Northwest and advocating for good roads across America. *Courtesy the Yellowstone Trail Association.*

By the 1920s, the Sunset Highway was part of the Yellowstone Trail, connecting Seattle with Yellowstone National Park, Chicago, and eventually to Boston. The Yellowstone Trail was used to highlight the growing importance of automobile traffic and to advocate for road building in America. It was yet another reminder that Seattle was now intimately connected to the rest of the Lower 48; the continued development of the nation's highways would only make this more so.

Photographer Asahel Curtis was a strong proponent of local highway development. His images capture many scenes from the region's early days of nature tourism and natural resource industry. Curtis was a founding member of the Mountaineers, and he had a deep appreciation for the area's natural beauty. He also believed strongly in the potential economic benefits of tourism. Curtis' ardent support of the Seattle Chamber of Commerce often put him at odds with his preservationist mountaineering friends, but it also gave him a platform for promoting Washington's developing highways. His body of work now stands as a photographic record of the timber, rails, and roadways of a young state.

In the 1950s, the highway over Snoqualmie Pass became part of the Dwight D. Eisenhower National System of Interstate and Defense Highways and eventually became known as Interstate 90, the longest interstate in the nation. As the highway climbs over the crest of the Cascades, the challenges of mountain construction and avalanche control



The checkerboard ownership patterns seen on the landscape today are a direct effect of the Northern Pacific Railroad land grant. *Photo by Kevin Matthews, Artifice Images.*

Sampling of Cultural Resources

- Snoqualmie Falls Traditional Cultural Property*
- Burke-Gilman Rail Trail
- Issaquah To High Point Rail Trail
- Preston Snoqualmie Rail Trail
- Coal Mines Rail Trail
- Iron Horse State Park Trail
- Cedar River Rail Trail
- East Lake Sammamish Rail Trail
- Snoqualmie Valley Rail Trail
- Mountains to Sound Greenway National Scenic Byway

*NRHP

are clear. Even in the lowland plateaus near Puget Sound, the glaciers have left their mark: deep, underwater valleys rendered a conventional highway bridge across Lake Washington unfeasible. Instead, engineers embarked upon an experiment in floating bridge design. At the time of its construction in 1940, the Lacey V Murrow Memorial Bridge across Lake Washington was the longest floating bridge in the world. Continued improvements to I-90 later focused on avalanche control at Snoqualmie Pass, with the construction of a series of landmark snow sheds in the 1960s and the development of munitions targeted to the heavy, wet snow of the Cascades – echoes of the railroad's battles with the same heavy winters.

THE LANDSCAPE TODAY

The transportation corridors and forested landscape surrounding Snoqualmie Pass became the organizing features around which the Mountains to Sound Greenway was created in 1991. The Greenway tied together the railroad and interstate corridor with the surrounding forest land, seeking to preserve and interpret the cultural and natural heritage of the transportation corridor, working landscapes, preserved open spaces, and outdoor recreation.

The landscape of the proposed heritage area shaped travel and commerce, as early settlers and entrepreneurs took on the challenges of railroad construction and large-scale timber extraction. These patterns, in turn, made their own mark on the landscape, as the Northern Pacific land grant combined with federal forest reserves to leave large swaths of the landscape beyond the reach of small-scale development and construction. As the twentieth century progressed and the local population grew, the region's forested foothills and mountains remained largely undeveloped.

It was the preservation of these foothills that sparked a movement to protect the Mountains to Sound Greenway in 1991. Local residents saw value in maintaining working forests, as well as in the preservation of open space for wildlife and recreation. A map of the Greenway today shows a complex mix of public and private ownership, including large swaths of private land still held by timber companies. Working forests, active farms, and public open space create a scenic backdrop and ecological buffer for the region's 3 million people. Wildlife habitat corridors provide safe passage for elk, bear, cougar, and coyotes. Trails connect urban centers with vast Wilderness areas. Urban and wild are threaded along a transportation

corridor that brings a city dweller to a wilderness trailhead in less than an hour. The result is a landscape that looms large in the consciousness of local residents and visitors. This connection has engendered a series of landscape conservation initiatives that have preserved the heritage and culture of the railroads, as well as the industry, recreation, and tourism they engendered.

Many of the region's railroad lines have been converted to regional trails and remain a distinct part of the landscape. The Burke-Gilman Trail set a federal precedent in the 1970s by giving local governments the right of first refusal when a railroad was abandoned. This decision set the stage for a nationwide movement to



The Burke-Gilman Trail is now a major transportation corridor that serves thousands of commuter and recreational cyclists and pedestrians. *Photo by Mountains to Sound Greenway Trust.*

build class I regional trail systems. The Burke-Gilman Trail follows an old Northern Pacific line, used primarily for shipping timber, with a branch that leads up to Snoqualmie Falls. It now connects with Snoqualmie Valley, Interurban, East Lake Sammamish and other regional trails, all built on old rail lines, creating a network of bike and pedestrian pathways used for recreation and transportation.

Meanwhile, the Milwaukee Road ceased operations in 1970s. In the early 1980s, the state of Washington began acquiring the right-of-way from the bankrupt Chicago- Milwaukee-St. Paul-Pacific Railroad, and the resulting 253-mile John Wayne Pioneer Trail in Iron Horse State Park is now the longest rail-trail in the nation. Seventy-six miles run through the Heritage Area, including the historic 2.3-mile Snoqualmie Pass Tunnel, the longest recreational tunnel in the nation.

In 2009, Snoqualmie Falls was listed on the National Register as a Traditional Cultural Property, recognizing the spiritual importance of the Falls to the Snoqualmie Tribe, whose ancestors would gather at its base, trading and sharing culture. Tribal members continue to bring their children to the falls for purification, spiritual sustenance, and fortitude. Puget Sound Energy, which still operates the underground Snoqualmie Falls

generating plant, has developed a public park and overlook to cater to the more than 1.5 million tourists who visit the Falls each year. The power plant itself is listed as an ASCE Historic Civil Engineering Landmark.

Weyerhaeuser and Plum Creek, the heirs of the Northern Pacific Railroad land grants, as well as public agencies including the United State Forest Service, the State Department of Natural Resources, and the City of Seattle, have spent decades consolidating land ownership, piecing together acreage from the land-grant checkerboard through acquisition and land exchanges. Still, mountainsides in the Greenway show the telltale signs of varying degrees of harvest across different ownership boundaries in a unique checkerboard pattern.



The 90,000-acre Cedar River Watershed, once a part of the Northern Pacific land grant, is now the largest municipally owned watershed in the country. Its acreage has been consolidated into public ownership and the watershed now provides some of the cleanest drinking water in the country to Seattle residents. Just to the north, the 228-square-mile Snoqualmie Tree Farm continues as a working private forest today, now on its third generation of harvest. Originally a Weyerhaeuser holding, King County acquired development rights to the tree farm in 2004, ensuring a large, forested buffer between the region's urban growth boundary and the Cascade crest.

Forestry in the Greenway today is characterized by the active management of forests, which preserves and captures a myriad of values. Some forests continue to provide timber products, and all forests, whether harvested or not, can provide clean water, clean air, habitat for wildlife, and recreational opportunities. Whether overseeing large commercial timber plantations, small private woodlots or public natural areas, Greenway foresters manage for a mix of these values.

A rare combination of working forests and preserved open space forms today's viewshed in the Milwaukee Road Corridor. While the region is now home to 3 million people, vast stretches of forest, river and mountain still remain in their natural state, thanks to the ability of local conservations to work collaboratively with large-scale timber owners, as well as state and federal agencies whose own land was interwoven among the Northern Pacific land grant.

In 1998, the section of Interstate-90 in the Mountains to Sound Greenway was designated a National Scenic Byway, the first such designation in the country for an interstate highway. The designation reflects the synergy of the Greenway's primary assets – commerce and conservation, which continue to co-exist within the same narrow corridor of mountainous crossing.

LIFE IN THE MOUNTAINS TO SOUND GREENWAY

A trip through the Snoqualmie Pass corridor today ties together the age of transcontinental railroads, land grants and timber towns, telling the story of how a narrow route through a rugged mountain range opened up the last remaining corner of the Lower 48, establishing a national presence at a remote frontier outpost, and building empires out of lumber and Asiatic trade.

Seattle consistently ranks as one of the nation's best places to live, thanks to its proximity to an abundance of world-class recreation opportunities and the strength of the region's economy. For many decades, timber was the area's economic engine and the mountains were integral to the region's way of life. Today, the region's economy is more diversified, but the mountains still remain a defining part of local life and culture, and there is a strong conservation ethic evidenced by the region's history of leadership on clean water, farmland preservation and parks funding.

Washington is the nation's fourth-largest exporting state. Its economy is dependent on trade, with one in three jobs tied to trade. Agriculture is now the state's top employer, and two-thirds of its production is exported to Asia. Whether shipping apples, wheat, potatoes or hay, farmers today are following centuries of traders who moved goods over Snoqualmie Pass to the deep-water harbors of Puget Sound. From there, it is a quick trip, by air or by sea, to Asia. Washington's many other export industries – including aerospace, timber and other forest products – also continue to benefit from Puget Sound's optimal location on the Pacific Rim.

Trucks now move an estimated \$500 billion in freight across Snoqualmie Pass each year, bringing produce from eastern Washington to world markets and carrying goods from Asia to the rest of the nation – just as the railroads once did. The scenic journeys advertised by the Milwaukee Road have been transformed into an outdoor recreation and tourism industry that generates \$22.5 billion each year statewide.



The restored South Cle Elum Rail Yard is the site of an interpretive trail, a bunkhouse bed-and-breakfast, the rails-to-ales brewfest, and railroad era reenactments like the one above. *The Cascade Association of Museums and History.*

Outdoor retailer Recreational Equipment, Inc. is one of the region's largest private companies, with more than \$1.6 billion in sales annually. The company, which still operates as a co-op, has its roots in a group of Seattle mountaineers who pooled their resources together to import European climbing gear for their own personal use. Like Seattle-based Eddie Bauer, who patented the first quilted down jacket and gave rise to a major retail chain, REI's humble beginnings were a direct and practical response to the technical challenges posed by the region's rugged terrain. Today, REI's flagship store in Seattle is a major tourist destination unto itself and the company's northwestern brand is marketed around the country.

Many of the ski areas and trailheads once serviced by the Milwaukee "Snow Train" are now accessible along I-90. Snoqualmie Pass, one of the most heavily-used ski areas in the country, is the main attraction of a winter recreation corridor that includes cross-country ski trails, sledding runs, snowmobile tracks, and dog-sled trails. Meany Lodge continues to serve new generations of families learning to ski alongside the old Northern Pacific line.

While the timber industry has been eclipsed by aerospace and technology, telltale signs remain, from chainsaw sculptures, to resident timber-sports champions, who practice their trade by competitively swinging axes and scaling trees. The great Snoqualmie Mill has closed and some of the original workers' cabins have been razed and reforested, but the old town remains as a historic district, and the local city council is considering plans for redeveloping the mill site.

Local festivals and events throughout the region celebrate the cultural heritage of the Greenway. Snoqualmie Railroad Days, in the historic town of Snoqualmie, celebrates the town's railroad and logging history, as well as its connections to the Snoqualmie Tribe. Visitors can watch lumberjack demonstrations, historic trains, and participate in Native drumming.

Across the pass, Roslyn celebrates its coal mining history and unique ethnic heritage. The annual Coal Miners Day festival typically coincides with the High Country Log Show, in which participants compete in a number of different timber sports, including axe throwing and pole climbing. You'll also find the town's Italian Heritage Celebration that weekend, while the Croatian picnic takes place earlier in the summer.

Down the road in Cle Elum, volunteers with the Cascade Rail Foundation have helped restore the historic South Cle Elum Depot. An interpretive trail guides visitors through the rail yard and tells the story of the Milwaukee Road's western extension and its pioneering electrification. The nearby Coal Mines Trail takes visitors on a five-mile walk between Cle Elum and Roslyn, along a Northern Pacific spur line that was used to transport coal from the mines at Roslyn to the mainline rail yard at South Cle Elum.



In the Greenway, the historic Milwaukee Road is now the longest rail-trail in the nation, and the riding through the old 2.3 mile tunnel at Snoqualmie Pass is just one of the many ways that visitors are immersed in the transportation heritage resulting from the northern transcontinental railroads. *Photo by Mountains to Sound Greenway Trust.*

In the historic town of Snoqualmie, the Northwest Railway Museum offers rides on vintage train stock along an old Northern Pacific spur line. Passengers board at the historic Snoqualmie Depot and then travel by train to a dramatic overlook of Snoqualmie Falls. Volunteers at the museum also have several active restoration projects, including the Messenger of Peace Chapel Car. They also staff the museum's regular historic train excursions.

Most of the railroad ties in the Mountains to Sound Greenway have been abandoned and the rights of way converted to trails, although a few, including the main Northern Pacific line, still operate. The timber mills have fallen silent, but the communities they spawned continue to thrive, nestled among mountains and forests, waterways and highways, strung along historic railroad lines whose advent gave rise to the industry, trade and conservation of the Pacific Northwest.