
Appendix I—Giant Sequoia Inventory

Giant Sequoia Groves and Inventory

Giant sequoia groves are a subcomponent of the mixed conifer vegetation type. They occupy a wide variety of site conditions, but often encompass the more productive, moist sites that grow not only the largest giant sequoias, but the largest pines and firs in the mixed conifer group. In most size classes, the average species-size distribution follows the common inverse relationship of size and number of trees where

the larger the tree, the fewer the number. Intermediate sized trees are underrepresented; however, with only 26 trees per acre in the 11- to 14-inch size class, as shown in the following table and figure.⁽⁹⁾

This apparent deficiency may be due to the lack of disturbance in the last 50 years and the lack of recruitment of pines and giant sequoia.

Table 72 Tree Density—Number of Conifer and Hardwood Trees per Acre (TPA) by Diameter Class

Grove	Conifer TPA by Dia.Class (inch)								Hardwood TPA by Dia.Class (inch)							
	<1	1 - 10	11- 14	15- 20	21- 28	29- 38	39+	Tot.	<1	1- 10	11- 14	15- 20	21- 28	29- 38	39+	Tot.
Alder Creek	. ⁽¹⁾	218	33	32	24	9	5	.	.	.	.	.	.	.	.	.
Big Stump	.	41	17	17	21	13	8	.	.	.	.	.	.	.	.	.
Black Mountain	.	223	31	38	30	20	14	.	.	.	.	.	.	.	.	.
Cherry Gap	.	127	11	5	0	1	0	.	.	216	3	1	0	0	0	220
Converse Basin	.	209	18	20	14	6	3	.	11	12	3	0	0	0	0	26
Deer Creek	.	160	35	25	22	8	2	.	.	.	.	.	.	.	.	.
Grant Grove	.	93	25	26	21	7	6	.	.	.	.	.	.	.	.	.
Indian Basin	.	59	17	27	25	9	3	.	.	.	.	.	.	.	.	.
Landslide	.	190	30	14	13	5	5	.	.	.	.	.	.	.	.	.
Long Meadow	.	60	20	9	5	2	6	.	.	.	.	.	.	.	.	.
Mountain Home	.	173	48	72	38	15	5	.	.	.	.	.	.	.	.	.
Packsaddle	.	87	16	16	10	4	3	.	.	.	.	.	.	.	.	.
Peyrone	.	192	41	56	26	9	5	.	.	.	.	.	.	.	.	.
Red Hill	.	190	21	35	18	6	6	.	.	.	.	.	.	.	.	.
Redwood Mountain	.	189	33	25	19	8	2	.	.	.	.	.	.	.	.	.
Starvation	.	156	17	16	9	7	3	.	.	.	.	.	.	.	.	.
Abbot	595	169	10	19	12	6	4	914	25	13	0	0	0	0	0	38
Agnew	28	106	37	37	11	5	2	225	6	0	0	0	0	0	0	6
Bearskin	690	179	12	11	11	6	3	911	30	0	3	2	0	0	0	35
Belknap	710	237	20	20	12	7	5	1009	399	49	4	3	1	0	0	456
Burro Creek	496	108	16	21	13	7	7	667	191	46	0	0	0	0	0	236

1. Currently, there is no data for cells missing numbers.

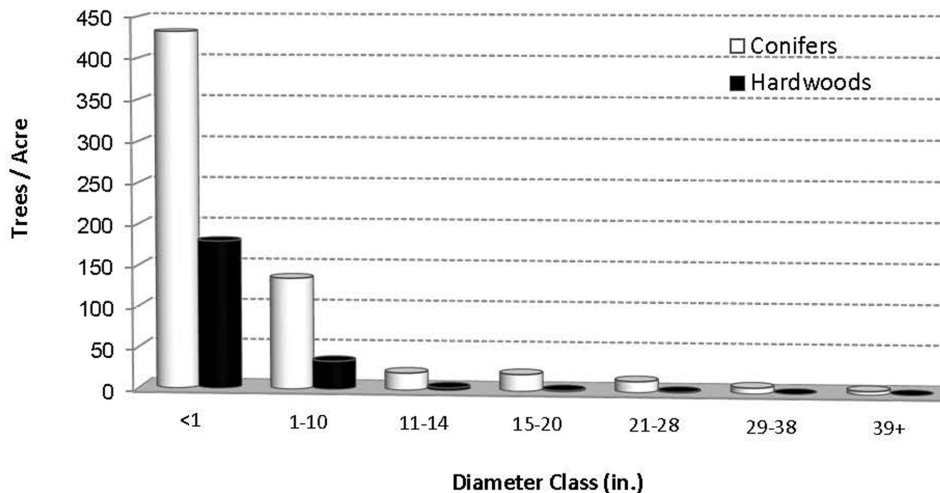
9. All of the following tables and figures were based on the 1999 inventory of half the groves in the Monument and the 2009 inventory of the remaining half. The regeneration data is from a

2009 inventory of all groves in the Monument. The rest of the data from 2009 have not been examined to date.

Appendix I—Giant Sequoia Inventory

Grove	Conifer TPA by Dia.Class (inch)								Hardwood TPA by Dia.Class (inch)							
	<1	1 - 10	11- 14	15- 20	21- 28	29- 38	39+	Tot.	<1	1- 10	11- 14	15- 20	21- 28	29- 38	39+	Tot.
Cunningham	788	69	28	15	7	6	3	915	406	0	0	0	0	0	0	406
Deer Meadow	180	111	16	16	7	3	3	334	125	19	5	2	0	0	0	150
Dillonwood	436	114	22	13	8	14	4	613	359	0	3	4	1	1	1	368
Evans	263	143	8	8	5	5	3	435	59	10	1	1	0	0	0	70
Freeman	546	172	12	14	9	6	6	765	188	8	1	0	0	0	0	197
Maggie Mtn	38	29	0	8	2	3	5	84	388	0	10	0	0	0	0	397
Middle Tule	90	46	13	13	8	11	8	189	60	29	0	0	0	0	0	89
Monarch	277	123	17	5	12	2	2	437	105	111	9	5	13	0	0	230
Silver Creek	504	105	32	23	9	6	1	682	238	64	8	9	4	0	0	322
South Peyrone	354	61	15	9	13	9	5	466	100	4	0	2	0	0	0	105
Upper Tule	483	42	0	11	4	10	14	563	0	0	0	0	0	0	0	0
Wishon	877	291	23	6	9	5	3	1213	550	74	16	5	4	2	0	650
Average	433	135	21	21	14	7	5	635	180	34	3	2	1	0	0	211

Figure 13 Number of Conifer and Hardwood Trees per Acre by Diameter Class (Average of All Groves)



Many groves now have an excessive buildup of surface and ladder fuels and a lack of openings needed for abundant regeneration. The average surface fuels, shown in the table and figure below, and the density of white fir, also shown in the third and fourth following table/figure, are currently about twice the amount desired for managing fuels and tree

species composition in a sequoia grove. The presence of a wide range of sizes and ages of incense cedar and white fir indicate that these shade tolerant species are a part of the natural giant sequoia ecosystems under a sporadic fire regime with return intervals that may have ranged from a few years to several hundred depending on the location and size.

Table 73 Current Surface Fuels and Standing Dead Trees (Snags)

Grove	Current Conditions (Mean Values)							
	Tons/ac. by Dia.Class (inch)						Snags	
	Duff	0-1	1.1- 3	3.1- 9	>9	Tot.	BA ft ² /a	TPA
Alder Creek	28	6	8	15	35	92	. ⁽¹⁾	.
Big Stump	17	2	2	2	31	54	.	.
Black Mountain	30	3	4	5	49	92	.	.
Cherry Gap	18	3	4	5	5	34	3	1
Converse Basin	22	3	5	5	20	53	20	6
Deer Creek	25	4	6	4	8	48	10	3
Grant Grove	27	2	2	4	24	59	.	.
Indian Basin	12	2	3	4	8	29	.	.
Landslide	17	4	6	8	15	51	32	8
Long Meadow	17	3	3	2	20	45	22	5
Mountain Home	26	5	7	10	27	75	.	.
Packsaddle	34	3	3	3	18	61	.	.
Peyrone	33	2	3	5	16	59	.	.
Red Hill	36	2	2	4	13	57	.	.
Redwood Mountain	19	2	3	4	17	45	.	.
Starvation	50	3	4	4	42	103	.	.

1. Currently, there is no data for cells missing numbers.

Grove	Current Conditions (Mean Values)							
	Tons/ac. by Dia.Class (inch)						Snags	
	Duff	0- 1	1.1- 3	3.1- 12	>12	Tot.	BA ft ² /a	TPA
Abbot	7	2	1	9	.	.	14	6
Agnew	7	2	3	11	.	.	37	12
Bearskin	7	2	2	12	.	.	17	5
Belknap	32	2	2	10	.	.	40	9
Burro Creek	16	2	2	9	.	.	97	12
Cunningham	10	1	2	11	.	.	54	15
Deer Meadow	3	2	2	9	.	.	38	11
Dillonwood	15	2	2	11	.	.	32	7
Evans	31	1	2	7	.	.	38	9
Freeman	14	2	2	9	.	.	71	8
Maggie Mountain	11	1	2	7	.	.	14	5

Grove	Current Conditions (Mean Values)							
	Tons/ac. by Dia.Class (inch)						Snags	
	Duff	0- 1	1.1- 3	3.1- 12	>12	Tot.	BA ft ² /a	TPA
Middle Tule	10	2	2	9	.	.	32	6
Monarch	2	1	2	7	.	.	42	14
Silver Creek	24	2	2	11	.	.	37	11
South Peyrone	10	1	2	9	.	.	98	14
Upper Tule	10	2	2	8	.	.	38	3
Wishon	11	2	2	10	.	.	26	6
Average 2009	13	2	2	9	.	.	43	9
Average 1999	26	3	4	5	22	60	17	5
Average all	19	2	3	7	22	54	30	7

Figure 14 Current Surface Fuels (Averages of 16 Groves from 1999)

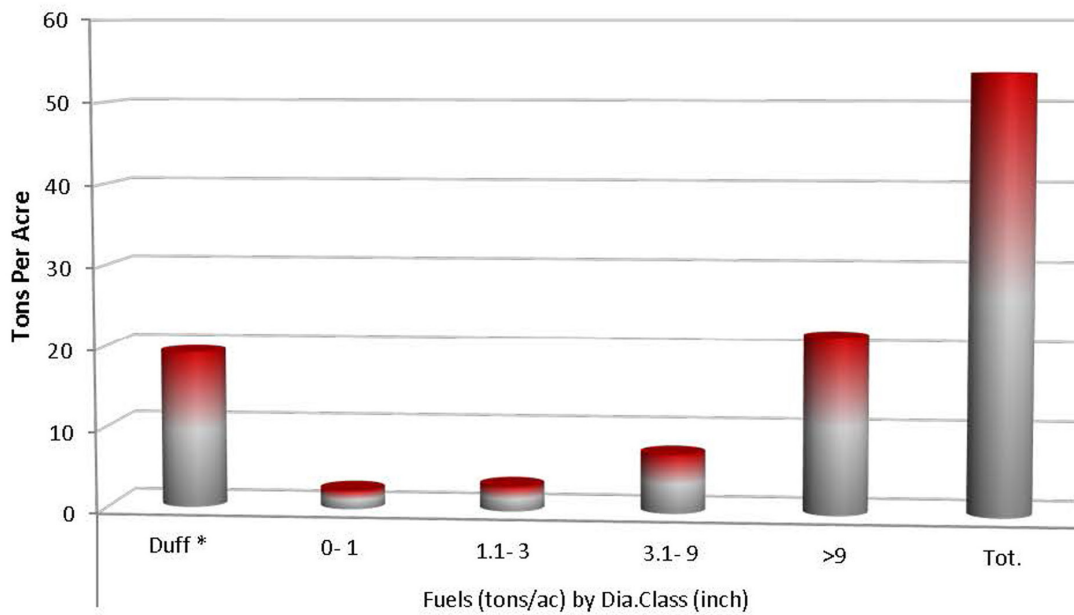
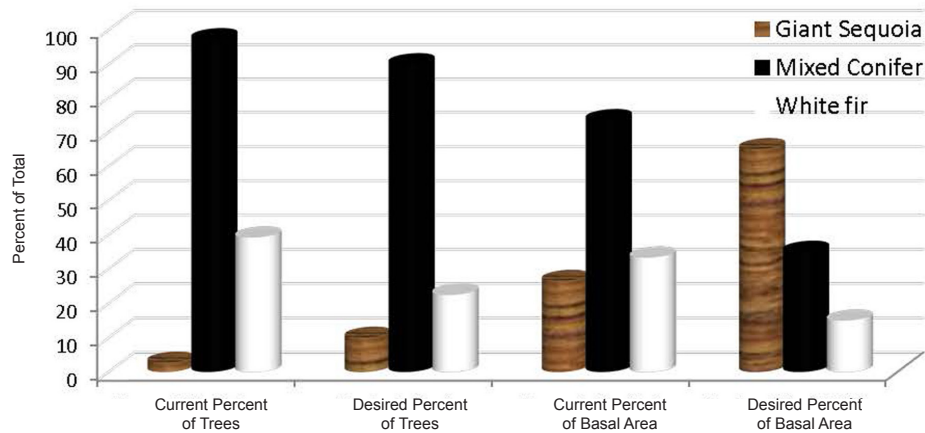


Table 74 Current and Desired Species Composition and Basal Area (BA)

Grove	Current Percent of Trees			Desired Percent of Trees			Current Percent of BA			Desired Percent of BA		
	GS	MC	WF	GS	MC	WF	GS	MC	WF	GS	MC	WF
Alder Creek	1.0	99	71	10	90	22.5	32	68	42	65	35	15
Big Stump	5.0	95	36	10	90	22.5	15	85	36	65	35	15
Black Mountain	4.0	96	52	10	90	22.5	20	80	47	65	35	15
Cherry Gap	1.0	99	0	10	90	22.5	4	96	0	65	35	15
Converse Basin	19.0	81	50	10	90	22.5	25	75	32	65	35	15
Deer Creek	1.0	100	37	10	90	22.5	23	77	28	65	35	15
Grant Grove	2.0	98	31	10	90	22.5	10	90	27	65	35	15
Indian Basin	9.0	91	25	10	90	22.5	20	80	22	65	35	15
Landslide	6.0	94	38	10	90	22.5	31	69	42	65	35	15
Long Meadow	3.0	98	41	10	90	22.5	46	54	14	65	35	15
Mountain Home	0.3	100	42	10	90	22.5	5	95	44	65	35	15
Packsaddle	1.0	99	61	10	90	22.5	40	60	45	65	35	15
Peyrone	1.0	99	48	10	90	22.5	6	94	46	65	35	15
Red Hill	3.0	97	72	10	90	22.5	59	41	23	65	35	15
Redwood Mountain	3.0	97	36	10	90	22.5	20	80	32	65	35	15
Starvation	4.0	96	44	10	90	22.5	2	98	45	65	35	15
Abbot	0.1	100	41.7	10	90	22.5	3	97	12	65	35	15
Agnew	0.2	100	86.4	10	90	22.5	23	77	69	65	35	15
Bearskin	11.5	89	53.8	10	90	22.5	18	82	34	65	35	15
Belknap	0.3	100	26.9	10	90	22.5	40	60	27	65	35	15
Burro Creek	2.7	97	29.7	10	90	22.5	58	42	27	65	35	15
Cunningham	0.2	100	14.1	10	90	22.5	26	74	31	65	35	15
Deer Meadow	0.7	99	48.1	10	90	22.5	49	51	33	65	35	15
Dillonwood	3.1	97	25.1	10	90	22.5	25	75	39	65	35	15
Evans	0.9	99	55.6	10	90	22.5	37	63	29	65	35	15
Freeman	0.3	100	46.8	10	90	22.5	49	51	29	65	35	15
Maggie Mtn	0.3	100	11.8	10	90	22.5	46	54	29	65	35	15
Middle Tule	3.6	96	9.4	10	90	22.5	41	59	46	65	35	15
Monarch	0.2	100	39.1	10	90	22.5	18	82	23	65	35	15
Silver Creek	0.8	99	31.7	10	90	22.5	13	87	33	65	35	15
South Peyrone	0.2	100	33.2	10	90	22.5	27	73	49	65	35	15
Upper Tule	1.7	98	26.3	10	90	22.5	44	56	38	65	35	15
Wishon	0.0	100	28	10	90	22.5	1	99	24	65	35	15
Average	3	97	39	10	90	23	26	74	33	65	35	15

Abbreviation key: GS=Giant Sequoia; MC=Mixed Conifer; WF=White Fir

Figure 15 Comparison of Current to Desired Species Composition and Density



Many groves currently have small sequoia trees scattered in small openings or other disturbed areas that may be 35 to 100 years old. The lack of recent disturbances over the last decade or more which exposes mineral soils and allows light to reach the ground, has resulted in many groves lacking natural sequoia regeneration less than twenty years old. The lack of more favorable rains or soil moisture during the summer and fall has likely been an additional factor in poor survival and growth of new seedlings. Sequoia planted during this time have survived and established well in the limited openings available for regeneration projects. White fir and incense cedar, which are well-adapted to extremes in soil moisture, temperature, and light conditions, are often abundant. These two species make up about 75 percent of the seedling sized trees in groves with black oak and sugar pine being the next most abundant, as shown in the following table. Giant sequoia seedlings and saplings may be abundant in occasional openings,

but are rare under mature canopies. With a lack of adequately disturbed soils and canopies, giant sequoia only averages about 1 seedling per acre over all groves combined. In 2009, the average number of mixed conifer tree seedlings, including black oak, was 444 trees per acre across 26 groves. A more desirable species mixture would contain 44 giant sequoia seedlings per acre or 10 percent of the total. Given the longevity of the species, the tendency to grow best in disturbances, and frequent droughts, it is not likely that sequoia regeneration would follow a smooth pattern of frequent, successful seedling establishment. It is likely that sequoia regenerates only during certain years when the site conditions and soil moisture are optimal. It is also likely that one or more decades are required between burning to enable a young sequoia to withstand the heat. Sporadic regeneration of the species in small groups or large even-aged cohorts is more an ecological trait than a concern in the groves of the Monument.

Table 75 Tree Species Composition—Total Number of Seedling and Sapling Sized Trees per Acre

Grove	Tree Seedlings/Acre by Species ⁽¹⁾										Tree Saplings/Acre by Species ⁽²⁾									
	GS	WF	RF	IC	PP	JP	SP	BO	oth	Tot.	GS	WF	RF	IC	PP	JP	SP	BO	oth	Tot.
Alder Creek	0	186	.	229	7	.	14	0	0	436	⁽³⁾
Big Stump	0	305	.	133	3	.	85	0	25	550	.	.	.	.	.	.	.	.	.	.
Black Mountain	3	0	.	0	0	.	0	0	0	3	.	.	.	.	.	.	.	.	.	.
Cherry Gap	0	30	.	20	0	.	0	0	0	50	.	.	.	.	.	.	.	.	.	.

Grove	Tree Seedlings/Acre by Species ⁽¹⁾										Tree Saplings/Acre by Species ⁽²⁾									
	GS	WF	RF	IC	PP	JP	SP	BO	oth	Tot.	GS	WF	RF	IC	PP	JP	SP	BO	oth	Tot.
Converse Basin	3	355	.	85	2	.	10	0	0	455	.	.	.	.	.	.	.	.	.	.
Deer Creek	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Grant Grove	0	365	.	205	0	.	105	0	0	675	.	.	.	.	.	.	.	.	.	.
Indian Basin	0	300	.	58	22	.	28	0	0	408	.	.	.	.	.	.	.	.	.	.
Land-slide	0	210	.	60	15	.	55	0	0	340	.	.	.	.	.	.	.	.	.	.
Long Meadow	3	0	.	0	0	.	0	0	0	3	.	.	.	.	.	.	.	.	.	.
Mountain Home	0	119	.	214	0	.	33	0	3	369	.	.	.	.	.	.	.	.	.	.
Pack-saddle	0	140	.	58	0	.	38	18	0	253	.	.	.	.	.	.	.	.	.	.
Peyrone	0	113	.	90	7	.	7	0	0	217	.	.	.	.	.	.	.	.	.	.
Red Hill	1	0	.	0	0	.	0	0	0	1	.	.	.	.	.	.	.	.	.	.
Redwood Mountain	2	661	.	708	25	.	107	0	2	1506	.	.	.	.	.	.	.	.	.	.
Starvation	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Abbot	0	356		275	0		63	25	0	719	0	31		88	0		6	13	138	275
Agnew	0	6		6	17		0	6	0	33	0	28		0	0		0	0	28	56
Bearskin	20	443	0	150	0	0	77	30	0	720	80	33	0	37	3	0	3	0	0	157
Belknap	0	268	4	223	1	0	198	378	13	1085	1	79	1	101	4	0	3	43	0	232
Burro Creek	5	182	0	264	0	0	46	186	5	687	0	41	0	18	0	0	0	0	46	105
Cunningham	0	100	0	194	0	0	469	406	0	1169	0	50	0	44	0	0	0	0	0	94
Deer Meadow	0	131		29	3		7	125	4	299	0	42		16	0		2	11	79	150
Dillonwood	5	132		232	5		64	355	0	791	5	73		23	0		0	0	100	200
Evans	1	174	1	58	2	3	24	59	0	322	1	82	1	31	1	1	12	8	0	137
Freeman	0	299		74	4		135	181	0	693	0	95		40	11		10	15	170	340
Maggie Mountain	0	19		0	0		0	344	0	363	0	19		0	0		6	44	69	138
Middle Tule	0	58		20	0		10	60	0	148	0	38		3	0		0	25	65	130
Monarch	0	191		41	0		36	105	9	382	0	41		18	5		23	32	118	236

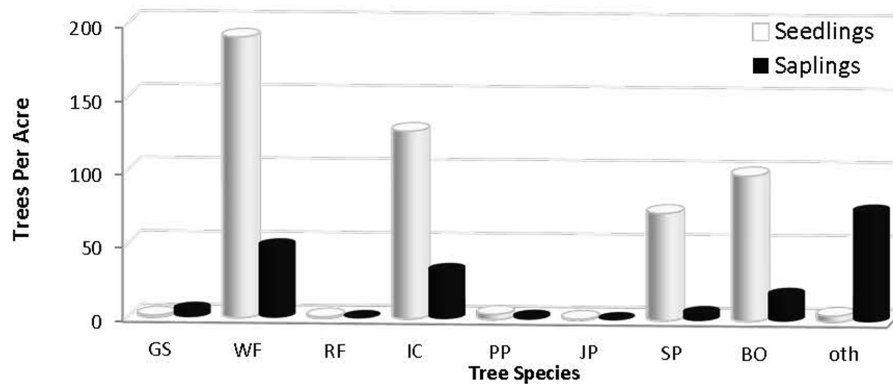
1. Tree seedlings are less than 1 inch diameter breast height (dbh).
2. Tree saplings are 1 to 4.9 inches dbh.
3. Currently, there is no data for cells missing numbers.

Appendix I—Giant Sequoia Inventory

Grove	Tree Seedlings/Acre by Species ⁽¹⁾										Tree Saplings/Acre by Species ⁽²⁾									
	GS	WF	RF	IC	PP	JP	SP	BO	oth	Tot.	GS	WF	RF	IC	PP	JP	SP	BO	oth	Tot.
Silver Creek	0	242		150	0		104	233	0	729	0	25		54	0		4	42	125	250
South Peyrone	0	107		29	0		207	21	0	364	0	14		11	0		0	4	29	57
Upper Tule	0	92		0	0		250	0	0	342	0	33		0	0		0	0	33	67
Wishon	0	347		357	0		103	543	67	1417	0	107		77	0		13	67	277	540
Average	1	191	1	128	4	0.7	73	99	4	501	5	49	0.3	33	1	0.3	5	18	75	186

Abbreviation key: GS=giant sequoia, WF=white fir, RF=red fir, IC=incense cedar, PP=ponderosa pine, SP=sugar pine, BO=black oak, JP=Jeffrey pine, oth=other trees including canyon live oak and other hardwoods. Other trees in Cherry gap are mostly willow.

Figure 16 Number of Small Trees per Acre in Groves (Averages of All Groves)



The greatest scientific concern in most groves is not sequoia regeneration, but the heavy buildup of surface and ladder fuels which could do serious damage to existing larger trees. Associated with this is the abundant ingrowth of white fir and incense cedar. These more shade tolerant species reduce the growth of other tree species by using soil moisture, crowding the growing space, and casting shade. They also serve as ladder fuels which could damage or kill the crowns of the largest trees. Tree mortality follows a pattern common in most forests where most dead trees are smaller and suppressed. The current inventory shows an average of 15 standing dead trees per acre over all groves. About 20 percent of these are dominant or larger trees. Similarly, less than 30 percent of the dead, fallen trees are over 24 inches in diameter, as

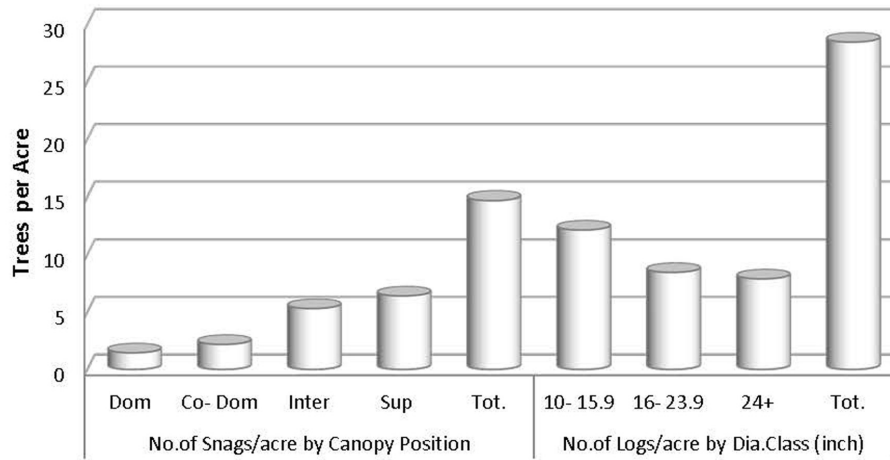
shown in the following table. The high mortality (42 standing snags per acre) of larger white fir, sugar pine, incense cedar, and black oak in the Mountain Home Grove is most likely due to overcrowding, drought, and insects. Higher mortality such as this can be expected in many groves given the current drought, future predictions that we may see warmer and drier growing conditions, increasingly higher densities of trees, and older pines, oaks, cedars, and firs. Higher tree mortality in groves such as Alder Creek (56 snags per acre) and Mountain Home will likely contribute to a higher fuels loading. Alder Creek and Mountain Home groves in 1999 already had total fuel loads of 92 and 75 tons per acre, respectively. The desired amount of fuel loading for these groves is 31 tons per acre.

Table 76 Standing Dead Conifer Trees (Snags) by Forest Canopy Position and Fallen Conifer Trees (Logs) by Diameter Class

Grove	No. of Snags/acre by Canopy Position					No. of Logs/acre by Dia. Class (inch)			
	Dom ⁽¹⁾	Co-Dom	Inter	Sup	Tot.	10- 15.9	16- 23.9	24+	Tot.
Alder Creek	3	3	5	44	56	24	20	15	59
Big Stump	1	4	6	1	12	8	8	6	22
Black Mountain	3	3	6	23	35	15	8	16	39
Cherry Gap	.	.	.	.	1	9	10	3	22
Converse Basin	1	2	3	0	6	6	7	9	22
Deer Creek	0	1	1	1	3	2	2	2	6
Grant Grove	1	3	4	1	10	10	5	5	20
Indian Basin	0	3	9	2	14	19	9	5	33
Landslide	.	.	.	.	8	7	9	10	26
Long Meadow	1	1	1	1	4	3	2	6	11
Mountain Home	18	3	5	16	42	26	18	13	57
Packsaddle	1	2	3	0	7	8	4	7	19
Peyrone	2	3	14	6	25	14	10	9	33
Red Hill	2	3	11	48	64	13	8	6	27
Redwood Mtn	1	3	11	15	29	21	6	6	33
Starvation	1	3	8	1	12	9	9	8	26
Abbot	0	3	3	0	6	.	.	.	.
Agnew	0	4	5	3	12	.	.	.	.
Bearskin	0	2	2	1	5	.	.	.	.
Belknap	0	2	8	0	10	.	.	.	.
Burro Creek	2	3	3	4	12	.	.	.	.
Cunningham	2	2	1	10	15	.	.	.	.
Deer Meadow	0	1	10	0	11	.	.	.	.
Dillonwood	1	5	2	0	8	.	.	.	.
Evans	0	0	5	4	9	.	.	.	.
Freeman	0	1	4	4	9	.	.	.	.
Maggie Mtn	0	1	4	1	5	.	.	.	.
Middle Tule	0	3	2	1	6	.	.	.	.
Monarch	0	2	11	1	14	.	.	.	.
Silver Creek	2	2	7	1	11	.	.	.	.
South Peyrone	0	2	9	4	15	.	.	.	.
Upper Tule	1	0	0	2	3	.	.	.	.
Wishon	1	0	2	3	6	.	.	.	.
Average	1	2	5	6	15	12	8	8	28

1. Canopy position: Dom=dominant, Codom=codominant, Inter=intermediate, Sup=suppressed

Figure 17 Standing and Fallen Dead Trees in Groves (Averages of 33 Groves for Snags and 16 Groves for Logs)



The following tables and figures show more data for tree species composition, tree density, and canopy

cover and height for the giant sequoia groves in the Monument.

Table 77 Tree Species Composition as a Proportion of Basal Area and Total Number of Trees

Grove	Tree Species Composition Percent Basal Area								Tree Species Composition Percent Total Trees							
	GS	WF	IC	PP	SP	BO	JP	oth	GS	WF	IC	PP	SP	BO	JP	oth
Alder Creek	32	42	13	0	6	0	0	7	1.0	71	14	0	5	0	0	9
Big Stump	15	36	15	5	29	0	0	0	5.0	36	39	3	17	0	0	0
Black Mountain	20	47	10	1	17	0	0	5	4.0	52	17	4	12	0	0	11
Cherry Gap	4	0	1	34	0	18	35	8	1.0	0	4	23	0	8	10	54
Converse Basin	25	32	10	10	17	5	0	1	19.0	50	14	6	5	5	1	0
Deer Creek	23	28	33	1	8	6	0	1	1.0	37	45	1	7	10	0	0
Grant Grove	10	27	27	5	29	2	0	0	2.0	31	47	5	12	3	0	0
Indian Basin	20	22	22	29	7	0	0	0	9.0	25	43	14	8	0	0	1
Landslide	31	42	18	1	5	0	0	3	6.0	38	28	6	7	0	0	15
Long Meadow	46	14	6	6	5	1	0	22	3.0	41	18	32	5	2	0	0
Mountain Home	5	44	19	2	23	0	0	7	0.3	42	29	1	19	0	0	9
Packsaddle	40	45	7	1	7	0	0	0	1.0	61	32	1	5	0	0	0
Peyrone	6	46	17	1	13	0	0	17	1.0	48	20	1	7	0	0	23
Red Hill	59	23	6	2	9	0	0	1	3.0	72	13	7	4	0	0	1
Redwood Mtn	20	32	32	10	5	0	0	1	3.0	36	53	4	4	0	0	0
Starvation	2	45	46	1	6	0	0	0	4.0	44	43	4	5	0	0	0
Abbot	3	12	37	0	42	0	5	0	0.1	42	45	0	9	4	0	0
Agnew	23	69	0	3	5	0	0	0	0.2	86	2	8	0	2	0	0
Bearskin	18	34	16	0	30	3	0	0	11.5	54	21	0	10	4	0	0
Belknap	40	27	18	3	7	5	0	1	0.3	27	27	1	14	30	0	1
Burro Creek	58	27	9	1	5	0	0	0	2.7	30	35	0	6	21	0	6
Cunningham	26	31	13	4	27	0	0	0	0.2	14	18	0	37	31	0	0

Grove	Tree Species Composition Percent Basal Area								Tree Species Composition Percent Total Trees							
	GS	WF	IC	PP	SP	BO	JP	oth	GS	WF	IC	PP	SP	BO	JP	oth
Deer Meadow	49	33	10	1	1	4	1	0	0.7	48	14	1	2	31	1	2
Dillonwood	25	39	15	2	10	9	0	0	3.1	25	27	1	7	37	0	0
Evans	37	29	13	3	13	1	4	0	0.9	56	19	1	8	14	1	0
Freeman	49	29	6	4	8	0	1	3	0.3	47	13	2	16	20	0	2
Maggie Mtn	46	29	0	0	16	6	3	0	0.3	12	0	0	2	33	0	53
Middle Tule	41	46	5	0	5	1	0	3	3.6	9	17	0	10	59	0	1
Monarch	18	23	16	6	10	27	0	0	0.2	39	14	1	10	34	0	1
Silver Creek	13	33	28	2	5	20	0	0	0.8	32	24	0	11	32	0	1
South Peyrone	27	49	17	0	5	1	0	1	0.2	33	8	0	37	5	0	17
Upper Tule	44	38	0	0	0	0	0	19	1.7	26	0	0	44	0	0	28
Wishon	1	24	38	4	6	23	0	4	0.0	28	27	0	7	35	0	4
Average	26	33	16	4	11	4	2	3	3	39	23	4	11	13	0	7

Abbreviation key: GS=giant sequoia, WF=white fir, IC=incense cedar, PP=ponderosa pine, SP=sugar pine, BO=black oak, JP=Jefferey pine, oth=other trees including canyon live oak and other hardwoods. Other trees in Cherry gap are mostly willow.

Figure 18 Grove Species Composition—Percent Basal Area and Total Trees (Average of All Groves)

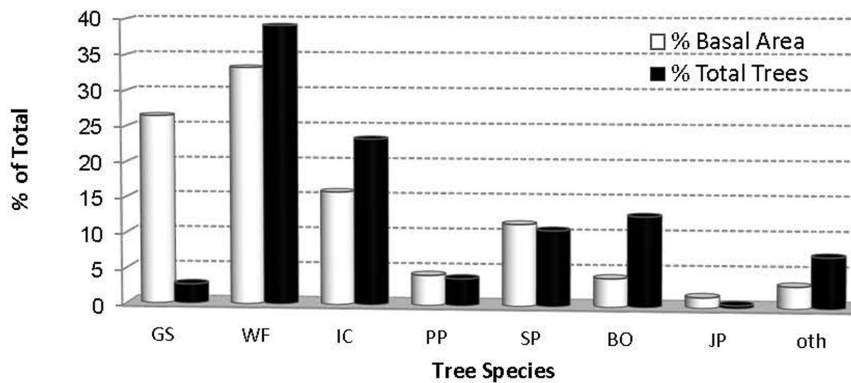


Table 78 Tree Density (Combined Species)—Basal Area (BA) per Acre by Diameter Class

Grove	BA (ft ² /ac) by Diameter Class (inch)						
	1-10	11-14	15-20	21-28	29-38	39+	Total
Alder Creek	47	31	55	77	3	145	358
Big Stump	9	16	30	70	76	102	303
Black Mountain	45	31	52	64	58	142	392
Cherry Gap	42	14	10	0	5	0	71
Converse Basin	29	19	35	45	39	43	210
Deer Creek	14	33	45	71	45	89	297
Grant Grove	16	24	45	63	37	57	242
Indian Basin	10	16	46	83	54	37	246
Landslide	23	31	26	46	41	152	319
Long Meadow	11	19	14	17	14	301	376

Appendix I—Giant Sequoia Inventory

Grove	BA (ft ² /ac) by Diameter Class (inch)						Total
	1-10	11-14	15-20	21-28	29-38	39+	
Mountain Home	35	46	90	95	67	67	400
Packsaddle	16	15	28	33	23	120	235
Peyrone	42	40	77	69	45	71	344
Red Hill	32	18	61	55	37	389	592
Redwood Mountain	27	28	41	64	46	47	254
Starvation	29	16	26	33	40	31	175
Abbot	19	10	35	40	37	39	180
Agnew	34	36	62	36	27	97	291
Bearskin	12	13	21	37	36	49	169
Belknap	33	22	38	39	42	128	302
Burro Creek	17	15	33	44	45	223	376
Cunningham	2	25	25	25	40	46	163
Deer Meadow	24	18	29	22	15	123	231
Dillonwood	13	3	29	29	91	70	254
Evans	11	8	14	18	29	87	165
Freeman	17	12	24	29	39	207	329
Maggie Mountain	5	10	15	5	16	111	162
Middle Tule	8	12	24	28	70	186	327
Monarch	46	22	15	44	11	42	180
Silver Creek	31	37	57	43	36	17	220
South Peyrone	10	14	20	43	55	121	263
Upper Tule	2	0	20	13	61	236	333
Wishon	43	35	19	43	41	43	224
Average	23	21	35	43	40	110	272

Figure 19 Basal Area—All Species (Average of All Groves)

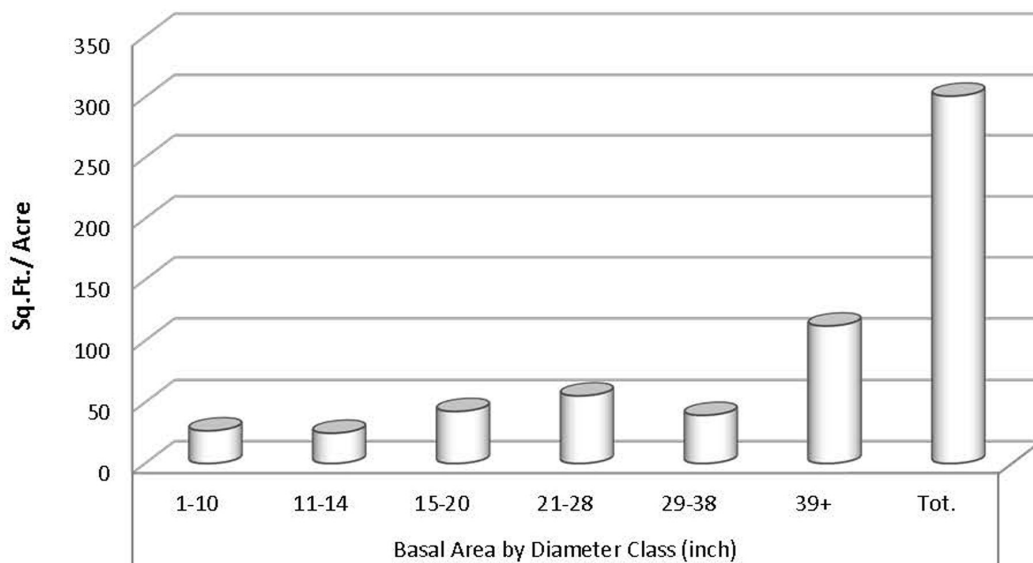


Table 79 Forest Vegetation Canopy Cover (cc) and Height (ht) by Vegetation Group

Grove	Conifer		Hardwood		Shrub		Forb		Grass		Total Tree	Total Oth
	cc %	Ht (ft)	cc %	Ht (ft)	cc %	Ht (ft)	cc %	Ht (ft)	cc %	Ht (ft)	cc %	cc %
Alder Creek	78	103	34	46	15	6	16	1	1	1	113	32
Big Stump	71	111	16	57	19	3	5	1	2	1	87	26
Black Mountain	64	104	11	33	27	5	9	1	1	1	75	37
Cherry Gap	29	46	42	31	42	5	12	1	12	1	71	66
Converse Basin	67	79	27	38	56	3	8	1	1	1	94	65
Deer Creek	75	95	22	60	1	1	25	.	1	.	97	27
Grant Grove	59	89	6	53	33	2	7	1	1	1	65	41
Indian Basin	62	96	0	.	14	3	14	1	3	1	62	31
Landslide	68	97	1	19	13	3	4	1	2	1	69	19
Long Meadow	71	182	7	49	40	2	10	.	5	.	78	55
Mountain Home	63	92	24	34	18	4	18	1	1	1	87	37
Packsaddle	55	110	10	50	30	4	17	1	1	1	65	48
Peyrone	55	86	36	33	20	5	5	1	1	1	91	26
Red Hill	95	149	5	32	20	3	5	1	1	1	100	26
Redwood Mountain	66	84	20	49	35	5	3	1	1	1	86	39
Starvation	54	82	15	45	13	5	39	1	3	1	69	55
Abbot	45	30	3	3	.	.	.	.	.	.	48	.
Agnew	55	59	0	1	.	.	.	.	.	.	55	.
Bearskin	38	8	6	4	.	.	.	.	.	.	44	.
Belknap	42	28	24	3	.	.	.	.	.	.	66	.
Burro Creek	55	22	2	6	.	.	.	.	.	.	57	.
Cunningham	37	39	0	1	.	.	.	.	.	.	37	.
Deer Meadow	35	28	15	3	.	.	.	.	.	.	50	.
Dillonwood	37	15	19	2	.	.	.	.	.	.	56	.
Evans	34	23	4	2	.	.	.	.	.	.	38	.
Freeman	50	36	3	1	.	.	.	.	.	.	53	.
Maggie Mtn	24	40	14	1	.	.	.	.	.	.	38	.
Middle Tule	44	43	6	3	.	.	.	.	.	.	50	.
Monarch	15	34	55	9	.	.	.	.	.	.	70	.
Silver Creek	23	30	44	6	.	.	.	.	.	.	67	.
South Peyrone	42	34	3	3	.	.	.	.	.	.	45	.
Upper Tule	45	22	0	0	.	.	.	.	.	.	45	.
Wishon	24	53	48	3	.	.	.	.	.	.	72	.
Average	51	65	16	21	25	4	12	1	2	1	67	39

Figure 20 Vegetation Canopy Cover and Height in Groves (Average of 16 Groves in 1999)

