

# CHAPTER 1

## Introduction: The Project

### PURPOSE AND SCOPE

Federal law requires the Forest Service to identify, evaluate, and protect cultural resources on public lands under its jurisdiction. These requirements are mandated by the National Historic Preservation Act (NHPA) of 1966 as amended, the National Environmental Policy Act (NEPA) of 1974, the National Forest Management Act of 1976, the Antiquities Act of 1906, the Archaeological Resources Protection Act of 1979, and Executive Order 11593. *A Contextual and Architectural History of USDA Forest Service Region 6: 1891-1960* was initiated by the Pacific Northwest Region of the Forest Service, Region 6, to aid in the identification and evaluation historic resources on Forest Service land.

The historic context study is used as a planning tool, providing guidance for evaluating and protecting significant Administrative and Recreation facilities owned and managed by Region 6. Broad patterns of the agency's growth and development are defined, and events, themes, and associated individuals are also identified as part of the study. The context study identifies potential property types associated with the Administrative, Recreation, and other Forest Service-related historic resources.

According to available Forest Service records, Region 6 has at least 1500 Administrative and Recreation related resources that are over fifty years of age, and potentially eligible for listing in the National Register of Historic Places. Administrative related buildings and structures include a wide variety of resources including ranger station complexes (residences, barns, garages, storage building, and offices), remote guard cabins, fire lookouts, shelters, and trails. Recreational properties include Forest Service campgrounds, ski lodges, trail shelters, lodges, and other publicly developed facilities as well as privately-owned recreation summer homes, organizational camps, club sites, resorts, and lodges.

The Forest Service has approximately 2,300 "individual recreation facilities" existing on Region 6. In addition, Region 6 Forest Service Historian Elizabeth Gail Throop estimates that over 2,700 summer homes have been erected by private individuals on Forest Service lands. Other resources include snow-survey-cabins, and property types associated with experiment stations, and nurseries. Buildings constructed by Civilian Conservation Corps (CCC), the Bureau of Reclamation, and Soil Conservation Service are also found on Forest Service land. The context statement does not address prehistoric sites, or privately built structures such as mining cabins, mills, or ranching improvements not directly related to the Forest Service.

### RESEARCH METHODOLOGY

The historic context study was based on existing secondary resources including context statements, historic overviews, National Register nominations, Region 6 data bases, plans, photographs, and other internal agency reports and letters, in addition to nationally published sources on Forest Service history. Document research included a review of Forest Service engineering records (RG95) housed at the National Archives and Records Administration (NARA) Pacific-Alaska Region branch in Seattle, Washington. The Forest Service expressed particular interest in gathering information related to the post-World War II years, an era not previously studied in the development of the agency's contexts. An oral interview was conducted in August 2004 by Richard McClure, Forest Archeologists, Gifford Pinchot National Forest, with A.P. "Benny" DiBenedetto, FAIA, who served as the Region 6 Architect from 1951 to 1961. DiBenedetto provided valuable insight into the post-war expansion period within the Forest Service.

## **ADMINISTRATIVE BOUNDARIES**

The geographical framework for this historic context is the Pacific Northwest Region 6, USDA Forest Service that includes nineteen national forests in Oregon and Washington, one national grassland, and the Columbia River Gorge National Scenic area. The six national forests in Washington are the Colville, Gifford Pinchot, Mt. Baker-Snoqualmie, Okanogan, Olympic, and Wenatchee. The thirteen national forests in Oregon are the Deschutes, Fremont, Malheur, Mt. Hood, Ochoco, Rogue River, Siskiyou, Siuslaw, Umatilla, Umpqua, Wallow-Whitman, Willamette, and Winema.

Forest Service Region 6, one of nine National Forest Regions in the country, is administered by the Department of Agriculture under the direction of a Chief Forester. The agency's main headquarters is located in Washington, DC; referred to as the Washington Office. Region 6, the Pacific Northwest Region, has its headquarters in Portland, Oregon.

## **TEMPORAL BOUNDARIES**

The Temporal Boundaries for the Region 6 context study extends from 1905, when the earliest administrative and recreation developments occurred in the Pacific Northwest Forests, to 1960 when the Multiple Use Sustained Yield Act was enacted. This Act effectively ended the post-World War II building period by redefining the many forest resources. Contextual information in the document pre-dating 1905 frames the development of the National Forest system in the policies, laws, and philosophies of the eightieth and nineteenth centuries.

The historic context is divided into eras that represent important shifts in the patterns and events of the developing Forest Service as well as at regional and national levels. These eras are:

- Eightieth and Nineteenth Century Background
- Forest Reserve Period: 1897-1904
- Early Forest Service Period: 1905-1911
- Intermediate Period: Forest Service Management Comes of Age: 1912-1932
- Depression-Era Forest Service Programs: 1933-1941
- World War II and the Post-War Period: 1942-1960

## **ORGANIZATION**

Divided into three major sections, this context study serves as the basis for future evaluation of historic resources within Region 6. Chapter 2, "Historical Context—The Development of Region 6" provides an historical overview. Divided into pertinent time periods, the overview section considers the national trends and policies affecting the agency's development in the Pacific Northwest.

Chapter 3, "Forest Service Building Program—An Architectural History" reviews the historic themes and associated property types on the Region's nineteen national forests. Categorized within specific chronological eras, the property types represent resources built on forestland between 1905 and 1960 by Forest Service personnel, local carpenters, Depression-Era work relief program participants, or in conjunction with other agencies, private individuals or organizations. Each thematic group and associated buildings and structures are related by function, use, building type, design, and stylistic influences. Within each chronological era, consideration is given to the social and political constraints and influences affecting property types, and how the built resources relate to the evolving missions and goals of the Forest Service.

Chapter 4, "Evaluation" outlines the evaluation criteria used to determine the significance and potential eligibility for the National Register of Historic Places. This chapter discusses: the Period of Significance (the period in which a property acquires historic significance); defines contributing and non-contributing

properties; and discusses the criteria for evaluating the integrity of a historic resource. In addition, this chapter considers the areas in which Region 6 resources gain significance and identifies the various property types that tangibly express that significance. Chapter 4 also outlines the Registration Requirements—those associative and physical qualities each property type must possess to meet the national standard. Potential thematic nominations to the National Register of Historic Places are also discussed. Chapter 5 lists the references cited in the historic context and architectural overview.

# CHAPTER 2

## Historic Context - The Development of Region 6

### NINETEENTH CENTURY CONTEXT: 1781-1891

#### Forests in the Euro-American Tradition

The history of forests in North America has two separate subjects – the forests and the trees. For many Americans, “forest” means “public land,” as well as “a place where trees grow.” After the Revolution, Americans were very concerned about public land, but were not particularly concerned with trees. The new nation found itself burdened with debt. One resource that offered potential income was land, and the former colonies had land in abundance. The states ceded lands to the federal government in 1781. Three years later, Congress adopted Thomas Jefferson’s proposal for “an ordinance for the disposal of the Western territory” and the public domain was offered for sale (Rohrbough, 1968:8).

**Table 1: Timeline of Legislation and Events Affecting the Forests of the Pacific NW (1781-1891)**

Date	Agency	Impact
1781	U.S. Public Domain	Public domain created when states ceded 233 million acres to federal government
1789	Constitution, Article 4, Sect. 3, Paragraph 2	Established Congressional authority over the public domain, including sale of land
1841	Act of September 4	Granted federal lands to Midwestern states, established rules for preemption claims
1848	Act of August 14	Established territorial government for Oregon Territory (Oregon and Washington)
1849	Act of March 3	Established Department of the Interior to manage the public domain
1862	Homestead Act	Established homestead rights
1862	Union Pacific and Central Pacific Grants	Railroad land grants to the transcontinental lines
1864	Act of June 30	Preserved Yosemite Valley and Mariposa Grove
1864	Northern Pacific Grant	Land grants to first transcontinental railroad in Pacific Northwest
1866	Oregon and California Grant	Land grants to a second railroad in the Pacific Northwest
1873	Timber Culture Act	Land grants for growing trees on public domain
1874	William H. Brewer	<i>Woodlands and Forest Systems of the U.S.</i> (Early U.S. forestry publication)
1875		American Forestry Assn. founded
1877	Desert Lands Act	Sale of 640-acre tracts in western states
1878	Timber and Stone Act	Sale of 160-acre forest tracts from public domain in Oregon, Washington, California, Nevada
1885	C.S. Sargent	<i>Report on the Forests of North America</i> (Early U.S. forestry publication)
1886	Act of June 30	Created Forestry branch of Department of Agriculture
1886	Cleveland Administration	Created Crater Lake National Park
1889	Act of March 2	Preserved Casa Grande in AZ, first prehistoric site protected
1889	William G. Steel	Organized the Oregon Alpine Club, later the Mazamas, instrumental in early conservation, outdoor recreation
1891	Forest Reserve Act of March 3 (Creative Act)	Established Forest Reserve policy

## Public Land Policy

As most commentators note, the concept of the public domain in the U.S. was founded on the idea of disposing of public land rather than keeping it. Each generation of immigrants in the nineteenth century aspired to the Jeffersonian ideal of the independent yeoman farmer—to own land and reach a level of self-sufficiency or economic independence. America offered immigrants an opportunity to satisfy land-hunger that had been building for centuries. In the fall of 1787, the federal government auctioned off 72,934 acres of public land (Rohrbough, 1968:11). This land was to be cleared of trees, tilled, and settled.

For the aspiring farmers who bought public lands for settlement, trees were a barrier to agriculture and had to be removed as expeditiously as possible. Historian Samuel T. Dana quotes Issac Weld, an English visitor to the Colonies, who remarked that the trees “...are looked upon as a nuisance, and the man who can cut down the largest number...is looked upon as the most industrious” (Dana, 1956:3). The settlers used wood for building and fuel, but because of the abundance there was no concern about the future supply.

The British, however, had experienced a shortage of trees. Because ships were essential for England’s economy and national defense, the British were more sensitive than the colonists to the supply of hardwoods for hulls, conifers for masts, and pines for pitch and resins. The English government in the colonies used a broad arrow mark to select trees reserved for masts. This policy angered the colonists, leading to the Pine Tree Riot in 1772, but this early message of conservation was lost on the Americans.

During the first decades of the nineteenth century, American settlement moved west through the Ohio Valley and into the Midwest. The northern U.S. industrialized during these years. In the 1840s, emigration into the trans-Mississippi West opened a new frontier, the Oregon Territory. The new territorial government formed in 1848. With a new frontier and public lands extending to the Pacific, the government applied itself more vigorously to getting the public domain “settled up.” The Department of the Interior was created in 1849 for the purpose of distributing the lands. The means of distribution included various homestead programs, claims by the states, and finally, after 1850, huge grants to railroads participating in the transcontinental railroad system. With the lands went the forests.

## Forestry and Conservation in the 1870s

Prior to the 1870s, Congress had passed very few laws dealing with forests. These laws established timber reserves for the navy, and controlled timber trespass on public land. In 1872, botanist Franklin B. Hough presented his influential paper “On the Duty of Governments in the Preservation of Forests” at the meeting of the American Association for the Advancement of Science. In the same year, Congress set aside Yellowstone National Park, and in 1873, Congress passed the Timber Culture Act. William H. Brewer published *Woodlands and Forest Systems of the U.S.* in 1874. In the following year, enthusiastic converts to the new science of forestry founded the American Forestry Association, and in 1876, the Department of Agriculture created its Division of Forestry. In 1878, Franklin Hough presented his report on the condition of U.S. forests to the Secretary of Agriculture, who ordered 25,000 copies printed; that same year Congress passed the Timber and Stone Act establishing 160-acre timber claims for individuals but forbade unauthorized cutting on public lands. In 1879, the Secretary of the Interior asked Congress to establish tree preserves in California.

The remarkable burst of conservation activity in the 1870s came from a combination of factors. First, there was a great deal of interest in the new science of forestry, which was emerging as an academic subject in the curriculum of some German universities. Forestry was also raising interest in American universities including Harvard and Yale. The nineteenth century admired practical science, and the American national love affair with technology perhaps dates from this period. The media and the marketplace celebrated engineering, agriculture, home economics, and other practical applications of science. Americans proved quick to embrace new sciences that were equal to the test of utility, and forestry promised to be one of these new sciences.

The second stimulus for the conservation effort of the 1870s was the observation made by Franklin Hough and others that the U.S. was depleting its forests at a rate faster than the forests were growing. Certainly this was true of New England and perhaps the Middle Atlantic states. In 1870, total U.S. timber consumption was 12.7 billion board feet. Of this, Michigan and Pennsylvania were the leading producers, producing 2.25 billion and 1.6 billion respectively (*Statistical Abstracts*, var. dates). However, both of these states sustained significantly higher levels of production for the next 50 years. Maine, at the center of New England's supposedly depleted timber industry, produced 639 million board feet in 1870, and then sustained that level through 1920, except for 1909 when it produced 1.1 billion board feet.

The efforts at conservation were not directed towards states like Maine or Michigan that were producing timber, but were directed toward the western states, which produced very little timber at the time. Oregon, Washington, and California together produced 521 million board feet in 1870. This was only 4% of the nation's total timber. The Rocky Mountain states, which had rail access to eastern markets by 1870, also produced insignificant amounts.

The third element in the conservation movement of the late nineteenth century was recreation. This was particularly important for the western U.S. The movement for national parks and for preservation of wilderness lands drew energy from organizations like the Boone and Crockett Club (1887) and the Sierra Club (1892). Early members of the Boone and Crockett Club included such national figures as Theodore Roosevelt, Gifford Pinchot, George Bird Grinnell, Henry Cabot Lodge, and Henry L. Stimson (Williams, 2000:7). John Muir campaigned tirelessly for the mountains of California and the rest of the West. In Oregon, Muir spent summers on Upper Klamath Lake with his sponsor and fellow outdoor enthusiast, Edward H. Harriman.

Muir, Roosevelt, and others wrote about the outdoors in books and in articles for national magazines. The articles reached a substantial audience and did a great deal to educate and motivate the public. In the Pacific Northwest, John Breckenridge Waldo, William Gladstone Steel, and John Minto were successful writers and public figures who worked at shaping public support for Crater Lake National Park, and the vast Cascade Forest Reserve.

### **Region 6 and the Pacific Northwest**

Forest Service Region 6 serves the states of Oregon and Washington, along with a portion of northern Idaho. Although the Region does not encompass the entire Pacific Northwest, the Region's development is closely linked to the history of the Northwest. For most Americans, Oregon and Washington comprise the Pacific Northwest as a geographical and cultural region of the United States. Like some other parts of the United States, the Pacific Northwest has a cultural identity that comes from its pre-history and history, its geography, and its bioregionalism.

From the perspective of geography, the Pacific Northwest is often defined as the watershed of the Columbia River. This is very not precise, because Puget Sound to the north, and coastal rivers to the west are also part

#### ***John Breckenridge Waldo***

Judge Waldo was born near Salem, Oregon, in 1844. His father, Daniel Waldo, had come to Oregon on an 1843 wagon train and was a member of the legislative committee for the provisional government. John Waldo graduated from Willamette University and was admitted to the Oregon bar. He served as Supreme Court justice and state legislator. Waldo was a lifelong advocate of wilderness, especially the Cascade Forest Reserve. He wrote in *The Forester* magazine in 1890 that Americans "should...have our national preserves...for inspiration and our own true recreation" (Waldo, 1896:v). In the summer of 1880, Waldo wrote in his journal while camped on the Deschutes River

*This evening we are all here – have a fine supper—and my blankets are spread for the night within the same circle of trees with their grassy carpet which concealed me, and from which I fired my shots at the deer. Think of this, my friends in the Valley, and weep! (Waldo, 1986:8)*

of the region. But the Columbia River and its tributaries provide a physical thread connecting the western valleys with the inland areas of Oregon, Washington, Idaho, and portions of western Montana.

The topography of this area is complex, with river valleys and mountain ranges extending from sea level to 14,000 feet. The biological communities of this area are also complex, but the common element is the vast expanse of coniferous forests. Douglas fir, hemlock, spruce and cedar dominate west of the Cascade Range, and Ponderosa pine forests stretch east of the Cascades to the continental divide.

Until recent times, the Columbia and its tributaries also connected the people of this region. Indigenous groups lived in the river valleys and used the runs of anadromous fishes as a vital food supply. For the first Euro-Americans, the Columbia and its tributaries provided routes for communication and travel through the daunting wilderness.

During the nineteenth century, the Pacific Northwest was indeed a wilderness, a remote corner of Euro-American outreach. It was the land north of the Spanish colonies, west of the French, and south of the Russians and British. Americans who began to enter the country in the middle decades of the nineteenth century were—in the phrase of historian Malcolm Clarke—“Eden seekers” drawn to the remoteness of the Oregon country and its imagined pristine, unspoiled nature. The pioneers tended to be serious people, imbued with the spirit of Jeffersonian self-sufficiency, and often holding strong religious convictions. In his classic account of crossing the plains in 1846, Francis Parkman contrasts the lively, “skylarking” emigrants bound for Santa Fe with the dour farmers bound for Oregon.

Until the transcontinental railroads reached Oregon and Washington in the 1880s, the Northwest was difficult to reach. The most reliable access from the rest of the U.S. or Europe was by ship. Moving goods or even mail across the continent was slow and arduous. In other parts of the American west, gold provided an economic stimulus to Euro-American settlement. The gold rushes in southern Oregon, northeastern Oregon, and central Washington were short-lived, however, and the bounty was dissipated within a few years. What remained in the Pacific Northwest after the gold and the miners were gone, was the forest, soil, and water.

## **FOREST RESERVE PERIOD: 1891-1904**

### **Victory for the Conservation Movement**

Three critical pieces of legislation created the U.S. National Forest system. These were the Forest Reserve Act in 1891, the Organic Act in 1897, and the Forest Transfer Act in 1905. These three acts established the forest reserves, provided a legislative aegis for managing the forests, and placed the reserves under the administration of the Department of Agriculture.

The Forest Reserve Act was a revolutionary piece of federal legislation, but several states had anticipated it. New York established state forest reserves in the Adirondack and Catskill areas by 1885. Pennsylvania, Colorado, and Utah also had state forest preservation programs (Dana, 1956:93). By the mid-1880s, Edward Bowers of the General Land Office, and Senator Hale of Maine had brought bills to create federal forest reserves to Congress. The American Forestry Congress and the American Association for the Advancement of Science lobbied Congress in 1889 to consider plans for forest reserves. In 1891, new legislation limited the scope of land laws and Section 24 of the text gave the President the power to “set apart and reserve” lands “wholly or partially covered with timber” in any state or territory.

### **Forest Reserves in the Pacific Northwest**

The first forest reserve was the Yellowstone Forest Reserve in Wyoming, which President Benjamin Harrison created in 1891. Following that, he created reserves in the Pacific Northwest including the Bull Run Reserve on the Portland city watershed and the Pacific Reserve in Washington. In 1893, President Grover Cleveland

created the Ashland Reserve, again to protect a city water supply, and the huge Cascades Reserve. Four years later, President Cleveland created the Rainier Reserve and the Olympic Reserve in Washington.

**Table 2: Timeline of Legislation and Events Affecting Forest History in the Pacific NW (1891-1904)**

Date	Agency	Impact
1891	Forest Reserve Act of March 3 (Creative Act)	Established Forest Reserve policy
1891	Harrison Administration, first Forest Reserve	Established Yellowstone Forest Reserve
1891-3	Harrison Administration Reserves	Bull Run Reserve in Oregon; Pacific Reserve in Washington
1893	Cleveland Administration Reserves	Cascade Reserve and Ashland Reserve in Oregon
1896	National Academy of Science	Sent Forestry Commission to survey forests in the western states
1897	Cleveland Administration Reserves	Mt. Rainier Reserve and Olympic Reserve in Washington
1897	Organic Act	Provided for the administration of the Forest Reserves, Gifford Pinchot hired as GLO special forestry agent
1898	Act of July 1	Appropriated funds to manage Forest Reserves
1898	USDA	Gifford Pinchot changed jobs to become chief of USDA Department of Forestry
1901	USDI	Forestry Division created in Department of the Interior
1902	Newlands Act	Began federal irrigation programs
1902	USDI	Published <i>Forest Reserve Manual</i>
1902		Yacolt Fire in SW Washington
1905	Forest Transfer Act	Transferred Forest Reserves to Department of Agriculture

The Northwest’s response to the new forest reserves was very complex. Many people opposed the reserves, believing the reserves threatened grazing rights, hampered mining projects, precluded homesteading, and limited timber supply. For Northwest citizens who depended on natural resource industries and businesses, these were not idle concerns. Residents of Western Washington were particularly negative; the Washington legislature condemned the reserves in three separate messages to Congress. The Seattle Chamber of Commerce also condemned the reserves.

From the political standpoint, state and local governments objected that the reserves took without compensation the state school sections in each township, and kept the reserved land off the property tax roles forever. Local governments would need to build and maintain roads through the reserves, provide community services for people living on the reserves, provide protection to citizens visiting the reserves, and control fire, floods, and other natural events without being able to tax the land. Eighty percent of Washington’s Skamania County, for example, lay within the Mt. Rainier Forest Reserve. The county seriously considered dissolving itself and joining with adjacent counties to create an adequate tax base (Mack and McClure, 1999:12).

<i>Early Forest Reserves in Region 6</i>		
<b>State</b>	<b>Reserve</b>	<b>Date</b>
Oregon	Bull Run	1892
Washington	Pacific	1893-1907
Oregon	Cascade Range	1893-1907
Oregon	Ashland	1893
Washington	Mt. Rainier	1897-1907
Washington	Olympic	1897
Washington	Washington	1897
Oregon	Baker City	1904

Support for the reserves came from Northwesterners in the conservation/recreation movement, including such influential figures as John B. Waldo, William Steel, and John Minto. Also, to the consternation of many, the large timber companies supported the reserves (Robbins, 1975). The industry reasoned that company timberland and timber investments were worth more if the federal government withheld public land and

timber from the market. The last thing that Weyerhaeuser and the other industry giants wanted was the government flooding the market with inexpensive timber or timberland.

These timber companies (Weyerhaeuser, Tacoma-St. Paul, Bloedel-Donovan) and other businesses exercised considerable political power in the Northwest states. Small businesses in Washington, represented by such voices as the Seattle Chamber of Commerce, generally condemned the forest reserves, but the large lumber interests supported federal forestry. Only J.J. Donovan of Bloedel-Donovan spoke against the reserves, and he objected to the disruption of mining and railroad investments rather than timber operations (Ficken, 1987:204).

## **Management Philosophy**

The federal government set about meeting the public's objections to the forest reserves. States were able to request lieu lands from the public domain that would be of comparable value to lost school sections. Legislation in 1906 returned 10% of all revenue from federal forest lands to local governments. In the same year, the Forest Homestead Act made land within reserves and national forests available to homesteading. The Organic Act in 1897 and the Act of July 1, 1898, made funds available to protect, patrol, and generally manage the reserves with rangers and other forest personnel.

The issues of mining, grazing, and logging on the reserves were difficult to handle because the issues straddled a gulf within the conservation movement. For Gifford Pinchot, who joined the USDI Forestry Division in 1897, "conservation" meant using natural resources in a sustainable way.

Without natural resources, life itself is impossible. From birth to death, natural resources transformed for human use feed, clothe, transport, and shelter us. Upon them we depend for every material necessity, comfort, convenience, and protection in our lives. Without abundant resources, prosperity is out of reach (Williams, 2000:15).

For John Muir and like-minded preservationists, the forest reserve were sacred ground to be used only for what John Waldo called "inspiration and our own true recreation." Men like Muir were few in number, but exercised a strong influence on the public. Pinchot and the new agency did not want to offend these vocal preservationists. To Pinchot's credit, he could disagree publicly with Muir, yet preserve his friendship over the years (Williams, 2000:9).

## **Grazing on the Reserves**

During this era, the policy of federal forestry was "conservation through use." Even before the Forest Transfer Act of 1905, the General Land Office (GLO) was working to open the reserves to legitimate use. In the Northwest, one of the most visible and volatile of these uses was grazing sheep. The western sheep business had prospered during the 1880s and 1890s, with wool production at the forefront. Sheep outnumbered cattle; cattlemen used the lower elevation public ranges near privately owned the water sources. Sheepmen wintered and lambled flocks on private land at low elevations, then drove the flocks into the mountains to graze on public land during the months of favorable weather.

Grazing sheep in the mountains was one of the issues that angered preservationists. John Muir called sheep in the Sierras "hooved locusts" for their ability to denude alpine meadows of all vegetation. The 1902 *Forest Reserve Manual* specifically prohibited "the grazing of sheep, goats and horses in herds," while stipulating the "...cattle are generally allowed to graze in all reserves." The sheepmen were forced to compete with cattlemen for grazing on the lower elevation public lands. These lands were traditionally used by the cattlemen. Sheepmen and cattlemen did not have a great deal of mutual respect or forbearance, and range wars broke out in many areas of the West around the turn of the century. The Oregon range wars peaked in 1905 (Hodgson, 1913:5; Mosgrove, 1980:81).

As most commentators at the time point out, the situation was really very difficult. Large sheep ranches like the Baldwin Ranch in Oregon's Crook County went out of business because sheep could not graze in the mountains. Cattlemen and sheepmen petitioned the GLO for grazing rules and for clear boundaries. These were not available, however, since Washington DC was creating reserves faster than land could be surveyed.

In 1897, Frederick Colville, a botanist working for the US Department of Agriculture (USDA), made a comprehensive survey of the grazing situation on the huge Cascade Forest Reserve. Colville and his party spent the summer of 1897 surveying the reserve from Crater Lake to the Washington border. His report indicated that the Reserve was not overgrazed, and that grazing should be permitted under regulation (Rakestraw and Rakestraw, 1989:3).

The Oregon Woolgrowers Association then hired conservationist John Minto as consultant and spokesman. Minto knew the right people in Washington DC, and he convinced federal and state officials to open the Cascade Reserve for limited grazing of sheep (Robbins, 1975:7). In the 1903 season, 71,000 sheep grazed on the Cascade Reserve (Williams and Mark, 1995:969), and in 1906, 340,000 sheep and 30,000 cattle and horses grazed on the nutritious fescue of the Blue Mountains West reserve (Hodgson, 1913:20).

## Timber Management

Timber sales were not a priority on the forest reserves. Paragraph 22 of the 1897 "Rules and Regulations" for the forest reserves said that "dead, matured, or large growth" trees could be "designated and appraised" for sale and then logged under the supervision of "some person" appointed by the Secretary of the Interior. Timber from such sales was not to be exported from the "State or Territory in which such timber [is]...situated." This policy effectively precluded large commercial timber sales on the forest reserves. Small sales for ranchers and for local mills were possible, but not large sales for industrial-scale mills.

### "Cy" Bingham

One of the well-known Rangers was Cyrus James Bingham. Cy Bingham, born in Michigan in 1870, came west to work as a cowboy & miner. He became a ranger in 1903, patrolling the Cascade Reserve from Crater Lake to the McKenzie River. Bingham and his wife jointly patrolled the reserve and became so adept at horse packing that they were said to have made camp, prepared a meal, and re-packed in less than an hour. The Bingham's marked boundaries on the Cascade Reserve, and blazed trails across miles of wilderness. Cyrus was also a proponent of wildlife conservation, as witnessed by his satiric poem:

*There is a lake that's called Odell  
Where city sportsmen love to dwell.  
The sportsmen shoot the spotted  
fawn  
And spear the Dollies as they spawn.*

Bingham took the Ranger examination after 1905 and continued on the Deschutes, Ochoco, and Malheur national forests. He retired as Supervisor of the Malheur in 1920, and then served as the sheriff of Grant Co.

The 1902 *Forest Reserve Manual* was more lenient. Timber could be sold where the sale was beneficial "or at least not detrimental" to the reserve. There was also leeway on the question of shipping timber or lumber cut on the reserves to distant markets. While not encouraging shipment of timber or lumber, the 1902 policy stated "export of material to distant points will be refused" only when local demand for the timber cannot be met. If the local demand was not too strong, the timber could be cut for shipment out of the area.

## Rangers on the Reserves

The Organic Act of 1897 provided a management structure for the reserves consisting of superintendents (by state), supervisors (by reserve) and rangers who patrolled the reserves. Many of the superintendents and supervisors were political appointees. The rangers, however, were a mixed lot. Duties included patrolling districts on horseback enforcing the regulations, especially in regards to grazing and timber policies. The ranger also fought fires, surveyed land, built cabins, swamped trails, examined lands, and did whatever else was required. Some of the early rangers were barely literate. On the other hand, Grenville F. Allen, ranger on the Mt. Rainier Forest reserve, was an engineer trained at Yale (Mack and McClure, 1999:14).

Whatever the educational background, rangers were drawn to the “strenuous life” that Teddy Roosevelt made popular. The Cascade Forest Reserve had so many applications for rangers’ positions that it formulated a rough-and-ready personnel policy, “... the reserve is not primarily a sanatorium and only those will be appointed who are vigorous, vigilant, and fearless in dealing with violations of the forest law” (Rakestraw and Rakestraw, 1989:16).

### The Oregon Land Frauds

During the Forest Reserve period, Oregon received some unwelcome national publicity through the activities of Steven A.D. Puter, self-proclaimed “king of the Oregon land fraud ring.” Puter and his associates took advantage of the state lieu land provisions of the 1897 Forest Reserve Act to file spurious homestead claims in eligible townships. Puter and associates then bribed GLO inspectors to verify the claims. Puter’s bribes and falsifications worked through the system as he sought patents for the spurious claims. He went to Washington DC, where he bribed Senator John H. Mitchell and Binger Hermann, Commissioner of the GLO.

In 1903, Puter and others were indicted for fraud in two conspiracies, known as the 7-11 case and the 24-1 case after the township and range locations of the affected properties. President Roosevelt appointed Francis J. Henley as a special prosecutor in the Oregon cases. Under pressure, the thieves had a major falling-out, and Puter implicated Senator Mitchell and Commissioner Hermann. Eventually the special investigation brought 26 indictments against more than 100 persons in Oregon and in the federal government. Many were convicted and sentenced to prison, including Puter and Mitchell. One person who narrowly avoided indictment was Oregon Senator Charles W. Fulton, who later (1907) authored legislation that removed the President’s ability to create Forest Reserves.

Puter served his sentence from 1906 until President Roosevelt pardoned him in 1908. He took advantage of his time in prison to write *Looters of the Public Domain*, a rather sanctimonious account of his life of crime and his sincere repentance. The title page of *Looters* announced that it had been written “in the dank recesses of a prison cell.” His book was something of a best-seller, and he apparently renounced his criminal ways.

## EARLY FOREST SERVICE: 1905-1911

<i>Reserves Created after the 1905 Transfer Act</i>		
<b>State</b>	<b>Reserves</b>	<b>Date</b>
Oregon	Wallowa	1905-07
Oregon	Wenaha	1905
Oregon	Chesnimmus	1905-07
Oregon	Maury	1905
Oregon	Blue Mtns.	1906-07
Oregon	Ashland	1906
Oregon	Heppner	1906
Oregon	Goose Lake	1906
Oregon	Fremont	1906
Oregon	Siskiyou	1906
Oregon	Imnaha	1907
Washington	Colville	1907
Washington	Rainier	1907
Oregon	Coquille	1907
Oregon	Cascade	1907
Oregon	Umpqua	1907
Oregon	Tillamook	1907

### Impact of the Transfer Act

Transferring the forest reserves from the Department of the Interior to the Department of Agriculture in 1905 shifted the management focus from the forestlands to the forests themselves. The Department of the Interior and the General Land Office were land management agencies. The Department of Agriculture’s forestry program was staffed by graduate foresters with a scientific background. In authorizing the transfer, President Roosevelt acknowledged that the new science of forestry would set the direction for what were to become the national forests. From 1905 to 1907, the President established new reserves in record numbers, creating d-seventeen additional reserves in Oregon and Washington. The Northwest contained a higher percentage of reserved land than any other region.

The Transfer Act also marked a shift in management philosophies. The forest reserves had been established and managed with a sense of “reserving” the forests, while the Department of Agriculture emphasized using the forests. The famous directive that Gifford Pinchot sent out over Secretary of

Agriculture James Wilson’s signature makes this clear:

In the management of each reserve local questions will be decided upon local grounds...and where conflicting interests must be reconciled, the question will always be decided from the standpoint of the greatest good for the greatest number in the long run (Feb. 1, 1905).

The guide for the new administration was *The Use of the National Forest Reserves: Regulations and Instructions* (or the *Use Book*) first published in 1905 and updated yearly. If the title was not enough to announce the new orientation to using forest resources, the word “use” or some variant appeared eleven times in the table of contents.

**Table 3: Timeline of Legislation and Events Affecting the Forests of the Pacific NW (1905-1911)**

Date	Agency	Impact
1905	Forest Transfer Act	Transferred Forest Reserves to Department of Agriculture
1905	USDA	<i>The Use Book</i>
1905-1907	Congress	PNW Land fraud investigations. Oregon’s Sen. John Mitchell indicted with GLO administrator Binger Hermann. S.A.D. Puter (in prison) chronicled frauds in <i>Looters of the Public Domain</i>
1906	American Antiquities Act	Protected cultural sites on public lands
1906	Forest Homestead Act	Opened agricultural lands within Forest Reserves to settlement
1906	Act of June 30	10% of revenues from Forest Reserves for local government
1906	Roosevelt Administration Reserves	Goose Lake and Fremont Reserves in Oregon
1907	Roosevelt Administration Reserves	Colville and Rainier in Washington; Blue Mountains, Cascade, Coquille, Imnaha, Tillamook, Umpqua in Oregon
1907	Oregon legislature	Established Oregon Board of Forestry
1907	Act of March 4	Created National Forest designation, forbade presidential creation of additional National Forests
1908	Joint Resolution of April 30	Began proceedings for forfeiture of the OR & CA (O&C) lands
1908		Washington Forest Fire Association formed by timber owners
1910	Ballinger-Pinchot controversy	Gifford Pinchot removed as Chief Forester
1910		Severe fire season in northern Rocky Mountain states (including northern Idaho) considered worst since fire control began
1910		National Conservation Congress held in St. Paul
1911	Weeks Act	Increased funding for fire protection, watershed protection, and forest land acquisition

Forest Service historian Lawrence Rakestraw suggests that the emphasis on use had a practical purpose. The Transfer Act had put the forests on a new financial footing. All receipts from forest resources were to go into a special fund for the management and expansion of the forests. This freed the forests from the need for Congressional appropriations. Since the forest reserve program was politically sensitive, this financial arrangement meant that if the reserves could earn money from grazing and timber, Congress could not hold them hostage for operating funds (Rakestraw and Rakestraw, 1989:21).

For the most part, Oregon was a strong proponent of the forest reserve program. In 1907, the state sent a delegation to the Denver Conservation Convention to show their support for the federal forest reserves. The Arizona delegates agreed with Oregon, but the other western states’ delegates voted to condemn all federal forest programs in their states.

Regionally, the support for the reserves and the federal forestry program remained strong. *The Oregonian*, the largest newspaper in the Northwest, the Oregon Conservation Commission, Governor (later Senator) George Chamberlain, and Governor Oswald West were all strong proponents of forest reserves. Governor Jay

Bowerman, on the contrary, constantly harped on Oregon’s burden of federal lands and the “blight of the present federal policy,” and Senator Charles Fulton sponsored the bill in 1907 that took away the President’s right to create new reserves by proclamation (Robbins, 1975:15).

## Personnel Policy

One of Pinchot’s priorities in 1905 was an overhaul of the personnel policies inherited from the Department of the Interior. The Oregon land fraud scandal had first surfaced in the *Portland Oregonian* in 1902, and soon became national news. Trials of Steven A.D. Puter and others took place at the Federal Courthouse in

**Grover Blake, District Ranger**

Born in West Virginia in 1884, Grover Blake “went west” to Oregon to seek his fortune at the age of 20. He worked in farming, road building, and ranching for five years. In 1907, he read the *Use Book* and was “completely sold on Forest Service policies.” After passing the Ranger’s examination, he was appointed to the FS on May 4, 1909. In his first summer on the ‘old’ Deschutes NF, Blake went to work surveying boundaries, counting sheep (50,000 in two weeks), building corrals, investigating range trespass cases, laying out a timber sale, fighting a fire, examining a ‘June 11’ claim, counting more sheep (17,000 in ten days), and cutting wood and hay for the winter. During Thanksgiving week in 1909, Blake was expected to travel 3 days to attend a FS Rangers’ meeting in John Day. Blake said of his early FS years, “A Ranger’s headquarters were wherever his pack horse happened to be.”

Portland from December 1904 until April 1905. This scandal undermined public confidence in the forest reserve administration. At the highest level, Commissioner Binger Herman was suspected of improprieties, and at the lower levels supervisors, rangers, and other personnel were seen as opportunistic and dilatory.

One obvious problem was the system of political appointment, so the new agency initiated civil service examinations for staff.

Many forest reserve rangers left the agency, but some made the transition to the new regime. The exam for rangers had a written section testing knowledge of forest laws and conservation principles, and also had a practical skills section that included packing, surveying, riding, shooting, and building. Newly appointed rangers knew the Latin names of the trees as well as the finer points of cooking over a camp fire.

The 1907 edition of the *Use Book* offers the following job description:

The Rangers are the men who carry out the work on the ground. They are directly under the Supervisor. They must thoroughly know the country, its conditions, and its people. They live in the forests, often in locations far from settlement and sources of supply. The Ranger must be able to take care of himself and his horses under very trying conditions; build trails and cabins, ride all day and all night; pack, shoot, and fight fire without losing his head.

## Organization

Gifford Pinchot favored a decentralized structure for the new organization. In 1908, he created the original six districts of the Forest Service:

**Table 4: The Six Original Forest Regions in 1908**

District	Headquarters	Forester
1	Missoula, Montana	W.B. Greeley
2	Denver, Colorado	Smith Riley
3	Albuquerque, New Mexico	A.C. Ringland
4	Odgen, Utah	Clyde Leavitt
5	San Francisco, California	E.F. Olmstead
6	Portland, Oregon	E.T. Allen

In later years, the districts became “Regions” to avoid confusion with the ranger districts. Region 6 originally included Alaska, but for purposes of simplicity, we will consider the national forests created in Oregon and

Washington from the end of the forest reserve period to 1911. One of the first duties of the new forest administrators was to plan for Administrative Withdrawals. This involved selecting land to be used as administrative and work sites on the forests. Ranger stations and guard stations, pack stations, and other areas were selected for convenience and utility, and for proximity to water, pasture, and access.

### Meeting the Objections to the Forest Reserves

The formation of the forest reserves created a great deal of political and popular indignation in the Pacific Northwest. Gifford Pinchot was eager to distinguish his new organization from the old forest reserves. The 1907 *Use Book* introduced the new name “National Forests” and clarified policies about points of friction.

First, Pinchot told readers that “home seekers” could homestead any agricultural lands within the national forests under the terms of the 1906 Forest Homestead Act. The only caveats were that the lands be suitable for agriculture and be used “for a *home*, and not for other purposes.” Second, prospecting, staking claims, and mining were to “go on just as if there were no National Forests there.” Third, he assured the readers that the timber was there to be used, and that the national forests sold 700 million board feet in 1906 and gave away 75 million board feet. Finally, grazing on the forests was managed so that the “small man” gets as much of a chance at the public range as the big rancher. In 1906, 1.5 million cattle and horses and 6 million sheep grazed on the national forest lands. At the end of the discussion, Pinchot asked rhetorically if this sounds like policy “which locks up...lands and resources and stops settlement and industry? What it really does is to take the public domain with all of its resource and most of its laws, and make sure the best possible use is made of every bit of it.”

**Table 5: Region 6 National Forests: 1907-1911**

<u>State</u>	<u>Forest</u>	<u>Action</u>	<u>Year</u>
Oregon	Whitman	Created	1908
Oregon	Malheur	Created	1908
Oregon	Hepner	Ended	1908
Oregon	Umatilla	Created	1908
Oregon	Deschutes	Created	1908
Oregon	Blue Mtns.	Ended	1908
Oregon	Goose Lake	Ended	1908
Washington	Columbia	Created	1908
Washington	Chelan	Created	1908
Washington	Snoqualamie	Created	1908
Washington	Wenatche	Created	1908
Oregon	Tillamook	Ended	1908
Oregon	Siuslaw	Created	1908
Oregon	Bull Run	Ended	1908
Oregon	Oregon	Created	1908
Oregon	Coquille	Ended	1908
Oregon	Ashland	Ended	1908
Oregon	Crater	Created	1908
Oregon	Imnaha	Ended	1908
Oregon	Wallowa	Created	1908
Oregon	Minam	Created	1911
Washington	Okanogan	Created	1911
Oregon	Paulina	Created	1911
Oregon	Santiam	Created	1911
Oregon	Ochoco	Created	1911

The 1907 annual sales receipts for the Oregon’s Blue Mountains Forest Reserve, West Range, show the revenue generated from “best possible use of the land” — Timber Sales, \$214.10; Timber Settlements, \$0.00; Timber Trespass, \$32.00; Special Use, \$52.00, and Grazing, \$32,804.20 (Hodgson, 1913:38). Grazing was the most important resource on this reserve. The timber sales represent small mills cutting lumber for mines, for local building, or perhaps for irrigation flumes. Settlers in the Blue Mountains and elsewhere were able to get free use permits on the reserves for firewood, fencing, and timber for personal use.

## FOREST SERVICE MANAGEMENT COMES OF AGE: 1912-1932

### Changing the Guard

In 1909 President Theodore Roosevelt left office. Gifford Pinchot and the newly created Forest Service lost a powerful ally. In the following year, Pinchot quarreled with Richard Ballinger, Secretary of the Interior, and President Taft removed Pinchot from his position in 1910. The honeymoon was over, and the new agency would have to survive without a friend in the White House.

The next two decades saw the U.S. through the First World War, the prosperous 1920s, and the beginning of the Great Depression. For the Forest Service, it was a period of maturing as an agency of the federal government and as an organization with its own distinct culture. These were the years of legendary Forest Supervisors in Region 6—names like Gilbert Brown, Archie Knowles, Cleon Clark, Cy Bingham, and Rudo Fromme echo through accounts of the period. Four major themes in national forest administration came into focus during these years—these are timber production, fire suppression, forest research, and recreation.

**Table 6: Timeline of Legislation and Events Affecting the Forests of the Pacific NW (1912-1932)**

Date	Agency	Impact
1912	Agricultural Appropriations of Aug.	Reserved 10% of NF receipts for road and trail construction
1913	Region 6	Wind River Experiment Station
1915	Agricultural Appropriations of Mar.	Authorized 30-year lease of recreational sites in NF
1916	Chamberlain-Ferris Act	Returned unsold O&C lands to the public domain
1916-1926	Act of July 1, 1916	Committed \$1 million each year for road construction on national forests
1916	Act of August 25	Created National Park Service in USDI
1916	Stockraising Homestead Act	Opened 640-acre tracts of non-forested lands in public domain for homestead
1917	Labor organizations	Coordinated strikes by Industrial Workers of the World, Shingle Weavers Union, American Federation of Labor Mill workers.
1917	World War I	Impact on R-6: Organization of the 10 <sup>th</sup> & 20 <sup>th</sup> Engineering Reg of FS and lumber industry foresters, the organization of the Spruce Production Division, and the Loyal Legion of Loggers and Lumbermen (4Ls)
1919	Act of Feb. 26	Returned unsold Coos Bay Wagon Road lands to public domain
1920	Act of June 10	Created the Federal Power Commission
1920	Region 6	Fred Cleator established the Oregon segment of the Pacific Crest Trail
1921	Federal Highway Act	Provided funds for forest highways and roads
1922	General Exchange Act	Allowed FS to exchange forestland or timber for private land
1924	Clarke-McNary Act	Expanded terms of the Weeks Act in fire protection, watershed protection, and forest acquisition
1925	Fiscal Appropriation, 1925	Pacific Northwest Forest Experiment Station
1926	Act of July 13	Back taxes paid to counties for O&C lands, government's responsibility to compensate counties for lost tax base
1928	McNary-Woodruff Act	Further expanded Weeks Act and Clarke-McNary
1928	McSweeney-McNary Act	Established FS research program
1930	Knutson-Vandenberg Act	Provided funds and provisions for reforestation after timber sales

### Forest Service Administration

Although losing the leadership of Gifford Pinchot was a blow to the new agency, the position of Chief (or “Forester”) passed to a good alternate in Henry S. Graves. Graves was a close friend to Pinchot and was also associated with the Yale forestry group. Graves continued in the position until 1920, when William B. Greeley succeeded him. Greeley was a national figure and a voluminous writer. His energy and public presence restored some of the visibility and *esprit de corps* lost with Pinchot.

The major pieces of forest legislation passed during the 1900s and 1920s emphasized cooperative forestry and acquiring lands for the national forest system. The Weeks Act of March 1, 1911, began this pattern by

authorizing some cooperative management strategies for federal and state forests. It also provided funds for the “examination, survey, and acquisition” of lands on the headwaters of navigable streams. The General Exchange Act of 1922 authorized land exchanges to consolidate or expand the national forests. The Clarke-McNary Act of 1924 authorized cooperative agreements between federal and state foresters for forest-fire control. The act also enabled forest managers to purchase (or accept as gifts) lands anywhere on navigable streams, or for timber production. In 1928, the McNary-Woodruff Act provided \$5 million for Weeks Act

### *Oregon’s Senator McNary*

Charles L. McNary was an Oregon Senator from 1917 until his death in 1944. Although a Republican, he was one of the western Progressives, allied in the Senate with Robert LaFollette, William Borah, and Hiram Johnson. Born on a farm near Salem, Oregon, McNary reflected the values of Willamette Valley farmers. He was an advocate of conservation, the Forest Service, farm support, and irrigation. McNary was Senate minority leader during the Roosevelt Era, effectively supported the New Deal, as well as brokered agreements between the Administration and his Republican colleagues. As a Republican Vice President candidate in 1940, McNary spoke in favor of the radical Tennessee Valley Authority (TVA), much to the chagrin of the Presidential candidate, Wendell Willkie.

purchases in 1928, 1929, and 1930. Later that year, the McSweeney-McNary Act authorized funds for forest research and forest survey. The last major piece of legislation of the period was the Knutson-Vandenburg Act of 1930, which funded reforestation or improvement of cut-over lands.

### **Impact of the Weeks Act and Subsequent Legislation**

Legislation in the 1920s enhanced cooperative forestry, but work with private foresters and farmers had been a part of the USDA program long before the Forest Reserves or the national forest system. Gifford Pinchot created the Office of State and Private Forestry within the Forest Service in 1908 to give the cooperative forest programs a home in the new agency (Williams, 2000:27). In the years following the 1920s, areas of cooperation between the Forest Service, state forests, BLM forests, and private forests extended to include fire control, disease control, reforestation, and even sustained yield management.

Acquiring private lands for the national forest system began with the Weeks Act and grew to become a major element of the system. President Roosevelt had signed the Fulton Amendment in 1907, relinquishing his own and future Presidents’ right to reserve forestland by proclamation. Congress alone had that authority after 1907. But the Weeks Act allowed the national forest system to grow without Congressional or Presidential action. Purchasing private land was crucial in areas east of the Mississippi, where there was no public domain. It was also very important in the West, where private forestland would be returned to the public domain through purchase or exchanges authorized by the General Exchange Act. By 1920, 2,000,000 acres had entered the national forest system through Weeks Act purchases; by 1980, that number had risen to 22,000,000 acres (Williams, 2000:39).

### **Timber Management in Region 6**

For most Americans, the Pacific Northwest is synonymous with softwood timber. As federal management of the Northwest forests solidified under the Forest Reserve and national forest systems, the question of providing timber (or “stumpage”) from public lands in the Northwest became more controversial. The Hudson’s Bay Company had begun manufacturing lumber for export in the 1850s. In the next decade, mills on Puget Sound, the Columbia, and the Oregon coast provided lumber to California and to the Pacific Rim markets of Japan, China, Southeast Asia, Australia, and Latin America. This early industry, known as the “cargo trade,” relied on ships to get the lumber to market. The mills could operate only in locations adjacent to deep-water ports. Logs moved to the mills by water, and lumber moved to the customer by water. The advent of the transcontinental railroad system in the 1880s changed all that. With rail transportation, logs could be brought to mills located anywhere the railroad went, and lumber could go to customers in the

Midwest, or the eastern U.S. Through 1920, however, the Pacific Northwest and California supplied only 20% of the nation’s lumber needs.

**Table 7: Percentage of the Nation’s Lumber Cut in Four Major Regions, 1850-1914**

<b>Year</b>	<b>NE States</b>	<b>Lake States</b>	<b>Southern States</b>	<b>Pacific States</b>
1850	54.5%	06.4%	13.8%	03.9%
1860	36.2	13.6	16.5	06.2
1870	36.8	24.4	09.4	03.6
1880	24.8	33.4	11.9	03.5
1890	18.4	36.3	15.9	07.8
1900	16.0	27.4	25.2	09.6
1914	09.0	10.5	47.7	19.3

(Greeley, 1917)

The cargo mills in the 1860s and 1870s were not particularly concerned with timber supply. Plenty of excellent Douglas fir was available, and mill owners did not need to tie up too much capital acquiring timberland for future use (Cox, 1979). The next generation of mills, the railroad mills, were more concerned. Rail-based lumber manufacturers came from the Lake states and the South, where the industry had experienced a diminishing timber supply. The largest operators in the west, like Weyerhaeuser, Long-Bell, and T.B. Walker’s Red River Lumber Company, had come because these companies had “cut out” their lands in other places, and as a consequence, wanted as much timberland as possible. Weyerhaeuser, for example, bought Ponderosa pine timber for \$2/thousand board feet. Since most Ponderosa land scaled at 10,000 board feet per acre, Weyerhaeuser was paying \$20/acre, and bought hundreds of thousands of acres at that price (Hidy, Hill, and Nevins, 1963:395).

As the Forest Reserve system took root in Oregon and Washington, eastern capitalists worried that no timberlands would remain available for sale. Prices rose. By World War I, most companies had private timber, paid for or not, adequate to support their mills, and did not want the federal government to dump cheap timber on the market, enabling new mills to start and further flood the lumber market. The companies that bought private timber supplies worried that new mills could obtain logs from national forest lands for less. In his excellent analysis of lumber business economics, Forest Service Chief William Greeley (1917) argued that private ownership of timber in the west would never be economically sound, given the amount of public timber potentially available (Greeley, 1917).

Forest Service timber sales in Region 6 started in 1905 with a moderate-sized sale of Crater National Forest timber on Upper Klamath Lake to the Moore Lumber Company in Klamath Falls. In the next twenty years, however, the pattern was for the Forest Service to sell either very small timber tracts to local operators or to sell huge tracts to establish new mills (Williams, 2000:53). In 1922, for example, a sale on the Lassen National Forest in California exceeded 1 billion board feet.

### **The Bear Valley Sale**

The largest sale of the 1920s in Region 6 was the Bear Valley sale on the Malheur National Forest. This sale serves as an excellent example of a large Forest Service sale of this period. The timber was at the head of the Malheur and Silvies rivers on the south slope of the Strawberry Mountains. The entire area contained an estimated 6.7 billion board feet of merchantable timber, but the sale only covered 890 million board feet. Local businesses in John Day had asked the Forest Service to offer the sale, and it was advertised in 1922 at \$2.75/thousand for Ponderosa pine. The sale would require building a mill in Burns, building 35 miles of logging railroad to the timber, and building a main-line railroad to connect Burns with the Union Pacific. The Forest Service estimated the development costs at \$2.5 million. The sale would provide 68 million board feet each year for 20 years. No one responded to the solicitation.

The Forest Service contacted potential bidders and lowered the price to \$2/thousand. The major mills still would not bid, but a timber operator named Fred Herrick secured the sale and began building railroad from Burns to the Union Pacific. This was completed in 1924. Herrick began constructing the mill at Burns, but exhausted his capital. William B. Greeley ordered a Congressional investigation of Herrick's contract dealings, which dragged on until 1928. At that point, the citizens of Burns invited the Hines Lumber Company of Chicago to look at the sale; a \$2.86/thousand bid was submitted. Hines took over Herrick's holdings, finished the mill, built the logging railroad, and started production in 1930. Total cost of development was \$7 million. The year 1930 was not, of course, a good time to begin manufacturing lumber, especially while paying interest on notes and bonds of \$7 million. Hines found itself in financial trouble by 1931 and stopped cutting national forest timber. After three years without sale receipts, the Forest Service changed its method of selecting trees to be cut, and Hines resumed logging on the sale in 1935. The Bear Creek Sale did not reach its target volume of 68 million feet/year until 1939. It took 20 years for the Bear Creek sale to go from proposal to target volume (Mosgrove, 1980:183ff).

### **World War I and the Spruce Production Division**

The United States entered the European war in April, 1917, convinced that its fresh military forces and huge industrial capacity would bring a swift resolution to the "stalemate in the trenches." Military strategists recognized that aircraft were the technological solution to trench warfare. Aircraft could fly over the lines, bomb the enemy, and return to base. Aircraft in 1917 required lumber as the structural element of the airframe. This lumber needed to be flawless, light, and very strong.

The best material was Sitka spruce, available on the coastal forests of Oregon, Washington, British Columbia, and Alaska. During the winter of 1916-1917, the Europeans discovered Sitka spruce and placed large orders for this material with West Coast lumber manufacturers. West Coast spruce prices rose, stocks went down, and by midwinter, 1917, one mill manager reported that "there is an unlimited demand for Sitka spruce at exceedingly high prices" (*Timberman*, 1935:35).

The industry wanted to cut the spruce, but early World War I years were a period of labor activism and radicalism throughout the western states. The disruptive Industrial Workers of the World (IWW) enjoyed a solid following among the "homeless, womanless, disenfranchised migratory workers in the West," particularly in the agricultural, mining, and maritime trades (Jensen, 1945:106).

West Coast labor groups active at the time included the IWW, the shingle weavers unions in the Puget Sound mills, and the several American Federation of Labor loggers' and mill workers' locals. The unions wanting better wages, improved camp conditions, and eight-hour work days, set a strike date for July 16. By August 1, no more than 15% of the Pacific Northwest mills were running.

When the lumber industry failed to meet spruce production goals, the Army formed the Spruce Production Division (SPD) in the fall of 1917. This organization eventually stationed 30,000 troops in Oregon and Washington. General Pershing placed Col. Brice P. Disque in command. Disque investigated the Northwest lumber industry and identified a "labor problem" and a "production problem" (Disque, n.d.:17).

Disque's mentors in the industry included some knowledgeable lumbermen and loggers, particularly from the spruce producing areas of western Washington. Disque appointed such industry notables as Mark Reed of the Simpson Logging Company, J.J. Donovan of Bloedel-Donovan, Timothy Jerome of Merrill and Ring, and G.S. Long of Weyerhaeuser to an informal council of advisors for the SPD (Ficken, 1979:36). Whatever advice he received from these men, Disque went about spruce production in his own rather idiosyncratic way.

To solve the production problem, Disque built Army mills at Vancouver, Washington; Toledo, Oregon; and Port Angeles, Washington. He built thirteen separate logging railroads to bring in the spruce logs, and he commandeered private and public forestland with high volumes of Sitka spruce.

To solve the labor problem, he assigned 34 squadrons of soldiers to work in the logging camps. Logging operators were to pay them regular wages (which Disque set at union rates) and were to provide camp and mess conditions equivalent to the Army standards (which met union requests). Disque allowed his soldiers to work only eight hours each day, as the unions also asked. The logging operators were outraged, but they had no choice. To stay in business the logging companies had to provide clean bunks, Army-inspected meals, hot showers, and eight-hour shifts.

Disque also organized the Loyal Legion of Loggers and Lumbermen as an antidote to the militant unions. The 4Ls, as they were known, were effective in improving working conditions and wages. The 4Ls also recruited women to work in the mills and camps, raising some eyebrows and anticipating World War II's "Rosie the Riveter."

By the end of the war, the Spruce Production Division was manufacturing 1,000,000 board feet of aircraft-grade spruce lumber each day. After the war was over, it took the Army several years to dismantle the SPD. The SPD mill in Toledo, Oregon, is still in production as a pulp mill. Timberlands owned by the SPD, including Oregon's Blodgett Tract, are now in the national forest system. Traces of the thirteen SPD railroads remain as roads and trails on the Suislaw and Olympic National Forests.

## **Forest Fire Management**

The fires that ravaged Region 1 in the summer of 1910 heightened the public's awareness about the need for fire prevention and control. According to forest historian Lawrence Rakestraw (1989) Region 6 was the most innovative of the regions in fire control. The 1910s and 1920s saw several important technological advances. These included telephone and radio communication, the Osborne Fire Finder, and the development of photogrammetry.

On the Willamette National Forest and the Deschutes National Forest, homing pigeons carried messages from lookouts to guard stations. Forest Service personnel bred and reared the pigeons at permanent pigeon cotes established at the McKenzie Bridge and West Boundary ranger stations (Rakestraw and Rakestraw, 1988:54). Lookouts were improved and standardized. After World War I, aircraft patrolled at critical times. More mundane but equally important tools as the Pulaski and the backpack pump tank appeared on the fire lines.

During the Forest Reserve period, the GLO had little opportunity to prevent fires, detect them, or suppress them. The Forest Reserve ranger cadre was notoriously understaffed. To complicate matters further, stockmen lit fires at the end of the grazing season in September to improve the range conditions for the following year. This practice of "light burning" caused havoc each fall as fires multiplied across the West. On balance, however, light burning may in fact have reduced fuel loads in some areas. The following is a classic account of the Forest Reserve fire management (E.J. Fenby quoted by Holstine, 1994:11.7):

- Sunday Stayed in camp at Tieton Basin. A man stopped and said there was a fire on Sand Ridge.
- Monday Rode to Sand Ridge and found fire beyond all human control so returned to camp.
- Tuesday Rode to Sand Ridge to see how the fire was doing. It had slowed down and is doing no damage so returned to camp.

The Forest Service was determined to do better, but needed to create policies to succeed at fire management. The first area was fire prevention. This took the form of regulations in sale contracts requiring loggers to dispose of slash before it became hazardous. Railroads that burned coal were another problem. Logging railroads were required to use oil. The Southern Pacific Railway cooperated with Forest Service programs by patrolling its tracks and providing fire suppression cars and equipment (Rakestraw and Rakestraw, 1989:53). The Forest Service used citations and fines to educate recreational campers and stockmen about fire prevention (Bach, 1989:84).

The most important means of detecting fires was the network of lookouts stretching across the forest. The Forest Service began building lookouts soon after 1905, but the essential communications and fire-locating technologies were not in place until after World War I. With the improvement in field telephone and radio communication during the war, and the development of the Osborne Fire Finder in 1917, the Forest Service began a vigorous period of lookout construction. In the first years after the war, however, the Forest Service contracted with the Army Signal Corps to provide military aircraft for patrolling the forests (Williams, 2000:32; Rooney, 1997:30). This system no doubt worked in areas close to military installations, but accounts from the remote forests east of the Cascades do not mention aircraft patrols during the 1920s.

Fire suppression required the greatest effort of all aspects of fire management. The Forest Service trained personnel in fire suppression and these men served as bosses for the fire crews. At the beginning of the period, fire crews were still hired from local labor pools, and had no real training. As Lawrence Rakestraw points out, the quality of fire crews gradually improved during the 1920s as college students worked as laborers, lookouts, and fire chasers on many national forests. Seasonal personnel received training in fire suppression techniques as early as 1920.

### Recreation

In the nineteenth century, recreationists like Judge Waldo, John Minto, and William G. Steel had been vociferous advocates of the federal forest system in the Pacific Northwest. The following generation produced more hikers and alpinists who were also active in the conservation and outdoor recreation movement. These people were never numerous, however, and exercised more influence as organized clubs.

<i>Early Mountaineering Clubs in Region 6</i>	
OR Alpine Club/Mazamas	Portland
Skyliners	Olympic NF
Klahanc	Eugene
Obsidians	Seattle
Seattle Mountaineers	Seattle
Chemeketans	Salem
Cascadians	Seattle

From inception in 1886, mountaineering clubs were politically active. The Oregon Alpine Club—which became the Mazamas—was a major regional voice supporting conservation and the creation of the Cascade Forest Reserve (Williams and Mark, 1995). Later, outdoor clubs like the Issac Walton League, the Sierra Club, and the Wilderness Society championed the 1964 Wilderness Act and other preservation programs.

Only after automobile roads penetrated the national forests did forest recreation become truly popular. As Forest Historian Gail Throop points out, the Good Roads movement of the 1890s had raised Americans' expectations about highway travel. Automobiles were getting more affordable, and more reliable. The 1912 Agricultural Appropriations Act reserved 10% of all forest receipts for road and trail construction, extending good roads into the national forests.

In 1915, the Agricultural Appropriations Act of March 4 set a policy that would make recreation leases available on national forest lands. Individuals could build cabins; churches, summer camps; and businesses, lodges. All of these were accessible by automobile. In the same year, Region 6 set aside lands in the Columbia Gorge, on Mt. Baker, and on Mt. Hood as forest parks. These were protected from homesteading,

### *Frank W. Cleator*

Perhaps the most influential individual in the Region 6 recreational movement in the 1920s was Frank W. Cleator. He was Assistant Supervisor on the Colville National Forest when he was appointed Forest Inspector in charge of recreation at the regional headquarters in Portland. Cleator worked on surveys of the Olympic National Forest and the Oregon Skyline Trail through the high Cascades. Cleator was energetic and dedicated to recreational development. In 1925, for example, he proposed that Marion Lake in the Cascades be developed with two commercial resorts, one ranger station, two organizational camp sites, two public camp grounds, and a health spa. Developments on this scale would have occupied about 150 acres on the small lake and alpine meadow.

logging, or grazing. In the following year, the USDI established the National Park Service. Not to be outdone, the Forest Service engaged landscape architect Fred Waugh to investigate national forest recreation. The result was his 1917 report, *Recreational Uses in the National Forests*.

Most of the forests in Region 6 had access to mountains and “high country.” These areas exercised a magnetic appeal to the public in the 1920s, and continue to do so. Alpine clubs built lodges and ski areas. Commercial mountain lodges appeared on the Mt. Hood, the Wenatchee, the Olympic, and the Mt. Baker-Snoqualamie national forests. Hot springs also drew visitors, and virtually every forest in the region had one or more hot springs developed for tourists. Fishing and hunting were significant attractions, but wildlife was not a major Forest Service focus at this time.

## Forest Research

The USDA emphasized biological research, and as the Forest Service grew from its parent agency, that emphasis continued. Research work in Region 6 dates back to administrative sections established in the Regional Office to investigate wood products technology and to conduct research on silvics. Thornton T. Munger, a Yale forestry graduate who had studied in Germany, headed the silvics section. Munger worked on pine succession on the Deschutes National Forest and on Douglas fir at several locations west of the Cascades (Rakestraw and Rakestraw 1989:51).

Region 6 began planning a nursery on Wind River in 1909, on the Hemlock Ranger District of what is now the Gifford Pinchot National Forest. In 1912, the Region established an experiment station at Wind River to work in conjunction with the nursery. A year later, the Experiment Station separated from the nursery and assumed a wider purview (Mack and McClure, 1989:23). In 1915, the Forest Service created the Branch of Research to coordinate scientific efforts (Doig, 1976:4). Forest Service Historian Gerald Williams estimates that the Forest Service had twelve research stations operating by 1920 (Williams, 2000:40).

Region 6 established the Pacific Northwest Experiment Station in Portland in 1924. Thornton Munger was the first chief of the new experiment station, a position he was to occupy until his retirement in 1946. During the next few years work continued at Wind River. Munger and his crew traveled the Pacific Northwest forests from southern Oregon to the north Cascades.

The 1928 McSweeney-McNary Act enhanced funding for forest research. One priority of the new program was a very ambitious national timber survey. The nationwide survey of public and private timber was to begin in Region 6. This was an enormous undertaking, requiring thousands of hours of field time in the national forests, as well as time examining cruise records from private timber tracts. The statistical calculations employed needed careful monitoring. By 1932, the western portion of Region 6 was surveyed, and by the end of 1935, the pine region was complete (Doig, 1976:13). Data from the survey confirmed what many had long suspected—that the national forests in Region 6 held the greatest volume of quality timber remaining in the U.S. This proved extremely important when the lumber industry resumed after the Depression and World War II.

**Table 8: Region 6 National Forest Changes 1915-1924**

<u>State</u>	<u>Forest</u>	<u>Action</u>	<u>Year</u>
Oregon	Paulina	Ended	1915
Oregon	Minam	Ended	1920
Oregon	Wenaha	Ended	1920
Washington	Okanogan	Ended	1920
Washington	Washington	Ended	1924
Washington	Mt. Baker	Created	1924
Oregon	Oregon	Ended	1924
Oregon	Mt. Hood	Created	1924

## DEPRESSION ERA FOREST SERVICE PROGRAMS: 1933-1941

### The Pacific Northwest and the Great Depression

During the Great Depression, the Pacific Northwest was especially hard pressed by a combination of economic and social ills. As early as 1927, the lumber industry in the Northwest was feeling the pressure of

declining sales and excess production capacity (Ficklin, 1987:176ff). Mills closed down and workers in the woods and the mills lost their jobs. For much of the Northwest, lumber mills were an important element of small-town economic life. Some mills were located in the large cities like Portland, Tacoma, or Everett. Most were located in small communities near the timber, however. When the mill closed, there was no other work available, since there was no other industry to employ the workers. Few residents of small towns had

**Table 9: Timeline of Legislation & Events Affecting the Forests of the Pacific NW (1933-1941)**

Date	Agency	Impact
1933	Act of March 31	Established Emergency Conservation Work program, parent of the Civilian Conservation Corps
1933	Industrial Recovery Act (IRA)	Set price and wage controls in lumber industry and established Forest Conservation Code in March, 1934, to promote sustained yield idea.
1933		Tillamook Burn in NW Oregon
1934	Act of June 14	Expanded Weeks Act
1934	Taylor Grazing Act	Began system of managing open range by long-term leases to stockmen
1934	Soil Conservation Act	Established Soil Conservation Service, USDA
1935	Supreme Court	Ended Rational Recovery Act
1935	Bankhead-Jones Act	Funded USDA research programs
1936	USDA Forest Service	Published <i>The Western Range</i> , a report on grazing policy in the western states
1937	Act of June 28	Named the CCC as successor to the ECW
1937	Act of August 28	Designated Oregon's revested O&C and Coos Bay WR lands as timberlands to be managed by USDI with compensation for counties' lost tax base.
1937		Timberline Lodge completed on Mt. Hood NF
1938	Act of June 29	Created Olympic National Park after long and bitter controversy
1938		Oregon replaced Washington as nation's leading lumber producer
1939	Act of July 14	Established local advisory boards elected by grazing associations to administer BLM range
1940	USDA Forest Service	Published <i>Forest Outings</i> , a report on national forest recreation
1941	Joint Committee on Forestry	Published <i>Forest Lands of the United States</i>
1941-1945	World War II	Impact on R-6 included termination of CCC, termination of precious metals mining; restrictions on lumber manufacture; aerial, naval, and balloon attacks with civilian casualties

the resources for self-sufficiency. Livestock, gardening, hunting, and fishing provided subsistence to a few, but most people were desperate when their savings were gone.

A synchronous but unrelated phenomenon was the Dust Bowl, or drought in the Midwest. As conditions worsened during the 1920s in Kansas, New Mexico, Oklahoma, Colorado, and the Dakotas, farmers were unable to survive, many simply abandoned farms. Many of these people arrived in rural areas of the Northwest ill-adapted to industrial work in the forests or mills and generally did not have the means to begin farming again (Johansen and Gates, 1957). These immigrants increased the labor pool of many rural communities beyond the number of available jobs. When the economy collapsed after 1929, their livelihood became even more tenuous.

For the national forests of Region 6, the early 1930s saw initial declines in timber sale revenue as industrial production slowed. Then, New Deal programs provided additional labor and funds for infrastructure improvement, buildings, and conservation work. At the same time, the national forests were expanding, due to legislation that allowed more aggressive purchase of distressed forests or sub-marginal agricultural lands. Conservationists like Aldo Leopold and Bob Marshall began the push for wilderness lands during the late 1920s and 1930s. Forest recreation became more visible in Region 6 during these years, culminating in the construction of Timberline Lodge in 1937, and the creation of the Olympic National Park in 1938. Finally, as the Depression waned and the World War II market began to grow, a generation of new, smaller mills started up. Because these new mills did not have access to huge amounts of capital, the companies typically did not own timberland and relied on national forest timber sales.

## **The Civilian Conservation Corps**

In the 1932 election, Franklin D. Roosevelt ran on a platform of social stabilization and economic relief. This was the genesis of the New Deal. The Civilian Conservation Corps or CCC as it was widely known was one of the most successful social programs of the New Deal. Most accounts agree that the CCC was an idea that President Roosevelt had developed himself. It was also an idea that he had used in his campaign. In Roosevelt's original conception and in the legislation that he brought to Congress in March of 1933, the CCC was to have dual purposes of financial relief for unemployed workers and conservation measures for public lands.

CCC historian John Salmond traces Roosevelt's idea to a 1912 essay by American philosopher William James entitled "The Moral Equivalent of War." James called for young men to be conscripted into a "great army" to be "enlisted against nature." Like most philosophers, James was a bit vague about the details of this grand plan. When the Depression arrived 18 years later, James' basic concept seemed more practical. As early as 1931, the Forest Service began operating conservation work camps for unemployed men in California and Washington (Otis, 1986:5).

In Oregon, Cascade National Forest Rangers C.B. McFarland and Axel Lindh prepared a very innovative plan for unemployed workers in the mill community of Oakridge. This community, like dozens of others, had been devastated by the mill closures and a collapse of the local economy. McFarland and Lindh submitted their plan to National Forest Administrators in Washington DC in March of 1933, one month before the CCC came into existence (Rakestraw and Rakestraw, 1974:71). In Europe also, conservation works for the unemployed were available in many countries, and especially in Germany under the Weimar and National Socialist governments.

If Roosevelt's plan was not exactly unique, it was well conceived and widely successful. As CCC publicists were fond of pointing out, it was also the first of the "national recovery organizations" established by the New Deal administration. The CCC was successful on two fronts. The conservation work that the program undertook helped repair the damages to forests, range, and farms that had accumulated during the first decades of the twentieth century. The second purpose of the CCC was social stabilization. An internal publication of the CCC in 1934 emphasized the organization's social goals over its environmental goals (McKinney, 1934:2-3):

<b>Goal 1</b>	Relief of unemployment, especially among young men
<b>Goal 2</b>	Health and attitude of enrollees
<b>Goal 3</b>	Relief of destitute families
<b>Goal 4</b>	Work totals (Conservation Projects)

In the 1944 final report on the CCC prepared by Conrad Wirth and submitted to Harold Ickes, Secretary of the Interior, however, Wirth listed conservation work and conservation training as the first 8 of 10 accomplishments that the program achieved. He listed relief and social stabilization as a very minor point in the CCC program:

The CCC program was looked on by many as a relief program rather than a conservation program. A good conservation program can do much toward the relief of the unemployed, but its main objective should never be thought of as relief. (Wirth, 1944:2)

This shift in emphasis between 1934 and 1944 interpretations of the CCC suggests that the agency matured and grew into its conservation goal.

Executive Order #6101 created the CCC from four departments of the Federal government: The Department of War (Army), the Department of Agriculture (Forest Service), the Department of Labor, and the Department of the Interior (Bureau of Reclamation, Fish and Wildlife, National Park Service, Office of Indian Affairs). When the operation began, only the Department of War was prepared for a large influx of men. Early estimates suggested that as many as 250,000 young men would enroll. The Forest Service, under Chief Forester Stuart, prepared plans for conservation work, but the agency was not prepared to operate the camps. As a consequence, the Army became the most important element in the mix of agencies and the CCC emerged with a profoundly military flavor. The following policies continued throughout the nine-year life of the CCC:

- The CCC would enroll only young single unemployed men whose families were on public relief.
- The enrollees would be paid \$30/month, but must agree to remit \$25 to their families; this amount was deducted from their pay.
- Enrollees would live in barracks, wear uniforms, and maintain military discipline.
- Over 70% of the enrollees would come from east of the Mississippi, but 90% of the projects would be conducted on public lands west of the Mississippi. Consequently most enrollees would be sent far from their homes.
- The Federal agencies managing the lands where the camps were located would choose and design the projects.

Much like the draft, the CCC promoted homogeneity among young Americans. Many CCC men left rural homes—especially in the South or in Appalachia—and traveled to the Northwest. The workers often graduated from CCC camps into the military for service in World War II. Many returned to the areas where they had served in the CCC rather than to their original homes.

## **The Civilian Conservation Corps in Region 6**

In April of 1933, soon after the CCC was formed, the War Department selected Vancouver Barracks as a regional center for CCC administration, training, and supply in the Pacific Northwest. The nationwide CCC organizational structure included nine units or “corps areas” across the U.S. Oregon and Washington were part of the Ninth CCC Corps. The first group of enrollees to arrive in 1933 numbered 800. The Army was initially charged with the task of supplying the new recruits and the 26 CCC camps to be built in the area. Later in 1933, the CCC established its own supply organization, also located at Vancouver Barracks (*Official Annual, 1939, Ninth Corps Area, Civilian Conservation Corps*, 1939:38)

By the end of the CCC in 1942, the Ninth Corps induction center had received 40,000 men, housed them temporarily, outfitted them, and screened them for diseases. The Ninth Corps administration transported them to camps in Oregon and Washington, fed and supplied them, and paid their meager monthly emolument.

Once the enrolled men had left Vancouver Barracks and reported to camps, the workers were under the administrative aegis of the Forest Service, or one of the branches of the Department of the Interior. These included the National Parks Service, the Oregon and California Railroad Lands Administration, and the Grazing Service. The Indian Service—soon to become the Bureau of Indian Affairs—had its own separate Civilian Conservation Corps that was administered by the tribal governments rather than the Army.

In the nine years of its operation, the Ninth Corps built and staffed 67 camps. These did not operate simultaneously. Camps typically lasted two to three years until all the conservation work projects adjacent to

the camp were finished and then a new camp was built. Table 9 shows that in 1939, the CCC operated thirty camps in Oregon and Washington. Each of these camps undertook conservation projects in the surrounding area. Re-located camps retained their unit number and staff; however, the CCC was constantly receiving new enrollees and “graduating” ones that had served the enlistment period.

In addition to the ongoing conservation work projects, CCC crews also fought forest fires. Fire fighting was especially important in the Northwest, and was well regarded by members of communities whose livelihood depended on the forest resources. Another activity of the CCC during the 1939-1941 period was military support work on military bases. The second World War was beginning in Europe, and the United States was divided about American participation. Using the CCC for enhancing military preparedness was a controversial area that was criticized by opponents of the CCC and by pacifists (Cray, 1990). Erigero (1992:328) notes that six camps of the District Nine were “directly engaged in war-related work” in 1942 after Pearl Harbor.

The CCC also operated education programs for basic literacy and for some specialized training. Most enrollees learned building or mechanical trades under the tutelage of the local experienced men (LEMs) who supervised crews.

### The Civilian Conservation Corps Building Program

The CCC had a very strong commitment to building as a part of the conservation work, constructing administrative and recreational structures for national forests, national parks, state parks, and other public agencies throughout the west. The CCC employed thousands of “local experienced men” who were masters of the building trades, including carpentry, masonry, heavy equipment operation, wiring, and plumbing. These buildings were not for use by the CCC, but were intended for the agencies with the CCC serving as contractors. For their own use, the CCC built modest frame structures that were often portable so that the buildings could be disassembled and re-assembled as the camps moved.

The CCC building program on national forests in R-6 included a full range of structures for forest management and public recreation. This latter activity was increasingly important on national forests, but had been a part of the picture from the beginning.

Standards for Forest Service buildings in the CCC building program were provided by the Forest Service in the *Improvement Handbook*, published by the Government Printing Office (GPO) in 1937, and later supplemented by *Acceptable Plans for Forest Service Administrative Buildings* published in 1939. These two publications offered sample plans, specifications of material, and site

**Table 10: CCC Camps in Vancouver District, 1939**

Unit Number	Place	State
2946 <sup>th</sup> Company	Vancouver Barracks	Washington
1922 <sup>nd</sup> Company	Camp Bonneville	Washington
491 <sup>st</sup> Company	Warrenton	Oregon
1258 <sup>th</sup> Company	Seaside	Oregon
1456 <sup>th</sup> Company	Cathlamet	Washington
2908 <sup>th</sup> Company	Foss	Oregon
3225 <sup>th</sup> Company	Ilwaco	Oregon
5461 <sup>st</sup> Company	Timber	Oregon
5477 <sup>th</sup> Company	Tillamook	Oregon
5481 <sup>st</sup> Company	Yacolt	Oregon
263 <sup>rd</sup> Company	Prineville	Oregon
928 <sup>th</sup> Company	Zig Zag	Oregon
944 <sup>th</sup> Company	Carson	Washington
945 <sup>th</sup> Company	Goldendale	Washington
1294 <sup>th</sup> Company	Brothers	Oregon
1452 Company	Cascade Locks	Oregon
1454 <sup>th</sup> Company	Camp Sheridan	Oregon
1469 <sup>th</sup> Company	Simnasho	Oregon
5428 <sup>th</sup> Company	Moro	Oregon
5480 <sup>th</sup> Company	Skamania	Washington
927 <sup>th</sup> Company	McKenzie Bridge	Oregon
981 <sup>st</sup> Company	Reedsport	Oregon
1213 <sup>th</sup> Company	Camp Woahink Like	Oregon
1443 <sup>rd</sup> Company	Sublimity	Oregon
907 <sup>th</sup> Company	Cascadia	Oregon
3402 <sup>nd</sup> Company	Blachly	Oregon
426 <sup>th</sup> Company	Silverton	Oregon
3503 <sup>rd</sup> Company	Corvallis	Oregon
2908 <sup>th</sup> Company	Side Camps, Foss & Jewell	Oregon

suggestions for builders. These books promoted the rustic style that was popular during the 1920s and 1930s for park buildings, cabins, and lodges.

For a variety of aesthetic and historical reasons, the CCC rustic style is emblematic of Region 6. The style has a great appeal to residents of the area who associate it with “the woods” and recreational activities. The CCC style is also prevalent throughout Region 6 since the CCC building program was so extensive. The result was a regional building style constructed from available materials.

### **Significance of the Civilian Conservation Corps to Region 6**

The CCC was a national program, but it had special significance for the small timber-dependent communities of the Pacific Northwest. These areas were more battered by the Depression than other areas of the nation. The CCC brought employment to local men through the “local experienced men” program, and brought an influx of new people to patronize local businesses. The CCC also contributed to the infrastructure of these areas by building roads, fences, water projects, and other improvements. Many CCC men married local women, and others returned to the CCC camp locations to live after World War II. In many small towns of the west, CCC alumni organizations are still active (Hill, 1990).

### **The National Recovery Act—The “Blue Eagle” and Sustained Yield**

When the Depression set its teeth in the Northwest lumber industry in 1932, mills in Washington were running at 20% of capacity (Ficken, 1987:193). Other industries had comparable problems, and the Roosevelt Administration rose to the challenge by creating the “Blue Eagle” of the NRA. If the CCC was the most successful program of the New Deal in Region 6, the National Recovery Act (NRA) was perhaps the least successful. The NRA proposed to regulate prices, wages, and production in the U.S. industries. The lumber industry was regulated through the Lumber Code Authority and through industry associations such as the Western Pine Association. Included in the provisions of the Lumber Code was Article X, which was a mild conservation proposal aimed at increasing the national forest system, fighting fires and insect depredations, and moving toward a sustained yield cutting program (Robbins, 1996).

NRA production quotas interrupted existing Forest Service timber sales. Most sale contracts set an annual cut and a guaranteed price for stumpage. Lumber manufacturers were required to reduce production and prices by the NRA and could not meet contract obligations.

NRA wage and price controls required the consent of industry and of labor. Since the trade associations contained both sides, the financial controls were region-specific and set by negotiation. For example, mill and woods workers in the Pacific Northwest averaged a wage of \$.42/hour, while counterparts in the South received an average of \$.24/hour (Ficken, 1987:198). Section 7a of the Code guaranteed the rights of laborers to form unions and to bargain collectively. In non-union areas, the American Federation of Labor hastened to organize loggers and mill-workers. Mill owners trotted out the Loyal Legion of Loggers and Lumbermen (4Ls) as a substitute for A. F. of L unionism.

By 1934, lumber prices and wage expectations both exceeded the code rates. The NRA was obsolete after only two years, and officially disbanded in 1935.

### **The Big Burn**

In the summer of 1933 forest fires in Oregon added environmental disaster to economic disaster. Several small fires in the drainages of the Trask, Tillamook, and Nehalem rivers in Oregon’s Coast Range combined into a mega-fire. The Tillamook Burn “blew up” along a 70-mile front for 20 hours, consuming 12 billion board feet of mature Douglas fir timber in that time. For sheer destructiveness, the “blow-up” phase of the Tillamook fire exceeded all previous fires in Region 6, and is still viewed as Oregon’s greatest economic disaster. The value of the timber lost was calculated at \$275 million dollars (Kemp, 1967:77). This figure

may be inaccurate, however, because the price for timber was at a historic low in the summer of 1933. Much of the burned timber subsequently reached market in the final years of the 1930s, when the World War II market had increased prices to historic highs.

The Tillamook Burn occurred on private forestland in one of the region’s most productive areas. Forest Service and CCC crews from camps throughout the region fought the fire, but the Forest Service was not the lead agency. Nevertheless, the Tillamook Burn had important implications for the Forest Service because the fire caught the public’s imagination and brought the issue of fire safety into focus.

Legislative response to the Depression and the ecological catastrophes like the Tillamook Burn sought to bring the damaged lands into the public forests. Much of the Tillamook Burn became Oregon State Forest land after the salvage was complete. Legislation in 1934 enhanced the Weeks Act of 1911. For many timber operators, the tight markets of the 1930s did not encourage good management.

As the market conditions improved, timber was liquidated for whatever it would bring. Land that had been logged was “let go for taxes,” reverting to county ownership and eventually finding its way into the national forest system.

**Robert Marshall**

Robert Marshall (1901-1939) began his career at the Forest Service experiment station in Missoula, Montana. He then went on to contribute the recreation section of the 1933 *National Plan for American Forestry*. In that document, Marshall argued that 10% of the forests be set aside for recreation. His final assignment before his untimely death in 1939 was Chief of the Forest Service Division of Recreation and Lands. In this capacity, he established the “U” regulation policy for primitive lands, which were the forerunners of dedicated wilderness lands. Marshall and others formed the Wilderness Society in 1935.

### **New Mills in the Late 1930s**

Good news was in short supply in the 1930s, but the decade ended on positive notes for lumber manufacturing. As the Depression deepened in the early 1930s, many larger mills were pulled into bankruptcy. Financial firms that provided capital for the industry in the Northwest, like Herbert Fleishacker’s Anglo-California National Bank in San Francisco and Baker, Fentress and Company in Chicago were also in trouble, and could not extend credit to clients (Ficken, 1987). In this atmosphere, large mills with extensive land holdings operated at a disadvantage, unable to get neither the capital nor the revenue that was required.

Smaller operators flourished in this environment, however. The companies bought small national forest timber sales, and logged with inexpensive internal combustion machines like trucks and tractors. For example, production statistics for Klamath County, Oregon, show the newer, smaller operations replacing the old railroad mills. The volume of lumber produced had returned to pre-Depression levels by 1935. Employment data shows that number of workers in 1935 had also reached pre-Depression levels, but the value of the lumber produced was only 53% of the 1928 cut. The wages the workers earned in 1935 also lagged pre-Depression wages by about 53%.

**Table 11: Lumber Production in Oregon’s Klamath County, 1928-1937**

<b>Year</b>	<b>Production</b>	<b>Value</b>	<b>Payroll</b>	<b>Employment</b>
1928	440 million BF	\$17 million	\$11 million	4406
1932	190 million BF	\$4 million	\$2.8 million	1908
1935	463 million BF	\$9 million	\$5.9 million	4638
1937	698 million BF	\$15 million	\$8.1 million	6175

*Source:* Good, 1941:191

Another Oregon community, Prineville, was the scene of a burst of enterprise in the late 1930s by new mills. Timber was available in the Ochoco National Forest, and on extensive private holdings. The city of Prineville had built a railroad to connect with the transcontinental rail network, but there was no industrial-scale lumber

production until 1936. Then, within a three-year period, Pine Products, Ochoco Lumber, Alexander-Yawkey, Consolidated Pine, and the Hudspeth Lumber Company all began manufacturing pine. These mills prospered during the war years and through the 1950s and 1960s.

These examples show that the industry was not completely prostrated by the Depression. Economic life was stirring in the late 1930s, but was still far below previous levels. The new mills were smaller, and generally did not own timberland; the mills bought Forest Service sales. In some instances, the Forest Service guaranteed that new mills would receive a predictable amount of stumpage through timber sales. Instead of the expensive railroad logging technology, the new mill relied on motor trucks. These vehicles, likely owned and operated by contract operators (called gyppos), relieved the lumber companies from the need for capital.

## Recreation and the New Deal

Despite its connotations of hardship and sober times, the Depression Era was marked by increasing recognition of the importance of recreation on the national forests. In 1940, at the end of the period, the Forest Service published *Forest Outings*, a national report on forest recreation. In Region 6, recreation was a central theme in CCC construction projects. Campgrounds and other facilities such as trail shelters marked the CCC contribution. Conservations of the period like Robert Marshall and Aldo Leopold reflected on recreation and aesthetics more than the more traditional conservation themes of resource management.

**Table 12: Changes in Region 6 Forests in the 1930s**

State	Forest	Action	Date
Oregon	Crater NF	Ended	1932
Oregon	Rogue River NF	Formed	1932
Oregon	Santiam NF	Ended	1933
Oregon	Cascade NF	Ended	1933
Oregon	Willamette NF	Formed	1933

The crown jewel of the 1930s recreation movement in Region 6 was Timberline Lodge on the Mt. Hood National Forest. The federal Works Progress Administration (WPA) completed this ambitious building in 1937. The architecture and site selection were spectacular, but the social content of the building was equally compelling. Crafts and trades from the Pacific Northwest adorned the interior, as did visual arts associated with the region (Fulton, 1994). Although the lodge would be judged as lacking in Native American content by today's standards, its inclusion of arts and crafts was a major achievement for its time. One interesting social element of Timberline is that it was located close to a major city

(Portland) and was designed to be accessible by car (Potter, 1974:518ff). The lodges of the previous decades tended to be located in remote areas, often accessible only by rail. Thus Timberline was available to lower-income families who could best afford recreation located within driving distance of their homes.

## WORLD WAR II AND THE POST WAR PERIOD: 1942-1960

### The Second World War

At the time of the bombing of Pearl Harbor in December of 1941, the national forests of Region 6 were replete with new buildings and infrastructure improvements. The CCC program was winding down, but it had left the Region with buildings, campgrounds, roads, ditches, trails, and communication systems. Also, the CCC program had provided labor for conservation work and for fire fighting at a time when receipts from timber sales were at very low level. As the lumber industry picked up in the late 1930s, sales revenues increased.

The economic impact of the war was complex. The "Lumber Price Index" (LPI) is a comparative price scale that takes 1926 prices as the base line or 100 on the scale. In 1939, the LPI was a 93, slightly below 1926 prices. In 1941, before U.S. entry into the war, the European war had nudged prices up to 122 on the LPI, and in 1945, at the height of wartime production, the LPI stood at 155 (Ficken, 1987:225). This was good news for the industry. However, loggers and mill workers were not protected from the draft during the early years

of the war, so labor was hard to find and expensive. Also, the only customer for lumber was the government, so prices were set nationwide. William B. Greeley wrote in 1943, “The war has so thoroughly absorbed all the energies of the West Coast lumber industry that for practical purposes we are part of the Armed Services” (Ficken, 1987:224).

Forest Service personnel volunteered for service or were drafted, leaving the national forests short of staff. Throughout the Pacific Northwest, outdoor recreation clubs organized volunteer programs to create a “Forest Service Auxiliary.” The Forest Service also received some assistance from conscientious objectors who were assigned to alternative service at a former CCC camp on the Siuslaw National Forest near Waldport, Oregon, and another former CCC camp near Wyeth on the Mt. Hood National Forest. These conscientious objectors spent the war working on reforestation projects.

**Table 13: Timeline of Legislation and Events Affecting the Forests of the Pacific NW (1942-1960)**

Date	Agency	Impact
1941-1945	World War II	Terminated of CCC, terminated precious metals mining; placed restrictions on lumber manufacture; aerial, naval, and balloon attacks with civilian casualties
1944	Sustained Yield Forest Management Act	Authorized cooperative public/private forest management units
1944	USDA Organic Act	Augmented forest fire protection
1946	Reorganization Plan of May 16	Created Bureau of Land Management
1947	Forest Pest Control Act	Authorized government protection of all forest lands from insect pests
1949	Anderson-Mansfield Reforestation Act	Appropriated funds for reforestation in logged or burned forest lands
1949	Supreme Court	Upheld Washington law regulating the cut on private forest lands
1950	Granger-Thye Act	Facilitated cooperative management of intermingled lands
1950	Dingell-Johnson Act	Established excise tax on fishing equipment to be used for fishery management
1950	Cooperative Forest Management Act	Facilitated cooperative management of public and private forest lands
1953	USDA Administrative Order of Dec. 24	Transferred Soil Conservation Service lands to the FS. This became the 4 million acres of National Grasslands
1954	Act of August 13	Terminated the Klamath Reservation in Oregon
1955	Multiple Use Mining Act	Regulated mining within national forests
1960	Multiple-Use Sustained-Yield Act	Promulgated multiple-use management philosophy
1964	Wilderness Act	Created wilderness areas on national forests
1965	Wild and Scenic Rivers Act	Protected river corridors from development
1969	National Environmental Policy Act	Provided beginnings of ecosystem management philosophy

Some activities on the national forests expanded during the war and others closed down. The CCC closed in 1942. The Army disassembled and moved many CCC camp buildings. The War Production Board issued order L-208 in 1942. This curtailed precious metals mining and shifted labor and mine machinery to strategic materials mining. The ultimate effect of this was that underground gold and silver mines in Region 6 flooded and deteriorated beyond repair. Mining communities like Cornucopia and Waldo became ghost towns. On the other hand, business was brisk at the lookouts. Aircraft Warning Service observers spent the winter months in strategic lookouts. Insulating, supplying, and heating the lookouts for year-around service was no small achievement.

Logging technology changed during the war in some ways that affected national forest management. Gasoline-powered trucks and tractors had come into use during the Depression. By the start of the war, truck

and tractor logging was taking over from railroad operations. During the war, the lack of skilled labor made truck and tractor logging more practical since it was less complicated for unskilled men to learn. As a result, the national forests moved toward smaller sales aimed at truck logging. These smaller sales had a higher management cost per unit of timber volume. The national forests also had a number of issues related to roads and road building as trucks replaced railroads. Logging roads opened the forest to fire protection and to silviculture, but the roads also opened the forests to visitors, many of whom did not approve of the roads that allowed them access.

## **The Post-War Timber Market**

When the war ended and the troops returned to civilian life, the demand for housing materials peaked. Federal and state governments offered veterans' loans at attractive rates. There had been little private construction during the Depression, and there was a sharp demand for houses and for lumber. The total U.S. lumber production in 1947 was 35.4 billion board feet. This compares with the 34.7 billion produced in 1900 and the 36.8 billion produced in 1929. The record production year had been 1909, with 44.5 billion produced. After 1938, Oregon became the leading state in timber production. In 1947, at the peak of the post-war market, Oregon produced 7.1 billion board feet, 20% of the nation's total. Washington produced an additional 3.7 billion board feet; Region 6 produced over 30% of the nation's lumber.

The prices for lumber and for stumpage rose rapidly in the post-war period. Douglas fir lumber sold in 1944 for \$5.20/thousand board feet. By 1965, the price had risen to \$66, and twelve years later, in 1977, the price was up to \$206.

The irony of the post-war timber market is that it was a time of decline for the lumber business in the Pacific Northwest. Between 1944, during the wartime manpower crisis, and 1953, employment in the lumber industry in Washington fell by 8%. At the same time, employment in other industries rose in double or triple digit percentages. Comparable employment figures for Oregon are not available, but Oregon's lumber employment surely declined during the 1950s and 1960s as older mills closed and the total milling capacity declined. The lumber business was an economic roller-coaster. "Dependent on a highly competitive and housing-oriented domestic market, Northwest lumbermen experienced repeated recessions in the postwar decades (Ficken, 1989:225).

The large lumber companies' stock of private timber was declining in the post-war period. Heavy cutting in the 1920s and the war years had taken its toll. National forest sales increased to provide logs for the industry. Region 6 was by far the most productive, with a large share of the 6.2 billion board feet of national forest timber sold in 1955. Although the 6.2 billion board feet of national forest timber represented a high point in 1955, it was less than 20% of the nation's total cut in that year.

One effect of the decline in private timber was the industry's realization that "tree farms" could be made to pay. Major lumber companies like Weyerhaeuser and independent tree farms like Starker Forests of Corvallis, Oregon, acquired or held logged-over land and planted trees.

Declining timber reserves led Congress to pass the Sustained-Yield Forest Management Act of 1944. This law encouraged partnerships between public and private forests to maintain a constant flow of timber for timber-dependent communities. The Simpson Logging Company in Shelton, Washington, joined with the Forest Service in 1946 to create a sustained yield unit made of national forest and Simpson lands. The Forest Service and the Department of the Interior's O&C Lands administration proposed similar plans with Weyerhaeuser and the Booth-Kelly Lumber Company in Oregon.

A variant of the public-plus-private sustained yield plans was the Lakeview Federal Unit program on the Fremont National Forest. This sustained yield plan did not involve private timber. The lumber companies in Lakeview and Paisley received exclusive access to sales in the Lakeview working circle, which included

the southern parts of the Fremont National Forest. Total cut from the Unit was to be 50 million board feet/year. The milling capacity of the Lakeview and Paisley mills was 65 million, so there would be competition for the sales, and a market for private timber. The Unit was established in 1951 (Bach, 232).

The response to the Sustained Yield plans was varied. In general, large lumber companies favored the plans and agreed to participate. Local business organizations, exemplified by the Lakeview Chamber of Commerce, opposed the plans, however, because the organizations perceived the plans as being “anti-growth.” The unions and the smaller timber operators worried about losing access to public timber. The unhappy memory of the National Recovery Agency may also have prejudiced people against federal sustained yield management. At any rate, the Shelton Unit and the Lakeview Unit were the only two established in Region 6.

### Forest Recreation

The post-war period saw an enormous increase in forest recreation. The affordability and reliability of automobiles, plus new forest roads, and a shorter work week made forest recreation available to urban Americans. Such activities as wilderness hiking, skiing, boating, mountaineering, fishing, and hunting had formerly been the province of rural people or the very wealthy. Suddenly, a whole generation of middle-class urban pleasure-seekers was looking to the national forests as their playground.

The Forest Service responded by building additional campgrounds and facilities. Skiing and winter mountain sports flourished in Region 6, perhaps because of the Scandinavian heritage of many of the immigrant mill and forest workers. There are a total of 28 ski huts and 14 ski lodges on 17 of the region’s national forests. Nordic skiing trails, snowshoe trails, and snowmobile trails also draw winter sports enthusiasts.

One interesting response to the post-war sports mania was the Dingell-Johnson Act in 1950, which set a 10% excise tax on sport fishing equipment. Funds collected from this tax were to be used for fisheries enhancement. On most forests, state and federal fish and wildlife agencies partnered with the Forest Service to erect hatcheries and various fisheries improvement projects. One early (and spectacular) use of Dingell-Johnson funds in Region 6 was the construction of a canal to drain Diamond Lake in the Umpqua National Forest. Once the level of the lake was drawn down, it was treated with rotenone to poison undesirable fish.

### The Reservoir Era

Federal dam construction in the Northwest began in the 1930s and reached a crescendo in the 1950s and 1970s. After Bonneville and the Grand Coulee set the course, the Corps of Engineers supervised construction of dams on major rivers throughout the region. Dams on the Columbia and its tributaries generated electricity for the interstate power grid and provided flood control. Irrigation dams, with the exception of Grand Coulee, were generally located on smaller streams at higher elevations, and most were associated with the Carey Act early in the century.

The national forests on the tributaries of the Columbia and the Willamette experienced the brunt of the dam building. The reservoirs behind the dams offered recreation opportunities with campgrounds and boat launching ramps. When the dams interrupted salmon or steelhead runs, as was usually the case, the state or federal agencies provided hatcheries to mitigate the loss of spawning runs.

The Willamette National Forest saw the greatest concentration of dam building, on the forks of the Willamette, the Santiam

<b>State</b>	<b>Forest</b>	<b>Action</b>	<b>Year</b>
Washington	Columbia NF	Ended	1949
Washington	Gifford-Pinchot NF	Created	1949
Washington	Chelan NF	Ended	1955
Washington	Okanogan NF	Created	1955
Oregon	Winema NF	Created	1961

and North Santiam, and the McKenzie. The Corps built Detroit dam in 1953, then the re-regulating dam below Detroit in 1954, then Lookout Point dam in 1954, then Cougar in 1956, then Blue River and Saddle dams in 1960, and Hills Creek in 1964. Foster dam and Green Peter dam followed. The Forest felt the impact of the dams and reservoirs. Timber in the reservoirs were sold, roads re-aligned, camp grounds moved, and in two cases, ranger stations relocated (Rakestraw and Rakestraw, 1989:100). The forest service also had to make provisions for housing construction personnel and equipment.

### **Multiple Use Sustained Yield Act of 1960**

The Multiple Use Sustained Yield Act of 1960 effectively ended the post war period. From the beginning of the New Deal in 1932, there had been a sense of “mobilizing” the national forests to meet national goals of relief work, war production, and lumber for the post-war housing boom. The 1960 act declared an end to that mind set by placing all forest resources on an equal footing. And, the 1960 Act expanded the scope of forest resources to include recreation, range, timber, watershed, and wildlife.

The political climate that led to the 1960 Act incorporated the view that timber production had gone too far and that other resources needed to gain an equal footing in forest management decisions. Recreation groups and what would soon be called “environmental” groups weighed in with opinions. The Sierra Club opposed the 1960 Multiple Use Act, pushed for a wilderness law, and worried that multiple use legislation would compromise the cause. Forest historian Gerald Williams interprets the 1960 Act as a landmark piece of legislation that ended an era and that pointed to events in the future. “This example of redefinition of the old ways rather than managing differently on the ground had implications for the controversies regarding forest management for the 1970s, 1980s, and 1990s.”

# CHAPTER 3

## Forest Service Building Program - An Architectural History

Chapter 3, “An Architectural History” explores the development of the various property types in relationship to the main thematic groups of Administrative and Recreation, and to the growth and expansion of the Forest Service in the eras outlined in Chapter 2, “Historic Context.” Within each era, consideration is given to the ways in which the associated property types relate to the evolving missions and goals of the Forest Service, and the influences/constraints affecting their development. The function, building type, design, and stylistic influences are framed within this thematic and chronological framework. .

### ADMINISTRATIVE FACILITIES

This thematic group includes property types related to the Administrative theme and sub-themes (Administrative Buildings and Sites, and Fire and Forest Health) that represent the mission and goals of the Forest Service in administering programs in Region 6 throughout the historic period. Property types associated with each sub-theme share associative attributes distinctive to each of the chronological eras. The discussion of each sub-theme includes examples of representative property types within each temporal and thematic group. The defined property types share associative and stylistic characteristics related to events that have made a significant contribution to the administrative development of the Forest Service as well as to the broad patterns of history.

#### Administrative Buildings and Sites

Property types encompassed within this sub-theme include offices, residences, bunkhouses, bathhouses, warehouses, shops/maintenance buildings, pump and power houses, garages, barns, gas/oil storage houses, storage sheds, woodsheds and other storage facilities. Potential cultural or landscape features include corrals, roads, fences, flagpoles, parking areas, pastures, retaining walls, paths, and wells. The buildings, either standing alone or in complexes, directly relate to the history of administrative development and resource management in Region 6. These resources firmly established the federal presence at the local level and were significant in the agency’s development through the chronological eras.

#### Forest Reserve Period: 1891-1904

The “Organic Act” signed June 4, 1897, by President William McKinley identified three purposes for which the sixteen western forest reserves set aside between 1891 and 1897 should be managed: 1) to improve and protect the national forests; 2) to secure favorable conditions of water flow; and 3) to furnish a continuous supply of timber for the use and necessities of citizens of the United States (Throop, 2004:2). The Act also provided for an organization to manage the reserves and placed it under the Department of the Interior’s General Land Office.

During the summer of 1898, officials appointed supervisors to oversee management of the forests and rangers to patrol the reserves. The General Land Office selected rangers who lived in the local reserve areas, and who generally had no formal training in forestry. As described by historian Gerald W. Williams, the rangers hired primarily to fight fires were “rough and ready” practical men who knew the mountain country, but were sometimes incompetent, abandoning their forest posts to work at home (Williams, 2000:11-19).

During the six-years of General Land Office Administration, Congress provided scant funding for salaries and none for construction of administrative buildings. Forest supervisors made no organized plans to develop trails or identify administrative sites. Rangers built trails or structures only as needed (Caywood, HRA,

1991:20). Hastily constructed, seasonal in use, and vulnerable to the elements, these administrative structures and shelters were often dismantled, incorporated into other structures, burned, or left to the elements.

These early rangers buildings of the Forest Reserve Period can be defined as “Vernacular” structures as described by Henry Glassie and James Deetz.

The meanings that lie in the selection of materials are social and economic as well as environmental. But the environment set the stakes. They [people] know how to select from it the right material for the job . . . Local materials are their resources, their technologies are powered by their own muscles, but their aim is to create emblems of cultural presence (Glassie, 2000:29-30).

James Deetz further defines the Vernacular as:

. . . folk buildings, done without the benefit of formal plans. Such structures are frequently built by their occupants or, if not, by someone who is well within the occupant’s immediate community. Vernacular structures are the person’s inner feelings, their ideas of what is or is not suitable to them (Deetz, 1977:93).

These early building variations in workmanship, design, and materials reflect the skills of the individual builder, rather than the Forest Service standards and designs. These vernacular style buildings were typically lean-to’s, tents, or log cabins. The seasonal cabins, the more elaborate of these early structures, were typically constructed of local timber (log construction), native stone, and/or wood shakes. The rangers lived in nearby communities and only resided on the reserve land seasonally. Other structures previously built by trappers or logger were often used for shelters by the rangers. Because of their temporary nature, none of these buildings from this earliest period are known to survive in Region 6. There are no known structures remaining in Region 6 from this early development period with the exception of buildings that were originally built by private concerns (Cloud Cap Inn, Mt. Hood, 1893) or other government agencies (Heceta Head Lighthouse, 1893), and later became part of the Forest Service property.

Although the Forest Service architecture in this period was vernacular in nature, the arrival of the railroad in the late 1800s brought new stylistic influences to Northwest communities as building designs and pre-fabricated architectural components were sold through catalogues and pattern books. Following this national trend, the Forest Service published in 1905 *The Use of the National Forest Reserve: Regulations and Instructions* and the 1908 *Standard Plans for Buildings on Ranger Stations* that provided more standardized plans for administration buildings. The influence of these plan books is evident in the next developmental phase; the Early Forest Service Period.

## **Early Forest Service Period: 1905-1911**

In 1905, the Forest Reserves were transferred to the U.S. Department of Agriculture; this marks the beginning of a new management and development era within the Forest Service. The transfer provided some funding for the construction of much-needed infrastructure like roads and trails and ranger buildings. In an effort to regulate the uses of the forests, Gifford Pinchot, National Forester, authored the first manual for regulating activities in the forests; *The Use of the National Forest Reserve: Regulations and Instructions*, commonly known as the 1905 *Use Book*. Although this publication did not regulate the types or styles of buildings, procedures and allocations for erecting Forest Service buildings were outlined, and what type of private structures were allowed (by special permit) within the Forest Reserve. The *Use Book* also described the procedure for allowing the public to use the natural resources (timber and stone) of the forest land to build privately owned structures.

By 1907, the Forest Service decentralized and established eight Districts (later reclassified as Regions) in different sections of the country. Supervisory employees were dispatched to key communities throughout the region to oversee activities at the local level including a District office in Portland, Oregon (Williams, 2000:

25-26). During these early years, the Forest Ranger's role was mainly custodial with very little guidance in management or oversight. The *Use Book* describes the purpose of the forest reserves:

Forest reserves are for the purpose of preserving a perpetual supply of timber for home industries [and] preventing destruction of the forest cover which regulates the flow of streams . . . They are patrolled and protected at Government expense, for the benefit of the community and home builder (USDA FS, 1905:7).

Supervised from centrally located offices within Region 6, the Rangers' duties varied according to location, but generally focused on monitoring range use by stockmen, overseeing homestead entries, managing small-scale timber sales, fighting fires, and building roads and trails. At first, the employees lived in tents for the summer fire season, or occupied abandoned homestead cabins and corralled their pack animals nearby. The Forest Ranger's offices were often rented spaces in nearby towns. In July 1907, M.L. Erickson, Forest Inspector, wrote a "Report on Heppner, Oregon, National Forest" and the various improvements needed on the Forest. Among these were recommendations on Ranger Station offices and stations:

Heppner is the only town suitable for the headquarters of the supervisor. The town possesses all the necessary means of communication, having railroads, telegraphs, and telephones. It is a good source of supplies and is central for the majority of the users of the Forest. I recommend that no other town be made headquarters for the Heppner Forest. The [current] office is in a rather small dingy building. The one room is 33' x 10'. It is not very suitable. The rent including light amounts to \$12.50 per month, which is too high for such accommodations (Erickson, 1907:27).

Inspector Erickson continued by recommending the office be relocated to another less expensive building in Heppner, and building two or three ranger stations for winter use in the Forest during the fall. The forest rangers built these seasonal and year-round administrative quarters as needed and as time permitted. These one- or two-room cabins, residences, store houses, and barns served as centers for overseeing natural resource protection throughout vast areas.

## Site Improvements

Generally, Region 6 employees erected buildings as needed, rather than locate structures according to an overall plan. Site planning was minimal at best and the arrangement of the sites were often dictated by proximity of water sources, roads, and pasturage. In some instances conveniently situated camp sites developed into more permanent administrative sites. At lower elevations where accessible by road, the Forest Service established year-round "ranger stations" usually comprising at least a residence or combination office/residence, barn, and storehouses. In more remote high-elevation areas, seasonal log cabins or guard stations provided the necessary facilities. From these modest and hard-won structures, Forest Service personnel protected the Forests.

Although many ranger stations were built on an "as needed" basis, the Rangers began turning to the government's *Use Book* for guidance before a selecting sites and constructing buildings:

Lands needed for supervisors' headquarters, rangers' cabins, gardens, or pastures, and Forest Service nursery sites should be selected, so far as possible, from non-mineral, unclaimed lands, and will be specially reserved from any form of location or entry . . . Reserve headquarters should be located in the nearest town to the reserve that offers proper railroad, telephone, telegraph, and mail facilities, and may be secured only through the permission of the Forester . . . Usually [the quarters] should be built with logs with shingle or shake roofs. Dwellings should be of sufficient size to afford comfortable living accommodations to the family of the officer. Ranger's cabins should be located where there is enough agriculture land for a small field and suitable pasture for a few head of horses and a cow or two, in order to decrease the often excessive expense for vegetables and food (USDA Forest Service, 1906:25,108,121).

Plans for these early administrative buildings were generally inspired by local vernacular architecture. “Administrative buildings were largely reflective of the rangers’ personal preferences, as well as the materials, tools, and time available . . . The special relationships between the barn, cabin, and corrals were similar to those of typical homestead layouts” (Grosvenor, 1999:3). Although vernacular in style, these buildings often looked similar due to the use of local materials (native stone, timber, and wood shingles/shakes) common in the Pacific Northwest.

Despite field conditions that fostered diverse building appearances nationwide, the Forest Service, headed by Gifford Pinchot, fervently promoted the agency’s mission and expected architecture to support that vision. After 1908, when the Forest Service established district headquarters, supervisors’ offices, and ranger stations on a broad basis, “more emphasis was placed on regional standardization of architecture” (Grosvenor, 1999: 5). At this same time, Engineering Divisions were established in each of the eight Districts, so regional factors and styles such as climate, design elements, and availability of materials were considered in the building program. The District engineers, at first primarily concerned with surveying activities and civil engineering projects, began designing buildings.

### **Standardized Plans: Building Designs**

In 1908, the Forest Service distributed standard plans to guide Forest supervisors in designing buildings, *Bills for Material Accompanying Standard Plans for Buildings on Ranger Stations*. The guidebook had 29 standardized plans, with layouts and designs for 20 forest ranger cabins, two bunkhouses, two storehouses, and four stables/barns. A materials list was provided for each plan specifying the amount of dimensional lumber, shingles, nails, doors, bricks, windows and doors, and interior finishes. Even the number of screws and nails needed were cited. This marks the first overarching effort to provide standardized plans for Rangers to use.

#### **Cabins**

Stylistic details were limited but some of the plans drew from the Bungalow and Craftsman traditions that gained popularity in the first decades 20th century. These vernacular cabins often had exposed rafter tails, eave overhangs, and multi-light windows that were characteristics of the Bungalow styles. Plan No. 10 in the 1908 *Standard Plan* book was designed in the saltbox form popular on the East Coast, and other styles also influenced the plans; the long, narrow cabin plans reflected the vernacular shotgun houses of the South.

The plan book offered many options for cabin layouts. The most common cabin types were rectangular or square in plan, divided into one-to-five rooms, and had gable or hip roofs covered with wood shingles or shakes, interior brick chimneys, frame or log construction, partial porches, board (1” x 12”) and batten (1/4” x 4”) or 6” drop siding, four-panel doors (2’8” x 6’8”), and 4/4 or 6/6 double-hung wood sash windows with 10” x 12” lights. These cabins were usually built on log pile foundations. Sizes ranged from the smallest one-room cabins measuring 14’ x 16’ to larger plans measuring 15’ x 39’ and 20’1” x 36’6”; these cabins were generally 8’6” to 10’ high.

The more complex cabins were L-, T-, or U-shaped in plan, one to one-and-a-half stories high, made of frame or log construction, and had hip or cross-gable roofs, and full or partial porches. The larger cabins had separate rooms for living, sleeping, cooking/dining, and sometimes, office use, and even had built-in closets and pantries. The full or partial porches had shed roofs supported by timber posts on the log constructed buildings and 4” x 4” chamfered posts on wood frame buildings.

Frame constructed buildings were built with 2” x 4” framing members that were secured to 2” x 8” floor joists and 2” x 4” top plates and rafters. The log-constructed cabins were built from logs at least 12” in diameter and V-notched corners. The interior of the cabins had either a fireplace with a stone or brick hearth, or a wood stove vented by a “galvanized smoke stack.” Interior finishes included 1” x 4” beaded board ceilings and walls, 1” x 4” board floors, and 2’6” x 6’6” vertical plank doors with diagonal bracing.

## **Bunk Houses, Store Houses, and Stables**

The two bunkhouse designs consisted of a small 14' x 16' single room structure with a wood stove and two bunks, and a two-room structure with a bunk room for three plus a living room. Of frame construction, both designs had board and batten siding, a side-facing gable roof, full front porch with a shed roof, 6/6 double-hung wood sash windows, and a brick chimney. The larger bunkhouse had two doors, one leading into the common room and the other into the bunkroom.

There were two plans for the 12' x 18' store houses; a log-and a frame-constructed building. The log store house had a side-facing gable roof, wood shingle or shake roofing, notched corners, board and batten on the gable ends, and operable vertical board shutters on the outside of the 6/6 double-hung wood sash windows. There were only two windows on the gable ends and a central door as the primary entrance. Sided with board and batten siding, the frame-constructed storehouse was identical in plan to the log building with the exception of the lack of shutters.

The four plans for the barns typically contained two to four horse stalls, and had board and batten siding, gables roofs, hay lofts, and 4/4 and 6/6 double-hung windows. The sliding doors were on one end on the smaller plans and at both gable ends on the larger stables. Three of the plans had side aisles with the stalls on one side, and the other plan had a central drive-through with stalls on either side.

## **Representative Examples: 1905-1911**

The Gotchen Creek Guard Station in the Mt. Adams Ranger District, Gifford Pinchot National Forest, is a good example of a Vernacular style ranger station remaining from this early period. The small cabin is similar to a plan in the *1908 Standardized Plan Book*. Constructed in 1909, the building had a side facing gable roof, exposed rafter tails, wood shingled roofing, interior ridge chimney, drop siding, 4/4 and 1/1 double-hung wood sash windows, and partial shed roof porch. Although slightly smaller and L-shaped in plan, the Gotchen Creek Station is similar to Standardize Plan No. 7 in its materials and front façade configuration. These early building often served dual purposes as ranger and guard stations (see Fire Protection section).

Another good example of an early headquarters building for rangers and men engaged in improvement and grazing work is the Independence Prairie Ranger Station (c. 1910). The cabin, vernacular in style, was a hand-hewn log building (13' x 21') constructed of round, peeled logs that were squared on the inner and outer sides (*Independence Prairie National Register Nomination 1979*). Another example, the Interrorem Guard Station was built in 1907 as the first administrative site of the Olympic National Forest. The 20' x 24' log cabin has a hip roof with wood shingles, front porch with timber posts, and multi-light windows. The building later served as a fire guard station.

The Star Ranger Station, built as administrative headquarters in 1911, was a simple vernacular wood-frame structure measuring 12' x 20' in plan. The structure had a gable roof covered with wood shingles, horizontal drop siding, and 4/4 double-hung wood sash windows (*Star Ranger Station National Register nomination 1999*). Builders of the first Star Gulch Ranger Station building (1911) possibly consulted the 1908 standardized plans for the one-room Ranger's Cabin. Ranger Horace G. Whitney arrived at Star Gulch in the spring of 1911 and found “. . . two carpenters just completing a one-room, combined office and living quarters in the middle of the alfalfa patch at Star Ranger Station” (LaLande, 1979).

The Independence Prairie Ranger Station (c. 1910), Willamette NF, and the Star Ranger Station (1911), Rogue River-Siskiyou NF, are tangible representatives of early Forest Service administrative activities in Region 6. These buildings exemplify the simple, Vernacular style used for early Forest Service administrative buildings and evoke the associative qualities related to their historic contexts.

### Examples of Early Forest Period Administrative Properties: 1905-1911

<u>Name</u>	<u>Location</u>	<u>Date</u>
Livery, Mapleton Ranger Station	Siuslaw NF	1907-1910
Interrotem Ranger Station	Olympic NF	1907
Gotchen Creek Ranger Station	Gifford Pinchot NF	1909
Independence Prairie Ranger Station	Willamette NF	c. 1910
Star Ranger Station	Rogue River-Siskiyou NF	1911
Allison Ranger Station	Ochoco NF	1911

*Note:* Early ranger or guard stations often served dual purposes (administrative and fire protection) because of the limited focus in the Early Forest Service period. The Olallie Meadow Log Cabin, Mt. Hood National Forest and the Lake-in-the-Woods Guard Station (1909-1910), Umpqua National Forest, are examples of this type of station (see Fire Protection Section).

### Intermediate Period: Forest Service Management Comes of Age: 1912-1932

From 1912 to 1932, wood-frame structures continued to house the fledgling Forest Service's activities in managing natural resources, including fire detection and suppression, range use, small timber sales, homestead entries and trail construction. Early in the period, administrative/residential quarters consisted primarily of a residence/office combination building and a barn/stable. Improvements relating to fire protection (lookouts, trails, and telephone lines) were the number one priority; the construction of administrative sites received second priority (Caywood, 1991:33). Construction of new ranger stations was only allowed if no other rental properties were available. Federal policy stipulated that construction costs for new Forest Service buildings could not exceed \$650.

This national mandate was often felt by Region 6 Forest Rangers who struggled to obtain funding for administrative improvements. In the fall of 1912, Ranger Jesse P. DeWitt, assigned to the Galice District on the Siskiyou National Forest, occupied a tent as he had for several previous seasons. On DeWitt's behalf, the Forest supervisor wrote the District Forester in Portland:

The conditions under which the district Ranger has to live at Galice at present are extremely unfavorable to his efficient performance of Forest Service work, both on account of personal discomfort and also on account of lack of storage facilities for tools and equipment (MacDuff, 1912).

Three years later, DeWitt was still in his tent, living now with a wife and child. He wrote regional supervisor in utter frustration:

. . . The present ranger headquarters . . . do not provide any conveniences for the proper handling of the work and my family is forced to live in cramped and unsanitary quarters . . . Real live action is needed more than anything else . . . I have lived here for the past eight years under adverse conditions . . . The land is simply lying there unused and there is no apparent reason why I should put up with temporary quarters indefinitely (DeWitt, 1916).

Records indicate that the Regional Office did respond to DeWitt's heart-felt letter when a new ranger station (office and residence) was constructed in 1917. The small building had a gable roof with wood shingles, projecting gable entrance bay, horizontal drop siding, and multi-pane windows.

These early administrative sites were often named after local geographic features or wildlife as dictated by the Washington DC Office. Region 6 Ranger Station used names such as Paulina Lake, White Pass, Oak Grove, Red Mountain, Quail Prairie, Bear Wallow, Thorn Creek, Salmon Lake, Silver Falls, Lost Lake, Clearwater, and Chinook. These names not only reflected the local area but also served as a way to easily identify and locate the various ranger stations.

## **Frank A. Waugh - Landscape Architect**

In 1917, Landscape Architect Frank A. Waugh was hired by the Forest Service to survey the recreational potential of the national forests. After five months of fieldwork, Waugh concluded in his three-volume report that the 'enticing wilderness' of the forest has 'direct human value' and should be given parity with economic consideration when determining the forests' future. In 1918, Waugh was a collaborator on another publication that shaped site planning in the national forests; *Landscape Engineering in the National Forests*. Typical site plans for ranger stations were drawn by Waugh and other drawings such as ranger stations residences were drawn by Forester Aldo Leopold and included as models. As a result of this publication, Waugh was hired as the Forest Service's first full-time landscape architect or "recreation engineer." At the same time, the newly established National Park Service also created a more unified vision for Park structures that were based on nature. These design principles also influenced the Forest Service building program.

## **The National Park Service Influence**

The National Park Service, created in 1917, began a new building program that strongly emphasized the relationship of the built environment and the surrounding landscape. As the Park Service received its first funding allocation in 1917, the new program was halted when the United States entered World War I. Although the war also negatively affected the Forest Service's building program there was an increase in harvesting raw materials in forest lands due to the war. The authors of *Forest Outings*, a 1940 Forest Service publication, described the period as one in which ". . . All activities not absolutely necessary to protect the forests from fire and for the production for wood, minerals, meat, wool, and leather were curtailed" (Caywood, 1991:1-5). After the end of World War I, the building programs of both the National Park Service and Forest Service began in earnest, as westerners began the quest for the great outdoors.

The architectural theories developed by the National Park Service influenced the Forest Service building practices during the 1920s; buildings were erected of native materials that were compatible with the environment. As historian Elizabeth Gail Throop observed, "The prevailing Park Service ethic of non-intrusive architecture was found to be appropriate and adopted by the Forest Service" (Throop, 1979:32).

Some of the new buildings constructed during this period were considered "rustic" in appearance. This style, derived from mainstream principles of the American landscape design profession, adopted naturalistic and informal practices of landscape design through preservation and harmonization of built features. These ideas were accompanied by specific practices for accommodating development, whether roads or structures that caused minimal disruption of natural topography and that blended structures in with the natural surroundings (McClelland, 1993).

This "rustic" style was based on the nineteenth century naturalistic tradition of landscape gardening that valued scenic views, variations in topography, natural features and plantings, and the use of native materials for construction. Details were borrowed from the Shingle, Bungalow, Craftsman, Adirondack, Vernacular, and the Prairie architectural styles; building techniques and native material used were drawn from the skilled craft of pioneers and indigenous cultures. All of these influences were embraced by the Arts and Crafts movement, which fostered an appreciation of handcrafted forms, natural settings, and naturalistic appearances (McClelland, 1993).

In Region 6, some of the administrative buildings from this period reflect the popular Bungalow style; these houses proliferated in towns and cities across the Northwest in the 1910s and 1920s. Bungalow style ranger residences/offices were generally one to one-and-a-half stories high, rectangular in plan, and had gable roofs, eave overhangs, brackets and exposed rafter tails, shingle or drop siding, 1/1 or multi-light double-hung windows, and partial front porches supported by square posts. Fairly easy to construct, these structures utilized available materials in the milled frame construction. The more remote ranger stations often reflected the vernacular building traditions utilizing log construction, hand-split wood shingles or shakes, and local stone (Figure : Suiatte Guard Station, Mt. Baker-Snoqualmie NF).

Auxiliary buildings in these pre-WWI complexes usually included a barn for the pack and saddle horses. Vernacular in design, the larger barns were often rectangular in plan, built of lumber-truss construction, and had a gambrel roof covered with wood shingles or shakes, hay hoods, horizontal siding, multi-pane windows, and center or side transverse main drive-through cribs. The doors were usually finished with diagonal bracing.

### **The Automobile: Paving the Way**

The growing importance of the automobile in the American landscape stimulated construction of new federally funded roads in the national forests. The increase in automobile use in the forest after World War I not only fostered the construction of new roads, but also attracted more recreational users and heightened timber harvesting in the forests. Rangers began to use automobiles and trucks to accomplish tasks in the field. Improved transportation and communication systems resulted in the consolidations of ranger districts and the replacement of isolated ranger stations with seasonal or temporary guard stations occupied during the summer months (Grosvenor, 1999:17). The increase use of the automobile also dictated the need for additional administration storage buildings such as oil and gas houses, garages, and vehicle warehouses. These automobile-related structures began replacing the stables and barns as cars and trucks slowly supplanted horses and mules. The ranger stations began to be more of a complex than a few isolated structures.

Automobiles provided easier transport to neighboring towns so the rangers had an easier time getting to grocery stores, shops, schools, doctors, and other services (Caywood, 1991:43). The ranger's life became less isolated and more conducive to family life. Subsequently, more effort went into providing adequate facilities and housing for the rangers. Although the automobile began to effect the daily operations of the Forest Service, headquarters and Congress still regarded cars and trucks as superficial in some forests. Forest Service regulations stated:

. . . where the use of horses or a car is regarded by the superior officer as essential to the work to be done, barns or garages may be provided at Government expense. In no case will garages for privately owned automobiles be provided unless it is clearly established that the machine is necessary for and will be used largely on official work (USFS, 1928).

Spending restrictions by Congress limited the amount of money that could be used for construction projects in the forest; \$1,000 to \$1,500 per structure in the 1920s. To compensate for the lack of funding for construction, the Forest Service instituted the use of contributed time by employees who would work after hours and in the winter on improvement projects. Some forest even offered training courses on different construction techniques in order to train the "volunteer help." Generally, each district addressed their own architectural design issues; however, in the late 1920s another guidebook was published for Forest Service employees that provided regulations and guidance for various building programs; the *Forest Service National Manual of Regulations*.

### **Manuals and Handbooks**

The 1928 *Forest Service National Manual of Regulation* established new guidelines for improvements in national forests. Among other stipulations, this manual stated that new structures should only be erected when rental of residential or office space was impractical, and that offices should be constructed separate from living space. Although the *Construction and Maintenance Handbook (C&M)*, issued as a companion to the *National Manual*, contained plans for a variety of buildings, use of these designs was not mandatory (Grosvenor, 1999:14).

In 1932, the Washington DC Office requested that the Regions develop careful policies and programs before beginning any major Government-owned improvement projects. The office suggested that location, permanency, condition of present building complexes, costs of existing complexes/rental properties, opportunity to rent adequate facilities, cost of building new structures, and the annual maintenance cost be examined before any new improvement project was undertaken (Grosvenor, 1999:17). The Washington DC

Office published the *Lands Handbook L (R6)* in 1932 that helped guide Foresters in these manners. The handbook contained a chapter entitled “Ranger Station Plans” (*Handbook L-R6*, 1932). As the automobile increased public’s use of national forests, the Forest Service increased attention to its public image:

The ranger Station is regarded by the public as the official entrance to the National Forest. Therefore this entrance deserves the most careful planning in order that it may be pleasing to the eye as well as to evidence, order and efficiency (*Handbook*, 1932: 175).

Declaring “Utility first beauty second,” the document declared that “Logically the district headquarters should be located so that the administrative unit can be handled with a minimum of effort and a maximum of efficiency” (*Handbook*, 1932:175). The *Handbook* covered a variety of topics including site selection, site layout, and location of specific structures, and emphasized that unimproved sites should have a good water supply and drainage, and protection from the elements. Sites with southern exposure, and proximity to nearby towns and highways were recommended. The *Lands Handbook* even specified the size of a site plan (13” x 21”) map and what types of information needed to be shown. A written report was recommended for the more complex sites. Other resources consulted were Frank A. Waugh’s “Rural Improvements” and “Landscape Engineering in the National Forests,” and other planning and planting guides from the *Farmer’s Bulletin*.

Under a section entitled “What Makes Up a Ranger Station (A Guide—Not a Rule),” the handbook lists structures potentially needed in an administrative complex: rangers’ dwellings and outbuildings, (toilets, henhouse, cow shed, and wood shed); garage, office, fire warehouse, construction and maintenance shops, vehicle storage, gas and oil station, bunkhouse and kitchen, horse barn and corral, powder and cap house, and flag pole. Other improvements that may be included in the complex were pastures, parking spaces, landscaping elements, including planting plans, landing fields, roadways and fences; gardens, nurseries and arboretum space, and recreational area (*Handbook*, 1932:180). The manual stated that new stations had to be setback at least 100’ to 200’ from a highway depending on the road classification, and that ranger’s residences should be constructed in a location to maximize privacy.

The *Lands Handbook* set the stage for site planning and expansion of the Forest Service facilities during the Depression-Era. The *Lands Handbook* stated:

This landscape plan should serve as a guide for the comprehensive building and expansion of our ranger stations and should be made with an appreciation of their purpose, that of utility and service, combined with beauty. The plan is made to serve, not restrict, and should, with intelligence, be flexible enough to provide for the ever-changing needs of the Forest Service (*Handbook*, 1932:187).

### **Representative Examples - Intermediate Period: 1912-1932**

Buildings from this period represent the development of Forest Service programs and site improvements leading up to the more unified designs of the Depression Era. Ranger stations during this period grew from a few basic structures such as a residence and barn to complexes including more specialized building types accommodating the increase use of the automobile.

Extant buildings from this period are more vernacular in style or have elements in common to the Bungalow style. Examples of Bungalow style ranger stations and residences include: Wind River Experiment Station Office (1912) and Director’s Residence (1914), and the Guler Headquarters (1920) in the Gifford Pinchot National Forest; and the Sykomish Residence (1921), and the Darrington Ranger’s and Assistant’s Residences (1921 and 1922) in the Mt. Baker-Snoqualmie National Forest.

An excellent example of a log-constructed Guard Station is the Suiattle Guard Station in Mt. Baker-Snoqualmie National Forest. Built in 1913 by Forester Tommy Thompson, the cabin has a front facing gable roof covered with hand-split wood shakes, interior chimney, wood shingles on the gable ends, central front

porch supported by peeled logs, small multi-pane windows, and log walls with half-dovetail notching. The Big Elk Guard Station, built in 1929 in the Rogue River National Forest, is similar to the Suiattle Guard is its rectangular form, front facing gable roof, partial porch supported by log posts, small multi-pane windows, and log construction with square notching at the corners.

There are several Ranger Station complexes that were built during this period that retain a number of the original buildings. The Oak Grove Ranger Station, Mt. Hood National Forest, includes a residence, carpenter shop, fire warehouse, recreation warehouse, and storage warehouse. These building, constructed from 1922 to 1930, are similar in design and generally have gable roofs, exposed rafter tails, shakes on the upper portion and peeled horizontal logs on the lower section (except the residence that sided with shakes), multi-light windows, and vertical board doors with diagonal bracing. These buildings reflect the Forest Service guidelines for uniformity in the building types and use of local material that emerged in the later part of this period. of other complexes that retain a number of buildings include the Zigzag Ranger Station and the Oak Grove Ranger Station, Mt. Hood National Forest.

#### **Individual Administrative Buildings in the Intermediate Period: 1912-1932**

<b>Resource Name</b>	<b>Forest Location</b>	<b>Date</b>
Cow Cabin Barn	Ochoco NF	1912
Murderer’s Creek Guard Station	Malheur NF	1913
Suiattle Ranger/Guard Station	Mt. Baker-Snoqualmie NF	1913
Guler Headquarters	Gifford Pinchot NF	1920
Mt. Adams Barn	Gifford Pinchot NF	1920
Skyomish Residence	Mt. Baker-Snoqualmie NF	1921
Koma Kulshan F.R.& T WH	Mt. Baker-Snoqualmie NF	1932

#### **Examples of Complexes in the Intermediate Period: 1912-1932**

<b>Resource Name</b>	<b>Forest Location</b>	<b>Date</b>
<b>Darrington Complex</b>	<b>Mt. Baker-Snoqualmie NF</b>	
Mule Barn		1916
Ranger’s Residence		1921
Assistant Ranger Residence		1922
<b>Oak Grove Complex</b>	<b>Mt. Hood NF</b>	
Residence		1922
Carpenter Shop		1930
Fire Warehouse		1930
Recreation Warehouse		1930
Storage Warehouse		1930
<b>Zigzag Warehouse</b>	<b>Mt. Hood NF</b>	
Warehouse		1929
Gas House		1930
Warehouse		1931

### **Depression Era: 1933-1941**

In 1933, the Forest Service completed the *National Plan for American Forestry*, known as the Copeland Report, and presented the findings to Congress. The plan included an extensive inventory of forest lands and resources, a findings section detailing the “forest problem” in the United States, and short-term and long-term recommendations for action. The intent of the report was to identify all of the economic and social benefits to be derived from forestland—its timber and products, its natural and recreational resources—and insure these benefits were available in quantities adequate to meet national demand. Expanded public use of the forests through the 1920s had made apparent the need for coordinated resource management.

At the same time, the Forest Service received a boost through the federally supported Civilian Conservation Corps (CCC) program. Enacted in the spring of 1933 as the Emergency Conservation Work program, the CCC was designed to work under the existing Labor, Agriculture, War, and Interior departments. The Forest Service was able to identify needed work programs quickly, based on the recently completed Copeland Report's recommendations (Throop, 2003). This new period was "a significant departure from custodial maintenance [that] greatly enhanced the Forest Service's managerial role . . . The Forest Service's needs for supplemental administrative facilities coincided with the creation of the Civilian Conservation Corps," a national mandate to provide separate quarters for forest rangers, an increase in government-funded vehicles, and a desire to provide for more comfortable working conditions (Throop, 1984).

CCC laborers began constructing permanent, well-planned and efficient facilities for Forest management operations. The newly hired CCC architects, landscape architects, and engineers worked on creating standardized building designs and site plan layouts. The administrative complexes of the 1910s and 1920s grew from simple residences with a few auxiliary buildings to complexes where personnel and equipment occupied an assortment of structures designed to serve a number of functions. The number of permanent administrative sites doubled during this period (Throop, 1984:6-8). These buildings included residences, garages, offices, crew houses, toilets, guard residences, mess halls, bunkhouses, machine storage, automotive shops, gas and oil houses, warehouses, and barns/stables of various sizes and configurations. These new administrative facilities, symbolic of the Forest Service in the Pacific Northwest, were the outward manifestation of policy change (Throop, 1984:8-6).

### **Site Planning**

In the early 1930s, T.W. Norcross, Chief Engineer of the Forest Service, hired W. Ellis Groben as consulting landscape architect for the Washington DC headquarters. Groben articulated Forest Service evaluation studies that indicated important deficiencies in facilities development, stating that current Forest Service design did not "possess Forest Service identity or adequately express its purposes." His theories concerning architectural designs and form for administrative sites were published in technical information and design guidelines to assist regional architects and CCC workers. Even though he developed guidelines for designers, Groben encouraged the regions to develop building plans that reflected their identities. These guidelines were supplemented in 1936 and in 1937 when the Forest Service published the *Improvement Handbook* that specified building construction techniques and materials' guide. Groben authored another book, *Principles of Architectural Planning for Forest Service Administrative Improvements* that provided basic guidelines for designers such as:

- Buildings in a group should be of similar character and appearance.
- Local materials should be used whenever possible. Avoid combinations of materials.
- Wood siding should be not more than 8" wide. Drop siding or imitation log siding should be avoided.
- Avoid "X" and "Y" bracing on exterior side of garages and barns (many of Region 6 barns and garages have these bracing members), use color schemes composed of several shades of the same color, and "avoid delicate colors when painting the interiors used primarily by men."

Groben's guidelines were further refined and published in a book entitled *Acceptable Plans, Forest Service Administrative Buildings*. This book addressed how to effectively plan and design "acceptable" administrative complexes from site selection and planning to color choices and individual building designs. Groben first outlined a more standardized way of selecting new ranger stations by developing a standard questionnaire that helped evaluate site drainage, flooding possibilities, cost, soil condition, erosion potential, suitability for building, and expansion possibilities. Each site was also evaluated for its proximity to water, electricity, telephone, and established roadways.

After a site was selected, planning the complex followed. “Architectural and landscape designs were integral parts of planning for optimum serviceability and utility, as was provisions for logical future expansion. Administrative, service, and residential buildings or building groups were organized separately to achieve maximum efficiency of operation and minimum interruption of activity. While the function of each respective building was clearly articulated, a uniformity of style was achieved through similarity of character and appearance. “Continuity of forms and materials produced a textural harmony which contributed to the overall ensemble character of the site” (Throop, 1984:8-11). Groben’s philosophy about site planning was supplemented by the work of A.D. Taylor. A prominent landscape architect, Taylor was hired by the Forest Service and authored the 1936 publication *Problems of Landscape Architecture in the National Forests*. Taylor furthered the discussion of how to locate buildings within a complex, and landscape effectively.

## **Region 6 Architects and the “Rustic” Style**

During the beginning of CCC period, “it was recognized that forests were not the only areas of economic value, but also areas which were developing an increasing social value” (Throop, 1984). As a result, the Forest Service sought designs that would enhance expression of the Forest Service’s identity and goals. Region 6’s plans were designed by a new architectural staff that took into consideration regional factors such as climatic conditions, vegetation, geography, and forest cover.

William I. “Tim” Turner was the first architect employed by the Northwest Region to design and manage the CCC construction projects. Turner, who worked for the Forest Service from 1935 to 1950s, headed the team of architects that worked on prominent buildings such as Timberline Lodge and Silcox Hut. Turner was assisted by architects Howard L. Gifford (1936-1945), Linn A. Forrest (1936-1939), and Dean R. E. Wright (1936-1939). Ward Gano and Jim Franklin served as the resident engineers for the region during this period. Other architects working with the group included George H. Wardner and Art M. Ulyestad. Wardner designed some building interiors at the Wind River Nursery in the Gifford-Pinchot National Forest, and Ulyestad designed an assortment of buildings including oil houses, residences, and warehouses. Landscape Architect Emmet U. Blanchfield also worked with the Region 6 architectural group.

Many of the designs and plans produced by the Region 6 architectural team were published in Groben’s *Acceptable Plans, Forest Service Administrative Building*. These buildings had an elemental feel in the use of stone and wood, and the term Rustic style became associated with these Depression-Era structures that were locally designed by trained architects and constructed by local carpenters. Some of the same plans were used at different ranger stations. For example, one of the standard three-room residences was built at three locations in the Siskiyou National Forest (Gasquet, Patrick Creek, and Ferron), and as guard cabins in the Wallowa, Deschutes, and Colville forests. These plans and designs could be modified (with approval) to meet the needs of the various ranger districts.

Generally, the “Rustic” or “Cascadian” style took the form of wood-frame buildings with mid-to-high pitched gable or hip roofs covered with cedar shingles or shakes, and had dormers, fieldstone or brick chimneys, horizontal clapboard, drop, or wood shingle siding often with vertical boards or shingles on the gable ends, and fieldstone or concrete foundations, entries, and patios. The most successful ornamental scheme on most CCC Forest Service buildings in Region 6 were the windows. The multiple lights windows, with simple wide trim, gave the buildings a distinctly “cottage-like” look.

Ornamental elements on the buildings included timber brackets at doorways and entries, timber porch posts, and wooden shutters with the familiar Forest Service tree cut-out symbol. Paint or stain schemes favored earth-tones, especially brown stain in forested areas. Suggested building colors for open sites could be gray or white; these color schemes were also “suggested” in Groben’s plan book. Outdoor fireplaces were common as were other stone landscaping features. Variations of these designs were used for different building types. Residences, garages, and accessory buildings designed in this period often had similar elements that visually tied together the buildings in the complex.

A few of the designs in Region 6 reflect other architectural designs. Although similar to the Rustic style in the multi-light windows, side-facing gable roof, interior masonry chimney, the residential building in the Cascade Head Experimental Forest, Siuslaw National Forest was designed with elements of the Colonial or “Cape Cod” style with its shallow eaves, limited details, slightly recessed front door with classical pilasters flanking the front door, and corner pilasters. Designed by Region 6 architect Linn A. Forrest, the residence reflects the coastal Cap Cod style rather than the Rustic style because of its location near the Pacific Ocean.

## **Dwellings**

The Forest Service residences include single-family dwellings, scaler’s portable residences, crew and bunk houses, guard dwellings, and combination offices and residences. Four, five, six and seven-room ranger residences were designed in various configurations; some having partial basements. These residences were generally one or one-and-a-half stories structures, and varied in size from the smaller four-room buildings measuring 23’ x 35’ to the larger seven-room residences measuring 28’ x 46’6”. Most of the residences are rectangular, L-shaped, or irregular in plan with lower wings projecting from the main building volume.

Patios, porches, and entries were integral to the design that were planned for efficiency and to take advantage of the natural light and ventilation. Interior floor plans at a minimum had a hall, kitchen, living room with fireplace, bathroom, and bedroom. The larger floor plans often had additional rooms such as a dining room, pantry, linen closet, storeroom, and basement with laundry facilities. Interior rooms were designed to maximize light and wall space by assuring good door and window placement, and care was taken not to use other rooms as corridors between two rooms. This was especially important in dwellings that also served as office space or a public area. These combination guard residences and public contact stations were larger in plan and had a public room with limited access to the private living quarters.

The guard dwellings were usually smaller two or three-room structures with a larger living area, a kitchen, and a sleeping room to accommodate one or more employees (bunks were often incorporated into the rooms). Some of the smaller two room dwellings measured 18’6” x 26’ and the larger three room building measured 24’ x 36’6”. Although somewhat simplified versions of the larger ranger residences, these guard cabins shared the same rustic attributes such as rock patios and porches, fireplaces, and decorative details.

The crew houses were large building that accommodated a number of workers. Common crew house designs were for 6, 8, 12, 16, and 30 workers. These buildings usually had a central lounge or community area, large washroom and toilet facilities, dining room, and bedrooms and/or dormitories. In the larger houses, the dormitory or sleeping quarters were in the upper story. Another type of residence was the portable scaler’s dwellings, which was a small (14’ x 32’ or 39’), rectangular buildings with a side facing gable roof. Constructed as fairly portable units, these buildings resembled manufactured homes in their long narrow plan that included a kitchen, living room, entrance, and bedroom. Two of these units were sometimes used in an L-shaped configuration connected by a breezeway. One unit functioned as the living area and the other unit contained the bedrooms and bathroom.

## **Offices**

The Forest Service offices were similar in design to the residences. Increasingly separated from the ranger’s living quarters, the offices ranged in size from small (16’ x 24’) one room structures with an office area, storage room and wash room, to larger two, three, and four room buildings (27’4” x 46’2”) designed with several office spaces for the rangers and drafters, a bathroom, and a public room or lobby. Most of the offices had basements with a lavatory and furnace/fuel room. Some of the larger offices also functioned as a living quarters with bedrooms or dormitories on the upper level.

## **Support Buildings**

The support buildings, arranged for efficiency in relationship to one another, included shops, warehouses, garages, oil and gas storage buildings, barns, public toilets, and garages. Other associated features such as outdoor fireplaces, flagpoles, and landscape elements were also important parts of the complex layout and design.

The machine/carpenter's shop was a vital part of the ranger station, and often had dual purposes. These buildings, constructed for utility, were designed with large open interior spaces lit by bands of multi-light windows, garage doors, skylights, and dormers. Often, smaller rooms were designed along one elevation providing rooms for offices, utilities, blacksmiths, parts, battery storage, welding, and painting. Typical sizes for the machine shops were 44' x 70', 45' x 80', and 58' x 100'. The length of the larger shop buildings were often broken by projecting gable end bays used as service areas.

The gas and oil storage houses, designed as separate building to reduce the risk of fire, were small structures with the same "rustic" elements as the larger buildings. These storage buildings generally had a loading platform or curb, an oil barrel storage room, fire extinguisher, sand box, and an exterior gas pump. Typical sizes were 13' x 18', 16' x 18', and 26' x 30'. Often, the gas and oil storage house was combined with a vehicle service area (wash room, greasing area).

Garages varied from simple one-and-two car garages to four-car garages. Other variation on the plan includes combining the garage with a wood shed or a storage area. Typical sizes for the two-car garage was 17'/20' x 28' and the combination buildings (woodshed, storage) were 20' x 20'. Larger vehicle (trucks and cars) storage garages and shops sometimes had dormitory facilities on the second floor and vehicle storage and repair on the first floor.

There were a variety and combinations of warehouse and storage buildings at different ranger stations. These include storage warehouses for supplies and equipment/tools and fire equipment and trucks, and combination shops and storage buildings, and fire and improvement warehouses. Sometimes the storage areas were attached to the ranger station office. These storage facilities were tailored to the needs and uses of the different ranger stations, and served a variety of purposes.

Other storage buildings include machine or truck storage structures and barns. The machine or truck storage sheds were generally simple rectangular buildings with gable roofs, and vehicle bays along the longitudinal elevation. The bays were either open or were enclosed with doors. The horse barns, ranging in size to accommodate two to twelve horses, had stalls, feed and saddle/tack rooms, and a hay storage area. During this period, barns followed a more standardized plan that reflected the other rustic style buildings in the complex. The distinctive gambrel roof and hay hoods found in regional farmsteads and earlier ranger stations, gradually gave way to gable roofs and dormers. Pump houses, public restrooms, horse shelters, recreation halls, lumber sheds, cement warehouses, sign shops, and boat houses were also part of some ranger stations depending on the location and use.

## **A Unified Vision: Example of a "Rustic" Forest Ranger Station Complex**

The Lake of the Woods Ranger Station, listed in the National Register in 1983, is an excellent example of Civilian Conservation Corps Forest Service resource. The complex consists of seven separate structures: the office, ranger's residence, fire control officer's (FCO) residence with garage, crew house, generator house, fuel house, and barn. All of these buildings demonstrate the basic hallmarks of the rustic style: 12 in 12 or 14 in 12 roof pitches, 12" horizontal clapboard siding with 12" vertical board siding on the gable ends, fieldstone entries, chimneys, and foundations (the foundations are concrete with the fieldstone applied as a decorative veneer in keeping with the rustic appearance). On four of the buildings, solid timber posts with curved brackets mark the entries and the distinctive cut-out Forest Service tree symbol appear on several of the gable

ends. In addition to the buildings themselves, “outdoor living” elements - benches and a stone patio - are incorporated into the design. These buildings have Region 6 Rustic style design elements.

Other extant individual examples of Depression-Era buildings/complexes include the Mapleton Ranger District Residence (1934) and Assistant Ranger’s Residence, Siuslaw National Forest; buildings on the Clackamas Lake Ranger Station, Mt. Hood National Forest (eleven buildings and four structures); the Bly Ranger Station, Winema National Forest; the former Union Creek Ranger Station, Rogue River-Siskiyou National Forest; Gold Beach Ranger Station, Rogue River-Siskiyou National Forest, and the Wallowa Ranger Station, Wallowa-Whitman National Forest.

**Examples of Depression-Era Buildings Complexes: 1933-1941**

<b>Resource Name</b>	<b>Forest Location</b>	<b>Date</b>
<b>Glacier Ranger Station</b>	<b>Mt. Baker-Snoqualmie NF</b>	
Glacier Residence		1933
Machine Shop		1933
Field Office		1936
Ranger Station Office		1938
<b>Darrington Ranger Station</b>	<b>Mt. Baker-Snoqualmie NF</b>	
Fire Warehouse		1933
Paint Storage Building		1933
Residence		1934
Storage Building		1938
Open Storage Shed		1938
* Note: Several other buildings in this station were constructed during the Intermediate Period: 1912-1932		
<b>Mt. Adams Ranger Station</b>	<b>Gifford Pinchot NF</b>	
Ranger Residence		1933
Lumber Shed		1935
Ranger Station Office		1936
Fire Warehouse		1936
Truck Shed		1936
Machine Shop		1937-38
Ranger Station Asst. Ranger’s Garage		1940
<b>Zigzag Ranger Station</b>	<b>Mt. Hood NF</b>	
Fire Management Office		1933
Carpenter Shop		1933
Cement Shed		1933
Crewhouse		1934
Sign Shop		1935
Residence		1936
South Residence		1936

**World War II and the Post War Period: 1942-1960**

The declaration of war on Japan in 1941 marked the end of the work relief era with its extensive building activity. In Region 6 war-time budget constraints had halted most construction of improvements and officials focused on repair and alterations to meet building needs. Not only was the CCC phased out in 1942 and materials restricted because of the war but the Forest Service faced a staffing problems as men joined the armed forces.

At Bear Springs Guard Station on the Mt. Hood National Forest where additional housing was needed for timber management personnel, Forest Supervisor Clare Hendee sought funds only to cover materials and

meals for the Civilian Public Service workers doing the construction. In October 1944, he justified the project to the Regional Forester:

. . . The one-room cabin which was moved to Bear Springs from Cedar Flat has been repaired and is now being used by timber sale personnel, but this one-rooms cabin is entirely inadequate to house the four or more people who will be engaged in timber sale work during the winter at this station. It is therefore, urgent that we provide additional bachelor quarters for these men (Hendee, 1944).

### **Post-War Period**

After the end of World War II, thousands of military personnel returned home and went back into the workforce. The post-War building period created a demand for timber. The Forest Service once again reassessed their mission, placing more emphasis on road building and timber production. This increased activity placed a stress on Forest Service facilities.

By 1946, road development and the availability of vehicles lessened the isolation of ranger stations. More visitors traveled to the stations with questions about hiking, camping, hunting and fishing, and rangers now needed offices large enough to house additional duties associated with increased public contact. With employees able to either live at the administrative site or commute there for work, some of the permanent ranger stations became known as “work centers” to better reflect their function in the agency’s program.

While individual Forests desperately needed new residences, offices, garages, warehouse and maintenance facilities, Federal budget restrictions slowed the construction program. In the late 1940s and early 1950s, Forest Service improvement projects “focused on rehabilitation, relocation, replacement or reconstruction of older facilities” (Grosvenor, 1999:53). Many garages and barns were converted to bunkhouses, and dwellings changed to offices.

Pine Creek Ranger Station (Gifford Pinchot National Forest) sought expanded facilities. Early in the spring of 1952, Forest Supervisor Barrett wrote R.F. Grefe in the Region 6 Engineering Division:

We have in mind a combined office and warehouse with bachelor quarters either over the office or in a wing attached to the office. . . . In addition to this combination building we will need several residences, equipment storage building, gas and oil house, light plant, bunkhouse facilities, barn and probably a mess hall unless this could be in combination with the bunkhouse . . . I would say that the first building we need would be the combined office and warehouse, and at least one residence with, of course, a light plant, water system, gas and oil house, and equipment storage (Barrett, 1952).

In describing the need for facilities at Union Creek on the Rogue River National Forest, Supervisor J.H. Wood wrote the Regional Forester to report plans to move the old Hamaker Guard Station to the ranger station to gain much-needed living quarters for an expanding work force. “There are now eight yearlong personnel at Union Creek,” he wrote,

. . . not including scalers who usually work from eight to ten months. There are available quarters for seven families if we include an unsatisfactory two-room converted garage. We realize fully this situation is not uncommon to other Forests. We recognize also betterment and new construction priorities are controlled entirely by limited budgets in available funds (Wood, 1952).

### **Surplus Buildings: Meeting the Demand**

Forest Service supervisors researched other ways to procure new buildings in the forests. The Forests purchased surplus structures—especially war surplus buildings—and moved unwanted structures to Forest sites. The Forest Service purchased bunkhouses from the Camp Adair army complex near Corvallis after the camp was decommissioned in 1946 (DiBenedetto, 27 Aug 2004). These buildings were placed in several

ranger stations including Packwood, Wind River, and Blue River. Region 6 continued to seek more surplus housing units and in 1950, bought three portable, 20' x 30' prefabricated timber sale buildings from the Carlton Lumber Company (Beaman, June 1950). Three years later, the Regional officials located surplus houses from the "Victory Housing Project" in Portland that was operated by the Public Housing Authority. These buildings, Minimal Tract style residences, were simple structures with gable roofs, wide clapboard or shingles siding, multi-light windows, shallow eaves, and small porch hoods. L. K. Mays, Region 6 Engineer, described the opportunity to get these structures:

We found some rather desirable 1 and 3 bedroom frame dwellings available at a cost of approximately \$62.50 each . . . Considering the very great need for additional housing and the very low price at which these buildings can be secured, we have decided to attempt purchase of 12, 3-bedroom units, preferably with the drop siding finish. We would not care to get the structures with plywood and batten strip exterior finish or those with the vents under the fixed windows (Mays, 1953).

Rather than spend the limited amount available for a relatively small number of standard new structures, it has been decided that we would try out some of the surplus houses that can be purchased from the Portland Housing Authority at low cost. This will permit the erection of a much larger number of buildings to help solve the shortage where it is most acute. . . . Distribution would be . . . contingent upon receiving allotments from the Chief for F.Y. 1954 equal to the estimates that we are now using . . . and to our budget being approved:

<u>Forest</u>	<u>Type</u>	<u>Size</u>	<u>New Location and Use</u>
Deschutes	3 bed	24 x 33	Sisters T.M.A.
G. Pinchot	duplex	24 x 33	Pine Creek- Office & crew house
Mt. Hood	3 bed	24 x 33	Bear Springs T.M.A.
Mt. Hood	2 bed	24 x 28	Estacada T.M.A.
Siuslaw	3 bed	24 x 33	Hebo T.M.A.
Siuslaw	3 bed	24 x 33	Mapleton T.M.A.
Umpqua	2 bed	24 x 28	Wolf Cr. Crew House
Umpqua	3 bed	24 x 33	Steamboat T.M.A.
Umpqua	3 bed	24 x 33	Steamboat D.A.
Willamette	2 bed	24 x 28	Rigdon office
Willamette	3 bed	24 x 33	Rigdon dwelling

Unable to buy all three-bedroom houses, Region 6 Engineering Division accepted some two-bedroom dwellings, and unable to pay for full basements, allowed individual Forests to use their own allocated funds to build them. Mays warned the Forest Supervisors that there was no money for new water systems. "You may have to pack water out of the creek for a year," he told them "until additional funds can be secured to finish the job" (Mays, 1953).

The Forest Service dismantled the structures and transported the buildings to the Ranger Stations where workers placed them on new concrete foundations at Verlot Ranger Station, Mt. Baker National Forest, and the Pine Creek Ranger Station on the Gifford Pinchot National Forest. The Mt. Hood National Forest purchased two buildings—one at Estacada Ranger Station and one at Bear Springs. The Siuslaw National Forest, Hebo and Mapleton Ranger Stations each received one building. The Steamboat Ranger Station on the Umpqua National Forest secured three buildings, and the Cascadia Ranger Station and McKenzie Bridge Ranger Station each received one (Nelson, 1953; Greffe, 1953).

In late July 1953, the Federal Bureau of the Budget issued Circular No. A-18, announcing new policies regulating housing construction for federal personnel. The publication set criteria for justifying construction—agencies had to prove that there was no private rental housing available close by and that a certain number of families were required at a location. The regulations also determined the allowable sizes for residential building. The document also described a new system of design standards and rules for compliance with these standards. Forest Service officials tried to devise workable interpretations of some of the stipulations (Dodge, 1953).

## The New Building Program

By 1956, funding had increased sufficiently to allow Region 6 administrators to plan a number of new buildings. On 13 January 1956, Forest Service officials in Washington DC wrote Regional Foresters announcing funding for Fiscal Year 1957. Funds of \$1,000,000 had been budgeted “for construction of dwellings necessary to meet urgent needs of our timber management program.” The letter listed an advance estimate of allocations to regions with the three largest allotments planned for Region 1 (\$146,000); Region 5 (\$143,000); and Region 6 (\$289,000) (Forest Service, 1956). This new building program was symbolic of the nation’s post-war prosperity.

Advising Forests to submit their requests for houses, the announcement instructed, “Include only dwellings most urgently needed for timber management personnel, such as rangers, assistant rangers, timber sales assistants, etc.” Following regulations set in Circular A-18 of the Bureau of the Budget, officials stipulated, “Brief justification statements should be on file for each dwelling or group of dwellings at one station, explaining: (a) the remoteness of the location, and/or (b) unavailability of rental housing within reasonable commuting distance, and (c) need for the employee to be stationed at the selected location” (USDA Forest Service, 1956).

Washington DC once again established budgets and architectural designs for Forest Service buildings; “Design standards must conform to those specified by the Bureau of the Budget Booklet, *Design Standards for Construction of Permanent Family Housing for Federal Personnel*.” Forest Service officials noted “wide variation in design standards in the past,” and added, “Assuming there will be a sizeable building program during the next few years, we are establishing the following guidelines.”

Each region will be limited to two architectural plans for each size dwelling (1, 2, 3 bedroom) etc., for each climatic zone where differences in temperature, precipitation and wind justify significant variations in architectural design.

Designs should provide for economical construction, which will result in a livable, utilitarian type of structure without unnecessary luxury and/or ornamentation. Give careful attention to exterior design and material features, as well as interior details that will minimize maintenance costs.

This office has recently developed standard dwelling plans for 2 and 3 bedroom houses. These will be made available upon request to those regions which cannot arrange for prefabricated structures and do not have ideal standard plans of their own (USDA Forest Service, 1956).

In April 1956, the Regional Forester, Housing Committee, and Architect met to discuss plans for the 1957 housing program in Region 6. The group estimated that funding existed for approximately twenty new buildings—“standard three-bedroom size” and six new office buildings, of which four would be dual headquarters. In consensus, the group agreed,

. . . that we would give the forests an opportunity to select from several standard plans that would be developed for use at the approved project locations. The basic plan as now developed for the three-bedroom structure with vaulted ceiling and windows extending to the roof at the gable end will be modified to provide the same basic layout and floor plan but with conventional ceiling and windows . . . . These two basic plans will also be available in reverse or flip-over arrangements to facilitate accommodating the building to the site (Smith, 1956)

Finally, the committee decided that due to the large building program, Forests could not easily make even minor changes to plans “as has been customary in the past and provide full cooperation in accepting plans with changes being limited to those that are necessary to accommodate the building to a site and not the result

of personal whims or tastes.” The schedule for the ambitious building program put Regional Architect A.P. DiBenedetto under considerable pressure. As set up, the schedule “contemplates use of approved standard plans for all locations with no revisions contemplated” and depended on “if plans were produced by DiBenedetto alone or if a suitable experienced Architectural Draftsman were available by May 15” (Smith, 1956; Remington, 1956).

One month later, consistent with Forest determination to provide housing to suit incoming families, R.E. Grefe, Assistant Regional Forester, wrote twenty-five wives Regional Forest Rangers. “We are writing you,” Grefe explained,

to ask your opinion on the proposed design for ranger dwellings. Attached is a sketch of a proposed house plan and a list of questions for you to consider. It will be all right if you ask your husband to help you interpret the drawings and the questions, but we don’t want his answers—we want yours even if you have to wait until he is away to answer the questions. We feel that since you are generally in the house all day and he is not, your opinion is a lot more valuable than his about the living arrangements which we are able to build into the house (Grefe, 1956)

Twenty-one of the wives responded to the survey. Most of the women preferred the standard 8-foot ceiling to the vaulted ceiling, most wanted standard windows rather than extra-tall windows in the living room. Eleven wives wanted basements; 7 wanted no basement and 3 liked either (basements, the office decided, would stay). Ten women wanted the utility room located on the main floor; seventeen preferred the “split-type” bathroom with two entrances. All twenty-one respondents wanted a fireplace. Eleven thought storage was adequate, 8 believed it too meager. Fourteen wives like the kitchen – seven wanted the design changed. In general, the respondents preferred an eating space in the kitchen.

“All of these suggestions in our plans for these years are being considered,” Grefe reported to the region’s supervisors, but noted that “many of the comments were made because of lack of understanding the rules and regulations that restrict our construction of houses.” Among these restrictions, the Assistant Regional Forester noted were limitations on size that required a maximum house size of 950 square feet for a two-bedroom house with a basement; 1070 square feet for a three-bedroom house with basement, or 1200 square feet for a three-bedroom house without a basement. Additionally, Grefe described a Congressional limitation on building costs to \$18,500 per building (Grefe, 1956).

Architect DiBenedetto met his schedule, and by the summer of 1956, over a dozen new wood frame residences were under construction at Quilcene, Darrington, Concrete, and Rager Ranger Districts, as well as on the Tiller, Silver Lake, Gold Beach, Brookings and Sisters’ Ranger Districts (Sisters also had offices under construction). Administrative projects included three residences and an office building at Chelatchie Prairie and at Blue River; an office at Oakridge, and four residences and an office at Ripplebrook (Grefe, 1956).

DiBenedetto summarized the 1956 building program as having contracted for twenty-four residences; twenty-two of them 1140 square-foot, three-bedroom dwellings with a basement, fireplace and carport (average cost of \$17,230); and two built without a basement. The architect also reported construction of five dual-office buildings at 1920 square feet each (DiBenedetto, 1957).

The Regional Office announced a revised version of Circular A-18 in October 1957s. The new standard outlined specific interpretations for housing Forest Service personnel. In addition to sections requiring appropriate construction and assessment of rental properties or houses for sale, the revised circular again addressed design standards. In determining the number of rooms appropriate for family housing, the circular policy supported construction of three-bedroom houses not to exceed six rooms.

“Our pattern of housing,” said Region 6 officials “will generally follow the ‘Small Station’ description, Caption 3a, p-3 of Circular A-18. If more than 5 houses were needed as in the case of some dual

headquarters, the pattern outlined under ‘Medium-size Station’ in Caption 3b should be followed.” Regarding maximum square footage for each dwelling, Regional policy permitted an increase of 215 square feet or more from the previous maximum for a three-bedroom house. “We do not want to be in the position of constructing houses that will require rental rates so high that the occupants cannot afford them.” You may wish to use your present plans for houses containing about 1200 square feet for lower salaried personnel and the larger houses for district rangers” (USDA Forest Service, 1957; Grefe, 1957). The Region 6 architectural group complied with these standards, and continued to design new building types that met the national guidelines and the stylistic trends of the Pacific Northwest.

### **Architectural Influences in the Post-War Period**

A.P. DiBenedetto, Forest Service architect from 1951 to 1961, was trained by Region 6’s engineers, Jim Frankland and Ray Grefe, who were guided by the architectural principals developed in the CCC era. DiBenedetto in his role as the Region’s architect worked closely with the region’s architecture, engineering, and drafting group in the 1950s. At various times, the “group” included Bill Hummel, Dick Parker, Ken Grimes, Doug Parmenter, Norm Krause, Joe Mastrandrea, Perry Carter, Ken Reynolds, Terry Young, and Tom Morland (Grosvenor, 1999:203). DiBenedetto and the “group” also worked very closely with Dick Bowe, the Region’s landscape architect who integrated the buildings into the site.

Along with the established design philosophies of the Region’s CCC “rustic” architecture, DiBenedetto and the architectural group were also influenced by the popular Northwest Regional style that was inspired by Oregon-based architects such as Peitro Belluschi, Walter Gordon, Van Evera Bailey, and John Yeon. Many of the design elements of the Northwest style were similar to the fine crafting, design, and naturalistic approach of the Depression-Era “Rustic” or “Cascadian” styles that were associated with the Forest Service.

The Northwest Regional style emerged in the 1930s and 1940s when architects such as Belluschi and Yeon adapted the principals of the earlier International style movement that promoted simple geometric building volumes, minimal ornamentation, and use of natural materials. Belluschi and other regional architects adapted design elements of the International style to suit the regional climate, materials, and landscape. The vernacular architecture of rural Oregon found in the barns, outbuildings, and utility structures also influenced the designs of this period. Simple forms, broad sheltering gable roofs with wood shingle roofing, exteriors of unpainted wood siding (often board and batten), uncluttered facades, and open floor plans were hallmarks of this new regional style.

The integration of the building into the environment was a guiding principle of Northwest Regional style architects; this was promoted to its fullest by architect John Yeon in his Wazek House (1938) and Victor Jorgensen House (1939) designs in Portland. As the Northwest Regional style reached its peak in the 1950s, these stylistic elements were adapted to other building types such as churches, schools, and offices. Many stylistic elements were used in Forest Service buildings constructed during the 1950s.

DiBenedetto and other Region 6 Forest Service architects applied Northwest style design elements to the 1950s administrative building designs. These elements included low building profiles, gable roofs covered with wood shakes or shingles, eaves overhangs, 1” x 10” cedar board and batten or horizontal lap siding, brick chimneys, grouped or ribbon single-light fixed, hopper, or awning windows with simple trim, and entrances connecting to the landscape. The garages were now an integral part of the house compared to the CCC era detached garages. The garages were either attached or took the form of a carport (Figure \_\_\_: Ripplebrook Residence, Mt. Hood NF). DiBenedetto stated in a 2004 interview:

The trend was to the king of the Northwest Style . . . the board and bat, very simple roof structures, and color-wise and site plan-wise, orientating everything to the existing site that was present within the nicely wooded areas . . . that we built these buildings into . . . And the architects were allowed a lot of leeway” (DiBenedetto, 8/27/04).

The Forest Service also used plywood. Although plywood had been marketed nationwide in the 1920s, the Forest Service did not begin using plywood for exterior construction until after World War II because of problems with delamination and weathering. The Forest Service's Forest Products Laboratory, founded in 1910 to research the use of wood and related products, developed an exterior siding material called Textured 1-11 plywood. This product was used to reduce construction costs in the forests (DiBenedetto, 2004). According to DiBenedetto, exterior cedar plywood was laminated on the Textured 1-11 (fir) because of its superior strength and durability for outside use (Figure \_\_ Nachas Bunkhouse 1 & 2, Wenatchee NF). Another innovation was incorporated into the standard designs; skylight. Skylights were added to increase illumination in the entrance area of the residences. This innovation; however, did not hold up to the rigors of the Northwest climate and after a few years, field checks confirmed that the skylights had been covered (DiBenedetto, 2004).

Once again Region 6 architects readjusted the building program when the Washington DC Office set new size requirements (1,000 square feet) for residences. The architectural team tried to conform to the size requirements by reconfiguring the interior spaces to maximize efficiency and space. The three-bedroom residence (Design 2-A) was designed in an L-shape with the living spaces on one side of the ell that included the living room with fireplace, kitchen, and eating nook, and on the other side the bedrooms and bath room, with the entry hall and closet in between.

Measuring about 36' x 40', the plan had a 10' x 19' carport that also sheltered the entrance door. Some of these residences in remote places had basement "where they had to more or less burn wood, they had no other access to heat" (DiBenedetto, 2004). In locations where electricity was inexpensive, electric heat was installed. By 1957, there was some variation to the designs as noted in the three-bedroom 4-A residence that was slightly elongated because these buildings could be 1060 square feet. Some of the residences had attached attached garages. DiBenedetto further articulates design considerations for these small residences:

. . . we had to kind of go to nice open windows for living rooms and kitchen and so forth. For bedrooms, you still get the ventilation. but put the windows up high because the rooms were only about 9' x 10' or 10' x 10' so you didn't have much room to put furniture in. So, that's how we pretty well got those.

And another thing we did was really try and develop the bathroom so it could be used by two people without too much of a problem. I think that was one of the key things we tried to work with, trying to stay within that thousand square feet. We concentrated a lot of time on that and the kitchen and the fireplaces (DiBenedetto, 27 Aug 2004).

Region 6 architects also worked on designing other building types such as offices, crew quarters, experiment stations, and storage/service buildings such as sheds, garages, barns, oil and gas houses, and toilets/bath houses. These buildings had the same design details as the residences; simple forms, gable roofs with cedar shingles, textured 1-11 plywood or board and batten siding, bands of hopper, fixed, or awning windows, and concrete foundation.

In the late 1950s and early 1960s, women started working for the Forest Service in greater numbers and began playing a more prominent role in the operations. Crew and bunkhouses were now being built exclusively for women; a departure from the pre-World War II role of women in the Forest Service who individually staffed lookouts, conducted research, and filled secretarial positions. During this post-war period, Joanne McElfresh was hired (1957) as the first women forester in the Deerlodge National Forest in Montana; McElfresh paved the way for an expanded role of women in the Forest Service.

The introduction of new materials, techniques, and building programs in the post-World War II era led to advances and efficiency in building construction. These larger and more varied use ranger station complexes relied more on cost-effective and standardized means of providing housing and support services to employees of the Forest Service.

**Examples of World War II and the Post-War Period: 1942-1960**

There are many examples of buildings constructed during the post-war period in the Region 6. Perhaps the structures that exemplify the budget constraints and expanded role of the Forest Service were the temporary or surplus buildings placed during this period. Example of these buildings are: the Parkdale Bunkhouse (1945), Mt. Hood National Forest; the Mt. Adams Ranger Station Residence (1947), Gifford Pinchot National Forest; the Oak Grove Ranger Station Residence (1949), Mt. Hood National Forest; and Cascadia and Blue River Ranger Stations (1953), Willamette National Forest (McClure, 2004). Example of “standardized” plans of the 1950s that have elements of the Northwest Regional style are at:

**Examples of Post-World War II Administrative Properties: 1942-1960**

<b>Resource Name</b>	<b>Forest Location</b>	<b>Date</b>
<b>Diamond Lake Station</b>	<b>Umpqua NF</b>	
Office		1959
Bunkhouse		1961
Warehouse		1961
Gas/Oil House		1961
Bath House		1962
<b>Estacada Ranger Station</b>	<b>Estacada Ranger Station NF</b>	
Residence		1954
Men’s Bunkhouse		1959
Women’s Bunkhouse		1960
<b>Ripplebrook Ranger Station</b>	<b>Mt. Hood NF</b>	
3 Residences		1956
Residence		1957
<b>Toketee Station</b>	<b>Umpqua NF</b>	
6 Residences		1959-60
Office		1959
Fire Warehouse		1960
<b>Wind River Ranger Station</b>	<b>Gifford-Pinchot NF</b>	
Residence		1959
Warehouse/Shop		1959

**FIRE AND FOREST HEALTH**

**Trails, Lookouts, Guard Stations, and Other Service Related Facilities**

Trails and other service facilities such as roads and telephone lines, are not usually identified as "developed facilities," but are included here to aid in inventory and identification. Because trails were the primary means of accessing the national forests during much of the historic period, construction standards were established quite early, and evolved as resource work and public use expanded. The trail policies, classifications, construction standards and specifications provide insight into period travelways, their purposes and uses. The material also reveals much about the development of the Forest Service as a land managing agency, its mission, and its priorities. Other service facilities that were developed to aid in the mission of the Forest Service include lookouts, trail shelters, roads, bridges, and communication facilities including telegraphs and telephone lines.

Extant lookouts and guard stations in Region 6 are directly associated with the Forest Service’s management of public land and natural resources. Constructed by forest employees and carpenters, lookouts have been in use throughout the historic period 1905 to 1960, and have played a critical role in the development of fire

detection on Region 6 forests. Through the decades, these structures have helped assure protection of a reliable and abundant timber supply to meet demand, and support the regional and national economy. A major component in the Forest Service fire detection system in isolated rugged areas, the lookout station is linked to the agency's important mandate to protect natural resources.

Property types associated with fire detection in Region 6 include lookout trees and platforms, lookout cabins and towers, guard stations, garages, and outhouses. As property types, extant fire lookouts, guard stations, and their associated structures are identified by shared physical and associative attributes. Individual resources within a property type display various physical attributes characteristic of specific time periods. In all, however, the components of the property type, all represent the Forest Service's steady execution of its mission to regulate and protect use of the national forests through fire detection and suppression.

## **Early Forest Service Period: 1905-1911**

### **Trail and Shelters**

Early trails in the national forests were administrative travelways, developed or adapted for official use in land management and resource protection. There were other trails, developed by users such as miners or stockmen, that provided access to minerals or summer forage. Together these trails formed the primary transportation systems in the national forests. Trail-side improvements, including shelters, did not begin to appear until the 1910's.

Initially, Forest Service fire patrolmen traveled through their areas looking for fires and contacting forest users to provide information about fire prevention. The duties of the Forest Service rangers included building and working on a permanent system of roads and trails. The 1906 Forest Service *Use Book* identifies the need for immediate construction of telephone lines between ranger stations and offices as well as construction road and trails in cooperation with the local authorities (*Use Book*, 1906:72).

### **Lookouts and Guard Stations**

In the beginning of the 20<sup>th</sup> century, the major management goal of the Forest Service was the protection of the forests from fire. The earliest rangers, many hired especially for fire season, spent much of their time "chasing smokes" and battling blazes with hand tools. At the time, national forests had few roads so the rangers built pack trails to link the remote "guard stations" that sheltered the seasonal fire guards. The Forest Service had little systematic organization for fire detection other than the random efforts of individual Forest Service employees; this labor supply was often inadequate. The guards established a variety of stations depending on the location. These included pup tents on mountain peaks, high lookout trees, tower platforms, and small log cabins.

In 1910, the Pacific Northwest's catastrophic fire season scorched immense areas of land throughout the region. Following the conflagration, Congress and the public demanded a more aggressive and effective forest-fire suppression organization. Passage of the Weeks Act of 1911 authorized the Forest Service to cooperate with state and private agencies to create a fire protection system. The Forest Service also depended on ranchers and farmers in the region to aid in the fire detection. As a result the Forest Service committed to developing a "fixed-point detection" system that would entail a network of fire observation, or "lookout," stations. By 1911, Forest rangers built cabins and cupolas on mountain peaks throughout Region 6 to aid in fire detection.

The early ranger stations were small rectangular structures generally made of log with gable roofs, small multi-light windows, and some covering over the porch. The Olallie Meadow Guard Cabin (1910) in the Mt. Hood National Forest has a front-facing gable roof covered with wood shakes, wood shingles on the gable ends, horizontal round logs walls with timbers chinking, and a shed roof supported by log posts. This is one of the few surviving seasonally used cabins from this era. The Packwood Lake Guard Cabin (1910) in the

Gifford Pinchot National Forest represents the early period of dispersed Forest Service administration when much of the terrain was accessible only by trail. Built by a private hydroelectric company, the 18' x 20' rectangular log building became a fixture in Forest Service use in 1916 as housing for backcountry patrolmen.

**Examples of Fire Detection Structures: 1905-1911**

Robert M. Carricker lists fire lookouts remaining from this early period in the 1991 *Fire Lookout Context Study Document*. These include a 1906 tent camp at Hickman Butte, Mt. Hood National Forest; 1909 camps at North and South Baldy Mountains, Colville National Forest; and a 1910 crow’s nest on Black Butte; Deschutes National Forest (Carricker, 1991).

**Examples of Guard Stations in the Early Forest Service Period: 1905-1911**

<u>Resource Name</u>	<u>Forest Location</u>	<u>Date</u>
Lake-in-the-Woods Log Cabin	Umpqua NF	1907
Olallie Meadow Cabin	Mt. Hood NF	1910
Packwood Lake Guard Station	Gifford Pinchot NF	1910

**Intermediate Period: Forest Service Management Comes of Age: 1912-1932**

**Trails and Shelters**

During that period, the role of the Forest Service was still largely custodial, with fire protection a high priority. In this period, most of the fire lookouts were in unroaded areas, and connected to the District offices and to each other by a system of trails and telephone lines, and supplied by the District packer and his string of animals. In addition to providing access to the lookouts, the trail system was used to access fires. The ability of the fire fighters to travel quickly to any portion of the forest was directly related to the condition of the trails over which they traveled. The trail and telephone systems were essential components of fire suppression and critical links in communication on the national forests. Each Ranger District's maintenance crew packed into the forest in the late spring and remained to work on trails and adjacent telephone lines until fall.

The growing importance of trails to administrative activities as well as recreation on the national forests is evident in the 1923 Forest Service publication, *Trail Construction on the National Forests*. The book’s goal was to standardize trail construction for fire control, administrative purposes, grazing, and recreation. The manual created a framework for the construction of new trails; each had to be planned, mapped, and classified before construction, and specifications for the width, slope, material use, and signage of each trail outlined.

Dividing Forest Service trails into two groups, primary and secondary, the handbook defines primary trails “as trails over which an average of more than one saddle or pack animal will pass each day during the field season.” Secondary trails were defined as “trails which for the ensuing five years will be used by an average of one saddle or pack animal or less, per day during the field season” (USDA Forest Service, 1923:9). To make the national forests more accessible, the handbook described the greatest need for secondary trails – “ways through the woods.” Less urgent, were new primary trails since adequate maintenance could keep existing trails open for use (USDA Forest Service, 1923:3).

In subsequent sections the handbook addresses location, estimating costs, the construction process, marking (identification marks on trees, rocks, or post), maintenance, and the construction of bridges. This handbook was one of the first attempts to standardize trail construction. The types of features associated with trails construction include turnouts, switchbacks, rock walls, retaining walls, corduroys, bridges, railings, water bars, culverts, signs, and markings. These features were constructed of stone and logs, all native to the area.

Trail shelters were also an important part of the trail system. Most of the shelters were constructed in locations where they could be used not only by trail maintenance crews but also as overnight stops for the packer. Sites near meadows were often selected to take advantage of the available forage. Many were located near trail junctions which allowed the maintenance crews to work more miles of trail and telephone lines from a single location. The shelters were basic support facilities necessary for the construction and maintenance of the trails and telephone lines which were essential for transportation and communication.

Up to this point, there was no standard Forest Service shelter designs in the Pacific Northwest Region. Shelters were built utilizing readily available native materials and designed on site by the builders. Since most of the shelters were constructed by trail maintenance crews, the shelters tended to be of simple construction. Most were three sided buildings with a shed roof and were framed with split and whole logs spiked together. The roof and walls were covered with split boards or shakes, and the floors were dirt. The size of these shelters varied, although most were designed to house two to four people. Simple, durable, and functional, the shelters had no decorative treatments. Some shelters were constructed as a base for a fire patrolman, and used for longer periods of time. These shelters were better built, and sometimes were equipped with a rock or metal stoves.

### **Lookouts**

After the disastrous 1910 fire season, stations were assigned to mountaintops throughout the region; the Forest Service employee occupied various kinds of lookout facilities. In many instances, the lookout stayed at a tent “rag camp” at the nearest spring and hiked each day up to the summit. The agency linked these places to district Ranger Stations by telephone. Some of these first lookouts simply consisted of a barren rock “knob,” with no structure. Others involved construction of a crude “crow’s nest” in the tallest tree on the peak, a viewpoint usually reached by a ladder nailed to the tree’s trunk. By 1914, the Aermotor Company of Chicago (manufacturers of windmills) produced towers used as observation facilities. Important observation sites acquired humble living accommodations built by resourceful rangers. The Walker Mountain Cabin (about 8’ x 12’) was constructed in 1917, with a shake gable roof, native stone walls, board and batten or cedar planks at the gable ends, a multi-pane window in each wall, five-panel door in front facing gable with shed porch roof supported by four log columns, native stone exterior chimney on rear gable, plastered interior walls, and exposed log rafters (no finished ceiling). A garage and L-4 tower were added to the site in the early 1930s.

While early lookout houses were often built of logs or milled lumber, no standard design existed until the mid-1910s. In 1915, the first “D-6” (District 6) cupola lookout was built on the summit of Mt. Hood. The lookout was designed and constructed by local guide Lige Coalman. The Mt. Hood cupola lookout, slightly modified by the manufacturer, became the standard lookout design for the region over the next decade. The D-6 kit was relatively easy to pack and build, and when completed it was efficient and sturdy. The 12’ x 12’ main floor of the wood-frame cupola lookout had windows on all sides, and a small, glassed-in upper floor observatory (1/4 the size of the bottom). A few D-6 structures were built atop low towers, but most of them were ground cabins (LaLande, 1998:11). Although other lookout types were built in the 1920s including the steep hipped-roof 14’ x 14’ “Supervisor Halls’ special,” and the unusual Cathedral-style lookout, the D-6 became a standard. The D-6 stations became the first lookout distinctively associated with the Forest Service and were something of a signature structure by the late 1920s.

Various designs were used to meet the Forest Service’s expanded commitment to fire detection. Smaller lookouts were mounted on towers originally designed for oil drilling rigs or windmills. The 1927 Saddle Blanket Mountain Lookout in the Willamette National Forest is on a steel Aermotor tower, originally with ladder access; wooden stairs were added later. Small lookouts became an exception as an emphasis grew on combining living and fire detection activities. The philosophy was that while dressing, cooking, or eating, the watcher was able to spotting a smoke curl if living arrangements were included in the lookout.

In 1929, the agency sought less cumbersome lookout kits by dispensing with the second-story, and incorporating both living quarters and observatory within a single floor. The design of lookouts had to accommodate more than the ranger and his gear. Besides a kitchen, cupboards and bed, lookouts began to include circular map tables attached to the floor and an alidade-type sighting device, the Osborne Fire Finder, which helped to pinpoint a fire's location. The Forest Service switched to the new single-story "L-4" style in 1929 that was easier to build with fewer pieces. The 14' x 14' wood-frame structure had a gable roof covered with wood shingles, heavy shutters, and could be placed on top of fire towers. The L-4s were built from 1929 to about 1932 when the roof structure was redesigned into a hip form to increase strength and withstand the heavy snow loads on Northwest mountaintops. High Rock Fire Lookout, Gifford Pinchot National Forest, built in 1930, was a one-and-a-half story ground-level version of the L-4; the bottom floor had no windows and was used for storage. The upper level had a perimeter railing and deck accessed by exterior stairs. The National Park Service may have adopted this design; four of these one and one-and-a-half story lookouts built in Mt. Rainier National Park from 1932 to 1934 are extant.

### Examples of Lookouts in the Intermediate Period: 1912-1932

Mark Swift's *Tree Platform Style Lookout Inventory for Oregon and Washington* (1992) lists examples of property types of the Intermediate Period extant at the time of his study. There are no known examples of Cathedral-style lookout structures remaining in Region 6 during this period and one known extant log-cabin lookout on Tire Mountain (1931), Willamette National Forest. Other examples of lookouts include:

#### Examples of Lookouts in the Intermediate Period: 1912-1932

<b>Resource Name</b>	<b>Forest Location</b>	<b>Date</b>
<b>Lookout Houses</b>		
Walker Mt. Cabin	Deschutes NF	1917
<b>Platform Lookouts</b>		
Yellowjacket	Rogue River-Siskiyou NF	1917
West Flagtail	Malheur NF	1920s
Saddle Blanket	Willamette NF	1922
Collins Mountain	Umpqua NF	1925
Huckleberry Mountain	Rogue River-Siskiyou NF	1929
<b>Aermotor Tower</b>		
Saddle Blanket Mountain	Willamette NF	1927
<b>Cupola-Style Lookouts</b>		
Calimus Butte	Winema NF	1920
Black Butte	Deschutes NF	1922
Illahe Rock	Umpqua NF	1923
Hersherger Lookout	Rogue River-Siskiyou NF	1925
Dutchman Peak Lookout	Rogue River-Siskiyou NF	1927
Red Mountain	Umpqua NF	
1928; moved 1985		
<b>L-4 Lookouts</b>		
Calamity Butte	Malheur NF	1927
High Rock Fire	Gifford Pinchot NF	1930
Olallie Mountain	Willamette NF	1932
Walker Mt.	Deschutes NF	1932

### Guard Stations

Administrative tasks on the Forests such as fire detection, overseeing grazing and timber-cutting activities, and examining mining or homestead entries required Forest officers to erect buildings at strategic locations. Property types associated with guard stations were those situated to accommodate public contact and provide

convenient access to the backcountry. These simple log facilities usually consisted of an office with living quarters and a corral, and might include a barn and a garage – the structures arranged informally on their site. Constrained by small staffs and short budgets prior to World War I, rangers often built their own stations for which log construction reduced the need to purchase building materials. In 1913, the Bagby Guard Station, constructed of peeled cedar logs on Mt. Hood measures 16’ x 34’ and its accompanying wood-frame shed comprised a key station for operations in the Forest’s summer fire protection program.

### **Examples of Guard Stations in the Intermediate Period: 1912-1932**

<b>Resource Name</b>	<b>Forest Location</b>	<b>Date</b>
Bagby Guard Station	Mt. Hood NF	1913
Willow Prairie Cabin	Rogue River-Siskiyou NF	c. 1924
Peterson Prairie Guard Station	Gifford Pinchot NF	1926
Big Elk Guard Station	Rogue River-Siskiyou NF	1929
Olallie Guard Station	Mt. Hood NF	1932

## **Depression Era: 1933-1941**

### **Trails and Shelters**

The use of the trails started changing in the 1930s as more vehicle were able to drive into the backcountry; the prime importance of the trails as administrative and protective travelways began to diminish as recreation use of the trails increased. Although use of the trails were shifting, the trail system continued to be an important part of the Forest Service’s mission.

The *Forest Trail Handbook*, revised July 1935, states that the construction of trails was a relatively simple one. "Money, proper workmanship, common sense, abundant energy, and simple tools and equipment are the only requisites to good work. The employment of location and supervising engineers and specially organized survey parties, and the use of precise methods involving technical practices such as accurate leveling, transit work, detailed field notes, and profile maps of location, have no place in the trail program."

Trail shelters continued to be an integral part of the fire protectin and suppression system necessary for the contruction and maintenance of the trail and telephone lines. In 1931, the Pacific Northwest Region introduced a standard trail shelter design which followed the Adirondack shelter style. Originally, the shelter was a three-sided log building with one open side. It had a saltbox roof (a gable roof of unequal pitches) with the shorter slope overhanging the open front. Built low in height, the shelter could be heated by a campfire built in front of the open side. Users slept on the ground (Throop, 2004:61).

Several modifications were made to the original Adirondack design to accommodate local conditions and needs. Rather than being made solely of logs, most shelters were framed with peeled logs and poles, then covered with a variety of materials including split cedar shakes and hand split boards. In some locations with particular ease of access or transportation, sawn shakes were used. In timberline areas or above, shelters were more frequently constructed of stone, with some interior timber support. Exposed to the harshest climatic conditions, and in some locations subject to avalanches, the shelters were of the sturdiest construction. Because of the highly erratic weather patterns of their alpine environment, these shelters were for traveler safety as well as traveler convenience. Inside, many shelters had built-in furniture including sleeping platforms, bunks, tables, shelves, and benches. Toilets, stoves, and feed racks for animals were also added to some shelters (Throop, 2004:61).

### **Lookouts**

The increased funds available through the Works Progress Administration and labor through the CCC program permitted the Forest Service to achieve one of its ultimate goals in fixed-point fire detection; coverage of most seen-areas was doubled. In this plan, two reporting lookouts would provide their own fire

locations, which could be triangulated at the Ranger Station to give a more accurate map location (LaLande, 1998:12-13). The program resulted in construction of an extensive number of new lookouts.

Through the CCC program, hundreds of L-4 model lookouts were built in Region 6. The L-4 evolved through many revisions: the hip roof replaced the gable in about 1933. In 1936, the 2" x 2" inch pine struts used to prop the shutters open were replaced by bolting the open shutter to ceiling rafters that extended beyond the eaves. While the L-4 remained the lookout design standard, the need for additional fire detection coverage required the Forest Service to site lookouts where access was poor.

Designed for at sites with difficult access, a 10' x 10' wood-frame L-5 lookout (a smaller version of the L-4) usually had a hip roof. The Green Ridge Lookout in the Deschutes National Forest was originally a hillside L-5 lookout for the Metolious River and Mt. Jefferson. No L-5 structures still remain according to R.H. Spray in "Pacific Northwest Fire Lookout Architecture," April 1995.

Another even smaller version of the L-4, the L-6 was a (7' x 7' or 8' x 8') wood-frame lookout cab usually built on top of tall wood towers with separate living quarters on the ground. Built from 1932 to 1942, the cab was usually accessed through a trapdoor in the floor and had a catwalk around its perimeter, a shake hip roof, slight eaves, and three six-pane windows on a half wall of horizontal exterior siding. Large window shutters, hinged under the eave, formed a shade panel when lifted and braced for viewing. The L-6 lookout towers ranged from 10' to 100' high; the towers were often a design originally intended for oil drilling or windmill use.

**Examples of Lookout in the Depression Era: 1933-1941**

<b>Resource Name</b>	<b>Forest Location</b>	<b>Date</b>
<b>L-4 Lookouts</b>		
Fall Mountain	Malheur NF	1933
Wanoga Butte	Deschutes NF	1933
Gold Butte	Willamette NF	1934
Oregon Butte Lookout	Umatilla NF	1935
Table Rock	Malheur NF	1937
Huckleberry Mountain	Willamette NF	1939
Dry Soda	Malheur NF	1941
<b>L-6 Lookouts</b>		
Goodman Ridge	Umatilla NF	1936
Halfway	Wallowa-Whitman NF	1938
Frazier Point	Malheur NF	1940

**Guard Stations**

During the Depression-Era, Region 6 architects produced drawings for guard stations as well as for other administrative structures. While the older hand-crafted structures built by Forest employees remained in use at isolated forest locations, the new standardized plans introduced structures carefully planned for efficiency and utility. *Acceptable Plans Forest Service Administrative Buildings* contained examples of guard stations in various room configurations. In some instances, Region 6 employees constructed new guard station buildings at strategic locations, and in others replaced older structures in poor condition. Region 6 Architectural Historian E. Gail Throop considered the guard stations, like other Forest Service administrative structures erected from architects plans in the Depression-Era, "aesthetically pleasing as well as substantial buildings compatible with their surroundings, and cohesive in their unity of style, materials, proportion, color and texture" (Throop, 1979).

### **Examples of Guard Stations in the Depression Era: 1933-1941**

<b>Resource Name</b>	<b>Forest Location</b>	<b>Date</b>
Currier Guard Station	Fremont NF	1933
Koma Kulshan Guard Station	Mt. Baker-Snoqualmie NF	1933
Lodgepole Guard Station	Rogue River-Siskiyou NF	
Cabin and Barn		1933
Store Gulch Guard Station	Rogue River-Siskiyou NF	1933
Musick Guard Station	Umpqua NF	1934
Hamma Hamma Guard Station	Olympic NF	1936
Zigzag Summit Guard Station	Mt. Hood NF	
South, East & North Cabins		1936-37
Bunkhouse		1937
Storage/Office, Garage, Gas House		1937
Imnaha Guard Station	Rogue River-Siskiyou NF	
Cabin and Barn		1937
North Fork Guard Station	Gifford Pinchot NF	
Residence		1937
Garage		1938

### **World War II and the Post-War Period: 1942-1960**

#### **Trails and Shelters**

The construction activity of CCC Era was sharply curtailed when the United States entered into World War II. By that time, hundreds of trails and trail shelters had been built on the national forests in Region 6 by CCC work crews. The majority of these were built primarily for use by Forest Service work crews, although public use was allowed when they were vacant. When World War II started, most of the Forest Service development projects were sharply curtailed. The building program did not resume until after World War II.

After World War II, the Forest Service embarked on a mission of massive road building and timbering to keep up with the demand for lumber for new construction projects. The region responded to the need by giving road access construction high priority. Cooperative road building ventures were promoted with the National Housing Agency and private timber companies to keep up with the demand.

Trail shelters were built during this period; however, the post-World War II shelters differed from the earlier shelters in two ways. While the pre-World War II shelters were built almost exclusively by or for the Forest Service, most of the later shelters were constructed by private individuals and groups. Also, the Forest Service shelters built during the decade preceding the war followed the standardized Adirondack style but the privately erected post-World War II shelters varied widely in design. These later shelters tended to be much more substantial structures that were often enclosed on all sides and included such amenities as stoves, beds, windows, and floors (Throop, 2004:61-62).

#### **Lookouts**

The budget and labor constraints of World War II resulted in little new lookout construction in Region 6, while the significance accorded fire detection practice increased. Men and women staffed existing lookouts and the Forest Service sought volunteers to assist with fire detection and suppression efforts (Williams, 2000:81).

After the war, the rate of new lookout construction slowed considerably and most structures were replacements of older facilities. Proliferating roads associated with increased timber harvest levels from the national forests, provided better access and brought more people into the forest who could report fires. Aerial patrol and improved radio communication in both aircraft and vehicles further lessened the need for fixed-

point detection. Numerous lookouts were either abandoned or used only intermittently. In the 1940s and 1950s, the L-4 standard was used as the cab on 15' to 30' wood towers; the Rustler Peak Fire Lookout in the Rogue River National Forest is an example.

The introduction of the “R-6 flat top” in 1953 was made possible by improved road (and helicopter) access; the lookout was built of large-sized materials that could not be packed in. The concept, originated by Region 6, was designed to alleviate the costs and hazards of re-shingling the hip roof of L-4s. The structures were 15' x 15' wood-frame with flat, tarred roofs. The flat roof extended beyond the cabin a few feet to provide shade. Single-light windows replaced multi-pane windows for better viewing. The extra foot in dimension made the living area more accommodating than the L-4. The R-6 typically had no shutters; window coverings and exterior walls were constructed of textured-1-11 siding. R-6 model lookouts were not placed in large numbers, and were eventually supplanted by modern fire detection and suppression methods (Cox 1991:8). Metal construction was used in some models. The Lake O' Woods Fire Lookout in the Rogue River-Siskiyou National Forest is an all steel R-6 mounted on a short tower, originally built on Barkow Mountain in 1955 and moved by helicopter to its present location in 1974.

#### **Examples of Lookout in the WWII and Post-War Period: 1942-1960**

<u>Resource Name</u>	<u>Forest Location</u>	<u>Date</u>
<b>L-4 Lookouts</b>		
Bull-o-the-Woods	Mt. Hood NF	1942
Garwood Butte	Umpqua NF	1942
Mt. Stella	Rogue River-Siskiyou NF	1946
<b>R-6 Lookouts</b>		
Red Mountain Lookout	Gifford Pinchot NF	1947
Red Butte	Umpqua NF	1953
Lake O' Woods	Rogue River-Siskiyou NF	1955 moved 1974
Hall's Point	Rogue River-Siskiyou NF	1956
Five Mile Butte	Mt. Hood NF	1957
Madison Butte Lookout	Umatilla NF	1957
Little Cowhorn	Willamette NF	1960

#### **Air Centers**

In 1919, cooperative agreements between the Forest Service and the Army Air Corps resulted in experiments using airplanes to patrol for forest fires in California. Historian Gerald Williams observes that their use was soon expanded into the mountainous areas of Oregon and Washington, as well as in Idaho and Montana (Williams, 2000:47). In the 1920s, the National Forest Service used airplanes for aerial patrols and for delivering supplies to fire fighters on the ground; by late 1930s experiments proved fire fighters could be parachuted into locations, but the technology and equipment was not yet suitable for aerial bombardment with water or chemicals. Widespread use of airplanes for fire detection and suppression activities would wait, however, until the end of World War II.

The Forest Service's established lookout sites became important during World War II as part of the nation's defense strategy. The fear of enemy aircraft attack led to the establishment of the War Department's Aircraft Warning Service (AWS) in 1942, with substantial Forest Service support and cooperation in the Pacific Coast area. AWS lookouts were concentrated in coastal and adjacent mountainous sections of the Northwest. Two-person teams staffed the AWS lookouts on a 24-hour basis, reporting any aircraft sighted or heard. Not all lookouts within the AWS “filter” area were pressed into year-round service; only those able to be supplied in the winter were used. AWS personnel converted several garages (many constructed by CCC crews) associated with lookouts into modest residences for use by observers. An example of this is the Dutchman Peak Lookout in the Rogue River-Siskiyou National Forest. The D-6 cupola cabin was built in 1927 and a garage was added in 1937, but converted to living quarters for the Aircraft Warning Service in 1942. At the

Onion Mountain Lookout and at the Whiskey Peak Lookout in the Rogue River-Siskiyou National Forest Aircraft Warning Service cabins was built in 1942, and at the Evergreen Mountain Lookout in the Mt. Baker-Snoqualmie National Forest the 14' x 14' L-4 ground house saw year-round use in World War II as an Aircraft Warning Service site.

In the post-World War II years, airplanes dramatically changed the ways in which the Forest Service handled fire management operations. In 1955, a Ford Trimotor airplane fitted with two 275-gallon tanks was used in aerial fire fighting for Region 1; then in 1958, it was further modified for use by smokejumpers. Filling the bays of converted bombers with water, borate, and other solutions, skilled crews turned the airplanes into major tools for fighting fire in Region 6 and other areas (Williams, 2000:98). Region 6 took an active part in developing new facilities to support fire-fighting aircraft. There has been an air tanker base located at the Redmond, Oregon, airport since 1961; the Forest Service built a new airfield, Redmond Air Center, in 1964.

Region 6 took an active part in developing new facilities to support the use of aerial fire fighting technologies. The Region 6 Air Center at Redmond, Oregon, incorporates facilities for training and supplying Forest Service smoke jumpers as well as tankers and other fire-fighting aircraft. Structures in the complex consist of generic administrative and support buildings, as well as hangars, which are specialized buildings for aircraft maintenance and storage.

## RECREATION FACILITIES

The development of USDA Forest Service Region 6 was directed by the recreational use of forests. These recreational facilities, constructed between 1905 and 1960, were built on the Region's nineteen national forests, and the Columbia River Gorge National Scenic Area in the states of Oregon and Washington by private individuals and organizations, the Forest Service, and enrollees in Depression-Era work-relief programs. In this section, resources are organized by recreation function and agency administration.

The resources pertinent to this study encompass a broad range of property types including privately-owned recreation residences, organizational camps, club sites, resorts and lodges, as well as Forest Service-built campgrounds, ski lodges, trail shelters, and other publicly developed facilities. Although diverse in kind, and varied in appearance, these property types share basic physical and associative characteristics.

**Note:** This section draws substantially upon Region 6 Forest Service Historian Elizabeth Gail Throop's comprehensive *Recreation Development in the National Forests in Oregon and Washington 1905-1945*, USDA Forest Service Region 6 – Pacific Northwest Region, 2004.

### Early Forest Service Period: 1905-1911

Prior to the creation of the Forest Service in 1905, recreation development remained informal and very limited. Public use of the Region 6 forests during this period involved mixed recreational and subsistence activities including picnicking, camping, hunting, fishing and berry picking. During temperate seasons families took brief excursions or camped for prolonged periods. With modest population numbers and few tourists, the human impact on Region 6 forests was relatively small.

Forest Rangers managed campsites seasonally as time permitted – clearing vegetation from well-used sites, building simple rock fireplaces, and installing toilets and garbage pits. “Priorities, budget limitations, and customs precluded recreation spending by the Federal Government. Recreation development was primarily private, consisting of hotels, sanitariums, and camps, located in the mountains or near mineral or hot springs, lakes, rivers and streams, that were accessible by road” (Throop 2004:77). Minimal Forest Service development of popular sites emphasized fire prevention, health, and safety. Most recreation development was concentrated near urban areas and larger population centers.

Following transfer of the Forest Reserves, the Forest Service published regulations that included the provisions of the 1902 Government Land Office Manual for granting permits for hotels and sanitariums, and summer residences. From 1905-1915, the special use permits were issued annually. Yearly renewal was not a particular problem because the permitting process was quite efficient, and investment in permanent improvements were not substantial.

The natural hot springs and mineral springs in the western Cascades of Oregon and Washington were used to promote bathing and water cures at various spa developments in Region 6. Entrepreneurs developed hotels at Government Mineral Springs (Gifford Pinchot NF), Bagby Hot Springs (Mt. Hood NF), and Breitenbush Hot Springs and McCredie Hot Springs (Willamette NF). While few spa facilities remain standing from this period, public use continued in more informal settings, and in some cases, replacement facilities, both public and private, were built (Throop 2004:77).

Property types associated with campgrounds during the earliest period of national forest development include crude fireplaces, protected springs or other water sources, outhouses, and signs. Recreation facilities include lodges/hotels, bathhouses, tubs and pools. Features established as part of the earliest campground efforts on Region 6 have disappeared—in many instances later development at camp locations replaced these first improvements. The extant lodges or spa facilities remaining from this period include the Cloud Cap Inn, which was developed in 1889 but not part of the Mt. Hood National Forest until later.

### **Intermediate Period: Forest Service Management Comes of Age: 1912-1932**

By the mid-1910s, newly developed roads and widespread ownership of the automobile made travel into Region 6 forests a popular diversion for the public. The Forest Service responded by establishing the Columbia River Gorge Park in 1915, an event that “appears to mark the first time the Forest Service dedicated an extended area to purely recreational use” (Throop 2004:4). In the summer of 1916, the agency developed the Eagle Creek Campground on the Columbia River Highway along the Oregon bank of the Columbia River Gorge. The facility was “fully modern” with tables, toilets, and a registration booth. In addition, Forest Service officials planned development of the Mt. Hood Recreation Area, including publicly financed trails with shelters, a winter sports area, and campgrounds (Throop 2004:4). Although these facilities were planned, there was very little national direction for designing these recreation facilities.

In 1918, Consulting Landscape Engineer, Frank A. Waugh, published two manuals for the Forest Service with guidelines for designing summer home recreational tracts. The previous year, Waugh spent five months in the field in each of the seven Districts (now Regions) working on a national forest study. *Recreation Uses in the National Forests*, Waugh's main report on the status of recreation, summarized the types of facilities found in the forests—publicly owned developments consisted almost entirely of automobile camps and picnic grounds, while the private sector provided fraternal camps, sanatoria, commercial summer resorts, and private summer home cabins (Throop, 2004:5). Waugh also included an exploration of the cash value of forest recreation, asserting that forest recreation would be at least as much as casual urban recreation.

Although Waugh provided some guidance for larger development on forestland, there was little discussion on campground and picnic facilities. The further development of Waugh's observations and guidelines, slowed when the United States entered World War II. After the War, planning for recreation facilities in the forest resumed as recreational use of Region 6 Forests rapidly expanded.

In 1922, Congress began appropriating “Sanitation and Fire” prevention funds that could be used on sites the public occupied for recreation such as campgrounds and picnic facilities. With the availability of the funds, the Forest Service decided to start integrating recreation facilities into their building program by hiring Landscape Engineer Waugh. The following short note appeared in the September issue of *American Forestry* magazine:

Dr. Frank A. Waugh, professor of landscape engineering at the Massachusetts Agricultural College, Amherst, Mass., has been appointed recreation engineer in the Forest Service, USDA. Dr. Waugh, a noted author, and one of the leading landscape architects of this country, will spend the summer formulating plans for the development of public camp grounds and summer-home sites in the National Forests of Colorado, Wyoming, Idaho, Utah, Idaho and other western states. This study is a part of the established plan of the Forest Service toward providing adequate camp and sanitation facilities for the 5,500,000 persons who yearly seek rest, health and enjoyment in our National Forests.

Fred W. Cleator, Forest Service Recreation Examiner in Portland, further noted the need for planned facilities because of the increase use of the forests by tourist. In a 1924 letter, Cleator states:

. . . almost without warning, the Forest Service, as protector and administrator of an empire of mountains and forests, was suddenly brought face to face with the great problem of handling the visiting public who came in increasing thousands, in addition to its regular business (Cleator, 1924:467-468).

In general, however, the Forest Service limited development of recreation sites; if facilities were built, the improvements were very simple in design and construction. More extensive developments remained confined to privately-financed resorts or summer cabins on national forest land. A number of small resorts and rural motor lodges appeared during the late 1910s and 1920s. Modest in design, and usually rustic in character, these businesses typically included a lodge and guest cabins.

The 1920s brought initial efforts at backcountry access in Region 6. While recreation trails were not developed as extensively as administrative service trails, Forest Service supervisors gradually undertook recreation trail construction in areas where a "recreation experience was the objective," incorporating "scenic view, interesting terrain and vegetation, and other opportunities into the design" (Throop 2004:63). One of the most extensive plans involved development of a trail, now the Pacific Crest Trail, along the Cascade Mountains from the Oregon-California border to Canada. Trail-side shelters were frequently incorporated into the design. Due to lack of funding, development of the Crest Trail progressed slowly and plans for trail-side shelters were set aside (Throop 2004:63).

Gradually some guidelines emerged for the development of recreation facilities in the 1920s, although, in most instances, it was not comprehensive in nature. There were exceptions; Fred Cleator wrote a very comprehensive recreation plan for the Union Creek Recreation Area on the Crater National Forest (now Rogue River NF) in 1920, that included design guidance for three tracts of summer homes, a public campground and picnic area, and a resort, as well as direction on vegetation management within the highway corridor to preserve a particular old-growth character (Throop 2004:32).

By 1925, there were some 1,500 campgrounds in the national forests. Only one third of these contained even the most basic facilities. By 1930, the Forest Service reported 1,493 fully and partially developed campgrounds. The number of improved facilities was growing; national forest recreation use increased 38% in 1929 alone. The rising trend in recreation appropriations gave the Forest Service reason to be optimistic. With increased funding, "promised" recreational opportunity would catch up with demand. Unfortunately, the Great Depression resulted in a 25% reduction in the Forest Service's recreation budget instead of a 100% increase. The means for moving the recreation development program forward remained beyond reach until the New Deal programs of the Depression Era brought an infusion of funding and support for development of recreation facilities (Throop, 2004:8).

## **Recreation Facilities: 1912-1932**

### **Campgrounds and Picnic Areas**

Campgrounds in the 1910s and 1920s were limited at best. The camping areas sometimes included fireplaces, toilets, signs, tables, drinking fountains, and water faucets. With no standardized plans, these facilities were Vernacular in construction, often built by foresters using available materials. One exception during this period was at the Eagle Creek Campground in the Columbia River Gorge. Opened in 1916, Eagle Creek's early structures included stone water fountains and fireplaces, and shelters built of logs, stone, and wood shingles. Site planning was limited but campgrounds and picnic areas were generally built to blend with the surrounding landscape.

### **Recreational Trails and Shelters**

Development of backcountry access for recreation purposes was not undertaken until the 1920's. This was reflective of the agency's mission, work, policies, and funding priorities in its formative years. Planning and design of recreation trails proceeded, under the guidance of Fred Cleator in the Regional Office, and numerous trails were constructed. Since recreation experience was the objective, these trail routes were planned in relationship to scenic views, interesting terrain and vegetation, and other natural features. Width, clearance, grades and other specifications set recreation trails apart from those whose purpose was strictly ranger access or transportation. Recreation trails were engineered for leisurely and pleasurable travel, in contrast with the direct and efficient travelways for administration, communication, and fire access (Throop, 2004:62).

In 1919, the Forest Service began planning for a trail the length of the Cascade Mountains. Existing trails would be used where possible with new connecting trails constructed where necessary. In the summer of 1920, recreation planner, Fred W. Cleator inspected the area between Crater Lake and Minto Pass in the central Cascade Mountains of Oregon. Cleator along with an engineer, two grazing experts, a cook, and a packer began surveying the trail now known as the Pacific Crest National Scenic Trail. Cleator's plans for the Crest Trail included the construction of trail-side shelters for hikers overnighiting along the trail. However, funding for recreation on national forest lands was marginal and plans for trail-side shelters were shelved until the creation of the CCC in 1933 and the simultaneous increase in recreation funding.

### **Resorts and Lodges**

In the late 1910's and 1920's small resorts and rural motor lodges were built in forest locations that had traditionally been popular recreation areas such as Mt. Hood, Crater Lake, and Mt. Rainier. Sited adjacent to the main road, these resorts were visible, convenient, and accessible to motor traffic. Nearly all were modest and affordable accommodations of vernacular design, frame or log construction, and rustic in character. The architecture may not be stylistically or materially cohesive, but was compatible with the environment. The overall effect is picturesque charm (Throop, 2004:32).

These early accommodatins were not luxury establishments in fabric or design, or at all pretentious, but offered a comfortable, informal experience. Typically, initial development of facilities included a lodge and guest cabins. Food service, groceries and sundries, and gasoline were sometimes provided, either in the lodge or in auxiliary structures. In some small resorts, all services and accommodations were fitted into a single lodge building. Some other building types associated with these early lodges include guest cabins, bathhouses, toilets, boat houses, gas and oil facilities, retail, water and sewage structures, power utility infrastructure, and signage.

### **Summer Home Tracts**

With the passage of the Term Permit Act in 1915, summer homes and resorts in the national forests increased dramatically. The middle-class who desired homes in a national forest now had an opportunity to apply for a

permit and select a forested lot to erect a building. Fees were low and summer homes were often built on a shoe-string budget by private individuals.

In 1918, the Washington Office issued technical directions for subdividing summer home tracts. In the same year, the Forest Service published *Landscape Engineering in the National Forest* by land surveyor Frank A. Waugh, as guidance to field personnel for planning and design. Waugh recommended that one acre be the standard lot size for a summer-camp permit on the national forests; a 200' x 200' or 150' x 267' forest lot was representative. Waugh warned against "the building of disreputable, unsightly structures which disfigure the natural landscape surroundings." General layout should avoid straight alignments and "the checkerboard system" of rectangular plans. Waugh contends that "it is better administration to have three or four tracts surveyed and designed with no demand for leases than to have one colony established in helter-skelter fashion before the Forest Service gets started with its plans" (Waugh, 1918).

The early summer home tracts in Region 6 were platted by forest officers applying Waugh's principles. Waugh was hired by Mount Hood National Forest in 1920 and wrote *Recreational Units in the Mt. Hood Area*. From this work, a recreation plan map was created identifying the development of campgrounds, summer home tracts, clubhouses, health camps, access roads, and trails, and identified the need to maintain the natural landscape (AINW, 2003:6). This was one of the early master plans that examined how development within a forest area interrelated.

The plan for summer home tracts took into consideration the topography, views, road system, sanitation limitations, setbacks from streams, lakes, and roads, and orientation of the summer home and outbuildings. Each summer home usually had several features to the site. Some of the common property types typically found on the summer home lots include cabins, garages, woodsheds, boathouses, outhouses, barbecues, garages, trash pits, and landscape features such as benches, bridges, rock stairs, paths, and retaining walls.

The cabins, usually one or one-and-a-half stories, had front or side-facing gable roofs often with shed or gable dormers, or intersecting gable ends. Cladding included horizontal lap, wood shingles or shakes, logs, or board and batten siding. Some of the cabins had partial to full stone walls. The cabins generally had wood shingle roofs, full or partial front porches supported by log posts, decks, multi-light windows often times with functional shutters, and stone chimneys. "Rustic" style elements dominated the construction, with the use of native materials and natural paint colors for the exterior such as dark brown, gray, dark green, and reddish-brown that blended with the local environment.

The outbuildings were designed in a similar style, and were generally free standing structures. Garages had gable or hip roofs and sometimes had a shed-roofed woodshed attached to the side or rear of the building. Outhouses had shed or gable roofs, and were covered with lap, wood shingles or shakes, or constructed of logs. The fire-pits, barbecues, and retaining walls were generally rock structures.

Examples of summer home tracts include Lake of the Woods, Winema National Forest; Union Creek, Rogue River-Siskiyou National Forest; Diamond Lakes Resort, Umpqua National Forest; and Still Creek Summer and Camp Creek, Mt. Hood National Forest.

## **Depression Era: 1933-1941**

During the New Deal, the Forest Service received recreation funds and labor sources far beyond its wildest dreams. The tight budgetary limits that had constrained the Forest Service recreation program disappeared, resulting in an unprecedented wave of recreation development in the 1930s. The intense building program that began in 1933 flourished until 1940 when, in the shadow of impending war, support for work relief programs and other national forest programs waned. "As national defense priorities came to the fore, public works recreation appropriations ceased" (Throop 2004:10). Recreation sites and structures were a discrete classification of forest improvements. These were intended for public use and enjoyment but also were

intended to concentrate recreational use of the forest in protected and supervised areas, and to reduce the risk of fire.

During the seven-year building phase, Region 6 staff planned and constructed hundreds of public campgrounds and recreation areas, four federally financed organization camps, numerous improved winter sports areas—eight with small-scale lodges, and one with a large-scale lodge and hotel—with downhill runs, cross-country trails, jumps, and many trails, some with backcountry shelters (Throop 2004:8). These projects were built by laborers and skilled crafts people, workers in the government sponsored CCC program. Designed in the Rustic style, these buildings were based on the Forest Service philosophy of non-intrusiveness, using native materials, and integrating the structure into the surrounding landscape.

### **Campgrounds and Picnic Areas**

The construction of safe campgrounds and picnic areas were given first priority according to the 1930 planning document, the *Forest Service Manual*. Careful selection of the site was emphasized. Water sources, scenic views, drainage, and accessibility were considered in the planning process. These camps were classified according to use ranging from Class A Camps with 5,000 or more visitors annually to Class D Camps with less than 50 visitors annually; the most elaborate camps were designed for Class A and Class B forest camps. While many of these campgrounds were new developments, many of the sites previously occupied were enlarged and improved by the CCC (Throop, 2004:23-24).

The new campgrounds developed during this period emphasized the natural setting in relationship to the use of the automobile. These camp unit layouts now provide for parking at each campsite, and general parking near picnic areas. Roads into the site were curvilinear, fitting the contours of the land. The secondary roads extended to the individual camp sites were on either side of the road. Circular layouts were also used with campsites on either side of the road. Garbage pits and toilets were in close proximity to the campsites. Hiking trails connected to the campground. If the campground was near a prominent feature, such as a lake, the development was designed to minimize its impact on the landscape.

Carefully planned and detailed designs for campground amenities extended far beyond the bare necessities. Camp fixtures such as tables, benches, fireplaces, and stoves (from 1937 *Camp Stoves and Fireplaces*) were constructed using established designs. Other amenities, water hydrants, drinking fountains, garbage pits, and occasional seats had certain specifications, but were often innovatively executed. Stones and logs were used to create unique and truly rustic features (Throop, 2004:25).

Water faucets and fountains were placed in unpeeled sections of log. Garbage pits were covered with lengths of logs, stacked and affixed, with the center section cut and hinged to permit opening. Single rustic garbage cans were made of unpeeled log sections placed upright, the heartwood removed, with lids fashioned from an additional short log section. Occasional seats and benches were made from entire logs, hewn, or from half-logs fitted to form seats and backs, some having armrests of smaller unpeeled poles. Others were made of stone, sometimes built into a retaining wall. All seats and benches were built with the idea of rest, and many were placed in locations that afforded a pleasing or beautiful view. "Smoking spots," with a bench or seat and rustic log or stone ashtrays were similarly located (Throop, 2004:25). Boat ramps were also included in sites that were near lakes.

Built improvements were to be painted or stained in natural or neutral colors to make them less conspicuous and to protect the materials against the climate. French gray or silver gray shingle stain was the medium of choice, although log structures could be left natural to weather or treated with a precise mixture of raw linseed oil, spar varnish and Burnt Umber ground in oil. Grays were preferred as they conferred a "pleasant weathered appearance," and "blended with nature better" than brown or green stains (Throop, 2004:25).

### ***Roads, Trails, and Footbridges***

Forest camp roads were primarily a means of ingress and egress, but locating these roads in relation to scenic vistas and surrounding landscape was encouraged. Trails in the campgrounds connected the various elements within the site, scenic overlooks, and other natural features around the campground. Part of this trail system often included rustic footbridges that insured safety in crossing. These footbridges varied from simple footlogs, hewn to provide a flat walking surface, with a single pole handrail, to more complex constructions made of two or three logs covered with a plank surface, and balustrade-like guard rails. Such bridges were inexpensive to build, attractive, and appropriate to the environment. Suspension bridges for pedestrian traffic were built in a few locations (Throop, 2004:26-28).

### ***Water Systems, Pump Shelter, and Spring Development***

Water system development was a primary consideration in some campgrounds. Where springs were to be used as the supply, the source was often walled up, either with rock or cement, and covered. Piped water systems required that several hydrants, at least 36" high, be located conveniently.

In some campgrounds rustic pump shelters and gazebos were erected. Springs such as the Little Iron Mike and Bubbling Mike in the Gifford Pinchot National Forest were developed in an unobtrusive, natural way with landscaping that blended into the existing environment, but were not enclosed or sheltered. The spring at the Soda Springs Forest Camp on the Snoqualmie National Forest (present day Soda Springs Campground, Wenatchee National Forest) was enclosed in a cobblestone masonry well structure and covered with a simple, open well house of log uprights with a shake-covered hip roof. A more formal approach to spring development was used at the Dead Indian Soda Springs on the Rogue River National Forest. The spring itself was built up like a stone well, while the surrounding area was enclosed by a masonry wall with stone benches, and triangular tables located in two corners of the enclosure. Stone steps led up and down from the development, the upper approach forming an arched bridge over a small stream (Throop, 2004:28). Stone water fountains at roadside rests were for drinking water and refilling radiators of over-heated automobiles. Three of these remain in the Mt. Hood National Forest (Tolgate, Sahalie, and Pioneer's Women's rest stops).

### ***Toilets and Comfort Stations***

Convenient placement of toilets was important to the overall design of the campground. The most common toilet facility was the traditional single or double pit outhouse. Larger, more highly developed campgrounds had flush toilet systems, ranging in capacity from two to twelve fixtures. Buildings to house the toilet facilities were of pole construction and split shake exterior, or frame construction with vertical board exteriors, with or without battens. Some incorporated stone as a facing material. Occasionally, the exteriors were covered with bark. As with other features and furnishings, toilet buildings were set into the landscape, and made inconspicuous by screens of natural vegetation and by use of a neutral colored stain (Throop, 2004:26).

### ***Camp Stoves and Fireplaces***

"Camp Stoves and Fireplaces" published in 1937 by the Forest Service, was produced to aid in the design fireplaces, stoves, and ovens. The manual gave specific instructions on past construction problems with these amenities, how to improve on designs, and what type of materials and building techniques were appropriate (Figure \_\_). This book created a standard for stove and fireplace construction in the campgrounds.

To minimize fire hazard, camp stoves and fireplaces were provided as conveniences for cooking, warming, and lighting in campgrounds and picnic areas. Location of the stoves or fireplaces were extremely important in campsite planning. Stoves had to be easily accessible to tables, at least 10' from trees, and have sufficient work space and provision of firewood storage. The direction of the normal prevailing winds was considered to reduce the possibility of fire.

Stove and fireplace designs were attractive, had maximum utility, and required minimum maintenance. No single stove type met all these requirements in every location: the natural topography of an area largely determined the appropriate design. Massive high-chimney stoves were deemed appropriate only in large timber areas where there was adequate opportunity to screen the facilities. To retain scale and proportion, a height ranging from 15" to 24" was prescribed for cooking surfaces. Native stone was the preferred material.

The most frequently built stove design in Region 6 was the convertible camp stove; the texture of masonry varying with the type of native stone available. Rectangular, with a chimney built into one end as part of the fabric, these stoves eliminated undue fire hazard, and provided for cooking and for warming fire use. Within individual campgrounds, textural diversity is evident. Some stoves were constructed of boulders, rounded, uncut and assembled in a very informal manner while others exhibit very carefully cut and fitted stone, more formal in appearance. Variations of the basic design that included a triangular warming fireplace abutting the cooking stove chimney were found in campgrounds throughout the Region. The warming fireplace variation was referenced as "the Mt. Hood design" (Throop, 2004:27).

### ***Group Facilities and Community Kitchens***

In addition to the facilities designed for individual family campsites, furnishings for group sites that provided for common activities were planned. Community bonfire rings, defined by flat stones, and surrounded by log benches were not unusual. In some larger campgrounds, the community fireplaces took on the form of an amphitheater in anticipation of interpretive programs and other group events.

Among the most eloquent expressions of rustic architecture in the diverse forest improvements, and the most interesting from a sociological standpoint, were the community kitchens. Of log, pole, and masonry construction, the structural members were carefully proportioned to the natural setting. Log uprights corresponded in diameter to the measurements of the surrounding trees. Foundations and masonry walls were styled to appear as "rough rock footings" or natural outcrops. Structures made of irregularly shaped rock were preferable. Placed along their horizontal axis, uncoursed rubble stone resembled nature's bedding patterns, and more closely tied the structure to the ground.

Roof design and pitch had to be compatible with potential snow load and other climatic conditions without creating a dominate vertical emphasis that would overpower the site. Roofs had to achieve a proper proportion with the often massive nature of upright support members and footings; oversized verge members and shake roofing helped resolve this problem. Climate and the character of the forest surrounding the structure is reflected in the design, not only in the size of the structural members but also in the degree of enclosure.

Community kitchens on the western slopes of the Cascades were more frequently enclosed by heavy railings or even solid walls. In contrast, the community kitchens located east of the Cascades in the pine forests appeared lighter in construction, more open, and had pole railings or no enclosure; this lighter structure was commensurate with the surroundings. Within the parameters of community kitchen design, there was also a concerted effort to provide variety of appearance. No two shelters were exactly alike. If identical floor plans were used, then the elevation design differed substantially; if elevations were similar, then floor plans were altered to create a unique edifice. Two major plans emerged: rectangular and octagonal. Variations, however, in roof shape and materials, elevation design, arrangement and number of stoves and fireplaces, and in building materials prevented monotonous repetition (Throop, 2004:29-30).

### ***Playground Facilities***

Some campgrounds had playground facilities for children designed by Regional Office architects. The equipment was constructed of poles, logs, and planking, rather than metal piping. Swings with wood slab seats or chairs were suspended from a pole framework, and bench swings utilizing a log for the seat, with handles and footrests, were supported to withstand the longitudinal sway. In a few locations "monkey trees"

were erected; defoliated yew trees, sunk in the ground so that ten to twelve feet of branched trunk projected above ground level. Rockers, rocking horses, teeter-totters, and merry-go-rounds were other optional equipment (Throop, 2004:27).

**Registry Booths**

Most campgrounds had registry booths to house a notice board and the campground registration book. Located centrally these booths were noticeable but not obtrusive. These small rustic shelters were of post and beam construction, or of native stone masonry, or frequently a combination of both. If a large shelter or community kitchen was included in the campground facilities, the registry booth repeated its design in a smaller scale. Provided with benches or seats, and a secured writing surface, the booths afforded shelter from wind and rain. In a few locations, the registry booth was combined with a comfort station (Throop, 2004:28).

**Signing**

All recreational improvements were appropriately signed. Rustic entry signs were located prominently beside approach roads. Wood slabs, of varying dimensions, were supported by log or stone piers or suspended from log gibbets, and identified the site by name. Often the Forest Service shield was incorporated in the design and the administering national forest identified. Characteristically, lettering and any insignia were raised. Within the campground or picnic area, all facilities were clearly designated, with directional and locational signs. The standard Region 6 "ten rule" sign which contained precautionary remarks and the administrative regulations was placed in the registry booth or adjacent to the registry box for public information. As late as 1933, Forests were directed to post at least one metal sign in the forest stating, "This land is reserved as a public service site and is not subject to appropriation under any of the public land laws." This applied to any forest camp where any Government appropriation or private donation had been used for improvements (Throop, 2004:29).

**Examples of Campground/Picnic Areas in the Depression Era: 1933-1941**

<b>Resource Name</b>	<b>Forest Location</b>	<b>Date</b>
<b>Campgrounds</b>		
McKee Bridge Campground	Rogue River-Siskiyou NF	1935-36
<b>Community Kitchens</b>		
American Forks Campground	Wenatchee NF	1936
Boulder Cave Campground	Wenatchee NF	1935
Silver Falls Campground	Wenatchee NF	c. 1935
The Dalles Campground	Mt. Baker-Snoqualmie NF	1935-36
French Creek Campground	Mt. Baker-Snoqualmie NF	c. 1935
Dead Indian Soda Spring	Rogue River-Siskiyou NF	1936
McKee Bridge Campground	Rogue River-Siskiyou NF	1935-36
Fish Lake Campground	Rogue River-Siskiyou NF	1936
<b>Campground Shelters</b>		
Big Creek Campground	Wenatchee NF	1936
Bedal Campground	Mt. Baker-Snoqualmie NF	1937
Wrangle Gap Campground	Rogue River-Siskiyou NF	1935-36
<b>Information/Registry Booth</b>		
Silver Falls Campground	Wenatchee NF	c. 1935-36
<b>Stove Shelters</b>		
Chatter Creek Campground	Wenatchee NF	1940
Silver Falls Campground	Wenatchee NF	1935-36
<b>Camp Stoves</b>		
Chatter Creek Campground	Mt. Baker-Snoqualmie NF	
Silver Falls	Mt. Baker-Snoqualmie NF	
Salmon La Sac	Mt. Baker-Snoqualmie NF	1936

## **Resorts and Lodges**

By the 1930's, recreation planning had an order of priority for land use allocation and development. Forest Service manuals specify that after public forest camps were built in a Recreation Unit Plan, the next selection ordinarily was the resort. The basis for the priority order appears to have been "the greatest good for the greatest number" (Throop, 2004:33). Plans for resort areas required the approval of the Forest Supervisor and the Regional Forester. If any structure, either government or private, would cost \$20,000 or more, then the Chief's approval was required for the resort development (Throop, 2004:33).

The development of needed resorts on national forest land by private capital was favored, but Forest Service manual directions stated that "it is especially desirable that resorts in localities of unique or outstanding character be constructed by the Government and priority in planning will be given to the development of such sites." Timberline Lodge on Mt. Hood is the only example of a Government financed, designed, and built lodge on the national forests in Oregon and Washington (Throop, 2004:33). Completed in 1937, Timberline Lodge was constructed entirely by hand by Federal WPA craftspeople.

Forest Service planners provided for space on the ground for resort development while the permittee was responsible for siting and designing the specific commercial facilities. The public-private venture was cooperative and for the public benefit. Guidance was lengthy and explicit. The permittee was to consider the design of the landscape and the interrelationship of the buildings. Suggested buildings included lodges, guest cabins, gas and oil facilities, boathouses, bath houses, stables and corrals, power houses, water and sewage facilities, dock and swimming floats, beach developments, and playgrounds, also included were winter sports facilities that often included parking, toilets, housing and shelter, ski slopes, trails, lifts and tows, toboggan and sled runs, and warming huts (Throop, 2004:79).

Architectural elements of predominantly vernacular lodges reflected the Craftsman and Rustic styles. These small-scale, log or wood frame buildings were clad with shingles or shakes, or rough-sawn siding, with gable roofs, multi-light windows in varying divisions, and prominent masonry chimneys. Plain and comfortable, the resorts offered a change of pace and scenery for people of average means (Throop, 2004:36).

### ***Timberline Lodge***

Timberline Lodge, completed in 1937, was built during the height of the Great Depression as a WPA project. Designed by agency architects, construction started in 1936 with the workers living in nearby tent cities and trucked daily to the construction site. The structure, Cascadian in style, on the south side of Mt. Hood, Oregon, was constructed of stone and wood by some of the finest crafts people in the region.

The project was completed in a short time - the intensity of the project being due not only to the weather but also to the uncertainty of the WPA's future. From the first drawings, made in early 1936, to the dedication of the completed Lodge by President Franklin Roosevelt in September, 1937, only 15 months elapsed. Despite the extreme conditions, fast-paced construction, and the inexperience of some of the workers, there were no major accidents during the entire period. In 1978, Timberline Lodge was declared a National Historic Landmark. The lodge is one of the finest examples of WPA architecture in the country.

## **Winter Sports Areas**

Prior to the 1930s, there was not an unified effort by the Forest Service in Region 6 to plan for winter sports areas. The earliest documented planning effort that included a winter sports component was the Mt. Hood Recreation Development Plan undertaken by Francis Williamson in 1926. In the early 1930s, planning for these activities began. The Forest Service stated that "improvements should be concentrated at a few of the most desirable locations rather than being spread out over a larger number of small developments" (Throop, 2004:65). In considering the development of winter sport areas accessibility to state highways, parking, and

location of toilets, housing and shelters (warming, eating, first aid), ski slopes, ski trails, ski lifts and tows, and toboggan and sled runs were all part of the planning process. Winter and summer weather conditions were also studied. Many of these winter sports areas in the national forests were built throughout Washington and Oregon.

Extant examples of the small log ski lodges built under the auspices of the Forest Service include Salmon Meadows, Chelan National Forest (now Okanogan NF); Leavenworth, Wenatchee National Forest; American River [Ski Bowl], Snoqualmie National Forest (administered by Wenatchee NF); Tumalo [Skyliner's Lodge], Deschutes National Forest; and Santiam Pass and Whitebranch, Willamette National Forest (Throop, 2004:79).

Extant examples of log warming huts or shelters were built at Wicky Creek, Gifford Pinchot National Forest; American River, Scenic, Silver Springs, and Snoqualmie Pass, Snoqualmie National Forest; Chartrand's Winter Sports, Keechelus Inn, Martins Winter Sports, Lake Wenatchee, and Snoqualmie Ski Bowl [Hyak], Wenatchee National Forest; Government Camp [Ski Bowl] and Tilly Jane, Mt. Hood National Forest; Trail Camp, Union Creek, Rogue River National Forest; Mt. Hebo, Siuslaw National Forest; Pioneer Forest Camp, Tollgate, Umatilla National Forest; Red Butte [Watson Cabin], Umpqua National Forest; Anthony Lakes [2 warming houses], Whitman National Forest; Hand Lake, Hoodoo [2 warming houses], and Sunshine Shelter, Willamette National Forest.

### **Organizational Camps and Clubs (Private and Public)**

***Privately Developed:*** Land for private organizational camp development was classified in the 1933 *Recreation Handbook* as "Organization Areas." Organizations were defined as a large, active, organized group of people such as Boy Scouts, Campfire Girls, Elks Lodge, Y.M.C.A. or Epworth League, and many churches, youth organizations, fraternal orders, civic and service organizations built and operated summer camps on the national forests.

Organization tracts were located off the main road, and required good water, ample seclusion, and safe sanitation while public forest camps and resort sites were allocated space on the main road for high visibility and access. The primary consideration for location of organization camps was safety and ample area for outdoor activities such as hiking and boating.

The types of facilities built varied according to a camp's purpose and need. Most included a frame or log lodge building, cooking and dining hall, toilets and bathhouse, sleeping shelters, bunk houses, or cabins, and accessory storage or utility buildings. Some provided an infirmary. Depending upon the organization's orientation, the camp might have an amphitheater and/or sports area or playing field, and swimming pools (Throop, 2004:38).

The architecture was generally plain, functional, and vernacular, and rustic in character. Log or frame construction was typical, with a variety of exterior materials including vertical board and batten, rough-sawn horizontal lap siding, wood shingles or shakes, or round or hewn logs. Gable roof shapes predominated, and the larger buildings featured stone chimneys and fireplaces (Throop, 2004:38).

Extant examples of this type of recreation resource is the Lake of the Woods Girl and Boy Scout Camp on the Winema National Forest; and Skyliner's Lodge on the Deschutes NF by the Skyliners, designed by Clemon Clark, Forest Supervisor with a degree in architecture.

***Publicly Developed:*** The major purpose of public organization camps was to provide recreational opportunities for low income groups. Capacity, average period of use, and potential users were all considered when these facilities were planned. Government built camps were to provide a specified range of facilities, including a large central building for assembly, cooking, dining, sleeping quarters, toilets, and bathhouses, and group activities (Throop, 2004:39).

The configuration of organization camps was based on the directions provided for planning and design in the *Handbook*. The manual suggested segregation of the organization camp into the following use areas: administration area, utility area, sleeping shelter group, sports area, campfire circle, crafts area, and miscellaneous features such as entrance roads, parking, trails, benches, signs, and water systems (Throop, 2004:40).

The Forest Service approached the construction of publicly developed recreation facilities conservatively. Four of these facilities were built in the Pacific Northwest Region: Camp Cleawox (Girl Scouts) on the Siuslaw National Forest, Clark Creek and Long Bow on the Willamette National Forest, and Buck Creek Organization Camp on the Umatilla National Forest.

As built in 1938-39, Camp Cleawox had 16 major structural features including a lodge, 13 Adirondacks-type sleeping shelters, a change house, and a shelter for an aboriginal dug-out canoe. The lodge was rustic in character, of log and frame construction, and cruciform in plan. The sleeping shelters were hexahedral in plan, of pole construction, clad with wall shakes. The Long Bow and Clark Creek Camps contained large rustic community shelters for cooking, dining, and gathering, and groupings of three-sided frame sleeping shelters with built-in bunks. All historic components of these organization camps remain intact (Throop, 2004:40-41).

### **Club Sites**

Club Sites were similar in purpose to Organization Areas, and met many of the same planning criteria for location, sizing, capacity, and demand. Club Sites were intended for smaller groups with simpler operational needs. Most consisted of a clubhouse or lodge with cooking, dining, and sleeping quarters incorporated. Other improvements included outhouses and accessory storage or utility buildings (Throop, 2004:40-41).

Clubhouses and lodges were characterized by simple, vernacular architecture with rustic qualities. Two- or three-story buildings of log or frame construction were not uncommon. Exterior materials were various and natural: vertical board and batten, shingles, rough-sawn siding, or round or hewn logs. The buildings generally had gable roofs, porches or covered entries, sand stone chimneys and/or fireplaces (Throop, 2004:40-41).

### **Summer Home Tracts**

The Summer Home tracts continued to develop throughout the Depression Era. Developments near larger cities such as Portland grew rapidly as more people sought nearby recreation facilities. These tracts formed communities off the main road, where each individual would have a roomy lot that was private by design.

During the Great Depression, summer home planning was an important enough aspect of recreation development to warrant informing the public. In a 1932 Regional Forest Service publication entitled *Summer Homes in the National Forests of Oregon and Washington*, Fred W. Cleator described the process for establishing public recreation areas, and the requirements and conditions for building and maintaining a summer home on the national forest.

There are 22 national forests within the States of Oregon and Washington. Each of these forests has opportunities for supplying summer-home demand. . . . The Forest Service does not discriminate among individuals so long as the permittee obeys the laws and regulations of the United States, the State, and county in which the land is located and the rules of any local governing body, which are determined by a majority of the users in any community or recreation unit.

Construction plans must fully satisfy the Forest Service with regard to fire menace, sanitation, and appearance. It is mainly required with buildings that they be put up in a workmanlike manner with substantial roofs, floors, doors, windows, brick or masonry

chimneys, fly-proof toilets and garbage containers; and that the setback of residence and general ensemble be not out of harmony with the neighborhood. Plans and locations of improvements must be approved by the Forest Service before construction begins. This does not mean that buildings must be uniform in character, but it will usually mean that they shall be of a generally accepted rustic style, and attractive in appearance. Glaring colors are not permitted.

If house logs are available and desired for building they may be purchased, and application for cutting should be made to the nearest forest officer. Although the stumpage price of this material is very low, it should be understood that the cost of log construction usually runs considerably higher than frame, except where lumber is inaccessible. Bark left on logs, except cedar, invites insects. Barbed wire should not be used in fence construction.

In landscaping the lots, it is expected that a natural appearance will be kept. Small trees should not be "limbed up," but only the dead material should be removed. Groups or clumps of trees and bushes should be encouraged between houses and especially between the house and roads or streams. . . .

The lots are surveyed along landscaping principles with the idea of obtaining vistas, building sites, and safety. No attempt is made to square up the lots. They are made to fit the streams, the slopes, the roads, and other features. The corners may be stakes, rocks, or living trees, but they are official surveyors' markings and should be carefully preserved in place to avoid complications.

As more people built on the summer home tracts, the Forest Service provided specific guidelines for leasees and Forest Service rangers. Monitoring these buildings became important to maintain the "Rustic" style architecture and the natural setting that became the hallmark of the Forest Service buildings. As in the earlier developmental period, common accessory structures on summer home lots included: outhouses, woodsheds, barbecues, trash pits, and landscape features such as rock retaining walls, paths, and patios.

The cabins were small structures that represented the salient features of the Rustic style. Built primarily of native materials, these buildings generally were wood buildings (log or frame), one to one-and-a-half stories, front or side-facing gable with shed or gable dormers, large rock end chimneys or brick or rock ridgeline chimneys, and multi-light casement or double-hung windows often grouped. Siding material include wide lap siding, wood shingles or shakes, board and batten siding, round or half-peeled logs. Porches were either full-length or partial, and supported by peeled logs or square posts. Decks and patios were integral to the design in many cases. Some of the summer homes were finely crafted log constructed homes with details such as decorative peeled log king posts, log porch railings with geometric patterns, and massive stone chimneys. Skilled local contractors built these more decorative homes.

Examples of these Summer Home developments include Still Creek Summer Home Tract, Mt. Hood National Forest; Lake of the Woods Summer Home Tract, Winema National Forest; Camp Sherman Tract, Deschutes NF; and Diamond Lakes Tract, Umpqua NF.

## **Recreational Trails and Associated Structures**

### ***Trails***

The construction of roads and "truck trails" accelerated in the 1930's, with much of the work completed under the auspices of the CCC and other federal work-relief programs. As vehicle access pushed into the backcountry, the prime importance of the trails as administrative and protective travelways diminished, and recreational use of trails increased (Throop, 2004:54).

The *Forest Trail Handbook*, revised July, 1935, states that one of the Forest Service's job was to build and maintain trails, establish a uniform classification and standard specifications for the trails according to use, and to describe and illustrate approved methods of location, construction, and upkeep. The trails were constructed,

reconstructed, and maintained for fire control, administration, grazing, and recreation purposes. The object of trail construction was to provide safe and unobstructed passage for pack animals and hikers, and be durable enough to withstand the elements. Other types of resources associated with these trails were overlooks, parapet/retaining walls, monuments (signage and memorials), and trail shelters.

It was not until the creation of the CCC in 1933, and the simultaneous increase in recreation funding to the Forest Service that plans for a long-distance interstate trail were realized. A 1934 reconnaissance report on the entire 531 mile Oregon Skyline Trail by William L. Royer detailed the condition and amenities of the existing trails. In 1935, locations were identified that focused on the construction of new trails linkages that were incorporated into the Cascade Crest Trail system. The Cascade Crest Trail and associated shelters was conceived and developed as a unit. The Mt. Hood Recreation Development Plan, including the Timberline Trail System, was also started in 1933 and completed in 1935.

The trail/shelters system was planned and built during an era when camping equipment was heavy and cumbersome; the placement of the shelters a day's hike apart eliminated the need to pack tents, making the mountains more accessible.

Examples of early trails that were more extensively developed during the Depression Era include the Timberline Trail System as part of the Mt. Hood Development Plan, the Oregon Skyline, and the Cascade Crest Trails.

### ***Shelters***

In 1931, the Pacific Northwest Region introduced a standard trail shelter design which followed the Adirondack design but was modified to accommodate local conditions and needs. Rather than being made solely of logs, most shelters were framed with peeled logs and poles, then covered with a variety of native materials including split cedar shakes and hand split boards. In timberline areas or above, shelters were more frequently constructed of stone, with some interior timber support.

Examples of recreational trail shelters built during the Depression Era include Meadow Creek and Moore Point Trail Shelters on the Chelan Ranger District, Wenatchee National Forest; Swamp Lake and Long Lake Trail Shelters, Wenatchee National Forest; and Parker Meadows Shelter on the Rogue River-Siskiyou National Forest. Parker Meadows Shelter was built circa 1935 by the CCC in the Adirondack-style; the hand-split wood shake siding, gable roof, and exposed rafters are characteristics of the style.

### ***Observation Sites***

Observation areas as planned recreation developments first appeared during the Depression Era. These sites were identified as having outstanding scenic views and/or interpretive opportunities, and were intended to enhance the recreational experience of visitors who were hiking or "driving for pleasure." Observation areas geared towards the automobile travellers often included signs, parking areas, retaining walls, drinking fountains, guard rails, and seats and benches. Observation areas accessible by trail only were designed to accommodate the average number of visitors anticipated, and often included amenities such as fences, benches, toilets, and view-finders (Throop, 2004:71-72).

Examples of Observation areas include the Dee Wright Observatory at McKenzie Pass, Willamette National Forest. The observatory is a small, stone-faced, circular-shaped shelter with view-finder windows and mountain-identifier interpretation. Another observation site, with a shelter, is at the summit of Cape Perpetua on the Oregon Coast. The observation site, with long-distance views was one component of a larger recreation complex (Throop, 2004:72, 79). Built in 1935, Dee Wright Observatory is located at the summit of McKenzie Pass. The structure, surrounded by lava rock, is constructed of the same materials and appears to be a natural outgrowth of the surrounding landscape.

## **World War II and Post-War Era: 1942-1960**

### **Campground and Picnic Areas**

After the end of World War II, Americans increasingly sought opportunities for outdoor recreation, soon overwhelming the number of developed recreation sites. Many of the campground facilities were added to in the first decade after the war to meet the increased demands. The most common addition to the CCC era campgrounds were toilet facilities and bathhouses. Picnic shelters were also added to these existing sites. Regional architect DiBenedetto stated that most of his work in Region 6 focused on the addition of administrative facilities; not many new recreation facilities were planned (DiBenedetto, 2004 interview).

In the late 1950s, another surge in recreational use of the forest resulted in more extensive recreation construction. "Operation Outdoors" began in 1957, and while the program brought about widespread recreation developments, it also contributed to the loss of older resources. As Forest historian James B. Cox observed:

That five year plan was intended to rehabilitate and expand existing, and construct new, Forest Service camping and picnicking facilities . . . Over the next 5-7 years, most of the recreation facilities developed during the Depression-Era were rebuilt. This resulted in the alteration or removal of many of the earlier improvement and the introduction of modern styles (Cox 1989).

After Congress established the Outdoor Recreation Review Commission (ORRC) in 1958, a number of legislative and administrative actions ensued, including a Federal Bureau of Outdoor Recreation (BOR), a Land and Water Conservation Fund, expansion of existing programs, and new federal grants-in-aid for states (Throop 2004:10).

Once again, the automobile dictated some of the new campgrounds designs. Roads within the campgrounds were often designated as one-way to accommodate larger trailer and vehicles; the circular road worked well with the one-way system. Larger, more regular parking pads appeared adjacent the individual campsites. Parking lots became an integral part of the plan, designed near picnic areas that had day use amenities such as picnic tables, toilets, garbage pits, and water spigots or pumps. Trails were designed within the campground connecting the various campsites to the group areas and other trails led to nearby natural features. Group areas with shelters and playgrounds were often incorporated into the design. Contact stations and entrance signs welcomed visitors into the campgrounds. The plans often included areas slated for future expansion.

Property types found in campground and picnic areas during the 1950s represent a mix of resources found in the Depression Era as well as newly constructed features. In some campgrounds, older features were removed or remodeled. Roadways and campsites were enlarged to make room for vehicles such as travel trailers, and additional toilet and bath buildings were enlarged or introduced.

Examples of CCC-built campgrounds that were completely remodeled in the 1950s and lost of their earlier historic features include the Big Creek, Boulder Cave, and Chatter Creek Campgrounds on the Wenatchee National Forest, and the Douglas Fir Campground on the Mt. Baker-Snoqualmie National Forest.

### **Other Recreational Facilities**

Other recreational facilities like resorts and lodges also expanded after World War II. Trails, roads, and overlooks were constructed as Forest Service roads were improved to accommodate the increase demand for lumber. Post-World War II private recreation facilities reflected pre-war developments including organizational camps complexes of lodges, cabins, bathhouses, boathouses, cooking & dining halls, toilets, sleeping shelters, utility/storage buildings, and recreation areas.

By 1950, the post-war economic boom encouraged expansion of summer home tracts; the Forest Service expanded developments by surveying additional lots. The Forest Service platted areas that needed minimal road construction and could accommodate new buildings. Recreation policies set forth in the late 1940 and early

1950s required keeping the regional landscape as natural as possible. Many buildings were remodeled during this period or older ones demolished and rebuilt.

## **SPECIAL RESOURCE TYPES**

The previous sections discussed the major categories of generalized historic buildings and other resources that the Forest Service operates. Resources in this section are specialized historic buildings, structures, sites, and objects that the Forest Service has constructed or acquired for its own use. Typically, a specialized Forest Service facility will include some generic administrative buildings as well as some distinctive structures. A research station, for example, would have generic office buildings, residential buildings, and service buildings, as well as specialized laboratory buildings.

### **Forest and Range Research Facilities**

In 1908, the Forest Service developed a system of forest experiment stations. An initial experiment station opened in Arizona; subsequently, stations were built in several western states (Williams, 2000:29; Grosvenor, 1999:253).

The Pacific Northwest Experimentation Station had its origins in 1912 when research began in Wind River (Carson), Washington to learn more about reforestation after wildfires (Mack and McClure, 1999:38). In 1913, the Wind River Forest Experiment Station was established south of Mt. St. Helens on the Gifford Pinchot National Forest. The facility was located in conjunction with Wind River Nursery, since planting and practice techniques were important areas of research (Mack and McClure, 1999:38). The center was the first Forest Service research facility in the Pacific Northwest.

The first arboretum in the Pacific Northwest was planted at Wind River in 1912 to test for the suitability of the species. Jurisdiction over the Wind River Experiment Station was transferred in 1924 from the Regional Office to the Branch of Research in the Washington Office (Mack and McClure, 1999:40). Wind River was then reassigned as a field office. With the onset of the Great Depression, funding and labor available through the CCC brought about an increase in construction for research as it did for other administrative facilities.

Typically, research stations were small campuses with a collection of buildings including residences, wet labs, offices, vehicle service areas, and libraries. The buildings that pre-date the CCC Era are more Vernacular in design reflecting the Bungalow or Craftsman styles, and the buildings constructed during the CCC Era reflect the Rustic style common to administrative buildings.

### **Nurseries**

The Forest Service initiated tree planting to replace trees lost to cutting and fires during the beginning of the 20<sup>th</sup> century. The agency built nurseries to house the processes of germinating seeds and growing seedlings, adapting the buildings as new technology became available. One of the earliest nurseries established in Region 6 was the Wind River Nursery. Initially, the purpose of this nursery was to grow trees to reforest the Bull Run watershed, Portland's source of drinking water, and other large burn areas in the region (Mack and McClure, 1999:18). The first seedlings at the Wind River Nursery were planted in 1910. The same year, crews were also hired to experiment with planting seedlings in burn areas.

As the nursery program expanded over the years, more building types were needed. By the end of the Great Depression, the Wind River Nursery included warehouses, an office, mess hall, barn, laboratory, greenhouse, bunk house, storage buildings, root house, bath house, tent sheds, storehouse/woodshed, wagon shed, manure shed, packing shed, and garages. World War II production at the nursery was reduced to a bare minimum (Mack and McClure, 1999:35). After the war, production increased substantially as the nursery expanded and the use of

machinery aided production. More buildings were added to the nursery as a packing shed, cold storage plants, seed storage, nursery office, warehouse/shops, pump house, and residences were built in the 1950s.

In Region 6, nursery construction increased after World War II with the increasing demand for timber and other wood products. In Fiscal Year 1956-1957, for example, the Engineering Division awarded contracts for construction of two cold storage buildings at the Wind River Nursery and put a packing shed project out for bid for the same facility (Grefe, 1956).

A Forest Service nursery in Bend has closed; extant example of structures associated with nursery facilities on the Gifford Pinchot National Forest include the Wind River Packing Shed (1956/1959) built as a packing shed and lunchroom for Wind River Nursery, the Wind River Nursery Tree Cooler (1956) and the Wind River Nursery Seed Freezer built in 1958 and used for cold storage of seed until the closure of the Nursery in 1997.

### **CCC Camps**

Another series of standard buildings were developed for the CCC camps. “Initially controlled by the Army, these camps were laid out in precise manners depending on their designation as permanent, semi-permanent, or portable camps. The camp enrollees stayed in canvas tents until the cost feasibility of lumber buildings was established. Many of these lumber buildings were designed to be portable, since camp locations often changed. They were typically clad with board and batten or clapboard siding, and had six-pane windows. The roofs were covered with roll roofing or shingles and the interiors were lined with 1” x 6” paneling” (Wilson, 2004:69). Mess halls, barracks, recreation halls, administrative buildings, offices, hospital, garage, and machine/carpentry shops, gas and oil houses, tool shed, and vehicle shelters were common building types found in the complexes. Grounds were often landscaped and sometimes had outdoor swimming pools and amphitheaters. There were many CCC complexes throughout Region 6.

### **Timber Production Facilities**

In 1907 timber sold from the national forests amounted to just 950 million board feet, which was only 2 percent of the Nation’s 44 billion board feet cut that year. Timber harvesting remained sporadic and on a relatively small scale (Williams 2000, 54)

Throughout the 1920s, an economic boost increased the demand for wood products. While previous timber sales had been for small volumes, described by historian Gerald Williams “related to timber beams for mining and ties for railroads,” the newer sales accommodated expanded railroad logging operations “for lengthy harvesting periods of several decades or longer.” Williams observes that while the timber sales of the 1920s were few, they were large, often involving the sale of whole drainages at one time, like the 1922 Bear Valley Sale(Williams, 2000:53,55).

After World War II, the steady depletion of old growth timber on private lands further reinforced the need for increased harvest on Federal lands. According to Williams, “During the 1950’s timber harvest on national forests almost tripled going from about 3 billion board feet in 1950 to almost 9 billion at the end of the decade. The impact was felt most in the Pacific Northwest Region, the major producer of softwood timber in the National Forest System” (Williams, 2000:55).

Timber production facilities are generally associated with the post-war period, and especially with truck logging. Trucks required roads to access timber sales. These roads required bridges and other infrastructure. The Forest Service needed to measure the volume of timber leaving the sales, which necessitated scaling stations at strategic locations on many forests.

### *Scaling Stations*

Property types associated with scaling stations included an office and a distinctive platform about 4' high and 40' long that enabled the scaler to reach the logs on the truck. With the vast increase in timber production activity in the 1950s, the number of scaling stations rose steadily. In August 1956, Region 6 Timber Management officer Glen Jorgensen wrote the Engineering Division in the Regional Office concerning scaling practice and policy (Jorgensen, 1956):

“In the past two years we have had several requests from the field for blue prints of scaling platforms. This has been necessitated by the increase in the number of truck scaling stations. We feel there is a great need for such prints and would like Engineering to prepare them for us.

There are four types we consider satisfactory and desire to make standard :

1. Portable; 2. Single – Permanent; 3. Double – Permanent; and 4. Double – with roof .

Location of the above types currently in use are:

1. Galice – Siskiyou NF; 2. Tieton RD--Snoqualmie NF; 3. Tieton RD--Snoqualmie NF;  
4. Darrington - Mt. Baker NF

### *Roads*

Historic logging roads and road can be evaluated as engineering resources with their associated bridges, culverts, and other features.

### *Re-Loads*

These sites were semi-permanent locations where off-road trucks unloaded logs to be decked and then re-loaded onto highway trucks or railroad cars. Features of the reload site may consist of buildings and earthwork. A good example of a long lived re-load is the Keystone Ranch Re-load on the Ochoco NF.

### *Booming Grounds*

Booming grounds are analogous to re-loads, but they are located at a point where logs are assembled into booms for water transportation to the mill. Elements of the facility may include buildings, permanent unloading machinery, and piling. An example of a booming ground is the Smith River Log Dump, developed cooperatively by the BLM and the Siuslaw NF.

## **COOPERATIVE MANAGEMENT RESOURCE TYPES**

Resources in this section are located on national forests. Typically, the Forest Service and another governmental agency operate them in a cooperative agreement.

### **Snow-Survey Cabins**

Snow-survey cabins are associated with the development of the snow-survey program in the American West and the role of the federal government (specifically Region 6 National Forests) in cooperative natural resource management. Snow-survey cabins on Region 6 Forests were built in the 1930s and 1940s during the period when the Bureau of Agricultural Engineering/Soil Conservation Service (BAE/SCS) snow-survey program was established and flourished in the Pacific Northwest. The small, simply crafted snow-survey cabins represent the agency's involvement in establishing a critical component of natural resource conservation prior to the development of electronic snow-survey methods.

Examples of extant snow-survey cabins include the Blue Mountain Spring SCS snow-survey cabin; a log structure on the Prairie City Ranger District, Malheur National Forest; and the SCS cabin at Waldo Lake, Willamette National Forest. Four snow-survey cabins remain standing on the Rogue River-Siskiyou National Forest. Two of them—Wrangle Camp and Grayback Mountain in the Applegate area—are shake-over-lumber construction.

The log-built Whaleback Snow-Survey Cabin (1937) and the Honeymoon Creek Snow-Survey Cabin in the Sky Lakes Wilderness (1943) remain standing in good condition.

### **Fish Hatcheries**

State and federal agencies built hatcheries for propagating salmon and trout on most of the forests of Region 6. Many of these date from the post-war period of dam building, when dams and reservoirs threatened salmon runs. Other hatcheries date from earlier periods when Oregon and Washington state game commissions built hatcheries to enhance trout fishing. Generic structures on the hatchery sites typically include administrative buildings, residences, and service buildings. Specialized structures include the hatchery pools and the hatchery buildings.

The Butte Falls Hatchery on the Rogue River, Rogue River-Siskiyou NF was built in 1915, by the Oregon State Game Commission, and originally shared the present site with the U.S. Fish and Wildlife Service. In 1945 the Fish and Wildlife Service deeded their portion of the grounds, building and ponds to the Oregon State Game Commission, which continues to operate the hatchery.

### **Railroads**

Historic government railroads on Region 6 Forests are associated with the U.S. Army's Spruce Production Division (SPD), formed in 1917, to harvest Sitka spruce for use in aircraft construction. "In its short life," observed historian Ward Tonsfeldt, "the SPD provided labor in logging camps and mills, built and operated 13 logging railroads, condemned and purchased timber lands, and built two lumber mills of its own." Constructed in 1918-1919, railroad lines were critical in order allow the Spruce Production Division to take logs out of the forests for shipment to mills. The Division planned thirteen railroads for western Washington and Oregon, with mileage totaling 173 miles of main line and 181 miles of spurs (Williams: 1999:6).

### **Military Operations**

During World War II, the U.S. military operated training camps and conducted training maneuvers on national forests. Most of the resources associated with these activities are now below-ground, but some above-ground earthworks may remain. One example of a WW II military installation with impact on the national forest is Camp Abbott, which conducted maneuvers on the Deschutes NF.

### **Other Cooperating Agencies**

Other agencies that operate cooperative facilities on national forests in Region 6 include the following:

- U.S. Army, Corps of Engineers
- U.S. Bureau of Reclamation
- U.S. Department of Fish and Wildlife
- Bureau of Land Management

By and large, these cooperative facilities consist of generic buildings that show the temporal and architectural characteristics discussed earlier in this chapter.

# CHAPTER 4

## Evaluation

### ELIGIBILITY CRITERIA

Chapter 4 provides guidelines for evaluating Region 6's buildings, sites, objects, structures, and districts for listing in the National Register of Historic Places. The significance of a Region 6 historic resource must be determined through investigating their qualities, associations, and characteristics. This investigation should include the following:

1. Identification of the specific property type, recording of the resource's individual physical characteristics through field analysis, and documentation of the property's history.
2. Identification of the historic context(s) and themes associated with the property based on accurate documentation of the property's history.
3. Evaluation of the significance of the property based on the National Register of Historic Places criteria.

### CRITERIA

Evaluation is the process of determining the significance of a resource based on the National Register of Historic Places criteria. To be potentially eligible for listing in the National Register, the resources have to retain integrity of location, design, setting, materials, workmanship, feeling and association; be at least 50 years old; and meet one or more of the National Register criteria below:

- A Associated with an event or patterns of events or historic trend that has made a significant contribution to the history of the community, the region, the state, or the nation; or
- B Associated with the lives of persons significant in our past; or
- C Embodies distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D Yielded, or may be likely to yield, information important in prehistory or history.

### SPECIAL CRITERIA CONSIDERATIONS

Certain types of properties are not usually considered eligible for listing in the National Register, although special considerations may warrant inclusion. Moved buildings and properties that have gained significance within the past 50 years are among those properties usually considered ineligible for National Register listing. These properties, however, can be eligible for listing if special considerations are met. Properties in Region 6 that *may* meet these special considerations are moved buildings or structures, or buildings less than 50 years old.

Example of properties that must meet the Special Criteria Considerations include:

- A resource moved from one location on its original site to another location on the property, during or after its Period of Significance.
- A district that has a significant number of resources have been moved from their original locations.
- A district that has one moved building that made an especially significant contribution to the district.
- A portable resource such as a scaler's residence/office that is relocated to a place incompatible with its original function.

- A portable resource whose importance is critically linked to its historic location or route, and that is moved.
- A property built after the period of significance and is less than 50 years old but is historically or architecturally significant.

## TEMPORAL DISTRIBUTION

The temporal boundaries of this historic context span the years 1905-1960, and are divided into developmental periods. These eras represent important shifts in the patterns and events of the Forest Service administration at the national, regional, and local level. The Forest Reserve Period, 1897-1904, and other pertinent contextual information from the eighteenth and nineteenth centuries are included in the discussion of the resource types to provide a broader understanding of the development of the Region 6 and its built environment.

- 1891-1904 Forest Service Reserve:** Although there are no known extant resources specifically built by the Forest Service dating from this early period, historic resources constructed during this era may be potentially significant for its rarity, especially if constructed for Region 6.
- 1905-1912 Early Forest Service Period:** These resources are represented mainly by Administrative properties, and are limited in number. These represent the earliest period of the National Forest system in Region 6. Many of these buildings have been demolished or remodeled over the years.
- 1912-1932 Intermediate Forest Period:—FS Management Comes of Age:** These resources are represented by Administrative, Recreation, and other Special Use property types. Many of the resources in these post-date World War I when the automobile made forests more accessible for recreational users. New administrative buildings were also added during this period.
- 1933-1941 Depression Era 1933-1942:** This was the most prolific building period in the Forest Service history when labor and funding were provided for both Administrative and Recreation facilities. Site and building plans were standardized, designs reflected the “Rustic style,” and local building material utilized. Associated with the New Deal, the majority of these resources were built by CCC labor.
- 1942-1960 World War II and the Post-War Era:** This period marks a shift in the Forest Service building program. Portable, previously utilized, and prefabricated buildings were often used in the Forests, especially immediately following the war when funding was limited. The 1950s brought in another Administrative building boom; the buildings from this period reflect the Northwest Regional or Ranch styles.

## PERIOD OF SIGNIFICANCE

The Period of Significance for historic properties in Region 6 may be a specific construction date or it may reflect bracketed dates as outlined in the periods above depending on the criteria used of designation (themes, developmental periods, etc.). It is possible to have more than one Period of Significance. The Period of Significance will usually fall between 1905 when the Forest Service was established and the 50-year cutoff date (1954 at the time of this writing). Clearly, the end date for periods of significance continues to advance and appropriate adjustments should be made to accommodate the passing of time. When considering resources for the National Register that are less than 50 years old, the Special Criteria Considerations can be used to justify inclusion of significant resources.

Contributing and Non-Contributing Resources: Determining the Period of Significance (POS) is critical in establishing property types as either contributing or non-contributing historic features when evaluating a district, ensemble, or grouping of resources. The significant period provides a benchmark from which the integrity and

significance of a resource can be measured. If the POS is very specific, then a precise representation of the historic period is warranted. However, if the POS covers several decades, then contributing resources are more likely to reflect the property type's evolution throughout the historic period. A contributing resource property must have been built during the period of significance, relate to the documented significance of the property, and possesses sufficient historic integrity to reflect its historic associations.

## AREAS OF SIGNIFICANCE

Forest Service buildings, sites, objects, structures, and districts in Region 6 may be broadly described as significant for their association with a major Federal land managing agency whose administration of public land and resources influenced the historic development of local communities reliant on them for environmental, economic and recreational needs. The broader historical patterns described by the activities, policies, and programs of the Forest Service are those of natural resource conservation and development, and public land management (Throop, 2003). Secondly, the themes of politics and government, social history, recreation, landscape architecture, and/or architecture are also represented.

## INTEGRITY

### Components of Integrity

Integrity indicates the property's ability to convey historic significance. The level of integrity is based on the degree of preservation – the amount of disturbance caused by alterations or loss of historic materials. Assessment of integrity is necessary in order to determine potential National Register eligibility and future management plans. In brief, the National Register defines the seven components of integrity listed below that must be considered for each historic resource:

- **Location** as the place where the historic resource was constructed;
- **Design** involves the organization of space, proportion, scale, technology and ornament;
- **Setting** is the physical environment of the property;
- **Materials** are the physical elements that were combined or deposited in a particular pattern or configuration in the building process;
- **Workmanship** is the physical evidence of the crafts of a particular culture or people...the evidence of a craftsman's labor and skill in constructing...Workmanship may be expressed in vernacular methods of construction and plain finishes, or in highly sophisticated configurations;
- **Feeling** is the quality of that a historic resource has in evoking the aesthetic or historic sense of a past period of time;
- **Association** is the direct link between a property and an event, or person for which the property is significant.

### Guidelines for Evaluating Integrity

Varying degrees of integrity should be taken into consideration when evaluating resources under the four primary National Register criteria.

**Criterion A** If eligible for its historic associations under Criterion A, then the resource should retain substantial aspects of integrity, although design and workmanship may not weigh as heavily as aspects related directly to its historic associations.

**Criterion B** To be eligible for its association with a prominent person under Criterion B, the resource should retain some aspects of integrity, although design and workmanship may not be as important as the others.

**Criterion C** To be eligible for its architectural merits under Criterion C, properties must retain its physical features that constitute its significant construction technique or architectural style. Critical aspects of integrity for these properties are design, workmanship, and materials. Location and setting will also be important for those resources whose design reflects their immediate environment, for example a lookout tower located on a mountain peak.

**Criterion D** Resources significant under Criterion D may not have the type of integrity described under the other criterion. Of the seven aspects, location, design, materials, and possibly workmanship are the most important.

## RESOURCE TYPES

Resources strongly associated with these significant themes may be eligible for listing in the National Register of Historic Places under Criteria A in include Administrative, Recreation, Special Resources, and resources associated with Cooperative Management.

### Administrative

Properties developed or used by the Forest Service for administering and managing National Forest lands include a wide variety of property types from residential dwellings to gas houses. The main categories of property types are residential sites, ranger stations, offices, work centers, and fire suppression facilities. The following property types are associated with Forest Service administration and its corollary themes of natural resource conservation and development, and public land management:

**Table 15: Administrative Property Types**

Residential/ Domestic	Support/Utilitarian Buildings	Office	Landscape Elements	Forest Health & Fire Protection
Barracks	Blacksmith Shop	Office	Driveways	Fire Cache
Bathhouse	Carpentry Shop	Office/Residence	Flagpoles	Guard Stations
Bunkhouse/Crew House	Garage	Ranger Headquarter	Footbridges	Lookouts
Cabin	Gas and Oil House	Guard Station	Gardens	Trails
Garage	Generator Shed		Parking Areas	Trail Shelters
Latrine	Mess Hall		Retaining Walls	Air Centers
Portable Residences/ Pre-fabricated	Power House		Rock Walkways	
Residence/Dwelling	Pump House			
Tents	Recreation Hall			
Woodshed	Shop/Shed (mechanic, auto, trucks, sign)			
	Sheds (paints, lumber, storage, tools, pesticide, etc)			
	Stables, barns, corrals			
	Toilets			
	Warehouse			
	Power House			
	Woodshed			

## Recreation

Properties developed or used by the Forest Service recreation in the National Forest lands include a wide variety of property types. The property types most closely associated with recreation include Campgrounds & Picnic Areas, Resorts & Lodges, Trails & Shelters, Summer Home Tracts, Winter Sports Areas, Organizational Camps, and Clubs. The following property types are associated with the theme of Recreation.

**Table 16: Recreation Property Types**

<b>Campground &amp; Picnic Areas</b>	<b>Resorts &amp; Lodges</b>	<b>Recreational Trails &amp; Structures</b>	<b>Summer Home Tracts</b>	<b>Winter Sports Area</b>	<b>Organizational Camps — Public &amp; Public</b>	<b>Clubs (Private)</b>
Amphitheatre	Bath House	Benches	Barbecues	First Aid Shelters	Bathhouses	Barbecue/ Fireplace
Camp Stoves & Fireplaces	Beach Resources (beach, dock, float, lifeguard tower, bathhouse)	Footbridges	Cabin	Shelters	Boathouses	Cabins
Community Kitchens	Boat House	Handrails	Fire pits, fireplaces	Ski Lifts & Tows	Cabins	Clubhouse
Footbridges	Gas and Oil House	Monuments, Signage, & Memorials	Garage	Ski Slopes	Dining Hall	Landscape Features
Group Facilities	Guest Cabins	Overlooks	Landscape Features	Ski Trails	Group Facility	Outhouse
Landscape Feature Trees and Shrubs	Lodge	Parapets & Walls	Outhouse	Tobogans & Sled Runs	Lodges	Sleeping Quarters
Playground Equipment	Playground Facilities	Trails & Roads	Trash Pits		Sleeping Shelters	Storage Building
Pump Shelters & Spring	Power House/ Utility Buildings	Trail Shelters	Woodshed		Recreation & Play Areas	Trash pit
Roads	Pump Station				Toilets	Woodshed
Registry / Info Booths	Signage				Utility/Storage Buildings	
Signs: Entrance, directional, and/or informational	Sports Facilities					
Storage Buildings	Stable and Corral					
Tables	Water and Sewage					
Tent Spaces						
Toilets and Comfort Stations						
Trails and Roads						
Water Systems- Drinking Fountains						

## SPECIAL RESOURCE TYPES

Resources in this section are specialized historic buildings, structures, sites, and objects that the Forest Service has constructed or acquired for its own use. Typically, a specialized Forest Service facility will include some generic administrative buildings as well as some distinctive structures. A research station, for example, would have generic office buildings, residential buildings, and service buildings, as well as specialized laboratory buildings.

**Experiment Stations & Nurseries** Experiment stations usually includes numerous buildings developed for use by Forest Service research stations. Nurseries are associated with a ranger station, and established to grow trees and other plant stock.

**CCC Camps** A series of standard buildings developed and built by the CCC. Initially controlled by the Army, these camps were laid out in precise manners depending on their designation as permanent, semi-permanent, or portable camps.

**Timber Production** Timber production facilities are generally associated with the post-war period, and especially with truck logging.

## COOPERATIVE RESOURCE MANAGEMENT

**Snow-Survey Cabin** Snow-survey cabins are used by the Forest Service in conjunction with other agencies and organizations to manage water resources.

**Fish Hatcheries** State and federal agencies built hatcheries for propagating salmon and trout on most of the forests of Region 6.

**Railroads** Historic government railroads on Region 6 Forests are associated with the U.S. Army's Spruce Production Division (SPD), formed in 1917, to harvest Sitka spruce for use in aircraft construction.

**Military Operations** During World War II, the U.S. military operated training camps and conducted training maneuvers on national forests. Most of the resources associated with these activities are now below-ground, but some above-ground earthworks may remain.

**Table 17: Special Resource Types and Cooperative Resource Management**

Experiment Stations & Nurseries	CCC Camps	Timber Production Facilities	Snow-Survey Cabins	Fish Hatcheries	Railroads	Military
Arboretum	Administrative	Booming ground	Cabins	Admin Buildings	Grade	Earthwork
Barn	Amphitheaters	Platforms		Hatchery Pool	Grade feature	
Bath house	Barns	Portable office/residences		Hatchery Buildings		
Bunkhouse	Barrack	Re-Load sites		Residences		
Cold storage	Garage	Roads & bridges		Service Buildings		
Fields-Landscape Features	Gas & Oil House	Scaling Stations				
Fire hydrant house	Garage					
Garage	Hospital					
Greenhouse	Landscape					

	features					
Laboratory	Machine/ carpentry shop					
Mess hall	Mess hall					
Office	Office					
Oil House	Recreation hall					
Outhouse	Swimming pools					
Packing shed	Tool shed					
Residence	Vehicle shelters					
Root house						
Sheds						
Shops						
Special use						
Storage shed						
Warehouse						
Woodshed						

## REGISTRATION REQUIREMENTS

### Associative Qualities and Physical Characteristics

The following requirements for the property types outline the associative qualities and physical characteristics that define a building, structure, or site's significance. These physical characteristics and associative qualities are the basis for theme-specific criteria to measure the relative architectural, stylistic and historic values. While Criteria B may apply also apply to individual sites or structures, Region 6 historic resources will qualify under Criterion A and/or Criterion C; these two Criteria are discussed in detail below.

### Administrative: Buildings and Sites

#### Associative Qualities

**Early Administrative Resources (1905-1932):** Administrative resources built in Region 6 between 1905 and 1932 from the Early Forest Service Period (1905-1911) and Intermediate Forest Service Period (1912-1932) are potentially significant under National Register Criterion A for their association with the historic development of Forest Service, "whose administration of public land and resources influenced the historic development of local communities reliant on them for environmental, economic, and recreational needs. The broader historical patterns described by the activities, policies, and programs of the Forest Service are those of natural resource conservation and development, and public land management" (Throop, 1995:5).

The administrative resources from this period have strong associations with the historical development of natural resource conservation, and are located in forest where Forest Service Rangers established administrative sites to oversee activities of the local jurisdiction, and in response to the establishment of National Forest regulations. Historically, these structures were built before funding and labor became available through the Great Depression work-relief programs that emphasized standardized planning and designs. Generally, resources built between 1905 and 1911 were constructed by Forest Service officers/rangers considering cost and location, and the resources constructed between 1913 to 1932 were built under the direction of Forest Officers with guidance from the Regional Office concerning cost and appearance (Throop, 1995:6).

***Depression Era Resources (1932-1941):*** Depression Era administrative resources are significant under Criterion A for their direct association with the political and legislative events of President Franklin Roosevelt's New Deal. These events signify the unprecedented intervention of the Federal government in the economic life of the country and in the welfare of its citizens. Associative qualities that distinguish these property types include: designed by architects in the Regional Office with consideration for agency image and identity; constructed by the CCC work crews; Federal government's response to the Depression; and translation of needed work identified in the Copeland Report (1933) into CCC work projects, supervised by the Forest Service (Throop, 1995: 5-6).

***World War II and Post-War Resources (1942-1960):*** These resources are potentially eligible under National Register Criterion A for their direct association with the "extractive" era in Region 6. After the war, when demand for timber intensified, the agency's forest personnel and building program rapidly expanded. As a result, the Forest Service established new relationships with the private timber industry and other agencies, and developed new management methods.

The specific associative qualities that contribute to the ability of these property types' to reflect Forest Service historic development include: designed by architects in Regional Office with consideration for agency image, compatibility with existing buildings, and cost; the Federal government's response to the Post-War booming demand for resources and limited budgets; and the new Federal government design standards to be enforced on individual Forests.

*Note:* Many Forest Service properties include buildings from several eras. An administrative complex, for example, might include a 1920 barn, a 1928 fire-guard's residence/office, in addition to CCC-era buildings, and post-World War II residences. In cases such as this, the property will have an extended, continuous period of significance, or several periods of significance and all of the buildings should be evaluated for historic significance.

### **Physical Characteristic: Buildings and Sites**

In order to be eligible under Criterion C, the administrative resources in Region 6 must embody the distinctive characteristics of its type and retain sufficient architectural integrity. These include a variety of resources including residences, cabins, storage buildings, barns/stables, warehouses, maintenance sheds, and garages.

***Early Administrative Resources (1905-1932):*** Early administrative buildings were Vernacular in style representing the regional architecture and skills of the builders. Constructed by local builders or Forest Service rangers, these buildings represented in this period often had characteristics of the Bungalow or Craftsman style, a popular regional style. The common features on the residential buildings included gable or hip roofs often with dormers, one to one-and a-half stories, eave overhangs with exposed rafter tails, shiplap, clapboard, wood shingle or shake, or drop siding, 1/1 or multi-pane double-hung windows, and full or partial porches. The more remote administrative buildings were sometimes log structures with gable roofs, porches, and multi-light windows. More vernacular building types include simple rectangular buildings with gable roofs, full or partial porches, and board and batten siding. These resources lacked the standardized design elements that were the hallmark of the CCC era Forest Service buildings. Utilitarian buildings were such as barns and stables were vernacular in style, and generally had board and batten, or drop siding, hip or gable roofs, hay loft hoods, and large sliding doors.

***Depression Era Resources (1933-1941):*** The Depression Era resources were generally architect-designed buildings or constructed from standardized plans books provided by the regional or national Forest Service offices. These reflected the Rustic style that became associated with the Forest Service and National Park Service buildings. Common physical characteristics that define this era include:

Natural and Native Materials - Milled/manufactured, locally processed or obtained rough-sawn beveled siding, shiplap, and flush drop-siding, wood shingles or shakes, peeled log; board and batten; and field and rubble stone.

Varied Exterior Treatment - Materials applied differing in size, shape, and finished surface. Detail enhanced by juxtaposing two (or more) contrasting textures. Single texture - manufactured wood - a common treatment; single texture - natural rustic materials (log, stone); multiple textures of stone and wood, stone and log, and differing wood surfaces characteristic also.

Gable, Hip, and Shed Roof Shapes - Primary design, pitch appropriate to climatic conditions. Roof configurations range from single shape, varied in size, position, and number - to occasional complex designs incorporating two or more shapes, variously reiterated in porches, hoods, and dormers.

Multi-Paned Windows - Both double-hung sash, casements, and/or fixed-light. Window treatments differ in size and aspect, and range from single divisions to groups of two or three, generally with divided lights. Arrangements also vary from regularity to asymmetry.

Chimneys - Massive brick or stone (dressed, random coursed; field stone) exterior side or end, and/or brick or stone-faced interior.

Dormers - Complimentary or contrasting to the roof shape.

Main Entry - Covered with small portico or porch.

Shutters - Often present as a decorative element as well as functional purpose. Forest Service tree cut-out symbols common.

Trim - Limited and most often subtle, including items of architectural vocabulary such as heavy timber posts, usually single but occasionally paired, often with brackets or corbels. Oversize roof and other structural members are also used.

Landscape - To enhance relationship of building/structure to site -- includes built features such as dry-laid or mortared stone retaining walls, paths/trails, roads/spurs defined with stone.

Style - Representative of the Rustic style, but other regional adaptations are also present.

*Note:* Buildings constructed very early in the CCC program may lack the fuller articulation of the Rustic style that flourished later in the Depression in the Pacific Northwest. These buildings may exhibit definitive characteristics of their type and should not be discounted (Throop, 2003).

### ***World War II and Post-War Resources (1942-1960)***

Exterior Treatment – Board and batten, or horizontal lap siding; plywood siding with cedar veneer.

Gable or Hip – Generally low profile gable roofs covered with wood shingle or shakes. Eave overhangs.

Fixed, Awning, or Hopper Windows – Single light windows. Sometimes skylights added to entrance areas.

Chimneys – Brick chimney.

Main Entry - Covered with small portico or porch, or sheltered by part of carport roof. Sometime a recessed entrance.

Trim – Simple narrow trim boards.

Landscape - To enhance relationship of building/structure to site -- includes built features such stone patios and porches. Integrated into the landscape.

Style - Representative of the Ranch or Northwest style, but other regional adaptations are also present.

## **Administrative: Fire Detection and Suppression**

Extant fire detection and suppression structures in Region 6 are directly associated with the Forest Service's management of public land and natural resources. Constructed by forest employees and carpenters, these structures have played a critical role in the development of fire detection on Region 6 forests. Trails and other service facilities such as roads, shelters, and bridges were very important to the protection of the forests.

Property types associated with fire detection in Region 6 include lookout trees and platforms, lookout cabins and towers, guard stations, garages, and outhouses. As property types, extant fire lookouts, guard stations, and their associated structures are identified by shared physical and associative attributes. Individual resources within a property type display various physical attributes characteristic of specific time periods. In all, however, the components of the property type, all represent the Forest Service's steady execution of its mission to regulate and protect use of the national forests through fire detection and suppression. Other fire detection and suppression-related property types include trails, trail shelters, roads, bridges, and communication facilities such as telephone lines.

### **Associative Qualities**

#### **Lookouts**

The extant historic fire lookouts on Region 6 are potentially eligible under National Register Criterion A for their associations with public land administration and natural resource conservation—specifically fire detection and suppression. The lookouts are characteristic of different time periods, and when considered as a whole, represent an evolution in lookout construction styles. As rare and relatively short-lived structures, the lookouts are vulnerable to snow loads, moisture, high winds and vandalism.

Specific associative qualities that contribute to fire lookout's representation of Forest Service Region 6 historic development include: designed by Forest Service engineers in the variety of standard lookout styles developed between 1910 and 1960; reflect the Forest Service goals for natural resource protection through fire detection and suppression, identified with catastrophic events, and resulting legislation; and constructed by CCC enrollees under direction of Forest officers, as part of the New Deal work-relief program.

***Early Administrative Lookouts (1905-1932):*** The D-6 cupola lookouts reflect the early years of the historic period, from World War I until the beginning of the Great Depression. These structures are closely associated with the development of the Forest Service and that agency's initial attempts at standardization in the fields of fire detection and suppression. The cupola lookout represents the agency's "early day" fire suppression efforts in the forests of the Pacific Northwest – of the "lonely vigil" of a fire observer stationed on the summit of a remote peak.

***Depression Era Lookouts (1933-1941):*** The L-4 hipped gable-style lookouts are associated with New Deal's Civilian Conservation Corps program during the years of the Forest Service's continued attempts at standardization in fire detection and suppression.

***World War II and Post-War Lookouts (1942-1960):*** Placed on Region 6 Forests between about 1957 and the early 1960s, the R-6 "flat-top" lookout extend the long continuum of fire detection efforts in rugged areas of the Pacific Northwest. Significant for their role in the continuum of fire detection and suppression in Region 6, these lookouts helped maintain a reliable timber supply to meet the intense post-World War II demand. Placed in relatively small numbers, the R-6 lookouts represent new technologies and materials available after the war.

### **Physical Characteristics**

#### **Lookouts**

In order for properties to qualify for listing, Region 6 National Forests must have used the lookouts for fire detection and suppression during the historic period, and be clearly associated with the government and

conservation activities of the National Forest. The fire lookouts, intact examples of D-6 cupola, L-4 style, R-6 flat-roofed lookouts, or platform lookouts, must retain sufficient *integrity* of location, setting, design, and materials to evoke the period of their construction and historic use. The integrity of the structure should not be compromised by relocation, reconstruction, or by substantial replacement materials. The fire lookouts should embody craftsmanship and materials, and retain its historic associations. Representative physical characteristics of fire lookouts include:

D-6 Cupola Lookouts: Characteristics include: lookouts made of a pre-cut kit of wood frame construction; a square floor plan of approximately 12'x 12' dimensions; a main story with a wood shingled, hipped roof cupola; double "v" rustic, or clapboard siding; top-hinged, wood windows on elevations of the main story; and wooden shutters on the main and cupola stories. Interior components include wood, tongue-in-groove wall covering and flooring, or wallboard covering of Celotex or a like material.

L-4 Lookout: Characteristics include: structures built according to standardized plans and from pre-cut kits; a square floor plan, approximately 14 x 14 feet, a hipped roof; two-over-two light windows; and door and "awning" type window shutters. A variant of the L-4 lookout style has extended ceiling joists that form external attachments for the "awning" type window shutters when the structure is in use. Typical construction materials included a wood-shingled roof, tongue-in-groove ceilings, interior siding and floor.

R-6 Lookout: Characteristics include: a structure that has a 15' by 15' cabin dimensions; flat, tarred roof; no shutters or window coverings; and siding typically constructed of T-1-11 plywood or similar prefabricated wood materials. Early R-6 lookout cabins had seven windows per wall with four lights each and an open soffit. Later models had one light above and one larger light below and closed soffits. Standard on the interior of all R-6 lookouts as well as earlier models was the Osborne Firefinder.

## **Associative Qualities**

### **Guard Stations**

Region 6 guard stations are potentially eligible under National Register Criterion A for their association with the Forest Service and its administration of public lands and natural resources. Characteristics that distinguish these resources are also related to location and period of use, design and materials. Guard stations built in Region 6 prior to the Depression-Era, were typically constructed in isolated areas of native materials. From these rural headquarters, the Forest Service managed natural resources. Guard stations built during the Depression Era served similar functions.

Specific associative qualities that contribute to the Region 6 Guard Station's significance include: designed by Forest Service officers between 1905 and 1932 with consideration for cost and location; reflect the Forest Service goals for natural resource protection through fire detection and suppression and; constructed by CCC enrollees under direction of Forest officers, as part of the New Deal work-relief program in the 1930s.

## **Physical Characteristics**

### **Guard Stations**

In the early years of Forest Service development, guard stations often had dual purposes as administrative and fire suppression-related facilities. These were often single structures with sometimes an associated outhouse and barn. The physical characteristics and the stylistic elements of these buildings are the same as the development of the administrative buildings and sites. The same types of physical characteristics and attributes are discussed in "Administrative Buildings and Sites" section above.

## Recreation Facilities

### Associative Qualities

The following assessment of associative values pertaining to the historical significance of Region 6 Recreation Facilities is from Elizabeth Gail Throop's *Recreation Development in the National Forests in Oregon and Washington* (2004).

[These] requirements for the property types set apart the physical characteristics and associative qualities that compose a building, structure, or site's significance. These physical characteristics and associative qualities are the basis for theme-specific criteria to measure the relative architectural, stylistic and historic values.

As a property type, Forest Service recreation buildings, structures, and sites are significant under Criterion A, for their association with a major Federal land managing agency whose administration of public land and resources influenced the historic development of local communities reliant on them for environmental, economic and recreational needs. The broader historical patterns described by the activities, policies, and programs of the Forest Service are those of natural resource conservation and development, and public land management.

As a property type, privately-built recreation resources on the National Forests are significant under Criterion A, for their association with important trends in the historic development of the travel, tourism, and/or hospitality industries, and in the growth of outdoor recreation in the States of Oregon and Washington.

As a property type, Forest Service Depression Era recreation resources are significant under Criterion A, for their direct association with the political and legislative events of President Franklin D. Roosevelt's New Deal. These events signify the unprecedented intervention of the Federal Government in the economic life of the country and in the welfare of its citizens. The broader pattern inherent in these events is the recasting of American thinking on the responsibilities of government, and the resultant change in the role played by the Federal government.

The associative qualities that qualify an example of the property type, relevant to Criterion A, include:

- Tangible manifestations of the Good Roads Movement, and mass-production of the automobile.
- Represent private development of long-term, permanent recreation facilities to serve public needs.
- Represent private response to Forest Service measures to encourage public recreation on the National Forests.
- Public or private organizational efforts to promote outdoor recreation and good health for youth and/or constituents.
- Agency's response to establishment of public land and resource management mission to regulate use of National Forests.
- Designed by Architects in Regional Office, with consideration for agency image and identity.
- Built by Forest Service employees in the early recreational use of the forest.
- Built by CCC, 1933-42; end products of New Deal direct-aid, work-relief program.
- Recall Federal government's response to the Depression, and the problems of unemployed youth.

- Translation of needed work identified in 1933 "A National Plan For American Forestry" (the Copeland Report) into work projects for CCC, supervised by technical agency.

## **Physical Characteristics**

The physical characteristics that qualify examples of recreation property types relevant to Criterion C include:

### ***Early Forest Period (1905 -1911)***

Natural and Native Materials - Logs, local and on-site; field or rubble stone.

Single Exterior Treatment - Hewn or round logs, scribed or unscribed.

Gable, Shed, Hip Roof Shapes - Pitch responds to climatic conditions; roof trim projects, open; roof configuration simple, gable - primary shape, entry, porch covered with gable extension or shed roof.

Windows - Single and double-hung sash, singly placed for light and ventilation

Chimney - Interior chimney, stovepipe, occasional stone exterior end chimney.

Entry - Plain, covered.

### ***Intermediate Period (1912-1932)***

Natural and Native Materials - Milled/Manufactured -- shiplap, clapboard, flush drop-siding, shingles; limited processing -- peeled logs, field and rubble stone.

Single Exterior Treatment - Materials applied in uniform finished surface. Single Texture - manufactured wood or round logs.

Gable and Shed Roof Shapes - Gable shape predominates, pitch appropriate to climatic conditions. Primary shape may be reiterated in complimentary roof dormers. Porches may be extended gable shape, or shed roof along long axis of building.

Windows - Single sash, fixed, or paired with horizontal slide opening; may be single light or multi-light divisions; one-over-one double-hung sash, singly or in pairs. Arrangements vary from regularity to asymmetry.

Chimneys - Brick or stone exterior side or end placement; interior chimneys.

Entry - Plain, covered.

### ***Depression Era Period (1932-1941)***

Natural and Native Materials - Milled/Manufactured, locally processed or obtained -- rough-sawn beveled siding, shiplap and flush drop-siding, shingles: limited processing -- peeled logs, field and rubble stone.

Varied Exterior Treatment - Materials applied differing in size, shape, and finished surface. Detail enhanced by juxtaposing two (or more) contrasting textures. Single texture - manufactured wood - a common treatment; single texture - natural rustic materials (log, stone); multiple textures of stone and wood, stone and log, and differing wood surfaces characteristic also.

Gable, Hip, and Shed Roof Shapes - Primary design, pitch appropriate to climatic conditions. Roof configurations range from single shape, varied in size, position, and number - to occasional complex designs incorporating two or more shapes, variously reiterated in porches, hoods, and dormers.

Multi-Paned Windows - Both double-hung sash and casements. Window treatments differ in size and aspect, and range from single divisions to groups of two or three, with and without mullions. Arrangements also vary from regularity to asymmetry.

Chimneys - Massive brick or stone (dressed, random coursed; field stone) exterior side or end, and/or brick or stone-faced interior - regular features.

Dormers - Complimentary or contrasting to roof shape.

Main Entry - Covered, with cover repeating roof shape.

Shutters - Often present as a decorative element as well as functional purpose.

Trim - limited and most often subtle, including items of architectural vocabulary such as heavy timber posts, usually single but occasionally paired, often with brackets or corbels. Oversize roof and other structural members.

Objects: Shelters, registration booths, fountains, campground stoves, fireplaces, pits, outhouses - generally rock and wood structures that blend into the surrounding natural setting in form and material. Use of native materials.

Landscape - To enhance relationship of building/structure to site - includes built features such as dry-laid or mortared stone retaining walls, paths/trails, roads/spurs defined with stone.

### ***World War II and Post-War Period (1942-1960)***

Exterior Treatment – Board and batten, or horizontal lap siding; plywood siding with cedar veneer.

Gable or Hip – Generally low profile gable roofs covered with wood shingle or shakes. Eave overhangs.

Fixed, Awning, or Hopper Windows – Single light windows. Sometimes skylights added to entrance areas.

Main Entry - Covered with small portico or porch, or sheltered by part of carport roof. Sometime a recessed entrance.

Trim – Simple narrow trim boards.

Landscape - To enhance relationship of building/structure to site -- includes built features such stone patios and porches. Integrated into the landscape.

Style - Representative of the Ranch or Northwest style, but other regional adaptations are also present. Minimal detail, and simplicity of form.

## **Summary**

The significance of the property types are closely tied to early Forest Service land management, and are interrelated. Buildings, sites, objects, structures, and districts have both associative and architectural values: the architecture itself is often associative. Thus, much of their significance is carried in their character and appearance.

To meet the applicable criteria, a property must have retained most of the physical features that characterize the respective period expressions, and its historic materials: the original design must be clearly discernible, and workmanship in construction and finish evident. The property should be in its original location, with the natural or built setting at least partially intact. A property that has been relocated to a wholly compatible environment will be considered, if the building retains its historic appearance and character. The architectural character of the property type ranges from the very plain and simple to highly stylistic. The plain buildings tolerate less change than the more elaborately styled ones, that is, relatively fewer modifications can be made before the historic identity is lost.

## **Organization for Potential National Register Nominations**

There are a variety of ways in which Region 6 staff can approach the organization for future Determination of Eligibility studies and nominations to the National Register of Historic places, whether individual

nominations or multiple property submissions. Choices regarding optimum ways to proceed will necessarily involve internal considerations such as efficiency, staff availability, and agency budgets.

Agency personnel may consider establishing priorities for completing Determination of Eligibility's (DOE) or National Register nominations. This might be based on rarity of type and use. For example, extant buildings/structures from the 1905-1911 time period are extremely rare and might rate higher in priority for documentation and protection.

The Forest Service can select from a variety of approaches to complete further documentation of historic resources – grouping the properties by historic theme, property type or geography, or complete either individual nomination forms or Multiple Property Submissions. For example, in 1993, the Mt. Hood National Forest produced an individual National Register nomination for the Bagby Guard Station. In 1994, the Siskiyou National Forest completed a Determination of Eligibility document “Historic Fire Lookouts on the Siskiyou National Forest,” a study of all eight extant fire lookouts on the Forest. In 1999, the Rogue River National Forest produced a Multiple Property Submission to the National Register entitled “U.S. Forest Service Historic Structures on the Rogue River National Forest.” The document included fourteen eligible resources associated with the development of the Crater/Rogue River National Forest in southwest Oregon. The resources in the latter project ranged in date from 1911 to 1943, and encompassed administrative buildings, fire lookouts, snow-survey cabins, a campground, and shelters. These fourteen structures were selected for their quality, integrity, and significance.

Individual National Register nominations and/or DOE's for any qualifying properties can be completed on a case-by-case basis by individual Forests as time and money permit. Multiple Property Submissions provide a wide range of choices for organization, including by entire Forest Service Region, by State (Oregon and Washington) or geographic area or by individual Forest, and are less labor intensive and can cover a wide range of properties.

The Forest Service could, for example, focus on a property type such as fire lookout cabins/towers and prepare a Multiple Property Submission focused in any one of the above-mentioned geographic configurations. Agency staff can then decide if it is most efficient or best suited to the agency's needs to document the number of L-4-type lookout cabins/towers remaining in the entire region, or east and west of the Cascades, or in Oregon or Washington, or on an individual Forest.

Following are examples of *potential* Multiple Property Submissions organized in various ways according to the project's focus, geographic area and chronological period:

- Early U.S. Forest Service Historic Structures, Region 6, 1905-1911.
- Early U.S. Forest Service Historic Structures, Oregon, 1905-1911.
- Early U.S. Forest Service Historic Structures, Washington, 1905-1911.
- U.S. Forest Service Historic Structures by each National Forest.
- U.S. Forest Service CCC/WPA Rustic Style Guard stations in Region 6; or by Forest; or state.
- CCC/WPA Rustic Style Administrative Complexes in Region 6; or by Forest; or state.
- CCC/WPA Recreation Facilities in Region 6; or by Forest; or state.
- Pre-CCC Era Historic Structures in Region 6 (1905-1932).
- U.S. Forest Service Fire Lookouts, Region 6; or “Cupola-style” Lookouts in Region 6.
- Summer Home Tracts in the Region 6 (as a property type or by Forest).

- U.S. Forest Service Recreation Facilities in Region 6-by property type or forest (ie. campgrounds, ski facilities, trails, public group facilities)
- World War II Historic Resources in Region 6
- Post-World War II Administrative Buildings and Sites in Region 6
- U.S. Forest Service Nursery Complexes in Region 6
- U.S. Forest Service Experiment Stations in Region 6
- Snow-Survey Cabins in Region 6
- Cooperative Management Resources in Region 6

# CHAPTER 5

## References

AINW and Sally Donovan

- 2003 "Determination of Eligibility for the Still Creek Summer Home Tract." Rhododendron, OR. Oregon Department of Transportation, Salem, OR.

Atwood, Katherine C.

- 1999 "Star Ranger Station Building." National Register of Historic Places Nomination. USDA Forest Service Rogue River-Siskiyou National Forest.

Barrett, H.

- 1952 Memorandum to Regional Forester, Region 6. March 20, 1952. Engineering 95-55BP062, Box 13346 E- Improvements. Record Group 95 Records of the USDA Forest Service, Pacific Northwest Region, Region 6. National Archives and Records Administration Pacific Alaska Region, Seattle, WA.

Bach, Melva M.

- 1989 *History of the Fremont National Forest*. Fremont National Forest, Lakview, OR.

Beaman, T.

- 1950 Memorandum June 26, 1950 to Regional Forester Region 6. 95-54BP045, Box 6811. E-Improvements. Record Group 95 Records of the USDA Forest Service, Pacific Northwest Region, Region 6. National Archives and Records Administration Pacific Alaska Region, Seattle, WA.

Carricker, Robert M.

- 1991 "Fire Lookout Context Study Document." Draft Manuscript. USDA Forest Service, Pacific Northwest Regional Office, Portland, OR.

Caywood Janene, Theodore Catton, and James McDonald.

- 1991 Evaluation of Region 1 Forest Service Owned Buildings for Eligibility to the National Register of Historic Places. Report prepared for USDA Forest Service, Region 1, Missoula, Montana, Contract No. 53-0343-9-00047. Historical Research Associates, Inc., Missoula.

Cleator, Fred W.

- 1924 "Recreation Objectives" *Parks and Recreation* (May-June), 467-475.

Cox, James B. Jr.

- 1988 "Historic Trail Shelters of the Willamette National Forest: An Inventory and Determination of Eligibility." USDA Forest Service Pacific Northwest Region, Willamette National Forest.

Cox, James B. Jr.

- 1989 "Historic Campground Shelters of the Mt. Baker-Snoqualmie and Wenatchee National Forests: An Inventory and Determination of Eligibility for the National Register of Historic Places." USDA Forest Service Pacific Northwest Region, Mt. Baker-Snoqualmie and Wenatchee National Forests.

- Cray, Ed.  
1990 *General of the Army: George C. Marshall, Soldier and Statesman*, New York University Press, New York.
- Crist, Raymond L.  
1979 "Independence Prairie Ranger Station." National Register of Historic Places Nomination. USDA Forest Service Willamette National Forest.
- Dana, Samuel T.  
1956 *Forest and Range Policy*, McGraw-Hill, New York.
- Darby, Melissa.  
1993 "Bagby Guard Station." National Register of Historic Places Nomination. USDA Forest Service Mt. Hood National Forest.
- DeWitt, Jesse  
1916 Letter to Forest Supervisor, June 20, 1916. Rogue River-Siskiyou National Forest Archives.
- DiBenedetto, A.P.  
1957 Architectural Plans. Design 4A - 3 Bedroom Residence Elevations, 26 June 57; 3 Bedroom Residence - Design 2A-DG, Elevations, 10 April 1958; and 3 Bedroom Residence - Design 1-B-R, Elevations, 4 August 1958.
- DiBenedetto, A.P.  
1957 Memorandum to Regional Forester, January 15, 1957. Engineering 095-60B0316, Box 33781 Folder: E – Improvements. Record Group 95 Records of the USDA Forest Service, Pacific Northwest Region, Region 6. National Archives and Records Administration Pacific Alaska Region, Seattle, WA.
- Dodge, Joseph M.  
1953 Circular No. A-18. July 22, 1953. Engineering 095-59D0073, Box 18631. Folder: E – Improvements. Record Group 95 Records of the USDA Forest Service, Pacific Northwest Region, Region 6. National Archives and Records Administration Pacific Alaska Region, Seattle, WA
- Doig, Ivan.  
1975 *Early Forestry Research*, Pacific Northwest Forest and Range Experiment Station, Corvallis, OR.
- Doig, Ivan  
1977 *Early Forestry Research: A History of the Pacific Northwest Forest & Range Experiment Station 1925-1975* by Ivan Doig. USDA Forest Service.  
[www.fs.fed.us/pnw/about/history.shtml](http://www.fs.fed.us/pnw/about/history.shtml)
- Ficken, Robert E.  
1987 *The Forested Land: A History of Lumbering in Western Washington*, University of Washington, Seattle.
- Glassie, Henry.  
2000 *Vernacular Architecture*. Indiana: Indiana University Press.

Greeley, William B.

1917 "Some Public and Economic Aspects of the Lumber Industry" Washington DC. USGPO.

Grefe, R.F.

1953a Memorandum to Forest Supervisors, June 24, 1953. Engineering 095-59D0073, Box 18631 Folder: E – Improvements. Record Group 95 Records of the USDA Forest Service, Pacific Northwest Region, Region 6. National Archives and Records Administration Pacific Alaska Region, Seattle, WA.

Grefe, R.F.

1953b Memorandum to Forest Supervisors, July 1, 1953. Engineering 095-59D0073, Box 18631 Folder: E – Improvements. Record Group 95 Records of the USDA Forest Service, Pacific Northwest Region, Region 6. National Archives and Records Administration Pacific Alaska Region, Seattle, WA.

Grefe, R.F.

1956a Letter to Ranger's Wives, May 23, 1956. Engineering 095-60B0316, Box 33781 Folder: E – Improvements. Record Group 95 Records of the USDA Forest Service, Pacific Northwest Region, Region 6. National Archives and Records Administration Pacific Alaska Region, Seattle, WA.

Grefe, R.F.

1956b Letter to Forest Supervisors, August 1, 1956. Engineering 095-60B0316, Box 33781 Folder: E – Improvements. Record Group 95 Records of the USDA Forest Service, Pacific Northwest Region, Region 6. National Archives and Records Administration Pacific Alaska Region, Seattle, WA.

Grefe, R.F.

1956c Letter to Mr. Stone, August 17, 1956. Engineering 095-60B0316 Box 33781 Folder E (Improvements) Record Group 95 Records of the USDA Forest Service Pacific Northwest Region, Region 6. National Archives and Records Administration-Pacific Alaska Region, Seattle, WA.

Grefe, R.F.

1957a Memorandum re: Circular No. A-18 (Revised), October 18, 1957. Engineering 095-60B0316, Box 33781, Folder: E – Improvements Record Group 95 Records of the USDA Forest Service, Pacific Northwest Region, Region 6. National Archives and Records Administration Pacific Alaska Region, Seattle, WA.

Grefe, R.F.

1957b Memorandum to Operations, December 17, 1957. Engineering 095-60B0316, Box 33781 Folder: E – Improvements. Record Group 95 Records of the USDA Forest Service, Pacific Northwest Region, Region 6. National Archives and Records Administration Pacific Alaska Region, Seattle, WA.

Groben, E. Ellis.

1938 "Acceptable Plans Forest Service Administrative Buildings." USFA: Division of Engineering, Washington DC.

- Groben, E. Ellis.  
1940 "Architectural Trends of Future Forest Service Buildings." USFA: Washington DC.
- Grosvenor, John R.  
1999 *A History of the Architecture of the USDA Forest Service*. USDA Forest Service, Engineering Management Series, Washington.
- Hendee, Clare  
1944 Memorandum. Engineering O95-54BP045, Box 6811; Folder "Mt. Hood" (October 1944) Record Group 95 Records of the USDA Forest Service Pacific Northwest Region, Region 6 National Archives and Records Administration-Pacific Alaska Region, Seattle, WA.
- Hidy, Ralph, Frank Hill, Allan Nevins.  
1963 *Timber and Men: The Weyerhaeuser Story*, Macmillan, New York.
- Hodgson, Allen H.  
1913 "A History of the Ochoco National Forest." On file at the Ochoco NF, Prineville. OR.
- Jorgensen Glen.  
1956 Memorandum to Regional Forester, August 8, 1956. Engineering O95-60B0316, Box 33781 Folder: E – Improvements. Record Group 95 Records of the USDA Forest Service, Pacific Northwest Region, Region 6. National Archives and Records Administration Pacific Alaska Region, Seattle, WA.
- Kemp. Larry J.  
1967 *Epitaph for the Giants: The Story of the Tillamook Burn*. Portland.
- LaLande, Jeff  
1979 "A Cultural Resource Inventory and Evaluation of Existing Structures at Star Ranger Station." C.R. Job RR-11, Applegate Ranger District, Rogue River National Forest.
- LaLande, Jeff.  
1998 "Dutchman Peak Lookout (CR Job RR-446) Heritage Resource Evaluation and Rehabilitation Project Report." USDA Forest Service, Rogue River National Forest.
- Mack, Cheryl A. and Richard H. McClure  
1999 "Significance Evaluation, Wind River Administrative Site Historic District." Heritage Program, USDA Forest Service, Gifford Pinchot National Forest, Vancouver, WA. .
- MacDuff, Nelson.  
1912 Letter to Regional Forester, October 9, 1912. Rogue River-Siskiyou National Forest Archives.
- McClure, Rick and Cheryl Mack  
1999 *For the Greatest Good: Early History of the Gifford Pinchot National Forest*, Northwest Interpretive Association, Seattle, WA
- McClure, Richard H.  
2004 USDA Forest Service - R-6 Building Plans — Preliminary Sketches, 1935-1942. USDA Forest Service Engineering Office: Portland, OR.

- McDonald, James A.  
 1989 "Suiattle Guard Station." National Register of Historic Places Nomination. USDA Forest Service Mt. Baker-Snoqualmie National Forest.
- McKinney, Guy D.  
 [1934] "What the CCC Is and Does." *My CCC History*. Company 5463, Camp S-139, Greenstown, PA.
- Mays, L.K.  
 1953a Memorandum, June 2, 1953. Engineering 95-55BP062, Box 13346 E-Improvements. Record Group 95 Records of the USDA Forest Service Pacific Northwest Region, Region 6. National Archives and Records Administration Pacific Alaska Region, Seattle, WA.
- Mays, L.K.  
 1953b Memorandum June 24, 1953 to Forest Supervisors. Engineering 095-59D0073, Box 18631 Folder E – Improvements. Record Group 95 Records of the USDA Forest Service, Pacific Northwest Region, Region 6. National Archives and Records Administration Pacific Alaska Region, Seattle, WA.
- Musgrove, Jerry L.  
 1980 *The Malheur National Forest: An Ethnographic History*. USDA Forest Service, Pacific Northwest Region, Portland, OR.
- Nelson, R.J.  
 1953 Memorandum July 15, 1953. Engineering 9555BP062, Box 13346 Folder E Improvements. Record Group 95 Records of the USDA Forest Service, Pacific Northwest Region, Region 6. National Archives and Records Administration Pacific Alaska Region, Seattle, WA.
- Ninth Corps, CCC  
 1939 *Official Annual, 1939*, Ninth Corps Area, CCC.
- Norcross, T.W. Chief Engineer  
 1937 *Improvement Handbook*. Division of Engineering, USDA Forest Service, Washington DC.
- Rakestraw, Lawrence and Mary Rakestraw.  
 1991 *History of the Willamette National Forest*, Willamette NF, Eugene.
- Remington, C.E.  
 1956 Memorandum, April 25, 1956. Engineering O95-60B0316, Box 33781 Folder: E – Improvements. Record Group 95 Records of the USDA Forest Service, Pacific Northwest Region, Region 6. National Archives and Records Administration Pacific Alaska Region, Seattle, WA.
- Robbins. William G.  
 1982 *Lumberjacks and Legislators: Political History of the U.S. Lumber Industry, 1890-1941*. Texas A&M, College, Station, TX.
- Robbins, William G.  
 1975 "The Early Conservation Movement in Oregon, 1890-1910." Oregon State University, Corvallis, OR.

- Rooney, J.R.  
1997 *Frontier Legacy: A History of the Olympic National Forest*. Northwest Interpretive Association, Seattle, WA.
- Rohrbough, Malcom J.  
1968 *The Land Office Business: the Settlement and Administration of American Public Lands, 1789-1837*. Oxford UP, New York.
- Smith, Marvin L.  
1956 Memorandum, April 19, 1956. Engineering O95-60B0316, Box 33781 Folder: E – Improvements. Record Group 95 Records of the USDA Forest Service, Pacific Northwest Region, Region 6. National Archives and Records Administration Pacific Alaska Region, Seattle, WA.
- Steen, Harold K.  
1976 *The U.S. Forest Service A History*. Seattle, WA: University of Washington Press.
- Swift, Mark.  
1991a “Cupola Style Lookout Inventories for Oregon, Washington, Idaho, Montana, California, Arizona and New Mexico.” Ms. on file, USDA Forest Service, Pacific Northwest Regional Office, Portland, OR.
- Swift, Mark.  
1991b “L-6, 7x7, 8x8 and 6x6 Style Lookout Inventories for Oregon, Washington, Idaho and Montana.” Ms. on file, USDA Forest Service, Pacific Northwest Regional Office, Portland, OR.
- Swift, Mark.  
1992a “L-4 Style Lookout Inventories for Oregon and Washington.” Ms. on file, USDA Forest Service, Pacific Northwest Regional Office, Portland, OR.
- Swift, Mark.  
1992b “Tree Platform Style Lookout Inventory for Oregon and Washington.” Ms. on file, USDA Forest Service, Pacific Northwest Regional Office, Portland, OR
- Swift, Mark.  
1993 “Aircraft Warning System Site Inventories for Oregon and Washington and California.” Ms. on file, USDA Forest Service, Pacific Northwest Regional Office, Portland, OR.
- Taylor, A.D.  
1937 *Camp Stoves and Fireplaces*. USDA Forest Service. US Government Printing Office, Washington, DC.
- Throop, Elizabeth Gail.  
1979 *Utterly Visionary and Chimerical: A Federal Response to the Depression. An Examination of Civilian Conservation Corps Construction on National Forest System Lands in the Pacific Northwest*. M.A. Thesis. Portland State University, Portland, OR.
- Throop, Elizabeth Gail.  
1984 “USDA Forest Service Administrative Buildings in the States of Oregon and Washington Built by the Civilian Conservation Corps.” National Register of Historic Places Nomination. USDA Forest Service, Pacific Northwest Regional Office, Portland, OR.

Throop, Elizabeth Gail.

1995 "An Architectural and Historical Analysis of Selected Northern Region Historic Administrative Buildings." USDA Forest Service, Regional Office, Portland, OR.

Throop, Elizabeth Gail.

2004 "Recreation Development in the National Forests in Oregon and Washington 1940-1945." USDA Forest Service, Pacific Northwest Regional Office, Portland, Oregon.

Tonsfeldt, Ward.

2003 "Historic Structures Report for Vancouver Barracks, West Barracks." Vancouver National Historic Reserve Historical Background and Context, Vancouver, WA.

Tweed, William C. Laura E. Soulliere, and Henry G. Law

1977 *National Park Service Rustic Architecture: 1916-1942*. Washington DC: National Park Service.

USDA Forest Service

1905 *The Use of the National Forest Reserves: Regulations and Instructions*. US Department of Agriculture, Washington DC.

USDA Forest Service

1908 *Bills for Material Accompanying Standard Plans for Buildings on Ranger Stations*. Washington DC. Government Printing Office.

USDA Forest Service

1923 *Trail Construction on the National Forests*. Washington DC. Government Printing Office.

USDA Forest Service

1932 *Lands Handbook*. U.S. Government Printing Office, Washington DC.

USDA Forest Service

1936 "USDA Forest Service, National Forest, Plat of the Bird Lake Area, Tract J Bird Creek Section, Mt. Adams Recreation Unit." Field work by Paeth and Langdon, Sept. 1936 and drawn by Langdon, July 1936.

USDA Forest Service

1938 *Acceptable Plans Forest Service Administrative Buildings* USDA Forest Service Division of Engineering. Washington DC: Government Printing Office.

USDA Forest Service

1955 "USDA Forest Service, Gifford Pinchot National Forest, Site Plan of Sunset Campground." Drawn by R.M. Bowe.

USDA Forest Service

1956 USDA Forest Service, Washington DC Memorandum to Regional Foresters, January 13, 1956. Engineering O95-60B0316, Box 33781 Folder: E – Improvements. Record Group 95 Records of the USDA Forest Service, Pacific Northwest Region, Region 6. National Archives and Records Administration Pacific Alaska Region, Seattle, WA.

USDA Forest Service

- 1957 “USDA Forest Service, Gifford Pinchot National Forest, Mt. Adams Ranger District, Site Plan, Region 6, Cultus Creek Campground.” Designed and drawn by Ken McCabe, 7 August 1957.

USDA Forest Service

- 1958 “USDA Forest Service, Gifford Pinchot National Forest, Site Plan of Spirit Lake Campground.” Field work by J.P. Langdon, August 1957 and drawn by J.P. Langdon, January 1958.

U.S. Department of Commerce

- Var. *Statistical Abstracts of the United States*. USGPO Washington, DC.

U.S. Department of the Interior

- 1902 *Forest Reserve Manual*. USGPO, Washington DC.

U.S. Department of Agriculture

- 1907 *The Use of the National Forests*. USGPO, Washington DC.

Waldo, John Breckenridge.

- 1985 *Diaries and Letters from the High Cascades of Oregon*, ed. G. Williams Umpqua National Forest, Roseburg, OR.

Williams, Gerald W.

- 2000 *The USDA Forest Service: The First Century*. USDA Forest Service, Washington DC.

Williams, Gerald W.

- 1999 “The Spruce Production Division,” *Forest History Today* Spring 1999.  
<http://www.lib.duke.edu/forest/Publications/fhtspruce.pdf>

Williams, Gerald W. and Stephen Mark.

- 1995 *Establishing and Defending the Cascade Range Forest Reserve*, USDA Forest Service, Region-5, Portland, OR.

Wilson, Richa

- 2004 “Within a Day’s Ride: Forest Service Administrative Site in Region 4, 1891-1960.” USDA Forest Service, Intermountain Region, Ogden, UT.

Wirth, Conrad.

- 1944 “Final Report to the Secretary,” USGPO Washington, DC.

Wood, J.H.

- 1953 Memorandum October 21, 1952 to Regional Forester. Engineering 95-55BP062, Box 13346 E- Improvements. Record Group 95 Records of the USDA Forest Service, Pacific Northwest Region, Region 6. National Archives and Records Administration Pacific Alaska Region, Seattle, WA.