HISTORIC FIRE LOOKOUTS

ON THE

DESCHUTES NATIONAL FOREST

A Determination of Eligibility

to the

National Register of Historic Places

USDA Forest Service
Pacific Northwest Region
Deschutes National Forest

Deschutes, Jefferson, Klamath, and Lake Counties, Oregon

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August 17, 1991

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Executive Summary

Numbering over thirty facilities in the 1930's, presently, eleven fire lookouts still stand on the Deschutes National Forest. These facilities are in various states of repair and use, and presently the Deschutes National Forest is attempting to decide how to best manage them. Many of these lookouts and their related structures are over fifty years old. In compliance with Section 106 of the National Historic Preservation Act, the Deschutes Cultural Resource personnel inventoried and evaluated lookout facilities on the Forest for eligibility to the National Register of Historic Places. As a result of this evaluation, the following lookouts are recommended for National Register eligibility: Black Butte, East Butte, Fox Butte, Trout Creek Butte, Wanoga Butte, and Walker Mountain. Other lookouts on the Forest, including Green Ridge, Lava Butte, Odell Butte, Round Mountain, and Spring Butte are not recommended for National Register Eligibility.

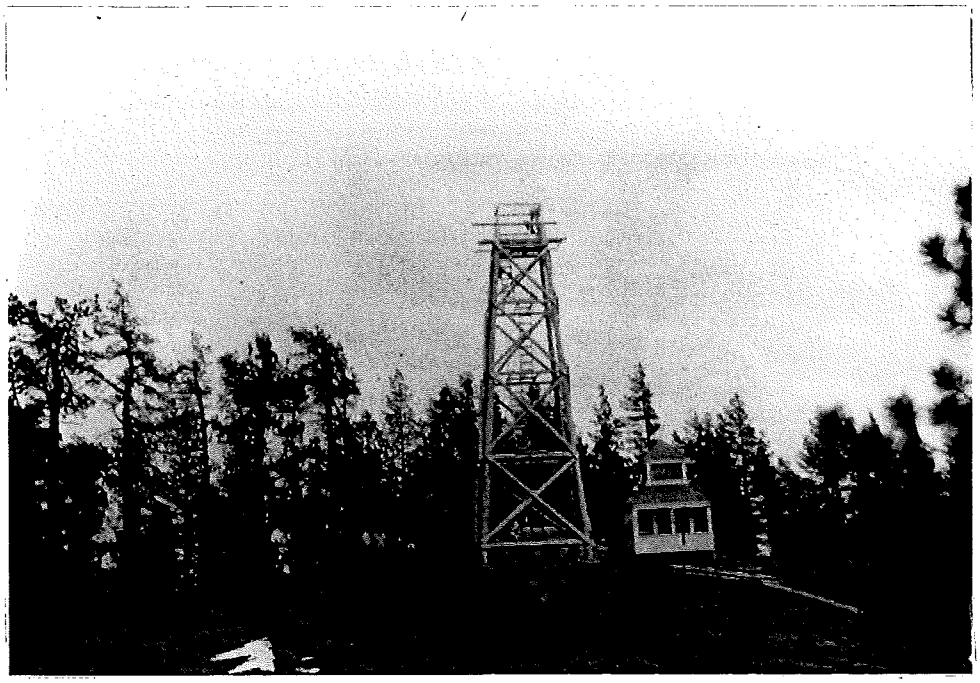


Photo (1): Pine Mountain Lookout, 1926. The cupola, built in 1921, was used as living quarters in conjunction with the crow's nest platform for spotting fires. Deschutes National Forest Supervisor's Office Photo Files.

Introduction

In compliance with Section 106 of the National Historic Preservation Act, the following report is a thematic evaluation of the fire lookout facilities on the Deschutes National Forest for possible inclusion to the National Register of Historic Places.

Presently, there are eleven fire lookout facilities on the Deschutes National Forest. These lookouts include lookout towers and their supporting structures such as living facilities, garages, and outhouses. Not all of these lookouts are presently being used in fire detection. Only six are primary lookouts, that is, continuously occupied by a fire observer throughout fire season. Several are secondary facilities used only in times of high fire danger or in emergencies. A few are abandoned, that is, not used for fire detection at this time.

TABLE I
Extant Lookouts on Deschutes National Forest

Lookout	Location	Built	Style	Status
Black Butte	T13S R9E Sec. 34			
Cupola		1922	D-6	Primary
Tower		1934	L-6	Condemned
East Butte	T22S R14ESec. 13	1932	GR L-4#	Primary
Fox Butte	T23S R16ESec. 6			
Ground House		1931	GR L-4	For Tower
Tower		1933	Aermotor	Secondary
Green Ridge	T12S R9E Sec. 13	1961	R-6	Secondary
Lava Butte	T19S R11ESec. 24	1958	R-6	Primary
Odell Butte	T24S R7E Sec. 26	1963	R-6	Primary
Round Mountain	T21S R8E Sec. 13	1933	HR L-4*	Primary
Spring Butte	T24S R11ESec. 1	1932	HR L-4	Condemned/ Priming
Trout Creek Butte	T15S R9E Sec. 28	1933	Aermotor	Abandoned
Walker Mountain	T26S R8E Sec. 28			
Cabin		c.1917	Unique	Abandoned
Tower	T26S R8E Sec. 24	1932/3	HR L-4	Secondary
Wanoga Butte	T19S R10ESec. 20	1933-4	HR L-4	Abandoned

= gable roofed L-4 * = Hip roofed L-4

These lookouts are related through several historical contexts. First of all, as a group, they represent the remnants of the major forest fire detection apparatus on the Deschutes National Forest from 1910 through the 1960's, and the use of many of these sites for fire detection continues to the present. Second, they represent part of a system installed nationwide in the first half of the century for forest fire protection. Third, many of the lookouts on the Deschutes National Forest were constructed during the Great Depression, an era in which the Forest Service relied on work relief programs such as the Civilian Conservation Corps (CCC) to provide much of its labor. Fourth, these lookouts are related to the history of conservation and government land management. They represent a land ethic of stewardship of forest resources by protection from devastating forest fires.

All of the properties discussed in this paper are owned by the United States Government and are located on and managed by Deschutes National Forest. All are located on mountain tops which offer commanding views of the surrounding territory relating to their function as forest fire detection facilities.

Historical Overview

Historically, the lands over which were to become the Western United States were theaters to wildfires of legendary proportions, the likes of which were unknown in Europe. As a result, the European models, upon which United States forestry was based, presented little in solution to the problem of forest fires. "Like the question of slavery, the question of forest fires may be shelved for some time, at enormous cost in the end, but sooner or later it must be met," stated Gifford Pinchot (1898). Pinchot became the first Chief when the Forest Service was created in 1907, taking over the lands which had been established as Forest Reserves as a result of the General Land Law Revision Act of 1891.

The fact that the newly created Forest Service needed to develop a strategy to deal with wildland fire was underscored just three years after the agency's creation, when a series of massive fires burned five million acres of forest lands throughout the West, particularly in Idaho and Montana. Hundreds of fires burned from July through September of 1910, many of them started by lightning in remote locations and not discovered for several days.

Some of these fires from the backcountry grew to massive size causing loss to life and property as well as loss of timber and other resources (Pyne 1982). All in all, 85 firefighters were killed and hundreds of others hospitalized. People were evacuated from threatened towns shortly before they burned over and between seven and eight billion board feet of marketable timber were burned.

The reason the timing of the 1910 fires was so important to Forest Service history is summed up by Stephen J. Pyne in his description of United States wildland fire history. Simply put, "fires were common but holocausts rare" (1982:202). The fact that such tragedies could happen, that forest fires could grow large enough to run out of the backcountry to threaten settlements, demanded action by the government agency deemed responsible for most of the public land involved.

Furthermore, the government had removed the Forest Reserves from public settlement justifying this action in the name of retaining these lands for the benefit of future descendants. Fire was seen as a barrier to conservation; if America needed these reserves, it could not afford to lose them.

The challenge left in the wake of 1910, therefore, was the development of a system of forest fire protection without a reliance on the close proximity of people or resources to fight such a fire. The 1910 debacle and the series of serious fire years that followed (1919, 1926, 1929, 1931, and 1934) would shape the fledgling U.S. Forest Service. As Pyne states:

> "Rather than integrating fire protection closely with logging, grazing, and settlement patterns, fire suppression would necessarily become a preliminary to future forestry management practices. [The necessity of] fire control opened up the lands. It was fire that dictated early timber

management, which was often restricted to fire salvage sales and replanting burn sites.....for the first time [for the young Forest Service] lightning fires dominated the scene: human-caused fires stayed close to settlements, roads, and railways; lightning pounded the vast backcountry, igniting holocausts through fuels unbroken by land clearing. (1982: 240)"

Early Foresters realized that quick detection was essential to preventing small starts from becoming large fires. The quicker personnel could arrive at a fire, the more likely that fire could be put out before it reached such a size that massive amounts of time and manpower would be needed to control it. While as few as one person could put out a small fire, large fires possessed the ability to move much faster, gobbling up land, creating their own weather, and sometimes only stopping when autumn came and cold, wet, less windy weather slowed down the rate of spread enough that fireline would contain it.

Photo (2): Fly Lake Lookout (No Date) Sisters Ranger District CRM Photo Files.

As a result, one of the first tasks of young agency was to identify lookout observation points and to put in a system of telephones for rapid communication of the presence of forest fires. The Deschutes National Forest was no exception:

> "Immediate detection of fires was essential, but practically not possible. In 1912 we had no lookouts or telephone lines; providing these was the first necessity. Grounded circuit telephone lines were therefore built first to high points that would serve as lookouts. Funds for this purpose were all spent for materials, with rangers doing the labor of construction. All my Rangers were anxious for telephones, and it was surprising how quickly lines materialized. They were first built to Paulina Peak, Maiden Peak, and Walker Mountain, and soon after to Black Butte. These four points overlooked most of the Deschutes and assured that we would at least know of most fires. At first Lookout men camped below the summits, walking up for periodic observations, so that continuous lookout service was not maintained. All field men were soon convinced that lookout men should live on the actual summits and soon cabins were built on Paulina Peak and Walker Mountain.....we then had men on these points watching for fires, and telephones over which they were reported promptly. "Elapsed time" from discovery to start to fire was whittled down in most cases. The Rangers took great pride in this accomplishment and developed much local cooperation and did a good job."
>
> Mel Merritt, Deschutes Forest Supervisor
> October, 1912 - December, 1915 (Merritt 1957)

Shortly afterward, the U.S. Forest Service in California became a leader in fire protection when, in 1914, its Regional Forester, Coert DuBois published Systematic Fire Protection in the California Forests, establishing forest fire science and outlining a strategy to reorganize the Forest Service to make it more effective in fire protection. A year later the Forest Service responded by reorganizing to create a Division of Fire Control.

While DuBois' book reemphasized the importance of early detection, further research was necessary to develop a lookout system which was effective as well as economically efficient. As the first fixed detection systems were being installed on National Forests across the country in the 1910's and 1920's, experimental results confirmed that suppressing fires while small was indeed the most efficient manner to stop fire (Pyne 1982).

Lookouts by this time had evolved from primitive camps to the beginnings of permanent structures from which the lookout could observe the forest sheltered from the elements. The number of permanent sites continued to grow, and the Forest Service began constructing standardized structures including the D-6 Cupola.

Lookouts were manned by firewatchers who often doubled as firemen, leaving the building to fight forest fires as the need arose. The necessity of continuous communication and detection resulted in the eventual assignment of two person teams to some stations. One person would scan the countryside as the other was freed to fight fires should they occur.

As the Forest Service fire protection system evolved into the 1930's, a system of fire detection points was established to cover most of each forest with a goal of 60 percent coverage from two or more lookouts. More lookout houses were built and equipped with Osborne Fire Finders (Pyne 1984). In the Northwest, Albert Arnst and his Regional Office-based crew set to work to take 360 degree panoramic photos of the landscape at every lookout location so to allow both dispatcher and lookout greater accuracy in establishing the location of a fire as well as learn more about fuel types and the topography in order to install an economically efficient system of lookouts.

During the winter months, Arnst and his crew used these photos to develop seen area maps which identified the actual territory viewed from the lookout as well as blind spots, such as far sides of ridges. The result was more lookout points established to observe these blind spots. According to Simpson and Jackman (1967), at least in Idaho, this led to breaking up a lot of the two person teams as the Forests increased the proximity of the lookouts to one another. As close to 100 percent visibility was approached, firewatchers could often cover for a neighbor as he acted as fireman.

Photo (3): First rider Van Smith, second rider, Cliff Ralston who had the job of packing the material for constructing the Black Butte tower in 1934. According to this photo, "At the taking of this picture there had been over 1000 packhorse loads taken up. Sisters Ranger District CRM Photo Files.

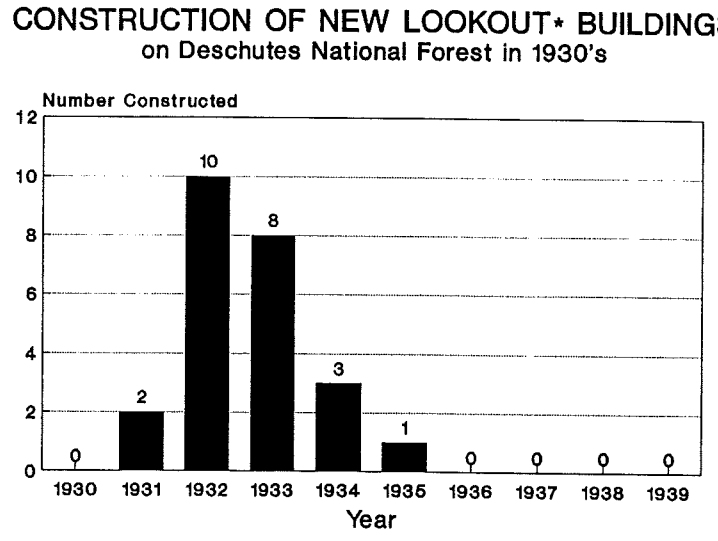
In early April, 1933, President Franklin Roosevelt established the Civilian Conservation Corps (CCC) in an attempt to alleviate the widespread unemployment of the Great Depression. The majority of corpsmen were assigned to the U.S. Forest Service where they provided labor to build roads and trails penetrating deep in the backcountry and constructed approximately 600 of a total of 5,000 known lookouts built in the United States, as well working on other conservation projects.

According to Pyne (1982), the sheer amount of manpower and funds available with the advent of the CCC, caused an increase in the number of forest construction and development projects nationwide. Yet, it would be a mistake to assume that fire protection systems were expanded only as a result of a decade of abundant manpower for the agency. The attempt to expand wildland fixed detection systems predated the CCC, at least on the Deschutes:

> "In about 1930, a regional study was made, and it was decided that fires often got too big before they were discovered and "initial action" was taken. Consequently, 1931 and 1932 were great construction years in the Forest Service. Many new "lookout fireman" stations were built on the lesser buttes and ridges. Because of the cross shots obtained, a more accurate location of the fire could be plotted out in the office and due to these extra stations, travel time was cut down."
>
> Archie Brown (Wilson and Scott 1974)

The Civilian Conservation Corpsmen and others employed by depression era projects probably did not build the majority of lookout structures on the Deschutes. The data is slightly clouded by the fact that the majority of actual detection structures were built in 1932 and 1933, the latter year, the three C's was created (see Table II). Two former Forest Service employees,

TABLE II



Slim Hein and Ray Kotsky, who were affiliated with the Corps in the 1930's, stated in interviews that none of the lookouts on the Deschutes were built by the CCC. Yet photo documentation of corpsman building Trout Creek Butte, and excerpts from the Odell Camp 965 newsletter recounting the building of the Black Butte Tower, show that the CCC had a role in building at least some of the lookouts.

The panoramic photos taken by Albert Arnst and his Regional Forest Service crew provide more clues as to the degree to which the Deschutes Forest lookouts were built by the Corps. The original cameras developed by W.B. Osborne to take the panoramic photos were actually tested on the Deschutes National Forest at Lava Butte in early 1933 during Arnst's actual photo project to take 360 degree pictures from all of the lookouts in Region 6 began June 11 (Arnst 1985). The earliest panorama by Arnst and his coworkers in the Deschutes files is dated June 15. The Deschutes may have been the forest where Arnst began his project.

TABLE III
Dates of Lookout Panoramic Photos on Deschutes National Forest

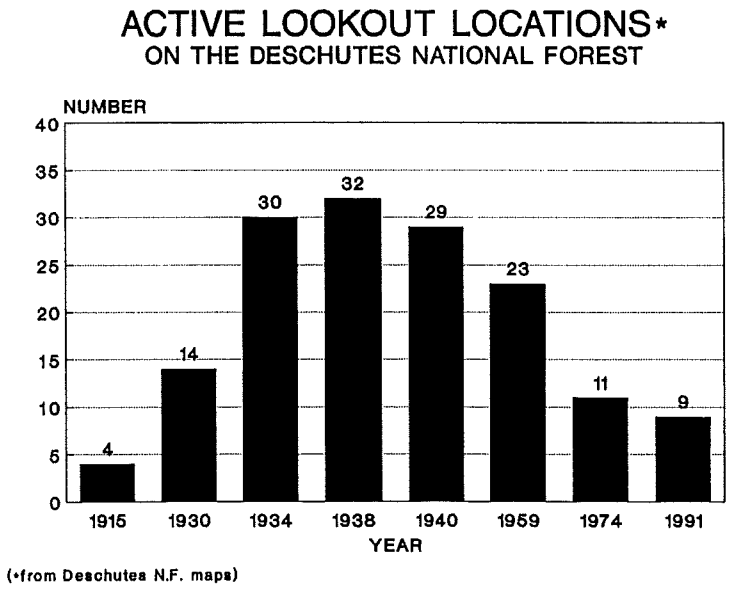
Date of Panorama	Lookout	
Pre-1933 (Before Arnst)	Bachelor Butte	Lava Butte
	Black Butte	Paulina Peak
	Black Crater	Pilot Butte (No lookout structure)
June 15 - July 3, 1933	Black Butte Tree Tower	
	Big Hole Butte	Pistol Butte
	East Butte	Plot Butte
	Fox Butte	Odell Butte
	Fuzztail Butte	Round Mountain
	Indian Butte	Sixteen Butte
	Lava Butte	Spring Butte
	Maiden Peak	Walker Mountain
	Pine Mountain	Wanoga Butte
Sept. 10 - 19, 1933	Abbot Butte	Trout Creek Butte
	Cache Mountain	
Jan. 8 - Feb. 2, 1934	Broken Top	Summit Butte
	Davis Mountain	
June 17 - 23, 1934	Bald Peter	Finley Butte
October 1935	Black Butte Tower	Cultus Mountain
August 1938	Deer Butte	
June 1938	Finley Butte	Fox Butte (second)
July 1941	Fly Lake	
No Panorama	Tumalo Mountain	Alder Springs

Because panoramas from seventeen lookouts on the Deschutes were taken from June 15 through July 3, 1933, a scant 2 1/2 to 3 months after the establishment of the CCC, it seems the Corps probably built few, if any, of structures from which the first wave of panoramas were taken. Panoramas from fourteen lookouts on the forest were taken in the fall of 1933 through the time the Corps was disbanded in 1942. It seems, therefore, that many of the lookouts on the Deschutes were not CCC built. This may be the reason that some property records (where the forest has records of lookout construction) have more than one date for the construction of lookout structures; some of the later CCC era dates resulting from the assumption that most of the lookouts were CCC built. The dates of the panoramic photos for the lookouts on the Deschutes are summarized in Table III.

The majority of fire lookouts were built on the Deschutes during the 1930's, because developing a system of fire detection was a major project of the Forest and the Region at that time. However, the presence of the three C's may have affected the history of fire detection in the United States because it allowed government and private agencies to install fire protection systems more quickly than had the C's not been available. The number of active lookouts facilities on the Deschutes peaked at 32 during the Corps Era (See Table IV).

The labor of the young men of the CCC affected fire detection in other important ways. The roads, trails, and landing fields they built allowed quicker fire suppression in remote locations. Their vast number also meant the Forest Service could rely on the CCC "armies" to fight fires (Pyne 1982). Quicker and more effective suppression in turn made immediate detection less critical.

TABLE IV



(*from Deschutes N.F. maps)

In 1942, the three C's was disbanded and what had been a manpower glut became a shortage. During the war, the Forest Service increased the number of women lookout staff nationwide. Vacationers and volunteers also manned some northwest coast lookouts around the clock to scout for Japanese planes and incendiary bombs as part of the military's Aircraft Warning System (Spring 1981).

While the number of lookouts would not reach its zenith nationwide (at 5,060) until 1953, World War II marked the beginning of changes which would result in a decrease in their numbers. First of all, with the opening of the backcountry, early detection was not as crucial. Secondly, technological innovations developed during the war increased the practicality of the use of helicopters, airplanes, smokejumpers, and cargo drops, which meant that fires could be attacked even more quickly. Furthermore, the airplane would soon present a competing means of detection.

The development of the two way radio, taken over from the Forest Service research during the war and perfected by the military (Spring 1981), also affected the need for fire lookouts. A firewatcher no longer needed to be in one place. A backcountry guard, for example, could look for smokes as she or he worked. Finally, increased use of the backcountry meant that recreationists and other forest workers in the forest would also report fires.

While a younger Forest Service strove to have lookouts with views of almost every valley and mountainside, a more mature agency with access to aerial detection produced analyses in the late 1950's and early 1960's that showed much of the lookout system redundant. As a result, by the 1960's and 1970's, the Forest Service began what looked like a phasing out of the lookout system. At the same time, Congress passed legislation in 1965 that allowed citizens to sue federal agencies for injuries occurring while on government property (Spring and Fish 1981). This made abandoned lookouts potential liabilities.

On the Deschutes, which had twenty plus structures in the fifties, this meant the destruction of lookouts not in use. Presently, all lookout locations with structures, but Trout Creek and Wanoga Buttes, are in use. All others have been torn apart and/or burned. This followed a nationwide trend. In 1953 over 5,000 lookouts were in operation in the United States. By 1968 only 3,500 remained.

Yet what had looked like a steady path toward phasing out the lookout system has been reversed in recent years as aerial detection has become increasingly expensive. Fire Staff also have come to realize that fixed lookout personnel spend more time watching the territory under their care and often can pick up fires that airplane observers miss. They are also effective at spotting human-caused fires, as aerial detection can follow lightning storms but not campers.

Presently, fixed-point detection covers 75 to 80 percent of the Deschutes. Within this system, the Forest utilizes six primary, as well as three secondary lookouts. The primary lookouts are continuously staffed during fire season either by forest employees or contractors. Secondary lookouts are only staffed at times of greater fire danger such as extreme hot and dry conditions or times of increased lightning activity. Despite technology, lookouts still offer the best coverage where continuous coverage is necessary (Pyne 1984).

Lookouts have other functions besides detection of fire. A firewatcher may collect weather and fire data as well as relay messages particularly in areas where terrain interferes with radio transmissions. She or he may also report fire behavior from their post. Furthermore, lookouts remain a symbol of protection and care of National Forest lands. Recreationists commonly visit lookouts both to view the panorama and to visit with the lookout. A lookout person may also instruct the public in fire prevention. With the advent of cultural resource management by the National Forests, lookouts also are beginning to be seen by the agency for values outside of utilitarian ones.

It should also be noted that the first women field officer in the Forest Service was a fire lookout, Hallie Daggett, who was hired by the Klamath National Forest in 1913 (James 1991). Women were appointed as lookouts at least as early as World War I on the Deschutes when Shasta Hoover became the first woman lookout in Oregon (Kresek 1985). Women were even more common as lookouts during World War II. The job of fire observer was one of the few paid positions open to women in the early Forest Service outside of clerical or switchboard operators (Pendergrass 1990). Presently, on some forests, women can even hold the position while caring for children. The position of firewatcher, therefore represents an early opportunity for women in a conservation field.

Fire Lookout Structure History

In 1902, the first known watch over what was to become National Forest land was made in Clearwater County, Idaho. Detection in those days often meant posting a watch to look for smokes or establishing patrols to drive or ride the trails and roads around the forest (Pyne 1984). Early lookouts were no more than observation points where a person could get a view of the surrounding area to watch for smoke. Before the era of telephones, there was no quick communication of fires, rather, the lookout had to travel to the nearest post or town to relay information about a fire.

With limited resources and manpower, the Forest Service later established telephones at crucial points which would provide large views. A lookout person might climb up the mountain once or twice a day to look for fires, then telephone in to the local ranger station from a metal phone box attached to a tree. Later he might hike to the fire in an attempt to put it out. As time went on, these more permanent or crucial lookout points might be equipped with an alidade to more precisely locate fires.

On promontories with a high tree or two, a lookout might climb to get a better view. This eventually evolved into a period when platforms with ladders were erected on topped living trees. These "crows nests" were not standard in design. On the Deschutes, Black Butte, Fox Butte, and Alder Springs were among those known to have such platforms and ladders. Lookout trees were used by the Forest Service at least as late as 1946.

As lookouts systems developed and more telephone lines were put in, more permanent "rag camps" might be set up where a lookout lived in a tent adjacent to a lookout tree, point, or open tower. This set the pattern of a seasonally occupied camp where the fire watcher lived continuously rather than patrolling, although he might leave his camp to fight a fire. This fixed detection system was a response to communications technology of the time. The very closeness of a fire observer to a telephone guaranteed quicker detection than if he was on patrol.

Later, as as the agency built live-in towers and ground houses, lookouts might be manned by one or two people, the single lookout/fireman leaving the lookout vacant while he hiked, drove, or rode to the fire's location. The advantage of the rarer two person team was that surveillance could continue while one fireman traveled to put out the fire (Simpson and Jackman 1967). Eventually, most fire suppression duties of lookout staff were given to other Forest Service personnel.

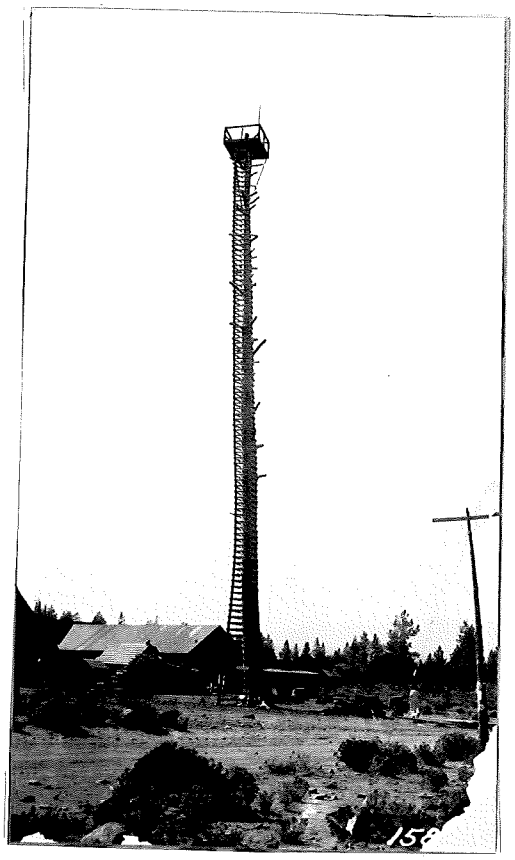


Photo (4): Lookout Tree, Sisters, Oregon, 1921. Private organizations, as well as federal, state, and local governments, constructed fire detection facilities across the nation. Deschutes National Forest Supervisor's Office Photo Files.

As with the crow's nests, early lookout houses exhibited tremendous variety, depending on the tastes and abilities of the designer and builder. Some were stone structures, others log cabins, some had cupolas, and others were built in trees. Not all of these structures were designed for looking for fires. Some were designed for habitation only, relying instead on a crow's nest or alidade nearby to fix a fire.

Yet by the 1920's, the plans for most lookouts had become standardized. The earliest standard lookout in Region 6 was the D-6 (District 6 was the name for the Pacific Northwest Region at the time). Designed by Lige Coalman, this cupola style lookout consisted of a 12' by 12' framed building with a 6' by 6' glassed-in second story. The first D-6 was placed on Mt. Hood in 1915. The first story was a living space surrounded by a band of windows at all elevations, four to a side, except where the door replaced the fourth. Protruding from the center of the first story's truncated hip roof was a second story 6' by 6' hip roofed cupola, where a firefinder was set up and the lookout worked. This cupola room was surrounded by two windows on each elevation. As with later styles of lookouts, all windows possessed shutters to protect them

Photo (5): Black Butte Cupola sometime after 1934 when it was used as a ground house in conjunction with the Black Butte Tower. Sisters Ranger District CRM Photo Files.

when not in use. Both the partial first story and the second story roof were covered by cedar shingles.

The D-6 was innovative because it was the first standardized lookout structure in the Region combining both fire detection and living facilities in one building. This further collapsed the separation of work from living space which had begun with the establishment of rag camps in place of patrolling. The completion of this collapse reoccurred in both the "Supervisor Hall Special" and the L-4. The D-6 was effective on high promontories where the view from the cupola was adequate without the added height that a lookout tree or open platform could provide. According to Kresek (1984), eventually 200 lookouts of this style were placed on high points in Idaho, Montana, Oregon and Washington, including the Black Butte cupola on the Sisters District of the Deschutes. Approximately 13 survive.

Another early standardized style of lookout house is what Cox (1991) calls the "Supervisor Hall Special." Like the cupola, this lookout was designed to be lived in. It could be built in places which afforded a view or on low treated timber towers. It was named for Supervisor Charles C. Hall, who worked on the Santiam National Forest from 1916-1933.

Photo (6): Forest Ranger Slim Hein on Black Crater, September, 1938. One of the earliest lookouts on the Deschutes, Black Crater was later abandoned because of limited visibility due to fog and the steepness of the territory. The Deschutes and other National Forsets found that the higher peaks of the Cascades were not necessarily the best lookout points. This lookout house is an example of a "Supervisor Hall Special." Deschutes National Forest Supervisor's Office Photo Files.

According to Cox, this style was a modification of the 4A style developed in Region 5. Lookouts similar to this style also appear in Region 3's 1989 publication, Lookouts in the Southwestern Region. These were 14-foot square, hip-roofed structures whose roof was steeper and taller than the later L-4's in Region 6. The windows were single paned, five to a side except on one side where a door took the place of the center window. Built in the twenties, three of this style were built on the neighboring Willamette National Forest. At least one was built on the Deschutes at Black Crater; none of these survive.

In 1929 the Forest Service introduced the L-4 or Aladdin style. Coinciding with a period in which the agency was busy installing its fire control system as well as one in which increased funds became available through the implementation of the New Deal Works Projects Administration, and the CCC, over 1000 were built in Region 6. Designed to be a living as well as a work space, the L-4 measured 14' by 14'. A band of windows extended all around the cab, five to each side except where the door replaced the fifth on one corner. Shutters, designed to swing up, shaded the windows when in use and covered and protected them in the off season.

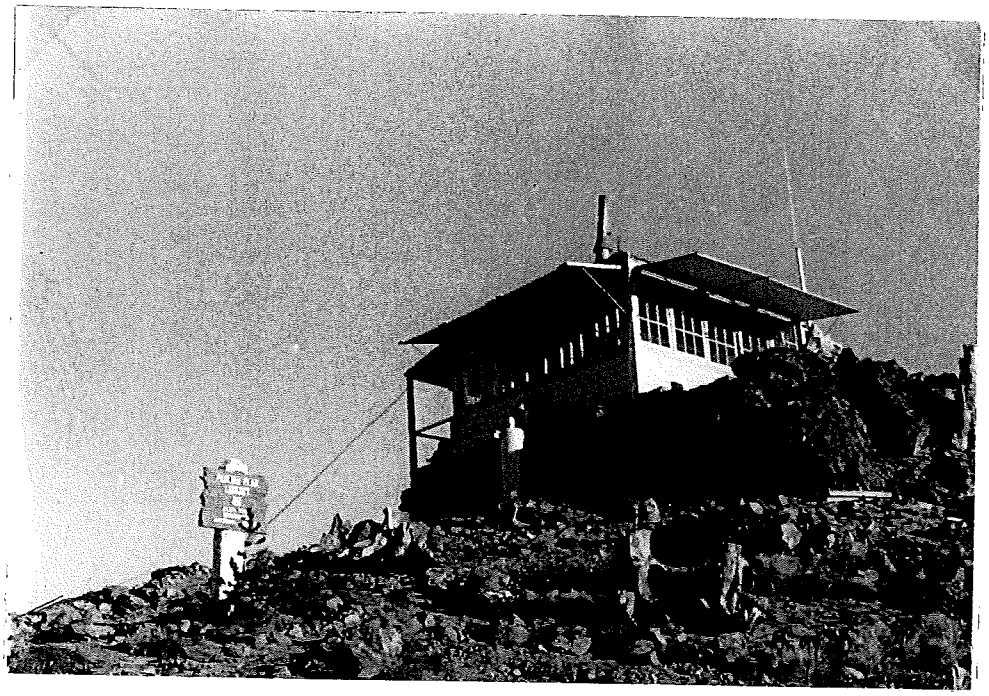


Photo (7): Former Paulina Peak Lookout: An example of a nine pane L-4 on the Deschutes. Presently all existing L-4 lookouts on the forest are the either the gable roof or the four pane hip roof versions. Deschutes National Forest Supervisor's Office Photo Files.

The L-4 was designed to be versatile. Unlike the cupolas, many were placed on towers of various heights and materials. Others were used as ground houses below towers too small to live in. Still others were placed on high points without towers. Catwalks were usually, but not always, built around them. The L-4's were prefabricated and sold as a kit by the Aladdin Company of Portland (Brown 1979; Cox 1991) which lent its name to the design though other companies may have manufactured them as well.

The L-4 went through several changes and revisions. Rather than the one or two pane windows of the cupola or "Supervisor Hall Special," the Aladdins' windows had either four or nine panes. The gabled roofed L-4 came into style between 1929 and 1932. The windows and door each had nine lights and lightning rods which extended from the peak of each gable. According to Timmons (1981) and Mark Swift, Sisters Archaeologist (1991, personal communication), the Forest Service later changed the roof design to a hipped one because of the tendency of snow to accumulate on the leeward side, causing instability.

The hip roofed L-4, which was first designed in 1931 and later updated in 1932 and 1936, had a roof shaped like a four-sided pyramid with a lightning rod extending from its apex. The windows and the top of the door had nine lights in the 1931 revision and four lights in the 1932 and 1936 revision, perhaps for increased visibility and ease of cleaning.

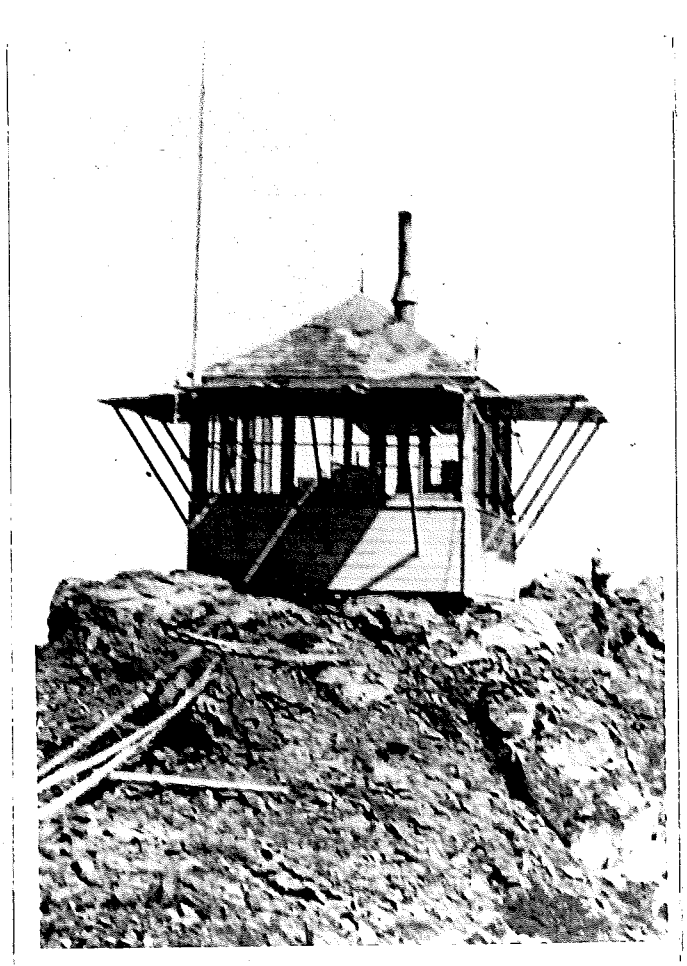
The hip roofed L-4 was later updated in 1936. The ceiling joists of the newer L-4 extended two feet beyond the cab where they were used to hold open the shutters in place of the wooden or metal posts of earlier models. All styles of L-4's had a cedar shingled roof, tongue and groove ceilings and interior siding, and floors of 1" by 4" tongue and groove of vertical clear grain fir. Tumalo Mountain Lookout, built in 1949 and taken down in 1968, was a Standard 1936.

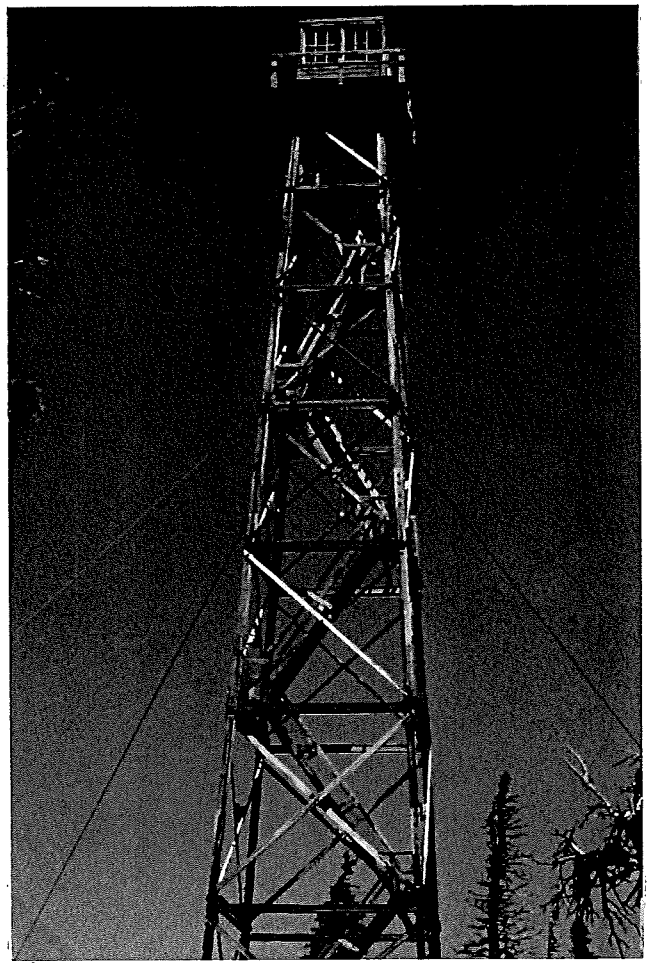
The Aladdins were extremely popular. In 1930, it cost approximately $1,000 to build one with a tower, $500 without. Twenty-one known L-4 lookouts were built on what is today the Deschutes out of thirty-two known sites of lookout structures (Kresek 1985). There are forty-six L-4's still standing in Oregon.

Today, of the eleven intact lookout complexes on the Deschutes, six have L-4's: East Butte, Walker Mountain, Round Mountain, Wanoga Butte, Fox Butte (a groundhouse adjacent to a 7' by 7' Aeromotor lookout tower), and Spring Butte (which will be replaced in 1991). None of these are "Standard 1936's," although two, East Butte Tower and Fox Butte ground house, are the rarer gable roofed version.

The L-5 and L-6 styles were also built in this period. Basically, these styles were smaller versions of the wooden framed L-4. The 10' by 10' L-5 was not usually lived in, but rather used as an emergency lookout for patrols. The Deschutes had four known L-5's such as the original Green Ridge Lookout. The 7' by 7' L-6 was often used in conjunction with a ground house or other living quarters. There were two known examples of these styles on the Deschutes, Black Butte which is still standing and Pine Mountain which has been destroyed (Swift 1991).

Another style, which was built in the CCC era, was a prefabricated 7' by 7' metal box standing on 35-175 foot metal towers. Designed by Aermotor of Chicago, a company which also designed windmill towers, these lookouts were designed to be used in conjunction with a ground house for living quarters. The tower component was also sold separately from the cabin. Both Trout Creek Butte and Fox Butte are examples on the Deschutes of a 7' by 7' Aermotor lookout tower/cab combination. Walker Mountain is an L-4 on a metal tower which may or may not be an Aermotor.





Photos (8) and (9): L-5 and L-6 lookout towers. (8) The Deschutes National Forest built four L-5's. Today none remain in the Region. Deschutes National Forest Fire Photo Files. (9) The 83 foot lookout tower on Black Butte is an L-6. Deschutes National Forest Cultural Resource Management Photo files.

The R-6 lookout, which was introduced in 1953, represents the most recent change in lookout styles in Region 6. Its flat roof design was a response to the cost of re-shingling the L-4 structures (Timmons 1991). Measuring 15' by 15', the R-6 has a tar roof for economical replacement and quick snow melt. It has no shutters and exterior siding is of T111 plywood. Both Odell Butte and Green Ridge are R-6's. Lava Butte is an example of a greatly modified lookout of this style.

It should be mentioned that there were other less popular styles which were not used on the Deschutes such as the cathedral style (Late 1920's) and various unique lookouts designed from nonstandardized plans. Furthermore, different regions of the Forest Service developed their own styles though there has been borrowing between regions.

Methodology

The following report is the result of several months of research and reconnaissance regarding lookouts on the Deschutes National Forest. At the start of the project all extant lookouts were inventoried in compliance with Section 106 of the National Historic Preservation Act. Cultural Resource personnel searched the general literature on lookouts, particularly Kresek (1984, 1985), Spring and Fish (1981), Cox (1991), Swift (1991), and a variety of Forest Service lookout reports and evaluations for information on history and styles of lookouts. The history of fire suppression, particularly Pyne (1982, 1984), was also researched. Lookout enthusiasts in the state, as well as the Sand Mountain Society (an Oregon lookout preservation and restoration group) were contacted with questions regarding lookout history, style, restoration and reconstruction possibilities, and how to best conserve parts of those lookouts which might be beyond restoration due to lack of integrity or funds.

In order to find specific information regarding lookouts on the Deschutes, a search was made of the Forest historical, fire, engineering, maintenance, and property records. The Deschutes County Library, the Deschutes Historical Society, and the Bend Bulletin all yielded information regarding local lookout history. Data from historical maps of the forest presented a picture of lookout distribution and use patterns unavailable in scanty forest records. Panoramic photos as well as those from files in the Supervisor's Office, attached to maintenance records, and from Ron Johnson's Fire Lookout Project told even more about lookout history.

Consultations with cultural resource personnel from the various Districts on the Deschutes, as well as from the Supervisor's and Regional Offices, helped to allow a variety of opinions regarding management of lookouts to be expressed in this report, as well as yielding data that might be otherwise unavailable. Interviews were conducted with fire staff, maintenance workers, and other present and retired Deschutes National Forest employees whose memories often held data about lookouts unobtainable in any other way. Some of these people worked on the Forest when many more lookouts were standing and operational and when many were decommissioned and destroyed. Others provided maintenance to the lookouts and remembered the changes made on them. One person, Slim Hein, was one of the people who built the Spring Butte and East Butte Lookouts.

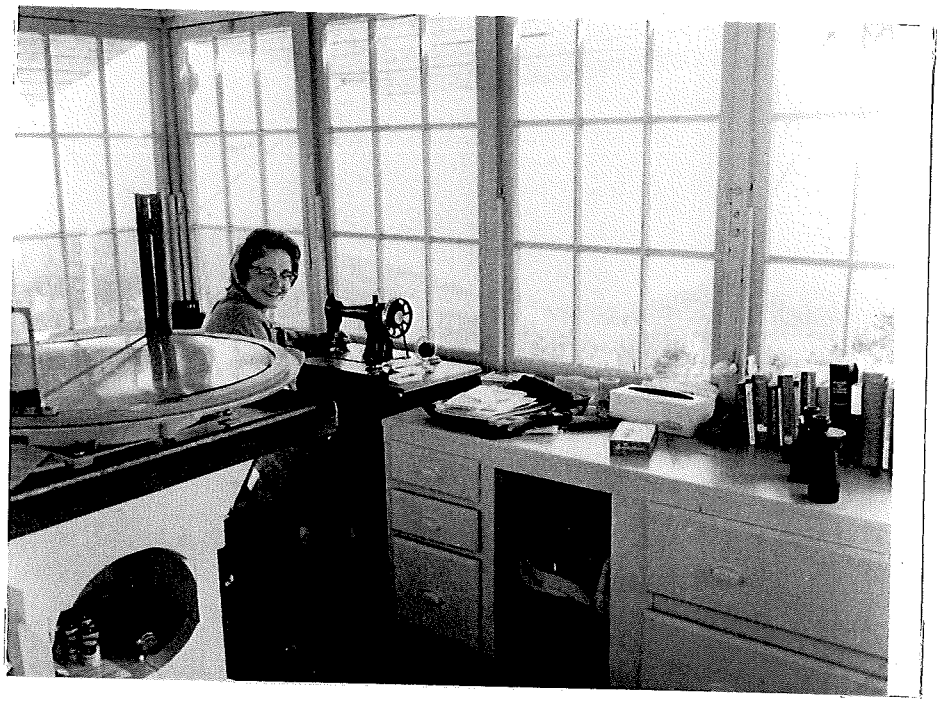


Photo (10): Mary Ellen Edgar of Gilchrist, Oregon, lookout on Paulina Peak, 1963. "Will become a teacher, makes her own clothes, hence the Singer." Deschutes National Forest Fire Management Photo Files.

Evaluation

Section 106 of the National Historic Preservation Act, states that Federal Agencies must "take into account the effect of an undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register". In the case of standing lookouts on the Deschutes, this means that before any action is taken to replace or alter lookouts or their associated buildings, the site must be evaluated to establish if it is eligible for inclusion on the National Register of Historic Places. According to 36 CFR 60.4, the National Register Criteria for Evaluation:

"The quality of significance in American history, architecture, archaeology, engineering and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, association and

(a) that are associated with events that have made a significant contribution to the broad patterns of our history;

or

(b) that are associated with the lives of persons significant in our past;

or

(c) That embody the 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) that have yielded, or may be likely to yield, information important in prehistory or history."

In general, "properties that have achieved significance within the past 50 years shall not be considered for the National Register."

Criterion A

All the lookouts on the Deschutes National Forest fulfill Criterion A because they are associated with events that have made a significant contribution to broad patterns of our history. Lookout systems were the major detection apparatus for forest fires prior to the late 1950's. They are associated with forest fires and the development of systematic fire protection linking them to one of the major early roles of the Forest Service. Furthermore, the construction of lookouts over fifty years of age is illustrative of an era when the Forest Service installed such a system of fire protection.

Lookout staff also functioned to relay phone and radio messages, record weather data, observe fire behavior, and to instruct their visitors in fire prevention. Many lookouts are located in places which were historically more remote than they are today, now that much of the backcountry has been opened by roads and trails. In the Northwest at least, in the 1930's, panoramic photos were taken from their roofs: lookouts are reminders of the changes in the landscape over time. Furthermore, built in an era which predates most of logging on National Forests, lookouts represent a time period when stewardship was the chief function of the Forest Service.

Criterion B

Records of persons who either built or manned historic lookouts on the forest have not been kept. In the course of research, several have been identified but none who are "significant in our past." The lookouts on Deschutes National Forest would not be eligible for inclusion to the National Register according to Criterion B.

Criterion C

According to National Register Guidelines, "type, period, or method of construction refers to properties related by cultural tradition, or function; by date of construction or style; or by choice or availability of materials and technology." Of those lookouts on the Deschutes National Forest which are over fifty years old, most represent some type of standard prefabricated construction specifically designed to be transported to remote locations and to be resilient to the elements. With the exception of the Walker Mountain ground house, each of these styles were used regionally for fire detection and suppression activities and are characteristic of a time period. Furthermore, lookouts as a group, represent a cultural response to forest fire detection needs.

Deschutes National Forest lookouts therefore illustrate a stylistic pattern that was common to lookouts, the variation that occurred within that class, and the evolution of the class over a period of time. Therefore, they fulfill Criterion C.

Criterion D

All of the Deschutes National Forest Lookout structures meet the requirement for significance under Criterion D. The Black Butte Cupola door is on the left as you face the building rather than the right. Therefore, it is likely to yield information regarding variation of R-6 lookout designs. Furthermore, both the cistern and the remains of the lookout tree on Black Butte have the potential to yield information about the variety of design and construction techniques of early lookouts. The Black Butte tower, because it is the only example of an L-6 cab with a stairs leading through the floor and no door onto the catwalk on an 83 foot C-1 tower, is a unique example of a lookout which could reveal information about variation within the class, lookout towers and L-6 lookout towers of which only six remain regionally.

The Walker Mountain ground house is also a unique lookout structure because it is is illustrative of a time period when lookouts were not standardized and fire detection activities occurred out of doors. It is likely to yield information regarding early lookout construction techniques, and early lookout design and function. If Kresek (1985) is correct, the tower at Walker Mountain is unique because it is the only example of an L-4 cab on a metal tower in Oregon. This tower, therefore, could provide information about the variation within the L-4 cab class.

The other lookouts on the Forest minimally meet the requirement for significance under Criterion D because the information they are likely to yield is available through documentary research of early plans for lookouts. Inventory revealed no unique design patterns in the the styles of lookouts outside of Black Butte and Walker Mountain.

Integrity

Having established that the lookouts on the Deschutes National Forest possess significance under Criterion A and C, as well as Criterion D, for Black Butte and Walker Mountain, the argument for eligibility to the National Register of Historic Places becomes one of age and integrity.

Photo (11): Black Butte Lookout Site: The 1922 Cupola and adjacent YACC built ground house from the Black Butte Tower. With the tower decommissioned, presently staff are working from the cupola second story. Sisters Ranger District CRM Photo Files.

Black Butte

Temporary No.H-S-1
T13S R9E Section 34
Elevation 6436

The site of the earliest lookout on the Deschutes, Black Butte, is a complex site with multiple components. At this time it includes remnants of a lookout tree, a cupola lookout, a lookout tower, a ground house, a radio tower and its associated building, two outhouses, a telephone line and several carved rocks.

Two lookout trees constructed by Forest Ranger Harve Vincent to 1910, are the earliest recorded lookout structures on the Butte (Wilson and Scott 1974). Vincent later built a log cabin he called a squirrel cage because of its open appearance (Baker 1950). In 1913, Forest Supervisor, Mel Merritt, ordered a telephone line installed on Black Butte, as well as three other lookouts: Paulina Peak, Maiden Peak, and Walker Mountain. Together these comprised the first system of permanent lookouts on the Deschutes National Forest (Merritt 1957).

Lynn Wilson was lookout on Black Butte in 1919. Along with Mose McKinney and Walt Graham, he built a new tree lookout: a platform supported by the trunks of four trees. The remnants of a tree lookout on the butte may be this structure. Lynn Wilson lived in a cabin "about 100 yards from the top" (Wilson and Scott 1974). A faint alignment of stones and a flattened area are located just off the summit adjacent to an engraved rock reading "FIRE LOOK OUT LYNN WILSON 1919 JUNE JULY AUG & SEPT".

North of the lookout tree are the remnants of a stone cistern; a circular wall of rocks set into the ground. The date of construction for the cistern is uncertain but thought to be contemporary with the use of the tree.

In 1922, (Deschutes National Forest Real Property Ledger), an Aladdin D-6 Cupola was built, making it one of the oldest of the ten known standing in Region 6 (Swift 1991). It is unique because the door is on the left as you face the building rather than the right as is shown in D-6 plans. In the twenties, with Black Crater, it served as one of two lookouts on the Sisters District.

In July of 1934, Claude Post and a Civilian Conservation Corps crew of six from Company 965, began construction of the 83-foot treated timber lookout tower. It was estimated that the tower would require over 300 pack loads of materials brought up the four mile trail (Camp Odell Newsletter 1934); it ended up taking over a thousand. Because many of the timbers were so long, the horses and mules had to be unloaded and reloaded to negotiate some of the switchbacks. Finished in late August of 1934, the tower took 1,491 man hours to assemble and erect.

The tower is a treated timber CT-1 with a 7' x 7' L-6 cab on top. It is unique because the hatch from the stairs comes up through the floor of the cab rather than through the catwalk. Access to the catwalk is through a window, as there is no door from the cab. The catwalk was probably built with the original

tower or added shortly afterward (Neal 1936). However, the catwalk may be significant as the lack of door implies that it may have not been part of the original kit and been an adaption of the L-6 plans without catwalk.

Photo (12): Lynn Wilson Rock, "FIRE LOOKOUT LYNN WILSON 1919 JUNE, JULY, AUG and SEPT" Deschutes National Forest CRM Photo Files.

The Black Butte Tower is one of six L-6's left in the region, one of two which have a trapdoor in the floor of the cab versus through the catwalk and no exterior cab door, and the only L-6 on an 83 foot CT-1 tower. The tower has been condemned due to dry rot and instability. The other L-6 with a hatch through the floor is Frazier Peak, on the Malheur National Forest, which is also in bad shape due to woodpecker damage. The Black Butte Tower is a major cultural resource management challenge at this time (see site form).

From 1934-1979, the cupola served as the ground house for the lookout working in the tower. Near the cupola is another rock inscribed "EDDIE PARK THE BEARDED BACHELOR OF BLACK BUTTE 1948-9". Ed Park, a local photographer and writer for Hunting Magazines, was lookout on Black Butte at that time. A modern ground house was constructed by the YACC in 1979, as well as a new outhouse, by Forest regulars a few years ago; both are of rustic style. Other features of the site include a CCC era outhouse with graffiti dating from the 1940's through the 1970's. East of the tower is a small radio tower. Remnants of a telephone line climb with the two mile trail up to the summit.

The three historic buildings, the cupola, the lookout tower, and the CCC era outhouse, are all either unaltered or altered slightly. All three buildings possess integrity of location, design, setting, materials, workmanship, feeling, and association and are recommended for eligibility to the National Register.

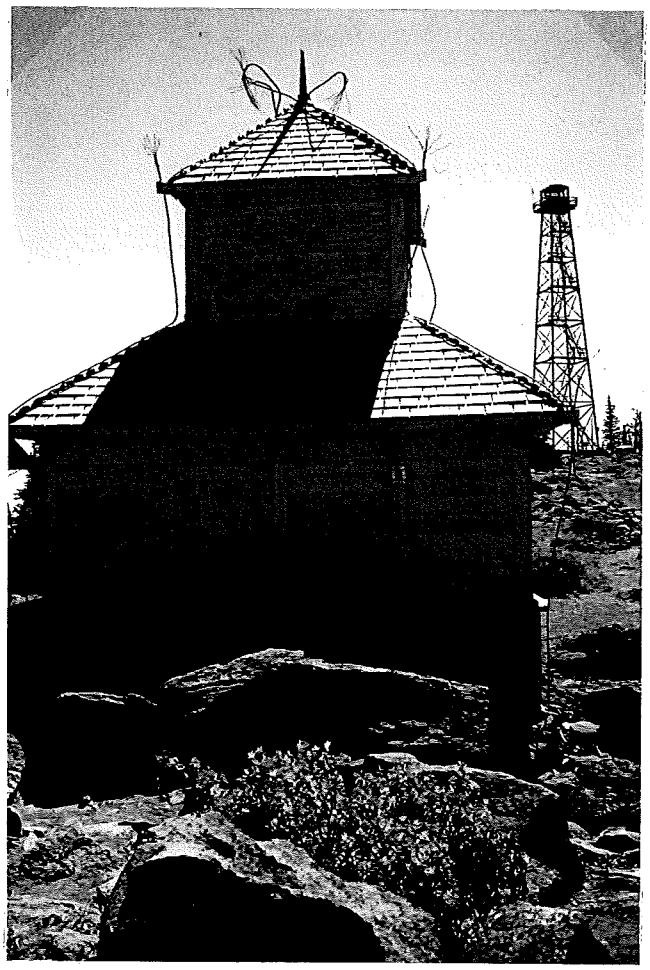


Photo (13): Black Butte Cupola with tower in background. The Black Butte Site is unique not only for its historical buildings but because of the site is an illustration of historic continuity: The D-6 Cupola was a Region 6 design. The tower was built by the CCC. Deschutes National Forest CRM Photo Files.

The site as a whole is unique for its juxtaposition of historic elements against the backdrop of Mt. Hood, Mt. Jefferson, Mt. Washington, the Three Sisters, and Broken Top; the towns of Sisters and Bend; and the Ochoco's and High Desert; the remains of lookout trees and historic cabins; the carved rocks by former lookouts who worked there; a lookout tower constructed by an historic government work program (the CCC) yards away from a lookout ground house assembled in part by a more recent government work program (the Young Adult Conservation Corps); an old outhouse with graffiti from the 1940's near its modern replacement; and a trail up to the site paralleling the remnants of the old telephone line and passing at one point the modern radio repeater.

The Black Butte site borders a 1979 burn and today continues as a primary lookout on the Forest. Three historic lookout fire detection facilities exist here: the lookout tree, the cupola, and the tower. In addition, thousands climb up the two mile Black Butte Trail every year. The value of this site lies in the continuity it presents; it is a study in the evolution of fixed fire detection located in a place accessible to a public willing to enjoy it. Because of the relationship of these elements, the top of the Butte as well as the trail leading up to it is also recommended for eligibility to the National Register of Historic Places.

East Butte

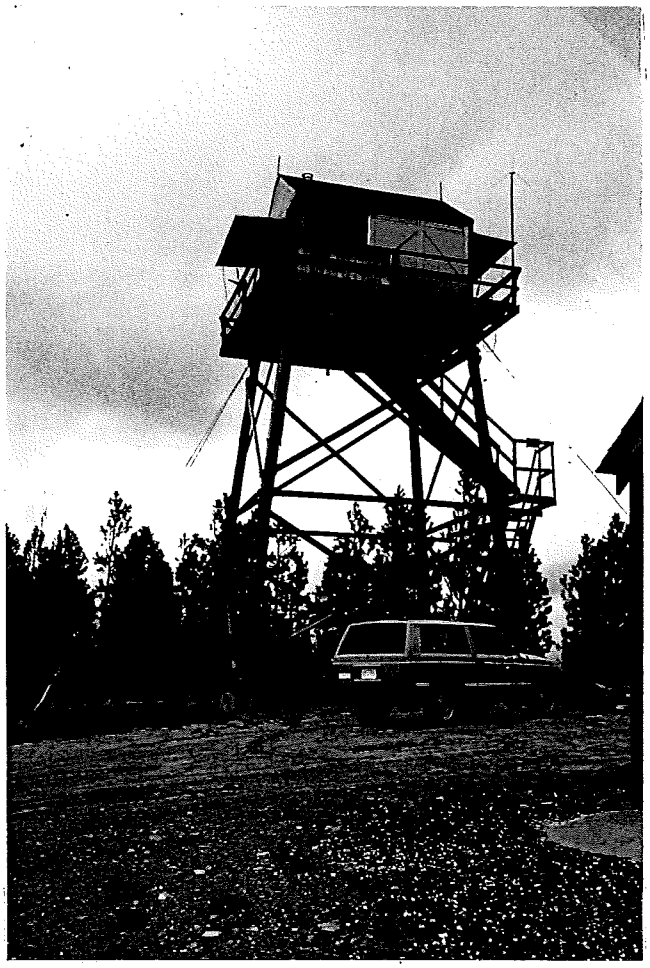
Temporary No. 043-FRD-91H
T22S R14E Section 13
Elevation 6365

East Butte Lookout point is first shown on a Deschutes Forest Map dated 1931. The lookout was built in 1932 and consists of a thirty foot pole tower with a gable roof L-4 lookout on top. The panoramic photo, taken in June 1933, shows the tower was built in the ashes of a recent burn. The original garage, built in 1934, is still standing, though the CCC era outhouse has since been replaced. In addition, an old garbage pit with a wooden cover is present on the site.

Several elements of the East Butte Tower have been altered. The former tongue and groove exterior siding was covered in 1960 with T111 plywood. The shutters have also been replaced, as well as the windows and door. The interior siding, however, as well as the floor, ceiling, roof, sheathing, deck and basic shape and structure of the lookout are intact: the original siding exists under the T111 and the tower is recognizable as an early 1930's L-4.

There are only four known gable roofed L-4's of the 47 standing L-4's in Oregon, one of which is a complete reconstruction. The garage has had its door replaced but is largely unaltered. Without testing it is difficult to establish the date of the garbage pit. Since the East Butte Lookout tower and

garage possess integrity of location, design, setting, materials, workmanship, feeling and association, they are recommended for eligibility to the National Register. The eligibility of the garbage pit cannot be established without testing.



Photos (14) and (15): East Butte Lookout in the late 1950's/early 1960's and in 1991. East Butte is one of two gable roofed L-4 lookout structures on the forest and the only gable roofed L-4 in its original location.

Fox Butte

Temporary No. 1042-FRD-91H
T23S R16E Section 6
Elevation 6109

Former Deschutes National Forest Engineer, Slim Hein, who worked on a beetle project on Fox Butte in 1929, remembered visiting a small wooden tower at the summit of Fox Butte with a shed at the foot of the mountain for habitation.

Fox Butte is later labeled as the site of a lookout house on a 1931 Deschutes National Forest Map. The present tower and garage were built in 1933. A secondary lookout located on the Fort Rock District of the Forest, is a 7' by 7' steel cab atop an 80' steel MC-39 Aermotor tower. The tower is intact, though it shows slight rust and the concrete footings, as well as the wooden steps and landing boards, are cracked. The tower appears unaltered, though shutters have been added to the cab. These shutters are made of plywood and bolted to 2 by 4 's which are bolted to the cab. Pictured in a 1937 photograph of the lookout, the shutters, while not the originals, are certainly not a new alteration. Unfortunately, due to deterioration and wind, only two of the shutters are intact, one of which is almost ready to fall off.

Two sets of panoramas exist for the lookout bringing to question the Forest records' 1933 date for construction of the tower and garage. The first, dated 1933, are two sets, one marked "Fox Bu. New Tower" and the other "Fox Bu. Old Tower." There is a rumor that the original tower at Fox Butte burned up, but no record of the tower burning could be found. The remains of what looks like the old tower has been found on the western point of the mountain, a wood pole structure without footings and the remains of some sort of cab which included cedar shingles. All of these posts exhibit slight charring, however, not enough to fell the tower.

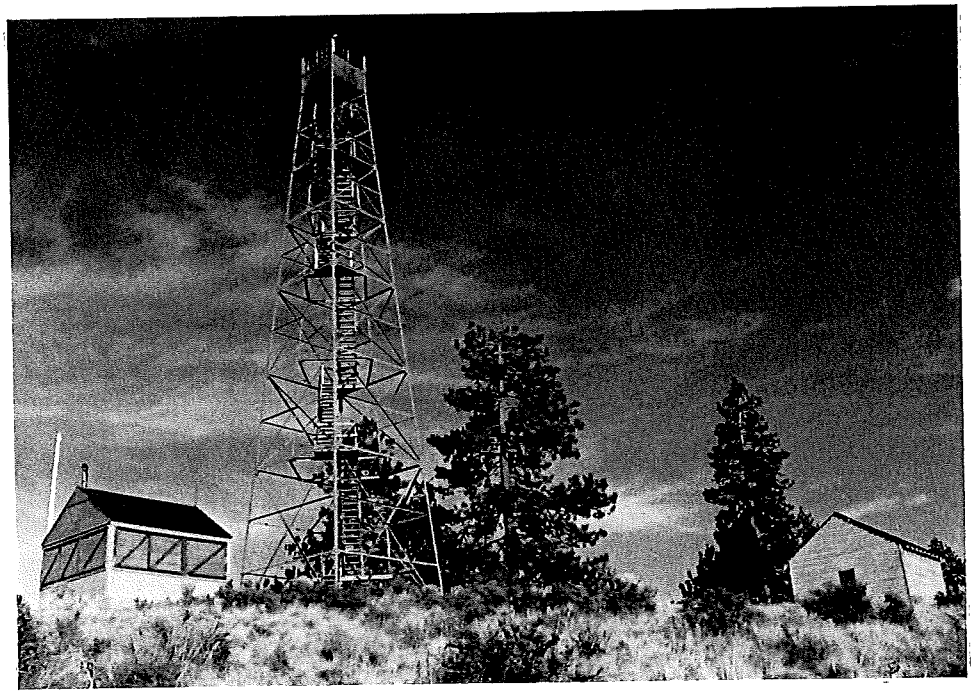
Another panorama, dated 1938, is claimed to have been taken from a tower 90 feet high, which is confusing as the present tower and the data recorded on the 1933 photograph states that the tower is 80 feet high. The 1938 photo seems to be taken from the same point as the earlier photo marked "Fox Bu. New Lookout Tower."

Regardless, the Fox Butte Lookout Tower is largely unaltered and possesses integrity of location, design, setting, materials, workmanship, feeling and association and is recommended for eligibility to the National Register of Historic Places.

The garage is a 14' by 18' structure with a sliding wooden door at the east and a window to the west. The door has been taken off but is sitting inside and could be reinstated. It is similar to the present garages at Spring Butte, and East Butte. The garage possesses integrity of location, design, setting, materials, workmanship, feeling, and association and is recommended for eligibility to the National Register of Historic Places.

The Fox Butte ground house is a gable roofed L-4 lookout building which formerly served as a lookout on nearby Sixteen Butte. According to Kresek (1985), the building was built in 1931 making it the oldest known standing L-4 in Oregon (Mark Swift, personal communication). It was moved to Fox Butte in 1948, presumably when Fox Butte's original ground house was destroyed. Though covered with T111 plywood, the original exterior siding is intact, as well as the original windows, ceiling, floor, interior siding and lightning protection. An old F. S. Lang Company wood cook stove sits in a corner.

Photos (16) and (17): Fox Butte Lookout Site in 1937 and 1991. The present ground house was moved from nearby Sixteen Butte to Fox Butte in 1948.
(16): Deschutes National Forest Supervisor's Office Photo Files. (17): Fort Rock Fire Staff.



Although the Fox Butte ground house has been moved less than 50 years ago, it possesses integrity of design, materials, workmanship, feeling, and association. Its setting and location are comparable to its original one: it is still located on a Butte in the High Lava Plateau and is still associated with fire detection on the Fort Rock District of the Deschutes National Forest. Furthermore, this report argues that the ground house is integral to the site because a tower this size necessitates the use of a ground house for habitation. The Fox Butte ground house is a moved building of lesser significance than the tower which is the crucial and dominating building of the complex. Though it has been moved, it still has an orientation, setting, and general environment comparable to its historic one. It is still associated with fire detection activities and fire lookouts and still provides housing for lookout staff. Dismantling or movement of the ground house would affect the overall quality of the site, which would lack an historic building to house lookout staff. Furthermore, as the oldest standing L-4 in Oregon, its loss would be significant. Therefore, the Fox Butte Ground House is recommended for eligibility to the National Register.

The outhouse at Fox Butte is a CCC era building whose exact date of construction is unknown. Much of the building has been chewed by porcupines and there is too little left of the original structure to be considered eligible to the National Register.

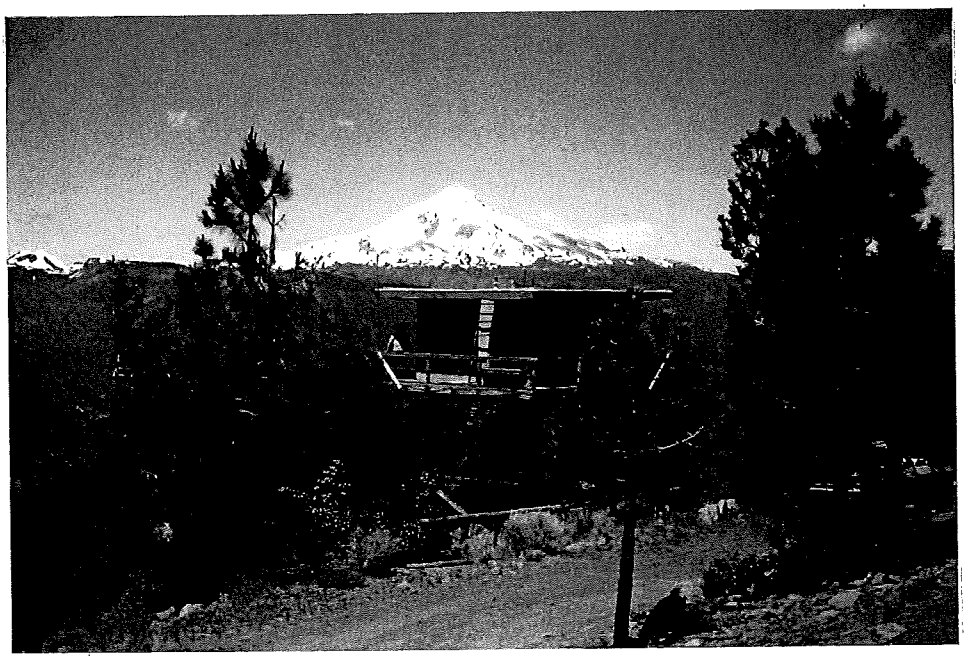


Photo (18): Green Ridge Lookout, 1991, an R-6 Flat Top on a treated tower. Deschutes National Forest Photo Files.

Green Ridge Lookout

T12S R9E Section 13
Elevation 4380

Presently, Green Ridge is a secondary lookout on the Deschutes. Built in 1961, it is a R-6 Flat Top cab on a 20 foot treated timber tower. An earlier lookout was built on Green Ridge in 1933, 500 feet below the site of the present tower. This was an L-5 according to Kresek, though no pictures of it exist. The earliest records indicate that Green Ridge was used as a lookout point as early as 1931 and that it has been a secondary lookout throughout its history. Because the present structure is less than 50 years old, it is not recommended for eligibility to the National Register of Historic Places.

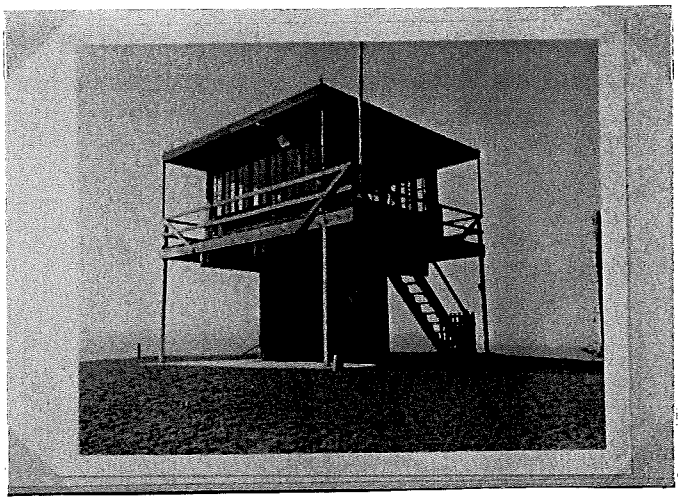
Lava Butte Lookout

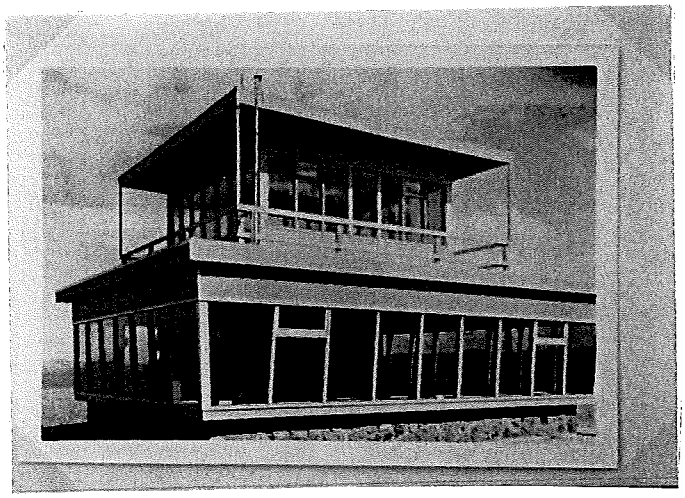
T19S R11E Section 24
Elevation 4988

Lava Butte was used as a fire lookout early in the history of Deschutes County. A July 15, 1913, Bend Bulletin article states that the newly formed Deschutes Valley Fire Patrol Association would place one E. T. Gerrish at a riverside camp so that he could ride to the summit daily to look for fires. A telephone line was also installed that year.

Later, after the Butte became property of the Forest, a nine paned window, hip roofed L-4 was built in 1932. A ground house, this structure occupied the same site as the present lookout and was replaced in 1957 by a 15' x 15' R-6 structure. In 1962, the bottom of the new lookout was enclosed with stone and glass and became the first Lava Butte Information Center. The Forest Service later built a new information center at the foot of the butte in the 1970's.

Lava Butte historically turns in the most forest fires on the Deschutes. It is also a well visited lookout with over 80,000 visitors per year. A pizza was once delivered here in 1989 when lookout Joe Perrin had a craving. Quoted in an 1989, Bend Bulletin article, Perrin described the delivery by John Dough's Pizza owner Rick Shain, "With courage, determination-- no fear-- he came up that hill dauntlessly and delivered that pizza...It was a moment. What can I say?" Perrin called the other lookouts on the radio, "You could hear jubilation ring across the forest." Despite this, because Lava Butte is less than 50 years old, it is not recommended for eligibility to the National Register.





Photos (18), (19) and (20): The Evolution of Lookout Styles at Lava Butte: (clockwise) (18) the original hip-roofed L-4, (19) its 1957 R-6 replacement which was walled in 1962 to create a visitor center. Deschutes National Forest Photo Files.

Odell Butte

T24S R7E Section 26
Elevation 7033

Odell Butte is first shown as a lookout point on a 1928 Deschutes National Forest Map. An L-4 on an 18-foot tower was built there in 1932. The Forest did not build a road to the site until after the 1950's (Roger Miller, personal communication). Earlier, a 300 gallon redwood tank had to be filled with snow

every spring for the lookout's water supply. Just prior to its destruction in 1963, a lookout accidentally threw white gas at a red hot chimney to cool it rather than water. A fire ensued, but was put out before it destroyed the lookout. Fire staff replaced the tower in 1963 with an R-6 TT-1 cab on a 30 foot CT-2 tower. Jim Shotwell, lookout on the Deschutes since 1979, has worked Odell for many years. Odell Butte is not recommended to the National Register because both tower and its outbuildings are less than 50 years old.

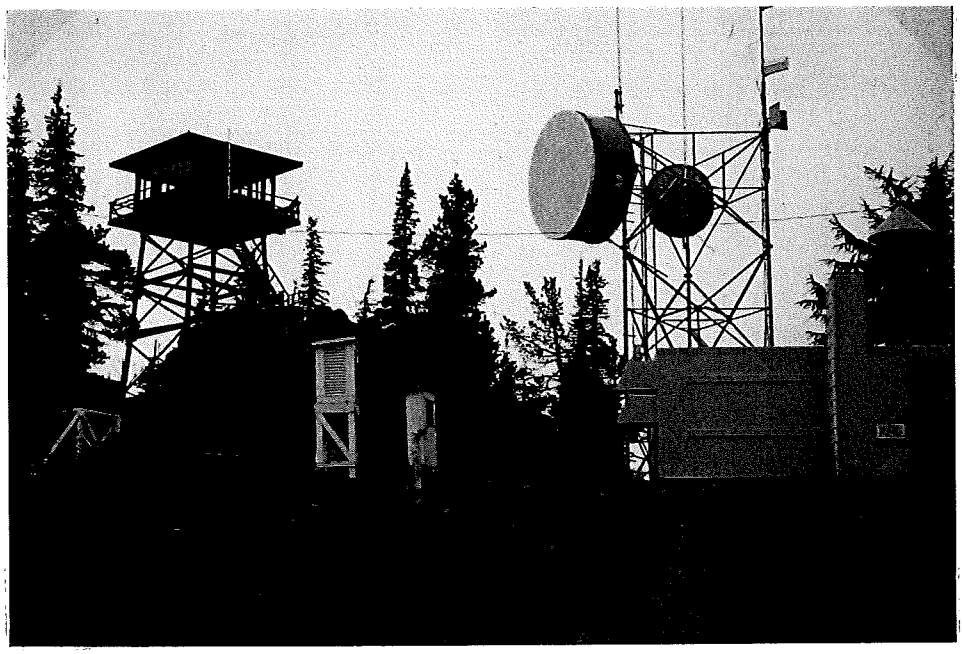


Photo (22): Odell Butte Lookout, 1991. Deschutes National Forest CRM Photo Files.

Round Mountain Lookout

143-BRD-89
T21S R8E Section 13
Elevation 5900

Round Mountain Lookout is a hip roofed L-4 which sits on a small tower on a pile of rocks at the summit of Round Mountain. First shown on a 1928 map of the forest as a permanent lookout point, the first lookout structure was built there in 1933. Round Mountain is presently a primary lookout on the Deschutes which has been staffed by Roger Miller since 1967.

The panoramic photo of the site dated June 29, 1933, shows a cedar shake lean-to with milk cans inside located at 40-60 degrees, a log telephone pole with a telephone box next to it outside the lookout at 25-30 degrees, and a wooden cistern at 15 degrees. A photo from the supplementary point shows the lookout house under construction on a newly logged site.

Round Mountain Lookout has been altered in many ways. The original windows have been replaced as well as all of the log bracing, 1/3 of the deck, and the catwalk. The original roof has been replaced several times including most recently with asphalt rather than cedar shingles. The original floors and exterior siding have been covered. Shutters as well as cabinets are not the originals. The lookout building is extensively modified and therefore lacks integrity of design, materials, and workmanship. It is not recommended for eligibility to the National Register of Historic Places.

There are two outhouses on site, neither of which are recommended for eligibility to the National Register because one is less than fifty years old and the other has been badly damaged by rodents and therefore lacks integrity of design, materials, and feeling.

Photo (23): Round Mountain Lookout, 1991. Round Mountain is a well-maintained L-4. Unfortunately, alterations have resulted in loss of its historical integrity. Deschutes National Forest Photo Files.

Photo (24): Spring Butte Lookout prior to its destruction in 1991. Deschutes National Forest Photo Files.

Spring Butte Lookout

Temporary No. 1041-FRD-91H
T24S R11E Section 1
Elevation 5464

Spring Butte Lookout Tower was determined ineligible to the National Register of Historic Places (see appendix IV) in June, 1991. Because the original tower will be removed, the eligibility of the other features on the site has been affected. So far, there is insufficient data to evaluate its outhouse, although it is not a CCC era structure. Its garage, built in 1934, is only slightly altered by putting cement blocks underneath it as a foundation, and is still associated with a lookout site. It retains integrity of location, design, workmanship, and feeling but because its setting and association with the 1932 tower has been disturbed, it is not recommended for eligibility to the National Register of Historic Places. It is suggested, however, that it should be reused in the restoration of other lookout sites, perhaps Wanoga Butte.

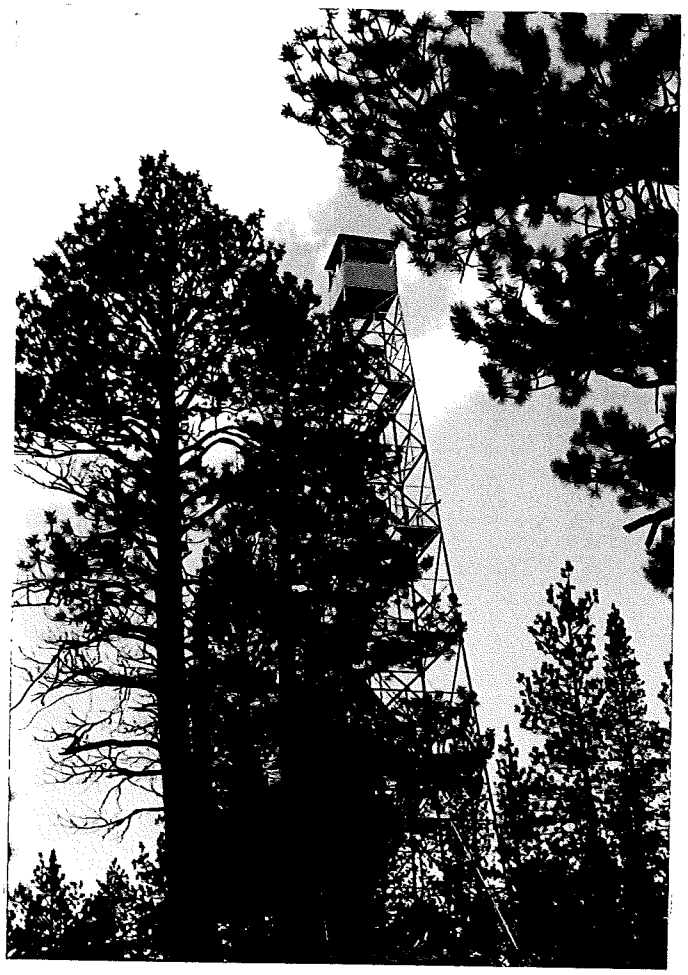


Photo (25): Trout Creek Butte Lookout in 1991. Vandalism is a problem in the management of these historic structures due to their remote locations. Deschutes National Forest Photo Files.

Trout Creek Butte

Temporary # SRD-H-50
T15S R9E Section 28
Elevation 5546

Civilian Conservation Corps Company 965 built Trout Creek Butte Lookout Tower in 1933. Boards were placed over the cross bracing on the lower levels of the tower as the crew constructed the section above. Stairs were put in as each section as the tower was built (Historic Photo). Presently, the 76 foot

Aermotor MC-39 tower with 7' x 7' steel cab is still intact, though the window panes and the cab have been shot through. At one time the Forest had plans to move the Trout Creek tower and cab to replace the deteriorating Black Butte Tower. In 1976, footings were actually poured on Black Butte to receive the tower which was to be transported by helicopter to the site. These plans were later abandoned. Trout Creek has not been used as a lookout on the Forest since before 1976.

A wood-framed lookout dwelling was built at the foot of the tower in 1934 but was destroyed in 1983, as well as a framed garage. A CCC era outhouse still exists at the site, but has fallen over and is deteriorated. Without restoration, it is not recommended for eligibility to the National Register.

The loss of the ground house and garage have resulted in a loss of integrity to the Trout Creek Lookout complex which was used in conjunction with ground house. The loss of the outbuildings have resulted in some loss of setting, feeling, and association; however, the tower still is recognizable as a lookout and provides the same panorama. It is one of the two lookout towers on the Forest known to be constructed by the CCC. The tower is almost unaltered. Therefore the Trout Creek Lookout Tower is recommended for eligibility to the National Register.

Walker Mountain

Temporary No. H-C-1
T26S R8E Section 24
Elevation 7078

Along with Black Butte, Maiden Peak, and Paulina Peak, Walker Mountain is the site of one of the four original permanent lookout structures on the Deschutes. Presently, it is a secondary lookout on the Forest manned by Walker Range Association and maintained by the Forest Service. It is the only lookout on the Forest which can adequately cover the Little Deschutes Canyon up to the headwaters. For many years a United States Geological Survey seismograph was maintained in the garage to monitor earthquakes. It was removed in the early 1980's. Twelve transmitter and receiver towers with seven associated buildings have been installed since the mid-1960's extending the lookout site's relay functions into more widespread communication.

The Walker Mountain site includes a stone and wood cabin, a hip roofed L-4 on a metal tower, three outhouses, a garbage dump, and a group of receiver and transmitter dishes and their associated buildings.

In his memoirs, former Forest Supervisor Mel Merritt mentions ordering telephone line strung up to Walker Mountain for the purpose of reporting fires. The next year, William Sproat collected weather data and did plane-table triangulation and mapping from Walker as well as other lookout points.

Photo (26): Walker Mountain Cabin sometime between 1964 and 1983. Since this picture was taken, the cistern has fallen over and the door has been replaced. (See Site Form in Addendum for recent photos) Deschutes National Forest Photo Files.

Shortly after his arrival in 1915, Deputy Supervisor Vern Harpham built a cabin on Paulina Peak prior to building the Walker Mountain stone house. Trying to avoid the slow process of hauling wood by sled and mule up Walker Mountain as he had on Paulina he decided:

> At Walker Mountain he wanted to avoid this slow lumber transportation, so he built a cabin of local shale rock, of which there was great abundance. This saved transporting lumber, but required cement, sand and water, all of which had to be carried uphill on horseback and proved to be almost as much work to move as lumber would have been. (Merritt 1957)

Photo (27): Walker Mountain Cabin, 1991, interior looking west. Deschutes National Forest CRM Photo Files.

Forest property records date the construction of this cabin to 1917. Although the daylight can be seen through the roof, the cabin is in good shape considering very little maintenance seems to have been done on it. It is made of native stone with a stone chimney along its west (back) side. The window and door frames, gable, cabin roof, and the porch roof and braces are made of timbers. Some of these timbers are unmilled, such as the rafters above the porch which show ax marks. Modifications include electricity, a plywood ceiling, and emplacement of concrete over the floor of the cabin and porch in 1964. While stone can be seen under the concrete of the porch, it is not known what the original materials of the cabin floor were made of.

Next to the cabin is a water tank in a wooden frame which has partially fallen over, but is restorable. Though in need of maintenance, the Walker Mountain cabin possesses integrity of location, design, setting, materials, workmanship, feeling, and association. Some associated features are a dump 15 meters below the lookout house, a wooden seat between two stumps, and an old outhouse. The

outhouse is badly deteriorated and is less than fifty years old. The dump is fairly old and has the potential to yield data about the historical activities of fire lookouts. The Walker Mountain Cabin and its associated features with the exception of the outhouse are recommended for eligibility to the National Register of Historic Places.

The Walker Mountain Lookout Tower is a 35-foot galvanized steel tower with a hip roofed L-4 on top. At one time there was a tree lookout on the site, northeast of the present tower. The tower was built in 1932 or 1933. According to Hal Pierce, head of Walker Range, Shorty Gufstenson hauled the pieces of the lookout up the road by team and wagon. While a fourteen foot cab atop a metal tower is very common in the Southwest Region, according to Kresek (1985), Walker Mountain may be the only example of an L-4 on a metal tower in Oregon.

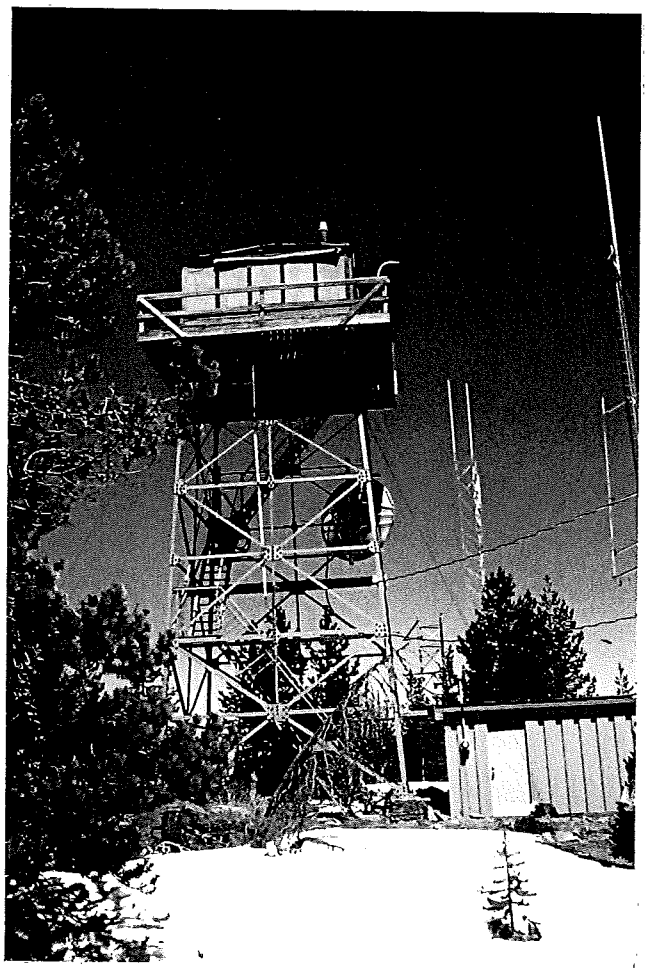


Photo (28): The Walker Mountain Tower, 1991. Because its tower-cab combination is the tower is recommended for eligibility to the National Register. Deschutes National Forest CRM Photo Files.

Unlike other metal towers on the Forest, the metal pieces of the tower are not stamped Aermotor, although it resembles the Aemotor MC-24; diagonal and horizontal cross braces meet at metal plates between the tower legs rather than simply crossing one another. A set of stairs from an Aermotor tower from the Silver Lake District of the Fremont was installed in 1979. Interior to the tower legs, this metal stairway replaced a wooden set of stairs which was attached to the tower exterior and led up and through the catwalk. The newer stairs is stamped both "AERMOTOR" and "FREMONT NATIONAL FOREST." They lead up through the floor of the cab. At the time the stairs were changed the catwalk was also replaced. Furthermore, two microwave dishes have been suspended from the north side of the tower about halfway up.

The cab has also been altered in several ways. The shutters were removed some time since the mid-seventies. The original four pane windows were replaced at that time with single pane smoky glass windows. The original door, the ceiling, roof, interior, and exterior siding are intact but the original flooring has been covered with carpeting. Though the cab has lost some integrity due to these changes, the uniqueness of the tower cab arrangement make data collection desirable. The Walker Mountain tower is therefore recommended for eligbility to the National Register.

The date of construction of the garage at Walker Mountain is 1934. The style, similar to the garages at Spring Butte, East Butte, and Fox Butte but smaller and without the storage platform. The garage retains integrity of location, design, setting, material, workmanship, feeling, and association. It is associated with the ground house as well as the tower. It is therefore recommended for eligibility to the National Register of Historic Places

Of the two other outhouses on the northern part of the site, one is less than fifty years old and the other is a CCC era structure which has been knocked over and is badly weathered. The CCC era outhouse lacks integrity of setting, location, feeling, and association and is not recommended for eligibility to the National Register.

Wanoga Butte

Temporary No. 30-BRD-87
T19S R10E Section 20
Elevation 5797

Wanoga Butte Lookout is a hip roofed L-4 cab on a 30 foot log tower. Though placed on a USGS map as early as 1930, the lookout has served as a secondary lookout point throughout most of its history. A road has led up to the lookout from at least the time its panorama was taken in 1933. The tower and cab were built in 1933-1934 in conjunction with a 14' x 18' garage and an outhouse. The original tower poles were of untreated Ponderosa pine and were replaced in 1953

by poles of Tamarack. The original garage, also built in 1934, was hauled to Fall Creek at Sparks Lake and converted to a maintenance cabin by Ken Clark and Harry Chase. The 1934 toilet was removed in 1950. Another third outhouse replaced the second in 1975. A road has led up to the lookout from at least the time its panorama was taken in 1933. The butte top was freshly clearcut at that time. A new shed, as well as a crib like shower structure, have been built on the site. In the last twenty years Wanoga has been staffed in an on-again off-again manner by the Deschutes. It is no longer considered a secondary lookout by the Forest.

The Wanoga Butte tower is largely intact. While the legs have been replaced, they have largely been in character with the original design of the tower. Shutters have been replaced with plywood, but swing up and are propped in largely the same manner as is in character with the original design. Wanoga Butte lookout tower possesses integrity of location, design, setting, materials, workmanship, feeling, and association. It is recommended for eligibility to the National Register.

Photo (29): Wanoga Butte Lookout, 1991. Its Garage was moved and converted to a cabin at Sparks Lake. Deschutes National Forest CRM Photo Files.

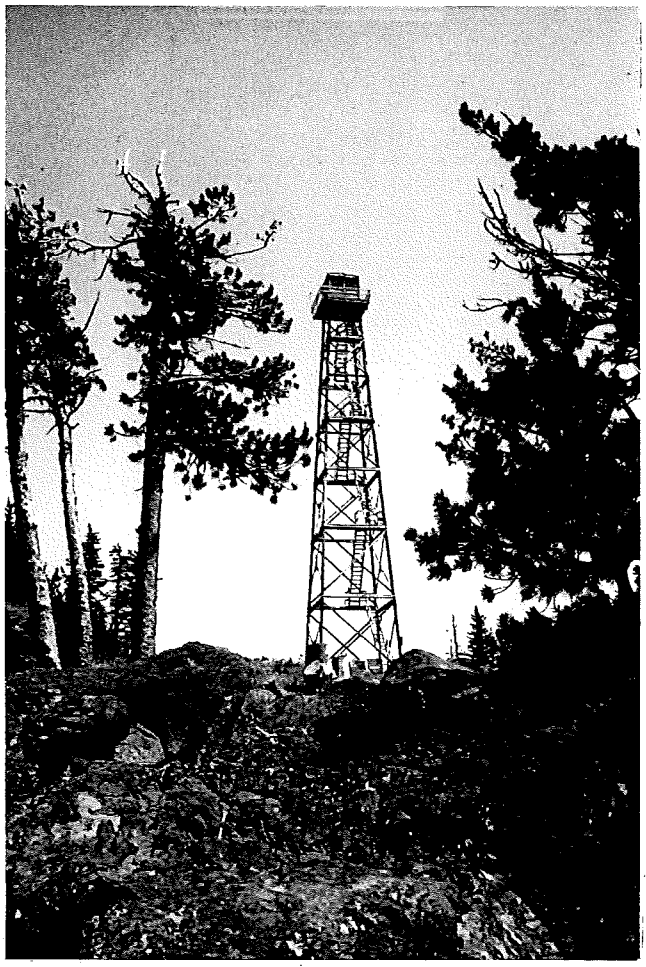


Photo (30): Black Butte Lookout Tower, 1991. Its management is one of the Forest's biggest challenges concerning lookouts. Deschutes National Forest CRM Photo Files.

Conclusions

The Deschutes National Forest Lookout System is shrinking. Although still viable as a means of fire detection, the Forest still owns more lookouts than are needed for fire duties. In the sixties and seventies, many of the lookout facilities on the forest were dismantled when research showed that a combination of lookout and air detection facilities was the most cost effective means of spotting wildfires. Those structures which were not being used were sold or destroyed due to potential liability and maintenance costs. Others were not well maintained. Nevertheless, lookouts have an unquestionable historic and recreational value, and the structures should not be destroyed without consideration for their historic significance and their potential for adaptive reuse.

In managing its historical structures, the Deschutes could do well to keep accurate maintenance records. These records as well as the other historical information were difficult to find. The United States Forest Service is one of the chief custodians of wild lands in the United States. It should be careful that it does not throw away its own history.

Because many lookouts of the CCC era are aging rapidly, timely inventory, evaluation, and management of lookouts nationwide is desirable so examples can be preserved and maintained. It is difficult to establish the significance of a type when accurate data describing the condition and styles of various lookouts is scanty. Walker Mountain is a good example. Its tower is of an unknown style, and it is unknown if others of its type exist, making it unique. The lookout has been heavily altered and might not be recommended for National Register eligibility should a better example of a tower of its type be discovered.

Furthermore, the Regional Office could help the Forests by providing tools to help in inventory, evaluation, restoration, and rehabilitation of these structures by attempting to locate lookout and associated building plans and reducing them into handbooks to be used by forest archaeologists, engineers, and maintenance persons. It is difficult to obtain such plans as many of them have been thrown away. The various Forests in the Region could be inventoried with the regional office coordinating the effort and putting together the handbooks.

As time passes, other lookouts of this age group are falling into disrepair and aging beyond rehabilitation. An evaluation of this kind needs to be conducted on a regionwide basis so an adequate management strategy can be formulated to preserve some of our fire lookout facilities. It is suggested that the Forest Service commit resources to identifying and managing its historic lookouts before some of the best examples are lost.

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Appendix I

Recyclable L-4 Lookout Parts

Movable bed frame with installed drawers

Original Windows

Tongue and Groove - 6 and 8 foot lengths or can be cut down to 6 and 8 foot lengths.

Lightning Rod System or Parts of it.

Original Hardware

Original Doors

Interior Cabinets

Firefinder

Firefinder Stand

From Hip Roof Models-- metal covering on outside of building where corners meet.

Phone System-- all parts, phone, switches, insulators

Original Stove

Original Stovepipe

Thimble which adapts stovepipe from 6 to 10 inches

Lightning Rod

Any type of Panoramic Photo

Panoramic Photo Box (mouse-proof, made of plywood)

Any specialty woods--flooring, siding, ceiling.

Garage

CCC Era Toilet (Generally a gabled tongue and groove structure)

Table V:
Historic Lookouts on the Deschutes National Forest

Lookout Name	Elevation	Location	Built	1st Style	Rebuilt	2nd Style	Dstryd	Notes
1.Abbot Butte	4329	T12S,R9E,S6	1932	hr L-4,40'ptS	NA	NA	1967	Standing in 1958S
2.Alder Springs		T18S,R10E,S8	1941	L-5, 65'ttS	NA	NA	1968	Earlier CN
3.Bachelor Butte	9065	T18S,R9E,S31 1943	c1919	D-6	1931	hr L-4S	NI	L-4 gh; standing
4.Bates Butte	4258	T20S,R10E,S27	c1928	cn camp	NA	NA	1939	
5.Big Hole Butte	5123	T25S,R12E,S5	1932	L-4, 20 pt	NA	NA	1958	
6.Black Butte	6436	T13S,R9E,S34	1922	D-6	1934	L-6,83'tt	NA	tower condemned 1991
7.Black Crater	7251	T15S,R8E,S14	1925	Supervisor gh	NI	NI	NI	standing in 1938
8.Broken Top (McArthur Rim)	7375	T17S,R9E,S23	1931	gr L-4 gh	NA	NA	NI	Aband'd 1952
9.Cache Mountain	5579	T14S,R8E,S4	1933	L-4, 20'pt	NA	NA	1969S	
10.China Hat	6573	T22S,R14E,S10	1930's	Unknown	NI	NI	NI	No Panorama, Possibly a cabin close to East Butte,Pre-East Butte?
11.Cultus Mountain	6759	T20S,R7E,S22	1934-5S	L-5 pt	1958	R-6,ttS	1968S	
12.Davis Mountain	6625	T22S,R8E,S26	1933S	L-4, 40' wt	NA	NA	c1968	
13.Deer Mountain	5450	T27S,R7E,S26	1934S	L-4, 45'wtS	NA	NA	NI	Once on Des. NF
14.East Butte	6365S	T22S,R14E,S13	1932	gr L-4	NA	NA	NA	

15.Finley Butte	4748	T22S,R11E,S20	1934's	60' Towers	NI	NI	NI	Panoramic Photo 1934 labeled Lot: "Lookout Tower" Former state LO
16.Fly Lake	3000	T12S,R11E,S17	1948	sL-4 , 54'tt	NA	NI	c1968	
17.Fox Butte	6025	T23S,R16E,S6	1933	Aermotor	?	NI	NA	Butte burned in 1930's
18.Fuzztail Butte	5734	T20S,R13E,S26	1933?	L-4 gh				PP 6/30/33
19.Green Ridge	4380	T12S,R9E,S13	1933	L-5	1961	R-6 20'tt	NA	
20.Indian Butte	5995	T23S,R13E,S27	1932	L-4, 10wt	NI	NI	NI	
21.Lava Butte	5016	T19S,R11E,s24	1932	hr L-4 gh	1957	R-6	NA	enclosed 1962
22.Lookout Mtn	6223	T20S,R94,S31	1930's	Cabin	NA			No Panoramic close to Round Mtn. Pre-1930's LO point?
23.Maiden Peak	7818	T22S,R6E,S35	1923	D-6	1958	NI	NI	
24.Odell Butte	7033	T24S,R7E,S26	1932	L-4, 18' wt	1963	R-6, 30'tt	NA	
25.Paulina Peak	7985	T22S,R12E,S2 later destroyed	c1916S	cabin	1932?S	hr L-4	1964	Replaced by R-6
26.Pine Mountain	6348	T20S,R15E,S33	1921	cn+cupola	1932	L-5	1941	SL-4 tt
27.Plot Butte	5365	T22S,R16E,S8	?	cn	NA	NA	NI	
28.Pistol Butte	5154	T20S,R10E,S29	1932S	L-4, 20'pt	NA	NA	c1968	
29.Round Mountain	5900	T21S,R8E,S13	1933	hr L-4 gh	NA	NA	NA	
30.Sixteen Butte	5682	T23S,R15E,S9	1931 1948	gr L-4 gh	NA	NA	NA	moved to Fox Butte

31.Spring Butte	5962	T24S,R11E,S1	1932	hr L-4	1991	Unique	NA	
32.Trout Creek	5546	T15S,R9E,S28	1933	Aermotor 86'st	NA	NA	NA	
33.Tumulo Mountain	7775	T18S,R9E,S22	1949	s L-4	NA	NA	1968	
34.Walker Mountain	7078	T25S,R8E,S24	c1917	cabin	1932/3	L-4 40'st	NA	Aermotor stairs added 1970's from Freement NF
35.Wanoga Butte	5697	T19S,R20E,s20	1933-4	hr L-4 30'pt	NA	NA	NA	

KEY

cn - crow's nest
gh - ground house
hr - hip roof
gr - gable roof
NI - No Information
NA - Not Applicable
pt - wooden pole(log) tower
PP - Panoramic Photo
tt - treated timber tower
wt - wooden tower
st - steel tower
S - any information which corrects Kresek's Fire Lookouts of Oregon and Washington.
s - Standard 1936
Supervisor - Supervisor Hall Special