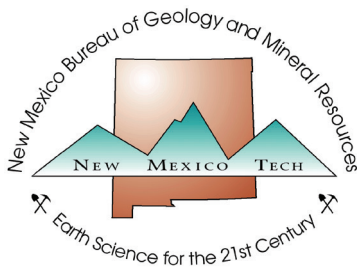# APPENDIX B

NMFWRI Field Inventory Summary for Three L Canyon, pre-treatment (2008 and 2009) and post-treatment (2013)

These documents describe efforts and results from surveys conducted by the New Mexico Forest and Watershed Restoration Institute at Highlands University.

Coleman Ranch
Field Inventory Summary
August 2008
New Mexico Forest and Watershed Restoration Institute

Introduction:

The NMFWRI inventory and monitoring crew sampled 39 points within the Coleman Ranch study boundary during June 2008 (550 acres, Figure 1). The original layout of sampling points (an evenly spaced grid) was altered in the field so that plot locations were not centered on roads or skid trails. In addition, we moved points originally located on the western boundary of the sub-watershed so that they fell on the ridge or the downhill side of the ridge at the top of the sub-watershed (points 1, 4, 8, 12, 17, 21, 31, 37).
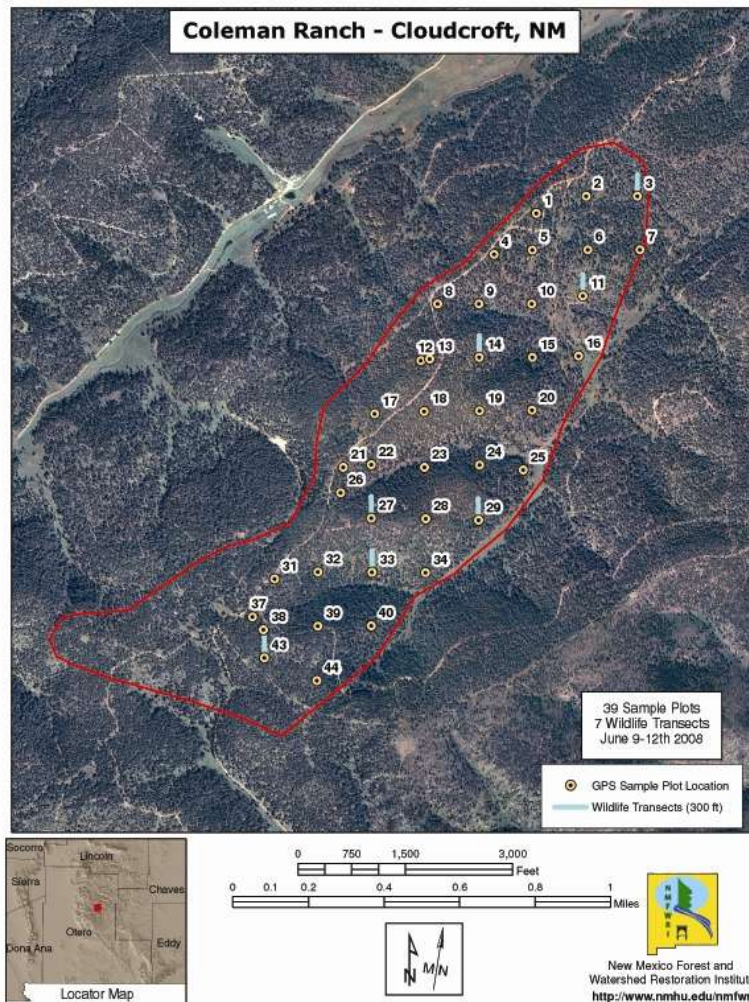

Figure 1. The Coleman Ranch watershed boundary and NMFWRI sampling areas.

The NMFWRI crew followed the Department of Interior's FFI sampling protocols and used 1/20th acre fixed plots to estimate tree size (diameter and total height) and density, understory and ground cover, fuel loadings, live crown base heights, and other variables including wildlife pellet counts. Photopoints were also taken at each plot. All the raw data sheets and photopoints will be provided to the Coleman Ranch, and the goal of this report is to summarize this information in a concise manner.

Results:

Over the entire sampling area, there was an average of 312 trees per acre and the average basal area was 86 ft^2/acre (Table 1). For piñon, juniper, and oak, we estimated basal area from root collar diameters using equations developed by Chojnacky and Roger (1999). For individual species, Douglas-fir was the most frequently encountered species (103 per acre), followed by ponderosa pine (58), white fir (41), southwestern white pine (31), piñon (30), oak (2 species, 23), and juniper (mostly alligator, 19). There were eleven tree species growing throughout the sampling area. The spatial distribution of trees varied over the study site and was most dense near the springs at sample point 25 (Figure 2).

Table 1. Summary of tree component at Coleman Ranch.

Average Trees/Acre (>4.5 ft.)	Average Basal (ft²/acre)	Live Crown Base Height (ft)
312	86	11.5
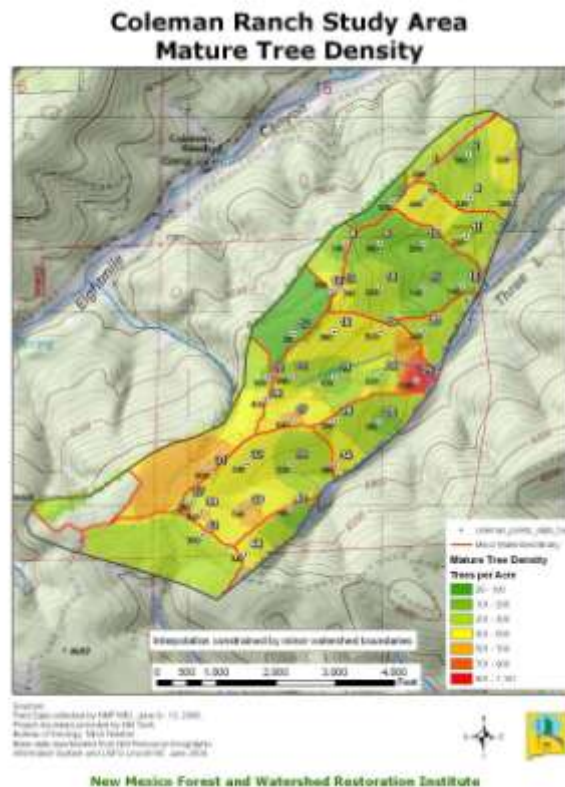
Figure 2. Tree densities across the Coleman Ranch sampling area.

There were large numbers of seedlings throughout the sampling area, and the seedling class was dominated by oak (Table 2). Although there were a large number of dead trees (50/acre), most of these snags had small diameters, and there were 9 snags per acre with a DBH greater than 8 inches. The majority of dead trees were small diameter Douglas-fir, ponderosa, or oak.

Table 2. Summary of the seedling and snag component at the Coleman Ranch.

Average Seedlings/Acre (<4.5 ft.)	*Quercus* seedlings/Acre	Snags (# per acre)
4656	3964	50

In terms of ground cover across all the sampling points for the eastern unit, average grass cover was 27% of the sampling plots, down and dead wood 15%, and bare soil 4%. Average shrub cover equaled only 3%.

Fuel loadings (1, 10, 100, or 1000 hour fuels plus duff and litter) were estimated by running a Brown's transect 75 feet due north from plot center. Across all 39 plots, there was an average of 26 tons of fuel per acre, one of the highest fuel loadings that we have encountered this field season. Surface fuels were highest in the southern part of the study site, near points 33 and 39 (Figure 3).
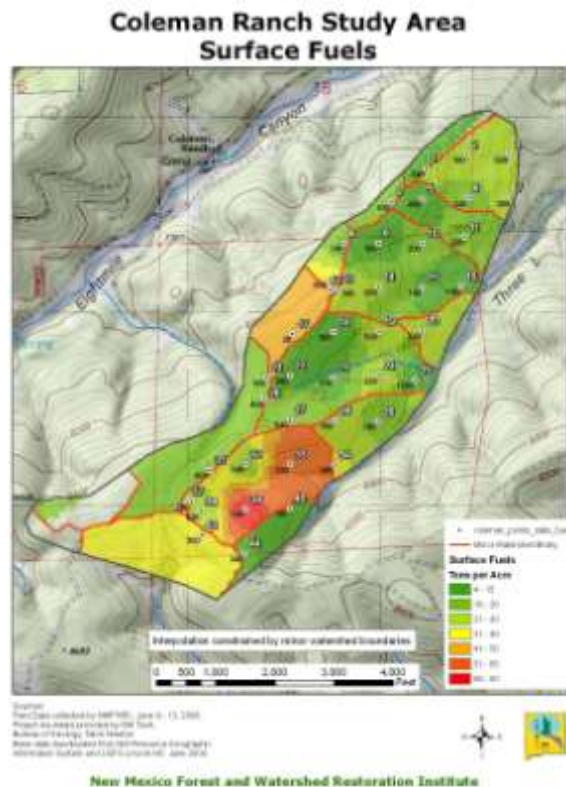
Figure 3. **Surface fuels (tons per acre) across the study site**.

Wildlife pellet counts were obtained at seven of the points in the sub-watershed (3, 11, 14, 27, 29, 33, 43). For these counts, we ran a 300 foot transect due north of plot center, and counted pellet groups (minimum of 5 pellets per group) from 10 feet on both sides of the transect center line. Pellets were removed once they were counted. Across all seven transects, average pellet counts (per acre) were 136 for mule deer, 607 for elk, 1 for cattle, 5 for horse, 1 for bear, and 20 for rabbit. The deer and elk counts are the highest that we have encountered this field season.

Photographs were taken at each plot and these photos will be delivered on a CD accompanying this report.

NMFWRI student intern Estevan Martinez measuring a Douglas-fir diameter at the Coleman Ranch.

Introduction:

The NMFWRI inventory and monitoring crew sampled 27 points within the Coleman Ranch study boundary during July 2009 (359 acres, Figure 1). The 2009 study area was located east of the 2008 study area.
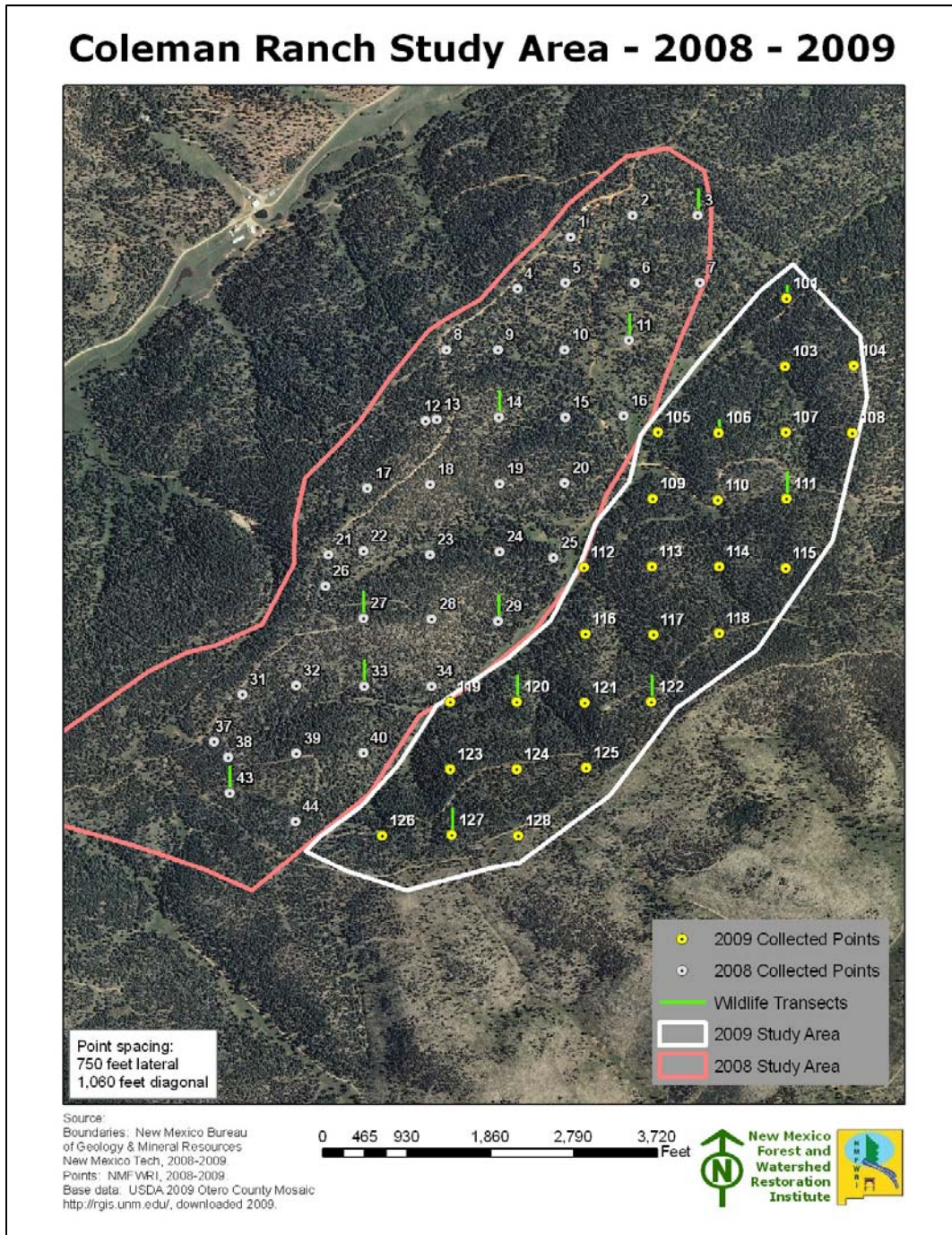
Figure 1. The Coleman Ranch study areas and NMFWRI sampling areas.

The NMFWRI crew followed the Department of Interior's FFI sampling protocols and used $1/20^{th}$ acre fixed plots to estimate tree size (diameter and total height) and density, understory and ground cover, fuel loadings, and other variables including wildlife pellet counts. Photo points were also taken at each plot. All the raw data and photo points will be provided to the Coleman Ranch, and the goal of this report is to summarize this information in a concise manner.

Results:

Over the entire sampling area, there was an average of 300 trees per acre and the average basal area was 83 ft^2/acre (Table 1). For piñon, juniper, and oak, we estimated basal area from root collar diameters using equations developed by Chojnacky and Roger (1999). For individual species, southwestern white pine was the most frequently encountered species (79.2) trees per acre), followed by Douglas-fir (75.5), white fir (57.7), gamble oak (44.4), ponderosa pine (28.1), two-needle piñon (9.6), alligator juniper (4.4), and ash (2.2) (Tables 2 and 3).

Table 1. Summary of tree component at Coleman Ranch.

Stand Total		Saplings			Pole			Tree or Sawlog							Total by Class
Diameter Class		0	2	4	6	8	10	12	14	16	18	20	22	24	
Growing Stock	COUNT	55	92	73	57	53	34	14	11	6	4	4	2	1	406.00
	TPA	40.74	68.15	54.07	42.22	39.26	25.19	10.37	8.15	4.44	2.96	2.96	1.48	0.74	300.74
	BA/AC	0.08	1.57	4.46	8.01	13.41	13.29	7.91	8.53	6.24	5.08	6.45	3.67	2.21	80.91
	AVE HT, H_L	8	15	23	29	39	44	51	55	63	61	74	93	91	
Summary by Size Class	TPA	162.96			106.67			31.11							300.74
	TPA %	54.19%			35.47%			10.34%							100.00%
	BA/AC	6.10			34.71			40.09							80.91
	BA/AC %	7.54%			42.90%			49.56%							100.00%
	QMD MEAN DIA.	2.62			7.72			15.37							7.02
	AVE HT, H_L	21			39			65							50
Dead	COUNT	22	34	11	12	6	5	6	1	0	0	3	0	1	101.00
	TPA	16.30	25.19	8.15	8.89	4.44	3.70	4.44	0.74	0.00	0.00	2.22	0.00	0.74	74.81
	BA/AC	0.03	0.55	0.72	1.81	1.57	1.93	3.37	0.85	0.00	0.00	4.73	0.00	2.33	17.88
	AVE HT, H_L	7	13	17	32	29	40	38	43	0.00	0.00	15	0.00	74	34

The high number of seedlings is comprised almost entirely of gamble oak. Snags were dominated by Douglas-fir (29 per acre), gamble oak (20), and southwestern white pine (8) in the sample area.

All tree data for Coleman Ranch were divided into woodland and forestland species and were organized by diameter class. Tables with complete data are found in Tables 2 and 3.

Table 2. Woodland Species by Diameter Class Coleman Ranch

Woodland Species		Saplings			Pole			Mature Trees							Total by Species	%Species for all G-Stock
Diameter Class		0	2	4	6	8	10	12	14	16	18	20	22	24		
PIED Pinon pine	COUNT	3	4	4	1	0	1	0	0	0	0	0	0	0	13.00	
	TPA	2.22	2.96	2.96	0.74	0.00	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.63	3.20%
	BA/AC	0.01	0.09	0.25	0.19	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.91	1.13%
	AVE HT. (H_L)	7	19	21	23	0.00	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
JUDE2 Alligator juniper	COUNT	3	2	0	0	0	1	0	0	0	0	0	0	0	6.00	
	TPA	2.22	1.48	0.00	0.00	0.00	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.44	1.48%
	BA/AC	0.00	0.02	0.00	0.00	0.00	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.46%
	AVE HT. (H_L)	5	11	0.00	0.00	0.00	27	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
QUGA Gambel oak	COUNT	23	19	8	3	0	2	2	2	0	0	0	0	0	59.00	
	TPA	17.04	14.07	5.93	2.22	0.00	1.48	1.48	1.48	0.00	0.00	0.00	0.00	0.00	43.70	14.53%
	BA/AC	0.03	0.21	0.42	0.40	0.00	0.83	1.19	1.50	0.00	0.00	0.00	0.00	0.00	4.59	5.67%
	AVE HT. (H_L)	10	14	18	22	0.00	33	44	38	0.00	0.00	0.00	0.00	0.00		
FRAXI Ash species	COUNT	0	2	1	0	0	0	0	0	0	0	0	0	0	3.00	
	TPA	0.00	1.48	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.22	0.74%
	BA/AC	0.00	0.02	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.08%
	AVE HT. (H_L)	0.00	14	23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Woodland Species Sub-total	COUNT	29	27	13	4	0	4	2	2	0	0	0	0	0	81.00	
	TPA	21.48	20.00	9.63	2.96	0.00	2.96	1.48	1.48	0.00	0.00	0.00	0.00	0.00	60.00	19.95%
	BA/AC	0.04	0.34	0.72	0.59	0.00	1.56	1.19	1.50	0.00	0.00	0.00	0.00	0.00	5.94	7.35%
	AVE HT. (H_L)	9	15	20	22	0.00	31	44	38	0.00	0.00	0.00	0.00	0.00		
Summary by Size Class for Woodland Species	TPA		51.11			5.93				2.96					60.00	
	TPA %		85.19%			9.88%				4.94%					100.00%	
	BA/AC		1.10			2.15				2.69					5.94	
	BA/AC %		18.55%			36.20%				45.26%					100.00%	
	QUADRATIC MEAN DIA.		1.99			8.16				12.90					4.26	
	AVE HT. (H_L)		18			29				41					32	

Table 3. Forestland Species by Diameter Class Coleman Ranch

Forestland Species		Saplings			Pole			Mature Trees							Total by Species	%Species for all G-Stock
Diameter Class		0	2	4	6	8	10	12	14	16	18	20	22	24		
ABCO White fir	COUNT	7	21	10	10	12	4	4	4	2	2	0	1	1	78.00	
	TPA	5.19	15.56	7.41	7.41	8.89	2.96	2.96	2.96	1.48	1.48	0.00	0.74	0.74	57.78	19.21%
	BA/AC	0.01	0.35	0.62	1.27	3.08	1.51	2.23	3.18	2.13	2.71	0.00	1.82	2.21	21.10	26.08%
	AVE HT. (H_L)	6.95	12.33	21.74	27.31	37.93	46.02	53.28	60.53	63.09	61.93	0.00	103.00	91.00		
PIPO Ponderosa pine	COUNT	2	8	7	5	9	4	0	2	0	0	0	1	0	38.00	
	TPA	1.48	5.93	5.19	3.70	6.67	2.96	0.00	1.48	0.00	0.00	0.00	0.74	0.00	28.15	9.36%
	BA/AC	0.00	0.18	0.35	0.64	2.39	1.45	0.00	1.57	0.00	0.00	0.00	1.85	0.00	8.43	10.42%
	AVE HT. (H_L)	6.00	17.41	22.85	26.36	39.06	41.87	0.00	58.47	0.00	0.00	0.00	83.00	0.00		
PSME Douglas-fir	COUNT	5	12	20	22	17	13	5	1	2	1	4	0	0	102.00	
	TPA	3.70	8.89	14.81	16.30	12.59	9.63	3.70	0.74	1.48	0.74	2.96	0.00	0.00	75.56	25.12%
	BA/AC	0.01	0.30	1.23	3.16	4.22	5.29	2.79	0.70	2.05	1.18	6.45	0.00	0.00	27.40	33.87%
	AVE HT. (H_L)	6.70	16.35	22.81	29.10	39.09	48.87	52.88	45.00	67.22	56.00	73.63	0.00	0.00		
PIST3 SW white pine	COUNT	12	24	23	16	15	9	3	2	2	1	0	0	0	107.00	
	TPA	8.89	17.78	17.04	11.85	11.11	6.67	2.22	1.48	1.48	0.74	0.00	0.00	0.00	79.26	26.35%
	BA/AC	0.01	0.40	1.54	2.34	3.72	3.47	1.71	1.57	2.06	1.20	0.00	0.00	0.00	18.02	22.27%
	AVE HT. (H_L)	6.41	16.55	24.91	32.30	39.71	42.15	49.19	63.79	60.09	65.00	0.00	0.00	0.00		
Forestland Species Sub-total	COUNT	26	65	60	53	53	30	12	9	6	4	4	2	1	325.00	
	TPA	19.26	48.15	44.44	39.26	39.26	22.22	8.89	6.67	4.44	2.96	2.96	1.48	0.74	240.74	80.05%
	BA/AC	0.03	1.23	3.74	7.42	13.41	11.73	6.72	7.03	6.24	5.08	6.45	3.67	2.21	74.96	92.65%
	AVE HT. (H_L)	7	15	23	30	39	46	52	59	63	61	74	93	91		
Summary by Size Class for Forestland Species	TPA		111.85			100.74				28.15						240.74	
	TPA %		46.46%			41.85%				11.69%						100.00%	
	BA/AC		5.00			32.56				37.40						74.96	
	BA/AC %		6.67%			43.43%				49.90%						100.00%	
	QUADRATIC MEAN DIA.		2.86			7.70				15.61						7.56	
	AVE HT. (H_L)		21			39				67						52	

Table 4. Individual Plot Summary Table

Macro Plot Name	Number of Trees Both Live and Dead	Growing Stock # of Live Trees	Trees per Acre	Basal Area per Acre
101	24	18	360	73.96
103	4	3	60	72.28
104	7	6	120	36.06
105	20	20	400	42.14
106	47	42	840	151.90
107	16	15	300	105.20
108	17	16	320	60.24
109	19	7	140	73.73
110	9	9	180	59.10
111	14	12	240	44.08
112	9	9	180	99.45
113	14	13	260	107.50
114	10	6	120	92.82
115	28	25	500	94.59
116	31	30	600	96.75
117	21	20	400	79.16
118	11	8	160	62.60
119	7	7	140	138.83
120	25	17	340	117.17
121	65	53	1060	103.58
122	9	8	160	34.58
123	23	9	180	36.17
124	30	16	320	145.20
125	26	20	400	89.10
126	8	8	160	96.67
127	9	6	120	57.29
128	4	3	60	14.36

In terms of ground cover across all the sampling points, average grass cover comprised 25% of the sampling plots, bare soil and rock together were 19%, and shrub cover equaled 8% (see Table 5).

Table 5. Average percent cover for sample plots

Canopy Cover	Seedling Cover	Shrub Cover	Graminoid Cover	Forb Cover	Litter	Bare Soil	Rock
53.3	24.5	8.4	24.8	19.4	28.9	8.8	10.9

Fuel loadings (1, 10, 100, or 1000 hour fuels plus duff and litter) were estimated by running a Brown's transect 75 feet due north from plot center. Across all the plots, there was an average of 16 tons of fuel per acre.

Table 6. Surface Fuels Summary

Surface Fuels (1,10,100,1000 hr fuels)		HD (Dead Non-Woody Veg)		HL (Live Non-Woody Veg)		SD (Dead Woody Veg)		SL (Live Woody Veg)	
Mean	SDev	Mean	SDev	Mean	Sdev	Mean	SDev	Mean	Sdev
16.8	9.8	6.1	10.2	29.7	23.5	3	7.2	7.3	9.6

Wildlife pellet counts were obtained at 7 of the sample points (101, 106, 111, 122, 124, 120, and 127). For these counts, we ran a 300 foot transect due north of plot center, and counted pellet groups (minimum of 5 pellets per group) from 10 feet on both sides of the transect center line (6000 ft^2 plot). Pellets were removed once they were counted. For the wildlife transects, there were 214 elk pellet groups per acre, 87 mule deer pellet groups per acre, and 1 horse pellet group per acre.

Table 7. Latitude and Longitude for 2009 Coleman Ranch sample points.

ID	Longitude	Latitude	Elevation (meters)	Elevation (feet)
107	-105.5885395	32.9064793	2394	7854
108	-105.5861253	32.90646074	2421	7943
104	-105.5860931	32.90853021	2402	7881
103	-105.5885882	32.90849641	2329	7641
105	-105.5931879	32.90646332	2331	7648
109	-105.5933481	32.90442452	2369	7772
112	-105.5958453	32.90230538	2372	7782
118	-105.5909196	32.90030574	2496	8189
115	-105.5885105	32.90230785	2485	8153
114	-105.5909405	32.90233744	2416	7926
117	-105.5933185	32.90024282	2461	8074
127	-105.6006082	32.89405846	2561	8402
123	-105.6006602	32.89609679	2511	8238
119	-105.6006914	32.89815769	2418	7933
120	-105.5982529	32.89816731	2448	8031
111	-105.5884944	32.90442889	2443	8015
110	-105.590991	32.90437084	2376	7795
106	-105.5909903	32.90644279	2378	7802
101	-105.5885531	32.91057631	2318	7605
113	-105.5933845	32.90234054	2424	7953
125	-105.5957304	32.89614686	2541	8337
124	-105.5982377	32.89609393	2530	8301
121	-105.595777	32.8981404	2489	8166
122	-105.5933652	32.89817297	2517	8258
128	-105.5981903	32.89406984	2563	8409
126	-105.6031248	32.89404563	2555	8383
116	-105.5957835	32.90026685	2431	7976

Sample Point # 101

Sample Point #103

Sample Point # 106

Sample Point # 112

Sample Point # 120
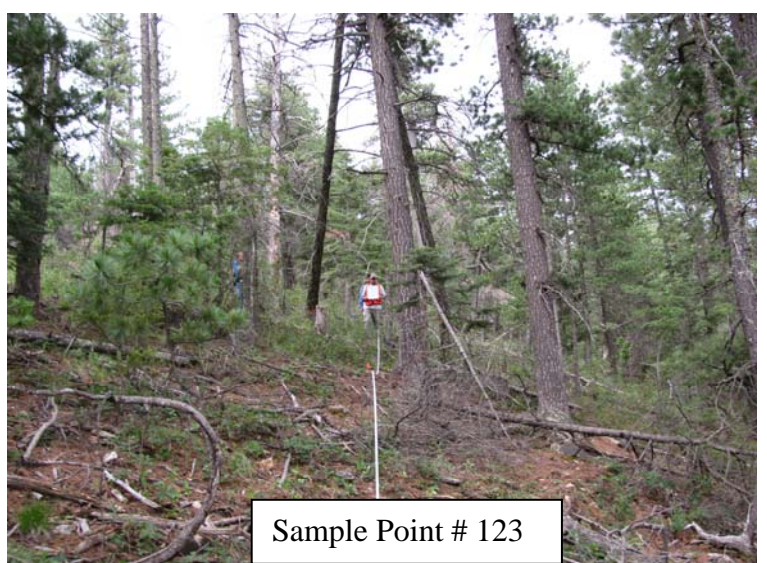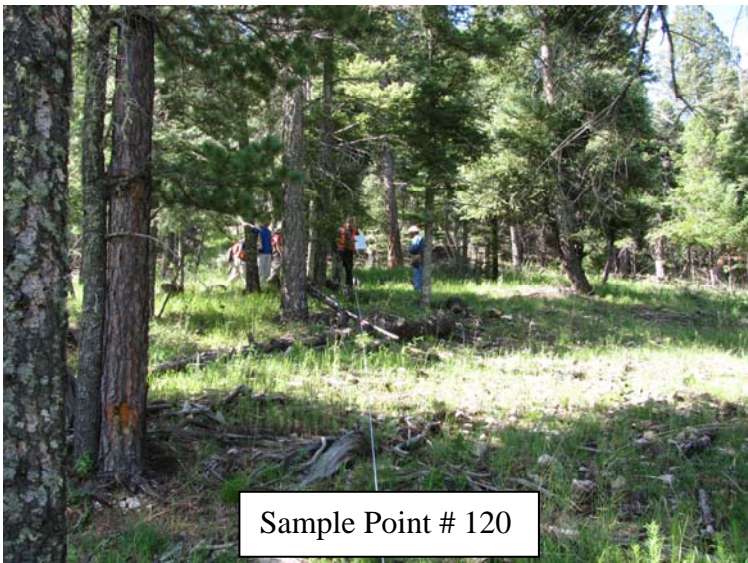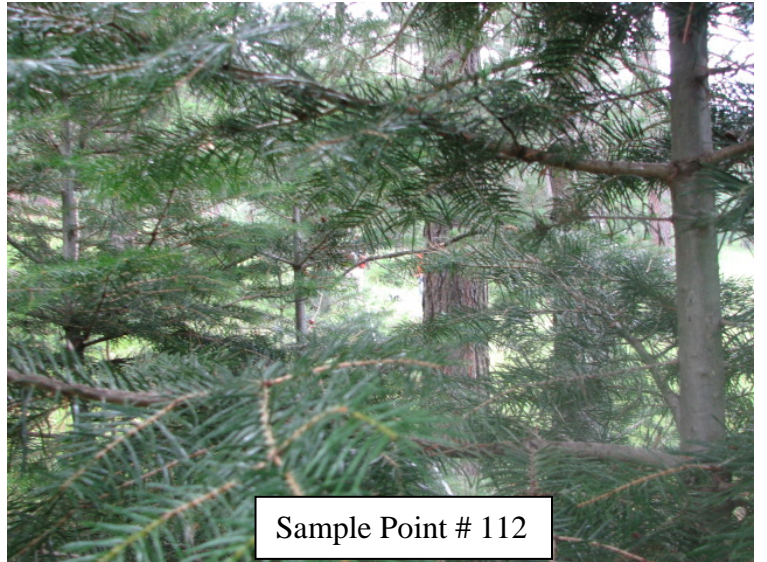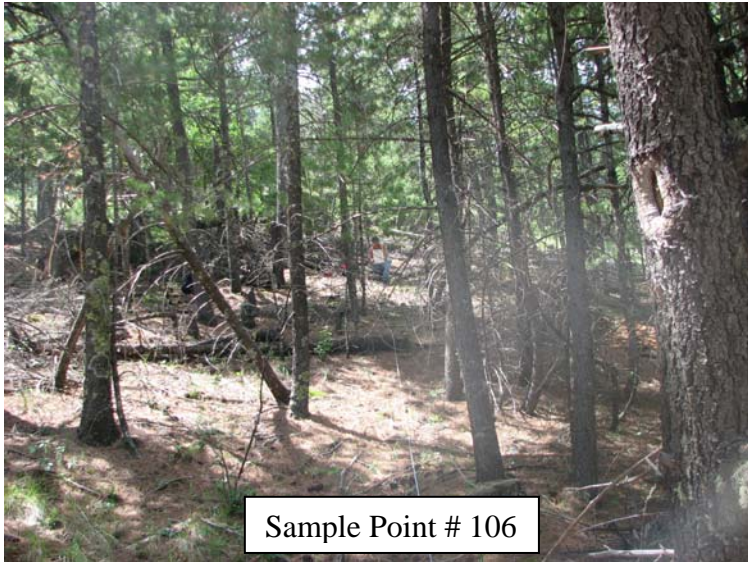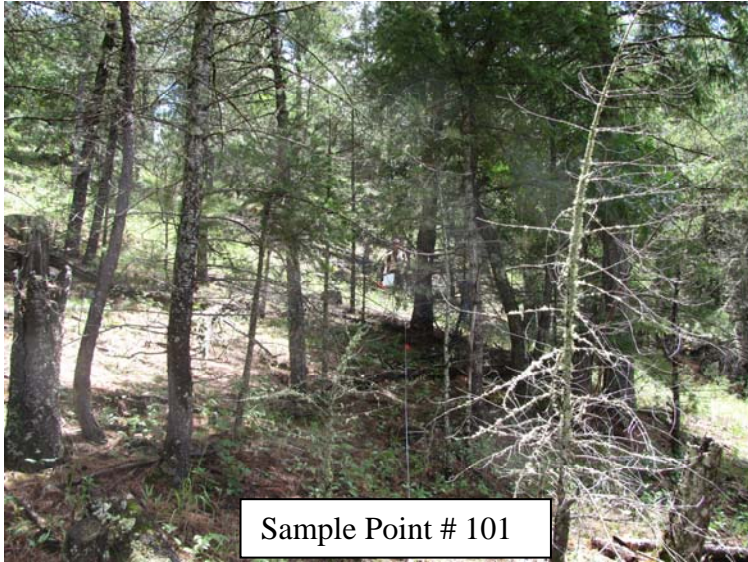
Sample Point # 123

Figure 2. Select Sample Point Photographs from Coleman Ranch, July 2009.

Colman Ranch
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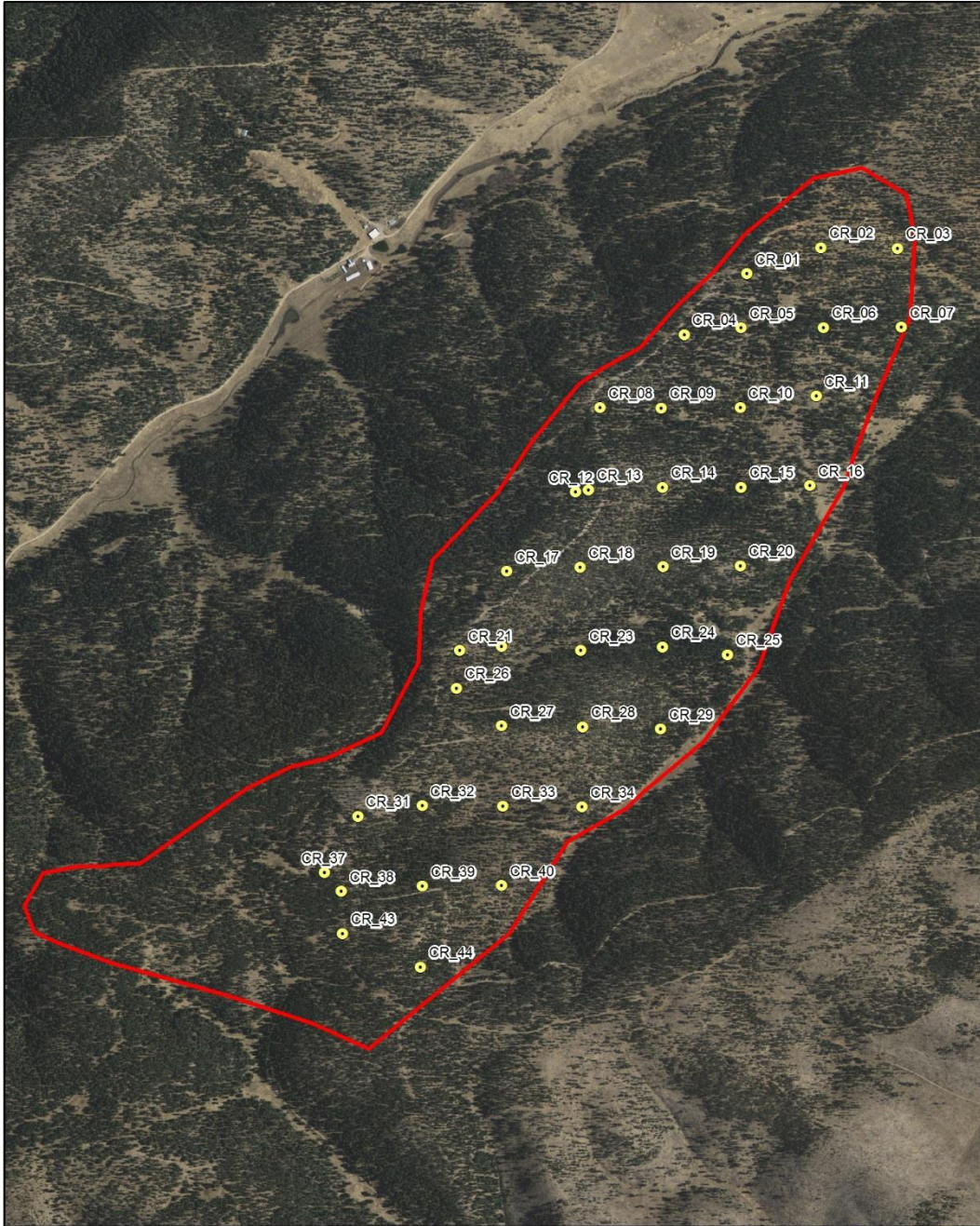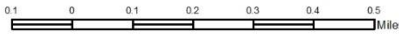
Figure 1. 2013 Monitoring Sample Plots (39 Points)

Section I. Colman Ranch

Table 1. Monitoring Summary of Tree Component for Colman Ranch Pre-Treatment, 2008

Stand Total		Saplings			Pole			Tree or Sawlog											Total by Class,Growing Stock & Dead	%by Class, Growing Stock vs Dead
Diameter Class		*0*	*2*	*4*	*6*	*8*	*10*	*12*	*14*	*16*	*18*	*20*	*22*	*24*	*26*	*28*	*30*	*32*		
Growing Stock (All living trees in woodland & forestland)	COUNT	82	142	108	102	81	39	29	15	8	8	3	2	0	2	0	0	1	*622.00*	
	TPA	42.05	72.82	55.38	52.31	41.54	20.00	14.87	7.69	4.10	4.10	1.54	1.03	0.00	1.03	0.00	0.00	0.51	*318.97*	*86.39%*
	BA/AC	0.06	1.63	4.80	10.45	14.18	10.79	11.72	8.00	5.80	7.31	3.20	2.66	0.00	3.71	0.00	0.00	3.10	*87.40*	*89.54%*
	AVE HT, H$_L$	8	14	21	30	33	41	50	48	71	64	67	78	0	47	0	0	36		
Summary by Size Class (All living trees in woodland & forestland)	TPA		170.26			113.85						34.87							*318.97*	
	TPA %		53.38%			35.69%						10.93%							*100.00%*	
	BA/AC		6.49			35.42						45.49							*87.40*	
	BA/AC %		7.42%			40.53%						52.05%							*100.00%*	
	QMD MEAN DIA.		2.64			7.55						15.47							*7.09*	
	AVE HT, H$_L$		19			35						56							*45*	
Dead (All dead trees in woodland & forestland)	COUNT	10	24	19	20	13	8	2	1	0	0	0	0	1	0	0	0	0	*98.00*	
	TPA	5.13	12.31	9.74	10.26	6.67	4.10	1.03	0.51	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.00	0.00	*50.26*	*13.61%*
	BA/AC	0.01	0.23	0.78	1.79	2.26	2.31	0.82	0.49	0.00	0.00	0.00	0.00	1.53	0.00	0.00	0.00	0.00	*10.21*	*10.46%*
	AVE HT, H$_L$	6	13	16	21	30	24	34	6	0	0	0	0	62	0	0	0	0	*30*	
Total for all sample trees including	COUNT	92	166	127	122	94	47	31	16	8	8	3	2	1	2	0	0	1	*720.00*	
	TPA	47.18	85.13	65.13	62.56	48.21	24.10	15.90	8.21	4.10	4.10	1.54	1.03	0.51	1.03	0.00	0.00	0.51	*369.23*	*100.00%*
	BA/AC	0.07	1.86	5.58	12.24	16.44	13.10	12.53	8.48	5.80	7.31	3.20	2.66	1.53	3.71	0.00	0.00	3.10	*97.62*	*100.00%*

Table 2. Monitoring Summary of Tree Component for Colman Ranch Post-Treatment, 2013

Stand Total		Saplings			Pole			Tree or Sawlog											Total by Class, Growing Stock & Dead	% by Class, Growing Stock vs Dead
Diameter Class		*0*	*2*	*4*	*6*	*8*	*10*	*12*	*14*	*16*	*18*	*20*	*22*	*24*	*26*	*28*	*30*	*32*		
Growing Stock (All living trees in woodland & forestland)	COUNT	17	48	48	48	54	34	29	16	14	11	3	3	0	2	0	0	1	*328.00*	
	TPA	8.72	24.62	24.62	24.62	27.69	17.44	14.87	8.21	7.18	5.64	1.54	1.54	0.00	1.03	0.00	0.00	0.51	*168.21*	*90.61%*
	BA/AC	0.02	0.53	2.23	5.04	9.59	9.52	11.76	8.58	9.48	9.83	3.19	4.14	0.00	3.58	0.00	0.00	3.25	*80.73*	*93.47%*
	AVE HT, H_L	7	13	23	30	33	41	48	47	55	67	59	72	0.00	50	0.00	0.00	42		
Summary by Size Class (All living trees in woodland & forestland)	TPA		57.95			69.74						40.51							*168.21*	
	TPA %		34.45%			41.46%						24.09%							*100.00%*	
	BA/AC		2.78			24.14						53.81							*80.73*	
	BA/AC %		3.44%			29.91%						66.66%							*100.00%*	
	QMD MEAN DIA.		2.96			7.97						15.61							*9.38*	
	AVE HT, H_L		21			36						55							*48*	
Dead (All dead trees in woodland & forestland)	COUNT	0	7	9	8	3	1	5	0	0	0	0	0	1	0	0	0	0	*34.00*	
	TPA	0.00	3.59	4.62	4.10	1.54	0.51	2.56	0.00	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.00	0.00	*17.44*	*9.39%*
	BA/AC	0.00	0.07	0.41	0.80	0.51	0.30	1.96	0.00	0.00	0.00	0.00	0.00	1.60	0.00	0.00	0.00	0.00	*5.64*	*6.53%*
	AVE HT, H_L	0.00	12	17	24	31	13	37	0.00	0.00	0.00	0.00	0.00	58	0.00	0.00	0.00	0.00	*37*	
Total for all sample trees including	COUNT	17	55	57	56	57	35	34	16	14	11	3	3	1	2	0	0	1	*362.00*	
	TPA	8.72	28.21	29.23	28.72	29.23	17.95	17.44	8.21	7.18	5.64	1.54	1.54	0.51	1.03	0.00	0.00	0.51	*185.64*	*100.00%*
	BA/AC	0.02	0.60	2.64	5.84	10.09	9.81	13.72	8.58	9.48	9.83	3.19	4.14	1.60	3.58	0.00	0.00	3.25	*86.37*	*100.00%*

Table 3. Colman Ranch Pre-Treatment Woodland Species by Diameter Class, 2008

Woodland Species		Saplings			Pole			Mature Trees											Total by Species	%Species for all G-Stock
Diameter Class		*0*	*2*	*4*	*6*	*8*	*10*	*12*	*14*	*16*	*18*	*20*	*22*	*24*	*26*	*28*	*30*	*32+*		
PIED	COUNT	11	19	11	11	7	0	0	0	0	0	0	0	0	0	0	0	0	59.00	
Pinon pine	TPA	5.64	9.74	5.64	5.64	3.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.26	9.49%
	BA/AC	0.01	0.27	0.55	1.01	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.02	3.46%
	AVE HT. (H$_L$)	10	17	19	27	22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
JUDE2	COUNT	10	4	5	7	8	1	1	3	0	0	0	0	0	1	0	0	1	41.00	
Alligator juniper	TPA	5.13	2.05	2.56	3.59	4.10	0.51	0.51	1.54	0.00	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.51	21.03	6.59%
	BA/AC	0.00	0.04	0.20	0.82	1.37	0.33	0.45	1.67	0.00	0.00	0.00	0.00	1.87	0.00	0.00	3.10		9.86	11.28%
	AVE HT.	6	16	15	22	19	24	32	35	0.00	0.00	0.00	0.00	0.00	31	0.00	0.00	36		
QUGA	COUNT	3	19	9	2	4	3	2	2	0	0	0	0	0	0	0	0	0	44.00	
Gambel oak	TPA	1.54	9.74	4.62	1.03	2.05	1.54	1.03	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.56	7.07%
	BA/AC	0.00	0.23	0.33	0.24	0.64	0.79	0.84	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.13	4.72%
	AVE HT. (H$_L$)	13	15	17	21	26	32	25	35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
PRUNU	COUNT	0	3	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	9.00	
Prunus species	TPA	0.00	1.54	2.05	0.51	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.62	1.45%
	BA/AC	0.00	0.05	0.16	0.08	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.57%
	AVE HT.	0.00	9	19	16	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
FRAXI	COUNT	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6.00	
Ash species	TPA	0.51	1.03	1.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.08	0.96%
	BA/AC	0.00	0.01	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.18%
	AVE HT.	7	14	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Woodland Species Sub-total	*COUNT*	25	47	32	21	20	4	3	5	0	0	0	0	0	1	0	0	1	159.00	
	TPA	12.82	24.10	16.41	10.77	10.26	2.05	1.54	2.56	0.00	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.51	81.54	25.56%
	BA/AC	0.01	0.60	1.38	2.15	3.41	1.12	1.29	2.73	0.00	0.00	0.00	0.00	0.00	1.87	0.00	0.00	3.10	17.66	20.21%
	AVE HT. (H$_L$)	11	15	18	24	21	29	27	35	0	0	0	0	0	31	0	0	36		

Summary by Size Class for Woodland Species		Saplings	Pole	Mature Trees	Total
	TPA	53.33	23.08	5.13	81.54
	TPA %	65.41%	28.30%	6.29%	100.00%
	BA/AC	1.99	6.68	8.99	17.66
	BA/AC %	11.27%	37.80%	50.93%	100.00%
	QUADRATIC MEAN DIA.	2.62	7.28	17.93	6.30
	AVE HT. (H$_L$)	17	23	33	28

Table 4. Colman Ranch Post-Treatment Woodland Species by Diameter Class, 2013

Woodland Species		Saplings			Pole			Mature Trees											Total by Species	%Species for all G-Stock
Diameter Class		*0*	*2*	*4*	*6*	*8*	*10*	*12*	*14*	*16*	*18*	*20*	*22*	*24*	*26*	*28*	*30*	*32+*		
PIED	COUNT	0	1	0	1	5	2	0	1	0	0	0	0	0	0	0	0	0	*10.00*	
Pinon pine	TPA	0.00	0.51	0.00	0.51	2.56	1.03	0.00	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	*5.13*	*2.99%*
	BA/AC	0.00	0.02	0.00	0.11	0.86	0.59	0.00	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	*2.15*	*2.65%*
	AVE HT. (H$_L$)	0	11	0	18	25	31	0	38	0	0	0	0	0	0	0	0	0		
JUDE2	COUNT	5	1	1	1	5	0	1	2	3	0	0	0	0	1	0	0	1	*21.00*	
Alligator juniper	TPA	2.56	0.51	0.51	0.51	2.56	0.00	0.51	1.03	1.54	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.51	*10.77*	*6.27%*
	BA/AC	0.00	0.01	0.06	0.08	0.91	0.00	0.42	1.16	1.97	0.00	0.00	0.00	0.00	1.83	0.00	0.00	3.25	*9.70*	*11.93%*
	AVE HT.	5	16	10	13	23	0	16	29	34	0	0	0	0	34	0	0	42		
QUGA	COUNT	0	2	3	1	5	3	3	1	1	0	0	0	0	0	0	0	0	*19.00*	
Gambel oak	TPA	0.00	1.03	1.54	0.51	2.56	1.54	1.54	0.51	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	*9.74*	*5.67%*
	BA/AC	0.00	0.02	0.11	0.10	0.89	0.77	1.21	0.57	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	*4.31*	*5.31%*
	AVE HT. (H$_L$)	0	15	21	28	17	28	23	8	23	0	0	0	0	0	0	0	0		
FRAXI	COUNT	0	2	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	*6.00*	
Ash species	TPA	0.00	1.03	1.03	0.51	0.00	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	*3.08*	*1.79%*
	BA/AC	0.00	0.03	0.11	0.09	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	*0.48*	*0.59%*
	AVE HT. (H$_L$)	0	10	10	15	0	17	0	0	0	0	0	0	0	0	0	0	0		
PRUNU	COUNT	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*1.00*	
Prunus species	TPA	0.00	0.00	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	*0.51*	*0.30%*
	BA/AC	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	*0.06*	*0.07%*
	AVE HT. (H$_L$)	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Woodland Species Sub-total	*COUNT*	*5*	*6*	*7*	*4*	*15*	*6*	*4*	*4*	*4*	*0*	*0*	*0*	*0*	*1*	*0*	*0*	*1*	*57.00*	
	TPA	*2.56*	*3.08*	*3.59*	*2.05*	*7.69*	*3.08*	*2.05*	*2.05*	*2.05*	*0.00*	*0.00*	*0.00*	*0.00*	*0.51*	*0.00*	*0.00*	*0.51*	*29.23*	*17.01%*
	BA/AC	*0.00*	*0.08*	*0.34*	*0.38*	*2.66*	*1.61*	*1.62*	*2.30*	*2.62*	*0.00*	*0.00*	*0.00*	*0.00*	*1.83*	*0.00*	*0.00*	*3.25*	*16.70*	*20.55%*
	AVE HT. (H$_L$)	*5*	*12*	*14*	*19*	*22*	*27*	*21*	*26*	*31*	*0*	*0*	*0*	*0*	*34*	*0*	*0*	*42*		

Summary by Size Class for Woodland Species	*TPA*	*9.23*			*12.82*			*7.18*											*29.23*	
	TPA %	*31.58%*			*43.86%*			*24.56%*											*100.00%*	
	BA/AC	*0.42*			*4.65*			*11.62*											*16.70*	
	BA/AC %	*2.54%*			*27.84%*			*69.61%*											*100.00%*	
	QUADRATIC MEAN DIA.	*2.90*			*8.15*			*17.23*											*10.23*	
	AVE HT. (H$_L$)	*14*			*23*			*32*											*29*	

Table 5. Colman Ranch Pre-Treatment Forestland Species by Diameter Class, 2008

Forestland Species		Saplings			Pole			Mature Trees											Total by Species & Covertype	%Species for all G-Stock
Diameter Class		*0*	*2*	*4*	*6*	*8*	*10*	*12*	*14*	*16*	*18*	*20*	*22*	*24*	*26*	*28*	*30*	*32*		
ABCO **White fir**	COUNT	42	25	4	5	1	0	2	0	1	0	0	0	0	0	0	0	0	*80.00*	
	TPA	21.54	12.82	2.05	2.56	0.51	0.00	1.03	0.00	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	*41.03*	12.86%
	BA/AC	0.04	0.19	0.16	0.46	0.16	0.00	0.90	0.00	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	*2.63*	3.00%
	AVE HT. (H$_L$)	7.66	13.22	19.99	31.64	39.00	0	62.13	0	99.00	0	0	0	0	0	0	0	0		
PIPO **Ponderosa pine**	COUNT	1	23	23	26	17	13	5	2	3	1	2	1	0	0	0	0	0	*117.00*	
	TPA	0.51	11.79	11.79	13.33	8.72	6.67	2.56	1.03	1.54	0.51	1.03	0.51	0.00	0.00	0.00	0.00	0.00	*60.00*	18.81%
	BA/AC	0.00	0.31	1.02	2.66	3.09	3.49	1.88	1.06	2.10	0.98	2.15	1.32	0.00	0.00	0.00	0.00	0.00	*20.05*	22.94%
	AVE HT. (H$_L$)	5.00	12.06	21.92	27.19	37.94	41.57	45.84	52.07	63.01	63.00	65.65	90.00	0	0	0	0	0		
PSME **Douglas-fir**	COUNT	8	36	33	36	35	19	14	8	4	7	1	1	0	1	0	0	0	*203.00*	
	TPA	4.10	18.46	16.92	18.46	17.95	9.74	7.18	4.10	2.05	3.59	0.51	0.51	0.00	0.51	0.00	0.00	0.00	*104.10*	32.64%
	BA/AC	0.01	0.43	1.63	3.80	6.20	5.28	5.67	4.21	2.97	6.33	1.05	1.34	0.00	1.85	0.00	0.00	0.00	*40.78*	46.66%
	AVE HT.	5.61	15.10	23.18	32.18	37.61	41.75	54.52	55.77	69.29	64.15	69.00	66.00	0	64.00	0	0	0		
PIST3 **SW white pine**	COUNT	6	11	16	14	8	3	5	0	0	0	0	0	0	0	0	0	0	*63.00*	
	TPA	3.08	5.64	8.21	7.18	4.10	1.54	2.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	*32.31*	10.13%
	BA/AC	0.01	0.10	0.60	1.37	1.33	0.90	1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	*6.29*	7.19%
	AVE HT.	7.33	14.54	21.55	35.55	32.02	50.05	47.50	0	0	0	0	0	0	0	0	0	0		
Forestland Species Sub-total	*COUNT*	*57*	*95*	*76*	*81*	*61*	*35*	*26*	*10*	*8*	*8*	*3*	*2*	*0*	*1*	*0*	*0*	*0*	*463.00*	
	TPA	*29.23*	*48.72*	*38.97*	*41.54*	*31.28*	*17.95*	*13.33*	*5.13*	*4.10*	*4.10*	*1.54*	*1.03*	*0.00*	*0.51*	*0.00*	*0.00*	*0.00*	*237.44*	*74.44%*
	BA/AC	*0.05*	*1.03*	*3.42*	*8.30*	*10.78*	*9.67*	*10.42*	*5.26*	*5.80*	*7.31*	*3.20*	*2.66*	*0.00*	*1.85*	*0.00*	*0.00*	*0.00*	*69.74*	*79.79%*
	AVE HT. (H$_L$)	*7*	*14*	*22*	*31*	*37*	*42*	*52*	*55*	*71*	*64*	*67*	*78*	*0*	*64*	*0*	*0*	*0*		

Summary by Size Class for Forestland Species		Saplings	Pole	Mature Trees	Total
	TPA	116.92	90.77	29.74	*237.44*
	TPA %	49.24%	38.23%	12.53%	*100.00%*
	BA/AC	4.50	28.75	36.50	*69.74*
	BA/AC %	6.45%	41.22%	52.33%	*100.00%*
	QUADRATIC MEAN DIA.	2.66	7.62	15.00	*7.34*
	AVE HT. (H$_L$)	20	37	62	*49*

Table 6. Colman Ranch Post-Treatment Forestland Species by Diameter Class, 2013

Forestland Species		Saplings			Pole			Mature Trees											Total by Species & Covertype	%Species for all G-Stock
Diameter Class		*0*	*2*	*4*	*6*	*8*	*10*	*12*	*14*	*16*	*18*	*20*	*22*	*24*	*26*	*28*	*30*	*32*		
ABCO **White fir**	COUNT	7	21	5	2	1	0	0	1	0	0	0	0	0	0	0	0	0	*37.00*	
	TPA	3.59	10.77	2.56	1.03	0.51	0.00	0.00	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	*18.97*	*11.04%*
	BA/AC	0.01	0.21	0.16	0.22	0.14	0.00	0.00	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	*1.30*	*1.60%*
	AVE HT.	7.46	12.95	20.08	33.43	34.00	0	0	54.00	0	0	0	0	0	0	0	0	0		
PIPO **Ponderosa pine**	COUNT	0	7	8	8	7	8	6	2	3	4	1	2	0	0	0	0	0	*56.00*	
	TPA	0.00	3.59	4.10	4.10	3.59	4.10	3.08	1.03	1.54	2.05	0.51	1.03	0.00	0.00	0.00	0.00	0.00	*28.72*	*16.72%*
	BA/AC	0.00	0.09	0.39	0.80	1.19	2.15	2.49	0.98	2.10	3.45	1.14	2.68	0.00	0.00	0.00	0.00	0.00	*17.47*	*21.50%*
	AVE HT. (H_L)	0	13.78	29.47	28.78	35.24	42.36	54.73	50.71	59.66	69.60	79.00	68.12	0	0	0	0	0		
PSME **Douglas-fir**	COUNT	5	13	19	25	25	19	14	8	7	7	2	1	0	1	0	0	0	*146.00*	
	TPA	2.56	6.67	9.74	12.82	12.82	9.74	7.18	4.10	3.59	3.59	1.03	0.51	0.00	0.51	0.00	0.00	0.00	*74.87*	*43.58%*
	BA/AC	0.01	0.12	0.98	2.66	4.61	5.41	5.61	4.22	4.76	6.38	2.05	1.45	0.00	1.75	0.00	0.00	0.00	*40.02*	*49.25%*
	AVE HT.	7.35	10.49	24.23	31.44	39.90	44.28	52.70	57.20	65.15	65.52	48.38	80.00	0	66.00	0	0	0		
PIST3 **SW white pine**	COUNT	0	3	12	10	6	2	5	1	0	0	0	0	0	0	0	0	0	*39.00*	
	TPA	0.00	1.54	6.15	5.13	3.08	1.03	2.56	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	*20.00*	*11.64%*
	BA/AC	0.00	0.05	0.52	1.07	0.99	0.59	2.04	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	*5.77*	*7.11%*
	AVE HT.	0	23.80	21.19	32.22	30.26	43.95	49.83	40.00	0	0	0	0	0	0	0	0	0		
Forestland Species Sub-total	*COUNT*	*12*	*44*	*44*	*45*	*39*	*29*	*25*	*12*	*10*	*11*	*3*	*3*	*0*	*1*	*0*	*0*	*0*	*278.00*	
	TPA	*6.15*	*22.56*	*22.56*	*23.08*	*20.00*	*14.87*	*12.82*	*6.15*	*5.13*	*5.64*	*1.54*	*1.54*	*0.00*	*0.51*	*0.00*	*0.00*	*0.00*	*142.56*	*82.99%*
	BA/AC	*0.02*	*0.48*	*2.05*	*4.75*	*6.93*	*8.15*	*10.14*	*6.28*	*6.86*	*9.83*	*3.19*	*4.14*	*0.00*	*1.75*	*0.00*	*0.00*	*0.00*	*64.57*	*79.45%*
	AVE HT. (H_L)	*7*	*14*	*24*	*31*	*38*	*44*	*53*	*54*	*63*	*67*	*59*	*72*	*0*	*66*	*0*	*0*	*0*		

Summary by Size Class for Forestland Species	*TPA*	*51.28*			*57.95*			*33.33*											*142.56*	
	TPA %	*35.97%*			*40.65%*			*23.38%*											*100.00%*	
	BA/AC	*2.55*			*19.84*			*42.19*											*64.57*	
	BA/AC %	*3.94%*			*30.72%*			*65.34%*											*100.00%*	
	QUADRATIC MEAN DIA.	*3.02*			*7.92*			*15.23*											*9.11*	
	AVE HT. (H_L)	*22*			*39*			*61*											*53*	

Table 7. Individual Plot Summary Table for Colman Ranch Pre-Treatment

Colman Ranch Pre-Treatment			Summer 2008		
Summary Table for all Plots			# Sample Trees on plot	Trees per acre	Basal area per acre
Plot Total			**720.00**	**369.23**	**97.62**
Growing Stock		Healthy (H)	512.00	262.56	77.93
		Unhealthy(U)	103.00	52.82	8.80
		Sick (S)	7.00	3.59	0.67
		Living (L)	0.00	0.00	0.00
Sum of Growing Stock			**622.00**	**318.97**	**87.40**
Dead		Dead (D)	98.00	50.26	10.21
Sum of Dead			**98.00**	**50.26**	**10.21**
Plot Total: **Growing Stock & Dead**	**Sum of**		**720.00**	**369.23**	**97.62**

Table 8. Individual Plot Summary Table for Colman Ranch Post-Treatment

Colman Ranch Post-Treatment			Summer 2013		
Summary Table for all Plots			# Sample Trees on plot	Trees per acre	Basal area per acre
Plot Total			**369.00**	**189.23**	**86.91**
Growing Stock		Healthy (H)	2.00	1.03	2.28
		Unhealthy(U)	0.00	0.00	0.00
		Sick (S)	1.00	0.51	0.02
		Living (L)	332.00	170.26	78.97
Sum of Growing Stock			**335.00**	**171.79**	**81.27**
Dead		Dead (D)	34.00	17.44	5.64
Sum of Dead			**34.00**	**17.44**	**5.64**
Plot Total: **Growing Stock & Dead**	**Sum of**		**369.00**	**189.23**	**86.91**

Table 9. Summary Table for all Plots – Colman Ranch Pre-Treatment

Macro Plot Name	Total number of sample trees on plot	Growing Stock Number of growing stock sample trees on plot	Growing Stock Trees per Acre	Growing Stock Basal Area per Acre
1	12	12	240	9.99
2	8	8	160	54.76
3	35	26	520	108.60
4	5	5	100	46.68
5	29	24	480	110.52
6	15	12	240	120.89
7	15	14	280	126.63
8	7	7	140	83.48
9	13	9	180	64.48
10	11	10	200	84.47
11	11	11	220	28.21
12	18	18	360	138.42
13	17	17	340	112.38
14	14	11	220	25.11
15	9	7	140	72.50
16	7	7	140	90.87
17	14	14	280	55.73
18	21	19	380	64.14
19	28	25	500	176.60
20	14	12	240	66.64
21	11	8	160	19.25
22	15	14	280	58.15
23	7	5	100	55.38
24	15	11	220	62.31
25	60	60	1200	28.76
26	25	20	400	140.36
27	28	27	540	102.85
28	18	15	300	71.46
29	9	9	180	140.29
31	36	30	600	113.90
32	21	17	340	120.05
33	12	11	220	97.04
34	22	19	380	77.90
37	15	13	260	108.90
38	45	27	540	136.17
39	34	27	540	111.40
40	9	9	180	146.78
43	17	15	300	89.48
44	18	17	340	87.17

Total	Total number of sample trees on plot	Number of growing stock sample trees on	Average for all Plots	
			TPA	BA/AC
	720.00	622.00	318.97	87.40

Table 10. Summary Table for all Plots – Colman Ranch Post-Treatment

Macro Plot Name	Total number of sample trees on plot	Number of growing stock sample trees on plot	Growing Stock	
			Trees per Acre	Basal Area per Acre
1	5	5	100	23.98
2	3	3	60	32.45
3	8	8	160	77.79
4	5	5	100	53.63
5	3	3	60	62.21
6	5	5	100	83.21
7	5	5	100	125.87
8	5	5	100	90.04
9	5	4	80	49.59
10	4	4	80	66.82
11	4	4	80	37.93
12	17	16	320	138.18
13	15	15	300	102.44
14	3	1	20	6.81
15	5	4	80	68.56
16	2	2	40	81.44
17	10	10	200	74.44
18	9	9	180	71.10
19	5	5	100	167.11
20	2	2	40	39.31
21	6	6	120	24.08
22	3	3	60	21.92
23	4	4	80	90.14
24	12	8	160	84.20
25	47	47	940	56.07
26	6	6	120	104.87
27	8	6	120	44.33
28	7	6	120	64.57
29	5	5	100	147.38
31	33	29	580	106.83
32	6	5	100	81.76
33	2	2	40	88.81
34	2	2	40	53.52
37	18	16	320	134.53
38	39	30	600	153.90
39	9	8	160	75.02
40	5	5	100	188.26
43	14	13	260	99.47
44	23	19	380	96.76
Total	**Total number of sample trees on plot**	**Number of growing stock sample trees on**	**Average for all Plots**	
			TPA	**BA/AC**
	369.00	**335.00**	**171.79**	**81.27**

Table 11. Average Percent Cover for Plot Descriptions, Colman Ranch Pre-Treatment, 2008

Tree Cover		Seed Cover		Shrub cover		Gram Cover		Forb Cover		Fern Cover		Bare Soil		Gravel	
Mean	SDev	Mean	SDev	Mean	SDev	Mean	SDev	Mean	SDev	Mean	SDev	Mean	SDev	Mean	SDev
40.6	15.0	7.5	10.0	2.7	4.1	26.8	20.5	1.9	2.6	0.0	0.0	4.2	6.1	1.3	5.2

Rock		Duff		Wood		Moss/Lichen		Char		Ash		Basal Veg		Water	
Mean	SDev	Mean	SDev	Mean	SDev	Mean	SDev	Mean	SDev	Mean	SDev	Mean	SDev	Mean	SDev
6.7	10.2	23.9	20.0	14.6	9.8	1.10	6.40	0.0	0.0	0.0	0.0	47.7	21.0	0.0	0.0

Table 12. Average Percent Cover for Plot Descriptions, Colman Ranch Post-Treatment, 2013

Tree Canopy	Seedlings/Saplings	Shrub cover	Graminoid Cover	Forb Cover	Litter	Bare Soil	Rock/Gravel
44.7%	0.40%	2.23%	18.97%	9.18%	60.38%	3.46%	3.56%

Table 13. Surface Fuels Summary, fuels listed in tons per acre, Colman Ranch Pre-Treatment, 2008

Surface Fuels Summary

Macroplot	Monitoring Status	1-hr	10-hr	100-hr	1-100-hr	1000-hr sound	1000-hr rotten	1-1000-hr	Duff	Litter	Total	Duff	Litt	Total
						Average Tons per Acre						Avg. Depth (in.)		
1	PreTreatment	0.03	1.52	3.33	4.88	1.01	5.29	11.19	1.00	0.50	12.68	0.1	0.1	0.2
10	PreTreatment	0.03	0.31	2.52	2.86	2.04	5.42	10.32	5.99	3.24	19.55	0.6	0.7	1.3
11	PreTreatment	0.11	2.48	0.42	3.02	0.00	12.11	15.13	1.50	1.00	17.62	0.2	0.2	0.4
12	PreTreatment	0.30	2.14	3.75	6.20	19.21	4.03	29.44	9.98	2.50	41.91	1.0	0.5	1.5
13	PreTreatment	0.10	1.83	2.92	4.85	8.90	1.46	15.21	7.49	2.99	25.69	0.8	0.6	1.4
14	PreTreatment	0.68	4.87	7.90	13.46	3.44	3.73	20.63	0.00	0.00	20.63	0.0	0.0	0.0
15	PreTreatment	0.03	1.23	4.18	5.44	0.00	6.67	12.11	1.00	1.50	14.61	0.1	0.3	0.4
16	PreTreatment	0.03	0.00	1.66	1.69	0.00	2.86	4.55	0.50	0.62	5.67	0.1	0.1	0.2
17	PreTreatment	0.06	3.35	2.49	5.90	22.17	0.00	28.07	7.49	4.99	40.55	0.8	1.0	1.8
18	PreTreatment	0.38	0.61	0.00	1.00	0.00	0.00	1.00	0.50	1.75	3.24	0.1	0.4	0.4
19	PreTreatment	1.01	2.16	0.84	4.01	3.53	0.00	7.54	17.47	0.75	25.76	1.8	0.2	1.9
2	PreTreatment	0.05	0.00	2.08	2.13	8.26	5.31	15.70	3.99	4.24	23.93	0.4	0.9	1.3
20	PreTreatment	0.59	0.91	1.24	2.75	14.76	2.89	20.39	1.50	1.00	22.89	0.2	0.2	0.4
21	PreTreatment	0.08	2.13	2.07	4.28	2.35	0.00	6.63	7.49	3.74	17.86	0.8	0.8	1.5
22	PreTreatment	0.10	0.00	0.00	0.10	0.75	0.56	1.41	11.98	0.50	13.89	1.2	0.1	1.3
23	PreTreatment	0.22	1.41	4.80	6.42	4.40	0.61	11.42	0.00	1.50	12.92	0.0	0.3	0.3
24	PreTreatment	0.27	3.29	2.08	5.64	8.13	8.52	22.30	4.99	0.25	27.54	0.5	0.1	0.6
25	PreTreatment	0.29	1.53	2.50	4.32	0.00	1.08	5.40	2.99	1.25	9.64	0.3	0.3	0.6
26	PreTreatment	0.16	1.22	1.25	2.62	9.26	0.00	11.88	5.99	1.25	19.12	0.6	0.3	0.9
27	PreTreatment	0.15	0.63	2.99	3.77	3.59	4.86	12.22	5.49	1.00	18.71	0.6	0.2	0.8
28	PreTreatment	0.21	2.43	4.15	6.79	0.00	14.88	21.67	1.50	1.25	24.42	0.2	0.3	0.4
29	PreTreatment	0.02	2.84	1.29	4.15	0.00	1.45	5.60	8.49	3.24	17.33	0.9	0.7	1.5
3	PreTreatment													
31	PreTreatment	0.10	2.74	1.24	4.08	4.10	0.00	8.18	4.99	4.99	18.16	0.5	1.0	1.5
32	PreTreatment	0.64	1.85	0.84	3.34	4.48	4.78	12.60	4.99	0.75	18.34	0.5	0.2	0.7
33	PreTreatment	0.35	3.70	6.42	10.47	15.68	36.61	62.75	1.50	0.50	64.75	0.2	0.1	0.3
34	PreTreatment	0.91	4.13	1.30	6.34	1.43	2.54	10.31	9.98	11.23	31.52	1.0	2.3	3.3
37	PreTreatment	0.30	2.74	1.66	4.70	6.48	8.38	19.56	4.99	1.25	25.80	0.5	0.3	0.8
38	PreTreatment	0.62	5.82	0.00	6.44	4.05	2.63	13.13	2.99	3.99	20.12	0.3	0.8	1.1
39	PreTreatment	0.82	3.58	3.11	7.50	0.00	9.85	17.35	60.39	2.75	80.49	6.1	0.6	6.6
4	PreTreatment	0.30	2.13	0.00	2.43	2.18	2.54	7.15	7.49	1.50	16.14	0.8	0.3	1.1
40	PreTreatment	0.46	0.91	1.25	2.62	2.99	0.00	5.61	0.00	1.50	7.10	0.0	0.3	0.3
43	PreTreatment	0.14	0.91	2.90	3.96	26.90	2.24	33.10	1.50	1.75	36.34	0.2	0.4	0.5
44	PreTreatment	0.26	3.08	3.37	6.71	2.56	0.00	9.27	0.50	3.74	13.51	0.1	0.8	0.8
5	PreTreatment	0.08	1.22	2.08	3.37	2.43	3.92	9.72	0.50	2.75	12.97	0.1	0.6	0.6
6	PreTreatment	0.06	1.22	1.25	2.53	3.85	1.79	8.17	5.99	2.50	16.66	0.6	0.5	1.1
7	PreTreatment	0.08	1.83	0.42	2.33	2.19	1.52	6.04	9.98	8.73	24.75	1.0	1.8	2.8
8	PreTreatment	0.08	0.31	1.25	1.64	0.00	0.00	1.64	10.48	2.50	14.62	1.1	0.5	1.6
9	PreTreatment	0.08	0.96	0.44	1.48	0.00	0.75	2.23	2.99	3.74	8.97	0.3	0.8	1.1

Table 14. Surface Fuels Summary, fuels listed in tons per acre, Colman Ranch Post-Treatment, 2013

Surface Fuels Summary

Macroplot	Monitoring Status	1-hr	10-hr	100-hr	1-100-hr	1000-hr sound	1000-hr rotten	1-1000-hr	Duff	Litter	Total	Duff	Litt	Total
						Average Tons per Acre						Avg. Depth (in.)		
1	PostTreatment	0.05	0.91	0.00	0.96	0.00	1.64	2.60	1.50	0.75	4.84	0.2	0.2	0.3
10	PostTreatment	0.06	1.85	3.79	5.71	0.00	0.00	5.71	7.49	2.00	15.20	0.8	0.4	1.2
11	PostTreatment	0.07	4.70	1.71	6.48	0.00	0.00	6.48	0.00	10.23	16.71	0.0	2.1	2.1
12	PostTreatment	0.16	0.30	3.33	3.79	0.00	0.00	3.79	2.99	3.24	10.03	0.3	0.7	1.0
13	PostTreatment	0.18	0.00	1.25	1.42	18.75	0.00	20.18	0.00	0.50	20.68	0.0	0.1	0.1
14	PostTreatment	0.08	1.54	3.36	4.98	3.07	1.47	9.52	3.49	1.75	14.76	0.4	0.4	0.7
15	PostTreatment	0.37	1.83	2.08	4.27	0.00	8.77	13.03	0.00	2.99	16.03	0.0	0.6	0.6
16	PostTreatment	0.06	0.61	1.67	2.35	0.00	0.00	2.35	0.00	1.50	3.85	0.0	0.3	0.3
17	PostTreatment	0.03	0.61	1.66	2.30	0.00	0.00	2.30	5.49	1.75	9.54	0.6	0.4	0.9
18	PostTreatment	0.06	0.62	0.42	1.11	0.00	0.00	1.11	4.99	0.50	6.60	0.5	0.1	0.6
19	PostTreatment	0.33	2.54	1.30	4.17	40.45	0.00	44.62	4.99	3.99	53.60	0.5	0.8	1.3
2	PostTreatment	0.05	3.05	2.08	5.17	0.00	0.00	5.17	1.00	5.24	11.41	0.1	1.1	1.2
20	PostTreatment	0.25	2.13	5.40	7.78	0.00	0.00	7.78	8.49	5.49	21.76	0.9	1.1	2.0
21	PostTreatment	0.18	1.22	0.83	2.22	0.00	2.64	4.86	3.49	0.75	9.11	0.4	0.2	0.5
22	PostTreatment	0.06	0.31	2.93	3.30	3.20	0.94	7.44	2.50	7.99	17.92	0.3	1.6	1.9
23	PostTreatment	0.04	1.04	3.31	4.39	0.00	0.60	4.99	2.50	2.50	9.98	0.3	0.5	0.8
24	PostTreatment	0.11	3.35	2.49	5.95	0.00	5.25	11.20	1.50	0.50	13.20	0.2	0.1	0.3
25	PostTreatment	0.27	1.84	1.67	3.79	0.00	0.00	3.79	4.99	4.99	13.77	0.5	1.0	1.5
26	PostTreatment	0.22	1.22	1.25	2.69	3.88	0.00	6.57	0.50	1.75	8.82	0.1	0.4	0.4
27	PostTreatment	0.03	0.92	2.10	3.05	0.00	14.14	17.19	1.00	2.25	20.44	0.1	0.5	0.6
28	PostTreatment	0.03	0.92	2.50	3.45	2.28	0.53	6.26	0.00	10.48	16.74	0.0	2.1	2.1
29	PostTreatment	0.03	1.25	0.43	1.71	5.75	0.00	7.46	2.50	2.75	12.70	0.3	0.6	0.8
3	PostTreatment	0.05	0.91	1.25	2.21	0.00	0.00	2.21	0.00	1.25	3.45	0.0	0.3	0.3
31	PostTreatment	0.02	1.22	2.08	3.32	0.00	16.51	19.82	8.49	2.99	31.30	0.9	0.6	1.5
32	PostTreatment	0.07	0.94	1.70	2.70	0.00	5.91	8.61	4.99	2.00	15.60	0.5	0.4	0.9
33	PostTreatment	0.05	1.70	0.00	1.75	0.00	0.00	1.75	0.00	0.50	2.25	0.0	0.1	0.1
34	PostTreatment	0.17	2.22	1.73	4.12	3.28	3.42	10.82	1.00	2.50	14.31	0.1	0.5	0.6
37	PostTreatment	0.22	0.91	1.25	2.38	0.00	8.53	10.91	0.50	0.75	12.16	0.1	0.2	0.2
38	PostTreatment	0.45	1.53	0.84	2.82	8.41	2.62	13.84	7.49	1.50	22.82	0.8	0.3	1.1
39	PostTreatment	0.18	2.78	0.95	3.90	5.78	19.20	28.88	0.00	30.70	59.58	0.0	6.2	6.2
4	PostTreatment	0.02	0.91	0.83	1.76	5.41	1.18	8.34	0.50	4.24	13.09	0.1	0.9	0.9
40	PostTreatment	0.11	0.31	2.08	2.50	0.00	0.00	2.50	0.00	10.48	12.98	0.0	2.1	2.1
43	PostTreatment	0.08	0.00	1.24	1.32	10.50	12.38	24.21	0.00	1.50	25.70	0.0	0.3	0.3
44	PostTreatment	0.06	1.23	1.68	2.98	0.00	1.59	4.57	0.50	2.99	8.06	0.1	0.6	0.7
5	PostTreatment	0.02	3.65	2.08	5.74	0.00	0.00	5.74	0.50	6.24	12.48	0.1	1.3	1.3
6	PostTreatment	0.03	1.22	2.08	3.33	0.00	0.00	3.33	0.00	3.99	7.32	0.0	0.8	0.8
7	PostTreatment	0.05	0.93	1.68	2.66	0.00	0.00	2.66	0.00	5.74	8.40	0.0	1.2	1.2
8	PostTreatment	0.03	0.30	1.66	2.00	10.59	4.46	17.05	1.50	1.50	20.05	0.2	0.3	0.5
9	PostTreatment	0.08	0.65	2.66	3.40	7.49	0.00	10.89	0.00	0.75	11.64	0.0	0.2	0.2

Table 15. Surface Fuels Vegetation for all Colman Ranch Pre-Treatment, 2008

| Surface Fuels (1,10,100,1000 hr fuels)		HD (Dead Non-Woody Veg)		HL (Live Non-Woody Veg)		SD (Dead Woody Veg)		SL (Live Woody Veg)	
Mean	SDev	Mean	SDev	Mean	Sdev	Mean	SDev	Mean	Sdev
13.2	11.4	0.1	0.1	0	0	0.1	0.1	0.1	0.1

Table 16. Surface Fuels Vegetation for all Colman Ranch Post-Treatment, 2013

Surface Fuels (1,10,100,1000 hr fuels)		HD (Dead Non-Woody Veg)		HL (Live Non-Woody Veg)		SD (Dead Woody Veg)		SL (Live Woody Veg)	
Mean	SDev	Mean	SDev	Mean	Sdev	Mean	SDev	Mean	Sdev
9.5	8.7	0	0	0.2	0.3	0.1	0.2	0.1	0.2

Table 17. Latitude and Longitude of Colman Ranch Monitoring Plot locations

Plot Number	Latitude	Longitude
CR_01	32.91241837	-105.5964133
CR_02	32.91309499	-105.5941481
CR_03	32.91309683	-105.5918005
CR_04	32.91083693	-105.5983275
CR_05	32.91102055	-105.596585
CR_06	32.91103664	-105.5940595
CR_07	32.91105421	-105.5916814
CR_08	32.90893325	-105.6008891
CR_09	32.90893829	-105.5990118
CR_10	32.90895717	-105.5965975
CR_11	32.90926723	-105.5942655
CR_12	32.90675402	-105.6016277
CR_13	32.90680808	-105.6012238
CR_14	32.9068875	-105.5989685
CR_15	32.90689678	-105.5965573
CR_16	32.90695589	-105.5944499
CR_17	32.9046952	-105.6037251
CR_18	32.90480748	-105.6014639
CR_19	32.90483519	-105.5989373
CR_20	32.90487535	-105.5965565
CR_21	32.90264688	-105.6051352
CR_22	32.90275202	-105.6038607
CR_23	32.90266568	-105.6014437
CR_24	32.90276431	-105.5989277
CR_25	32.90257859	-105.5969484
CR_26	32.90167309	-105.6052422
CR_27	32.90070081	-105.6038468
CR_28	32.90068735	-105.6013644
CR_29	32.90064103	-105.5989705
CR_31	32.89834327	-105.6082378
CR_32	32.89862744	-105.6062688
CR_33	32.89862365	-105.6038016
CR_34	32.89861962	-105.6013648
CR_37	32.89688926	-105.6092392
CR_38	32.89640496	-105.6087279
CR_39	32.89655054	-105.6062513
CR_40	32.8965775	-105.6038276
CR_43	32.89532101	-105.6086803
CR_44	32.89446452	-105.6062888
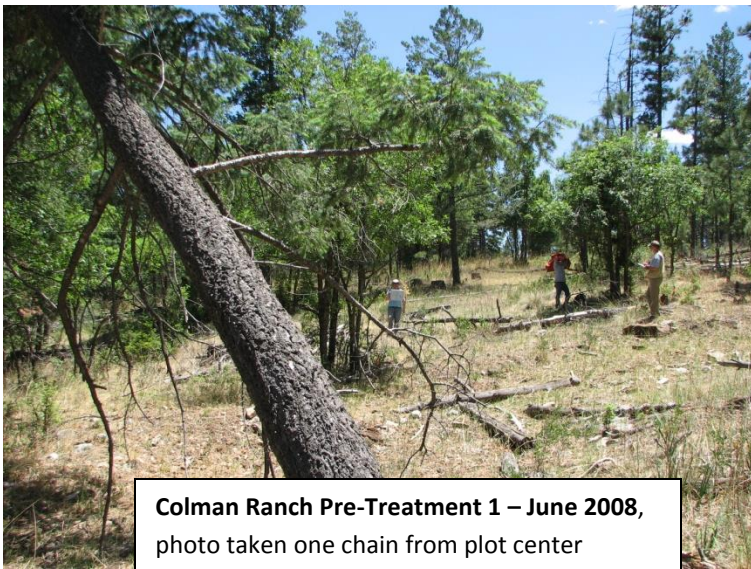
Colman Ranch Pre-Treatment 1 – June 2008, photo taken one chain from plot center

Colman Ranch Post-Treatment 1 – July 2013, photo taken one chain north from plot center

Colman Ranch Pre-Treatment 15 – June 2008, photo taken 37.24 feet from plot center

Colman Ranch Post-Treatment 15 – July 2013, photo taken 37.24 feet south from plot center

Colman Ranch Pre-Treatment 26 – June 2008, photo taken 37.24 feet from plot center

Colman Ranch Post-Treatment 26 – July 2013, photo taken 37.24 feet south from plot center

Figure 2. Colman Ranch Pre/Post-Treatment Sample Point Photographs, June, 2008 & July, 2013.

Colman Ranch Pre-Treatment 27 – June 2008, photo taken one chain from plot center

Colman Ranch Post-Treatment 27– July 2013, photo taken one chain north from plot center

Colman Ranch Pre-Treatment 31 – June 2008, photo taken one chain from plot center

Colman Ranch Post-Treatment 31 – July 2013, photo taken one chain north from plot center

Colman Ranch Pre-Treatment 37 – June 2008, photo taken 37.24 feet from plot center

Colman Ranch Post-Treatment 37 – July 2013, photo taken one chain north from plot center

Figure 3. Colman Ranch Pre/Post-Treatment Sample Point Photographs, June, 2008 & July, 2013.