Appendix G
1930s and Existing Vegetation Size Class, Cover Type, and Tree Canopy by VRU

The tables on the next 8 pages display the composition of the watershed in the 1930s and 1990s by Vegetation Response Unit (VRU). The 1930s vegetation cover was developed from aerial photo interpretation. The 1990s cover was developed from remote sensed data, and corrected using stand exam data.

The intent of this comparison is not to use one picture of the historical landscape as an objective, but to interpret that picture in terms of the setting and disturbance processes that shape plant communities in the landscape. Data are displayed by VRU to provide an understanding of how vegetation and disturbance regimes operate in these ecological settings. It is usually not appropriate to define rigorous targets for proportion of plant community types and stages at the scale of one or a few VRU delineations, but within several VRU delineations within fifth code watershed (at a minimum) or subbasin.

VRU 1: Convex slopes, subalpine fir and grand fir habitat types			
Size Class	**1930s acres**	**1991 acres**	**Percent Change**
Nonforest	849	801	-6
Seedling/sapling	7,433	564	-92
Pole (5-9 inches)	6,975	1361	-80
9-21 inch	2,694	14,324	+432
21+ inch	170	1060	+524

Cover Type	1930s acres	1991 acres	Percent Change
Herbaceous clearcut	0	271	+
Barren land	0	30	+
Whitebark pine	670	156	-77
Spruce/fir	11,973	10,220	-15
Lodgepole pine	2,480	2,462	-1
Mixed conifer	2,086	4,375	+110
Ponderosa pine / Douglas-fir	57	29	-49
Montane park	811	36	-96
Shrub	0	443	+
Wet meadows	37	0	-
Riparian forest	4	0	-

Tree Canopy Cover	1930s acres	1991 acres	Percent Change
Low	2,418	1,139	-53
Moderate	12,656	13,232	+5
High	2,200	2,938	+34

Old Growth	1930s acres	1991 acres	Likely Trend
Whitebark pine	NA	0	Decrease
Engelmann spruce/subalpine fir	NA	2,846	Increase
Lodgepole pine	NA	138	Increase
Ponderosa pine	NA	37	
Mixed conifer	NA	889	Increase

VRU 2: Glaciated slopes, subalpine fir habitat types

Size Class	1930s acres	1991 acres	Percent change
Nonforest	1,220	436	-64
Seedling/sapling	715	207	-71
Pole (5-9 inches)	3,261	857	-74
9-21 inch	489	4,067	+732
21+ inch	6	120	+190

Cover Type	1930s acres	1991 acres	Percent change
Barren land	22	92	+318
Whitebark pine	2,003	273	-86
Spruce/fir	2,191	3,728	+70
Lodgepole pine	255	1,150	+351
Mixed conifer	21	101	+381
Montane park	1,129	175	-84
Foothills grassland	7	0	-
Shrub	0	142	+

Tree Canopy Cover	1930s acres	1991 acres	Percent change
Low	396	1,602	+305
Moderate	3,740	2,906	-22
High	335	744	+122

Old Growth	1930s acres	1991 acres	Likely Trend
Whitebark pine	NA	12	Decrease
Engelmann spruce/subalpine fir	NA	1,884	Increase
Mixed conifer	NA	30	Increase
Lodgepole pine	NA	4	Decrease

VRU 3: Stream breaklands, Douglas-fir and grand fir habitat types			
Size Class	1930s acres	1991 acres	Percent change
Nonforest	3,773	2,616	-31
Seedling/sapling	9,957	4,214	-58
Pole (5-9 inches)	3,780	3,408	-10
9-21 inch	7,701	13,438	+74
21+ inch	4,275	5,791	+35

Cover Type	1930s acres	1991 acres	Percent change
Herbaceous clearcut	0	301	+
Barren land	490	397	-20
Whitebark pine	14	0	-
Spruce/fir	1,778	760	-57
Lodgepole pine	829	570	-31
Mixed conifer	12,432	12,657	0
Ponderosa pine / Douglas-fir	10,710	12,665	+18
Montane park	382	61	-84
Foothills grassland	2,418	413	-83
Disturbed grassland	0	606	+
Shrub	1,174	836	-29
Riparian forest	7	0	-
Riparian hardwoods	44	0	-

Tree Canopy Cover	1930s acres	1991 acres	Percent change
Low	5,723	2,042	-71
Moderate	17,092	17,049	0
High	2,899	7,759	+168

Old Growth	1930s acres	1991 acres	Likely Trend
Lodgepole pine	NA	61	Increase
Ponderosa pine/Douglas-fir	NA	4,354	Decrease in pine, increase in Douglas-fir
Engelmann spruce/subalpine fir	NA	28	
Mixed conifer	NA	4,269	Increase

VRU 4: Rolling hills, grand fir and Douglas-fir habitat types			
Size Class	**1930s acres**	**1991 acres**	**Percent change**
Nonforest	416	584	+40
Seedling/sapling	3,064	632	-79
Pole (5-9 inches)	868	760	-12
9-21 inch	1,100	2,482	+126
21+ inch	395	1,380	+249

Cover Type	1930s acres	1991 acres	Percent change
Herbaceous clearcut	0	252	+
Barren land	0	8	+
Spruce/fir	1,778	229	-87
Lodgepole pine	756	961	+27
Mixed conifer	2,487	3,659	+47
Ponderosa pine / Douglas-fir	399	406	+2
Montane park	63	11	-83
Foothills grassland	23	0	-
Shrub	237	307	+29
Wet meadows	92	6	-93
Riparian forest	8	0	-

Tree Canopy Cover	1930s acres	1991 acres	Percent change
Low	1,163	543	-53
Moderate	3,710	3,779	+2
High	4,264	932	-78

Old Growth	1930s acres	1991 acres	Likely Trend

Old Growth	1930s acres	1991 acres	Likely Trend
Engelmann spruce/subalpine fir	NA		
Lodgepole pine	NA	76	Similar
Ponderosa pine/Douglas-fir	NA	51	Decrease
Mixed conifer	NA	694	Increase

VRU 6: Cold basins, subalpine fir and grand fir habitat types			
Size Class	**1930s acres**	**1991 acres**	**Percent Change**
Nonforest	579	1,563	+170
Seedling/sapling	5,040	1,392	-72
Pole (5-9 inches)	7,967	540	-93
9-21 inch	4,245	14,099	232
21+ inch	795	1,028	+29

Cover Type	1930s acres	1991 acres	Percent change
Farmland	1	0	-
Herbaceous clearcut	0	813	+
Barren land	60	113	+88
Whitebark pine	0	74	+
Spruce/fir	3,530	4,534	+228
Lodgepole pine	11,204	7,756	-31
Mixed conifer	2,956	4,693	+150
Ponderosa pine / Douglas-fir	342	0	-
Montane park	18	214	+1089
Foothills grassland	15	0	-
Shrub	9	371	+4,022
Wet meadows	475	48	-90
Riparian forest	17	0	-

Tree Canopy Cover	1930s acres	1991 acres	Percent change
Low	1,496	2,865	+92
Moderate	16,551	13,072	-21
High	4,453	1,120	-75

Old Growth	1930s acres	1991 acres	Likely Trend

Old Growth	1930s acres	1991 acres	Likely Trend
Engelmann spruce/subalpine fir	NA	2	Similar
Lodgepole pine	NA	3,763	Increase
Ponderosa pine/Douglas-fir	NA	4	Similar
Mixed conifer	NA	1,065	Increase

VRU 9: High elevation ridges, whitebark pine and subalpine fir habitat types			
Size Class	1930s acres	1991 acres	Percent change
Nonforest	570	425	-25
Seedling/sapling	219	84	-62
Pole (5-9 inches)	1,163	326	-72
9-21 inch	27	1,162	+4,204
21+ inch	33	11	-67

Cover Type	1930s acres	1991 acres	Percent change
Herbaceous clearcut	0	3	+
Barren land	141	96	-32
Whitebark pine	1,043	325	-69
Spruce/fir	399	1,154	+189
Lodgepole pine	0	70	+
Mixed conifer	0	34	+
Montane park	427	292	-32
Shrub	0	34	+
Wet meadows	2	0	-

Tree Canopy Cover	1930s acres	1991 acres	Percent change
Low	695	1,159	+75
Moderate	664	369	-44
High	82	57	-30

Old Growth	1930s acres	1991 acres	Likely Trend
Whitebark pine	NA	52	Decrease

VRU 12: Stream breaklands, bunchgrass and shrublands			
Size Class	**1930s acres**	**1991 acres**	**Percent change**
Nonforest	4,061	3,740	-8
Seedling/sapling	2	204	+
Pole (5-9 inches)	43	0	-
9-21 inch	33	67	+103
21+ inch	15	136	+806

Cover Type	**1930s acres**	**1991 acres**	**Percent change**
Agriculture	18	9	-50
Herbaceous clearcut	0	4	+
Barren land	0	129	+
Lodgepole pine	0	6	+
Mixed conifer	35	10	-71
Ponderosa pine / Douglas-fir	15	392	+2,513
Foothills grassland	3,363	746	-78
Disturbed grassland	0	1,578	+
Shrub	680	1,274	-60
Riparian hardwoods	43	0	-

Tree Canopy Cover	**1930s acres**	**1991 acres**	**Percent change**
Low	42	161	+283
Moderate	51	236	+363
High	0	11	+

Old Growth	**1930s acres**	**1991 acres**	**Likely Trend**
Ponderosa pine/Douglas-fir	NA	63	Increase