

landowners (Longwood 1940; Bowen 1978; Olson 1994). The establishment of local sawmills during the 1890s resulted in the first industrial clearcut logging in Soap Creek Valley and offered opportunities for local landowners to capitalize on forested hillsides that had previously held little financial value (Thomas & Schroeder 1936).

LIVING MEMORY, 1900-1999

The memories of the oldest participants in the Soap Creek Valley Oral History Series begin to take shape in the early 1900s (see Fig. 4; Table 4), at about the same time local farming, ranching, and logging methods began to change dramatically. For that time, at least two distinctly different viewpoints currently represent forest conditions in western Oregon. One view, popularized in recent years by forest ecologists, environmentalists, wildlife biologists, and others with an interest in Douglas-fir Region history (FEMAT 1993), is summarized by Spies and Franklin (1988):

In the early part of this century, most of the forested area west of the crest of the Cascade Range was covered by old-growth forests consisting of Douglas-fir, western hemlock . . . and several other large, long-lived species. Most of these forests were probably more than 300 years old and many exceeded 750 years.

By “most” (over half) of the forested area, the authors apparently rely on information that: “At the time of the first settlers, conifer stands clothed almost the entire area of western Washington and northwestern Oregon from the ocean shore to the timberline . . . [of which] 82 percent of western Washington and Oregon is still classed as forest land” (Franklin & Dyrness c.1988). The cause of reduction of forest land from nearly 100% (“except for the Willamette Valley and some prairies in the Puget Sound trough”) to 82% in 150 years is stated to have been caused by: “Clearing away the obstructing forest was, of course, the first order of business for settlers . . . The lumber industry began almost simultaneously and grew rapidly in importance about the turn of the century” (Franklin & Dyrness c.1988).

A differing perspective is provided by Gannet (1902), who reported for 1900: “the total area of [Oregon] west of the crest of the [Cascade] range is 28,877 square miles, of which 15,089 square miles, or 52 percent, are occupied by merchantable timber [of all ages], and 7, 102 square miles, or 24 per cent, are open country.” Although the two views are for slightly different areas of land, the descriptions remain clearly contradictory for most of western Oregon, including Soap Creek Valley. One view is that pioneer settlers had cleared their claims of timber, yet nearly 90% or more of the land remained forested by 1900, of which most of the remaining timber was old-growth (about 50% or more of the total land area). The other view is that pioneer landowners had settled the open prairies of western Oregon and that forested land was at that time (and in 1900, as well) predominantly young reproduction and second growth, with scattered stands and pockets of old-growth (Leiberg 1900; Gannett 1902; Munger 1916; Zybach 1994b). For Soap Creek Valley, the amount of old-growth conifer acreage remained about the same from 1845 until 1900 (see Chapter III; Figs. 36, 37, and 38; Maps 12 and 22; Tables 14, 15, 20, and 21; Appendices F and G), of which the oldest trees were barely 300 years of age in 1900 (see Table 19), and much of the prairie lands had afforested to young stands of Douglas-fir and grand fir less than 40 years of age (see Chapter III; Figs. 14, 17, 19, 20 and 21).

1883-1914: Fencing and Farming (cont.)

As noted above, at some point in the late 1800s or early 1900s, the first memories of the oldest Soap Creek Valley informants (see Fig. 4; Table 4) began to be formed. Olson (1994), Cook (1995), and Murphy (1995), had clear descriptions of events and circumstances in the area from that time. Olson, in fact, is shown in a c.1902 Soap Creek School photograph in which he could still identify most of the other 20 students and adults (including his “7-foot tall” school teacher, Mrs. de Moulin) nearly 90 years later, in 1990 (Olson 1994). The principal change to Soap Creek Valley farming and logging during this time was the advent of the internal combustion engine (see Fig. 25).

Beginning in the early 1900s, the local use of automobiles and tractors permitted “deep plowing” farming practices and the creation of “truck farms”; i.e., the ability to drive select crops to local markets. Both Olson (1994) and Murphy (1995) claimed the “coming of the automobile” was the biggest change

they had witnessed in their lives, while Rohner (1993), Glender (1994), and Cook (1995) emphasized the dramatic changes the use of internal combustion engines brought to farming. As farms became smaller in size and more intensely managed for a greater variety of crops, fencing between fields and ownerships became more common—not to keep livestock out, as in pioneer times, but to keep them in. Free ranging cattle and horses began losing value, while milk cows, turkeys, and goats became more common (Longwood 1940; Glender 1994; Cook 1995).

1915-1940: Automobiles and Logging

In 1915, the State's "Good Roads" policy led to a rapid increase in road construction throughout western Oregon. This policy led to better market access for rural farms and forestlands not served by railroads or navigable streams (Carey 1961), including the farms and timber of Soap Creek Valley. World War I created an immediate demand for agricultural goods and lumber products, and The Valley's landowners were able to quickly capitalize on the new markets (Olson 1994; Cook 1995). The diversification of farming practices and creation of new logging and sawmill jobs helped lead to an increased local population during the 1920s (Rohner 1994; Hindes 1996), but the Great Depression of the 1930s caused the local economy to stagnate. As a result, many local families moved to other locations and The Valley's population declined for several years (Hanish 1994; Vanderburg 1995). In the 1920s and 1930s, the OSC College of Forestry began to buy logged over land in The Valley, under the leadership of T. J. Starker (Jackson 1980; Starker 1984). Establishment of the State's forest seedling nursery in the 1920s (McDaniel 1931) and a CCC camp in the 1930s (Thomas 1980) on nearby property provided the trees and manpower necessary to begin planting the new land acquisitions (see Fig. 19; Thomas & Schroeder 1936; Sekermestrovich 1990; Zybach c.1991). A catastrophic snowstorm in 1937 killed hundreds of local sheep and other livestock (Dickey 1995), but had a lesser effect on local landowners than similar events in the 1800s and early 1900s. A principal reason for the difference is that farmers and loggers were no longer dependent on livestock for transportation or to operate harvesting and processing equipment (Rohner 1993).

Map 23 shows horizontal forest cover patterns of Soap Creek Valley as documented in 1936 by aerial photographs (see Figs. 26 and 29). Property lines

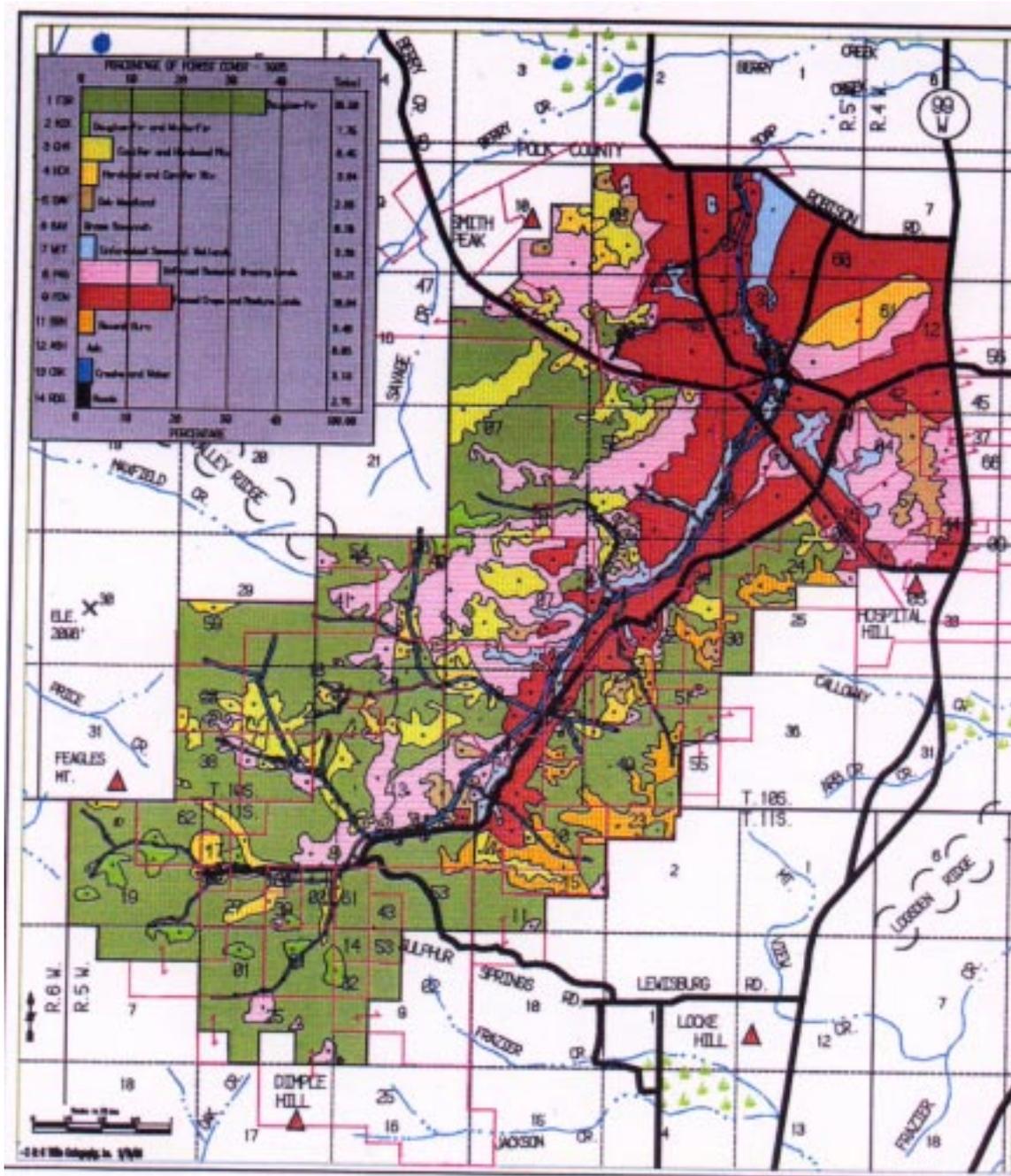
and landowners are based on Metsker maps from 1929 (1929a; 1929b; 1929c). Owners are listed in Table D.3. Note the large increase in number of owner/residents since 1853, and that few family names are consistent with the list of 1853 owners (Table D.2). This indicates an active immigration and emigration on the part of landowners and residents during the first 75 years of Soap Creek Valley settlement. In addition, a large increase in conifer forest area can be noted, primarily due to the decreased need for grazing land in the previous 25 years (see Fig. 21).

1941-1962: Wind and War

The establishment of Camp Adair at the outset of WW II (Berg 1983; Rohner 1993; Glender 1994; Rawie 1994; Dickey 1995; Polk County Historical Museum 1992; 1993; Zybach & Phelps 1997) resulted in the large scale evacuation of most Soap Creek Valley residents, an almost complete stoppage of farming and logging practices in The Valley, and the removal of most fencing, houses, and barns. This change in land use resulted in a noticeable increase in deer, bear, and raptor populations, likely due to the general lack of competition from domestic animals and a sharp reduction in predator control, hunting, and fishing by local residents. After the War, much of the Camp Adair property was obtained by OSU (see Maps 3 and 16), and families began to move on to adjacent properties. Many of the new families were residential, rather than farmers, and new home construction reflected this change (Grabe 1990).

Map 24 shows the horizontal forest pattern in 1945, based on US Army aerial photographs from that year (UO Knight Library Map Room) and local forest surveys (see Fig. 28). Note the continued increase in conifer forest area, the sharp decrease in agricultural use, and the military and industrial development of the Coffin Butte area (see Figs. 31 and 32). Development boundaries were interpreted from 1990 Benton County tax lot maps (Benton County Tax Assessors Office 1990; Zybach et al., 1990). Windfall resulting from the October 14, 1962 Columbus Day storm caused an immediate increase in local clearcut logging and a more thorough continuation of previously established salvage logging operations (see Table 16; Jackson 1980; Rowley 1996; Davies 1997).

Map 23. Forest cover patterns & landowner boundaries, 1929. By the start of the Great Depression in 1929, much of Soap Creek Valley had been subdivided into smaller farms and ranches and fenced (see Figs. 27 and 28), or afforested to stands of Douglas-fir and oak (see Map 20; Chapter III). Numbers within property boundary lines correspond to landowners listed in Table D.3. Note the great increase in residential landowners that has occurred since pioneer settlement (Metsker 1929a; Metsker 1929b; Metsker 1929c).



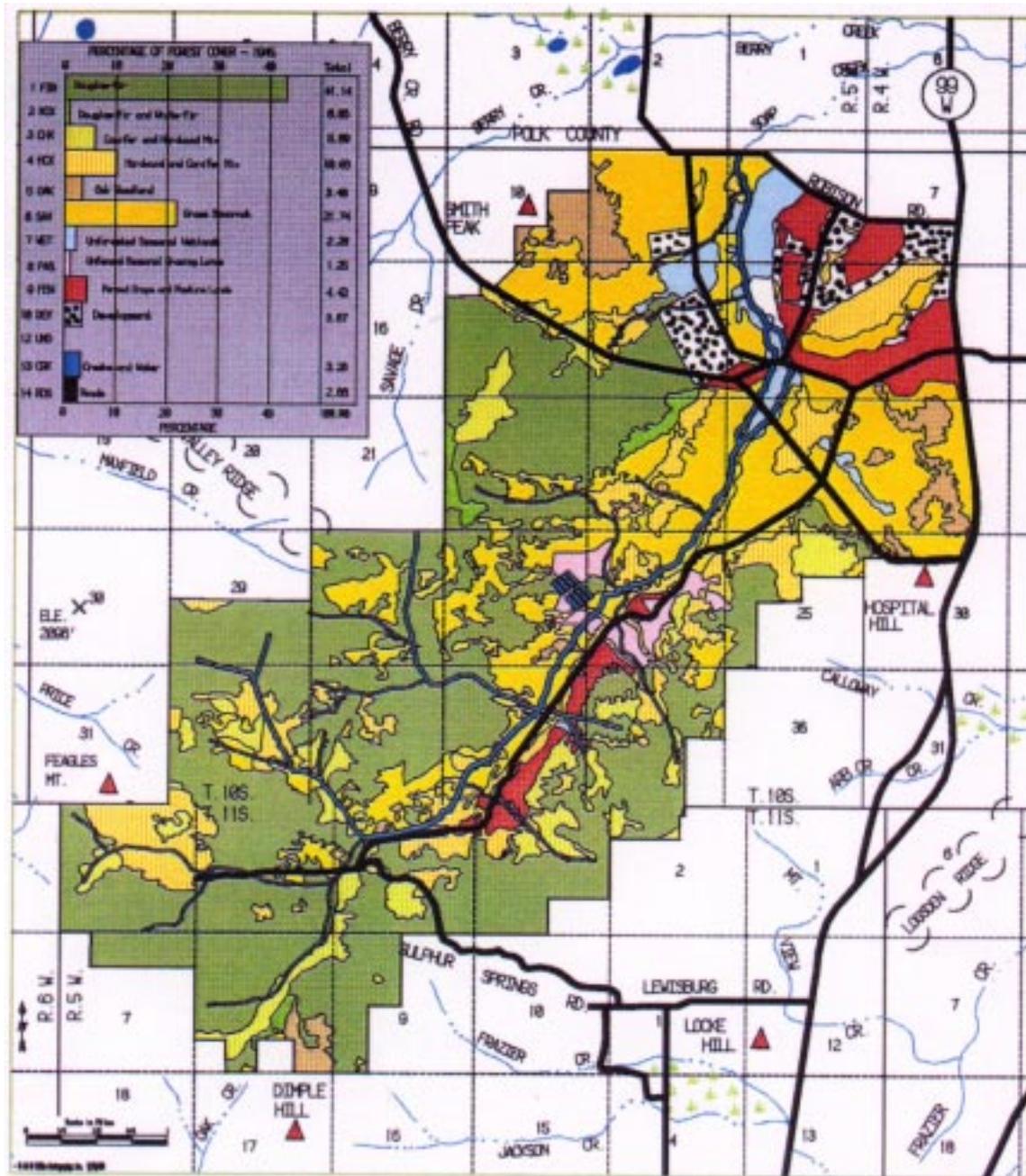
1963-1999: Recent Developments

Since 1963, changes that have affected forest cover patterns of Soap Creek Valley include the widespread establishment of conifer plantations in old clearcuts (including those associated with the Columbus Day Storm) and prairie lands acquired by OSU, establishment of a major solid waste landfill to the south of Coffin Butte (see Figs. 33 and 34; Westlund 1993; Kessinger 1999), and creation and proliferation of numerous residential housing developments (see Map 3; Table D.4). Conifer forestland has continued to increase in area, and commercial agricultural uses have decreased during this period. Dramatic increases in human population have been accompanied by corresponding increases in pet populations, secondary road and driveway constructions, lawn and ornamental plantation establishments, and home building projects.

Land ownership patterns for 1990 are shown in Map 3. Landowners are listed in Table D.4. Information regarding land ownership is based upon county survey data (Zybach et al., 1990). Note, again, the lack of family ownership stability and the increase in numbers of residential landowners between 1920 and 1990. Local land ownership changes and population growth rates have been at least as great in the recent (1929-1990) 62-year period as in the previous (1853-1928) 76-year period. This pattern also exists for the (1826-1852) 26-year period preceding the 1853 survey and the most recent (1991-1999) nine-year period (see Land ownership patterns for 1990 are shown in Map 3. Landowners are listed in Table D.4. Information regarding land ownership is based upon county survey data (Zybach et al., 1990). Note, again, the lack of family ownership stability and the increase in numbers of residential landowners between 1929 and Table 17; Appendix D). Dominant trends continue to be decreased numbers and varieties of large wild vertebrates (since 1811), increased variety of introduced plants and animals (since 1826), increased human population (since 1832), decreased grassland area (since 1832), increased conifer forest area (since 1832); decreased agricultural uses (since 1941), ephemeral land ownership claims (since 1846), decreased wild carnivore populations (since 1846), and smaller residential properties (since 1857).

Summary. Table 22 provides a chronological listing of events affecting Soap Creek Valley forest cover patterns during the past 500 years. Map 20 shows

Map 24. Forest cover patterns & Camp Adair developments, 1945. The dedication of most Soap Creek Valley land to a single use (see Map 17) by a single owner (see Map 16) resulted in rapid and dramatic changes to forest cover patterns: livestock and fences were removed and grass species went wild; Coffin Butte quarry operations were greatly increased (see Fig. 32); and quarried rock was used to build several new roads, most of which remain to this time (see Fig. 31; Map 18)).



how these events have combined to alter distribution and ages of Douglas-fir forestlands on OSU Research Forests properties (see Map 3). Table 23 and Map 24 summarize primary changes to horizontal patterns (and plant species “importance”) as shown on Maps 16, 17, 18, and 19. The living conifer forests of Soap Creek Valley owe their existence largely to the decline of Indian burning tied to human plagues in the early 1830s, pioneer settlement by American families in the 1840s, the decline of grazing mammal populations tied to the introduction of automobiles and tractors in the early 1900s, tree planting projects tied to CCC and OSU activities in the 1930s, and sharp increases in the value of Douglas-fir timber after WW II. The majority of these stands, and most of the area they cover in Soap Creek Valley, are a direct result of afforestation processes that occurred between 1830 and 1960 (see Chapter III; Maps 20, 21, and 24). The majority of trees are Douglas-fir, most of which were established by afforestation and reforestation tree planting projects that began in the early 1930s and continue through today (see Figs. 19, 21, and 38). Despite the relatively young age of most Soap Creek Valley forest trees (see Map 20 and Table 19), a significant number of old-growth Douglas-fir and oak existed in The Valley at the time of settlement (see Map 12; Tables 14, 15, 20, and 21; Appendices F and G), most of which were subsequently logged (see Figs. 21, 26 and 37; Map 15; Table 16).

Discussion. Table 23 summarizes basic changes to forest cover patterns in Soap Creek Valley from 1926 to 1945, as shown on Maps 21, 22, 23, and 24. These can also be interpreted as basic changes in land use for the same time periods, as illustrated by Map 25. The interrelationships between changing human values, changing human activities, changing forest cover patterns, and changing wildlife populations, as illustrated by Fig. 35, is also shown by Map 25. These patterns can be called “cultural landscape patterns,” forest cover patterns, or wildlife habitat patterns, depending on personal bias or perspective. In 1826, people grew camas and tarweed and harvested acorns; oak savannah and grassy prairies were the most common forest cover pattern and the principal form of wildlife habitat. In 1853, people established permanent homes and raised livestock on the open range provided by former prairie lands; rangeland became the most common forest cover pattern, and predatory carnivores and raptors were exterminated. In 1929, people maintained family farms for subsistence and income, and afforested rangelands were logged for timber crops and planted and seeded for future income; wildlife was introduced and specifically

Table 22. Timeline of events affecting forest cover patterns, 1500-1999.

<u>PREHISTORIC CONDITIONS</u>	
1500	Introduced diseases decimate North American families and communities
1539	Birth of savannah oak to the southwest of Soap Creek Valley
1550	Birth of oldest historical Soap Creek Valley oaks
1602	Birth of Soap Creek Valley Douglas-fir to north of Lewisburg Saddle
1788	American fur traders note metal knives and smallpox to the west
1805	Lewis and Clark note 20-year old smallpox epidemic to the north
<u>EARLY HISTORICAL CONDITIONS</u>	
1826	First record of Europeans and domestic animals in the area
1832	Epidemics kill most Kalapuyans in western Oregon
1837	First major cattle drive through Soap Creek Valley
1846	First pioneer settlers in Soap Creek Valley
1848	Last major forest fire in Soap Creek Valley
1852	Private land and road surveys are formalized and PLS initiated in The Valley
1857	Town of Tampico platted along California Trail/Territorial Road
1861	Catastrophic snowstorm kills thousands of livestock in Willamette Valley
1881	Major snowstorm kills livestock, crushes buildings in Willamette Valley
1890	First commercial sawmills begin operation in Soap Creek Valley
<u>LIVING MEMORY</u>	
1905	Introduction of internal combustion engine for farming, transportation
1915	Oregon Good Roads movement gains noted/Soap Creek Valley forests are cruised
1925	Oregon Forest Nursery begins production a few miles east
1926	Sawmill camp established in Soap Creek Valley
1931	Dust storm from the east, Eston Carter home burns at base of Coffin Butte
1933	CCC Camp Arboretum is established adjacent to Oregon Forest Nursery
1936	Large plantation established following clearcut and fire in E. Soap Creek Valley
1937	Catastrophic snowstorm kills livestock, crushes buildings in Soap Creek area
1941	US Army establishes Camp Adair, begins training in Soap Creek Valley
1948	OSC obtains majority of Soap Creek Valley lands from US Army
1950	Four feet of snowfall on Soap Creek Valley ridgelines, one of deepest on record
1956	Major cold snap affects region, including Soap Creek Valley area
1962	Columbus Day hurricane from the south
1966	Housing subdivisions for urban commuters begin to appear in Soap Creek area
1973	US Endangered Species Act is adopted; spotted owls become local concern
1981	Friday the 13th windstorm from the west
1993	“Dean’s Plan” draft adopted for management of OSU Research Forests
1999	Coffin Butte Landfill catches on fire

bred for recreational hunting and fishing opportunities. In 1945, Army troops learned field maneuvers and weaponry and the land was used almost exclusively for that purpose; trees were clearcut for wartime needs and wildlife populations rebounded with the elimination of competition from domestic plants and animals. In sum, Raup’s observation that: “No forest has value until human beings feel a need for it . . . [American foresters] seemed unaware of the fact that those demands were governed by peoples’ value judgments, and that people

Table 23. Changes in horizontal forest cover patterns, 1826-1945.

<u>Forest cover type</u>	<u>1826</u>	<u>1853</u>	<u>1929</u>	<u>1945</u>	<u>% Change</u>	
Oak savannah	62	0	0	22	-40	
Wetland prairie	11	6	6	5	-6	
Douglas-fir/grand fir	8	8	41	41	+33	
Conifer/hardwood mix	14	16	8	6	-8	
Hardwood/conifer mix ⁵	6	6	14		+9	
Fenced crops	0	1	19	4	+4	
Open grazing	0	62	18	1	+1	
<u>Structural development</u>	<u>0</u>	<u>1</u>	<u>2</u>	<u>7</u>	<u>+7</u>	
TOTAL PERCENTAGE	100	100	100	100	-54	+54

Based on descriptions and figures contained in thesis body.

1826 Percentage of total Soap Creek Valley area shown on Map 16.

1853 Percentage of total Soap Creek Valley area shown on Map 17.

1929 Percentage of total Soap Creek Valley area shown on Map 18.

1945 Percentage of total Soap Creek Valley area shown on Map 19.

% Change in percentage of Soap Creek Valley forest cover type between 1826 and 1945. Negative changes as shown with a minus ("-") sign. Increases are shown with a positive ("+") sign.

changed their values at will" (Stout 1981) is consistent with the history of Soap Creek Valley forestlands. It is likely also consistent with the prehistory of those same lands, beginning with the time that people first entered The Valley's forests—a time probably 10,000 or more years ago.

Map 25. Comparative forest cover patterns, 1826, 1853, 1929 & 1945. Note relationships between forest cover patterns, wildlife habitat patterns, cultural values, and human products, and compare with theoretical models (see Fig. 34; Maps 19, 21, 22, 23, and 24; Tables 18, 22, and 23).

Upper Left. 1826: acorns, berries, camas, firewood, filberts, onions, seeds.

Upper Right. 1853: firewood, grain crops, orchards, pasturage, wood homes.

Lower Left. 1929: crops, firewood, homes, logs, plowed fields, wood fencing.

Lower Right. 1945: field maneuvers, mining, rifle range, sport hunting.

