

# PHOTO SERIES FOR QUANTIFYING NATURAL FOREST RESIDUES IN COMMON VEGETATION TYPES OF THE PACIFIC NORTHWEST



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## ABSTRACT

Twenty-five series of photographs display different levels of natural forest residue loadings by size classes for areas of like vegetation in the Pacific Northwest. Information with each photo includes measured weights, volumes, and other data on residues, information about live vegetation, and fuel ratings.

These photo series provide a fast, easy-to-use way to quantify and describe existing and desired residues.

**KEYWORDS:** Residue management, fuel (waste wood), residue measurements, residue surveys, vegetation types.

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PLANT SPECIES

Sources for scientific names are Little,<sup>1</sup> Franklin and Dyrness,<sup>2</sup> or Hitchcock.<sup>3</sup>

<u>Common name</u>	<u>Scientific name</u>
balsamroot	<i>Balsamorhiza</i> spp.
big huckleberry	<i>Vaccinium membranaceum</i> Dougl. ex Hook.
bitterbrush	<i>Purshia tridentata</i> (Pursh) DC.
bluebunch wheatgrass	<i>Agropyron spicatum</i> (Pursh) Scribn. & Smith
bottlebrush squirreltail. . . . .	<i>Sitanion hystrix</i> (Nutt.) J. G. Smith
bracken fern . . . . .	<i>Pteridiwn aquilinum</i> (L. ) Kuhn
brome . . . . .	<i>bromus</i> spp.
California black oak . . . . .	<i>Quercus kelloggii</i> Newb.
canyon live oak. . . . .	<i>Quercus chrysolepis</i> Lieb.
ceanothus. . . . .	<i>Ceanothus</i> spp.

<sup>1</sup>Little, Elbert L., Jr. 1979. Checklist of United States trees (native and naturalized). U.S. Dep. Agric. Agric. Handb. 541, 375 p.

<sup>2</sup>Franklin, Jerry F., and C. T. Dyrness. 1973. Natural vegetation of Oregon and Washington. USDA For. Serv. Gen. Tech. Rep. PNW-8, 417 p., illus. Pac. Northwest For. and Range Exp. Stn., Portland, Oreg.

<sup>3</sup>Hitchcock, A. S. 1950. Manual of the grasses of the United States. U.S. Dep. Agric. Misc. Publ. 200, 1,051 p.

PLANT SPECIES (Continued)

<u>Common name</u>	<u>Scientific name</u>
cheatgrass brome . . . . .	<i>Bromus tectorum</i> L.
common beargrass . . . . .	<i>Xerophyllum tenax</i> (Pursh) Nutt.
crested wheatgrass . . . . .	<i>Agropyron desertorum</i>
dogwood. . . . .	<i>Cornus</i> spp.
Douglas-fir. . . . .	<i>Pseudotsuga menziesii</i> (Mirb.) Franco
elk sedge. . . . .	<i>Carex geyeri</i> Boott
Engelmann spruce . . . . .	<i>Picea engelmannii</i> Parry ex Engelm.
f e s c u e . . . . .	<i>Festuca</i> spp.
giant chinkapin. . . . .	<i>Castanopsis chrysophylla</i> (Dougl.) A. DC.
goodyera . . . . .	<i>Goodyera</i> spp.
grand fir. . . . .	(Dougl. ex D. Don) Lindl.
grouse huckleberry . . . . .	<i>Vaccinium scoparium</i> Leiberg
hawkweed . . . . .	<i>Hieracium</i> spp.
honeysuckle. . . . .	<i>Lonicera</i> spp.
huckleberry (blueberry). . . . .	<i>Vaccinium</i> spp.
Idaho fescue . . . . .	<i>Festuca idahoensis</i> Elm.
incense-cedar. . . . .	<i>Libocedrus decurrens</i> Torr.
Jeffrey pine . . . . .	<i>Pinus jeffreyi</i> Grev. & Balf
juniper. . . . .	<i>Juniperus</i> spp.
kinnikinnick . . . . .	<i>Arctostaphylos uva-ursi</i> (L.) Spreng.
lily . . . . .	<i>Lilium</i> spp.

lodgepole pine . . . . . *Pinus contorta* Dougl. ex Loud.  
lupine . . . . . *Lupinus* spp.  
manzanita. . . . . *Arctostaphylos* spp.  
medusahead wildrye . . . . . *Elymus raput-medusae* L.  
mountain hemlock . . . . . *Tsuga mertensiana* (Borg.) Carr.  
Oregon boxwood (myrtle). . . . *Pachistima myrsinites* (Pursh) Raf.  
Oregongrape. . . . . *Berberis nervosa* Pursh  
Pacific madrone. . . . . *Arbutus menziesii* Pursh  
Pacific poison oak . . . . . *Rhus diversiloba* T. & G.  
Pacific silver fir . . . . . *Abies amabilis* Dougl. ex Forbes  
Pacific yew. . . . . *Taxus brevifolia* Nutt.  
penstemon. . . . . *Penstemon* spp.  
pinegrass. . . . . *Calamagrostis rubescens* Buckl.  
ponderosa pine . . . . . *Pinus ponderosa* Dougl. ex Laws.  
princes pine . . . . . *Chimaphila* spp.  
pyrola. . . . . *Pyrola* spp.  
rhododendron . . . . . *Rhododendron* spp.  
rhus. . . . . *Rhus* spp.  
ribes . . . . . *Ribes* spp.  
rubus . . . . . *Rubus* spp.  
sagebrush. . . . . *Artemisia* spp.  
serviceberry . . . . . *Amelanchier* spp.  
snowberry. . . . . *Symphoricarpos* spp.  
spirea. . . . . *Spirea* spp.

Common name

Scientific name

squirreltail . . . . .	.Sitanion spp.
starflower . . . . .	.Trientalis spp.
strawberry . . . . .	.Fragaria spp.
tanoak. . . . .	.Lithocarpus densiflorus (Hook. & Arn.) Rehd.
trillium . . . . .	.Trillium spp.
twinflower . . . . .	.Linnaea borealis L.
vine maple . . . . .	.Acer circinatum Pursh
violet. . . . .	.Viola spp.
western hemlock . . . . .	.Tsuga heterophylla (Raf.) Sarg.
western larch. . . . .	.Larix occidentalis Nutt
white fir. . . . .	.Abies concolor (Gord & Glend.) Lindl. ex Hildebr.
wildros e. . . . .	.Rosa spp.

## METRIC CONVERSIONS

1 acre	=	0.404 7 hectare
2.471 acres	=	1 hectare
1 cubic foot	=	0.028 32 cubic meter
35.21 cubic foot	=	1 cubic meter
1 foot	=	0.304 8 meter
3.281 feet	=	1 meter
1 inch	=	2.54 centimeters
0.393 7 inch	=	1 centimeter
1 ton (short)	=	0.907 ton (metric)
1.102 tons (short)	=	1 ton (metric)
4.358 ft <sup>2</sup> /acre	=	1 m <sup>2</sup> /hectare
1 lb/acre	=	1.120 8 kg/hectare

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## **WHAT ARE THESE PHOTO SERIES?**

These photo series are arrays of photos, each showing different levels of residues resulting from natural causes in like vegetation types. Each photo is supplemented with information that includes:

- Measured quantities of down and dead woody residue by size classes, average depth, ground area covered, and other pertinent data.
- Characteristics of overstories, snags, understories, brush, grasses, and forbs.
- Fire hazard ratings. Conditions for fire behavior information are no slope, 4 miles an hour midflame wind, and 4-percent fuel moisture.

Thus, the series provide a basis for quantifying and describing existing and desired residue loadings on other areas and serves as a communication link between users.

## **WHY ARE THEY NEEDED?**

Millions of acres of forested lands in the west, not recently disturbed by cutting activity or wildfire, have accumulated residues as a result of natural processes, such as drought, blowdown, ice breakage, outbreaks of insects and diseases, and sloughing of needles, limbs, and bark.

Although some residues are beneficial for such purposes as nutrient cycling, soil protection, cover for wildlife, and effect on the microclimate, excessive residues adversely affect the forest environment in many ways. Much of the forest contains residues in undetermined but excessive quantities from the standpoint of use, protection, and management of the resources. For residues to be reduced to a level considered desirable, estimates are needed on present quantities.

Inventory techniques, such as the planar intersect method, are useful when a high degree of accuracy is needed but are time consuming and costly to apply extensively. Photo series can be used to make fast, easy, and inexpensive quantifications of residue, adequate for most management needs.

There has been no way for all resource disciplines to become readily familiar with volumes and descriptions of residue so that they can make quantitative inputs to management. Likewise, because fuel rating systems are specialized and subjective, they too are not readily adapted to other components of the environment. These deficiencies can be overcome with the photo series.

## HOW CAN THEY BE USED?

### Inventory of Down Residue

Loadings in various residue size classes, average depth, and ground area covered are characteristics that are visible in most of the photographs; hence, users can estimate any of these characteristics in an area being inventoried by comparing them with the photos as follows:

1. Observe each characteristic of the residue on the ground (for example, 3. 1- to 9-inch loading).
2. Select a photo which nearly matches, or photos that bracket, the observed characteristic.
3. Obtain the quantitative value for the characteristic being estimated from the data sheet accompanying the selected photo (or interpolate a value between photos).

Repeat these steps for each characteristic desired. If the general area being inventoried has zones of obvious differences in residue loading, consider making separate determinations for each zone, which can then be weighted and cumulated for the whole area.

Residue characteristics not distinguishable in the photographs are depths of duff and litter, proportion of sound residue by species, proportion rotted, and down and dead woody material in brush fields. If values for these characteristics are desired in an inventory, they must be derived from independent sampling or observations.

Inventory information can be used by land managers to: (1) evaluate impacts of residues on various aspects of forest management, (2) identify areas of unacceptable loadings of residue, (3) identify areas for priority treatment, (4) estimate amount of usable material, and (5) predict fire behavior characteristics.

## **Determination of Desired Residue Level**

Land management objectives can be more nearly achieved if a team of appropriate specialists can participate in specifying the desired levels of residue for various situations for specific forest sites. Individuals helping with these determinations can study the photo series to recognize the appearance of various quantities and distributions of residue. With this knowledge, each person can describe in quantitative terms the amount of residue which should be retained to meet environmental concerns and goals of a particular specialty. The group can then use the photo series as a communication tool to resolve differences in arriving at a desired level.

If natural residues are treated, the degree to which objectives were achieved can be judged by comparisons of observed posttreatment loading with the description of the desired level.

## **Changes in Natural Residue Over Time**

Long-range planning for management and protection of forests necessitates the projection of residue accumulations over time. During the natural cycle of vegetative progression and stand growth in western forests, accumulation of natural residues often exceeds rate of decay in young stands where normal mortality is high, and low heights of crowns allow rapid drying of the forest floor. Conversely, stands in the thrifty mature stage, with high dense crowns, may produce a microclimate in which residue decays faster than it accumulates.

Comparing typical quantities and characteristics of residue for the several forest size classes of a vegetation type in the natural photo series offers some insight about the probable fire hazard at various stages of stand development.

## **HOW WERE THEY DEVELOPED?**

Areas photographed for these series were selected to show typical variations in residue loadings resulting from natural causes in major vegetation types of the

Pacific Northwest. Photos were taken and data collected as follows:

1. Areas were photographed and the material in the area sampled in accordance with "Guidelines for Developing or Supplementing Natural Photo Series." <sup>4</sup>
2. Measurement techniques were patterned after procedures in "Handbook for Inventorying Downed Woody Material" <sup>5</sup> and "Fuel and Vegetation Inventory Procedures--Whitecap Study." <sup>6</sup> Weights of woody material are in oven-dry tons.
3. The assessments of fire behavior and difficulty of suppression for photo series examples were determined from fuel model scaling tables developed by Dr. David V. Sandberg and a resistance to suppression matrix developed by Wayne G. Maxwell.?

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<sup>4</sup>Maxwell, Wayne G., and Franklin R. Ward. 1979. Guidelines for developing or supplementing natural photo series. USDA For. Serv. Res. Note PNW-358, 16 p., Pac. Northwest For. and Range Exp. Stn., Portland, Oreg.

<sup>5</sup>Brown, James K. 1974. Handbook for inventorying downed woody material. USDA For. Serv. Gen. Tech. Rep. INT-16, 24 p., illus., Intermt. For. and Range Exp. Stn., Ogden, Utah.

<sup>6</sup>Brown, James K. 1974. Fuel and vegetation inventory procedures--Whitecap study. 11 p. Unpublished report on file at USDA For. Serv. North. For. Fire Lab., Missoula, Mont.

<sup>7</sup>These unpublished procedures are on file at Pacific Northwest Forest and Range Experiment Station, Portland, Oreg.

4. Ecoclass codes were assigned by plant ecologists of the Pacific Northwest Region of the USDA Forest Service; they used "Codes for Pacific Northwest Ecoclass Vegetation Classification."<sup>8</sup> They also estimated air dry weights for grass and forhs.

## HOW CAN THEY BE SUPPLEMENTED?

If users in the Western United States find they have important local residue loadings which are not adequately represented, they can supplement these series or develop additional series by following procedures described in "Guidelines for Developing or Supplementing Natural Photo Series" (see footnote 3). The series in this publication may be usable, in total or in part, in appropriate vegetation types in other regions.

These series do not show residue loadings in stands disturbed by cutting activities; such examples are given in General Technical Reports PNW-51 and PNW-52.<sup>9</sup>

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<sup>8</sup>Hall, Frederick C. 1979. Codes for Pacific Northwest ecoclass vegetation classification.

USDA For. Serv. Pac. Northwest Reg. R-6-Ecol. 79-002, 62 p. Portland, Oreg.

<sup>9</sup>Maxwell, Wayne G., and Franklin R. Ward. 1976. Photo series for quantifying forest residues in the coastal Douglas-fir--hemlock type, coastal Douglas-fir--hardwood type. USDA For. Serv. Gen. Tech. Rep. PNW-51, 103 p., illus. Pac. Northwest For. and Range Exp. Stn., Portland, Oreg.

Maxwell, Wayne G., and Franklin R. Ward. 1976. Photo series for quantifying forest residues in the ponderosa pine type, ponderosa pine and associated species type, lodgepole pine type. USDA For. Serv. Gen. Tech. Rep. PNW-52, 73 p., illus. Pac. Northwest For. and Range Exp. Stn., Portland, Oreg.

## HOW ARE LEVELS IN THESE SERIES CODED?

The data for each level are presented on the page facing the photo. Picture and data pages have the same code for the residue situation shown. The code shows:

- a. Order of rank from lightest loading to heaviest loading shown in the series of photographs.
- b. Forest type, e. g., DF = Douglas-fir-hemlock, DFHD = Douglas-fir--hardwood.
- c. Forest size class, where:
  - 1 = <5-inch d. b. h. ;
  - 2 = 5- to 11-inch d. b. h. ;
  - 3 = >11- to 20-inch d. b. h. ;
  - 4 = >20-inch d. b. h.

Example: 2-PP&ASSOC-3 is the second photo in the series for ponderosa pine and associated species ,>11- to 20-inch diameter trees.

DOUGLAS-FIR-HARDWOOD

SIZE CLASS 3

A SERIES OF 3 LEVELS

REMINDERS TO USERS:

1. The marker in these photos is 1 foot square, and the pole is painted in contrasting colors at 1-foot intervals to provide perspective.
2. Stumps are not included in residue quantities.
3. Rotted residue is that which would come apart or splinter when kicked.



1-DFHD-3

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
<b>0.0 - 0.25</b>	0.5	<del>33</del> 70	Average residue depth	(feet) <u>0.2</u>
<b>0.26 - 1.0</b>	1.1	63	Ground area covered by residue	(percent) <u>81</u>
<b>1.1 - 3.0</b>	0.8		Average duff and litter depth	(inches) <u>1.7</u>
<b>3.1 - 9.0</b>	0.9	52	Ground area covered by duff and litter	(percent) <u>97</u>
<b>9.1 - 20.0</b>	0	0	Sound residue 3.1-inch diameter and larger	(percent) <u>57</u>
<b>20.1+</b>	0	0	Rotten residue 3.1-inch diameter and larger	(percent) <u>43</u>
<b>Total</b>	3.3	218		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch</u> d.b.h.	Trees and dead stems under <u>8-inch</u> d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>8</u>
Dominant species <u>Douglas-fir</u>	Dominant species <u>California black oak</u>		Flame length (feet) <u>4</u>
Trees per acre <u>22</u>	Trees per acre <u>450</u>	Average height (inches) - _____	Resistance to suppression (chains/man-hour) <u>3</u>
Average d.b.h. (inches) <u>25</u>	Average d.b.h. (inches) <u>4</u>	Average crown height (inches) - _____	
Average tree height (feet) <u>108</u>	Average tree height (feet) <u>28</u>	Wound space occupied (percent) - _____	
Average crown height (feet) <u>30</u>	Average crown height (feet) <u>18</u>		Ecoclass coding <u>CDH2</u>
Estimated crown space occupied (percent) <u>20</u>	Estimated crown space occupied (percent) <u>20</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>8-</u> to <u>20-inch</u> d.b.h.	Snags <u>8-inch</u> d.b.h. and over	Dominant species _____	
Dominant species <u>Pacific madrone</u>	Number per acre _____		
Trees per acre <u>200</u>	Average d.b.h. _____	Average height (inches)	
Average d.b.h. (inches) <u>13</u>	Average height _____	Ground space (percent)	
Average tree height (feet) <u>64</u>		Estimated weight (pounds per acre)	
Average crown height (feet) <u>34</u>			
Estimated crown space _____			



2-DFHD-3

LOADING			OTHER MEASUREMENTS	
<b>Size class (inches)</b>	<b>Weight (tons/acre)</b>	<b>Volume (ft<sup>3</sup>/acre)</b>	Average residue depth	(feet) <u>0.6</u>
0.0 • 0.25	0.6	41	Ground area covered by residue	(percent) <u>95</u>
<b>0.26- 1.0</b>	<b>3.1</b>	<b>206</b>	Average duff and litter depth	(inches) <u>2.1</u>
1.1 • 3.0	1.8	143	Ground area covered by duff and litter	(percent) <u>100</u>
3.1 • 9.0	4.6	300	Sound residue 3.1-inch diameter and larger	(percent) <u>85</u>
9.1 -20.0	0	0	Rotten residue 3.1-inch diameter and larger	(percent) <u>15</u>
<b>20.1+</b>	<b>0</b>	<b>0</b>		
<b>Total</b>	10.1	690		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
<u>Trees over 20-inch d.b.h.</u>	<u>Trees and dead stems under 8-inch d.b.h.</u>	Dominant species _____	Spread rate (chains/hour) <u>3</u>
Dominant species <u>Douglas-fir</u>	Dominant species <u>Douglas-fir</u>	_____	Flame length (feet) <u>3</u>
Trees per acre <u>21</u>	Trees per acre <u>100</u>	Average height (inches) _____	Resistance to suppression (chains/man-hour) <u>1.5</u>
Average d.b.h. (inches) <u>55</u>	Average d.b.h. (inches) <u>5</u>	Average crown height (inches) - _____	Ecocl ass coding <u>CDH1</u>
Average tree height (feet) <u>177</u>	Average tree height (feet) <u>29</u>	Ground space occupied (percent) _____	
Average crown height (feet) <u>65</u>	Average crown height (feet) <u>16</u>		
Estimated crown space occupied (percent) <u>30</u>	Estimated crown space occupied (percent) <u>10</u>		
		<b>GRASS AND FORBS INFORMATION</b>	<b>REMARKS</b>
<u>Trees 8- to 20-inch d.b.h.</u>	<u>Snags 8-inch d.b.h. and over</u>	Dominant species _____	
Dominant species <u>Douglas-fir</u>	Number per acre <u>32</u>	_____	
Trees per acre <u>125</u>	Average d.b.h. <u>15</u>	Average height (inches) - _____	
Average d.b.h. (Inches) <u>16</u>	Average height <u>22</u>	Ground space (percent) _____	
Average tree height (feet) <u>104</u>		Estimated weight (pounds Per acre) _____	
Average crown height (feet) <u>48</u>			
Estimated crown space <u>40</u>			



3-DFHD-3

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
			Average residue depth	(feet) <u>0.4</u>
<b>0.0 - 0.25</b>	<u>1.2</u>	<u>80</u>	Ground area covered by residue	(percent) <u>97</u>
<b>0.26- 1.0</b>	<u>3.2</u>	<u>212</u>	Average duff and litter depth	(inches) <u>1.2</u>
<b>1.1 - 3.0</b>	<u>1.6</u>	<u>125</u>	Ground area covered by duff and litter	(percent) <u>99</u>
<b>3.1 - 9.0</b>	<u>5.2</u>	<u>358</u>	Sound residue 3.1-inch diameter and larger	(percent) <u>90</u>
<b>9.1 -20.0</b>	<u>5.0</u>	<u>337</u>	Rotten residue 3.1-inch diameter and larger	(percent) <u>10</u>
<b>20.1+</b>	<u>5.3</u>	<u>291</u>		
<b>Total</b>	<u>21.5</u>	<u>1,403</u>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch</u> d.b.h.	Trees and dead <u>stems</u> under <u>E-inch</u> d.b.h.	Dominant species <u>tanoak</u>	Spread rate (chains/hour) <u>3</u>
Dominant species <u>Douglas-fir</u>	Dominant species <u>Douglas-fir</u>		Flame length (feet) <u>4</u>
Trees per acre <u>25</u>	Trees per acre <u>250</u>	Average height (inches) <u>8</u>	Resistance to suppression (chains/man-hour) <u>2</u>
Average d.b.h. (inches) <u>28</u>	Average d.b.h. (inches) <u>3</u>	Average crown height (inches) <u>3</u>	
Average tree height (feet) <u>111</u>	Average tree height (feet) <u>26</u>	Ground space occupied (percent) <u>1</u>	
Average crown height (feet) <u>62</u>	Average crown height (feet) <u>17</u>		Ecocl ass coding <u>CDH1</u>
Estimated crown space occupied (percent) <u>30</u>	Estimated crown space occupied (percent) <u>10</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>B- to 20-inch</u> d.b.h.	Snags <u>B-inch</u> d.b.h. and over	Dominant species <u>lily</u>	
Dominant species <u>Douglas-fir</u>	Number per acre <u>9</u>		
Trees per acre <u>284</u>	Average d.b.h. <u>12</u>	Average height (inches) <u>16</u>	
Average d.b.h. (inches) <u>13</u>	Average height <u>55</u>	Ground space (percent) <u>1</u>	
Average tree height (feet) <u>89</u>		Estimated weight (pounds Per acre)	
Average crown height (feet) <u>60</u>			
Estimated crown space <u>60</u>			



DOUGLAS-FIR-HARDWOOD

SIZE CLASS 4

A SERIES OF 5 LEVELS

REMINDERS TO USERS:

1. The marker in these photos is 1 foot square, and the pole is painted in contrasting colors at 1-foot intervals to provide perspective.
2. Stumps are not included in residue quantities.
3. Rotted residue is that which would come apart or splinter when kicked.



1-DFHD-4

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Yeight (tons/acre)	Volume (ft <sup>3</sup> /acre)	Average residue depth	(feet) <u>0.4</u>
<b>0.0 - 0.25</b>	0.6	37	Ground area covered by residue	(percent) <u>89</u>
<b>0.26- 1.0</b>	1.9	128	Average duff and litter depth	(inches) <u>2.4</u>
<b>1.1 - 3.0</b>	1.9	155	Ground area covered by duff and litter	(percent) <u>100</u>
3.1 - 9.0	1.9	95	Sound residue 3.1-inch diameter and larger	(percent) <u>100</u>
<b>9.1 -20.0</b>	0	0	Rotten residue 3.1-inch diameter and larger	(percent) <u>0</u>
<b>20.1+</b>	0	0		
<b>Total</b>	6.3	415		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
<u>Trees over 20-inch d.b.h.</u>	<u>Trees and dead stems under 8-inch d.b.h.</u>	Dominant species _____	Spread rate (chains/hour) <u>8</u>
Dominant species <u>Douglas-fir</u>	Dominant species <u>tanoak</u>		Flame length (feet) <u>4</u>
Trees per acre <u>20</u>	Trees per acre <u>1,350</u>	Average height (inches) _____	Resistance to suppression (chains/man-hour) <u>1.7</u>
Average d.b.h. (inches) <u>42</u>	Average d.b.h. (inches) <u>3</u>	Average crown height (inches) _____	
Average tree height (feet) <u>139</u>	Average tree height (feet) <u>28</u>	Ground space occupied (percent) _____	
Average crown height (feet) <u>55</u>	Average crown height (feet) <u>18</u>		Ecocl ass coding <u>CDH2</u>
Estimated crown space occupied (percent) <u>20</u>	Estimated crown space occupied (percent) <u>60</u>		
		GRASS AND FORBS INFORMATION	REMARKS
<u>Trees 8- to 20-inch d.b.h.</u>	<u>Snags 6-inch d.b.h. and over</u>	Dominant species _____	
Dominant species <u>Pacific madrone</u>	Number per acre <u>1</u>		
Trees per acre <u>87</u>	Average d.b.h. <u>51</u>	Average height (inches) _____	
Average d.b.h. (inches) <u>13</u>	Average height <u>103</u>	Ground space (percent) _____	
Average tree height (feet) <u>67</u>		Estimated weight (pounds per acre) _____	
Average crown height (feet) <u>35</u>			
Estimated crown space <u>40</u>			



2-DFHD-4

LOADING			OTHER MEASUREMENTS	
<b>Size class</b> (inches)	<b>Weight</b> (tons/acre)	<b>Volume</b> (ft <sup>3</sup> /acre)	Average residue depth	(feet) <u>0.2</u>
0.0 - 0.25	0.8	54	Ground area covered by residue	(percent) <u>71</u>
<b>0.26 - 1.0</b>	<b>1.1</b>	<b>76</b>	Average duff and litter depth	(inches) <u>1.2</u>
<b>1.1 - 3.0</b>	<b>1.1</b>	<b>91</b>	Ground area covered by duff and litter	(percent) <u>89</u>
<b>3.1 - 9.0</b>	<b>2.0</b>	<b>183</b>	Sound residue 3.1-inch diameter and larger	(percent) <u>52</u>
<b>9.1 - 20.0</b>	<b>1.4</b>	<b>90</b>	Rotten residue 3.1-inch diameter and larger	(percent) <u>48</u>
<b>20.1+</b>	<b>0</b>	<b>0</b>		
<b>Total</b>	<b>6.4</b>	<b>494</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over 20-inch d.b.h.	Trees and dead stems under 8-inch d.b.h.	Dominant species <u>canyon</u>	spread rate (chains/hour) <u>10</u>
Dominant species <u>Douglas-fir</u>	Dominant species <u>incense-cedar</u>	<u>live oak</u>	flame length (feet) <u>7</u>
Trees per acre <u>11</u>	Trees per acre <u>250</u>	Average height (inches) <u>26</u>	resistance to suppression (chains/man-hour) <u>1.7</u>
Average d.b.h. (inches) <u>26</u>	Average d.b.h. (inches) <u>2</u>	Average crown height (inches) <u>3</u>	ecoclass coding <u>CDS1</u>
Average tree height (feet) <u>95</u>	Average tree height (feet) <u>8</u>	Ground space occupied (percent) <u>46</u>	
Average crown height (feet) <u>32</u>	Average crown height (feet) <u>3</u>		
Estimated crown space occupied (percent) <u>20</u>	Estimated crown space occupied (percent) <u>10</u>		
		GRASS AND FORDS INFORMATION	REMARKS
Trees 8- to 20-inch d.b.h.	Snags 8-inch d.b.h. and over	Dominant species <u>COMMON</u>	
Dominant species <u>Douglas-fir</u>	Number per acre _____	<u>beat-grass</u>	
Trees per acre <u>123</u>	Average d.b.h. _____	Average height (inches) -	
Average d.b.h. (inches) <u>15</u>	Average height _____	Ground space (percent) <u>1</u>	
Average tree height (feet) <u>78</u>		Estimated weight (pounds per acre) <u>50</u>	
Average crown height (feet) <u>33</u>			
Estimated crown space <u>30</u>			



3-DFHD-4

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.9	58	Average residue depth	(feet) <u>0.2</u>
0.26 - 1.0	1.8	117	Ground area covered by residue	(percent) <u>85</u>
1.1 - 3.0	1.7	135	Average duff and litter depth	(inches) <u>1.1</u>
3.1 - 9.0	6.3	515	Ground area covered by duff and litter	(percent) <u>100</u>
9.1 - 20.0	2.2	198	Sound residue 3.1-inch diameter and larger	(percent) <u>48</u>
20.1+	0	0	Rotten residue 3.1-inch diameter and larger	(percent) <u>5 2</u>
<b>Total</b>	12.9	1,023		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch</u> d.b.h.	Trees and dead stems under <u>8-inch</u> d.b.h.	Dominant species <u>canyon</u>	Spread rate (chains/hour) <u>2</u>
Dominant species <u>Douglas-fir</u>	Dominant species <u>white fir</u>	<u>live oak</u>	Flame length (feet) <u>3</u>
Trees per acre <u>48</u>	Trees per acre <u>150</u>	Average height (inches) <u>19</u>	Resistance to suppression (chains/man-hour) <u>2</u>
Average d.b.h. (Inches) <u>28</u>	Average d.b.h. (inches) <u>3</u>	Average crown height (inches) <u>5</u>	
Average tree height (feet) <u>114</u>	Average tree height (feet) <u>12</u>	Ground space occupied (percent) <u>6</u>	
Average crown height (feet) <u>51</u>	Average crown height (feet) <u>2</u>		EcoClass coding <u>CDFI</u>
Estimated crown space occupied (percent) <u>50</u>	Estimated crown space occupied (percent) <u>10</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>8- to 20-inch</u> d.b.h.	Snags <u>8-inch</u> d.b.h. and over	Dominant species <u>COMMON</u>	
Dominant species <u>Douglas-fir</u>	Number per acre <u>33</u>	<u>beargrass</u>	
Trees per acre <u>124</u>	Average d.b.h. <u>19</u>	Average height (inches) <u>9</u>	
Average d.b.h. (Inches) <u>15</u>	Average height <u>81</u>	Ground space (percent) <u>22</u>	
Average tree height (feet) <u>83</u>		Estimated weight (pounds per acre) <u>150</u>	
Average crown height (feet) <u>3 5</u>			
Estimated crown space <u>30</u>			



4-DFHD-4

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Yeigt (tons/acre)	Volume (ft <sup>3</sup> /acre)	Average residue depth	(feet) <u>0.3</u>
0.0 - 0.25	0.5	34	Ground area covered by residue	(percent) <u>91</u>
<b>0.26- 1.0</b>	<b>1.6</b>	<b>107</b>	Average duff and litter depth	(inches) <u>2.1</u>
1.1 - 3.0	1.7	135	Ground area covered by duff and litter	(w-cent) <u>80</u>
<b>3.1 - 9.0</b>	<b>5.4</b>	<b>265</b>	Sound residue 3.1-inch diameter and larger	(percent) <u>48</u>
9.1 -20.0	4.5	393	Rotten residue 3.1-inch diameter and larger	(percent) <u>52</u>
<b>20.1+</b>	0	0		
<b>Total</b>	13.7	934		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch d.b.h.</u>	Trees and dead stems under <u>8-inch d.b.h.</u>	Dominant species <u>tanoak</u>	pread rate (chains/hour) <u>2</u>
Dominant species <u>Douglas-fir</u>	Dominant species <u>tanoak</u>	tanoak	lame length (feet) <u>2</u>
Trees per acre <u>29</u>	Trees per acre <u>750</u>	Average height (inches) <u>9</u>	esistance to suppression(chains/man-hour) <u>1.7</u>
Average d.b.h. (inches) <u>31</u>	Average d.b.h. (Inches) <u>1</u>	Average crow" height (inches) <u>2</u>	
Average tree height (ft) <u>131</u>	Average tree height (feet) <u>9</u>	Ground space occupied (percent) <u>1</u>	
Average crown height (feet) <u>55</u>	Average crown height (feet) <u>2</u>		co class coding <u>CDH2</u>
Estimated crown space occupied (percent) <u>30</u>	Estimated crow" space occupied (percent) <u>20</u>		
		GRASS AND FORDS INFORMATION	REMARKS
Trees <u>8- to 20-inch d.b.h.</u>	Snags <u>8-inch d.b.h. and over</u>	Dominant species <u>pyrola</u>	
Dominant species <u>Pacific madrone</u>	Number per acre <u>1</u>		
Trees per acre <u>119</u>	Average d.b.h. <u>21</u>	Average height (inches) <u>2</u>	
Average d.b.h. (inches) <u>14</u>	Average height <u>15</u>	Ground space (percent) <u>4</u>	
Average tree height (feet) <u>78</u>		Estimated weight (pounds per acre) <u>50</u>	
Average crown height (feet) <u>41</u>			
Estimated crown space <u>50</u>			



5-DFHD-4

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	1.0	65	Average residue depth	(feet) <u>0.3</u>
<b>0.26 - 1.0</b>	3.2	216	Ground area covered by residue	(percent) <u>99</u>
<b>1.1 - 3.0</b>	1.5	154	Average duff and litter depth	(inches) <u>1.7</u>
<b>3.1 - 9.0</b>	5.5	430	Ground area covered by duff and litter	(percent) <u>99</u>
<b>9.1 - 20.0</b>	6.1	499	Sound residue 3.1-inch diameter and larger	(percent) <u>19</u>
<b>20.1+</b>	15.5	1,660	Rotten residue 3.1-inch diameter and larger	(percent) <u>81</u>
Total	33.2	3,024		

STANO INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch d.b.h.</u>	Trees and dead stems under <u>B-inch d.b.h.</u>	Dominant species _____	Spread rate (chains/hour) <u>3</u>
Dominant species <u>Douglas-fir</u>	Dominant species <u>tanoak</u>	<u>Oregongrape</u>	Flame length (feet) <u>4</u>
Trees per acre <u>47</u>	Trees per acre <u>950</u>	Average height (inches) <u>9</u>	Resistance to suppression (chains/man-hour) <u>1.2</u>
Average d.b.h. (inches) <u>32</u>	Average d.b.h. (inches) <u>1</u>	Average crown height (inches) <u>6</u>	Ecocl ass coding <u>CDH2</u>
Average tree height (feet) <u>144</u>	Average tree height (feet) <u>5</u>	Ground space occupied (percent) <u>3</u>	
Average crown height (feet) <u>75</u>	Average crown height (feet) <u>2</u>		
Estimated crown space occupied (percent) <u>50</u>	Estimated crown space occupied (percent) <u>20</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>8- to 20-inch d.b.h.</u>	Snags <u>B-inch d.b.h.</u> and over	Dominant species <u>pyrola</u>	
Dominant species <u>Douglas-fir</u>	Number Per acre <u>1</u>		
Trees per acre <u>121</u>	Average d.b.h. <u>32</u>	Average height (inches) <u>1</u>	
Average d.b.h. (inches) <u>16</u>	Average height <u>35</u>	Ground space (percent) <u>7</u>	
Average tree height (feet) <u>110</u>		Estimated weight (pounds per acre) <u>50</u>	
Average crown height (feet) <u>55</u>			
Estimated crown space <u>40</u>			



HARDWOODS

SIZE CLASS 2

A SERIES OF 2 LEVELS

REMINDERS TO USERS:

1. The marker in these photos is 1 foot square, and the pole is painted in contrasting colors at 1-foot intervals to provide perspective.
2. Stumps are not included in residue quantities.
3. Rotted residue is that which would come apart or splinter when kicked.



LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.2	13	Average residue depth	(feet) <u>0.2</u>
0.26- 1.0	1.0	54	Ground area covered by residue	(percent) <u>39</u>
1.1 - 3.0	0.6	37	Average duff and litter depth	(inches) <u>1.7</u>
3.1 - 20.0	0	0	Ground area covered by duff and litter	(percent) <u>100</u>
20.1+	0	0	Sound residue 3.1-inch diameter and larger	(percent) <u>100</u>
<b>Total</b>	2.4	143	Rotten residue 3.1-inch diameter and larger	(percent) <u>0</u>

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch</u> d.b.h.	Trees and dead stems under <u>8-inch</u> d.b.h.	Dominant species <u>Pacific</u>	spread rate (chains/hour) <u>8</u>
Dominant species _____	Dominant species <u>Pacific madrone</u>	<u>poison oak</u>	flame length (feet) <u>4</u>
Trees per acre _____	Trees per acre <u>730</u>	Average height (inches) <u>12</u>	resistance to suppression (chains/man-hour) <u>3</u>
Average d.b.h. (inches) _____	Average d.b.h. (inches) <u>6</u>	Average crown height (inches) <u>5</u>	ecoclass coding <u>HMS9</u>
Average tree height (feet) _____	Average tree height (feet) <u>34</u>	Ground space occupied (percent) <u>9</u>	
Average crown height (feet) _____	Average crown height (feet) <u>24</u>		
Estimated crown space occupied (percent) _____	Estimated crown space occupied (percent) <u>10</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>8- to 20-inch</u> d.b.h.	Snags <u>E-inch</u> d.b.h. and over	Dominant species _____	
Dominant species <u>Pacific madrone</u>	Number per acre <u>68</u>	<u>goodyera</u>	
Trees per acre <u>110</u>	Average d.b.h. <u>3</u>	Average height (inches) <u>5</u>	
Average d. b.h. (Inches) <u>9</u>	Average height <u>20</u>	Ground space (percent) <u>2</u>	
Average tree height (feet) <u>23</u>		Estimated weight (pounds per acre) <u>50</u>	
Average crown height (feet) <u>23</u>			
Estimated crown space <u>20</u>			



LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)	Average residue depth	(feet) <u>0.1</u>
<u>0.0 - 0.25</u>	<u>0.2</u>	<u>12</u>	Ground area covered by residue	(percent) <u>55</u>
<u>0.26 - 1.0</u>	<u>.8</u>	<u>48</u>	Average duff and litter depth	(inches) <u>3.0</u>
<del>1.1 - 3.0</del>	<del>4.3</del>	<del>78</del>	Ground area covered by duff and litter	(percent) <u>100</u>
<del>3.1 - 8.0</del>	<del>4.4</del>	<del>408</del>	Sound residue 3.1-inch diameter and larger	(percent) <u>65</u>
<u>9.1 - 20.0</u>	<u>1.3</u>	<u>86</u>	Rotten residue 3.1-inch diameter and larger	(percent) <u>35</u>
<u>20.1+</u>	<u>0</u>	<u>0</u>		
<b>Total</b>	<u>8.0</u>	<u>632</u>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch</u> d.b.h.	Trees and dead stems under <u>8-inch</u> d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>8</u>
Dominant species _____	Dominant species <u>Douglas-fir</u>	<u>manzanita</u>	Flame length (feet) <u>4</u>
Trees per acre _____	Trees per acre <u>50</u>	Average height (inches) <u>45</u>	Resistance to suppression (chains/man-hour) <u>1.5</u>
Average d.b.h. (inches) _____	Average d.b.h. (inches) <u>1</u>	Average crown height (inches) <u>31</u>	
Average tree height (feet) _____	Average tree height (feet) <u>4</u>	Ground space occupied (percent) <u>5</u>	
Average crown height (feet) _____	Average crown height (feet) <u>1</u>		Ecocl ass codi ng <u>HMS9</u>
Estimated crown space occupied (percent) _____	Estimated crown space occupied (percent) <u>10</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>8- to 20-inch</u> d.b.h.	Snags <u>8-inch</u> d.b.h. and over	Dominant species _____	
Dominant species <u>Pacific madrone</u>	Number per acre <u>19</u>	<u>honevsuckle</u>	
Trees per acre <u>91</u>	Average d.b.h. <u>15</u>	Average height (Inches) <u>8</u>	
Average d.b.h. (inches) <u>11</u>	Average height <u>14</u>	Ground space (percent) <u>4</u>	
Average tree height (feet) <u>36</u>		Estimated weight (pounds Per acre)	
Average crown height (feet) <u>11</u>			
Estimated crown space <u>30</u>			



DOUGLAS-FIR-HEMLOCK

SIZE CLASS 2

A SERIES OF 2 LEVELS

REMINDERS TO USERS:

1. The marker in these photos is 1 foot square, and the pole is painted in contrasting colors at 1-foot intervals to provide perspective.
2. Stumps are not included in residue quantities.
3. Rotted residue is that which would come apart or splinter when kicked.



1 - DF- 2

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	1.2	68	Average residue depth	(feet) <u>0.3</u>
<del>0.26-1.0</del>	<del>2.2</del>	<del>127</del>	Ground area covered by residue	(percent) <u>88</u>
<del>1.1 - 3.0</del>	<del>5.5</del>	<del>325</del>	Average duff and litter depth	(inches) <u>1.6</u>
<del>3.1 - 9.0</del>	<del>10.7</del>	<del>727</del>	Ground area covered by duff and litter	(percent) <u>100</u>
<del>9.1 -20.0</del>	<del>5.6</del>	<del>418</del>	Sound residue 3.1-inch diameter and larger	(percent) <u>79</u>
<del>20.1+</del>	<del>4.8</del>	<del>510</del>	Rotten residue 3.1-inch diameter and larger	(percent) <u>21</u>
<b>Total</b>	30.0	2,175		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
<u>Trees over 20-inch d.b.h.</u>	<u>Trees and dead stems under 8-inch d.b.h.</u>	Dominant species _____	Spread rate (chains/hour) <u>6</u>
Dominant species _____	Dominant species _____	<u>Oregon grape</u>	Flame length (feet) <u>6</u>
Trees per acre _____	Trees per acre _____	Average height (inches) <sup>12</sup> _____	Resistance to suppression (chains/man-hour) <u>1.3</u>
Average d.b.h. (Inches) _____	Average d.b.h. (Inches) _____	Average crown height (inches) <u>9</u>	Ecoclass coding <u>CHS 1</u>
Average tree height (feet) _____	Average tree height (feet) _____	Ground space occupied (percent) <u>6</u>	
Average crown height (feet) _____	Average crown height (feet) _____		
Estimated crown space occupied (percent) _____	Estimated crown space occupied (percent) _____		
		GRASS AND FORDS INFORMATION	REMARKS
<u>Trees 8- to 20-inch d.b.h.</u>	<u>Snags 8-inch d.b.h. and over</u>	Dominant species _____	
Dominant species <u>Douglas-fir</u>	Number per acre <u>2</u>	<u>bracken fern</u>	
Trees per acre <u>269</u>	Average d.b.h. <u>35</u>	Average height (inches) <u>11</u>	
Average d.b.h. (Inches) <u>11</u>	Average height <u>10</u>	Ground space (percent) <u>15</u>	
Average tree height (feet) <u>91</u>		Estimated weight (pounds per acre)	
Average crown height (feet) <u>47</u>			
Estimated crown space <u>70</u>			



2-DF-2

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.7	42	Average residue depth	(feet) <u>0.4</u>
<del>0.26</del> - 1.0	<del>1.3</del>	<del>72</del>	Ground area covered by residue	(percent) <u>89</u>
<del>1.1</del> - 3.0	<del>4.9</del>	<del>301</del>	Average duff and litter depth	(inches) <u>3.5</u>
<del>3.1</del> - 9.0	<del>7.2</del>	<del>529</del>	Ground area covered by duff and litter	(percent) <u>100</u>
<del>9.1</del> - 20.0	<del>10.6</del>	<del>917</del>	Sound residue 3.1-inch diameter and larger	(percent) <u>41</u>
<del>20.1+</del>	<del>31.1</del>	<del>3,149</del>	Rotten residue 3.1-inch diameter and larger	(percent) <u>59</u>
<b>Total</b>	<b>55.8</b>	<b>5,010</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch</u> d.b.h.	Trees and dead stems under <u>8-inch</u> d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>4</u>
Dominant species <u>Douglas-fir</u>	Dominant species <u>western hemlock</u>	<u>Oregongrape</u>	Flame length (feet) <u>4</u>
Trees per acre <u>6</u>	Trees per acre <u>550</u>	Average height (inches) <sup>9</sup>	Resistance to suppression (chains/man-hour) <u>.9</u>
Average d.b.h. (inches) <u>21</u>	Average d.b.h. (inches) <u>1</u>	Average crown height (inches) -	Eco class coding <u>CHS1</u>
Average tree height (feet) <u>100</u>	Average tree height (feet) <u>6</u>	Ground space occupied (percent) <u>18</u>	
Average crown height (feet) <u>50</u>	Average crown height (feet) <u>2</u>		
Estimated crown space occupied (percent) <u>10</u>	Estimated crown space occupied (percent) <u>20</u>		
		GRASS AND FORDS INFORMATION	REMARKS
Trees <u>8- to 20-inch</u> d.b.h.	Snags <u>8-inch</u> d.b.h. and over	Dominant species _____	
Dominant species <u>Douglas-fir</u>	Number per acre <u>7</u>	<u>twinflower</u>	
Trees per acre <u>353</u>	Average d.b.h. <u>26</u>	Average height (inches) <u>1</u>	
Average d.b.h. (inches) <u>11</u>	Average height <u>48</u>	Ground space (percent) <u>10</u>	
Average tree height (feet) <u>87</u>		Estimated weight (pounds per acre)	
Average crown height (feet) <u>50</u>			
Estimated crown space <u>70</u>			



DOUGLAS-FIR-HEMLOCK

SIZE CLASS 3

A SERIES OF 2 LEVELS

REMINDERS TO USERS:

1. The marker in these photos is 1 foot square, and the pole is painted in contrasting colors at 1-foot intervals to provide perspective.
2. Stumps are not included in residue quantities.
3. Rotted residue is that which would come apart or splinter when kicked.



I-DF-3

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	1.5	97	Average residue depth	(feet) <u>0.4</u>
0.26- 1.0	2.6	174	Ground area covered by residue	(percent) <u>87</u>
1.1 - 3.0	2.5	200	Average duff and litter depth	(inches) <u>2.0</u>
3.1 - 9.0	6.7	676	Ground area covered by duff and litter	(percent) <u>100</u>
9.1 -20.0	11.7	1,243	Sound residue 3.1-inch diameter and larger	(percent) <u>21</u>
20.1+	34.1	3,638	Rotten residue 3.1-inch diameter and larger	(percent) <u>79</u>
<b>Total</b>	<b>59.1</b>	<b>6,028</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch</u> d.b.h.	Trees and dead stems under <u>8-inch</u> d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>3</u>
Dominant species <u>Douglas-fir</u>	Dominant species <u>western hemlock</u>	<u>vine maple</u>	Flame length (feet) <u>4</u>
Trees per acre <u>3</u>	Trees per acre <u>350</u>	Average height (Inches) <u>13</u>	Resistance to suppression(chains/man-hour) <u>1</u>
Average d.b.h. (inches) <u>22</u>	Average d.b.h. (inches) <u>2</u>	Average crown height (Inches) <u>6</u>	Ecoclass coding <u>CHS2</u>
Average tree height (feet) <u>100</u>	Average tree height (feet) <u>17</u>	Ground space occupied (percent) <u>&lt;1</u>	
Average crown height (feet) <u>50</u>	Average crown height (feet) <u>11</u>		
Estimated crown space occupied (percent) <u>10</u>	Estimated crown space occupied (percent) <u>10</u>		
		GRASS AND FORES INFORMATION	REMARKS
Trees <u>8-</u> to <u>20-inch</u> d.b.h.	Snags <u>8-inch</u> d.b.h. and over	Dominant species _____	
Dominant species <u>Douglas-fir</u>	Number per acre <u>18</u>	<u>Oregon boxwood</u>	
Trees per acre <u>336</u>	Average d.b.h. <u>42</u>	Average height (inches) <u>6</u>	
Average d.b.h. (inches) <u>13</u>	Average height <u>35</u>	Ground space (percent) <u>&lt;1</u>	
Average tree height (feet) <u>80</u>		Estimated weight (pounds per acre)	
Average crown height (feet) <u>49</u>			
Estimated crown space <u>50</u>			



LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	1.8	<sup>121</sup> 555	Average residue depth	(feet) <u>2.8</u>
0.26- 1.0	8.3	1,633	Ground area covered by residue	(Percent) <u>94</u>
1.1 - 3.0	20.4	55	Average duff and litter depth	(inches) <u>3.0</u>
3.1 - 9.0	12.4	967	Ground area covered by duff and litter	(percent) <u>98</u>
9.1 - 20.0	68.6	4,970	Sound residue 3.1-inch diameter and larger	(percent) <u>95</u>
20.1+	0	0	Rotten residue 3.1-inch diameter and larger	(percent) <u>5</u>
<b>Total</b>	111.5	8,246		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch d.b.h.</u>	Trees and dead stems under <u>E-inch d.b.h.</u>	Dominant species _____	Spread rate (chains/hour) <u>17</u>
Dominant species <u>Douglas-fir</u>	Dominant species <u>Pacific silver fir</u>	<u>huckleberry</u>	Flame length (feet) <u>13</u>
Trees per acre <u>18</u>	Trees per acre <u>100</u>	Average height (inches) <u>4</u>	Resistance to suppression (chains/man-hour) <u>0.5</u>
Average d.b.h. (inches) <u>26</u>	Average d.b.h. (inches) <u>2</u>	Average crown height (inches) <u>0</u>	EcoClass coding <u>CHS6</u>
Average tree height (feet) <u>89</u>	Average tree height (feet) <u>8</u>	Ground space occupied (percent) <u>25</u>	
Average crown height (feet) <u>54</u>	Average crown height (feet) <u>5</u>		
Estimated crown space occupied (percent) <u>20</u>	Estimated crown space occupied (percent) <u>10</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>8- to 20-inch d.b.h.</u>	<u>Snags E-inch d.b.h. and over</u>	Dominant species <u>COMMON</u>	
Dominant species <u>Pac. silver fir</u>	Number per acre <u>4</u>	<u>beargrass</u>	
Trees per acre <u>63</u>	Average d.b.h. <u>24</u>	Average height (inches) <u>6</u>	
Average d.b.h. (inches) <u>15</u>	Average height <u>37</u>	Ground space (percent) <u>15</u>	
Average tree height (feet) <u>60</u>		Estimated weight (pounds per acre)	
Average crown height (feet) <u>44</u>			
Estimated crown space <u>30</u>			



DOUGLAS-FIR-HEMLOCK

SIZE CLASS 4

A SERIES OF 7 LEVELS

REMINDERS TO USERS:

1. The marker in these photos is 1 foot square, and the pole is painted in contrasting colors at 1-foot intervals to provide perspective.
2. Stumps are not included in residue quantities.
3. Rotted residue is that which would come apart or splinter when kicked.



LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)	Average residue depth	(feet) <u>0.1</u>
0.0 - 0.25	0.4	29	Ground area covered by residue	(percent) <u>53</u>
<del>0.26-1.0</del>	<del>1.2</del>	<del>36</del>	Average duff and litter depth	(inches) <u>2.3</u>
<del>1.1 - 3.0</del>	<del>1.9</del>	<del>70</del>	Ground area covered by duff and litter	(percent) <u>92</u>
<del>3.1 - 9.0</del>	<del>2.2</del>	<del>168</del>	Sound residue 3.1-inch diameter and larger	(percent) <u>26</u>
9.1 - 20.0	10.1	1,016	Rotten residue 3.1-inch diameter and larger	(percent) <u>74</u>
<del>20.1+</del>	<del>0</del>	<del>0</del>		
<b>Total</b>	14.1	1,319		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch</u> d.b.h.	Trees and dead stems under <u>8-inch</u> d.b.h.	Dominant species <u>huckleberry</u>	Spread rate (chains/hour) <u>1</u>
Dominant species <u>Douglas-fir</u>	Dominant species <u>mt.n. hemlock</u>	Average height (inches) <u>8</u>	Flame length (feet) <u>1</u>
Trees per acre <u>24</u>	Trees per acre <u>100</u>	Average crown height (inches) <u>0</u>	Resistance to suppression (chains/man-hour) <u>1.5</u>
Average d.b.h. (inches) <u>30</u>	Average d.b.h. (Inches) <u>2</u>	Ground space occupied (percent) <u>5</u>	Ecological coding <u>CHS6</u>
Average tree height (feet) <u>120</u>	Average tree height (feet) <u>11</u>		
Average crown height (feet) <u>42</u>	Average crown height (feet) <u>4</u>		
Estimated crown space occupied (percent) <u>30</u>	Estimated crown space occupied (percent) <u>10</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>8- to 20-inch</u> d.b.h.	Snags <u>8-inch</u> d.b.h. and over	Dominant species <u>common</u>	
Dominant species <u>mt.n. hemlock</u>	Number per acre <u>4</u>	<u>beargrass</u>	
Trees per acre <u>81</u>	Average d.b.h. <u>17</u>	Average height (inches) <u>8</u>	
Average d.b.h. (Inches) <u>14</u>	Average height <u>58</u>	Ground space (percent) <u>28</u>	
Average tree height (feet) <u>88</u>		Estimated weight (pounds per acre)	
Average crown height (feet) <u>27</u>			
Estimated crown space <u>40</u>			



2-DF-4

LOADING			OTHER MEASUREMENTS	
Size class (Inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
<b>0.0 - 0.25</b>	0.2	12	Average residue depth	(feet) <u>0.1</u>
<b>0.26-1.0</b>	.5	36	Ground area covered by residue	(percent) <u>44</u>
<b>1.1 - 3.0</b>	3.0	42	Average duff and litter depth	(inches) <u>3.4</u>
<b>3.1 - 8.0</b>		265	Ground area covered by duff and litter	(percent) <u>97</u>
<b>9.1 -20.0</b>	13.0	1,170	Sound residue 3.1.inch diameter and larger	(percent) <u>38</u>
<b>20.1+</b>	2.0	219	Rotten residue 3.1.inch diameter and larger	(percent) <u>62</u>
<b>Total</b>	19.2	<b>1,762</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
<u>Trees over 20-inch d.b.h.</u>	<u>Trees and dead stems under 8-inch d.b.h.</u>	Dominant species _____	Spread rate (chains/hour) <u>1</u>
Dominant species <u>Douglas-fir</u>	Dominant species _____	Average height (inches)	Flame length (feet) <u>1</u>
Trees per acre <u>28</u>	Trees per acre _____	Average crown height (inches)	Resistance to suppression (chains/man-hour) <u>2</u>
Average d.b.h. (inches) <u>30</u>	Average d.b.h. (inches) _____	Ground space occupied (percent) -	Eco class coding <u>CHF3</u>
Average tree height (feet) <u>115</u>	Average tree height (feet) _____		
Average crown height (feet) <u>64</u>	Average crown height (feet) _____		
Estimated crown space occupied (percent) <u>30</u>	Estimated crown space occupied (percent) _____		
		GRASS AND FORDS INFORMATION	REMARKS
<u>Trees 8- to 20-inch d.b.h.</u>	<u>Snags 8-inch d.b.h. and over</u>	Dominant species <u>common</u>	
Dominant species <u>Douglas-fir</u>	Number per acre <u>12</u>	<u>beargrass</u>	
Trees per acre <u>31</u>	Average d.b.h. <u>23</u>	Average height (inches) <u>10</u>	
Average d.b.h. (inches) <u>18</u>	Average height <u>80</u>	Ground space (percent) <u>7</u>	
Average tree height (feet) <u>104</u>		Estimated weight (pounds per acre)	
Average crown height (feet) <u>48</u>			
Estimated crown space <u>30</u>			



3-DF-4

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.3	18	Average residue depth	(feet) <u>0.1</u>
<del>0.26-1.0</del>	<del>9</del>	<del>58</del>	Ground area covered by residue	(percent) <u>57</u>
<del>1.1 - 3.0</del>	<del>2.6</del>	<del>205</del>	Average duff and litter depth	(inches) <u>2.3</u>
<del>3.1 - 9.0</del>	<del>5.0</del>	<del>385</del>	Ground area covered by duff and litter	(percent) <u>97</u>
9.1 - 20.0	18.5	1,533	Sound residue 3.1-inch diameter and larger	(percent) <u>68</u>
20.1+	0	0	Rotten residue 3.1-inch diameter and larger	(percent) <u>32</u>
<b>Total</b>	<b>27.3</b>	<b>2,199</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
<u>Trees over 20-inch d.b.h.</u>	<u>Trees and dead stems under 8-inch d.b.h.</u>	Dominant species <u>rhododendron</u>	Spread rate (chains/hour) <u>2</u>
Dominant species <u>Douglas-fir</u>	Dominant species <u>Pacific silver fir</u>	Average height (inches) <u>22</u>	Flame length (feet) <u>2</u>
Trees per acre <u>39</u>	Trees per acre <u>181</u>	Average crown height (inches) <u>8</u>	Resistance to suppression (chains/man-hour) <u>1.3</u>
Average d.b.h. (inches) <u>29</u>	Average d.b.h. (Inches) <u>2</u>	Ground space occupied (percent) <u>7</u>	Ecoclass coding <u>CFF3</u>
Average tree height (feet) <u>122</u>	Average tree height (feet) <u>6</u>		
Average crown height (feet) <u>60</u>	Average crown height (feet) <u>4</u>		
Estimated crown space occupied (percent) <u>50</u>	Estimated crown space occupied (percent) <u>20</u>		
<u>Trees 8- to 20-inch d.b.h.</u>	<u>Snags 8-inch d.b.h. and over</u>	GRASS AND FORBS INFORMATION	REMARKS
Dominant species <u>Pac. silver fir</u>	Number per acre <u>12</u>	Dominant species <u>COMMON</u>	
Trees per acre <u>28</u>	Average d.b.h. <u>10</u>	<u>beargrass</u>	
Average d.b.h. (inches) <u>11</u>	Average height <u>10</u>	Average height (inches) <u>11</u>	
Average tree height (feet) <u>61</u>		Ground space (percent) <u>13</u>	
Average crown height (feet) <u>4</u>		Estimated weight (pounds per acre)	
Estimated crown space <u>20</u>			



4-DF-4

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Height (tons/acre)	Volume (ft <sup>3</sup> /acre)	Average residue depth	(feet) <u>0.4</u>
0.0 - 0.25	0.9	63	Ground area covered by residue	(percent) <u>81</u>
<del>0.26 - 1.0</del>	<del>1.3</del>	<del>85</del>	Average duff and litter depth	(inches) <u>3.0</u>
<del>1.1 - 3.0</del>	<del>7.1</del>	<del>93</del>	Ground area covered by duff and litter	(percent) <u>99</u>
<del>3.1 - 8.0</del>	<del>7.2</del>	<del>545</del>	Sound residue 3.1-inch diameter and larger	(percent) <u>76</u>
9.1 - 20.0	35.8	2,854	Rotten residue 3.1-inch diameter and larger	(percent) <u>24</u>
20.1+	9.7	747		
<b>Total</b>	56.0	4,387		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over to 8-inch d.b.h.	Trees and dead stems under 8-inch d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>1</u>
Dominant species <u>Douglas-fir</u>	Dominant species <u>western hemlock</u>	<u>Oregongrape</u>	Flame length (feet) <u>2</u>
Trees per acre <u>75</u>	Trees per acre <u>250</u>	Average height (inches) <u>9</u>	Resistance to suppression (chains/man-hour) <u>1.2</u>
Average d.b.h. (inches) <u>31</u>	Average d.b.h. (inches) <u>3</u>	Average crown height (inches) >	
Average tree height (feet) <u>174</u>	Average tree height (feet) <u>13</u>	Ground space occupied (percent) <u>3</u>	
Average crown height (feet) <u>69</u>	Average crown height (feet) <u>10</u>		Ecol class coding <u>CHS1</u>
Estimated crown space occupied (percent) <u>30</u>	Estimated crown space occupied (percent) <u>10</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees 8- to 20-inch d.b.h.	Snags 8-inch d.b.h. and over	Dominant species <u>rubus</u>	
Dominant species <u>western hemlock</u>	Number per acre _____	Average height (inches) >	
Trees per acre <u>120</u>	Average d.b.h. _____	Ground space (percent) <u>3</u>	
Average d.b.h. (inches) <u>12</u>	Average height _____	Estimated weight (pounds per acre)	
Average tree height (feet) <u>54</u>			
Average crown height (feet) <u>22</u>			
Estimated crown space _____			
<u>40</u>			



5-DF-4

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	1.2	82	Average residue depth	(feet) <u>0.2</u>
<b>0.26- 1.0</b>	.	50	Ground area covered by residue	(percent) <u>69</u>
<b>1.1 - 3.0</b>	1.9	154	Average duff and litter depth	(inches) <u>5.3</u>
<b>3.1 - 9.0</b>	3.5	283	Ground area covered by duff and litter	(percent) <u>100</u>
<b>9.1 -20.0</b>	16.9	1,681	Sound residue 3.1-inch diameter and larger	(percent) <u>77</u>
<b>20.1+</b>	79.3	5,702	Rotten residue 3.1-inch diameter and larger	(percent) <u>23</u>
<b>Total</b>	103.6	7,752		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
<u>Trees over 20-inch d.b.h.</u>	<u>Trees and dead stems under 8-inch d.b.h.</u>	Dominant species _____	Spread rate (chains/hour) <u>2</u>
Dominant species <u>Douglas-fir</u>	Dominant species _____	_____	Flame length (feet) <u>2</u>
Trees per acre <u>31</u>	Trees per acre _____	Average height (inches) - _____	Resistance to suppression (chains/man-hour) <u>0.7</u>
Average d.b.h. (inches) <u>44</u>	Average d.b.h. (inches) _____	Average crown height (inches) - _____	Ecoclass coding <u>CMF9</u>
Average tree height (feet) <u>132</u>	Average tree height (feet) _____	Ground space occupied (percent) _____	
Average crown height (feet) <u>64</u>	Average crown height (feet) _____		
Estimated crown space occupied (percent) <u>40</u>	Estimated crown space occupied (percent) _____		
		GRASS AND FORBS INFORMATION	REMARKS
<u>Trees 8- to 20-inch d.b.h.</u>	<u>Snags 8-inch d.b.h. and over</u>	Dominant species _____	
Dominant species <u>mt.n. hemlock</u>	Number per acre <u>4</u>	<u>dogwood</u>	
Trees per acre <u>11</u>	Average d.b.h. <u>35</u>	Average height (inches) <u>2</u>	
Average d.b.h. (inches) <u>18</u>	Average height <u>68</u>	Ground space (percent) <u>5</u>	
Average tree height (feet) <u>113</u>		Estimated weight (pounds per acre)	
Average crown height (feet) <u>60</u>			
Estimated crown space <u>20</u>			



6-DF-4

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.9	58	Average residue depth	(feet) 1.1
0.26 - 1.0	1.9	127	Ground area covered by residue	(percent) 93
1.1 - 3.0	3.8	303	Average duff and litter depth	(inches) 6.2
3.1 - 9.0	2.6	218	Ground area covered by duff and litter	(percent) 98
9.1 - 20.0	74.2	6,081	Sound residue 3.1-inch diameter and larger	(percent) 76
20.1+	21.4	1,576	Rotten residue 3.1-inch diameter and larger	(percent) 24
Total	104.8	8,363		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over 20-inch d.b.h.	Trees and dead stems under 8-inch d.b.h.	Dominant species	spread rate (chains/hour) 3
Dominant species Douglas-fir	Dominant species western hemlock	Oregongrape	flame length (feet) 4
Trees per acre 39	Trees per acre 80	Average height (inches) 12	resistance to suppression (chains/man-hour) 0.6
Average d.b.h. (inches) 30	Average d.b.h. (inches) 3	Average crown height (inches) 3	co class coding CHS1
Average tree height (feet) 119	Average tree height (feet) 10	Ground space occupied (percent) 1	
Average crown height (feet) 87	Average crown height (feet) 9		
Estimated crown space occupied (percent) 50	Estimated crown space occupied (percent) 10		
		GRASS AND FORBS INFORMATION	REMARKS
Trees 8- to 20-inch d.b.h.	Snags E-inch d.b.h. and over	Dominant species	large amount of residue caused by blowdown
Dominant species Douglas-fir	Number per acre 5	trillium	
Trees per acre 13	Average d.b.h. 30	Average height (inches) 2	
Average d.b.h. (inches) 19	Average height 57	Ground space (percent) 4	
Average tree height (feet) 105		Estimated weight (pounds per acre)	
Average crown height (feet) 56			
Estimated crown space 20			



7-DF-4

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	1.1	74	Average residue depth (feet)	2.9
0.26 - 1.0	2.1	140	Ground area covered by residue (percent)	97
1.1 - 3.0	4.1	326	Average duff and litter depth (inches)	6.3
3.1 - 8.0	3.1	277	Ground area covered by duff and litter (percent)	92
9.1 - 20.0	101.2	7,690	Sound residue 3.1-inch diameter and larger (percent)	93
20.1+	219.1	14,956	Rotten residue 3.1-inch diameter and larger (percent)	
<b>Total</b>	330.7	23,463		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over 20-inch d.b.h.	Trees and dead stems under 8-inch d.b.h.	Dominant species _____	Spread rate (chains/hour) 4
Dominant species <u>Douglas-fir</u>	Dominant species _____	<u>bracken fern</u>	lame length (feet) <u>5</u>
Trees per acre <u>9</u>	Trees per acre _____	Average height (inches) <u>12</u>	Resistance to suppression (chains/man-hour) <u>.5</u>
Average d.b.h. (inches) <u>24</u>	Average d.b.h. (inches) _____	Average crown height (inches) <u>2</u>	Locality coding <u>CHF9</u>
Average tree height (feet) <u>130</u>	Average tree height (feet) _____	Ground space occupied (percent) <u>13</u>	
Average crown height (feet) <u>48</u>	Average crown height (feet) _____		
Estimated crown space occupied (percent) <u>20</u>	Estimated crown space occupied (percent) _____		
		GRASS AND FORBS INFORMATION	REMARKS
Trees 8- to 20-inch d.b.h.	Snags 6-inch d.b.h. and over'	Dominant species _____	Large amount of residue caused by blowdown.
Dominant species <u>Douglas-fir</u>	Number per acre <u>4</u>	<u>twinflower</u>	
Trees per acre <u>56</u>	Average d. b. h. <u>23</u>	Average height (inches) <u>2</u>	
Average d.b.h. (Inches) <u>18</u>	Average height <u>55</u>	Ground space (percent) <u>10</u>	
Average tree height (feet) <u>102</u>		Estimated weight (pounds Per acre)	
Average crown height (feet) <u>(feet) 60</u>			
Estimated crown space <u>40</u>			



SUBALPINE FIR

SIZE CLASS 1

A SERIES OF 3 LEVELS

REMINDERS TO USERS:

1. The marker in these photos is 1 foot square, and the pole is painted in contrasting colors at 1-foot intervals to provide perspective.
2. Stumps are not included in residue quantities.
3. Rotted residue is that which would come apart or splinter when kicked.



I-SA-1

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)	Average residue depth (feet)	<u>0.1</u>
0.0 - 0.25	0.4	25	Ground area covered by residue (percent)	<u>54</u>
0.26 - 1.0	.6	39	Average duff and litter depth (inches)	<u>1.0</u>
1.1 - 3.0	1.1	88	Ground area covered by duff and litter (percent)	<u>73</u>
3.1 - 9.0	13.8	1,067	Sound residue 3.1-inch diameter and larger (percent)	<u>93</u>
9.1 - 20.0	4.2	323	Rotten residue 3.1-inch diameter and larger (percent)	<u>7</u>
20.1+	0	0		
Total	20.1	1,542		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch</u> d.b.h.	Trees and dead stems under <u>8-inch</u> d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>1</u>
Dominant species _____	Dominant species <u>Pacific silver fir</u>	Flame length (feet) <u>1</u>	
Trees per acre _____	Trees per acre <u>372</u>	Average height (inches) - _____	Resistance to suppression (chains/man-hour) <u>4.3</u>
Average d.b.h. (inches) _____	Average d.b.h. (inches) <u>1</u>	Average crown height (inches) _____	
Average tree height (feet) _____	Average tree height (feet) <u>13</u>	Ground space occupied (percent) _____	Ecoclass coding <u>CMF1</u>
Average crown height (feet) _____	Average crown height (feet) <u>7</u>		
Estimated crown space occupied (percent) _____	Estimated crown space occupied (percent) <u>30</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>8- to 20-inch</u> d.b.h.	Snags <u>6-inch</u> d.b.h. and over	Dominant species <u>common</u>	
Dominant species <u>mt.n. hemlock</u>	Number per acre <u>3</u>	<u>beargrass</u>	
Trees per acre <u>35</u>	Average d.b.h. <u>19</u>	Average height (inches) <u>9</u>	
Average d.b.h. (inches) <u>11</u>	Average height <u>80</u>	Ground space (percent) <u>10</u>	
Average tree height (feet) <u>7</u>		Estimated weight (Pounds per acre)	
Average crown height (feet) <u>6</u>			
Estimated crown space <u>30</u>			



2-SA-1

LOADING			OTHER MEASUREMENTS	
Size class (inches.)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)	Average residue depth	(feet) <u>0.1</u>
0.0 - 0.25	0.5	33	Ground area covered by residue	(percent) <u>68</u>
<b>0.26- 1.0</b>	<b>1.1</b>	<b>76</b>	Average duff and litter depth	(inches) <u>4.0</u>
1.1 - 3.0	.8	65	Ground area covered by duff and litter	(percent) <u>100</u>
3.1 - 9.0	3.7	304	Sound residue 3.1-inch diameter and larger	(percent) <u>86</u>
<b>9.1 -20.0</b>	<b>14.8</b>	<b>1,152</b>	Rotten residue 3.1-inch diameter and larger	(percent) <u>14</u>
<b>20.1+</b>	0	0		
<b>Total</b>	<b>20.9</b>	<b>1,630</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch</u> d.b.h.	Trees and dead stems under <u>8-inch</u> d.b.h.	Dominant species <u>huckleberry</u>	Spread rate (chains/hour) <u>1</u>
Dominant species <u>Douglas-fir</u>	Dominant species <u>Pacific silver fir</u>	Average height (inches) <u>16</u>	Flame length (feet) <u>1</u>
Trees per acre <u>20</u>	Trees per acre <u>181</u>	Average crown height (inches) <u>1</u>	Resistance to suppression (chains/man-hour) <u>1.3</u>
Average d.b.h. (inches) <u>25</u>	Average d.b.h. (inches) <u>3</u>	Ground space occupied (percent) <u>14</u>	Ecoclass coding <u>CFS2</u>
Average tree height (feet) <u>118</u>	Average tree height (feet) <u>20</u>		
Average crown height (feet) <u>56</u>	Average crown height (feet) <u>13</u>		
Estimated crown space occupied (percent) <u>20</u>	Estimated crown space occupied (percent) <u>20</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>8- to 20-inch</u> d.b.h.	Snags <u>8-inch</u> d.b.h. and over	Dominant species <u>COMMON</u>	
Dominant species <u>western hemlock</u>	Number per acre <u>5</u>	<u>beargrass</u>	
Trees per acre <u>56</u>	Average d.b.h. <u>16</u>	Average height (inches) <u>6</u>	
Average d.b.h. (inches) <u>15</u>	Average height <u>70</u>	Ground space (percent) <u>21</u>	
Average tree height (feet) <u>97</u>		Estimated weight (pounds per acre)	
Average crown height (feet) <u>54</u>			
Estimated crown space <u>30</u>			



3-SA-1

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.3	22	Average residue depth	(feet) <u>0.1</u>
<del>0.26 - 1.0</del>	3.0	175	Ground area covered by residue	(percent) <u>54</u>
<del>3.1 - 8.0</del>	<del>6.0</del>	465	Average duff and litter depth	(inches) <u>.6</u>
<del>9.1 - 20.0</del>	12.0	915	Ground area covered by duff and litter	(percent) <u>49</u>
20.1+	0	0	Sound residue 3.1-inch diameter and larger	(percent) <u>92</u>
			Rotten residue 3.1 inch diameter and larger	(percent) <u>8</u>
<b>Total</b>	36.3	2,778		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch</u> d.b.h.	Trees and dead stems under <u>E-inch</u> d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>6</u>
Dominant species _____	Dominant species <u>western hemlock</u>	Average height (inches) - _____	Flame length (feet) <u>6</u>
Trees per acre _____	Trees per acre <u>372</u>	Average crown height (inches) - _____	Resistance to suppression (chains/man-hour) <u>1.3</u>
Average d.b.h. (Inches) _____	Average d.b.h. (inches) <u>5</u>	Ground space occupied (percent) - _____	Ecoclass coding <u>CMF1</u>
Average tree height (feet) _____	Average tree height (feet) <u>7</u>		
Average crown height (feet) _____	Average crown height (feet) <u>4</u>		
Estimated crown space occupied (percent) _____	Estimated crown space occupied (percent) <u>50</u>		
		GRASS AND FORDS INFORMATION	REMARKS
Trees <u>8- to 20-inch</u> d.b.h.	Snags <u>8-inch</u> d.b.h. and over	Dominant species <u>COMMON</u>	
Dominant species <u>mtn. hemlock</u>	Number per acre <u>22</u>	<u>beargrass</u>	
Trees per acre <u>65</u>	Average d.b.h. <u>11</u>	Average height (inches) <u>5</u>	
Average d.b.h. (inches) <u>14</u>	Average height <u>43</u>	Ground space (percent) <u>1</u>	
Average tree height (feet) <u>79</u>		Estimated weight (pounds per acre)	
Average crown height (feet) <u>47</u>			
Estimated crown space <u>30</u>			



SUBALPINE FIR

SIZE CLASS 2

A SERIES OF 2 LEVELS

REMINDERS TO USERS:

1. The marker in these photos is 1 foot square, and the pole is painted in contrasting colors at 1-foot intervals to provide perspective.
2. Stumps are not included in residue quantities.
3. Rotted residue is that which would come apart or splinter when kicked.



I-SA-2

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)	Average residue depth	(feet) <u>0.1</u>
0.0 - 0.25	0.2	11	Ground area covered by residue	(percent) <u>28</u>
<b>0.26- 1.0</b>	.1	5	Average duff and litter depth	(inches) <u>0</u>
<b>1.1 - 3.0</b>	.2	10	Ground area covered by duff and litter	(percent) <u>0</u>
3.1 - 9.0	4.0	309	Sound residue 3.1-inch diameter and larger	(percent) <u>77</u>
<b>9.1 -20.0</b>	0	0	Rotten residue 3.1-inch diameter and larger	(percent) <u>23</u>
<b>20.1+</b>	0	0		
Total	5.2	395		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
<u>Trees over 11-inch d.b.h.</u>	Trees and dead <u>stems</u> under 8-inch d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>1</u>
Dominant species _____	Dominant species <u>lodgepole pine</u>	<u>huckleberry</u>	Flame length (feet) <u>1</u>
Trees per acre _____	Trees per acre <u>565</u>	Average height (inches) <u>4</u>	Resistance to suppression (chains/man-hour) <u>1.7</u>
Average d.b.h. (inches) _____	Average d.b.h. (Inches) <u>2</u>	Average crown height (inches) <u>0</u>	
Average tree height (feet) _____	Average tree height (feet) <u>8</u>	Ground space occupied (percent) <u>17</u>	
Average crown height (feet) _____	Average crown height (feet) <u>2</u>		Ecoclass coding <u>CLS5</u>
Estimated crown space occupied (percent) _____	Estimated crown space occupied (percent) <u>40</u>		
		GRASS AND FORBS INFORMATION	REMARKS
<u>Trees 8- to 20-inch d.b.h.</u>	Snags 8-inch d.b.h. and over	Dominant species <u>common</u>	
Dominant species <u>lodgepole pine</u>	Number per acre <u>16</u>	<u>beargrass</u>	
Trees per acre <u>49</u>	Average d.b.h. <u>13</u>	Average height (inches) <u>1</u>	
Average d.b.h. (inches) <u>13</u>	Average height <u>90</u>	Ground space (percent) <u>9</u>	
Average tree height (feet) <u>78</u>		Estimated weight (pounds per acre)	
Average crown height (feet) <u>46</u>			
Estimated crown space <u>20</u>			



2-SA-2

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)	Average residue depth	(feet) <u>0.3</u>
<b>0.0 - 0.25</b>	<b>0.2</b>	<u>13</u>	Ground area covered by residue	(percent) <u>68</u>
<b>0.26- 1.0</b>	<u>1.0</u>	<u>65</u>	Average duff and litter depth	(inches) <u>.4</u>
<b>1.1 - 3.0</b>	<u>3.3</u>	<u>265</u>	Ground area covered by duff and litter	(percent) <u>91</u>
<b>3.1 - 9.0</b>	<u>23.1</u>	<u>1,920</u>	Sound residue 3.1-inch diameter and larger	(percent) <u>93</u>
<b>9.1 -20.0</b>	<u>13.1</u>	<u>1,023</u>	Rotten residue 3.1-inch diameter and larger	(percent) <u>7</u>
<b>20.1+</b>	<u>0</u>	<u>0</u>		
<b>Total</b>	<b>41.2</b>	<b>3,286</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
<u>Trees over 20-inch d.b.h.</u>	<u>Trees and dead stems under 8-inch d.b.h.</u>	Dominant species <u>huckleberry</u>	Spread rate (chains/hour) <u>2</u>
Dominant species _____	Dominant species <u>lodgepole pine</u>	Average height (inches) <u>9</u>	Flame length (feet) <u>3</u>
Trees per acre _____	Trees per acre <u>1,750</u>	Average crown height (inches) <u>6</u>	Resistance to suppression (chains/man-hour) <u>1.5</u>
Average d.b.h. (inches) _____	Average d.b.h. (inches) <u>1</u>	Ground space occupied (percent) <u>7</u>	Ecocl ass coding <u>CMS2</u>
Average tree height (feet) _____	Average tree height (feet) <u>3</u>		
Average crown height (feet) _____	Average crown height (feet) <u>1</u>		
Estimated crown space occupied (percent) _____	Estimated crown space occupied (percent) <u>30</u>		
		GRASS AND FORBS INFORMATION	REMARKS
<u>Trees 8- to 20-inch d.b.h.</u>	<u>Snags 8-inch d.b.h. and over</u>	Dominant species <u>COMMON</u>	
Dominant species <u>mt.n. hemlock</u>	Number per acre <u>15</u>	<u>bear-grass</u>	
Trees per acre <u>61</u>	Average d.b.h. <u>10</u>	Average height (inches) <u>5</u>	
Average d.b.h. (inches) <u>10</u>	Average height <u>47</u>	Ground space (Percent)?	
Average tree height (feet) <u>49</u>		Estimated weight (pounds per acre)	
Average crown height (feet) <u>12</u>			
Estimated crown space <u>10</u>			



SUBALPINE FIR

SIZE CLASS 3

A SERIES OF 3 LEVELS

REMINDERS TO USERS:

1. The marker in these photos is 1 foot square, and the pole is painted in contrasting colors at 1-foot intervals to provide perspective.
2. Stumps are not included in residue quantities.
3. Rotted residue is that which would come apart or splinter when kicked.



I-SA-3

LOADING			OTHER MEASUREMENTS	
Size class (Inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
<b>0.0 - 0.25</b>	0.5	34	Average residue depth	(feet) <u>0.2</u>
<b>0.26- 1.0</b>	1.1	75	Ground area covered by residue	(percent) <u>68</u>
<b>1.1 - 3.0</b>	5	37	Average duff and litter depth	(inches) <u>2.4</u>
<b>3.1 - 9.0</b>	6	48	Ground area covered by duff and litter	(percent) <u>99</u>
<b>9.1 -20.0</b>	0	0	Sound residue 3.1-inch diameter and larger	(percent) <u>100</u>
<b>20.1+</b>	0	0	Rotten residue 3.1-inch diameter and larger	(percent) <u>0</u>
<b>totals</b>	<b>2.7</b>	<b>194</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch</u> d.b.h.	Trees and dead stems under <u>8-inch</u> d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>1</u>
Dominant species <u>grand fir</u>	Dominant species <u>grand fir</u>		Flame length (feet) <u>1</u>
Trees per acre <u>15</u>	Trees per acre <u>850</u>	Average height (Inches)	Resistance to suppression(chains/man-hour) <u>1.3</u>
Average d.b.h. (inches) <u>23</u>	Average d.b.h. (Inches) <u>8</u>	Average crown height (inches)	
Average tree height (feet) <u>98</u>	Average tree height (feet) <u>8</u>	Ground space occupied (percent)	Ecoclass coding <u>CEF?</u>
Average crown height (feet) <u>10</u>	Average crown height (feet) <u>4</u>		
Estimated crown space occupied (percent) <u>10</u>	Estimated crown space occupied (percent) <u>10</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>8- to 20-inch</u> d.b.h.	Snags <u>8-inch</u> d.b.h. and over	Dominant species _____	
Dominant species <u>grand fir</u>	Number per acre <u>26</u>	<u>bracken fern</u>	
Trees per acre <u>180</u>	Average d.b.h. <u>11</u>	Average height (inches) <u>9</u>	
Average d.b.h. (inches) <u>15</u>	Average height <u>40</u>	Ground space (percent) >	
Average tree height (feet) <u>82</u>		Estimated weight (pounds per acre) <u>225</u>	
Average crown height (feet) <u>25</u>			
Estimated crown space <u>60</u>			



2-SA-3

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.4	27	Average residue depth	(feet) <u>0.3</u>
0.26- 1.0	2.7	182	Ground area covered by residue	(percent) <u>92</u>
1.1 - 3.0	1.1	88	Average duff and litter depth	(inches) <u>1.8</u>
3.1 - 9.0	1.2	97	Ground area covered by duff and litter	(percent) <u>95</u>
9.1 - 20.0	8.3	710	Sound residue 3.1-inch diameter and larger	(percent) <u>92</u>
20.1+	0	0	Rotten residue 3.1-inch diameter and larger	(percent) <u>8</u>
<b>Total</b>	13.7	1,104		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over XI-inch d.b.h.	Trees and dead stems under 8-inch d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>2</u>
Dominant species <u>white fir</u>	Dominant species <u>grand fir</u>	<u>huckleberry</u>	Flame length (feet) <u>3</u>
Trees per acre <u>10</u>	Trees per acre <u>350</u>	Average height (inches) <u>15</u>	Resistance to suppression (chains/man-hour) <u>3</u>
Average d.b.h. (inches) <u>23</u>	Average d.b.h. (inches) <u>1</u>	Average crown height (inches) <u>9</u>	Fire class coding <u>CEF3</u>
Average tree height (feet) <u>88</u>	Average tree height (feet) <u>4</u>	Ground space occupied (percent) <u>1</u>	
Average crown height (feet) <u>16</u>	Average crown height (feet) <u>1</u>		
Estimated crown space occupied (percent) <u>10</u>	Estimated crown space occupied (percent) <u>10</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees 8- to 20-inch d.b.h.	Snags 8-inch d.b.h. and over	Dominant species _____	
Dominant species <u>grand fir</u>	Number per acre <u>19</u>	<u>bracken fern</u>	
Trees per acre <u>113</u>	Average d.b.h. <u>22</u>	Average height (inches) <u>11</u>	
Average d.b.h. (Inches) <u>15</u>	Average height <u>27</u>	Ground space (Percent)?	
Average tree height (feet) <u>74</u>		Estimated weight (pounds Per acre) <u>150</u>	
Average crown height (feet) <u>23</u>			
Estimated crown space <u>50</u>			



3-SA-3

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.4	23	Average residue depth	(feet) <u>0.4</u>
0.26- 1.0	.8	47	Ground area covered by residue	(percent) <u>53</u>
1.1 - 3.0	2.1	129	Average duff and litter depth	(inches) <u>2.1</u>
3.1 - 9.0	13.7	1,210	Ground area covered by duff and litter	(percent) <u>99</u>
9.1 -20.0	7.9	705	Sound residue 3.1-inch diameter and larger	(percent) <u>53</u>
20.1+	0	0	Rotten residue 3.1-inch diameter and larger	(percent) <u>47</u>
Total	24.9	2,114		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees <u>over 20-inch</u> d.b.h.	Trees and dead <u>stems</u> under B-inch d.b.h.	Dominant species <u>grouse</u>	Spread rate (chains/hour) <u>1</u>
Dominant species _____	Dominant species <u>lodgepole pine</u>	<u>huckleberry</u>	Flame length (feet) <u>2</u>
Trees per acre _____	Trees per acre <u>600</u>	Average height (inches) <u>15</u>	Resistance to suppression (chains/man-hour) <u>1.1</u>
Average d.b.h. (inches) _____	Average d.b.h. (inches) <u>1</u>	Average crown height <u>7</u> (inches)	
Average tree height (feet) _____	Average tree height (feet) <u>4</u>	Ground space occupied (percent) <u>9</u>	
Average crown height (feet) _____	Average crown height (feet) <u>2</u>		Ecoclass coding <u>CES4</u>
Estimated crown space occupied (percent) _____	Estimated crown space occupied (percent) <u>20</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>8- to 20-inch</u> d.b.h.	Snags <u>B-inch</u> d.b.h. and over	Dominant species <u>common</u>	
Dominant species <u>Douglas-fir</u>	Number per acre <u>13</u>	<u>beargrass</u>	
Trees per acre <u>125</u>	Average d.b.h. <u>14</u>	Average height (inches) <u>6</u>	
Average d.b.h. (inches) <u>14</u>	Average height <u>15</u>	Ground space (percent) <u>10</u>	
Average tree height (feet) <u>19</u>		Estimated weight (pounds per acre) <u>50</u>	
Average crown height (feet) <u>16</u>			
Estimated crown space <u>40</u>			



SUBALPINE FIR

SIZE CLASS 4

A SERIES OF 2 LEVELS

REMINDERS TO USERS:

1. The marker in these photos is 1 foot square, and the pole is painted in contrasting colors at 1-foot intervals to provide perspective.
2. Stumps are not included in residue quantities.
3. Rotted residue is that which would come apart or splinter when kicked.



I-SA-4

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.2	16	Average residue depth	(feet) <u>0.1</u>
0.26- 1.0	.2	13	Ground area covered by residue	(percent) <u>53</u>
		33	Average duff and litter depth	(inches) <u>2.4</u>
<del>3.1 - 3.0</del>	<del>.7</del>	<del>64</del>	Ground area covered by duff and litter	(percent) <u>98</u>
9.1 - 20.0	22.7	2,176	Sound residue 3.1 inch diameter and larger	(percent) <u>26</u>
20.1+	9.0	964	Rotten residue 3.1-inch diameter and larger	(percent) <u>74</u>
<b>Total</b>	<b>33.2</b>	<b>3,266</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over 20-inch d.b.h.	Trees and dead stems under E-inch d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>1</u>
Dominant species <u>Pac. silver fir</u>	Dominant species _____	<u>willow</u>	Flame length (feet) <u>1</u>
Trees per acre <u>27</u>	Trees per acre _____	Average height (inches) <u>8</u>	Resistance to suppression (chains/man-hour) <u>1.5</u>
Average d.b.h. (inches) <u>34</u>	Average d.b.h. (inches) _____	Average crown height (inches) _____	
Average tree height (feet) <u>120</u>	Average tree height (feet) _____	Ground space occupied (percent) <u>21</u>	
Average crown height (feet) <u>51</u>	Average crown height (feet) _____		Ecoclass coding <u>CES9</u>
Estimated crown space occupied (percent) <u>20</u>	Estimated crown space occupied (percent) _____		
		GRASS AND FORBS INFORMATION	REMARKS
Trees B- to E0-inch d.b.h.	Snags B-inch d.b.h. and over	Dominant species _____	
Dominant species <u>Pac. silver fir</u>	Number per acre <u>4</u>	<u>violet</u>	
Trees per acre <u>27</u>	Average d.b.h. <u>33</u>	Average height (inches) <u>1</u>	
Average d.b.h. (inches) <u>11</u>	Average height <u>58</u>	Ground space (percent) <u>&gt;</u>	
Average tree height (feet) <u>85</u>		Estimated weight (pounds per acre) <u>100</u>	
Average crown height (feet) <u>28</u>			
Estimated crown space <u>20</u>			



2-SA-4

LOADING			OTHER MEASUREMENTS	
<b>Size class (inches)</b>	<b>Weight (tons/acre)</b>	<b>Volume (ft<sup>3</sup>/acre)</b>	Average residue depth	(feet) <u>0.3</u>
0.0 - 0.25	0.4	25	Ground area covered by residue	(percent) <u>87</u>
<b>0.26- 1.0</b>	<b>1.2</b>	<b>81</b>	Average duff and litter depth	(inches) <u>2.8</u>
<b>1.1 - 3.0</b>	<b>1.5</b>	<b>116</b>	Ground area covered by duff and litter	(percent) <u>99</u>
<b>3.1 - 9.0</b>	<b>5.0</b>	<b>461</b>	Sound residue 3.1-inch diameter and larger	(percent) <u>90</u>
<b>9.1 -20.0</b>	<b>8.9</b>	<b>731</b>	Rotten residue 3.1-inch diameter and larger	(percent) <u>10</u>
<b>20.1+</b>	<b>18.7</b>	<b>1,604</b>		
Total	36.3	3,018		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees <u>over 20-inch d.b.h.</u>	<u>rees and dead stems under B-inch d.b.h.</u>	Dominant species <u>grouse</u>	spread rate (chains/hour) <u>1</u>
Dominant species <u>Engelmann spruce</u>	ominant species <u>grand fir</u>	<u>huckleberry</u>	flame length (feet) <u>2</u>
Trees per acre <u>2</u>	rees per acre <u>950</u>	Average height (inches) <u>13</u>	resistance to suppression(chains/man-hour) <u>.9</u>
Average d.b.h. (inches) <u>21</u>	verage d.b.h. (inches) <u>2</u>	Average CROWN height (inches) >	
Average tree height (feet) <u>90</u>	verage tree height (feet) <u>4</u>	Ground space occupied (percent) <u>1</u>	eclass coding <u>CMS1</u>
Average crown height (feet) <u></u>	verage CROWN height (feet) <u>2</u>		
Estimated crown space occupied (percent) <u>1</u>	stimated crown space occupied (percent) <u>40</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>8- to to-inch d.b.h.</u>	<u>nags E-inch d.b.h. and over</u>	Dominant species <u></u>	
Dominant species <u>Engelmann spruce</u>	umber per acre <u>69</u>	<u>bracken fern</u>	
Trees per acre <u>194</u>	verage d.b.h. <u>18</u>	Average height (inches) <sup>h</sup>	
Average d.b.h. (inches) <u>15</u>	verage height <u>43</u>	Ground space (percent) <u>16</u>	
Average tree height (feet) <u>78</u>		Estimated weight (pounds Per acre) <u>100</u>	
Average crown height (feet) <u>21</u>			
Estimated CROWN space <u>40</u>			



MIXED CONIFER

SIZE CLASS 2

A SERIES OF 3 LEVELS

REMINDERS TO USERS:

1. The marker in these photos is 1 foot square, and the pole is painted in contrasting colors at 1-foot intervals to provide perspective.
2. Stumps are not included in residue quantities,
3. Rotted residue is that which would come apart or splinter when kicked,



LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)	Average residue depth	(feet) <u>0.3</u>
0.0 - 0.25	0.6	41	Ground area covered by residue	(percent) <u>99</u>
<del>0.26 - 1.0</del>	<del>2.3</del>	<del>154</del>	Average duff and litter depth	(inches) <u>2.0</u>
<del>1.1 - 3.0</del>	<del>1.9</del>	<del>119</del>	Ground area covered by duff and litter	(percent) <u>97</u>
<del>3.1 - 9.0</del>	<del>2.0</del>	<del>162</del>	Sound residue 3.1-inch diameter and larger	(percent) <u>100</u>
<del>9.1 - 20.0</del>	<del>0</del>	<del>0</del>	Rotten residue 3.1-inch diameter and larger	(percent) <u>0</u>
<del>20.1+</del>	<del>0</del>	<del>0</del>		
<b>Total</b>	<b>6.9</b>	<b>506</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
<u>Trees over 20-inch d.b.h.</u>	<u>reef and dead stems under 8-inch d.b.h.</u>	<u>Dominant species</u> _____	<u>Spread rate</u> (chains/hour) <u>2</u>
<u>Dominant species</u> <u>ponderosa pine</u>	<u>ominant species</u> <u>white fir</u>	<u>Average height (inches)</u> _____	<u>Flame length</u> (feet) <u>3</u>
<u>Trees per acre</u> <u>9</u>	<u>rees per acre</u> <u>800</u>	<u>Average crown height (inches)</u> _____	<u>Resistance to suppression</u> (chains/man-hour) <u>1.3</u>
<u>Average d.b.h. (inches)</u> <u>34</u>	<u>verage d.b.h. (inches)</u> <u>3</u>	<u>Ground space occupied (percent)</u> _____	<u>Ecoclass coding</u> <u>CPG-12</u>
<u>Average tree height (feet)</u> <u>121</u>	<u>verage tree height (feet)</u> <u>24</u>		
<u>Average crown height (feet)</u> <u>58</u>	<u>verage crown height (feet)</u> <u>16</u>		
<u>Estimated crown space occupied (percent)</u> <u>10</u>	<u>stimated crown space occupied (percent)</u> <u>50</u>		
		<u>GRASS AND FORBS INFORMATION</u>	<u>REMARKS</u>
<u>Trees 8- to 20-inch d.b.h.</u>	<u>nags E-inch d.b.h. and over</u>	<u>Dominant species</u> _____	
<u>Dominant species</u> <u>white fir</u>	<u>umber per acre</u> <u>19</u>	<u>Average height (inches)</u> _____	
<u>Trees per acre</u> <u>165</u>	<u>verage d.b.h.</u> <u>13</u>	<u>Ground space (percent)</u> _____	
<u>Average d.b.h. (inches)</u> <u>13</u>	<u>verage height</u> <u>55</u>	<u>Estimated weight (pounds per acre)</u> _____	
<u>Average tree height (feet)</u> <u>74</u>			
<u>Average crown height (feet)</u> <u>34</u>			
<u>Estimated crown space</u> <u>40</u>			



LOADING			OTHER MEASUREMENTS	
<b>Size class</b> (inches)	<b>Weight</b> (tons/acre)	<b>Volume</b> (ft <sup>3</sup> /acre)	Average residue depth	(feet) <u>0.7</u>
0.0 - 0.25	0.5	33	Ground area covered by residue	(percent) <u>76</u>
<del>0.26- 1.0</del>	<del>1.3</del>	<del>8</del>	Average duff and litter depth	(inches) <u>2.0</u>
<del>1.1 - 3.0</del>	<del>3.0</del>	<del>242</del>	Ground area covered by duff and litter	(percent) <u>100</u>
<del>3.1 - 9.0</del>	<del>4.5</del>	<del>8</del>	Sound residue 3.1-inch diameter and larger	(percent) <u>80</u>
9.1 -20.0	1.5	161	Rotten residue 3.1-inch diameter and larger	(percent) <u>20</u>
20.1+	0	0		
<b>Total</b>	10.8	904		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch</u> d.b.h.	Trees and dead stems under <u>8-inch</u> d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>2</u>
Dominant species <u>grand fir</u>	Dominant species <u>grand fir</u>	Flame length (feet) <u>3</u>	Resistance to suppression (chains/man-hour) <u>1.3</u>
Trees per acre <u>4</u>	Trees per acre <u>1,650</u>	Average height (inches) _____	Ecoclass coding <u>CWS2-11</u>
Average d.b.h. (inches) <u>25</u>	Average d.b.h. (inches) <u>2</u>	Average crown height (Inches) _____	
Average tree height (feet) <u>85</u>	Average tree height (feet) <u>18</u>	Ground space occupied (percent) _____	
Average crown height (feet) <u>30</u>	Average crown height (feet) <u>15</u>		
Estimated crown space occupied (percent) <u>10</u>	Estimated crown space occupied (percent) <u>40</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>8- to 20-inch</u> d.b.h.	Snags <u>8-inch</u> d.b.h. and over	Dominant species _____	
Dominant species <u>western larch</u>	Number per acre _____	<u>kinnikinnick</u>	
Trees per acre <u>347</u>	Average d.b.h. _____	Average height (inches) <sup>3</sup> _____	
Average d.b.h. (inches) <u>10</u>	Average height _____	Ground space (percent) <u>2</u>	
Average tree height (feet) <u>72</u>		Estimated weight (pounds per acre) _____	
Average crown height (feet) <u>49</u>			
Estimated crown space _____			



LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	1.3	86	Average residue depth	(feet) <u>0.8</u>
0.26- 1.0	3.4	224	Ground area covered by residue	(percent) <u>88</u>
1.1 - 3.0	4.9	396	Average duff and litter depth	(inches) <u>1.5</u>
3.1 - 9.0	78.6	2,196	Ground area covered by duff and litter	(percent) <u>100</u>
9.1 -20.0	10.1	810	Sound residue 3.1.inch diameter and larger	(percent) <u>93</u>
20.1+	8.0	689	Rotten residue 3.1-inch diameter and larger	(percent) <u>7</u>
<b>Total</b>	<b>56.3</b>	<b>4,401</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch</u> d.b.h.	Trees and dead stems <u>under 8-inch</u> d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>J</u>
Dominant species <u>grand fir</u>	Dominant species <u>grand fir</u>		Flame length (feet) <u>7</u>
Trees per acre <u>3</u>	Trees per acre <u>1,300</u>	Average height (inches) _____	Resistance to suppression (chains/man-hour) <u>1.1</u>
Average d.b.h. (Inches) <u>22</u>	Average d.b.h. (inches) <u>2</u>	Average crown height (inches) _____	Ecoclass coding <u>CWS2-11</u>
Average tree height (feet) <u>100</u>	Average tree height (feet) <u>14</u>	Ground space occupied (percent) _____	
Average crown height (feet) <u>40</u>	Average crown height (feet) <u>10</u>		
Estimated crown space occupied (percent) <u>10</u>	Estimated crown space occupied (percent) <u>40</u>		
		GRASS AND FORDS INFORMATION	REMARKS
Trees <u>8-</u> to 20-inch d.b.h.	Snags <u>8-inch</u> d.b.h. and over	Dominant species _____	
Dominant species <u>grand fir</u>	Number per acre <u>65</u>	<u>ribes</u>	
Trees per acre <u>181</u>	Average d.b.h. <u>10</u>	Average height (inches) <u>5</u>	
Average d.b.h. (inches) <u>13</u>	Average height <u>53</u>	Ground space (percent) <u>4</u>	
Average tree height (feet) <u>77</u>		Estimated weight (pounds per acre)	
Average crown height (feet) <u>33</u>			
Estimated crown space <u>40</u>			



MIXED CONIFER

SIZE CLASS 3

A SERIES OF 3 LEVELS

REMINDERS TO USERS:

1. The marker in these photos is 1 foot square, and the pole is painted in contrasting colors at 1-foot intervals to provide perspective.
2. Stumps are not included in residue quantities.
3. Rotted residue is that which would come apart or splinter when kicked.



I-MC-3

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Height (tons/acre)	Volume (ft <sup>3</sup> /acre)		
<b>0.0 - 0.25</b>	0.7	39	Average residue depth	(feet) <u>0.2</u>
0.26 - 1.0	1.1	61	Ground area covered by residue	(percent) <u>55</u>
<b>1.1 - 3.0</b>	<u>3.1</u>	<u>91</u>	Average duff and litter depth	(inches) <u>1.0</u>
<b>3.1 - 9.0</b>	<u>4.7</u>	<u>205</u>	Ground area covered by duff and litter	(percent) <u>100</u>
<b>9.1 - 20.0</b>		319	Sound residue 3.1-inch diameter and larger	(percent) <u>100</u>
<b>20.1+</b>	<b>0</b>	<b>0</b>	Rotten residue 3.1-inch diameter and larger	(percent) <u>0</u>
Total	11.1	715		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees <u>over</u> 20-inch d.b.h.	Trees and dead stems under 8-inch d.b.h.	Dominant species <u>big huckleberry</u>	Spread rate (chains/hour) <u>1</u>
Dominant species <u>Douglas-fir</u>	Dominant species <u>Douglas-fir</u>	Average height (inches) <sup>8</sup>	Flame length (feet) <u>2</u>
Trees per acre <u>5</u>	Trees per acre <u>50</u>	Average crown height (inches) <u>4</u>	Resistance to suppression (chains/man-hour) <u>2</u>
Average d.b.h. (inches) <u>27</u>	Average d.b.h. (inches) <u>1</u>	Ground space occupied (percent) <u>5</u>	Ecoclass coding <u>CWS2-11</u>
Average tree height (feet) <u>103</u>	Average tree height (feet) <u>7</u>		
Average crown height (feet) <u>28</u>	Average crown height (feet) <u>3</u>		
Estimated crown space occupied (percent) <u>5</u>	Estimated crown space occupied (percent) <u>10</u>		
		GRASS AND FORDS INFORMATION	REMARKS
Trees <u>8-</u> to 20-inch d.b.h.	Snags <u>8-inch d.b.h. and over</u>	Dominant species <u>elk sedge</u>	
Dominant species <u>Douglas-fir</u>	Number per acre <u>9</u>	Average height (inches) <u>2</u>	
Trees per acre <u>135</u>	Average d.b.h. <u>15</u>	Ground space (percent) <u>10</u>	
Average d.b.h. (inches) <u>15</u>	Average height <u>29</u>	Estimated weight (pounds per acre)	
Average tree height (feet) <u>75</u>			
Average crown height (feet) <u>28</u>			
Estimated crown space <u>40</u>			



2-MC-3

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.5	36	Average residue depth	(feet) <u>0.2</u>
0.26- 1.0	1.8	122	Ground area covered by residue	(percent) <u>7</u> <u>3</u>
1.1 - 3.0	3.5	277	Average duff and litter depth	(inches) <u>1.9</u>
3.1 - 9.0	12.3	958	Ground area covered by duff and litter	(percent) <u>99</u>
9.1 -20.0	2.3	171	Sound residue 3.1-inch diameter and larger	(percent) <u>93</u>
20.1+	0	0	Rotten residue 3.1-inch diameter and larger	(percent) <u>7</u>
Total	20.4	1,564		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch</u> d.b.h.	Trees and dead stems under <u>8-inch</u> d.b.h.	Dominant species <u>bia</u>	Spread rate (chains/hour) <u>3</u>
Dominant species <u>grand fir</u>	Dainant species <u>grand fir</u>	<u>huckleberry</u>	Flame length (feet) <u>4</u>
Trees per acre <u>3</u>	Trees per acre <u>1,400</u>	Average height (inches) <u>7</u>	Resistance to suppression (chains/man-hour) <u>1.5</u>
Average d.b.h. (inches) <u>27</u>	Average d.b.h. (inches) <u>3</u>	Average crown height (inches) <u>3</u>	
Average tree height ( <del>feet</del> ) <u>100</u>	Average tree height (feet) <u>21</u>	Ground space occupied (percent) <u>&lt;1</u>	Ecocl ass coding <u>CWS2-11</u>
Average crown height ( <del>feet</del> ) <u>60</u>	Average crown height (feet) <u>10</u>		
Estimated crown space occupied (percent) <u>1</u>	Estimated crown space occupied (percent) <u>30</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>8- to 20-inch</u> d.b.h.	Snags <u>8-inch</u> d.b.h. and over	Dominant species <u>kinnikinnick</u>	
Dominant species <u>grand fir</u>	Number per acre <u>107</u>		
Trees per acre <u>263</u>	Average d.b.h. <u>9</u>	Average height (inches) <u>&gt;</u>	
Average d.b.h. (inches) <u>11</u>	Average height <u>56</u>	Ground space (percent) <u>13</u>	
Average tree height (feet) <u>84</u>		Estimated weight (pounds Per acre)	
Average crow) height (feet) <u>5</u> <u>3</u>			
Estimated crown space <u>60</u>			



3-MC-3

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)	Average residue depth	(feet) <u>1.2</u>
<b>0.0 - 0.25</b>	<b>0.8</b>	<b>51</b>	Ground area covered by residue	(percent) <b>75</b>
<del>0.26- 1.0</del>	<del>2.7</del>	<del>180</del>	Averageduff and litter depth	(inches) <u>1.1</u>
<b>1.1 - 3.0</b>	<b>2.6</b>	<b>209</b>	Ground area covered by duff and litter	(percent) <u>91</u>
<del>3.1 - 8.0</del>	<del>10.6</del>	<del>848</del>	Sound residue 3.1.inch diameter and larger	(percent) <b>88</b>
<b>9.1 -20.0</b>	<b>26.8</b>	<b>2,257</b>	Rotten residue 3.1-inch diameter and larger	(percent) <u>12</u>
<b>20.1+</b>	<b>0</b>	<b>0</b>		
<b>Total</b>	<b>43.5</b>	<b>3,545</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch</u> d.b.h.	Trees and dead stems under <u>8-inch</u> d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>3</u>
Dominant species <u>grand fir</u>	Dominant species <u>Douglas-fir</u>	<u>wildrose</u>	Flame length (feet) <u>4</u>
Trees per acre <u>17</u>	Trees per acre <u>150</u>	Average height (inches) <u>17</u>	Resistance to suppression(chains/man-hour) <u>1.1</u>
Average d.b.h. (inches) <u>22</u>	Average d.b.h. (Inches) <u>2</u>	Average crown height (inches) <u>4</u>	Ecoclass coding <u>CWF3-11</u>
Average tree height (feet) <u>8</u>	Average tree height (feet) <u>3</u>	Ground space occupied (percent) <u>2</u>	
Average crown height (feet) _____	Average crown height (feet) _____		
Estimated crown space occupied (percent) <u>10</u>	Estimated crown space occupied (percent) <u>10</u>		
		GRASS AND FORDS INFORMATION	REMARKS
Trees <u>8- to 20-inch</u> d.b.h.	Snags <u>5-inch</u> d.b.h. and over	Dominant species _____	
Dominant species <u>Douglas-fir</u>	Number per acre <u>21</u>	<u>elk sedae</u>	
Trees per acre <u>156</u>	Average d.b.h. <u>23</u>	Average height (inches) <u>4</u>	
Average d.b.h. (inches) <u>15</u>	Average height <u>60</u>	Ground space (percent) <u>11</u>	
Average tree height (feet) <u>75</u>		Estimated weight (pounds per acre)	
Average crown height (feet) <u>27</u>			
Estimated crown space <u>50</u>			



MIXED CONIFER

SIZE CLASS 4

A SERIES OF 2 LEVELS

REMINDERS TO USERS:

1. The marker in these photos is 1 foot square, and the pole is painted in contrasting colors at 1-foot intervals to provide perspective.
2. Stumps are not included in residue quantities.
3. Rotted residue is that which would come apart or splinter when kicked.



I - MC - 4

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)	Average residue depth	(feet) <u>0.3</u>
0.0 - 0.25	0.5	34	Ground area covered by residue	(percent) <u>81</u>
<b>0.26 - 1.0</b>	<b>1.6</b>	<b>110</b>	Average duff and litter depth	(inches) <u>1.1</u>
<b>1.1 - 3.0</b>	<b>3.3</b>	<b>266</b>	Ground area covered by duff and litter	(percent) <u>89</u>
<b>3.1 - 9.0</b>	<b>5.0</b>	<b>443</b>	Sound residue 3.1-inch diameter and larger	(percent) <u>85</u>
<b>9.1 -20.0</b>	<b>10.5</b>	<b>943</b>	Rotten residue 3.1-inch diameter and larger	(percent) <u>15</u>
<b>20.1+</b>	<b>0</b>	<b>0</b>		
<b>Total</b>	<b>20.9</b>	<b>1,796</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch</u> d.b.h.	Trees and dead stems under <u>8-inch</u> d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>2</u>
Dominant species <u>grand fir</u>	Dominant species <u>grand fir</u>		Flame length (feet) <u>3</u>
Trees per acre <u>27</u>	Trees per acre <u>101</u>	Average height (inches)	Resistance to suppression (chains/man-hour) <u>3</u>
Average d.b.h. (inches) <u>24</u>	Average d.b.h. (Inches) <u>6</u>	Average crown height (inches)	Ecoclass coding <u>CWE3-11</u>
Average tree height (feet) <u>102</u>	Average tree height (feet) <u>23</u>	Ground space occupied (percent) -	
Average crown height (feet) <u>28</u>	Average crown height (feet) <u>6</u>		
Estimated crown space occupied (percent) <u>20</u>	Estimated crown space occupied (percent) <u>20</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>8-</u> to <u>20-inch</u> d.b.h.	Snags <u>8-inch</u> d.b.h. and over	Dominant species _____	
Dominant species <u>grand fir</u>	Number per acre <u>41</u>	<u>ribes</u>	
Trees per acre <u>150</u>	Average d.b.h. <u>21</u>	Average height (inches) <u>5</u>	
Average d.b.h. (inches) <u>15</u>	Average height <u>56</u>	Ground space (percent) <u>3</u>	
Average tree height (feet) <u>86</u>		Estimated weight (pounds per acre) <u>50</u>	
Average crown height (feet) <u>34</u>			
Estimated crown space <u>50</u>			



2-MC-4

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)	Average residue depth	(feet) <u>0.6</u>
<b>0.0 - 0.25</b>	<b>1.2</b>	79	Ground area covered by residue	(percent) <u>96</u>
<b>0.26- 1.0</b>	<b>7.0</b>	196	Average duff and litter depth	(inches) <u>3.0</u>
<b>1.1 - 3.0</b>	<b>4.1</b>	<b>327</b>	Ground area covered by duff and litter	(percent) <u>97</u>
3.1 - 9.0	14.5	1,228	Sound residue 3.1.inch diameter and larger	(percent) <u>94</u>
<b>9.1 -20.0</b>	19.5	1,649	Rotten residue 3.1.inch diameter and larger	(percent) <u>6</u>
<b>20.1+</b>	<b>0</b>	<b>0</b>		
<b>Total</b>	42.7	3,479		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees <u>over</u> 20-inch d.b.h.	Trees and dead stems under 8-inch d.b.h.	Dominant species <u>Oregon boxwood</u>	Spread rate (chains/hour) <u>5</u>
Dominant species <u>Douglas-fir</u>	Dominant species <u>white fir</u>	Flame length (feet) <u>6</u>	Resistance to suppression(chains/man-hour) <u>1.1</u>
Trees per acre <u>40</u>	Trees per acre <u>50</u>	Average height (inches) <u>7</u>	Ecoclass coding <u>CDS6-13</u>
Average d.b.h. (inches) <u>27</u>	Average d.b.h. (inches) <u>3</u>	Average crown height (inches) <u>1</u>	
Average tree height (feet) <u>149</u>	Average tree height (feet) <u>30</u>	Ground space occupied (percent) <u>5</u>	
Average crown height (feet) <u>87</u>	Average crown height (feet) <u>10</u>		
Estimated crown space occupied (percent) <u>40</u>	Estimated crown space occupied (percent) <u>5</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>8-</u> to to-inch d.b.h.	Snags <u>8-inch</u> d.b.h. and <u>over</u>	Dominant species <u>starflower</u>	
Dominant species <u>white fir</u>	Number per acre <u>103</u>	Average height (inches) <u>3</u>	
Trees per acre <u>108</u>	Average d.b.h. <u>15</u>	Ground space (percent) <u>1</u>	
Average d.b.h. (inches) <u>16</u>	Average height <u>46</u>	Estimated weight (pounds per acre)	
Average tree height (feet) <u>1 2 2</u>			
Average crown height (feet) <u>77</u>			
Estimated crown space <u>30</u>			



## LOGEPOLE PINE

### SIZE CLASS 1

#### A SERIES OF 3 LEVELS

#### REMINDERS TO USERS:

1. The marker in these photos is 1 foot square, and the pole is painted in contrasting colors at 1-foot intervals to provide perspective.
2. Stumps are not included in residue quantities.
3. Rotted residue is that which would come apart or splinter when kicked.



]-LP-]

LOADING			OTHER MEASUREMENTS	
<b>Size class</b> (inches)	<b>Weight</b> (tons/acre)	<b>Volume</b> (ft <sup>3</sup> /acre)	Average residue depth	(feet) <u>7</u>
0.0 - 0.25	0.3	47	Ground area covered by residue	(percent) <u>57</u>
<b>0.26-1.0</b>	<b>7</b>	<b>319</b>	Average duff and litter depth	(inches) <u>5</u>
<b>1.1 - 3.0</b>	<b>4.0</b>		Ground area covered by duff and litter	(percent) <u>100</u>
<b>3.1 - 9.0</b>	<b>8</b>	<b>60</b>	Sound residue 3.1-inch diameter and larger	(percent) <u>99</u>
<b>9.1 -20.0</b>	<b>0</b>	<b>0</b>	Rotten residue 3.1-inch diameter and larger	(percent) <u>1</u>
<b>20.1+</b>	<b>0</b>	<b>0</b>		
<b>Total</b>	<b>5.8</b>	<b>447</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
<u>Trees over 20-inch d.b.h.</u>	<u>rees and dead stems under 8-inch d.b.h.</u>	Dominant species <u>grouse</u>	pread rate (chains/hour) <u>2</u>
Dominant species _____	ominant species <u>Lodgepole pine</u>	<u>huckleberry</u>	lame length (feet) <u>3</u>
Trees per acre _____	rees per acre <u>2,250</u>	Average height (Inches) <u>5</u>	esistance to suppression (chains/man-hour) <u>2.4</u>
Average d.b.h. (inches) _____	verage d.b.h. (inches) <u>4</u>	Average crown height (inches) <u>1</u>	coiclass coding <u>CLS4-11</u>
Average tree height (feet) _____	verage tree height (feet) <u>41</u>	Ground space occupied (percent) <u>25</u>	
Average crown height (feet) _____	verage crown height (feet) <u>33</u>		
Estimated crown space occupied (percent) _____	stimated crown space occupied (percent) <u>60</u>		
<u>Trees 8- to to-inch d.b.h.</u>	<u>tags 8-inch d.b.h. and over</u>	GRASS AND FORDS INFORMATION	REMARKS
Domi nant species <u>lodqepole pine</u>	'umber per acre <u>88</u>	Domi nant species _____	
Trees per acre <u>19</u>	verage d.b.h. <u>10</u>	<u>Strawberry</u>	
Average d.b.h. (Inches) <u>8</u>	verage height <u>70</u>	Average height (inches) <u>1</u>	
Average tree height (feet) _____		Ground space (percent) <u>&gt;</u>	
Average crow height (feet) _____		Estimated weight (pounds per acre)	
Estimated crown space <u>10</u>			



2-LP-1

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.4	27	Average residue depth	(feet) <u>0.4</u>
<b>0.26- 1.0</b>	1.2	80	Ground area covered by residue	(percent) <u>85</u>
<b>1.1 - 3.0</b>	7.4	591	Average duff and litter depth	(inches) <u>.4</u>
<b>3.1 - 9.0</b>	2.1	188	Ground area covered by duff and litter	(percent) <u>89</u>
<b>9.1 -20.0</b>	0	0	Sound residue 3.1 inch diameter and larger	(percent) <u>93</u>
<b>20.1+</b>	0	0	Rotten residue 3.1-inch diameter and larger	(percent) <u>7</u>
<b>Total</b>	<b>11.1</b>	<b>886</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <b>20-inch</b> d.b.h.	Trees and dead steins under <b>E-inch</b> d.b.h.	Dominant species <u>grouse</u>	Spread rate (chains/hour) <u>6</u>
Dominant species _____	Dominant species <u>lodgpole pine</u>	<u>huckleberry</u>	Flame length (feet) <u>0</u>
Trees per acre _____	Trees per acre <u>4,200</u>	Average height (Inches) <u>5</u>	Resistance to suppression (chains/man-hour) <u>1.2</u>
Average d.b.h. (inches) _____	Average d.b.h. (inches) <u>3</u>	Average crow" height (inches) <sup>2</sup>	
Average tree height (feet) _____	Average tree height (feet) <u>31</u>	Ground space occupied (percent) <u>42</u>	
Average crown height (feet) _____	Average crown height (feet) <u>26</u>		Ecoclass coding <u>CLG2-11</u>
Estimated crow" space occupied (percent) _____	Estimated crown space occupied (percent) <u>60</u>		
		GRASS AND FORDS INFORMATION	REMARKS
Trees <b>8- to 20-inch</b> d.b.h.	Snags <b>8-inch</b> d.b.h. and over	Dominant species _____	
Dominant species <u>lodgpole pine</u>	Number per acre <u>15</u>	<u>pinegrass</u>	
Trees per acre <u>10</u>	Average d.b.h. <u>9</u>	Average height (inches) <u>3</u>	
Average d.b.h. (inches) <u>11</u>	Average height <u>45</u>	Ground space (percent) <u>1</u>	
Average tree height (feet) <u>75</u>		Estimated weight (pounds per acre) <u>200</u>	
Average crown height (feet) <u>35</u>			
Estimated crown space <u>5</u>			



3-LP-1

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Yeight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.6	38	Average residue depth	(feet) <u>0.8</u>
<b>0.26- 1.0</b>	2.1	138	Ground area covered by residue	(percent) <u>97</u>
<b>1.1 - 3.0</b>	10.4	833	Average duff and litter depth	(inches) <u>.6</u>
<b>3.1 - 9.0</b>	4.7	373	Ground area covered by duff and litter	(percent) <u>97</u>
<b>9.1 -20.0</b>	0	0	Sound residue 3.1-inch diameter and larger	(percent) <u>98</u>
<b>20.1+</b>	0	0	Rotten residue 3.1.inch diameter and larger	(percent) <u>2</u>
<b>Total</b>	17.8	1,382		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees <u>over 20-inch d.b.h.</u>	Trees <u>and dead stems</u> under E-inch d.b.h.	Dominant species <u>grouse</u>	pread rate (chains/hour) <u>12</u>
Dominant species _____	Dominant species <u>lodgpole pine</u>	<u>huckleberry</u>	lame length (feet) <u>10</u>
Trees per acre _____	Trees per acre <u>2,100</u>	Average height (inches) <u>5</u>	esistance to suppression(chains/man-hour) <u>1</u>
Average d.b.h. (inches) _____	Average d.b.h. (inches) <u>3</u>	Average crown height (inches) <u>1</u>	coclass coding <u>CLGZ- 11</u>
Average tree height (feet) _____	Average tree height (feet) <u>38</u>	Ground space occupied (percent) <u>31</u>	
Average crown height (feet) _____	Average crown height (feet) <u>30</u>		
Estimated crown space occupied (percent) _____	Estimated crown space occupied (percent) <u>76</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>8- to 20-inch d.b.h.</u>	Snags <u>8-inch d.b.h. and over</u>	Dominant species _____	
Dominant species <u>lodgpole pine</u>	Number per acre <u>115</u>	<u>lupine</u>	
Trees per acre <u>19</u>	Average d.b.h. <u>9</u>	Average height (inches) <u>2</u>	
Average d.b.h. (inches) <u>8</u>	Average height <u>64</u>	Ground space (percent) <u>2</u>	
Average tree height (feet) <u>65</u>		Estimated weight (pounds per acre) <u>100</u>	
Average crown height (feet) <u>50</u>			
Estimated crown space <u>10</u>			



LODGEPOLE PINE

SIZE CLASS 2

A SERIES OF 4 LEVELS

REMINDERS TO USERS:

1. The marker in these photos is 1 foot square, and the pole is painted in contrasting colors at 1-foot intervals to provide perspective.
2. Stumps are not included in residue quantities.
3. Rotted residue is that which would come apart or splinter when kicked.



LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.4	29	Average residue depth	(feet) <u>0.4</u>
0.26- 1.0	1.1	77	Ground area covered by residue	(percent) <u>71</u>
1.1 - 9.0	0.8	59	Average duff and litter depth	(inches) <u>.6</u>
9.1 - 20.0	0	0	Ground area covered by duff and litter	(percent) <u>97</u>
20.1+	0	0	Sound residue 3.1.inch diameter and larger	(percent) <u>94</u>
			Rotten residue 3.1.inch diameter and larger	(Percent) <u>16</u>
<b>Total</b>	<b>3.0</b>	<b>246</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over 20-inch d.b.h.	Trees and dead stems under 8-inch d.b.h.	Dominant species <u>grouse</u>	spread rate (chains/hour) <u>1</u>
Dominant species _____	Dominant species <u>lodgepole pine</u>	<u>huckleberry</u>	flame length (feet) <u>&gt;</u>
Trees per acre _____	Trees per acre <u>250</u>	Average height (inches) <u>4</u>	resistance to suppression(chains/man-hour) <u>2.4</u>
Average d.b.h. (inches) _____	Average d.b.h. (inches) <u>6</u>	Average crown height (inches); _____	
Average tree height (feet) _____	Average tree height (feet) <u>49</u>	Ground space occupied (percent) <u>36</u>	
Average crown height (feet) _____	Average crown height (feet) <u>32</u>		Locclass coding <u>CLS4-11</u>
Estimated crown space occupied (percent) _____	Estimated crown space occupied (percent) <u>50</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees 8- to 20-inch d.b.h.	Snags 8-inch d.b.h. and over	Dominant species _____	Numerous trees were killed by mountain pine beetle.
Dominant species _____	Number per acre <u>360</u>	<u>hawkweed</u>	
Trees per acre _____	Average d.b.h. <u>10</u>	Average height (inches) <u>2</u>	
Average d.b.h. (inches) _____	Average height <u>69</u>	Ground space (percent) <u>7</u>	
Average tree height (feet) _____		Estimated weight (pounds per acre) <u>100</u>	
Average crown height (feet) _____			
Estimated crown space _____			



LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.2	14	Average residue depth	(feet) <u>0.1</u>
<b>0.26- 1.0</b>	<u>3</u>	<u>18</u>	Ground area covered by residue	(percent) <u>33</u>
<b>1.1 - 3.0</b>	<u>14.0</u>	<u>74</u>	Average duff and litter depth	(inches) <u>0</u>
<b>3.1 - 9.0</b>	<u>14.0</u>	<u>1,328</u>	Ground area covered by duff and litter	(percent) <u>0</u>
<b>9.1 - 20.0</b>	<b>5.0</b>	<b>442</b>	Sound residue 3.1-inch diameter and larger	(percent) <u>53</u>
<b>20.1+</b>	<u>0</u>	<u>0</u>	Rotten residue 3.1-inch diameter and larger	(percent) <u>47</u>
Total	20.5	1,876		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
<u>Trees over 20-inch d.b.h.</u>	<u>rees and dead stems under 8-inch d.b.h.</u>	Dominant species <u>huckleberry</u>	Spread rate (chains/hour) <u>1</u>
Dominant species _____	ominant species <u>mtn. hemlock</u>	Average height (inches) <u>6</u>	Flame length (feet) <u>1</u>
Trees per acre _____	rees per acre _____	Average crown height (inches) <u>1</u>	Resistance to suppression (chains/man-hour) <u>2</u>
Average d.b.h. (Inches) _____	verage d.b.h. (Inches) _____	Ground space occupied (percent) <u>4</u>	Ecocl ass coding <u>CLS5</u>
Average tree height (feet) _____	verage tree height (feet) _____		
Average crown height (feet) _____	verage crown height (feet) _____		
Estimated crown space occupied (percent) _____	stimated crown space occupied (percent) _____		
		GRASS AND FORBS INFORMATION	REMARKS
<u>Trees 8- to 20-inch d.b.h.</u>	<u>logs 8-inch d.b.h. and over</u>	Dominant species <u>common beargrass</u>	
Dominant species <u>white fir</u>	lumber per acre _____	Average height (inches) <u>10</u>	
Trees per acre <u>58</u>	verage d.b.h. _____	Ground space (percent) <u>6</u>	
Average d.b.h. (inches) <u>11</u>	verage height _____	Estimated weight (pounds per acre) <u>100</u>	
Average tree height (feet) <u>90</u>			
Average crown height (feet) <u>7 3</u>			
Estimated crown space _____			
<u>23</u>			



3-LP-2

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
			Average residue depth	(feet) <u>0.3</u>
<u>0.0 - 0.25</u>	<u>0.7</u>	<u>45</u>	Ground area covered by residue	(percent) <u>89</u>
<u>0.26 - 1.0</u>	<u>2.3</u>	<u>156</u>	Average duff layer depth	(inches) <u>.6</u>
<u>1.1 - 3.0</u>	<u>5.9</u>	<u>474</u>	Ground area covered by duff and litter	(percent) <u>99</u>
<u>3.1 - 9.0</u>	<u>5.1</u>	<u>422</u>	Sound residue 3.1-inch diameter and larger	(percent) <u>98</u>
<u>9.1 - 20.0</u>	<u>18.8</u>	<u>1,156</u>	Rotten residue 3.1-inch diameter and larger	(percent) <u>2</u>
<u>20.1+</u>	<u>0</u>	<u>0</u>		
Total	<u>32.8</u>	<u>2,253</u>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
<u>Trees over 20-inch d.b.h.</u>	<u>Trees and dead stems under 8-inch d.b.h.</u>	<u>Dominant species grouse</u>	<u>Spread rate (chains/hour) &amp;</u>
<u>Dominant species</u>	<u>Dominant species lodgepole pine</u>	<u>huckleberry</u>	<u>Flame length (feet) 6</u>
<u>Trees per acre</u>	<u>Trees per acre 2,100</u>	<u>Average height (inches)<sup>4</sup></u>	<u>Resistance to suppression (chains/man-hour) 1.2</u>
<u>Average d.b.h. (inches)</u>	<u>Average d.b.h. (inches) 5</u>	<u>Average crown height (inches) 2</u>	
<u>Average tree height (feet)</u>	<u>Average tree height (feet) 5 5</u>	<u>Ground space occupied (percent) 46</u>	<u>Ecoclass coding CLS4-11</u>
<u>Average crown height (feet)</u>	<u>Average crown height (feet) 43</u>		
<u>Estimated crown space occupied (percent)</u>	<u>Estimated crown space occupied (percent) 60</u>		
		<u>GRASS AND FORBS INFORMATION</u>	<u>REMARKS</u>
<u>Trees 8- to 20-inch d.b.h.</u>	<u>Snags 8-inch d.b.h. and over</u>	<u>Dominant species</u>	
<u>Dominant species lodgepole pine</u>	<u>Number per acre 19</u>	<u>violet</u>	
<u>Trees per acre 38</u>	<u>Average d.b.h. 8</u>	<u>Average height (inches)<sup>3</sup></u>	
<u>Average d.b.h. (inches) 8</u>	<u>Average height 68</u>	<u>Ground space (percent) 8</u>	
<u>Average tree height (feet) 44</u>		<u>Estimated weight (pounds per acre) 100</u>	
<u>Average crown height (feet) 44</u>			
<u>Estimated crown space 20</u>			



4-LP-2

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
			Average residue depth	(feet) <u>0.3</u>
<b>0.0 - 0.25</b>	<b>0.5</b>	<u>33</u>	Ground area covered by residue	(percent) <u>89</u>
<b>0.26- 1.0</b>	<u>1.9</u>	<u>124</u>	Average duff and litter depth	(inches) <u>.6</u>
<b>1.1 - 3.0</b>	<u>7.0</u>	<u>559</u>	Ground area covered by duff and litter	(percent) <u>91</u>
<u>3.1 - 9.0</u>	<u>9.6</u>	<u>740</u>	Sound residue 3.1-inch diameter and larger	(percent) <u>85</u>
<b>9.1 -20.0</b>	<u>16.1</u>	<u>1,178</u>	Rotten residue 3.1-inch diameter and larger	(percent) <u>15</u>
<b>20.1+</b>	<u>0</u>	<u>0</u>		
<b>Total</b>	<u>35.1</u>	<u>2,634</u>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees <b>over</b> to-inch d.b.h. _____	Trees and dead stems under 8-inch d.b.h. _____	Dominant species <u>GROUSE</u>	Spread rate (chains/hour) <u>7</u>
Dominant species _____	Dominant species <u>lodgpole pine</u>	<u>huckleberry</u>	Flame length (feet) <u>6</u>
Trees per acre _____	Trees per acre <u>1,600</u>	Average height (inches) <u>4</u>	Resistance to suppression (chains/man-hour) <u>1.2</u>
Average d. b.h. (inches) _____	Average d.b.h. (inches) <u>5</u>	Average crown height (inches) <u>1</u>	
Average tree height (feet) _____	Average tree height (feet) <u>48</u>	Ground space occupied (percent) <u>15</u>	
Average crown height (feet) _____	Average crown height (feet) <u>38</u>		Ecoclass coding <u>CLS4-11</u>
Estimated crown space occupied (percent) _____	Estimated crown space occupied (percent) <u>60</u>		
		GRASS AND FORDS INFORMATION	REMARKS
Trees <b>8- to 20-inch</b> d.b.h. _____	Snags <b>8-inch</b> d.b.h. and over _____	Dominant species _____	
Dominant species <u>lodgpole pine</u>	Number per acre <u>30</u>	<u>violet</u>	
Trees per acre <u>57</u>	Average d.b.h. <u>9</u>	Average height (inches) <u>5</u>	
Average d.b.h. (Inches) <u>8</u>	Average height <u>66</u>	Ground space (percent) <u>3</u>	
Average tree height (feet) <u>63</u>		Estimated weight (pounds per acre) <u>50</u>	
Average crown height (feet) <u>45</u>			
Estimated crown space _____			
<u>20</u>			



LODGEPOLE PINE

SIZE CLASS 3

A SERIES OF 3 LEVELS

REMINDERS TO USERS:

1. The marker in these photos is 1 foot square, and the pole is painted in contrasting colors at 1-foot intervals to provide perspective.
2. Stumps are not included in residue quantities.
3. Rotted residue is that which would come apart or splinter when kicked.



LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.2	12	Average residue depth	(feet) <u>0.1</u>
0.26- 1.0	.9	63	Ground area covered by residue	(percent) <u>44</u>
1.1 - 3.0	1.7	135	Average duff and litter depth	(inches) <u>9</u>
3.1 - 9.0	1.3	104	Ground area covered by duff and litter	(percent) <u>99</u>
9.1 -20.0	0	0	Sound residue 3.1.inch diameter and larger	(percent) <u>100</u>
20. 1+	0	0	Rotten residue 3.1.inch diameter and larger	(percent) <u>0</u>
Total	4.1	314		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees <u>over 20-inch d.b.h.</u>	Trees and dead stems under 8 -inch d. b. h.	Dominant species <u>grouse</u>	Spread rate (chains/hour) <u>1</u>
Dominant species _____	Dominant species <u>lodgepole pine</u>	<u>huckleberry</u>	Flame length (feet) <u>2</u>
Trees per acre _____	Trees per acre <u>50</u>	Average height (inches) <u>7</u>	Resistance to suppression(chains/man-hour) <u>2.4</u>
Average d.b.h. (inches) _____	Average d.b.h. (inches) <u>6</u>	Average crown height (Inches) -	
Average tree height (feet) _____	Average tree height (feet) <u>60</u>	Ground space occupied (percent) <u>8</u>	Ecoclass coding <u>CLG2-11</u>
Average crown height (feet) _____	Average crown height (feet) <u>35</u>		
Estimated crown space occupied (percent) _____	Estimated crown space occupied (percent) <u>20</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>8- to 10-inch d.b.h.</u>	Snags <u>8-inch d.b.h.</u> and over	Dominant species _____	Numerous trees were killed by mountain pine beetle
Dominant species _____	Number per acre <u>197</u>	<u>pinegrass</u>	
Trees per acre _____	Average d.b.h. <u>13</u>	Average height (inches) <u>4</u>	
Average d.b.h. (inches) _____	Average height <u>72</u>	Ground space (percent) >	
Average tree height (feet) _____		Estimated weight (pounds per acre) <u>200</u>	
Average crown height (feet) _____			
Estimated crown space _____			



2-LP-3

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
<b>0.0 - 0.25</b>	<b>0.2</b>	12	Average residue depth (feet)	<b>0.4</b>
<b>0.26 - 1.0</b>	<b>1.0</b>	64	Ground area covered by residue (percent)	<b>69</b>
<b>1.1 - 3.0</b>	<b>4.1</b>	330	Average duff and litter depth (inches)	<b>.8</b>
<b>3.1 - 9.0</b>	<b>10.7</b>	852	Ground area covered by duff and litter (percent)	<b>97</b>
<b>9.1 - 20.0</b>	<b>.8</b>	<b>60</b>	Sound residue 3.1.inch diameter and larger (percent)	<b>97</b>
<b>20.1+</b>	<b>0</b>	<b>0</b>	Rotten residue 3.1.inch diameter and larger (percent)	<b>3</b>
Total	16.8	1,318		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over 20-inch d.b.h. _____	Trees and dead stems under 8-inch d.b.h. _____	Dominant species <u>GROUSE</u>	Spread rate (chains/hour) <u>2</u>
Dominant species _____	Dominant species <u>lodgepole pine</u>	<u>huckleberry</u>	Flame length (feet) <u>3</u>
Trees per acre _____	Trees per acre <u>300</u>	Average height (inches)? _____	Resistance to suppression (chains/man-hour) <u>1.1</u>
Average d.b.h. (inches) _____	Average d.b.h. (inches) <u>4</u>	Average crown height (inches) <u>2</u>	
Average tree height (feet) _____	Average tree height (feet) <u>31</u>	Ground space occupied (percent) <u>27</u>	
Average crown height (feet) _____	Average crown height (feet) <u>22</u>		Ecoclass coding <u>CLG2-11</u>
Estimated crown space occupied (percent) _____	Estimated crown space occupied (percent) <u>30</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees 8- to 20-inch d.b.h. _____	Snags E-inch d.b.h. and over _____	Dominant species _____	
Dominant species <u>lodgepole pine</u>	Number per acre <u>152</u>	<u>pinegrass</u>	
Trees per acre <u>34</u>	Average d.b.h. <u>13</u>	Average height (inches) <u>5</u>	
Average d.b.h. (inches) <u>9</u>	Average height <u>71</u>	Ground space (percent) <u>19</u>	
Average tree height (feet) <u>7</u> <u>5</u>		Estimated weight (pounds per acre) <u>200</u>	
Average crown height (feet) <u>(fe50)</u>			
Estimated crown space <u>10</u>			



LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
<b>0.0 - 0.25</b>	<b>0.2</b>	<b>11</b>	Average residue depth	(feet) <u>0.3</u>
<b>0.26- 1.0</b>	<b>1.1</b>	<b>71</b>	Ground area covered by residue	(percent) <u>48</u>
<b>1.1 - 3.0</b>	<b>3.4</b>	<b>271</b>	Average duff and litter depth	(inches) <u>.3</u>
<b>3.1 - 9.0</b>	<b>14.8</b>	<b>1,191</b>	Ground area covered by duff and litter	(percent) <u>91</u>
<b>9.1 -20.0</b>	<b>3.5</b>	<b>275</b>	Sound residue 3.1-inch diameter and larger	(percent) <u>95</u>
<b>20.1+</b>	<b>0</b>	<b>0</b>	Rotten residue 3.1.inch diameter and larqrr	(percent) <u>5</u>
<b>Total</b>	<b>23.0</b>	<b>1,819</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch</u> d.b.h.	Trees and dead stems under <u>8-inch</u> d.b.h.	Dominant species _____	pread rate (chains/hour) >
Dominant species _____	Dominant species <u>lodgepole pine</u>	<u>pyrola</u>	lame length (feet) <u>3</u>
Trees per acre _____	Trees per acre <u>650</u>	Average height (inches) <u>4</u>	esistance to suppression(chains/man-hour) <u>1.2</u>
Average d.b.h. (inches) _____	Average d.b.h. (inches) <u>4</u>	Average crown height (inches) <u>3</u>	co class coding <u>CLG2-11</u>
Average tree height (feet) _____	Average tree height (feet) <u>44</u>	Ground space occupied (percent) <u>13</u>	
Average crown height (feet) _____	Average crown height (feet) <u>32</u>		
Estimated crown space occupied (percent) _____	Estimated crown space occupied (percent) <u>30</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>8-</u> to <u>20-inch</u> d.b.h.	Snags <u>8-inch</u> d.b.h. and over	Dominant species _____	
Dominant species <u>lodgepole pine</u>	Number per acre <u>132</u>	<u>pinegrass</u>	
Trees per acre <u>74</u>	Average d.b.h. <u>12</u>	Average height (inches) <u>8</u>	
Average d.b.h. (inches) <u>9</u>	Average height <u>74</u>	Ground space (percent) <u>36</u>	
Average tree height (feet) <u>72</u>		Estimated weight (pounds Per acre) <u>400</u>	
Average crown height ( <del>feet</del> ) _____			
Estimated crown space _____			



## PONDEROSA PINE & ASSOCIATED SPECIES

### SIZE CLASS 3

#### A SERIES OF 5 LEVELS

#### REMINDERS TO USERS:

1. The marker in these photos is 1 foot square, and the pole is painted in contrasting colors at 1-foot intervals to provide perspective.
2. Stumps are not included in residue quantities.
3. Rotted residue is that which would come apart or splinter when kicked.



LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
			Average residue depth	(feet) <u>0.01</u>
0.0 - 0.25	0.02	1	Ground area covered by residue	(percent) <u>5</u>
0.26- 1.0	.3	18	Average duff and litter depth	(inches) <u>.3</u>
1.1 - 3.0	.1	5	Ground area covered by duff and litter	(percent) <u>76</u>
3.1 - 9.0	1.0	77	Sound residue 3.1.inch diameter and larger	(percent) <u>100</u>
9.1 -20.0	0	0	Rotten residue 3.1.inch diameter and larger	(percent) <u>0</u>
20.1+	0	0		
Tots l	1.42	101		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees <u>over 20-inch d.b.h.</u>	Trees and dead stems under 8-inch d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>0</u>
Dominant species <u>ponderosa pine</u>	Dominant species _____		Flame length (feet) <u>0</u>
Trees per acre <u>1</u>	Trees per acre _____	Average height (inches) -	Resistance to suppression (chains/man-hour) <u>12</u>
Average d.b.h. (inches) <u>22</u>	Average d.b.h. (inches) _____	Average crown height (inches)	Ecoclass coding <u>CPC1</u>
Average tree height (feet) <u>60</u>	Average tree height (feet) _____	Ground space occupied (percent) -	
Average crown height (feet) <u>25</u>	Average crown height (feet) _____		
Estimated crown space occupied (percent) <u>1</u>	Estimated crown space occupied (percent) _____		
		GRASS AND FORDS INFORMATION	REMARKS
Trees <u>8- to 20-inch d.b.h.</u>	Snags <u>8-inch d.b.h. and over</u>	Dominant species _____	
Dominant species <u>ponderosa pine</u>	Number per acre <u>3</u>	<u>fescue</u>	
Trees per acre <u>18</u>	Average d.b.h. <u>18</u>	Average height (inches) <u>2</u>	
Average d.b.h. (inches) <u>16</u>	Average height <u>50</u>	Ground space (percent) <u>8</u>	
Average tree height (feet) <u>36</u>		Estimated weight (pounds per acre)	
Average crown height (feet) <u>8</u>			
Estimated crown space <u>20</u>			



LOADING			OTHER MEASUREMENTS	
Size class (inches)	Yeight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.3	22	Average residue depth	(feet) 0.1
0.26- 1.0	.9	61	Ground area covered by residue	(percent) 63
1.1 - 3.0	.2	14	Average duff and litter depth	(inches) .9
3.1 - 9.0	.3	33	Ground area covered by duff and litter	(percent) 92
9.1 -20.0	0	0	Sound residue 3.1-inch diameter and larger	(percent) 22
20.1+	0	0	Rotten residue 3.1-inch diameter and larger	(percent) 78
Total	1.7	130		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over 20-inch d.b.h.	Trees and dead stems under 8-inch d.b.h.	Dominant species canyon	spread rate (chains/hour) 13
Dominant species ponderosa pine	Dominant species ponderosa pine	live oak	flame length (feet) 7
Trees per acre 12	Trees per acre 300	Average height (inches) 19	resistance to suppression(chains/man-hour) 1.7
Average d.b.h. (inches) 26	Average d.b.h. (inches) 4	Average crown height (inches) 3	
Average tree height (feet) 74	Average tree height (feet) 12	Ground space occupied (percent) 61	
Average crown height (feet) 18	Average crown height (feet) 6		ecoclass coding CPHT
Estimated crown space occupied (percent) 10	Estimated crown space occupied (percent) 20		
		GRASS AND FORBS INFORMATION	REMARKS
Trees 8- to 20-inch d.b.h.	Snags E-inch d.b.h. and over	Dominant species common	
Dominant species ponderosa pine	Number per acre 31	beargrass	
Trees per acre 48	Average d.b.h. 13	Average height (inches) 7	
Average d.b.h. (inches) 11	Average height 40	Ground space (percent) 5	
Average tree height (feet) 36		Estimated weight (pounds per acre)	
Average crown height (feet) 0			
Estimated crown space 20			



LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
			Average residue depth	(feet) <u>0.3</u>
0.0 - 0.25	1.2	83	Ground area covered by residue	(percent) <u>93</u>
<b>0.26- 1.0</b>	<b>2.3</b>	<b>154</b>	Average duff and litter depth	(inches) <u>2.9</u>
<b>1.1 - 3.0</b>	<b>1.3</b>	<b>104</b>	Ground area covered by duff and litter	(percent) <u>100</u>
<b>3.1 - 9.0</b>	<b>2.8</b>	<b>237</b>	Sound residue 3.1.inch diameter and larger	(percent) <u>65</u>
<b>9.1 -20.0</b>	<b>.8</b>	<b>62</b>	Rotten residue 3.1.inch diameter and larger	(percent) <u>35</u>
<b>20.1+</b>	<b>3.5</b>	<b>370</b>		
<b>Total</b>	<b>11.9</b>	<b>1,010</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees <u>over</u> 20-inch d.b.h.	Trees and dead <u>stems</u> under E-inch d.b.h.	Dominant species _____	Spread rate (chains/hour) >
Dominant species <u>Douglas-fir</u>	Dominant species <u>white fir</u>	<u>chinkapin</u>	flame length (feet) >
Trees per acre <u>9</u>	Trees per acre <u>1,100</u>	Average height (Inches) <u>12</u>	Resistance to suppression(chains/man-hour) <u>1.7</u>
Average d.b.h. (inches) <u>27</u>	Average d.b.h. (inches) <u>2</u>	Average crown height (inches) <u>6</u>	
Average tree height (feet) <u>1 2 6</u>	Average tree height (feet) <u>13</u>	Ground space occupied (percent) <u>&lt;1</u>	
Average crown height (feet) <u>45</u>	Average crown height (feet) <u>8</u>		{class coding <u>CWH1-11</u>
Estimated crown space occupied (percent) <u>10</u>	Estimated crown space occupied (percent) <u>40</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>8-</u> to 20-inch d.b.h.	Snags <u>8-inch</u> d.b.h. and <u>over</u>	Dominant species _____	
Dominant species <u>Douglas-fir</u>	Number per acre <u>3</u>	<u>rubus</u>	
Trees per acre <u>242</u>	Average d.b.h. <u>38</u>	Average height (inches) <u>5</u>	
Average d.b.h. (inches) <u>15</u>	Average height <u>170</u>	Ground space (percent)-	
Average tree height (feet) <u>96</u>		Estimated weight (pounds per acre)	
Average crown height (feet) <u>5</u>			
Estimated crown space <u>40</u>			



LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
			Average residue depth	(feet) <u>0.3</u>
<b>0.0 - 0.25</b>	<u>1.4</u>	<u>95</u>	Ground area covered by residue	(percent) <u>97</u>
<b>0.26- 1.0</b>	<u>2.6</u>	<u>172</u>	Average duff and litter depth	(inches) <u>3.3</u>
<b>1.1 - 3.0</b>	<u>1.8</u>	<u>147</u>	Ground area covered by duff and litter	(percent) <u>100</u>
<b>3.1 - 9.0</b>	<u>7.1</u>	<u>590</u>	Sound residue 3.1-inch diameter and larger	(percent) <u>98</u>
<b>9.1 -20.0</b>	<u>0</u>	<u>0</u>	Rotten residue 3.1-inch diameter and larger	(percent) <u>2</u>
<b>20.1+</b>	<u>0</u>	<u>0</u>		
<b>Total</b>	<u>12.9</u>	<u>1,004</u>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees <b>over</b> to-inch d.b.h.	Trees and dead stems under E-inch d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>3</u>
Dominant species <u>white fir</u>	Dominant species <u>white fir</u>		Flame length (feet) <u>4</u>
Trees per acre <u>25</u>	Trees per acre <u>350</u>	Average height (inches)	Resistance to suppression (chains/man-hour) <u>1.1</u>
Average d.b.h. (inches) <u>22</u>	Average d.b.h. (inches) <u>4</u>	Average crown height (inches)	
Average tree height (feet) <u>118</u>	Average tree height (feet) <u>28</u>	Ground space occupied (percent)	Ecoclass coding <u>CDS6-13</u>
Average crown height (feet) <u>5</u>	Average crown height (feet) <u>23</u>		
Estimated crown space occupied (percent) <u>20</u>	Estimated crown space occupied (percent) <u>30</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <b>8- to 20-inch</b> d.b.h.	Snags E-inch d.b.h. and <b>over</b>	Dominant species _____	
Dominant species <u>white fir</u>	Number per acre <u>19</u>		
Trees per acre <u>263</u>	Average d.b.h. <u>8</u>	Average height (inches)	
Average d.b.h. (inches) <u>15</u>	Average height <u>30</u>	Ground space (percent) -	
Average tree height (feet) <u>93</u>		Estimated weight (pounds per acre)	
Average crown height (feet) <u>5</u>			
Estimated crown space <u>40</u>			



LOADING			OTHER MEASUREMENTS	
Size class (Inches)	Yeight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	1.2	79	Average residue depth	(feet) <u>0.6</u>
0.26- 1.0	3.3	222	Ground area covered by residue	(percent) <u>96</u>
1.1 - 3.0	4.8	385	Average duff and litter depth	(inches) <u>3.1</u>
3.1 - 9.0	9.1	796	Ground area covered by duffd litter	(percent) <u>100</u>
9.1 -20.0	1.2	39	Sound residue 3.1.inch diameter and larger	(percent) <u>84</u>
20.1+	0	0	Rotten residue 3.1.inch diameter and larger	(percent) <u>12</u>
Total	19.6	1,581		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over 20-inch d.b.h.	Trees and dead stems under 8-inch d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>6</u>
Dominant species <u>white fir</u>	Dominant species <u>white fir</u>	_____	Flame length (feet) <u>6</u>
Trees per acre <u>37</u>	Trees per acre <u>450</u>	Average height (inches) - _____	Resistance to suppression(chains/man-hour) <u>1.1</u>
Average d.b.h. (inches) <u>23</u>	Average d.b.h. (inches) <u>4</u>	Average crown height (inches) - _____	Ecoclass coding <u>CDS6-13</u>
Average tree height (feet) <u>109</u>	Average tree height (feet) <u>28</u>	Ground space occupied (percent) - _____	
Average crown height (feet) <u>64</u>	Average crown height (feet) <u>17</u>		
Estimated crown space occupied (percent) <u>30</u>	Estimated crown space occupied (percent) <u>20</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees 8- to 20-inch d.b.h.	Snags E-inch d.b.h. and over	Dominant species _____	
Dominant species <u>white fir</u>	Number per acre <u>63</u>	_____	
Trees per acre <u>211</u>	Average d.b.h. <u>14</u>	Average height (inches)	
Average d.b.h. (inches) <u>15</u>	Average height <u>49</u>	Ground space (percent) - _____	
Average tree height (feet) <u>87</u>		Estimated weight (pounds per acre)	
Average crown height (feet) <u>50</u>			
Estimated crown space <u>40</u>			



## PONDEROSA PINE & ASSOCIATED SPECIES

### SIZE CLASS 4

#### A SERIES OF 3 LEVELS

#### REMINDERS TO USERS:

1. The marker in these photos is 1 foot square, and the pole is painted in contrasting colors at 1-foot intervals to provide perspective.
2. Stumps are not included in residue quantities.
3. Rotted residue is that which would come apart or splinter when kicked.



LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.1	4	Average residue depth	(feet) <u>0.1</u>
0.26- 1.0	.7	41	Ground area covered by residue	(percent) <u>47</u>
1.1 - 3.0	1.8	52	Average duff and litter depth	(inches) <u>.7</u>
3.1 - 9.0	1.7	154	Ground area covered by duff and litter	(percent) <u>80</u>
9.1 -20.0	2.0	212	Sound residue 3.1-inch diameter and larger	(percent) <u>25</u>
20.1+	0	0	Rotten residue 3.1-inch diameter and larger	(percent) <u>75</u>
<b>Total</b>	<b>5.3</b>	<b>463</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
<u>Trees over 20-inch d.b.h.</u>	<u>Trees and dead stems under 8-inch d.b.h.</u>	<u>Dominant species</u>	<u>spread rate (chains/hour)</u> <u>1</u>
<u>Dominant species ponderosa pine</u>	<u>Dominant species ponderosa pine</u>	<u>manzanita</u>	<u>Flame length (feet)</u> <u>1</u>
<u>Trees per acre</u> <u>4</u>	<u>Trees per acre</u> <u>400</u>	<u>Average height (inches)</u> <u>7</u>	<u>Resistance to suppression (chains/man-hour)</u> <u>2.4</u>
<u>Average d.b.h. (inches)</u> <u>24</u>	<u>Average d.b.h. (inches)</u> <u>1</u>	<u>Average crown height (inches)</u> <u>5</u>	<u>Ecoclass coding CPC1</u>
<u>Average tree height (feet)</u> <u>69</u>	<u>Average tree height (feet)</u> <u>4</u>	<u>Ground space occupied (percent)</u> <u>32</u>	
<u>Average crown height (feet)</u> <u>2</u>	<u>Average crown height (feet)</u> <u>2</u>		
<u>Estimated crown space occupied (percent)</u> <u>1</u>	<u>Estimated crown space occupied (percent)</u> <u>10</u>		
		GRASS AND FORDS INFORMATION	REMARKS
<u>Trees 8- to to-inch d.b.h.</u>	<u>Snags 8-inch d.b.h. and over</u>	<u>Dominant species</u>	
<u>Dominant species ponderosa pine</u>	<u>Number per acre</u> <u>4</u>	<u>fescue</u>	
<u>Trees per acre</u> <u>53</u>	<u>Average d.b.h.</u> <u>28</u>	<u>Average height (inches)</u> <u>14</u>	
<u>Average d.b.h. (inches)</u> <u>15</u>	<u>Average height</u> <u>36</u>	<u>Ground space (percent)</u> <u>17</u>	
<u>Average tree height (feet)</u> <u>64</u>		<u>Estimated weight (pounds per acre)</u>	
<u>Average crown height (feet)</u> <u>26</u>			
<u>Estimated crown space</u> <u>20</u>			



LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
<b>0.0 - 0.25</b>	0.5	31	Average residue depth	(feet) <u>0.2</u>
<b>0.26 - 1.0</b>	1.2	78	Ground area covered by residue	(percent) <u>76</u>
<b>1.1 - 3.0</b>	1.2	93	Average duff and litter depth	(inches) <u>3.0</u>
<b>3.1 - 9.0</b>	2.5	206	Ground area covered by duff and litter	(percent) <u>100</u>
<b>9.1 - 20.0</b>	2.2	172	Sound residue 3.1-inch diameter and larger	(percent) <u>97</u>
<b>20.1+</b>	0	0	Rotten residue 3.1-inch diameter and larger	(percent) <u>    </u>
Totals	7.6	580		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
<u>Trees over 20-inch d.b.h.</u>	<u>rees and dead stems under E-inch d.b.h.</u>	Dominant species <u>    </u>	spread rate (chains/hour) <u>    </u>
Dominant species <u>ponderosa pine</u>	ominant species <u>white fir</u>	lame length (feet) <u>    </u>	resistance to suppression (chains/man-hour) <u>1</u>
Trees per acre <u>45</u>	rees per acre <u>650</u>	Average height (inches) - <u>    </u>	class coding <u>CDS6-13</u>
Average d.b.h. (inches) <u>31</u>	verage d.b.h. (inches) <u>4</u>	Average crown height (inches) - <u>    </u>	
Average tree height (feet) <u>35</u>	verage tree height (feet) <u>73</u>	Ground space occupied (percent) <u>    </u>	
Average crown height (feet) <u>79</u>	verage crown height (feet) <u>24</u>		
Estimated crown space occupied (percent) <u>30</u>	stimated crow space occupied (percent) <u>20</u>	GRASS AND FORDS INFORMATION	REMARKS
<u>Trees 8- to 20-inch d.b.h.</u>	<u>ngs E-inch d.b.h. and over</u>	Dominant species <u>    </u>	
Dominant species <u>white fir</u>	umber per acre <u>83</u>	<u>princes pine</u>	
Trees per acre <u>168</u>	verage d.b.h. <u>10</u>	Average height (inches) <u>4</u>	
Average d.b.h. (inches) <u>13</u>	verage height <u>45</u>	Ground space (percent) <u>&lt;1</u>	
Average tree height (feet) <u>85</u>		Estimated weight (pounds per acre) <u>    </u>	
Average crown height (feet) <u>43</u>			
Estimated crown space <u>30</u>			



LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.7	49	Average residue depth	(feet) <u>0.3</u>
0.26- 1.0	1.6	104	Ground area covered by residue	(percent) <u>87</u>
1.1 - 3.0	1.9	155	Average duff and litter depth	(inches) <u>1.9</u>
3.1 - 9.0	13.9	1,234	Ground area covered by duff and litter	(percent) <u>96</u>
9.1 -20.0	13.7	1,165	Sound residue 3.1-inch diameter and larger	(percent) <u>84</u>
20.1+			Rotten residue 3.1-inch diameter and larger	(percent) <u>16</u>
Total	31.8	2,707		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over 20-inch <u>d.b.h.</u>	Trees and dead <u>stems</u> under 8-inch d.b.h.	Dominant species _____	pread rate (chains/hour) <u>2</u>
Dominant species <u>white fir</u>	Dominant species <u>Douglas-fir</u>	<u>vine maple</u>	lame length (feet) >
Trees per acre <u>29</u>	Trees per acre <u>350</u>	Average height (Inches) >	esistance to suppression(chains/man-hour) <u>1.3</u>
Average d.b.h. (inches) <u>30</u>	Average d.b.h. (inches) <u>1</u>	Average crown height (inches) <u>10</u>	cocl ass coding <u>CDS6-12</u>
Average tree height (feet) <u>132</u>	Average tree height (feet) <u>1</u>	Ground space occupied (percent) >	
Average crown height (feet) <u>58</u>	Average crown height (feet) <u>&lt;1</u>		
Estimated crown space occupied (percent) <u>20</u>	Estimated crown space occupied (percent) <u>10</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees 8- to 20-inch d.b.h.	Snags 8-inch d.b.h. and over	Dominant species _____	
Dominant species <u>white fir</u>	Number per acre <u>28</u>	<u>twinflor</u>	
Trees per acre <u>92</u>	Average d.b.h. <u>15</u>	Average height (inches) <u>1</u>	
Average d.b.h. (inches) <u>17</u>	Average height <u>65</u>	Ground space (percent) >	
Average tree height (feet) <u>113</u>		Estimated weight (pounds per acre)	
Average crown height (feet) <u>65</u>			
Estimated crown space <u>50</u>			



PONDEROSA PINE

SIZE CLASS 1

A SERIES OF 3 LEVELS

REMINDERS TO USERS:

1. The marker in these photos is 1 foot square, and the pole is painted in contrasting colors at 1-foot intervals to provide perspective.
2. Stumps are not included in residue quantities.
3. Rotted residue is that which would come apart or splinter when kicked.







2-PP-1

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.1	5	Average residue depth	(feet) <u>0.2</u>
<b>0.26 - 1.0</b>	1.5	89	Ground area covered by residue	(percent) <u>55</u>
<del>1.1 - 3.0</del>	<del>4.8</del>	<del>497</del>	Average duff and litter depth	(inches) <u>.8</u>
<b>9.1 - 20.0</b>	2.3	249	Ground area covered by duff and litter	(percent) <u>61</u>
<b>20.1+</b>	0	0	Sound residue 3.1-inch diameter and larger	(percent) <u>63</u>
<b>Total</b>	4.2	1,151	Rotten residue 3.1-inch diameter and larger	(percent) <u>31</u>

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch</u> d.b.h.	rees and dead stems under <u>8-inch</u> d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>4</u>
Dominant species _____	ominant species <u>ponderosa pine</u>	<u>snowberry</u>	Flame length (feet) <u>4</u>
Trees per acre _____	rees per acre <u>950</u>	Average height (inches) >	Resistance to suppression (chains/man-hour) <u>1.7</u>
Average d.b.h. (inches) _____	verage d.b.h. (inches) <u>3</u>	Average crown height (Inches) <u>3</u>	Ecoclass coding <u>CDS6-11</u>
Average tree height (feet) _____	verage tree height (feet) <u>18</u>	Ground space occupied (percent) <u>7</u>	
Average crown height (feet) _____	verage crown height (feet) <u>9</u>	GRASS AND FORBS INFORMATION	REMARKS
Estimated crown space occupied (percent) _____	stimated crown space occupied (percent) <u>30</u>	Dominant species _____	
Trees <u>8- to 20-inch</u> d.b.h.	<u>ags 8-inch</u> d.b.h. and over	<u>oinegrass</u>	
Dominant species <u>ponderosa pine</u>	umber per acre _____	Average height (inches) <u>9</u>	
Trees per acre <u>19</u>	verage d.b.h. _____	Ground space (percent) <u>6</u>	
Average d.b.h. (Inches) <u>8</u>	verage height _____	Estimated weight (pounds per acre) <u>250</u>	
Average tree height (feet) <u>40</u>			
Average crown height (feet) <u>15</u>			
Estimated crown space _____			
	<u>5</u>		



3-PP-1

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
<b>0.0 - 0.25</b>	0.1	9	Average residue depth	(feet) <u>0.3</u>
<b>0.26- 1.0</b>	3.9	238	Ground area covered by residue	(percent) <u>68</u>
<b>1.1 - 3.0</b>	4.5	297	Average duff and litter depth	(inches) <u>.7</u>
<b>3.1 - 9.0</b>	9.5	884	Ground area covered by duff and litter	(percent) <u>73</u>
<b>9.1 -20.0</b>	11.7	1,252	Sound residue 3.1.inch diameter and larger	(percent) <u>32</u>
<b>20.1+</b>	12.8	1,372	Rotten residue 3.1.inch diameter and larger	(percent) <u>68</u>
<b>Total</b>	42.5	4,052		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch</u> d.b.h.	Trees and dead stems under <u>B-inch</u> d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>7</u>
Dominant species _____	Dominant species <u>ponderosa pine</u>	<u>snowberry</u>	Flame length (feet) <u>6</u>
Trees per acre _____	Trees per acre <u>1,300</u>	Average height (inches) <u>8</u>	Resistance to suppression(chains/man-hour) <u>1.2</u>
Average d.b.h. (inches) _____	Average d.b.h. (inches) <u>3</u>	Average crown height (inches) <u>5</u>	Eco class coding <u>CDS6-11</u>
Average tree height (feet) _____	Average tree height (feet) <u>23</u>	Ground space occupied (percent) <u>11</u>	
Average crown height (feet) _____	Average crown height (feet) <u>14</u>		
Estimated crown space occupied (percent) _____	Estimated crown space occupied (percent) <u>50</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>8- to 20-inch</u> d.b.h.	Snags <u>B-inch</u> d.b.h. and over	Dominant species _____	
Dominant species <u>ponderosa pine</u>	Number per acre _____	<u>pinegrass</u>	
Trees per acre <u>38</u>	Average d.b.h. _____	Average height (inches) <u>9</u>	
Average d.b.h. (Inches) <u>9</u>	Average height _____	Ground space (percent) <u>25</u>	
Average tree height (feet) <u>52</u>		Estimated weight (pounds Per acre) <u>500</u>	
Average crown height (feet) <u>26</u>			
Estimated crown space _____			



PONDEROSA PINE

SIZE CLASS 2

A SERIES OF 4 LEVELS

REMINDERS TO USERS:

1. The marker in these photos is 1 foot square, and the pole is painted in contrasting colors at 1-foot intervals to provide perspective.
2. Stumps are not included in residue quantities.
3. Rotted residue is that which would come apart or splinter when kicked.



LOADING			OTHER MEASUREMENTS	
<b>Size class</b> (inches)	<b>Height</b> <b>(tons/acre)</b>	<b>Volume</b> <b>(ft<sup>3</sup>/acre)</b>	Average residue depth	(feet) <u>0.1</u>
0.0 - 0.25	0.1	4	Ground area covered by residue	(percent) <u>64</u>
<b>0.26- 1.0</b>	<b>1.5</b>	<b>25</b>	Average duff and litter depth	(inches) <u>1.5</u>
1.1 - 3.0	1.2	75	Ground area covered by duff and litter	(percent) <u>97</u>
3.1 - 9.0	0.8	64	Sound residue 3.1-inch diameter and larger	(percent) <u>84</u>
9.1 -20.0	1.7	136	Rotten residue 3.1-inch diameter and larger	(percent) <u>16</u>
<b>20.1+</b>	<b>0</b>	<b>0</b>		
<b>Total</b>	<b>5.3</b>	<b>304</b>		

STAND INFORMATION		BRUSH INFORMATION		ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY	
<u>Trees over 20-inch d.b.h.</u>	<u>Trees and dead stems under 8-inch d.b.h.</u>	<u>Dominant species</u>	<u>spread rate</u>	<u>(chains/hour)</u>	<u>4</u>
<u>Dominant species ponderosa pine</u>	<u>Dominant species ponderosa pine</u>	<u>bitterbrush</u>	<u>flame length</u>	<u>(feet)</u>	<u>3</u>
<u>Trees per acre 10</u>	<u>Trees per acre 200</u>	<u>Average height (inches) 24</u>	<u>resistance to suppression</u>	<u>(chains/man-hour)</u>	<u>4</u>
<u>Average d.b.h. (inches) 28</u>	<u>Average d.b.h. (inches) 4</u>	<u>Average crown height (inches) 2</u>	<u>social class coding</u>	<u>CPS2-12</u>	
<u>Average tree height (feet) 118</u>	<u>Average tree height (feet) 27</u>	<u>Ground space occupied (percent) 5</u>			
<u>Average crown height (feet) 50</u>	<u>Average crown height (feet) 14</u>				
<u>Estimated crown space occupied (percent) 10</u>	<u>Estimated crown space occupied (percent) 10</u>				
		<b>GRASS AND FORBS INFORMATION</b>	<b>REMARKS</b>		
<u>Trees 8- to 20-inch d.b.h.</u>	<u>Snags 8-inch d.b.h. and over</u>	<u>Dominant species</u>			
<u>Dominant species ponderosa pine</u>	<u>Number per acre 9</u>	<u>strawberry</u>			
<u>Trees per acre 155</u>	<u>Average d.b.h. 15</u>	<u>Average height (inches) 1</u>			
<u>Average d.b.h. (inches) 13</u>	<u>Average height 30</u>	<u>Ground space (percent) -</u>			
<u>Average tree height (feet) 66</u>		<u>Estimated weight (pounds per acre) 20</u>			
<u>Average crown height (feet) 34</u>					
<u>Estimated crown space 50</u>					



2-PP-2

LOADING			OTHER MEASUREMENTS	
<b>Size class</b> (inches)	<b>Weight</b> (tons/acre)	<b>Volume</b> (ft <sup>3</sup> /acre)	Average residue depth	(feet) <u>0.2</u>
0.0 - 0.25	0.02	1	Ground area covered by residue	(percent) <u>61</u>
<b>0.26- 1.0</b>	<b>1.5</b>	<b>91</b>	Average duff and litter depth	(inches) <u>1.2</u>
1.1 - 3.0	1.5	100	Ground area covered by duff and litter	(percent) <u>96</u>
3.1 - 9.0	<b>3.4</b>	<b>301</b>	Sound residue 3.1-inch diameter and larger	(percent) <u>64</u>
9.1 -20.0	2.1	222	Rotten residue 3.1-inch diameter and larger	(percent) <u>36</u>
<b>20.1+</b>	0	0		
<b>Total</b>	<b>8.52</b>	<b>715</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
<u>Trees over 20-inch d.b.h.</u>	Trees and dead stems under E-inch d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>5</u>
<b>Dominant species</b> _____	<b>Dominant species</b> <u>ponderosa pine</u>	<u>snowberry</u>	Flame length (feet) <u>4</u>
Trees per acre _____	Trees per acre <u>450</u>	Average height (inches) <u>11</u>	Resistance to suppression (chains/man-hour) <u>1.3</u>
Average d. b. h. (inches) _____	Average d.b.h. (inches) <u>4</u>	Average crown height (inches) <u>6</u>	Ecoclass coding <u>CDS6-11</u>
Average tree height (feet) _____	Average tree height (feet) <u>27</u>	Ground space occupied (percent) <u>20</u>	
Average crown height (feet) _____	Average crown height (feet) <u>18</u>		
Estimated crown space occupied (percent) _____	Estimated crown space occupied (percent) <u>20</u>		
		<b>GRASS AND FORDS INFORMATION</b>	<b>REMARKS</b>
<u>Trees 8- to 20-inch d.b.h.</u>	<u>Snags E-inch d.b.h. and over</u>	Dominant species _____	
<b>Dominant species</b> <u>ponderosa pine</u>	Number per acre <u>26</u>	<u>pinegrass</u>	
Trees per acre <u>145</u>	Average d.b.h. <u>10</u>	Average height (inches) <u>9</u>	
Average d.b.h. (inches) <u>10</u>	Average height <u>48</u>	Ground space (percent) <u>20</u>	
Average tree height (feet) <u>49</u>		Estimated weight (pounds per acre) <u>600</u>	
Average crown height (feet) <u>22</u>			
Estimated crown space <u>30</u>			



LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.1	4	Average residue depth	(feet) 0.2
0.26- 1.0	1.0	62	Ground area covered by residue	(percent) 84
1.1 - 3.0	2.5	162	Average duff and litter depth	(inches) 1.2
3.1 - 9.0	2.3	215	Ground area covered by duff and litter	(percent) 96
9.1 -20.0	3.4	360	Sound residue 3.1-inch diameter and larger	(percent) 35
20.1+	4.5	478	Rotten residue 3.1-inch diameter and larger	(percent) 65
Total	13.8	1,281		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over 20-inch d.b.h.	Trees and dead stems under 8-inch d.b.h.	Dominant species	Spread rate (chains/hour) 8
Dominant species	Dominant species ponderosa pine	bitter-brush	Flame length (feet) 5
Trees per acre	Trees per acre 150	Average height (inches) <sup>23</sup>	Resistance to suppression (chains/man-hour) 1.3
Average d.b.h. (inches)	Average d.b.h. (inches) 6	Average crown height 14 (inches)	Ecoclass coding CPG1-11
Average tree height (feet)	Average tree height (feet) 21	Ground space occupied (percent) 16	
Average crown height (feet)	Average crown height (feet) 12		
Estimated crown space occupied (percent)	Estimated crown space occupied (percent) 30		
		GRASS AND FORDS INFORMATION	REMARKS
Trees 8- to 20-inch d.b.h.	Snags 8-inch d.b.h. and over	Dominant species	
Dominant species ponderosa pine	Number per acre 8	bluebunch wheatgrass	
Trees per acre 81	Average d.b.h. 13	Average height (inches) <sup>2</sup>	
Average d.b.h. (inches) 11	Average height 13	Ground space (percent) 30	
Average tree height (feet) 41		Estimated weight (pounds per acre) 60	
Average crown height (feet) 29			
Estimated crown space 30			



LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
			Average residue depth	(feet) <u>0.4</u>
0.0 - 0.25	0.1	4	Ground area covered by residue	(percent) <u>71</u>
<del>0.26- 1.0</del>	<del>2.7</del>	<del>162</del>	Average <sup>duff</sup> and litter depth	(inches) <u>1.0</u>
<del>1.1 - 3.0</del>	<del>8.6</del>	<del>698</del>	Ground area covered by duff and litter	(percent) <u>89</u>
<del>9.1 - 20.0</del>	<del>7.9</del>	<del>631</del>	Sound residue 3.1-inch diameter and larger	(percent) <u>92</u>
<del>20.1+</del>	<del>16.2</del>	<del>1,369</del>	Rotten residue 3.1-inch diameter and larger	(percent) <u>8</u>
Total	<u>3y.2</u>	<u>3,101</u>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch</u> d.b.h.	Trees and dead <u>stems</u> under E-inch d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>9</u>
Dominant species _____	Dominant species <u>ponderosa pine</u>	<u>wildrose</u>	Flame length (feet) <u>6</u>
Trees per acre _____	Trees per acre <u>200</u>	Average height (inches) <u>12</u>	Resistance to suppression (chains/man-hour) <u>1.2</u>
Average d.b.h. (Inches) _____	Average d.b.h. (inches) <u>4</u>	Average crown height (inches) <u>6</u>	Ecoclass coding <u>CWG1-11</u>
Average tree height (feet) _____	Average tree height (feet) <u>19</u>	Ground space occupied (percent) <u>6</u>	
Average crown height (feet) _____	Average crown height (feet) <u>8</u>		
Estimated crown space occupied (percent) _____	Estimated crown space occupied (percent) <u>20</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>8- to 20-inch</u> d.b.h.	Snags <u>B-inch</u> d.b.h. and over	Dominant species _____	
Dominant species <u>ponderosa pine</u>	Number per acre <u>23</u>	<u>pinegrass</u>	
Trees per acre <u>61</u>	Average d.b.h. <u>14</u>	Average height (inches) <u>6</u>	
Average d.b.h. (inches) <u>10</u>	Average height <u>35</u>	Ground space (percent) >	
Average tree height (feet) <u>42</u>		Estimated weight (pounds per acre) <u>700</u>	
Average crown height (feet) <u>28</u>			
Estimated crown space <u>30</u>			



PONDEROSA PINE

SIZE CLASS 3

A SERIES OF 8 LEVELS

REMINDERS TO USERS:

1. The marker in these photos is 1 foot square, and the pole is painted in contrasting colors at 1-foot intervals to provide perspective.
2. Stumps are not included in residue quantities.
3. Rotted residue is that which would come apart or splinter when kicked.



LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
			Average residue depth	(feet) <u>0.1</u>
<u>0.0 - 0.25</u>	<u>0.1</u>	<u>6</u>	Ground area covered by residue	(percent) <u>48</u>
<u>0.26- 1.0</u>	<u>.4</u>	<u>21</u>	Average duff and litter depth	(inches) <u>1.8</u>
<u>3.1 - 3.8</u>	<u>.7</u>	<u>43</u>	Ground area covered by duff and litter	(percent) <u>75</u>
<u>9.1 - 20.0</u>	<u>0</u>	<u>0</u>	Sound residue 3.1-inch diameter and larger	(percent) <u>95</u>
<u>20.1+</u>	<u>0</u>	<u>0</u>	Rotten residue 3.1-inch diameter and larger	(percent) <u>5</u>
<b>Total</b>	<b>1.6</b>	<b>103</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
<u>Trees over 20-inch d.b.h.</u>	<u>Trees and dead stems under 8-inch d.b.h.</u>	<u>Dominant species</u>	<u>Spread rate (chains/hour)</u> <u>6</u>
<u>Dominant species ponderosa pine</u>	<u>Dominant species ponderosa pine</u>	<u>bitterbrush</u>	<u>Flame length (feet)</u> <u>3</u>
<u>Trees per acre</u> <u>12</u>	<u>Trees per acre</u> <u>50</u>	<u>Average height (inches)</u> <u>23</u>	<u>Resistance to suppression (chains/man-hour)</u> <u>3</u>
<u>Average d.b.h. (inches)</u> <u>27</u>	<u>Average d.b.h. (inches)</u> <u>1</u>	<u>Average crown height (inches)</u> <u>5</u>	
<u>Average tree height (feet)</u> <u>81</u>	<u>Average tree height (feet)</u> <u>3</u>	<u>Ground space occupied (percent)</u> <u>18</u>	<u>Ecoclass coding</u> <u>CPS2-11</u>
<u>Average crown height (feet)</u> <u>19</u>	<u>Average crown height (feet)</u> <u>2</u>		
<u>Estimated crown space occupied (percent)</u> <u>5</u>	<u>Estimated crown space occupied (percent)</u> <u>1</u>		
		<u>GRASS AND FORRS INFORMATION</u>	<u>REMARKS</u>
<u>Trees 8- to 20-inch d.b.h.</u>	<u>Snags 8-inch d.b.h. and over</u>	<u>Dominant species</u>	
<u>Dominant species ponderosa pine</u>	<u>Number per acre</u>	<u>Idaho fescue</u>	
<u>Trees per acre</u> <u>23</u>	<u>Average d.b.h.</u>	<u>Average height (inches)</u> <u>5</u>	
<u>Average d.b.h. (inches)</u> <u>16</u>	<u>Average height</u>	<u>Ground space (percent)</u> <u>&gt;</u>	
<u>Average tree height (feet)</u> <u>58</u>		<u>Estimated weight (pounds per acre)</u> <u>120</u>	
<u>Average crown height (feet)</u> <u>18</u>			
<u>Estimated crown space</u> <u>20</u>			



2-PP-3

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.03	2	Average residue depth	(feet) 0.1
0.26- 1.0	.9	51	Ground area covered by residue	(percent) 31
1.1 - 3.0	2.0	133	Average duff and litter depth	(inches) 3.2
3.1 - 9.0	3.5	309	Ground area covered by duff and litter	(percent) 100
9.1 - 20.0	0	0	Sound residue 3.1-inch diameter and larger	(percent) 84
20.1+	0	0	Rotten residue 3.1-inch diameter and larger	(percent) 16
<b>Total</b>	6.43	495		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees <u>over 20-inch</u> d.b.h.	Trees and dead stems under <u>8-inch</u> d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>3</u>
Dominant species <u>ponderosa pine</u>	Dominant species _____	<u>sdirea</u>	Flame length (feet) <u>2</u>
Trees per acre _____ 36	Trees per acre _____	Average height (inches) 25	Resistance to suppression (chains/man-hour) <u>1.3</u>
Average d.b.h. (inches) _____ 25	Average d.b.h. (inches) _____	Average crown height (inches) 10	Ecoclass coding <u>CPS2-11</u>
Average tree height (feet) <u>120</u>	Average tree height (feet) _____	Ground space occupied (percent) 10	
Average crown height (feet) <u>62</u>	Average crown height (feet) _____		
Estimated crown space occupied (percent) _____ 30	Estimated crown space occupied (percent) _____		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>8- to 20-inch</u> d.b.h.	Snags <u>8-inch</u> d.b.h. and over	Dominant species _____	
Dominant species <u>ponderosa pine</u>	Number per acre _____ 64	<u>Idaho fescue</u>	
Trees per acre _____ 116	Average d.b.h. _____ 17	Average height (inches) 3	
Average d.b.h. (inches) _____ 17	Average height _____ 74	Ground space (percent) >	
Average tree height (feet) _____ 100		Estimated weight (pounds per acre) 25	
Average crown height (feet) _____ 60			
Estimated crown space _____ 40			



LOADING			OTHER MEASUREMENTS	
Site class (inches)	Yeight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.1	7	Average residue depth	(feet) 0.1
0.26- 1.0	0.6	34	Ground area covered by residue	(percent) 45
1.1 - 3.0	1.6	105	Average duff and litter depth	(inches) 1.6
3.1 - 9.0	0.4	32	Ground area covered by duff and litter	(percent) 99
9.1 -20.0	0	0	Sound residue 3.1-inch diameter and larger	(percent) 100
20.1+	5.6	448	Rotten residue 3.1-inch diameter and larger	(percent) 0
<b>Total</b>	8.3	626		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over 20-inch d.b.h.	Trees and dead stems under 8-inch d.b.h.	Dominant species	spread rate (chains/hour) 4
Dominant species	Dominant species ponderosa pine	bitterbrush	lame length (feet) 3
Trees per acre	Trees per acre 50	Average height (inches) 27	resistance to suppression (chains/man-hour) 6
Average d.b.h. (inches)	Average d.b.h. (inches) 1	Average crown height (inches) 6	class coding CPS2-12
Average tree height (feet)	Average tree height (feet) 2	Ground space occupied (percent) 9	
Average crown height (feet)	Average crown height (feet) 1		
Estimated crown space occupied (percent)	Estimated crown space occupied (percent) 1		
Trees 8- to 20-inch d.b.h.		GRASS AND FORDS INFORMATION	
Dominant species ponderosa pine	Snags 8-inch d.b.h. and over	REMARKS	
Trees per acre 186	Number per acre	Dominant species	
Average d.b.h. (inches) 16	Average d.b.h.	bottlebrush squirreltail	
Average tree height (feet) 94	Average height	Average height (inches) 8	
Average crown height (feet) 39	Average height	Ground space (percent) 3	
Estimated crown space 30		Estimated weight (pounds per acre) 30	



LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)	Average residue depth (feet)	0.2
0.0 - 0.25	0.1	5	Ground area covered by residue (percent)	61
<del>0.26 - 1.0</del>	<del>1.6</del>	<del>98</del>	Average duff and litter depth (inches)	1.6
<del>1.1 - 3.0</del>	<del>4.2</del>	<del>277</del>	Ground area covered by duff and litter (percent)	95
<del>3.1 - 8.0</del>	<del>2.1</del>	<del>176</del>	Sound residue 3.1-inch diameter and larger (percent)	49
9.1 - 20.0	2.9	311	Rotten residue 3.1-inch diameter and larger (percent)	51
20.1+	4.7	506		
<b>Total</b>	<b>15.6</b>	<b>1,376</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch</u> d.b.h.	Trees and dead stems under <u>8-inch</u> d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>3</u>
Dominant species _____	Dominant species <u>ponderosa pine</u>		Flame length (feet) <u>3</u>
Trees per acre _____	Trees per acre <u>815</u>	Average height (inches)	Resistance to suppression (chains/man-hour) <u>1.7</u>
Average d.b.h. (inches) _____	Average d.b.h. (inches) <u>5</u>	Average crown height (inches)	
Average tree height (feet) _____	Average tree height (feet) <u>30</u>	Ground space occupied (percent) _____	Class coding <u>CPS2-12</u>
Average crown height (feet) _____	Average crown height (feet) <u>21</u>		
Estimated crown space occupied (percent) _____	Estimated crown space occupied (percent) <u>50</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>8-</u> to 20-inch d.b.h.	Snags <u>8-</u> inch d.b.h. and over	Dominant species _____	
Dominant species <u>ponderosa pine</u>	Number per acre _____		
Trees per acre <u>37</u>	Average d.b.h. _____	Average height (Inches) -	
Average d.b.h. (inches) <u>10</u>	Average height _____	Ground space (percent) -	
Average tree height (feet) <u>45</u>		Estimated weight (pounds Per acre)	
Average crown height (feet) <u>26</u>			
Estimated crown space <u>10</u>			



5-PP-3

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)	Average residue depth	(feet) <b>0.2</b>
<b>0.0 - 0.25.</b>	<b>0.1</b>	<b>4</b>	Ground area covered by residue	(percent) <b>39</b>
<del>0.26- 1.0</del>	<del>1.1</del>	<del>68</del>	Average duff and litter depth	(inches) <b>1.1</b>
<b>1.1 - 3.0</b>	<b>2.5</b>	<b>162</b>	Ground area covered by duff and litter	(percent) <b>100</b>
<del>3.1 - 9.0</del>	<del>10.3</del>	<del>892</del>	Sound residue 3.1-inch diameter and larger	(percent) <b>81</b>
<b>9.1 - 20.0</b>	<b>6.0</b>	<b>516</b>	Rotten residue 3.1-inch diameter and larger	(percent) <b>19</b>
<b>20.1+</b>	<b>0</b>	<b>0</b>		
<b>Total</b>	<b>20.0</b>	<b>1,642</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
<u>Trees over 20-inch d.b.h.</u>	<u>Trees and dead stems under E-inch d.b.h.</u>	Dominant species _____	Spread rate (chains/hour) <b>6</b>
Dominant species <u>ponderosa pine</u>	Dominant species _____	<u>snowberry</u>	Flame length (feet) <b>4</b>
Trees per acre <u>3</u>	Trees per acre _____	Average height (inches) <b>7</b>	Resistance to suppression (chains/man-hour) <b>1.2</b>
Average d.b.h. (inches) <u>29</u>	Average d.b.h. (inches) _____	Average crown height (inches) <b>3</b>	
Average tree height (feet) <u>95</u>	Average tree height (feet) _____	Ground space occupied (percent) <u>21</u>	Ecoclass coding <u>CDS6-11</u>
Average crown height (feet) <u>10</u>	Average crown height (feet) _____		
Estimated crown space occupied (percent) <u>1</u>	Estimated crown space occupied (percent) _____		
		GRASS AND FORBS INFORMATION	REMARKS
<u>Trees 8- to 20-inch d.b.h.</u>	<u>Snags E-inch d.b.h. and over</u>	Dominant species _____	
Dominant species <u>ponderosa pine</u>	Number per acre <u>132</u>	<u>pinegrass</u>	
Trees Per acre <u>50</u>	Average d.b.h. <u>13</u>	Average height (inches) <u>9</u>	
Average d.b.h. (inches) <u>16</u>	Average height <u>31</u>	Ground space (percent) <b>28</b>	
Average tree height (feet) _____		Estimated weight (pounds per acre) <b>250</b>	
Average crown height (feet) <b>3</b> <u>5</u>			
Estimated crown space <u>20</u>			



6-PP-3





7-PP-3

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
<b>0.0 - 0.25</b>	0.1	3	Average residue depth	(feet) <u>0.3</u>
<b>0.26- 1.0</b>	7	43	Ground area covered by residue	(percent) <u>73</u>
<b>1.1 - 3.0</b>	8	57	Average duff and litter depth	(inches) <u>2.2</u>
3.1 - 9.0	1.3	114	Ground area covered by duff and litter	(percent) <u>96</u>
<b>9.1 -20.0</b>	6.3	522	Sound residue 3.1-inch diameter and larger	(percent) <u>93</u>
<b>20.1+</b>	13.5	1,083	Rotten residue 3.1-inch diameter and larger	(percent) <u>7</u>
<b>Total</b>	22.7	1,817		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch d.b.h.</u>	Trees and dead stems under <u>8-inch d.b.h.</u>	Dominant species _____	Spread rate (chains/hour) <u>10</u>
Dominant species <u>ponderosa pine</u>	Dominant species _____	<u>wildrose</u>	Flame length (feet) <u>4</u>
Trees per acre <u>1</u>	Trees per acre _____	Average height (inches) <u>26</u>	Resistance to suppression (chains/man-hour) <u>1.1</u>
Average <u>d.b.h.</u> (inches) <u>23</u>	Average d.b.h. (inches) _____	Average crown height (inches) <u>16</u>	
Average tree height ( <del>feet</del> ) _____	Average tree height (feet) _____	Ground space occupied (percent) <u>20</u>	
Average crown height (feet) <u>61</u>	Average crown height (feet) _____		Ecoclass coding <u>CWGI-11</u>
Estimated crown space occupied (percent) <u>1</u>	Estimated crown space occupied (percent) _____		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>8- to 20-inch d.b.h.</u>	Snags <u>8-inch d.b.h.</u> and over	Dominant species _____	
Dominant species <u>ponderosa pine</u>	Number per acre <u>3</u>	<u>pinegrass</u>	
Trees per acre <u>57</u>	Average d.b.h. <u>26</u>	Average height (inches) <u>8</u>	
Average d.b.h. (inches) <u>14</u>	Average height <u>52</u>	Ground space (percent) <u>63</u>	
Average tree height ( <del>feet</del> ) _____		Estimated weight (pounds per acre) <u>50</u>	
Average crown height (feet) <u>40</u>			
Estimated crown space <u>30</u>			



8-PP-3

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
<b>0.0 - 0.25</b>	<u>0.04</u>	<u>?</u>	Average residue depth	(feet) <u>0.3</u>
<b>0.26- 1.0</b>	<u>2.5</u>	<u>150</u>	Ground area covered by residue	(percent) <u>67</u>
<b>1.1 - 3.0</b>	<u>6.9</u>	<u>449</u>	Average duff and litter depth	(inches) <u>.6</u>
<b>3.1 - 9.0</b>	<b>8.1</b>	<u>657</u>	Ground area covered by duff and litter	(percent) <u>73</u>
9.1 -20.0	<u>8.4</u>	<u>706</u>	Sound residue 3.1-inch diameter and larger	(percent) <u>94</u>
<b>20.1+</b>	<u>3.6</u>	<u>287</u>	Rotten residue 3.1-inch diameter and larger	(percent) <u>6</u>
<b>Total</b>	<u>29.54</u>	<u>2,251</u>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch</u> d.b.h.	Trees and dead stems under <u>E-inch</u> d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>6</u>
Dominant species <u>ponderosa pine</u>	Dominant species <u>ponderosa pine</u>	<u>snowberry</u>	Flame length (feet) <u>5</u>
Trees per acre <u>6</u>	Trees per acre <u>200</u>	Average height (inches) <u>11</u>	Resistance to suppression (chains/man-hour) <u>2</u>
Average d.b.h. (Inches) <u>25</u>	Average d.b.h. (inches) <u>2</u>	Average crown height (inches) <u>6</u>	Ecoclass coding <u>CWG1-12</u>
Average tree height (feet) <u>95</u>	Average tree height (feet) <u>11</u>	Ground space occupied (percent) <u>5</u>	
Average crown height (feet) <u>40</u>	Average crown height (feet) <u>5</u>		
Estimated crown space occupied (percent) <u>5</u>	Estimated crown space occupied (percent) <u>10</u>		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>8-</u> to 20-inch d.b.h.	Snags <u>G-inch</u> d.b.h. and over	Dominant species _____	
Dominant species <u>ponderosa pine</u>	Number per acre <u>3</u>	<u>pinegrass</u>	
Trees per acre <u>135</u>	Average d.b.h. <u>12</u>	Average height (inches) <u>8</u>	
Average d.b.h. (inches) <u>12</u>	Average height <u>20</u>	Ground space (percent) <u>13</u>	
Average tree height (feet) <u>70</u>		Estimated weight (pounds per acre) <u>200</u>	
Average crown height (feet) <u>37</u>			
Estimated crown space <u>20</u>			



PONDEROSA PINE

SIZE CLASS 4

A SERIES OF 8 LEVELS

REMINDERS TO USERS:

1. The marker in these photos is 1 foot square, and the pole is painted in contrasting colors at 1-foot intervals to provide perspective.
2. Stumps are not included in residue quantities.
3. Rotted residue is that which would come apart or splinter when kicked.



1 -PP-4

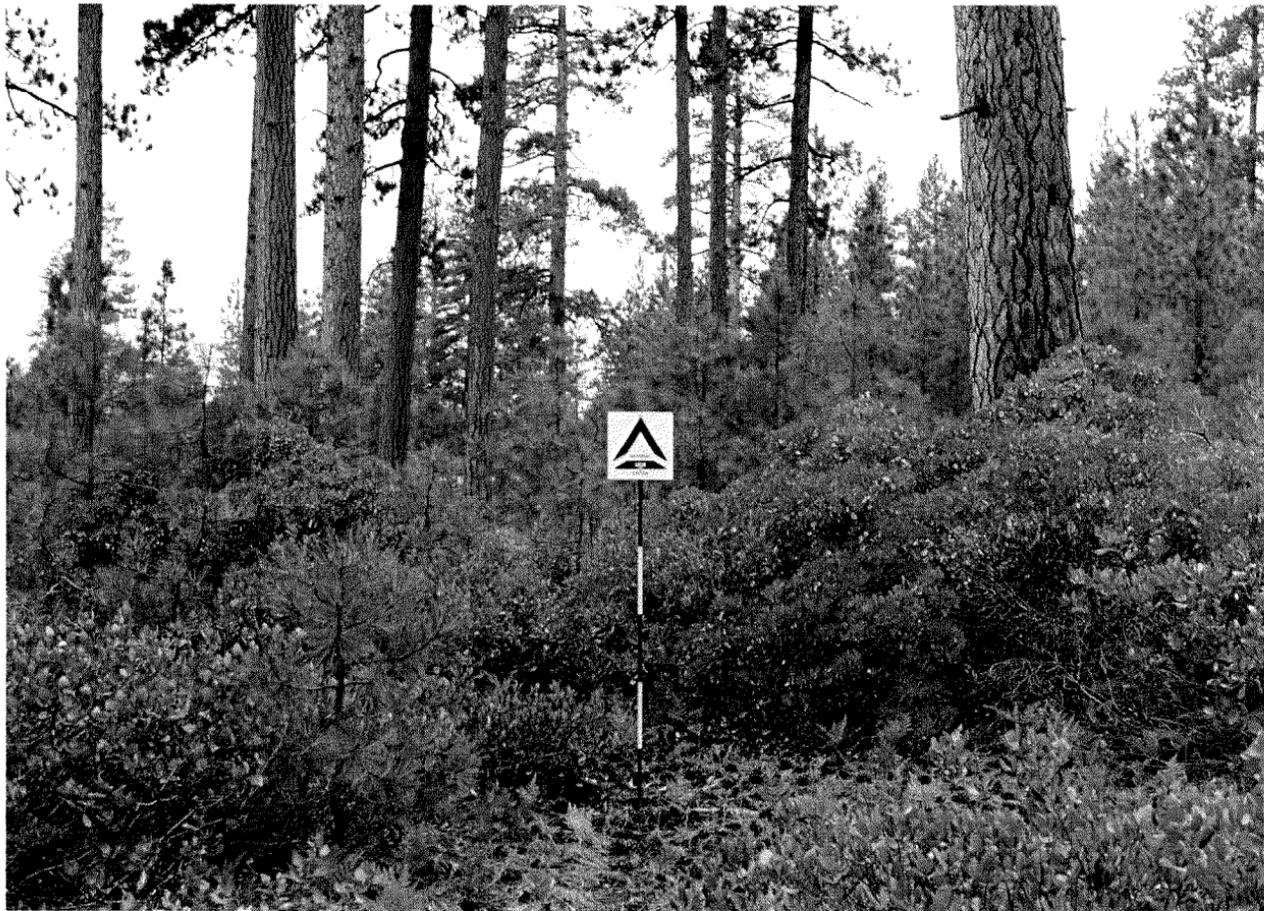




2-PP-4

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Yeight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.3	15	Average residue depth	(feet) <u>0.1</u>
<b>0.26- 1.0</b>	<b>8</b>	<b>48</b>	Ground area covered by residue	(percent) <u>65</u>
1.1 - 3.0	.8	52	Average duff and litter depth	(inches) <u>1.4</u>
3.1 - 9.0	.5	49	Ground area covered by duff and litter	(percent) <u>91</u>
9.1 -20.0	3.6	316	Sound residue 3.1-inch diameter and larger	(percent) <u>76</u>
<b>20.1+</b>	<b>0</b>	<b>0</b>	Rotten residue 3.1-inch diameter and larger	(percent) <u>24</u>
<b>Total</b>	<b>6.0</b>	<b>486</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
<u>Trees over 20-inch d.b.h.</u>	<u>Trees and dead stems under 8-inch d.b.h.</u>	Dominant species _____	Spread rate (chains/hour) <u>10</u>
Dominant species <u>ponderosa pine</u>	Dominant species <u>ponderosa pine</u>	<u>manzanita</u>	Flame length (feet) <u>4</u>
Trees per acre <u>15</u>	Trees per acre <u>400</u>	Average height (inches) <u>25</u>	Resistance to suppression(chains/man-hour) <u>2</u>
Average d.b.h. (inches) <u>28</u>	Average d.b.h. (inches) <u>2</u>	Average crown height (inches) <u>6</u>	Ecoclass coding <u>CPS2-13</u>
Average tree height (feet) <u>109</u>	Average tree height (feet) <u>9</u>	Ground space occupied (percent) <u>39</u>	
Average crown height (feet) <u>36</u>	Average crow height (feet) <u>3</u>		
Estimated crown space occupied (percent) <u>10</u>	Estimated crown space occupied (percent) <u>50</u>		
		GRASS AND FORDS INFORMATION	REMARKS
<u>Trees 8- to 20-inch d.b.h.</u>	<u>Snags 8-inch d.b.h. and over</u>	Dominant species _____	
Dominant species <u>ponderosa pine</u>	Number per acre _____		
Trees per acre <u>2</u>	Average d.b.h. _____	Average height (inches) -	
Average d.b.h. (inches) <u>20</u>	Average height _____	Ground space (percent) -	
Average tree height (feet) <u>100</u>		Estimated weight (pounds per acre)	
Average crown height (feet) <u>66</u>			
Estimated crown space _____			



3-PP-4

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.2	10	Average residue depth	(feet) <u>0.1</u>
0.26- 1.0	1.1	64	Ground area covered by residue	(percent) <u>73</u>
1.1 - 3.0	1.0	62	Average duff and litter depth	(inches) <u>2.4</u>
3.1 - 9.0	.5	40	Ground area covered by duff and litter	(percent) <u>97</u>
9.1 -20.0	4.8	386	Sound residue 3.1.inch diameter and larger	(percent) <u>100</u>
20.1+	0	0	Rotten residue 3.1-inch diameter and larger	(percent) <u>0</u>
total	7.6	562		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
<u>Trees over 20-inch d.b.h.</u>	<u>Trees and dead stems under E-inch d.b.h.</u>	Dominant species _____	spread rate (chains/hour) <u>6</u>
Dominant species <u>ponderosa pine</u>	Dominant species <u>ponderosa pine</u>	<u>manzanita</u>	Flame length (feet) <u>4</u>
Trees per acre <u>22</u>	Trees per acre <u>2,350</u>	Average height (inches) >	Resistance to suppression(chains/man-hour) <u>1.7</u>
Average d.b.h. (inches) <u>31</u>	Average d.b.h. (inches) <u>2</u>	Average crown height (inches) <u>8</u>	Ecoclass coding <u>CWC2-11</u>
Average tree height (feet) <u>128</u>	Average tree height (feet) <u>4</u>	Ground space occupied (percent) <u>22</u>	
Average crown height (feet) <u>43</u>	Average crown height (feet) <u>2</u>		
Estimated crown space occupied (percent) <u>20</u>	Estimated crown space occupied (percent) <u>40</u>		
		GRASS AND FORBS INFORMATION	REMARKS
<u>Trees 8- to 20-inch d.b.h.</u>	<u>Snags E-inch d.b.h. and over</u>	Dominant species _____	
Dominant species _____	Number per acre _____	<u>bracken fern</u>	
Trees per acre _____	Average d.b.h. _____	Average height (inches) <u>9</u>	
Average d.b.h. (inches) _____	Average height _____	Ground space (percent) ]	
Average tree height (feet) _____		Estimated weight (pounds Per acre) <u>50</u>	
Average crown height (feet) _____			
Estimated crown space _____			



4-PP-4

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.2	13	Average residue depth	(feet) <u>0.2</u>
<del>0.26- 1.0</del>	<del>1.2</del>	<del>71</del>	Ground area covered by residue	(percent) <u>77</u>
1.1 - 3.0	2.3	148	Average duff layer depth	(inches) <u>2.0</u>
3.1 - 9.0	2.3	218	Ground area covered by duff and litter	(percent) <u>97</u>
9.1 -20.0	2.4	253	Sound residue 3.1-inch diameter and larger	(percent) <u>55</u>
<b>20.1+</b>	0	0	Rotten residue 3.1-inch diameter and larger	(percent) <u>45</u>
<b>Totals</b>	<b>8.4</b>	<b>703</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FTRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over P0-inch d.b.h.	Trees and dead stems under 8-inch d.b.h.	Dominant species	Spread rate (chains/hour) <u>9</u>
Dominant species <u>ponderosa pine</u>	Dominant species _____	<u>bitterbrush</u>	Flame length (feet) <u>4</u>
Trees per acre <u>15</u>	Trees per acre _____	Average height (inches) <u>26</u>	Resistance to suppression (chains/man-hour) <u>1.3</u>
Average d.b.h. (inches) <u>24</u>	Average d.b.h. (inches) _____	Average crown height (inches) <u>9</u>	Ecoclass coding <u>CPS2-17</u>
Average tree height (feet) <u>8</u>	Average tree height (feet) _____	Ground space occupied (percent) <u>28</u>	
Average crown height (feet) <u>20</u>	Average crown height (feet) _____		
Estimated crown space occupied (percent) <u>10</u>	Estimated crown space occupied (percent) _____		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>8- to 20-inch d.b.h.</u>	Snags 6-inch d.b.h. and over	Dominant species <u>bluebunch</u>	
Dominant species <u>ponderosa pine</u>	Number per acre _____	<u>wheatgrass</u>	
Trees per acre <u>30</u>	Average d. b. h. _____	Average height (inches) <u>5</u>	
Average d.b.h. (inches) <u>17</u>	Average height _____	Ground space (percent) <u>5</u>	
Average tree height (feet) <u>73</u>		Estimated weight (pounds Per acre) <u>90</u>	
Average crown height (feet) <u>24</u>			
Estimated crown space _____			



5-PP-4

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Yeight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.1	4	Average residue depth	(feet) <u>0.4</u>
<b>0.26- 1.0</b>	.8	5	Ground area covered by residue	(percent) <u>53</u>
1.1 - 3.0	.8	52	Average duff and litter depth	(inches) <u>2.8</u>
3.1 - 9.0	1.6	139	Ground area covered by duff and litter	(percent) <u>97</u>
9.1 - 20.0	5.2	511	Sound residue 3.1 inch diameter and larger	(percent) <u>52</u>
<b>20.1+</b>	0	0	Rotten residue 3.1-inch diameter and larger	(percent) <u>48</u>
<b>Total</b>	8.5	711		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch</u> d.b.h.	Trees and dead stems under <u>B-inch</u> d.b.h.	Dominant species <u>bitterbrush</u>	Spread rate (chains/hour) <u>5</u>
Dominant species <u>ponderosa pine</u>	Dominant species <u>ponderosa pine</u>	Average height (inches) <u>21</u>	Flame length (feet) <u>3</u>
Trees per acre <u>24</u>	Trees per acre <u>450</u>	Average crown height (inches) <u>4</u>	Resistance to suppression (chains/man-hour) <u>1.5</u>
Average d.b.h. (inches) <u>29</u>	Average d.b.h. (Inches) <u>1</u>	Ground space occupied (percent) <u>8</u>	Ecoclass coding <u>CPS2-11</u>
Average tree height (feet) <u>10.1</u>	Average tree height (feet) <u>7</u>	GRASS AND FORBS INFORMATION	REMARKS
Average crown height (feet) <u>3</u>	Average crown height (feet) <u>5</u>	Dominant species <u>bluebunch wheatgrass</u>	
Estimated crown space occupied (percent) <u>20</u>	Estimated crown space occupied (percent) <u>10</u>	Average height (inches) <u>6</u>	
Trees <u>8- to 20-inch</u> d.b.h.	Snags <u>B-inch</u> d.b.h. and over	Ground space (percent) <u>15</u>	
Dominant species <u>ponderosa pine</u>	Number per acre <u>1</u>	Estimated weight (pounds per acre) <u>130</u>	
Trees per acre <u>28</u>	Average d.b.h. <u>22</u>		
Average d.b.h. (inches) <u>16</u>	Average height <u>55</u>		
Average tree height (feet) <u>7.3</u>			
Average crown height (feet) <u>3.1</u>			
Estimated crown space <u>20</u>			



6-PP-4

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.04	2	Average residue depth	(feet) <u>0.9</u>
<b>0.26- 1.0</b>	<b>1.5</b>	<b>91</b>	Ground area covered by residue	(percent) <u>40</u>
<b>1.1 - 3.0</b>	<b>4.9</b>	<b>320</b>	Averageduff and litter depth	(inches) <u>2.4</u>
<b>3.1 - 9.0</b>	<b>14.1</b>	<b>1,250</b>	Ground area covered duff and litter	(percent) <u>97</u>
<b>9.1 -20.0</b>	<b>6.2</b>	<b>578</b>	Sound residue 3.1.inch diameter and larger	(percent) <u>72</u>
<b>20.1+</b>	<b>0</b>	<b>0</b>	Rotten residue 3.1-inch diameter and larger	(percent) <u>28</u>
<b>Total</b>	<b>26.74</b>	<b>2,241</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch</u> d.b.h.	Trees and dead stems under <u>B-inch</u> d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>5</u>
Dominant species <u>ponderosa pine</u>	Dominant species _____	<u>Oregon grape</u>	Flame length (feet) <u>4</u>
Trees per' acre <u>40</u>	Trees per acre _____	Average height (inches) <u>7</u>	Resistance to suppression (chains/man-hour) <u>0.9</u>
Average d.b.h. (inches) <u>25</u>	Average d.b.h. (inches) _____	Average crown height (inches) <u>3</u>	
Average tree height (feet) <u>109</u>	Average tree height (feet) _____	Ground space occupied (percent) <u>6</u>	Ecoclass coding <u>CWG1-11</u>
Average crown height (feet) <u>52</u>	Average crown height (feet) _____		
Estimated crown space occupied (percent) <u>30</u>	Estimated crown space occupied (percent) _____		
		GRASS AND FORES INFORMATION	REMARKS
Trees <u>8- to 20-inch</u> d.b.h.	Snags <u>B-inch</u> d.b.h. and over	Dominant species _____	
Dominant species <u>ponderosa pine</u>	Number per acre <u>12</u>	<u>pinegrass</u>	
Trees per acre <u>61</u>	Average d.b.h. <u>23</u>	Average height (inches) <u>10</u>	
Average d.b.h. (Inches) <u>16</u>	Average height <u>35</u>	Ground space (percent) <u>19</u>	
Average tree height (feet) _____		Estimated weight (pounds per acre) <u>250</u>	
Average crown height (feet) <u>45</u>			
Estimated crown space <u>30</u>			



7-PP-4

LOADING			OTHER MEASUREMENTS	
size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)	Average residue depth	(feet) <u>0.1</u>
0.0 - 0.25	0.02	1	Ground area covered by residue	(percent) <u>27</u>
0.26 - 1.0	.3	17	Average duff litter depth	(inches) <u>1.8</u>
1.1 - 3.0	1.5	99	Ground area covered by duff and litter	(percent) <u>81</u>
3.1 - 3.6	6.7	393	Sound residue 3.1-inch diameter and larger	(percent) <u>72</u>
9.1 - 20.0	22.8	2,003	Rotten residue 3.1-inch diameter and larger	(percent) <u>28</u>
<u>20.1+</u>	0	0		
Total	31.32	2,715		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
<u>Trees over 20-inch d.b.h.</u>	Trees and dead stems under 8-inch d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>4</u>
Dominant species <u>ponderosa pine</u>	Dominant species <u>ponderosa pine</u>	<u>ceanothus</u>	Flame length (feet) <u>3</u>
Trees per acre <u>38</u>	Trees per acre <u>600</u>	Average height (inches) <u>43</u>	Resistance to suppression (chains/man-hour) <u>1.5</u>
Average d.b.h. (inches) <u>28</u>	Average d.b.h. (inches) <u>1</u>	Average crown height (inches) _____	Ecoclass coding <u>CWS1-12</u>
Average tree height (feet) <u>109</u>	Average tree height (feet) <u>2</u>	Ground space occupied (percent) <u>15</u>	
Average crown height (feet) <u>46</u>	Average crown height (feet) <u>1</u>		
Estimated crown space occupied (percent) <u>40</u>	Estimated crown space occupied (percent) <u>10</u>		
		GRASS AND FORBS INFORMATION	REMARKS
<u>Trees 8- to 20-inch d.b.h.</u>	<u>Snags 8-inch d.b.h. and over</u>	Dominant species _____	
Dominant species <u>ponderosa pine</u>	Number per acre _____		
Trees per acre <u>13</u>	Average d.b.h. _____	Average height (inches) - _____	
Average d.b.h. (Inches) <u>17</u>	Average height _____	Ground space (percent) - _____	
Average tree height (feet) <u>100</u>		Estimated weight (pounds per acre) _____	
Average crown height (feet) <u>53</u>			
Estimated crown space _____			
<u>10</u>			



LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.1	7	Average residue depth	(feet) <u>0.2</u>
0.26- 1.0	1.1	65	Ground area covered by residue	(Percent) <u>41</u>
1.1 - 3.0	3.3	214	Average duff and litter depth	(inches) <u>.7</u>
3.1 - 9.0	4.0	353	Ground area covered by duff and litter-	(percent) <u>100</u>
9.1 -20.0	20.7	1,733	Sound residue 3.1-inch diameter and larger	(percent) <u>74</u>
20.1+	19.3	1,656	Rotten residue 3.1.inch diameter and larger	(percent) <u>26</u>
Total	45.5	4,028		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over 10-inch <u>d.b.h.</u>	Trees and dead stems under 8-inch d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>5</u>
Dominant species _____	Dominant species <u>ponderosa pine</u>	<u>snowberry</u>	Flame length (feet) <u>4</u>
Trees per acre _____	Trees per acre <u>150</u>	Average height (inches) <u>9</u>	Resistance to suppression(chains/man-hour) <u>1.5</u>
Average d.b.h. (inches) _____	Average d.b.h. (inches) <u>3</u>	Average crown height (inches) <u>6</u>	Locclass coding <u>CDG1-11</u>
Average tree height (feet) _____	Average tree height (feet) <u>17</u>	Ground space occupied (percent) >	
Average crown height (feet) _____	Average crown height (feet) <u>6</u>		
Estimated crown space occupied (percent) _____	Estimated crown space occupied (percent) <u>10</u>		
		GRASS AND FORDS INFORMATION	REMARKS
Trees 8- to 20-inch d.b.h.	Snags 8-inch d.b.h. and over	Dominant species _____	
Dominant species <u>ponderosa pine</u>	Number per acre <u>20</u>	<u>pinegrass</u>	
Trees per acre <u>20</u>	Average d.b.h. <u>24</u>	Average height (Inches) <u>7</u>	
Average d.b.h. (inches) <u>16</u>	Average height <u>18</u>	Ground space (percent) <u>22</u>	
Average tree height (feet) <u>72</u>		Estimated weight (pounds per acre) <u>400</u>	
Average crown height (feet) _____			
Estimated crown space <u>10</u>			

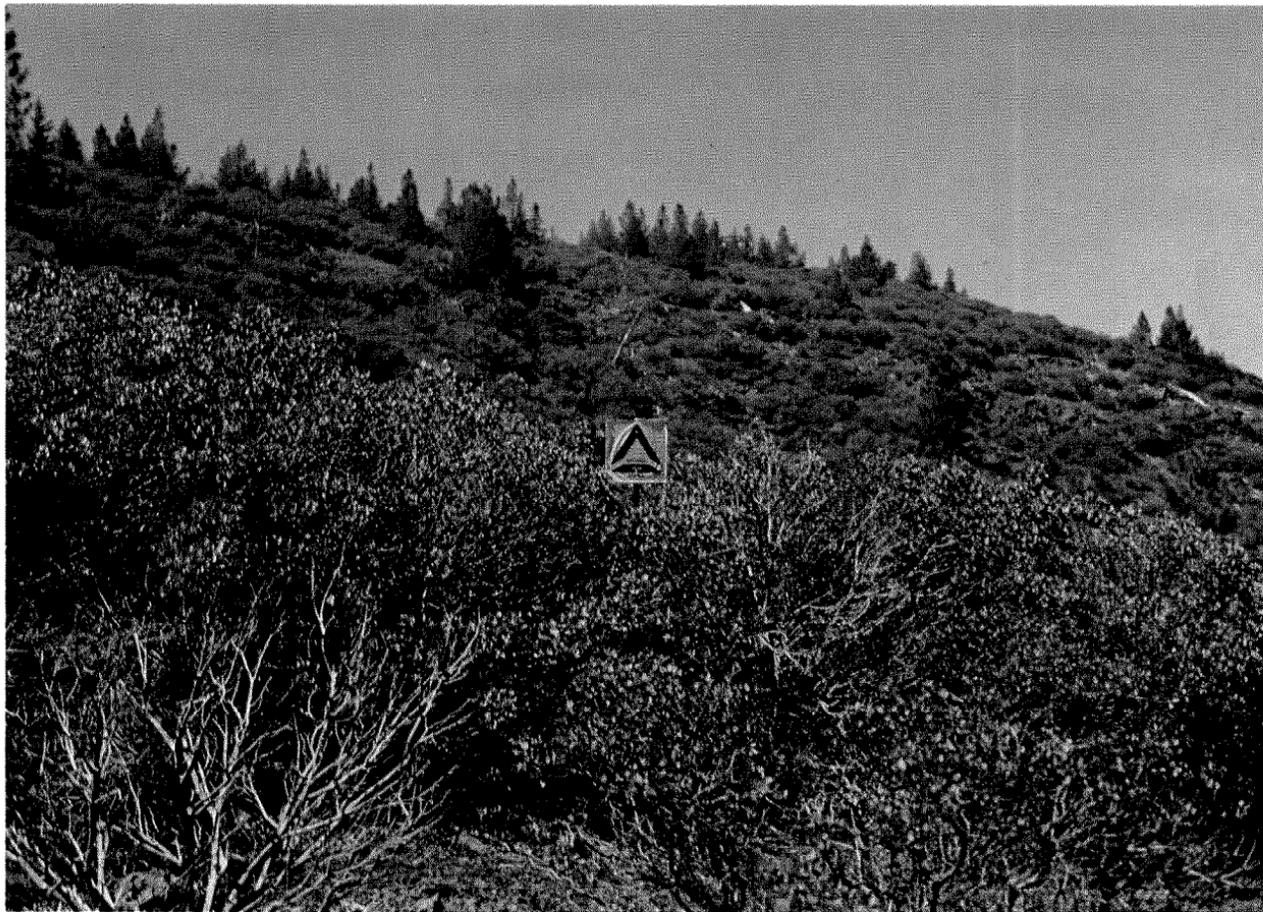


## BRUSH

### A SERIES OF 2 LEVELS

#### REMINDERS TO USERS:

1. The marker in these photos is 1 foot square, and the pole is painted in contrasting colors at 1-foot intervals to provide perspective.
2. Stumps are not included in residue quantities.
3. Rotted residue is that which would come apart or splinter when kicked.



1 - BR

LOADING			OTHER MEASUREMENTS	
<b>Size class</b> (inches)	<b>Weight</b> (tons/acre)	<b>Volume</b> (ft <sup>3</sup> /acre)	Average residue depth	(feet) <u>0.04</u>
0.0 - 0.25	0.3	12	Ground area covered by residue	(percent) <u>27</u>
<del>0.26 - 1.0</del>	<del>1.0</del>	<del>45</del>	Average duff and litter depth	(inches) <u>.6</u>
<del>1.1 - 3.0</del>	<del>.4</del>	<del>18</del>	Ground area covered by duff and litter	(percent) <u>43</u>
<b>3.1 - 9.0</b>	<b>3.6</b>	<b>280</b>	Sound residue 3.1-inch diameter and larger	(percent) <u>0</u>
<b>9.1 - 20.0</b>	<b>0</b>	<b>0</b>	Rotten residue 3.1-inch diameter and larger	(percent) <u>100</u>
<b>20.1+</b>	<b>0</b>	<b>0</b>		
<b>Total</b>	<b>5.3</b>	<b>455</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
<u>Trees over 20-inch d.b.h.</u>	<u>Trees and dead stems under 8-inch d.b.h.</u>	Dominant species _____	Spread rate (chains/hour) <u>7</u>
Dominant species _____	Dominant species _____	manzanita	Flame length (feet) <u>5</u>
Trees per acre _____	Trees per acre _____	Average height (inches) <u>42</u>	Resistance to suppression (chains/man-hour) <u>1.2</u>
Average d.b.h. (inches) _____	Average d.b.h. (inches) _____	Average crown height (inches) <u>26</u>	Ecoclass coding <u>SC29</u>
Average tree height (feet) _____	Average tree height (feet) _____	Ground space occupied (percent) <u>31</u>	
Average crown height (feet) _____	Average crown height (feet) _____		
Estimated crown space occupied (percent) _____	Estimated crown space occupied (percent) _____		
		GRASS AND FORBS INFORMATION	REMARKS
<u>Trees 8- to 20-inch d.b.h.</u>	<u>Snags 8-inch d.b.h. and over</u>	Dominant species _____	
Dominant species _____	Number per acre _____	medusahead	
Trees per acre _____	Average d.b.h. _____	Average height (inches) <u>6</u>	
Average d.b.h. (Inches) _____	Average height _____	Ground space (percent) <u>9</u>	
Average tree height (feet) _____		Estimated weight (pounds per acre)	
Average crown height (feet) _____			
Estimated crown space _____			



LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.1	8	Average residue depth (feet)	0.7
0.26- 1.0	.4	24	Ground area covered by residue (percent)	44
1.1 - 3.0	.3	19	Average duff and litter depth (inches)	2.2
3.1 - 9.0	11.2	859	Ground area covered by duff and litter (percent)	99
9.1 -20.0	22.5	1,687	Sound residue 3.1.inch diameter and larger (percent)	74
20.1+	2.3	240	Rotten residue 3.1.inch diameter and larger (percent)	26
<b>Total</b>	<b>36.8</b>	<b>2,837</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch d.b.h.</u>	Trees and dead stems under <u>8-inch d.b.h.</u>	Dominant species <u>ceanothus</u>	Spread rate (chains/hour) <u>13</u>
Dominant species _____	Dominant species <u>Douglas-fir</u>	Average height (inches) <u>63</u>	Flame length (feet) <u>7</u>
Trees per acre _____	Trees per acre <u>20c</u>	Average crown height (Inches) <u>29</u>	Resistance to suppression (chains/man-hour) <u>0.9</u>
Average d.b.h. (inches) _____	Average d.b.h. (inches) <u>1</u>	Ground space occupied (percent) <u>85</u>	Ecoclass coding <u>SC19</u>
Average tree height (feet) _____	Average tree height (feet) <u>4</u>		
Average crown height (feet) _____	Average crown height (feet) <u>0</u>		
Estimated crown space occupied (percent) _____	Estimated crown space occupied (percent) <u>1</u>		
		<b>GRASS AND FORDS INFORMATION</b>	<b>REMARKS</b>
Trees <u>8- to 20-inch d.b.h.</u>	<b>Snags 8-inch d.b.h. and over</b>	Dominant species <u>Oregon boxwood</u>	
Dominant species _____	Number per acre _____	Average height (inches) <u>10</u>	
Trees per acre _____	Average d.b.h. _____	Ground space (percent) <u>13</u>	
Average d.b.h. (inches) _____	Average height _____	Estimated weight (pounds per acre)	
Average tree height (feet) _____			
Average crown height (feet) _____			
Estimated crown space _____			



JUNIPER

SIZE CLASS 2

A SERIES OF 2 LEVELS

REMINDERS TO USERS:

1. The marker in these photos is 1 foot square, and the pole is painted in contrasting colors at 1-foot intervals to provide perspective.
2. Stumps are not included in residue quantities.
3. Rotted residue is that which would come apart or splinter when kicked.



1-JU-2

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.2	14	Average residue depth (feet)	<u>0.1</u>
<b>0.26 - 1.0</b>	.4	27	Ground area covered by residue (Percent)	<u>24</u>
<b>1.1 - 3.0</b>	.3	23	Average duff and litter depth (inches)	<u>.2</u>
<b>3.1 - 9.0</b>	0	0	Ground area covered by duff and litter (percent)	<u>48</u>
<b>9.1 - 20.0</b>	0	0	Sound residue 3.1 inch diameter and larger (percent)	<u>0</u>
<b>20.1+</b>	0	0	Rotten residue 3.1 inch diameter and larger (percent)	<u>0</u>
<b>Total</b>	<b>.9</b>	<b>64</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch</u> d.b.h.	Trees and dead stems under <u>E-inch</u> d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>12</u>
Dominant species _____	Dominant species <u>juni per</u>	<u>sagebrush</u>	Flame length (feet) <u>4</u>
Trees per acre _____	Trees per acre <u>200</u>	Average height (inches) <u>20</u>	Resistance to suppression (chains/man-hour) <u>4</u>
Average d.b.h. (Inches) _____	Average d.b.h. (inches) <u>1</u>	Average crown height (inches) <u>2</u>	Ecoclass coding <u>CJS2</u>
Average tree height (feet) _____	Average tree height (feet) <u>6</u>	Ground space occupied (percent) <u>10</u>	
Average crown height (feet) _____	Average crown height (feet) <u>0</u>		
Estimated crown space occupied (percent) _____	Estimated crown space occupied (percent) <u>1</u>		
		GRASS AND FORDS INFORMATION	REMARKS
Trees <u>8- to 20-inch</u> d.b.h.	Snags <u>8-inch</u> d.b.h. and over	Dominant species _____	
Dominant species _____	Number per acre _____	<u>cheat grass</u>	
Trees per acre _____	Average d.b.h. _____	Average height (inches) <u>16</u>	
Average d.b.h. (inches) _____	Average height _____	Ground space (percent) <u>&gt;</u>	
Average tree height (feet) _____		Estimated weight (pounds per acre) <u>150</u>	
Average crown height (feet) _____			
Estimated crown space _____			



2-JU-2

LOADING			OTHER MEASUREMENTS	
<b>Size class (inches)</b>	<b>Weight (tons/acre)</b>	<b>Volume (ft<sup>3</sup>/acre)</b>	Average residue depth	(feet) <u>0.1</u>
0.0 - 0.25	0.2	13	Ground area covered by residue	(percent) <u>23</u>
0.26- 1.0	.4	29	Average duff and litter depth	(inches) <u>.3</u>
1.1 - 3.0	.8	65	Ground area covered by duff and litter	(percent) <u>39</u>
3.1 - 9.0	0	0	Sound residue 3.1-inch diameter and larger	(percent) <u>0</u>
9.1 -20.0	0	0	Rotten residue 3.1-inch diameter and larger	(percent) <u>0</u>
20.1+	0	0		
<b>Total</b>	1.4	107		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch d.b.h.</u>	Trees and dead stems under <u>B-inch d.b.h.</u>	Dominant species <u>sagebrush</u>	Spread rate (chains/hour) <u>3</u>
Dominant species _____	Dominant species _____	Average height (inches) <u>26</u>	Flame length (feet) <u>8</u>
Trees per acre _____	Trees per acre _____	Average crown height (inches) <sup>12</sup>	Resistance to suppression (chains/man-hour) <u>3</u>
Average d.b.h. (inches) _____	Average d.b.h. (inches) _____	Ground space occupied (percent) <u>7</u>	Ecoclass coding <u>CJS2</u>
Average tree height (feet) _____	Average tree height (feet) _____		
Average crown height (feet) _____	Average crown height (feet) _____		
Estimated crown space occupied (percent) _____	Estimated crown space occupied (percent) _____		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>8- to 20-inch d.b.h.</u>	Snags <u>B-inch d.b.h. and over</u>	Dominant species <u>bluebunch wheatgrass</u>	
Dominant species <u>juniper</u>	Number per acre _____	Average height (inches) <u>17</u>	
Trees per acre <u>13</u>	Average d.b.h. _____	Ground space (percent) <u>&lt;9</u>	
Average d.b.h. (inches) <u>10</u>	Average height _____	Estimated weight (pounds per acre) <u>100</u>	
Average tree height (feet) <u>24</u>			
Average crown height (feet) _____			
Estimated crown space _____			



## GRASS

### A SERIES OF 2 LEVELS

#### REMINDERS TO USERS:

1. The marker in these photos is 1 foot square, and the pole is painted in contrasting colors at 1-foot intervals to provide perspective.
2. Stumps are not included in residue quantities.
3. Rotted residue is that which would come apart or splinter when kicked.



1-GR

LOADING			OTHER MEASUREMENTS	
Site class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)	Average residue depth	(feet) <u>0</u>
0.0 - 0.25	0.01	1	Ground area covered by residue	(percent) <u>0</u>
0.26 - 1.0	0	0	Average duff and litter depth	(inches) <u>0.1</u>
1.1 - 3.0	0	0	Ground area covered by duff and litter	(percent) <u>45</u>
3.1 - 9.0	0	0	Sound residue 3.1-inch diameter and larger	(percent) <u>0</u>
9.1 - 20.0	0	0	Rotten residue 3.1-inch diameter and larger	(percent) <u>0</u>
<b>20.1+</b>	0	0		
<b>Total</b>	0.01	1		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
Trees over <u>20-inch</u> d.b.h.	Trees and dead stems under <u>8-inch</u> d.b.h.	Dominant species _____	Spread rate (chains/hour) <u>23</u>
Dominant species _____	Dominant species _____		Flame length (feet) <u>2</u>
Trees per acre _____	Trees per acre _____	Average height (inches) - _____	Resistance to suppression (chains/man-hour) <u>6</u>
Average d.b.h. (inches) _____	Average d.b.h. (inches) _____	Average crown height (inches) - _____	
Average tree height (feet) _____	Average tree height (feet) _____	Ground space occupied (percent) - _____	Ecoclass coding <u>CA19</u>
Average crown height (feet) _____	Average crown height (feet) _____		
Estimated crown space occupied (percent) _____	Estimated crown space occupied (percent) _____		
		GRASS AND FORBS INFORMATION	REMARKS
Trees <u>8- to 20-inch</u> d.b.h.	Snags <u>8-inch</u> d.b.h. and over	Dominant species _____	An old abandoned farm field.
Dominant species _____	Number per acre _____	<u>cheatgrass</u>	
Trees per acre _____	Average d.b.h. _____	Average height (inches) <u>14</u>	
Average d.b.h. (inches) _____	Average height _____	Ground space (percent) <u>29</u>	
Average tree height (feet) _____		Estimated weight (pounds per acre) <u>300</u>	
Average crown height (feet) _____			
Estimated crown space _____			



2-GR

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft <sup>3</sup> /acre)		
0.0 - 0.25	0.04	3	Average residue depth	(feet) <u>a.02</u>
<b>0.26 - 1.0</b>	<b>0.2</b>	<b>11</b>	Ground area covered by residue	(percent) <u>9</u>
<b>1.1 - 3.0</b>	<b>0</b>	<b>0</b>	Average duff and litter depth	(inches) <u>.1</u>
<b>3.1 - 9.0</b>	<b>0</b>	<b>0</b>	Ground area covered by duff and litter	(percent) <b>28</b>
<b>9.1 - 20.0</b>	<b>0</b>	<b>0</b>	Sound residue 3.1-inch diameter and larger	(percent) <u>0</u>
<b>20.1+</b>	<b>0</b>	<b>0</b>	Rotten residue 3.1-inch diameter and larger	(percent) <u>0</u>
<b>Total</b>	<b>0.24</b>	<b>14</b>		

STAND INFORMATION		BRUSH INFORMATION	ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY
<u>Trees over 20-inch d.b.h.</u>	<u>Trees and dead stems under 8-inch d.b.h.</u>	Dominant species <u>                    </u>	Spread rate (chains/hour) <b>46</b>
Dominant species <u>                    </u>	Dominant species <u>                    </u>	<u>bitterbrush</u>	Flame length (feet) <u>3</u>
Trees per acre <u>                    </u>	Trees per acre <u>                    </u>	Average height (inches) <u>18</u>	Resistance to suppression (chains/man-hour) <b>4</b>
Average d.b.h. (inches) <u>                    </u>	Average d.b.h. (inches) <u>                    </u>	Average crown height (inches) <u>3</u>	Ecoclass coding <u>GB43</u>
Average tree height (feet) <u>                    </u>	Average tree height (feet) <u>                    </u>	Ground space occupied (percent) <u>1</u>	
Average crown height (feet) <u>                    </u>	Average crown height (feet) <u>                    </u>		
Estimated crown space occupied (percent) <u>                    </u>	Estimated crown space occupied (percent) <u>                    </u>		
		GRASS AND FORBS INFORMATION	REMARKS
<u>Trees 8- to 20-inch d.b.h.</u>	<u>Snags 8-inch d.b.h. and over</u>	Dominant species <u>crested</u>	
Dominant species <u>                    </u>	Number per acre <u>                    </u>	<u>wheatgrass</u>	
Trees per acre <u>                    </u>	Average d.b.h. <u>                    </u>	Average height (inches) <u>19</u>	
Average d.b.h. (inches) <u>                    </u>	Average height <u>                    </u>	Ground space (percent) <u>44</u>	
Average tree height (feet) <u>                    </u>		Estimated weight (pounds per acre) <u>500</u>	
Average crown height (feet) <u>                    </u>			
Estimated crown space <u>                    </u>			

