

**TECHNICAL DOCUMENTATION REPORT**

**Intermountain Forest Tree  
Nutrition Cooperative**

**April 1993**

**Part III**

**Statistical Analysis Documentation**

**College of Forestry, Wildlife and Range Sciences**

**University of Idaho**

**Moscow, Idaho 83844-1133**

## TABLE OF CONTENTS

	<u>Page</u>
SECTION I. Experimental Design Statistical Models for Four Year Douglas-fir Retreatment Response.....	1
SECTION II. Four Year Growth Retreatment Response Summaries for all Douglas-fir Installations.....	7
SECTION III. Experimental Design Statistical Models for Four Year versus Treatment and Parent Material.....	98
SECTION IV. Experimental Design Statistical Models for Four Year versus Treatment and Vegetation Series.....	111
SECTION V. Experimental Design Statistical Models for Four Year versus Initial Potassium Condition.....	118

## SECTION I

### Experimental Design Statistical Models for Four Year Douglas-fir Retreatment Response

- Table 1. Four Year Gross Basal Area Growth for all the Retreatment Douglas-fir Installations
- Table 2. Four Year Gross Basal Area Growth Point Estimates for all the Retreatment Douglas-fir Installations

**TABLE 1. Results 4 Years After Retreatment for 1981 and 1982 DF Sites  
Analysis of Covariance Using Starting BA**

Dependent Variable: GBAI 4 YEAR GROSS BASAL AREA GROWTH

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	147	25475.997863	173.306108	34.19	0.0001
Error	388	1966.621064	5.068611		
Corrected Total	535	27442.618927			
	R-Square	C.V.	Root MSE	GBAI Mean	
	0.928337	13.95579	2.2513576	16.132065	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Region	5	14110.159202	2822.031840	556.77	0.0001
Installation(Region)	84	9656.543355	114.958849	22.68	0.0001
Treatment	7	916.113524	130.873361	25.82	0.0001
Region*Treatment	35	390.927289	11.169351	2.20	0.0002
BA	1	309.373919	309.373919	61.04	0.0001
BA*BA	1	8.731392	8.731392	1.72	0.1901
BA*Treatment	7	33.643189	4.806170	0.95	0.4691
BA*BA*Treatment	7	50.505993	7.215142	1.42	0.1942

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Region	5	7879.3871704	1575.8774341	310.91	0.0001
Installation(Region)	84	9272.9548543	110.3923197	21.78	0.0001
Treatment	7	40.6550972	5.8078710	1.15	0.3335
Region*Treatment	35	326.7655559	9.3361587	1.84	0.0032
BA	1	80.8967534	80.8967534	15.96	0.0001
BA*BA	1	29.7190700	29.7190700	5.86	0.0159
BA*Treatment	7	41.1406203	5.8772315	1.16	0.3252
BA*BA*Treatment	7	50.5059927	7.2151418	1.42	0.1942

**TABLE 2. Results 4 Years After Retreatment for 1981 and 1982 DF Sites  
Analysis of Covariance Using Starting BA**

Dependent Variable: GBAI 4 YEAR GROSS BASAL AREA GROWTH

Means by Region and Treatment (adjusted to a starting BA = 150 ft<sub>2</sub>/a)

Parameter	Estimate	T for H0: Parameter=0	Pr >  T	Std Error of Estimate
NI:0#N + None	19.9022298	31.62	0.0001	0.62939780
NI:200#N + None	22.9599923	32.93	0.0001	0.69726540
NI:400#N + None	22.6601723	29.31	0.0001	0.77324446
NI:0#N + N+K	24.0724473	35.91	0.0001	0.67032851
NI:200#N + 200#N	26.0165918	30.40	0.0001	0.85594059
NI:400#N + 200#N	26.7511028	29.93	0.0001	0.89389505
NI:200#N + N+K	22.8570179	27.32	0.0001	0.83651538
NI:400#N + N+K	25.8374395	31.54	0.0001	0.81918856
MON:0#N + None	11.0164921	19.51	0.0001	0.56457564
MON:200#N + None	11.1380311	17.68	0.0001	0.63005720
MON:400#N + None	11.6255425	16.67	0.0001	0.69728096
MON:0#N + N+K	12.6521059	20.36	0.0001	0.62150931
MON:200#N + 200#N	11.8588668	14.05	0.0001	0.84413275
MON:400#N + 200#N	12.2821159	16.24	0.0001	0.75641392
MON:200#N + N+K	13.9877600	16.55	0.0001	0.84525917
MON:400#N + N+K	12.1722288	13.80	0.0001	0.88225504
CI:0#N + None	11.9331846	18.63	0.0001	0.64037754
CI:200#N + None	12.2758586	16.42	0.0001	0.74746536
CI:400#N + None	12.1253457	17.47	0.0001	0.69387518
CI:0#N + N+K	14.0806541	21.64	0.0001	0.65063247
CI:200#N + 200#N	13.4379571	16.10	0.0001	0.83478254
CI:400#N + 200#N	12.9992609	14.19	0.0001	0.91604756
CI:200#N + N+K	14.1639551	15.92	0.0001	0.88947781
CI:400#N + N+K	13.4703394	15.47	0.0001	0.87047364
NEO:0#N + None	8.3246636	9.73	0.0001	0.85514009
NEO:200#N + None	10.1605253	9.26	0.0001	1.09668388
NEO:400#N + None	8.4647092	7.67	0.0001	1.10425029
NEO:0#N + N+K	9.2907805	11.00	0.0001	0.84472245
NEO:200#N + 200#N	9.1438653	7.31	0.0001	1.25035975
NEO:400#N + 200#N	10.7328885	8.50	0.0001	1.26301566
NEO:200#N + N+K	8.9282165	8.45	0.0001	1.05610251
NEO:400#N + N+K	9.6882340	8.02	0.0001	1.20770941
CW:0#N + None	12.6298641	22.40	0.0001	0.56380464
CW:200#N + None	13.9842861	21.64	0.0001	0.64637271
CW:400#N + None	14.8312752	23.71	0.0001	0.62555524
CW:0#N + N+K	16.0182534	28.28	0.0001	0.56633106
CW:200#N + 200#N	15.4465532	21.38	0.0001	0.72234932
CW:400#N + 200#N	15.5846127	19.89	0.0001	0.78347022
CW:200#N + N+K	15.2494502	21.23	0.0001	0.71840875
CW:400#N + N+K	15.1683682	20.80	0.0001	0.72941840
NEW:0#N + None	14.2170018	24.69	0.0001	0.57580222
NEW:200#N + None	14.9114092	21.46	0.0001	0.69473892
NEW:400#N + None	16.1689337	25.66	0.0001	0.63005884
NEW:0#N + N+K	18.7921397	32.40	0.0001	0.58008942
NEW:200#N + 200#N	18.4486625	23.17	0.0001	0.79628206
NEW:400#N + 200#N	18.3758749	23.26	0.0001	0.79007856
NEW:200#N + N+K	19.1688979	25.53	0.0001	0.75078582
NEW:400#N + N+K	16.6375271	20.96	0.0001	0.79361251
ALL:0#N + None	13.6771615	45.83	0.0001	0.29844109
ALL:200#N + None	14.9513157	44.74	0.0001	0.33414606
ALL:400#N + None	15.1951668	44.17	0.0001	0.34399194
ALL:0#N + N+K	16.7354193	53.93	0.0001	0.31032893
ALL:200#N + 200#N	16.7235337	40.00	0.0001	0.41808668
ALL:400#N + 200#N	17.0463926	39.93	0.0001	0.42690980
ALL:200#N + N+K	16.6093013	46.96	0.0001	0.35369084
ALL:400#N + N+K	16.4168706	40.28	0.0001	0.40753016

TABLE 2. (Continued)

Results 4 Years After Retreatment for 1981 and  
1982 DF Sites

Analysis of Covariance Using Starting BA

Dependent Variable: GBAI 4 YEAR GROSS BASAL AREA GROWTH

Contrasts between Treatments by Region

Parameter	Estimate	T for H0: Parameter=0	Pr >  T	Std Error of Estimate
NI:Old 200 - 0	3.0577625	3.35	0.0009	0.91297761
NI:Old 400 - 0	2.7579425	2.94	0.0035	0.93871450
NI:N+K - 0	4.1702174	4.82	0.0001	0.86534322
NI:200+200 - 0	6.1143620	6.08	0.0001	1.00619284
NI:400+200 - 0	6.8488730	6.58	0.0001	1.04027532
NI:200+N+K - 0	2.9547881	2.93	0.0036	1.00961823
NI:400+N+K - 0	5.9352097	5.92	0.0001	1.00313826
NI:Old 400 - 200	-0.2998200	-0.30	0.7673	1.01265760
NI:New 200#N	3.5737650	4.60	0.0001	0.77746200
NI:New 200#N Inter	-0.5171655	-0.66	0.5074	0.77942001
NI:200#N on 200	3.0565995	2.83	0.0050	1.08190501
NI:200#N on 400	4.0909305	3.65	0.0003	1.11953873
NI:N+K	1.5371464	1.99	0.0472	0.77217166
NI:N+K Inter	-1.6401208	-2.13	0.0337	0.76951594
NI:N+K on 200	-0.1029744	-0.10	0.9243	1.08251267
NI:N+K on 400	3.1772672	2.89	0.0040	1.09771309
NI:N+K - 200#N	-2.0366186	-2.33	0.0202	0.87338427
NI:N+K-200#N Inter	-1.1229553	-1.40	0.1614	0.80032394
NI:N+K-200#N on 200	-3.1595739	-2.71	0.0070	1.16522869
NI:N+K-200#N on 400	-0.9136634	-0.76	0.4483	1.20369394
MON:Old 200 - 0	0.1215390	0.15	0.8846	0.83679808
MON:Old 400 - 0	0.6090504	0.69	0.4937	0.88905356
MON:N+K - 0	1.6356139	1.94	0.0525	0.84095020
MON:200+200 - 0	0.8423747	0.83	0.4063	1.01329663
MON:400+200 - 0	1.2656238	1.34	0.1806	0.94347285
MON:200+N+K - 0	2.9712679	2.91	0.0038	1.01938012
MON:400+N+K - 0	1.1557367	1.10	0.2703	1.04688293
MON:Old 400 - 200	0.4875114	0.52	0.6028	0.93609138
MON:New 200#N	0.6887046	0.92	0.3601	0.75171750
MON:New 200#N Inter	0.0321312	0.04	0.9647	0.72528808
MON:200#N on 200	0.7208357	0.68	0.4966	1.05938025
MON:200#N on 400	0.6565734	0.64	0.5240	1.02954237
MON:N+K	1.6982076	2.15	0.0321	0.78967316
MON:N+K Inter	1.1515213	1.50	0.1352	0.76930148
MON:N+K on 200	2.8497289	2.67	0.0080	1.06812516
MON:N+K on 400	0.5466863	0.48	0.6305	1.13574890
MON:N+K - 200#N	1.0095030	1.15	0.2489	0.87424464
MON:N+K-200#N Inter	1.1193902	1.39	0.1660	0.80656837
MON:N+K-200#N on 200	2.1288932	1.76	0.0800	1.21288535
MON:N+K-200#N on 400	-0.1098871	-0.09	0.9249	1.16559923
CI:Old 200 - 0	0.3426739	0.35	0.7266	0.97935774
CI:Old 400 - 0	0.1921610	0.20	0.8383	0.94111423
CI:N+K - 0	2.1474695	2.37	0.0183	0.90609123
CI:200+200 - 0	1.5047725	1.44	0.1517	1.04767362
CI:400+200 - 0	1.0660763	0.96	0.3379	1.11107017
CI:200+N+K - 0	2.2307705	2.05	0.0415	1.09042197
CI:400+N+K - 0	1.5371548	1.43	0.1540	1.07608365
CI:Old 400 - 200	-0.1505129	-0.15	0.8830	1.02215156
CI:New 200#N	1.0180069	1.25	0.2104	0.81140752
CI:New 200#N Inter	0.1440917	0.18	0.8578	0.80353317

TABLE 2. (Continued)

Results 4 Years After Retreatment for 1981 and  
1982 DF Sites

Analysis of Covariance Using Starting BA

Dependent Variable: GBAI 4 YEAR GROSS BASAL AREA GROWTH

Contrasts between Treatments by Region

Parameter	Estimate	T for H0: Parameter=0	Pr >  T	Std Error of Estimate
CI:200#N on 200	1.1620986	1.03	0.3036	1.12814716
CI:200#N on 400	0.8739152	0.76	0.4500	1.15558618
CI:N+K	1.6165451	1.97	0.0493	0.81965822
CI:N+K Inter	0.2715514	0.34	0.7335	0.79699169
CI:N+K on 200	1.8880966	1.62	0.1069	1.16845551
CI:N+K on 400	1.3449937	1.20	0.2295	1.11748934
CI:N+K - 200#N	0.5985382	0.64	0.5222	0.93438057
CI:N+K-200#N Inter	0.1274598	0.15	0.8816	0.85539606
CI:N+K-200#N on 200	0.7259980	0.59	0.5585	1.23983295
CI:N+K-200#N on 400	0.4710785	0.36	0.7159	1.29319495
NEO:Old 200 - 0	1.8358617	1.34	0.1815	1.37156751
NEO:Old 400 - 0	0.1400456	0.10	0.9188	1.37201620
NEO:N+K - 0	0.9661170	0.81	0.4165	1.18774329
NEO:200+200 - 0	0.8192017	0.55	0.5858	1.50207783
NEO:400+200 - 0	2.4082250	1.60	0.1113	1.50881363
NEO:200+N+K - 0	0.6035530	0.45	0.6533	1.34243236
NEO:400+N+K - 0	1.3635704	0.94	0.3489	1.45390345
NEO:Old 400 - 200	-1.6958161	-1.10	0.2730	1.54498424
NEO:New 200#N	0.6257597	0.54	0.5928	1.16910348
NEO:New 200#N Inter	-1.6424197	-1.40	0.1637	1.17717881
NEO:200#N on 200	-1.0166600	-0.61	0.5402	1.65818890
NEO:200#N on 400	2.2681794	1.37	0.1726	1.65997450
NEO:N+K	-0.0043919	-0.00	0.9968	1.09063686
NEO:N+K Inter	-1.2279168	-1.11	0.2686	1.10838498
NEO:N+K on 200	-1.2323087	-0.82	0.4146	1.50900197
NEO:N+K on 400	1.2235248	0.76	0.4448	1.59966406
NEO:N+K - 200#N	-0.6301516	-0.51	0.6110	1.23783982
NEO:N+K-200#N Inter	0.4145029	0.36	0.7202	1.15639956
NEO:N+K-200#N on 200	-0.2156488	-0.13	0.8960	1.64896651
NEO:N+K-200#N on 400	-1.0446545	-0.60	0.5481	1.73779291
CW:Old 200 - 0	1.3544220	1.59	0.1123	0.85101671
CW:Old 400 - 0	2.2014111	2.63	0.0088	0.83551237
CW:N+K - 0	3.3883893	4.31	0.0001	0.78684368
CW:200+200 - 0	2.8166890	3.10	0.0021	0.90803023
CW:400+200 - 0	2.9547485	3.09	0.0021	0.95563092
CW:200+N+K - 0	2.6195861	2.87	0.0044	0.91381918
CW:400+N+K - 0	2.5385041	2.77	0.0059	0.91646994
CW:Old 400 - 200	0.8469891	0.95	0.3447	0.89522978
CW:New 200#N	1.1078023	1.58	0.1148	0.70084982
CW:New 200#N Inter	0.3544648	0.51	0.6110	0.69634365
CW:200#N on 200	1.4622670	1.50	0.1336	0.97287877
CW:200#N on 400	2.2681794	1.37	0.1726	1.65997450
CW:N+K	0.8011285	1.16	0.2467	0.69055640
CW:N+K Inter	0.4640355	0.69	0.4916	0.67409960
CW:N+K on 200	1.2651640	1.30	0.1934	0.97117038
CW:N+K on 400	1.2235248	0.76	0.4448	1.59966406
CW:N+K - 200#N	-0.3066737	-0.39	0.6964	0.78541169
CW:N+K-200#N Inter	0.1095707	0.15	0.8790	0.71904002
CW:N+K-200#N on 200	-0.1971030	-0.19	0.8492	1.03562893
CW:N+K-200#N on 400	-0.4162445	-0.38	0.7036	1.09327621

TABLE 2. (Continued)

Results 4 Years After Retreatment for 1981 and  
1982 DF Sites

Analysis of Covariance Using Starting BA

Dependent Variable: GBAI 4 YEAR GROSS BASAL AREA GROWTH

Contrasts between Treatments by Region

Parameter	Estimate	T for H0: Parameter=0	Pr >  T	Std Error of Estimate
NEW:Old 200 - 0	0.6944074	0.77	0.4394	0.89716989
NEW:Old 400 - 0	1.9519319	2.29	0.0223	0.85086433
NEW:N+K - 0	4.5751379	5.63	0.0001	0.81218267
NEW:200+200 - 0	4.2316607	4.32	0.0001	0.97903469
NEW:400+200 - 0	4.1588731	4.26	0.0001	0.97708854
NEW:200+N+K - 0	4.9518961	5.27	0.0001	0.93990677
NEW:400+N+K - 0	2.4205252	2.48	0.0136	0.97681487
NEW:Old 400 - 200	1.2575245	1.34	0.1815	0.93957289
NEW:New 200#N	2.8720972	3.90	0.0001	0.73559552
NEW:New 200#N Inter	0.6651561	0.90	0.3686	0.73886730
NEW:200#N on 200	3.5372533	3.33	0.0009	1.06070480
NEW:200#N on 400	2.2069412	2.15	0.0318	1.02418584
NEW:N+K	2.3630410	3.22	0.0014	0.73320261
NEW:N+K Inter	1.8944477	2.64	0.0085	0.71635609
NEW:N+K on 200	4.2574887	4.14	0.0001	1.02735636
NEW:N+K on 400	0.4685934	0.46	0.6471	1.02276251
NEW:N+K - 200#N	-0.5090562	-0.62	0.5384	0.82670289
NEW:N+K-200#N Inter	1.2292916	1.60	0.1105	0.76842837
NEW:N+K-200#N on 200	0.7202354	0.65	0.5182	1.11369611
NEW:N+K-200#N on 400	-1.7383478	-1.52	0.1293	1.14346868
ALL:Old 200 - 0	1.2741542	2.95	0.0034	0.43208516
ALL:Old 400 - 0	1.5180053	3.50	0.0005	0.43369861
ALL:N+K - 0	3.0582578	7.50	0.0001	0.40782604
ALL:200+200 - 0	3.0463723	6.18	0.0001	0.49301782
ALL:400+200 - 0	3.3692311	6.73	0.0001	0.50066611
ALL:200+N+K - 0	2.9321399	6.52	0.0001	0.44971866
ALL:400+N+K - 0	2.7397092	5.60	0.0001	0.48910981
ALL:Old 400 - 200	0.2438511	0.53	0.5993	0.46379479
ALL:New 200#N	3.6234438	4.90	0.0001	0.73977594
ALL:New 200#N Inter	-0.0790077	-0.11	0.9151	0.74087781
ALL:200#N on 200	1.7722180	3.39	0.0008	0.52237416
ALL:200#N on 400	1.8512258	3.53	0.0005	0.52460407
ALL:N+K	2.8796894	4.03	0.0001	0.71403234
ALL:N+K Inter	0.4362818	0.63	0.5317	0.69688240
ALL:N+K on 200	1.6579856	3.45	0.0006	0.48064413
ALL:N+K on 400	1.2217038	2.37	0.0185	0.51645412
ALL:N+K - 200#N	-0.7437544	-0.89	0.3729	0.83365626
ALL:N+K-200#N Inter	0.5152896	0.68	0.4993	0.76196813
ALL:N+K-200#N on 200	-0.1142324	-0.21	0.8334	0.54282778
ALL:N+K-200#N on 400	-0.6295220	-1.07	0.2832	0.58577051



**SECTION II**

**Four Year Growth Retreatment Response Summaries  
for all Douglas-fir Installations**

Installation Summary: Adjusted Growth Following Retreatment

Installation 201                      LAFFINWELL CREEK #1

Region: Central Idaho                      Ownership: Boise Cascade  
 Legal Description: T16N R4E    Section 21    Meridian: Boise

Stand Characteristics at Time of Retreatment:

-----  
 Age    65 years  
 Trees per Acre                                227 trees/acre  
 Basal Area                                    137.3 sq.ft/acre  
 Total Volume                                 3332 cu.ft/acre  
 CCF     150.1  
 Relative Density Index                      42.2  
 Mean Diameter                                10.6 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 15.8 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	6.8	11.3
200#N	None	.	.
400#N	None	5.0	9.1
200#N	200#N	6.2	11.2
400#N	200#N	.	.
0#N	N+K	10.6	15.9
200#N	N+K	13.8	14.3
400#N	N+K	11.6	11.6

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	.	.	.	.
Old 400#N	-1.8	-2.2	-26.5	-19.5
400#N-200#N	.	.	.	.
New 200#N	.	.	.	.
N+K on Cont	3.8	4.6	55.9	40.7
N+K on Treat	6.6	2.5	132.0	27.5
New 200#K	7.6	3.1	122.6	27.7

Installation Summary: Adjusted Growth Following Retreatment

Installation 202

HORSETHIEF RESERVOIR

Region: Central Idaho

Ownership: Boise Cascade

Legal Description: T13N R5E Section 18 Meridian: Boise

Stand Characteristics at Time of Retreatment:

Age	64 years
Trees per Acre	182 trees/acre
Basal Area	87.9 sq.ft/acre
Total Volume	1819 cu.ft/acre
CCF	100.6
Relative Density Index	28.5
Mean Diameter	9.5 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 14.0 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	10.2	10.6
200#N	None	6.8	6.9
400#N	None	9.9	9.4
200#N	200#N	.	.
400#N	200#N	.	.
0#N	N+K	11.7	11.8
200#N	N+K	10.9	11.1
400#N	N+K	-9.3	8.0

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-3.4	-3.7	-33.3	-34.9
Old 400#N	-0.3	-1.2	-2.9	-11.3
400#N-200#N	3.1	2.5	45.6	36.2
New 200#N	.	.	.	.
N+K on Cont	1.5	1.2	14.7	11.3
N+K on Treat	-7.6	1.4	-90.4	17.2
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 203

LAFFINWELL CREEK #2

Region: Central Idaho

Ownership: Boise Cascade

Legal Description: T16N R4E Section 29 Meridian: Boise

Stand Characteristics at Time of Retreatment:

Age	75 years
Trees per Acre	164 trees/acre
Basal Area	119.7 sq.ft/acre
Total Volume	3149 cu.ft/acre
CCF	125.3
Relative Density Index	35.1
Mean Diameter	11.7 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 12.8 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	10.4	10.6
200#N	None	3.1	6.3
400#N	None	.	.
200#N	200#N	10.0	10.1
400#N	200#N	-9.7	6.4
0#N	N+K	1.4	9.8
200#N	N+K	.	.
400#N	N+K	11.2	11.3

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-7.3	-4.3	-70.2	-40.6
Old 400#N	.	.	.	.
400#N-200#N	.	.	.	.
New 200#N	6.9	3.8	222.6	60.3
N+K on Cont	-9.0	-0.8	-86.5	-7.5
N+K on Treat	.	.	.	.
New 200#K	20.9	4.9	215.5	76.6

Installation Summary: Adjusted Growth Following Retreatment

Installation 204

JOHNSON'S MILL #1

Region: Northern Idaho

Ownership: IDL

Legal Description: T37N R3E Section 4 Meridian: Boise

Stand Characteristics at Time of Retreatment:

Age	47 years
Trees per Acre	218 trees/acre
Basal Area	134.3 sq.ft/acre
Total Volume	3663 cu.ft/acre
CCF	158.4
Relative Density Index	41.2
Mean Diameter	10.6 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 25.3 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	17.7	21.5
200#N	None	21.9	21.4
400#N	None	21.7	20.9
200#N	200#N	19.2	24.0
400#N	200#N	27.2	27.1
0#N	N+K	30.1	30.3
200#N	N+K	.	.
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	4.2	-0.1	23.7	-0.5
Old 400#N	4.0	-0.6	22.6	-2.8
400#N-200#N	-0.2	-0.5	-0.9	-2.3
New 200#N	1.4	4.4	6.4	20.8
N+K on Cont	12.4	8.8	70.1	40.9
N+K on Treat	.	.	.	.
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 205

JOHNSON'S MILL #2

Region: Northern Idaho

Ownership: IDL

Legal Description: T37N R3E Section 4 Meridian: Boise

Stand Characteristics at Time of Retreatment:

Age	47 years
Trees per Acre	217 trees/acre
Basal Area	144.0 sq.ft/acre
Total Volume	4214 cu.ft/acre
CCF	165.6
Relative Density Index	43.3
Mean Diameter	11.0 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 24.4 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	21.7	22.0
200#N	None	.	.
400#N	None	21.6	21.8
200#N	200#N	17.9	25.0
400#N	200#N	20.7	25.7
0#N	N+K	23.3	24.4
200#N	N+K	18.7	24.2
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	.	.	.	.
Old 400#N	-0.1	-0.2	-0.5	-0.9
400#N-200#N	.	.	.	.
New 200#N	-0.9	3.9	-4.2	17.9
N+K on Cont	1.6	2.4	7.4	10.9
N+K on Treat	.	.	.	.
New 200#K	0.8	-0.8	4.5	-3.2

Installation Summary: Adjusted Growth Following Retreatment

Installation 206 CARIBEL

Region: Northern Idaho Ownership: IDL  
 Legal Description: T34N R4E Section 36 Meridian: Boise

Stand Characteristics at Time of Retreatment:

-----  
 Age 52 years  
 Trees per Acre 257 trees/acre  
 Basal Area 186.3 sq.ft/acre  
 Total Volume 5512 cu.ft/acre  
 CCF 201.2  
 Relative Density Index 54.8  
 Mean Diameter 11.6 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 23.2 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	20.7	21.3
200#N	None	19.0	18.5
400#N	None	.	.
200#N	200#N	.	.
400#N	200#N	3.7	19.5
0#N	N+K	25.5	25.7
200#N	N+K	21.2	21.4
400#N	N+K	19.6	20.3

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-1.7	-2.8	-8.2	-13.1
Old 400#N	.	.	.	.
400#N-200#N	.	.	.	.
New 200#N	.	.	.	.
N+K on Cont	4.8	4.4	23.2	20.7
N+K on Treat	2.2	2.9	11.6	15.7
New 200#K	15.9	0.8	429.7	4.1

Installation Summary: Adjusted Growth Following Retreatment

Installation 207 WAHA

Region: Northeast Oregon Ownership: Potlatch  
 Legal Description: T33N R4W Section 10 Meridian: Boise

Stand Characteristics at Time of Retreatment:

-----  
 Age 61 years  
 Trees per Acre 230 trees/acre  
 Basal Area 156.3 sq.ft/acre  
 Total Volume 4317 cu.ft/acre  
 CCF 165.3  
 Relative Density Index 46.8  
 Mean Diameter 11.1 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 15.9 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	-2.2	11.4
200#N	None	-24.0	8.6
400#N	None	8.4	12.3
200#N	200#N	.	.
400#N	200#N	.	.
0#N	N+K	-22.7	13.8
200#N	N+K	-32.3	8.3
400#N	N+K	-7.7	13.3

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-21.8	-2.8	-990.9	-24.6
Old 400#N	10.6	0.9	481.8	7.9
400#N-200#N	32.4	3.7	135.0	43.0
New 200#N	.	.	.	.
N+K on Cont	-20.5	2.4	-931.8	21.1
N+K on Treat	-12.2	0.3	-156.4	3.3
New 200#K	.	.	.	.



Installation Summary: Adjusted Growth Following Retreatment

Installation 208

LOVELL VALLEY ROAD

Region: Northern Idaho

Ownership: Potlatch

Legal Description: T46N R5W Section 25 Meridian: Boise

Stand Characteristics at Time of Retreatment:

Age	94 years
Trees per Acre	145 trees/acre
Basal Area	208.1 sq.ft/acre
Total Volume	7523 cu.ft/acre
CCF	187.4
Relative Density Index	51.4
Mean Diameter	16.6 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 14.0 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	1.8	15.5
200#N	None	.	.
400#N	None	14.5	14.4
200#N	200#N	16.1	15.9
400#N	200#N	15.0	15.4
0#N	N+K	15.4	15.6
200#N	N+K	16.0	15.7
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	.	.	.	.
Old 400#N	12.7	-1.1	705.6	-7.1
400#N-200#N	.	.	.	.
New 200#N	0.5	1.0	3.4	6.9
N+K on Cont	13.6	0.1	755.6	0.6
N+K on Treat	.	.	.	.
New 200#K	-0.1	-0.2	-0.6	-1.3

Installation Summary: Adjusted Growth Following Retreatment

Installation 209 ADDEY

Region: Northeast Washington Ownership: Boise Cascade  
 Legal Description: T34N R38E Section 27 Meridian: Willamette

Stand Characteristics at Time of Retreatment:

-----  
 Age 74 years  
 Trees per Acre 178 trees/acre  
 Basal Area 163.9 sq.ft/acre  
 Total Volume 5431 cu.ft/acre  
 CCF 170.7  
 Relative Density Index 45.4  
 Mean Diameter 13.0 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 15.3 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	12.6	12.7
200#N	None	.	.
400#N	None	11.3	11.3
200#N	200#N	12.8	12.5
400#N	200#N	.	.
0#N	N+K	14.3	14.9
200#N	N+K	14.3	14.2
400#N	N+K	14.1	13.7

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	.	.	.	.
Old 400#N	-1.3	-1.4	-10.3	-11.0
400#N-200#N	.	.	.	.
New 200#N	.	.	.	.
N+K on Cont	1.7	2.2	13.5	17.3
N+K on Treat	2.8	2.4	24.8	21.2
New 200#K	1.5	1.7	11.7	13.6

Installation Summary: Adjusted Growth Following Retreatment

Installation 210                      BUCK CREEK

Region: Northeast Washington      Ownership: Inland Empire  
 Legal Description: T31N R43E Section 26      Meridian: Willamette

Stand Characteristics at Time of Retreatment:

-----  
 Age    60 years  
 Trees per Acre                                242 trees/acre  
 Basal Area                                    154.6 sq.ft/acre  
 Total Volume                                 4110 cu.ft/acre  
 CCF     165.6  
 Relative Density Index                      46.9  
 Mean Diameter                                10.9 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 14.3 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	-67.3	10.9
200#N	None	-4.2	13.2
400#N	None	.	.
200#N	200#N	.	.
400#N	200#N	17.3	17.0
0#N	N+K	18.5	18.8
200#N	N+K	10.1	17.3
400#N	N+K	-57.5	11.3

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	63.1	2.3	93.8	21.1
Old 400#N	.	.	.	.
400#N-200#N	.	.	.	.
New 200#N	.	.	.	.
N+K on Cont	85.8	7.9	127.5	72.5
N+K on Treat	14.3	4.1	340.5	31.1
New 200#K	-74.8	-5.7	-432.4	-33.5

Installation Summary: Adjusted Growth Following Retreatment

Installation 211 HEEL CREEK

Region: Northeast Washington Ownership: Inland Empire  
 Legal Description: T31N R43E Section 20 Meridian: Willamette

Stand Characteristics at Time of Retreatment:

Age	40 years
Trees per Acre	412 trees/acre
Basal Area	204.0 sq.ft/acre
Total Volume	5030 cu.ft/acre
CCF	233.5
Relative Density Index	65.9
Mean Diameter	9.7 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 30.6 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	24.6	28.9
200#N	None	.	.
400#N	None	3.7	23.7
200#N	200#N	19.1	32.6
400#N	200#N	15.8	28.4
0#N	N+K	6.1	32.1
200#N	N+K	23.0	32.8
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	.	.	.	.
Old 400#N	-20.9	-5.2	-85.0	-18.0
400#N-200#N	.	.	.	.
New 200#N	12.1	4.7	327.0	19.8
N+K on Cont	-18.5	3.2	-75.2	11.1
N+K on Treat	.	.	.	.
New 200#K	3.9	0.2	20.4	0.6

Installation Summary: Adjusted Growth Following Retreatment

Installation 212 SWAMP CREEK

Region: Northeast Oregon Ownership: Boise Cascade  
 Legal Description: T1N R45E Section 5 Meridian: Willamette

Stand Characteristics at Time of Retreatment:

-----  
 Age 77 years  
 Trees per Acre 197 trees/acre  
 Basal Area 99.6 sq.ft/acre  
 Total Volume 2475 cu.ft/acre  
 CCF 116.9  
 Relative Density Index 32.0  
 Mean Diameter 9.6 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 12.4 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	9.9	10.2
200#N	None	7.9	7.5
400#N	None	8.4	8.4
200#N	200#N	5.3	9.1
400#N	200#N	6.6	6.7
0#N	N+K	11.2	11.2
200#N	N+K	.	.
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-2.0	-2.7	-20.2	-26.5
Old 400#N	-1.5	-1.8	-15.2	-17.6
400#N-200#N	0.5	0.9	6.3	12.0
New 200#N	-2.2	-0.1	-27.0	-0.6
N+K on Cont	1.3	1.0	13.1	9.8
N+K on Treat	.	.	.	.
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 213 KAMELA

Region: Northeast Oregon Ownership: Boise Cascade  
 Legal Description: T2S R35E Section 3 Meridian: Willamette

Stand Characteristics at Time of Retreatment:

-----  
 Age 86 years  
 Trees per Acre 107 trees/acre  
 Basal Area 99.6 sq.ft/acre  
 Total Volume 3086 cu.ft/acre  
 CCF 97.4  
 Relative Density Index 27.5  
 Mean Diameter 13.1 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 9.9 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	6.3	6.5
200#N	None	6.5	6.7
400#N	None	5.0	5.3
200#N	200#N	.	.
400#N	200#N	.	.
0#N	N+K	11.7	11.9
200#N	N+K	10.3	10.0
400#N	N+K	10.2	9.6

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	0.2	0.2	3.2	3.1
Old 400#N	-1.3	-1.2	-20.6	-18.5
400#N-200#N	-1.5	-1.4	-23.1	-20.9
New 200#N	.	.	.	.
N+K on Cont	5.4	5.4	85.7	83.1
N+K on Treat	4.5	3.8	78.3	63.3
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 214

FIFTEENMILE CREEK #1

Region: Northeast Washington

Ownership: Boise Cascade

Legal Description: T39N R37E Section 25

Meridian: Willamette

Stand Characteristics at Time of Retreatment:

Age	56 years
Trees per Acre	202 trees/acre
Basal Area	125.3 sq.ft/acre
Total Volume	3082 cu.ft/acre
CCF	142.8
Relative Density Index	38.2
Mean Diameter	10.7 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 22.4 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	19.5	19.8
200#N	None	15.6	15.8
400#N	None	16.2	17.1
200#N	200#N	22.8	23.1
400#N	200#N	19.9	19.8
0#N	N+K	22.6	22.7
200#N	N+K	.	.
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-3.9	-4.0	-20.0	-20.2
Old 400#N	-3.3	-2.7	-16.9	-13.6
400#N-200#N	0.6	1.3	3.8	8.2
New 200#N	5.4	5.0	34.3	30.4
N+K on Cont	3.1	2.9	15.9	14.6
N+K on Treat	.	.	.	.
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 215 FIFTEENMILE CREEK #2

Region: Northeast Washington Ownership: Boise Cascade  
 Legal Description: T39N R37E Section 25 Meridian: Willamette

Stand Characteristics at Time of Retreatment:

-----  
 Age 57 years  
 Trees per Acre 213 trees/acre  
 Basal Area 106.4 sq.ft/acre  
 Total Volume 2475 cu.ft/acre  
 CCF 128.7  
 Relative Density Index 34.4  
 Mean Diameter 9.6 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 22.2 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	17.6	17.7
200#N	None	17.1	16.5
400#N	None	.	.
200#N	200#N	14.4	18.7
400#N	200#N	19.7	19.5
0#N	N+K	21.3	22.0
200#N	N+K	.	.
400#N	N+K	17.5	17.7

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-0.5	-1.2	-2.8	-6.8
Old 400#N	.	.	.	.
400#N-200#N	.	.	.	.
New 200#N	-2.7	2.2	-15.8	13.3
N+K on Cont	3.7	4.3	21.0	24.3
N+K on Treat	.	.	.	.
New 200#K	-2.2	-1.8	-11.2	-9.2



Installation Summary: Adjusted Growth Following Retreatment

Installation 216

SCHMIDT MEADOWS

Region: Northeast Washington

Ownership: Boise Cascade

Legal Description: T32N R38E Section 28

Meridian: Willamette

Stand Characteristics at Time of Retreatment:

Age	72 years
Trees per Acre	258 trees/acre
Basal Area	157.5 sq.ft/acre
Total Volume	4599 cu.ft/acre
CCF	176.0
Relative Density Index	48.4
Mean Diameter	10.6 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 15.3 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	13.4	13.6
200#N	None	12.0	12.0
400#N	None	5.0	12.4
200#N	200#N	.	.
400#N	200#N	.	.
0#N	N+K	17.8	17.7
200#N	N+K	12.9	15.7
400#N	N+K	9.6	14.4

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-1.4	-1.6	-10.4	-11.8
Old 400#N	-8.4	-1.2	-62.7	-8.8
400#N-200#N	-7.0	0.4	-58.3	3.3
New 200#N	.	.	.	.
N+K on Cont	4.4	4.1	32.8	30.1
N+K on Treat	2.7	2.8	32.4	23.4
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 217                      EMANUEL CREEK

Region: Northeast Washington      Ownership: Boise Cascade  
 Legal Description: T39N R33E Section 29      Meridian: Willamette

Stand Characteristics at Time of Retreatment:

-----  
 Age    81 years  
 Trees per Acre                                215 trees/acre  
 Basal Area                                    138.2 sq.ft/acre  
 Total Volume                                 3673 cu.ft/acre  
 CCF     153.9  
 Relative Density Index                      41.8  
 Mean Diameter                                11.1 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 16.7 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	12.0	12.3
200#N	None	13.0	12.8
400#N	None	14.4	13.7
200#N	200#N	.	.
400#N	200#N	.	.
0#N	N+K	18.5	18.7
200#N	N+K	18.1	18.3
400#N	N+K	12.4	12.7

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	1.0	0.5	8.3	4.1
Old 400#N	2.4	1.4	20.0	11.4
400#N-200#N	1.4	0.9	10.8	7.0
New 200#N	.	.	.	.
N+K on Cont	6.5	6.4	54.2	52.0
N+K on Treat	1.5	2.2	11.3	17.0
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 218                      SECOND CREEK

Region: Northeast Washington      Ownership: Boise Cascade  
 Legal Description: T39N R34E Section 13      Meridian: Willamette

Stand Characteristics at Time of Retreatment:

-----  
 Age                                      106 years  
 Trees per Acre                        152 trees/acre  
 Basal Area                            120.2 sq.ft/acre  
 Total Volume                         3032 cu.ft/acre  
 CCF                                     130.5  
 Relative Density Index               34.6  
 Mean Diameter                        12.1 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 17.0 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	1.1	13.1
200#N	None	12.0	12.4
400#N	None	10.5	12.8
200#N	200#N	13.9	13.7
400#N	200#N	13.6	13.7
0#N	N+K	16.1	15.8
200#N	N+K	.	.
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	10.9	-0.7	990.9	-5.3
Old 400#N	9.4	-0.3	854.5	-2.3
400#N-200#N	-1.5	0.4	-12.5	3.2
New 200#N	2.5	1.1	22.2	8.7
N+K on Cont	15.0	2.7	1363.6	20.6
N+K on Treat	.	.	.	.
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 219                      LITTLE SALMON

Region: Central Idaho                      Ownership: Boise Cascade  
 Legal Description: T18N R1E Section 13      Meridian: Boise

Stand Characteristics at Time of Retreatment:

-----  
 Age    73 years  
 Trees per Acre                                242 trees/acre  
 Basal Area                                    155.2 sq.ft/acre  
 Total Volume                                 3849 cu.ft/acre  
 CCF     161.0  
 Relative Density Index                      47.0  
 Mean Diameter                                10.9 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 18.4 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	14.4	15.3
200#N	None	.	.
400#N	None	12.7	12.3
200#N	200#N	13.0	12.9
400#N	200#N	5.8	12.1
0#N	N+K	13.5	15.7
200#N	N+K	17.1	17.0
400#N	N+K	.	.

Effect	Four Year Response/Acre			
	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	.	.	.	.
Old 400#N	-1.7	-3.0	-11.8	-19.6
400#N-200#N	.	.	.	.
New 200#N	-6.9	-0.2	-54.3	-1.6
N+K on Cont	-0.9	0.4	-6.3	2.6
N+K on Treat	.	.	.	.
New 200#K	4.1	4.1	31.5	31.8

Installation Summary: Adjusted Growth Following Retreatment

Installation 220 GROUSE CREEK

Region: Central Idaho Ownership: IDL  
 Legal Description: T16N R4E Section 36 Meridian: Boise

Stand Characteristics at Time of Retreatment:

-----  
 Age 95 years  
 Trees per Acre 262 trees/acre  
 Basal Area 121.7 sq.ft/acre  
 Total Volume 3003 cu.ft/acre  
 CCF 145.6  
 Relative Density Index 39.9  
 Mean Diameter 9.3 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 12.3 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	10.1	10.0
200#N	None	8.8	8.9
400#N	None	7.8	7.4
200#N	200#N	14.1	13.9
400#N	200#N	8.5	9.4
0#N	N+K	-5.1	15.1
200#N	N+K	.	.
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-1.3	-1.1	-12.9	-11.0
Old 400#N	-2.3	-2.6	-22.8	-26.0
400#N-200#N	-1.0	-1.5	-11.4	-16.9
New 200#N	3.0	3.5	36.1	42.9
N+K on Cont	-15.2	5.1	-150.5	51.0
N+K on Treat	.	.	.	.
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 221                      LITTLE MUD CREEK #1

Region: Central Idaho                      Ownership: Boise Cascade  
 Legal Description: T20N R1E Section 33      Meridian: Boise

Stand Characteristics at Time of Retreatment:

-----  
 Age    88 years  
 Trees per Acre                              178 trees/acre  
 Basal Area                                  138.8 sq.ft/acre  
 Total Volume                                3626 cu.ft/acre  
 CCF    143.9  
 Relative Density Index                      40.0  
 Mean Diameter                                12.0 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 14.3 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	15.7	16.1
200#N	None	17.5	17.3
400#N	None	17.4	17.3
200#N	200#N	16.1	15.7
400#N	200#N	3.6	14.0
0#N	N+K	14.5	14.4
200#N	N+K	.	.
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	1.8	1.2	11.5	7.5
Old 400#N	1.7	1.2	10.8	7.5
400#N-200#N	-0.1	0.0	-0.6	0.0
New 200#N	-7.6	-2.4	-43.6	-14.2
N+K on Cont	-1.2	-1.7	-7.6	-10.6
N+K on Treat	.	.	.	.
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 222 WEST MILL CREEK #1

Region: Central Idaho Ownership: IDL  
 Legal Description: T18N R3W Section 36 Meridian: Boise

Stand Characteristics at Time of Retreatment:

-----  
 Age 77 years  
 Trees per Acre 353 trees/acre  
 Basal Area 163.4 sq.ft/acre  
 Total Volume 3953 cu.ft/acre  
 CCF 189.4  
 Relative Density Index 53.5  
 Mean Diameter 9.5 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 16.6 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	8.3	8.3
200#N	None	9.5	10.1
400#N	None	.	.
200#N	200#N	.	.
400#N	200#N	-5.1	6.9
0#N	N+K	11.9	11.9
200#N	N+K	8.1	8.2
400#N	N+K	1.5	8.0

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	1.2	1.8	14.5	21.7
Old 400#N	.	.	.	.
400#N-200#N	.	.	.	.
New 200#N	.	.	.	.
N+K on Cont	3.6	3.6	43.4	43.4
N+K on Treat	-1.4	-1.9	-14.7	-18.8
New 200#K	6.6	1.1	129.4	15.9

Installation Summary: Adjusted Growth Following Retreatment

Installation 223 WEST MILL CREEK #2

Region: Central Idaho Ownership: IDL  
 Legal Description: T18N R3W Section 36 Meridian: Boise

Stand Characteristics at Time of Retreatment:

-----  
 Age 81 years  
 Trees per Acre 223 trees/acre  
 Basal Area 136.4 sq.ft/acre  
 Total Volume 3583 cu.ft/acre  
 CCF 145.6  
 Relative Density Index 41.8  
 Mean Diameter 10.7 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 17.2 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	11.3	11.4
200#N	None	7.7	7.7
400#N	None	0.0	7.3
200#N	200#N	.	.
400#N	200#N	.	.
0#N	N+K	13.1	13.9
200#N	N+K	10.7	9.9
400#N	N+K	10.3	10.9

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-3.6	-3.7	-31.9	-32.5
Old 400#N	-11.3	-4.1	-100.0	-36.0
400#N-200#N	-7.7	-0.4	-100.0	-5.2
New 200#N	.	.	.	.
N+K on Cont	1.8	2.5	15.9	21.9
N+K on Treat	6.6	2.9	172.7	38.7
New 200#K	.	.	.	.



Installation Summary: Adjusted Growth Following Retreatment

Installation 224 KAISER BUTTE #1

Region: Central Washington Ownership: Boise Cascade  
 Legal Description: T6N R15E Section 20 Meridian: Willamette

Stand Characteristics at Time of Retreatment:

-----  
 Age 80 years  
 Trees per Acre 101 trees/acre  
 Basal Area 187.2 sq.ft/acre  
 Total Volume 7283 cu.ft/acre  
 CCF 156.9  
 Relative Density Index 43.5  
 Mean Diameter 18.5 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 21.8 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	15.7	16.3
200#N	None	16.1	15.5
400#N	None	-8.1	12.0
200#N	200#N	15.1	15.8
400#N	200#N	13.3	13.2
0#N	N+K	18.3	19.0
200#N	N+K	.	.
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	0.4	-0.8	2.5	-4.9
Old 400#N	-23.8	-4.3	-151.6	-26.4
400#N-200#N	-24.2	-3.5	-150.3	-22.6
New 200#N	10.2	0.7	255.0	5.5
N+K on Cont	2.6	2.7	16.6	16.6
N+K on Treat	.	.	.	.
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 225                      BOWMAN CREEK

Region: Central Washington              Ownership: Boise Cascade  
 Legal Description: T5N R15E Section 18      Meridian: Willamette

Stand Characteristics at Time of Retreatment:

-----  
 Age    91 years  
 Trees per Acre                              160 trees/acre  
 Basal Area                                    142.4 sq.ft/acre  
 Total Volume                                3948 cu.ft/acre  
 CCF    148.4  
 Relative Density Index                    39.8  
 Mean Diameter                              12.7 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 21.8 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	14.7	15.2
200#N	None	.	.
400#N	None	12.1	11.7
200#N	200#N	15.4	15.6
400#N	200#N	.	.
0#N	N+K	19.7	20.5
200#N	N+K	15.0	14.7
400#N	N+K	13.1	12.2

Effect	Four Year Response/Acre			
	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	.	.	.	.
Old 400#N	-2.6	-3.5	-17.7	-23.0
400#N-200#N	.	.	.	.
New 200#N	.	.	.	.
N+K on Cont	5.0	5.3	34.0	34.9
N+K on Treat	1.0	0.5	8.3	4.3
New 200#K	-0.4	-0.9	-2.6	-5.8

Installation Summary: Adjusted Growth Following Retreatment

Installation 226

CLEMAN MTN

Region: Central Washington

Ownership: Boise Cascade

Legal Description: T16N R15E Section 16

Meridian: Willamette

Stand Characteristics at Time of Retreatment:

Age	85 years
Trees per Acre	132 trees/acre
Basal Area	110.6 sq.ft/acre
Total Volume	2788 cu.ft/acre
CCF	117.4
Relative Density Index	31.4
Mean Diameter	12.4 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 15.0 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	9.7	10.1
200#N	None	9.0	9.1
400#N	None	9.0	8.7
200#N	200#N	.	.
400#N	200#N	.	.
0#N	N+K	12.7	13.0
200#N	N+K	9.2	9.0
400#N	N+K	11.7	11.3

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-0.7	-1.0	-7.2	-9.9
Old 400#N	-0.7	-1.4	-7.2	-13.9
400#N-200#N	0.0	-0.4	0.0	-4.4
New 200#N	.	.	.	.
N+K on Cont	3.0	2.9	30.9	28.7
N+K on Treat	1.4	1.2	16.1	14.0
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 227 JOHNSON CANYON

Region: Central Washington Ownership: Boise Cascade  
 Legal Description: T16N R15E Section 20 Meridian: Willamette

Stand Characteristics at Time of Retreatment:

Age	86 years
Trees per Acre	123 trees/acre
Basal Area	121.8 sq.ft/acre
Total Volume	3479 cu.ft/acre
CCF	124.9
Relative Density Index	33.1
Mean Diameter	13.4 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 13.4 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	8.0	8.6
200#N	None	6.2	6.0
400#N	None	.	.
200#N	200#N	.	.
400#N	200#N	6.5	6.0
0#N	N+K	10.2	10.7
200#N	N+K	7.9	7.3
400#N	N+K	7.4	7.6

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-1.8	-2.6	-22.5	-30.2
Old 400#N	.	.	.	.
400#N-200#N	.	.	.	.
New 200#N	.	.	.	.
N+K on Cont	2.2	2.1	27.5	24.4
N+K on Treat	1.7	1.3	27.4	21.7
New 200#K	0.9	1.6	13.8	26.7

Installation Summary: Adjusted Growth Following Retreatment

Installation 228

LOOKOUT MTN WEST

Region: Central Washington

Ownership: Washington DNR

Legal Description: T20N R16E Section 36

Meridian: Willamette

Stand Characteristics at Time of Retreatment:

Age	70 years
Trees per Acre	203 trees/acre
Basal Area	159.3 sq.ft/acre
Total Volume	4820 cu.ft/acre
CCF	167.4
Relative Density Index	45.8
Mean Diameter	12.2 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 15.3 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	12.1	12.4
200#N	None	.	.
400#N	None	10.3	10.4
200#N	200#N	2.0	13.1
400#N	200#N	.	.
0#N	N+K	-34.9	14.0
200#N	N+K	4.1	12.6
400#N	N+K	12.0	11.1

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	.	.	.	.
Old 400#N	-1.8	-2.0	-14.9	-16.1
400#N-200#N	.	.	.	.
New 200#N	.	.	.	.
N+K on Cont	-47.0	1.6	-388.4	12.9
N+K on Treat	1.7	0.7	16.5	6.7
New 200#K	2.1	-0.5	105.0	-3.8

Installation Summary: Adjusted Growth Following Retreatment

Installation 229

LOOKOUT MTN EAST

Region: Central Washington

Ownership: Boise Cascade

Legal Description: T20N R17E Section 31

Meridian: Willamette

Stand Characteristics at Time of Retreatment:

Age	75 years
Trees per Acre	113 trees/acre
Basal Area	155.9 sq.ft/acre
Total Volume	5167 cu.ft/acre
CCF	145.4
Relative Density Index	39.1
Mean Diameter	15.9 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 17.2 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	15.3	15.4
200#N	None	.	.
400#N	None	17.4	17.3
200#N	200#N	15.5	15.9
400#N	200#N	14.4	13.8
0#N	N+K	17.4	17.6
200#N	N+K	15.5	15.3
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	.	.	.	.
Old 400#N	2.1	1.9	13.7	12.3
400#N-200#N	.	.	.	.
New 200#N	-3.0	-3.5	-17.2	-20.2
N+K on Cont	2.1	2.2	13.7	14.3
N+K on Treat	.	.	.	.
New 200#K	0.0	-0.6	0.0	-3.8

Installation Summary: Adjusted Growth Following Retreatment

Installation 230

M.F. TEANAWAY RIVER

Region: Central Washington

Ownership: Boise Cascade

Legal Description: T21N R15E Section 20

Meridian: Willamette

Stand Characteristics at Time of Retreatment:

Age	87 years
Trees per Acre	127 trees/acre
Basal Area	151.4 sq.ft/acre
Total Volume	5159 cu.ft/acre
CCF	138.9
Relative Density Index	39.2
Mean Diameter	15.0 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 18.3 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	21.8	22.3
200#N	None	21.2	21.4
400#N	None	.	.
200#N	200#N	16.1	23.4
400#N	200#N	23.2	22.0
0#N	N+K	10.5	23.8
200#N	N+K	.	.
400#N	N+K	20.8	20.6

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-0.6	-0.9	-2.8	-4.0
Old 400#N	.	.	.	.
400#N-200#N	.	.	.	.
New 200#N	-5.1	2.0	-24.1	9.3
N+K on Cont	-11.3	1.5	-51.8	6.7
N+K on Treat	.	.	.	.
New 200#K	-2.4	-1.4	-10.3	-6.4

Installation Summary: Adjusted Growth Following Retreatment

Installation 231 ELMO

Region: Montana Ownership: Flathead (BIA)  
 Legal Description: T24N R21W Section 30 Meridian: Principal

Stand Characteristics at Time of Retreatment:

-----  
 Age 67 years  
 Trees per Acre 168 trees/acre  
 Basal Area 115.6 sq.ft/acre  
 Total Volume 2834 cu.ft/acre  
 CCF 126.3  
 Relative Density Index 34.5  
 Mean Diameter 11.2 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 12.4 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	5.9	10.1
200#N	None	10.3	10.4
400#N	None	4.0	8.9
200#N	200#N	.	.
400#N	200#N	.	.
0#N	N+K	.	.
200#N	N+K	.	.
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	4.4	0.3	74.6	3.0
Old 400#N	-1.9	-1.2	-32.2	-11.9
400#N-200#N	-6.3	-1.5	-61.2	-14.4
New 200#N	.	.	.	.
N+K on Cont	.	.	.	.
N+K on Treat	.	.	.	.
New 200#K	.	.	.	.



Installation Summary: Adjusted Growth Following Retreatment

Installation 232

SUNNY SLOPE

Region: Montana

Ownership: Flathead (BIA)

Legal Description: T23N R21W Section 12 Meridian: Principal

Stand Characteristics at Time of Retreatment:

Age	60 years
Trees per Acre	195 trees/acre
Basal Area	164.5 sq.ft/acre
Total Volume	4748 cu.ft/acre
CCF	170.4
Relative Density Index	46.6
Mean Diameter	12.5 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 18.4 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	14.0	14.1
200#N	None	13.1	13.1
400#N	None	13.1	13.3
200#N	200#N	14.7	14.5
400#N	200#N	15.3	14.8
0#N	N+K	15.1	15.8
200#N	N+K	.	.
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-0.9	-1.0	-6.4	-7.1
Old 400#N	-0.9	-0.8	-6.4	-5.7
400#N-200#N	0.0	0.2	0.0	1.5
New 200#N	1.9	1.4	14.5	11.0
N+K on Cont	1.1	1.7	7.9	12.1
N+K on Treat	.	.	.	.
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 233 HELLROARING CREEK

Region: Montana Ownership: Flathead (BIA)  
 Legal Description: T23N R19W Section 33 Meridian: Principal

Stand Characteristics at Time of Retreatment:

-----  
 Age 60 years  
 Trees per Acre 173 trees/acre  
 Basal Area 169.5 sq.ft/acre  
 Total Volume 4965 cu.ft/acre  
 CCF 172.9  
 Relative Density Index 46.3  
 Mean Diameter 13.4 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 16.8 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	12.2	12.8
200#N	None	10.3	10.5
400#N	None	10.5	10.3
200#N	200#N	.	.
400#N	200#N	.	.
0#N	N+K	14.9	14.6
200#N	N+K	14.2	14.1
400#N	N+K	13.9	13.8

Effect	Four Year Response/Acre			
	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-1.9	-2.3	-15.6	-18.0
Old 400#N	-1.7	-2.5	-13.9	-19.5
400#N-200#N	0.2	-0.2	1.9	-1.9
New 200#N	.	.	.	.
N+K on Cont	2.7	1.8	22.1	14.1
N+K on Treat	3.6	3.5	35.1	34.1
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 234                      RONAN

Region: Montana    Ownership: Flathead (BIA)  
 Legal Description: T20N R19W Section 5      Meridian: Principal

Stand Characteristics at Time of Retreatment:

-----  
 Age    65 years  
 Trees per Acre                              175 trees/acre  
 Basal Area                                    153.7 sq.ft/acre  
 Total Volume                                4491 cu.ft/acre  
 CCF    154.1  
 Relative Density Index                    43.1  
 Mean Diameter                              12.7 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 15.4 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	11.1	10.9
200#N	None	9.9	9.9
400#N	None	.	.
200#N	200#N	.	.
400#N	200#N	.	.
0#N	N+K	.	.
200#N	N+K	.	.
400#N	N+K	.	.

Effect	Four Year Response/Acre			
	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-1.2	-1.0	-10.8	-9.2
Old 400#N	.	.	.	.
400#N-200#N	.	.	.	.
New 200#N	.	.	.	.
N+K on Cont	.	.	.	.
N+K on Treat	.	.	.	.
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 235 FISH CREEK

Region: Montana Ownership: Champion  
 Legal Description: T14N R24W Section 5 Meridian: Principal

Stand Characteristics at Time of Retreatment:

-----  
 Age 80 years  
 Trees per Acre 305 trees/acre  
 Basal Area 122.2 sq.ft/acre  
 Total Volume 2937 cu.ft/acre  
 CCF 141.0  
 Relative Density Index 41.7  
 Mean Diameter 8.6 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 10.5 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	8.4	10.0
200#N	None	7.8	7.6
400#N	None	-2.4	10.2
200#N	200#N	5.1	9.5
400#N	200#N	5.4	9.7
0#N	N+K	9.2	11.6
200#N	N+K	.	.
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-0.6	-2.4	-7.1	-24.0
Old 400#N	-10.8	0.2	-128.6	2.0
400#N-200#N	-10.2	2.6	-130.8	34.2
New 200#N	2.6	0.7	94.4	7.9
N+K on Cont	0.8	1.6	9.5	16.0
N+K on Treat	.	.	.	.
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 236

DEER CREEK

Region: Montana

Ownership: Champion

Legal Description: T13N R18W Section 20

Meridian: Principal

Stand Characteristics at Time of Retreatment:

Age	86 years
Trees per Acre	293 trees/acre
Basal Area	180.0 sq.ft/acre
Total Volume	4838 cu.ft/acre
CCF	199.6
Relative Density Index	55.2
Mean Diameter	10.7 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 8.9 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	5.1	6.7
200#N	None	2.6	6.6
400#N	None	-8.6	6.3
200#N	200#N	.	.
400#N	200#N	.	.
0#N	N+K	6.5	7.5
200#N	N+K	-2.7	6.4
400#N	N+K	5.9	7.6

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-2.5	-0.1	-49.0	-1.5
Old 400#N	-13.7	-0.4	-268.6	-6.0
400#N-200#N	-11.2	-0.3	-430.8	-4.5
New 200#N	.	.	.	.
N+K on Cont	1.4	0.8	27.5	11.9
N+K on Treat	4.6	0.6	153.3	8.5
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 237                      MOLLET PARK

Region: Montana    Ownership: Champion  
 Legal Description: T15N R12W Section 9      Meridian: Principal

Stand Characteristics at Time of Retreatment:

-----  
 Age    96 years  
 Trees per Acre                              228 trees/acre  
 Basal Area                                  164.3 sq.ft/acre  
 Total Volume                                4643 cu.ft/acre  
 CCF    173.4  
 Relative Density Index                      48.3  
 Mean Diameter                                11.5 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 11.9 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	9.0	8.7
200#N	None	7.2	9.4
400#N	None	.	.
200#N	200#N	9.1	9.0
400#N	200#N	7.8	8.0
0#N	N+K	11.1	10.9
200#N	N+K	.	.
400#N	N+K	3.7	9.0

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-1.8	0.7	-20.0	8.0
Old 400#N	.	.	.	.
400#N-200#N	.	.	.	.
New 200#N	1.9	-0.4	26.4	-4.3
N+K on Cont	2.1	2.2	23.3	25.3
N+K on Treat	.	.	.	.
New 200#K	-4.1	1.0	-52.6	12.5

Installation Summary: Adjusted Growth Following Retreatment

Installation 238

BULLALO BILL CREEK

Region: Montana

Ownership: Champion

Legal Description: T22N R26W Section 34 Meridian: Principal

Stand Characteristics at Time of Retreatment:

Age	38 years
Trees per Acre	213 trees/acre
Basal Area	69.6 sq.ft/acre
Total Volume	1206 cu.ft/acre
CCF	85.0
Relative Density Index	25.0
Mean Diameter	7.7 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 14.5 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	13.9	14.1
200#N	None	.	.
400#N	None	14.1	14.1
200#N	200#N	14.0	14.3
400#N	200#N	.	.
0#N	N+K	18.0	18.0
200#N	N+K	14.8	14.3
400#N	N+K	13.5	13.4

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	.	.	.	.
Old 400#N	0.2	0.0	1.4	0.0
400#N-200#N	.	.	.	.
New 200#N	.	.	.	.
N+K on Cont	4.1	3.9	29.5	27.7
N+K on Treat	-0.6	-0.7	-4.3	-5.0
New 200#K	0.8	0.0	5.7	0.0

Installation Summary: Adjusted Growth Following Retreatment

Installation 239

WAHA #2

Region: Northeast Oregon

Ownership: Potlatch

Legal Description: T33N R4W Section 10 Meridian: Boise

Stand Characteristics at Time of Retreatment:

Age	93 years
Trees per Acre	143 trees/acre
Basal Area	199.2 sq.ft/acre
Total Volume	6810 cu.ft/acre
CCF	174.5
Relative Density Index	49.8
Mean Diameter	16.0 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 14.6 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	11.0	11.3
200#N	None	.	.
400#N	None	9.8	9.7
200#N	200#N	-4.6	12.0
400#N	200#N	.	.
0#N	N+K	11.1	10.8
200#N	N+K	7.4	9.3
400#N	N+K	10.1	10.1

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	.	.	.	.
Old 400#N	-1.2	-1.6	-10.9	-14.2
400#N-200#N	.	.	.	.
New 200#N	.	.	.	.
N+K on Cont	0.1	-0.5	0.9	-4.4
N+K on Treat	0.3	0.4	3.1	4.1
New 200#K	12.0	-2.7	260.9	-22.5



Installation Summary: Adjusted Growth Following Retreatment

Installation 240

QUARTZ CREEK #1

Region: Northern Idaho

Ownership: Potlatch

Legal Description: T37N R5E Section 8 Meridian: Boise

Stand Characteristics at Time of Retreatment:

Age	47 years
Trees per Acre	342 trees/acre
Basal Area	193.6 sq.ft/acre
Total Volume	5393 cu.ft/acre
CCF	215.9
Relative Density Index	60.5
Mean Diameter	10.2 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 30.0 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	26.5	27.1
200#N	None	20.6	26.7
400#N	None	23.3	22.9
200#N	200#N	.	.
400#N	200#N	.	.
0#N	N+K	34.7	34.8
200#N	N+K	30.4	30.5
400#N	N+K	29.1	30.1

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-5.9	-0.4	-22.3	-1.5
Old 400#N	-3.2	-4.2	-12.1	-15.5
400#N-200#N	2.7	-3.8	13.1	-14.2
New 200#N	.	.	.	.
N+K on Cont	8.2	7.7	30.9	28.4
N+K on Treat	7.8	5.5	35.5	22.2
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 241 WOODY MTN

Region: Central Washington Ownership: Washington DNR  
 Legal Description: T33N R24E Section 9 Meridian: Willamette

Stand Characteristics at Time of Retreatment:

-----  
 Age 78 years  
 Trees per Acre 295 trees/acre  
 Basal Area 142.9 sq.ft/acre  
 Total Volume 3570 cu.ft/acre  
 CCF 166.4  
 Relative Density Index 46.5  
 Mean Diameter 9.4 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 22.1 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	13.6	14.6
200#N	None	10.4	12.5
400#N	None	6.4	10.9
200#N	200#N	3.8	15.4
400#N	200#N	8.2	12.6
0#N	N+K	17.5	18.2
200#N	N+K	.	.
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-3.2	-2.1	-23.5	-14.4
Old 400#N	-7.2	-3.7	-52.9	-25.3
400#N-200#N	-4.0	-1.6	-38.5	-12.8
New 200#N	-2.4	2.3	-28.6	19.7
N+K on Cont	3.9	3.6	28.7	24.7
N+K on Treat	.	.	.	.
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 242

N.F. NINEMILE CREEK

Region: Central Washington

Ownership: Washington DNR

Legal Description: T39N R24E Section 13 Meridian: Willamette

Stand Characteristics at Time of Retreatment:

Age	93 years
Trees per Acre	427 trees/acre
Basal Area	156.8 sq.ft/acre
Total Volume	4016 cu.ft/acre
CCF	189.7
Relative Density Index	54.6
Mean Diameter	8.3 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 13.4 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	9.5	11.8
200#N	None	11.5	11.4
400#N	None	11.3	11.0
200#N	200#N	8.6	13.7
400#N	200#N	9.4	10.7
0#N	N+K	4.2	14.4
200#N	N+K	.	.
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	2.0	-0.4	21.1	-3.4
Old 400#N	1.8	-0.8	18.9	-6.8
400#N-200#N	-0.2	-0.4	-1.7	-3.5
New 200#N	-2.4	1.0	-21.1	8.9
N+K on Cont	-5.3	2.6	-55.8	22.0
N+K on Treat	.	.	.	.
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 243 STARVATION LAKE

Region: Northeast Washington Ownership: Washington DNR  
 Legal Description: T35N R40E Section 13 Meridian: Willamette

Stand Characteristics at Time of Retreatment:

-----  
 Age 79 years  
 Trees per Acre 227 trees/acre  
 Basal Area 148.3 sq.ft/acre  
 Total Volume 4097 cu.ft/acre  
 CCF 164.7  
 Relative Density Index 44.7  
 Mean Diameter 11.0 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 15.5 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	11.2	12.9
200#N	None	7.5	11.0
400#N	None	.	.
200#N	200#N	.	.
400#N	200#N	13.8	13.6
0#N	N+K	7.5	14.7
200#N	N+K	16.7	16.5
400#N	N+K	-9.7	12.3

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-3.7	-1.9	-33.0	-14.7
Old 400#N	.	.	.	.
400#N-200#N	.	.	.	.
New 200#N	.	.	.	.
N+K on Cont	-3.7	1.8	-33.0	14.0
N+K on Treat	9.2	5.5	122.7	50.0
New 200#K	-23.5	-1.3	-170.3	-9.6

Installation Summary: Adjusted Growth Following Retreatment

Installation 244

BIG LOOKOUT MTN #1

Region: Northeast Oregon

Ownership: BLM (Oregon)

Legal Description: T11S R45E Section 19 Meridian: Willamette

Stand Characteristics at Time of Retreatment:

Age	96 years
Trees per Acre	207 trees/acre
Basal Area	290.9 sq.ft/acre
Total Volume	9402 cu.ft/acre
CCF	260.3
Relative Density Index	72.0
Mean Diameter	16.6 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 12.5 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	9.9	9.9
200#N	None	-3.2	8.9
400#N	None	6.0	10.5
200#N	200#N	10.1	9.9
400#N	200#N	10.3	10.0
0#N	N+K	9.6	9.7
200#N	N+K	.	.
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-13.1	-1.0	-132.3	-10.1
Old 400#N	-3.9	0.6	-39.4	6.1
400#N-200#N	9.2	1.6	287.5	18.0
New 200#N	8.8	0.2	628.6	2.6
N+K on Cont	-0.3	-0.2	-3.0	-2.0
N+K on Treat	.	.	.	.
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 245                      BIG LOOKOUT MTN #2

Region: Northeast Oregon                      Ownership: BLM (Oregon)  
 Legal Description: T12S R44E Section 12      Meridian: Willamette

Stand Characteristics at Time of Retreatment:

-----  
 Age    58 years  
 Trees per Acre                              230 trees/acre  
 Basal Area                                  206.7 sq.ft/acre  
 Total Volume                                4464 cu.ft/acre  
 CCF    207.2  
 Relative Density Index                    57.0  
 Mean Diameter                              13.2 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 14.3 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	-0.4	9.2
200#N	None	-3.1	9.2
400#N	None	.	.
200#N	200#N	8.7	8.6
400#N	200#N	-4.5	8.9
0#N	N+K	10.7	11.1
200#N	N+K	.	.
400#N	N+K	-6.9	8.7

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-2.7	0.0	-675.0	0.0
Old 400#N	.	.	.	.
400#N-200#N	.	.	.	.
New 200#N	11.8	-0.6	380.6	-6.5
N+K on Cont	11.1	1.9	2775.0	20.7
N+K on Treat	.	.	.	.
New 200#K	-2.4	-0.2	-53.3	-2.2

Installation Summary: Adjusted Growth Following Retreatment

Installation 246

KETTLE FALLS

Region: Northeast Washington

Ownership: Washington DNR

Legal Description: T36N R37E Section 36

Meridian: Willamette

Stand Characteristics at Time of Retreatment:

Age	40 years
Trees per Acre	315 trees/acre
Basal Area	118.7 sq.ft/acre
Total Volume	2837 cu.ft/acre
CCF	143.7
Relative Density Index	41.0
Mean Diameter	8.4 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 16.0 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	9.5	11.6
200#N	None	.	.
400#N	None	12.0	12.0
200#N	200#N	11.5	14.4
400#N	200#N	.	.
0#N	N+K	9.5	16.0
200#N	N+K	5.4	13.7
400#N	N+K	11.2	14.2

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	.	.	.	.
Old 400#N	2.5	0.4	26.3	3.4
400#N-200#N	.	.	.	.
New 200#N	.	.	.	.
N+K on Cont	0.0	4.4	0.0	37.9
N+K on Treat	-0.8	2.2	-6.7	18.3
New 200#K	-6.1	-0.7	-53.0	-4.9

Installation Summary: Adjusted Growth Following Retreatment

Installation 247                      PARK RAPIDS

Region: Northeast Washington      Ownership: Washington DNR  
 Legal Description: T35N R40E Section 24      Meridian: Willamette

Stand Characteristics at Time of Retreatment:

-----  
 Age    82 years  
 Trees per Acre                              198 trees/acre  
 Basal Area                                  153.3 sq.ft/acre  
 Total Volume                                4510 cu.ft/acre  
 CCF    160.6  
 Relative Density Index                      44.4  
 Mean Diameter                                11.9 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 14.9 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	12.2	12.7
200#N	None	12.6	12.3
400#N	None	11.5	11.3
200#N	200#N	.	.
400#N	200#N	.	.
0#N	N+K	11.7	15.6
200#N	N+K	12.8	12.7
400#N	N+K	10.1	13.6

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	0.4	-0.4	3.3	-3.1
Old 400#N	-0.7	-1.4	-5.7	-11.0
400#N-200#N	-1.1	-1.0	-8.7	-8.1
New 200#N	.	.	.	.
N+K on Cont	-0.5	2.9	-4.1	22.8
N+K on Treat	-0.6	1.3	-5.0	11.4
New 200#K	.	.	.	.



Installation Summary: Adjusted Growth Following Retreatment

Installation 248

QUINEY FLAT

Region: Central Washington

Ownership: Boise Cascade

Legal Description: T5N R14E Section 1

Meridian: Willamette

Stand Characteristics at Time of Retreatment:

-----

Age	70 years
Trees per Acre	190 trees/acre
Basal Area	152.0 sq.ft/acre
Total Volume	4083 cu.ft/acre
CCF	161.5
Relative Density Index	43.7
Mean Diameter	12.1 in

Growth in 4 Years Following Retreatment:

-----

Note: all increments have been adjusted to a common expected 4 year growth of 24.9 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	16.9	16.9
200#N	None	16.0	16.0
400#N	None	15.2	15.1
200#N	200#N	16.0	15.5
400#N	200#N	16.5	17.0
0#N	N+K	23.5	23.7
200#N	N+K	.	.
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-0.9	-0.9	-5.3	-5.3
Old 400#N	-1.7	-1.8	-10.1	-10.7
400#N-200#N	-0.8	-0.9	-5.0	-5.6
New 200#N	0.7	0.7	4.2	4.5
N+K on Cont	6.6	6.8	39.1	40.2
N+K on Treat	.	.	.	.
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 249 KAISER BUTTE #2

Region: Central Washington Ownership: Boise Cascade  
 Legal Description: T6N R15E Section 20 Meridian: Willamette

Stand Characteristics at Time of Retreatment:

-----  
 Age 83 years  
 Trees per Acre 198 trees/acre  
 Basal Area 205.9 sq.ft/acre  
 Total Volume 6982 cu.ft/acre  
 CCF 198.8  
 Relative Density Index 55.2  
 Mean Diameter 14.0 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 22.6 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	9.7	15.3
200#N	None	12.5	12.7
400#N	None	12.9	12.9
200#N	200#N	.	.
400#N	200#N	.	.
0#N	N+K	20.5	20.8
200#N	N+K	13.0	15.7
400#N	N+K	13.9	14.3

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	2.8	-2.6	28.9	-17.0
Old 400#N	3.2	-2.4	33.0	-15.7
400#N-200#N	0.4	0.2	3.2	1.6
New 200#N	.	.	.	.
N+K on Cont	10.8	5.5	111.3	35.9
N+K on Treat	0.7	2.2	5.9	17.2
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 250

QUARTZ CREEK #2

Region: Northern Idaho

Ownership: Potlatch

Legal Description: T37N R5E Section 5 Meridian: Boise

Stand Characteristics at Time of Retreatment:

-----  
 Age 44 years  
 Trees per Acre 328 trees/acre  
 Basal Area 170.6 sq.ft/acre  
 Total Volume 3863 cu.ft/acre  
 CCF 200.2  
 Relative Density Index 54.4  
 Mean Diameter 9.9 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 39.0 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	33.0	34.0
200#N	None	.	.
400#N	None	37.1	35.9
200#N	200#N	43.8	43.5
400#N	200#N	.	.
0#N	N+K	39.6	42.8
200#N	N+K	37.8	42.0
400#N	N+K	34.7	36.3

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	.	.	.	.
Old 400#N	4.1	1.9	12.4	5.6
400#N-200#N	.	.	.	.
New 200#N	.	.	.	.
N+K on Cont	6.6	8.8	20.0	25.9
N+K on Treat	-2.4	0.4	-6.5	1.1
New 200#K	-6.0	-1.5	-13.7	-3.4

Installation Summary: Adjusted Growth Following Retreatment

Installation 251                      GAME CREEK

Region: Montana    Ownership: Champion  
 Legal Description: T13N R16W Section 30      Meridian: Principal

Stand Characteristics at Time of Retreatment:

-----  
 Age    66 years  
 Trees per Acre                              392 trees/acre  
 Basal Area                                    163.8 sq.ft/acre  
 Total Volume                                3768 cu.ft/acre  
 CCF    192.7  
 Relative Density Index                      55.2  
 Mean Diameter                                8.9 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 8.8 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	11.0	11.1
200#N	None	.	.
400#N	None	9.8	9.7
200#N	200#N	10.8	11.2
400#N	200#N	10.1	11.0
0#N	N+K	13.4	13.6
200#N	N+K	12.9	12.4
400#N	N+K	.	.

Effect	Four Year Response/Acre			
	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	.	.	.	.
Old 400#N	-1.2	-1.4	-10.9	-12.6
400#N-200#N	.	.	.	.
New 200#N	0.3	1.3	3.1	13.4
N+K on Cont	2.4	2.5	21.8	22.5
N+K on Treat	.	.	.	.
New 200#K	2.1	1.2	19.4	10.7

Installation Summary: Adjusted Growth Following Retreatment

Installation 252

BLACK CANYON RANCH

Region: Montana

Ownership: Champion

Legal Description: T15N R13W Section 6 Meridian: Principal

Stand Characteristics at Time of Retreatment:

Age	95 years
Trees per Acre	407 trees/acre
Basal Area	160.6 sq.ft/acre
Total Volume	3646 cu.ft/acre
CCF	188.0
Relative Density Index	55.0
Mean Diameter	8.5 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 11.1 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	3.9	9.0
200#N	None	.	.
400#N	None	6.1	8.3
200#N	200#N	-29.1	7.6
400#N	200#N	1.4	9.3
0#N	N+K	10.1	13.6
200#N	N+K	-2.6	7.9
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	.	.	.	.
Old 400#N	2.2	-0.7	56.4	-7.8
400#N-200#N	.	.	.	.
New 200#N	-4.7	1.0	-77.0	12.0
N+K on Cont	6.2	4.6	159.0	51.1
N+K on Treat	.	.	.	.
New 200#K	26.5	0.3	91.1	3.9

Installation Summary: Adjusted Growth Following Retreatment

Installation 253

ELK CREEK RESERVOIR

Region: Northern Idaho

Ownership: IDL

Legal Description: T40N R2E Section 36 Meridian: Boise

Stand Characteristics at Time of Retreatment:

Age	59 years
Trees per Acre	240 trees/acre
Basal Area	236.4 sq.ft/acre
Total Volume	8974 cu.ft/acre
CCF	243.9
Relative Density Index	64.3
Mean Diameter	13.6 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 24.0 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	19.1	19.8
200#N	None	18.8	19.0
400#N	None	.	.
200#N	200#N	.	.
400#N	200#N	17.8	22.8
0#N	N+K	13.2	23.7
200#N	N+K	17.9	21.8
400#N	N+K	26.1	25.1

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-0.3	-0.8	-1.6	-4.0
Old 400#N	.	.	.	.
400#N-200#N	.	.	.	.
New 200#N	.	.	.	.
N+K on Cont	-5.9	3.9	-30.9	19.7
N+K on Treat	-0.9	2.8	-4.8	14.7
New 200#K	8.3	2.3	46.6	10.1

Installation Summary: Adjusted Growth Following Retreatment

Installation 254 CRANBERRY CREEK

Region: Northern Idaho Ownership: IDL  
 Legal Description: T38N R2E Section 12 Meridian: Boise

Stand Characteristics at Time of Retreatment:

-----  
 Age 33 years  
 Trees per Acre 453 trees/acre  
 Basal Area 146.6 sq.ft/acre  
 Total Volume 3087 cu.ft/acre  
 CCF 193.0  
 Relative Density Index 52.6  
 Mean Diameter 7.8 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 37.2 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	30.5	31.3
200#N	None	30.6	30.6
400#N	None	.	.
200#N	200#N	35.5	35.0
400#N	200#N	38.3	37.8
0#N	N+K	36.2	37.3
200#N	N+K	.	.
400#N	N+K	37.6	37.3

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	0.1	-0.7	0.3	-2.2
Old 400#N	.	.	.	.
400#N-200#N	.	.	.	.
New 200#N	4.9	4.4	16.0	14.4
N+K on Cont	5.7	6.0	18.7	19.2
N+K on Treat	.	.	.	.
New 200#K	-0.7	-0.5	-1.8	-1.3

Installation Summary: Adjusted Growth Following Retreatment

Installation 255

BIRCH CREEK

Region: Northern Idaho

Ownership: Inland Empire

Legal Description: T53N R5W Section 2 Meridian: Boise

Stand Characteristics at Time of Retreatment:

Age	40 years
Trees per Acre	605 trees/acre
Basal Area	212.0 sq.ft/acre
Total Volume	4936 cu.ft/acre
CCF	259.7
Relative Density Index	74.8
Mean Diameter	8.0 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 34.2 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	16.1	30.3
200#N	None	19.4	28.7
400#N	None	16.8	26.8
200#N	200#N	21.1	33.4
400#N	200#N	26.6	35.5
0#N	N+K	29.6	33.3
200#N	N+K	.	.
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	3.3	-1.6	20.5	-5.3
Old 400#N	0.7	-3.5	4.3	-11.6
400#N-200#N	-2.6	-1.9	-13.4	-6.6
New 200#N	5.8	6.7	31.8	24.1
N+K on Cont	13.5	3.0	83.9	9.9
N+K on Treat	.	.	.	.
New 200#K	.	.	.	.



Installation Summary: Adjusted Growth Following Retreatment

Installation 256

SLY MEADOWS

Region: Northern Idaho

Ownership: Inland Empire

Legal Description: T46N R1E Section 31 Meridian: Boise

Stand Characteristics at Time of Retreatment:

-----

Age	42 years
Trees per Acre	458 trees/acre
Basal Area	202.4 sq.ft/acre
Total Volume	5772 cu.ft/acre
CCF	238.0
Relative Density Index	67.4
Mean Diameter	9.0 in

Growth in 4 Years Following Retreatment:

-----

Note: all increments have been adjusted to a common expected 4 year growth of 28.7 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	20.2	24.8
200#N	None	.	.
400#N	None	19.0	21.4
200#N	200#N	28.1	28.1
400#N	200#N	.	.
0#N	N+K	21.8	29.7
200#N	N+K	19.0	24.3
400#N	N+K	27.9	27.2

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	.	.	.	.
Old 400#N	-1.2	-3.4	-5.9	-13.7
400#N-200#N	.	.	.	.
New 200#N	.	.	.	.
N+K on Cont	1.6	4.9	7.9	19.8
N+K on Treat	8.9	5.8	46.8	27.1
New 200#K	-9.1	-3.8	-32.4	-13.5

Installation Summary: Adjusted Growth Following Retreatment

Installation 257

LITTLE CATHERINE CR

Region: Northeast Oregon

Ownership: Boise Cascade

Legal Description: T4S R41E Section 28

Meridian: Willamette

Stand Characteristics at Time of Retreatment:

Age	93 years
Trees per Acre	151 trees/acre
Basal Area	191.1 sq.ft/acre
Total Volume	5339 cu.ft/acre
CCF	172.3
Relative Density Index	48.8
Mean Diameter	15.5 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 14.1 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	4.2	9.7
200#N	None	.	.
400#N	None	7.8	7.8
200#N	200#N	-15.1	10.1
400#N	200#N	-6.8	10.0
0#N	N+K	-27.1	7.4
200#N	N+K	10.5	10.4
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	.	.	.	.
Old 400#N	3.6	-1.9	85.7	-19.6
400#N-200#N	.	.	.	.
New 200#N	-14.6	2.2	-187.2	28.2
N+K on Cont	-31.3	-2.3	-745.2	-23.7
N+K on Treat	.	.	.	.
New 200#K	25.6	0.3	169.5	3.0

Installation Summary: Adjusted Growth Following Retreatment

Installation 258                      RONDOWA

Region: Northeast Oregon                      Ownership: Boise Cascade  
 Legal Description: T3N R40E Section 23      Meridian: Willamette

Stand Characteristics at Time of Retreatment:

-----  
 Age    78 years  
 Trees per Acre                                173 trees/acre  
 Basal Area                                    196.6 sq.ft/acre  
 Total Volume                                 6821 cu.ft/acre  
 CCF     184.6  
 Relative Density Index                      51.6  
 Mean Diameter                                14.6 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 16.3 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	-40.6	10.9
200#N	None	13.3	12.9
400#N	None	.	.
200#N	200#N	.	.
400#N	200#N	4.6	12.9
0#N	N+K	10.8	10.8
200#N	N+K	-10.7	8.2
400#N	N+K	6.7	10.3

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	53.9	2.0	132.8	18.3
Old 400#N	.	.	.	.
400#N-200#N	.	.	.	.
New 200#N	.	.	.	.
N+K on Cont	51.4	-0.1	126.6	-0.9
N+K on Treat	-24.0	-4.7	-180.5	-36.4
New 200#K	2.1	-2.6	45.7	-20.2

Installation Summary: Adjusted Growth Following Retreatment

Installation 259 RAILROAD CANYON

Region: Central Washington Ownership: Longview Fiber  
 Legal Description: T25N R18E Section 2 Meridian: Willamette

Stand Characteristics at Time of Retreatment:

-----  
 Age 77 years  
 Trees per Acre 343 trees/acre  
 Basal Area 210.6 sq.ft/acre  
 Total Volume 6056 cu.ft/acre  
 CCF 236.3  
 Relative Density Index 64.4  
 Mean Diameter 10.6 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 13.9 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	12.4	12.7
200#N	None	12.2	12.1
400#N	None	.	.
200#N	200#N	.	.
400#N	200#N	10.2	11.4
0#N	N+K	14.0	14.8
200#N	N+K	10.8	10.7
400#N	N+K	10.2	9.7

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-0.2	-0.6	-1.6	-4.7
Old 400#N	.	.	.	.
400#N-200#N	.	.	.	.
New 200#N	.	.	.	.
N+K on Cont	1.6	2.1	12.9	16.5
N+K on Treat	-1.4	-1.4	-11.5	-11.6
New 200#K	0.0	-1.7	0.0	-14.9

Installation Summary: Adjusted Growth Following Retreatment

Installation 260

TUMWATER MTN

Region: Central Washington

Ownership: Longview Fiber

Legal Description: T24N R17E Section 3

Meridian: Willamette

Stand Characteristics at Time of Retreatment:

Age	80 years
Trees per Acre	218 trees/acre
Basal Area	227.4 sq.ft/acre
Total Volume	8016 cu.ft/acre
CCF	218.0
Relative Density Index	61.0
Mean Diameter	13.9 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 16.4 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	0.9	14.8
200#N	None	17.1	17.0
400#N	None	14.0	14.0
200#N	200#N	.	.
400#N	200#N	.	.
0#N	N+K	15.2	21.7
200#N	N+K	-1.9	16.1
400#N	N+K	16.5	16.4

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	16.2	2.2	1800.0	14.9
Old 400#N	13.1	-0.8	1455.6	-5.4
400#N-200#N	-3.1	-3.0	-18.1	-17.6
New 200#N	.	.	.	.
N+K on Cont	14.3	6.9	1588.9	46.6
N+K on Treat	-8.2	0.7	-53.1	4.8
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 261                      SECOND CREEK

Region: Central Washington              Ownership: Longview Fiber  
 Legal Description: T26N R18E Section 22      Meridian: Willamette

Stand Characteristics at Time of Retreatment:

Age	81 years
Trees per Acre	253 trees/acre
Basal Area	164.0 sq.ft/acre
Total Volume	5180 cu.ft/acre
CCF	185.6
Relative Density Index	49.6
Mean Diameter	10.8 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common  
 expected 4 year growth of 17.5 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	15.6	16.6
200#N	None	9.3	14.1
400#N	None	9.1	15.9
200#N	200#N	.	.
400#N	200#N	.	.
0#N	N+K	3.0	20.2
200#N	N+K	19.0	18.9
400#N	N+K	17.4	17.1

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-6.3	-2.5	-40.4	-15.1
Old 400#N	-6.5	-0.7	-41.7	-4.2
400#N-200#N	-0.2	1.8	-2.2	12.8
New 200#N	.	.	.	.
N+K on Cont	-12.6	3.6	-80.8	21.7
N+K on Treat	9.0	3.0	97.8	20.0
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 262

STEVENS PASS

Region: Central Washington

Ownership: Longview Fiber

Legal Description: T26N R15E Section 3

Meridian: Willamette

Stand Characteristics at Time of Retreatment:

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-----
Age                81 years
Trees per Acre    365 trees/acre
Basal Area        244.2 sq.ft/acre
Total Volume      8308 cu.ft/acre
CCF               276.6
Relative Density Index 73.2
Mean Diameter     11.1 in
  
```

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 20.9 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	-5.4	20.4
200#N	None	-39.2	15.4
400#N	None	.	.
200#N	200#N	21.7	23.5
400#N	200#N	21.4	21.3
0#N	N+K	-11.3	23.8
200#N	N+K	.	.
400#N	N+K	24.5	23.7

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-33.8	-5.0	-625.9	-24.5
Old 400#N	.	.	.	.
400#N-200#N	.	.	.	.
New 200#N	60.9	8.1	155.4	52.6
N+K on Cont	-5.9	3.4	-109.3	16.7
N+K on Treat	.	.	.	.
New 200#K	3.1	2.4	14.5	11.3

Installation Summary: Adjusted Growth Following Retreatment

Installation 263

N.F. TEANAWAY RIVER

Region: Central Washington

Ownership: Washington DNR

Legal Description: T21N R16E Section 20 Meridian: Willamette

Stand Characteristics at Time of Retreatment:

Age	93 years
Trees per Acre	205 trees/acre
Basal Area	181.2 sq.ft/acre
Total Volume	5481 cu.ft/acre
CCF	186.1
Relative Density Index	50.7
Mean Diameter	12.7 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 18.6 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	13.5	17.0
200#N	None	14.9	14.6
400#N	None	9.6	16.5
200#N	200#N	17.4	17.2
400#N	200#N	14.0	14.1
0#N	N+K	22.2	22.4
200#N	N+K	.	.
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	1.4	-2.4	10.4	-14.1
Old 400#N	-3.9	-0.5	-28.9	-2.9
400#N-200#N	-5.3	1.9	-35.6	13.0
New 200#N	3.4	0.1	28.2	0.6
N+K on Cont	8.7	5.4	64.4	31.8
N+K on Treat	.	.	.	.
New 200#K	.	.	.	.



Installation Summary: Adjusted Growth Following Retreatment

Installation 264                      RENFRO PEAK

Region: Northern Idaho                      Ownership: Potlatch  
 Legal Description: T44N R1E    Section 11    Meridian: Boise

Stand Characteristics at Time of Retreatment:

-----  
 Age    56 years  
 Trees per Acre                                425 trees/acre  
 Basal Area                                    268.7 sq.ft/acre  
 Total Volume                                 8217 cu.ft/acre  
 CCF     295.8  
 Relative Density Index                      81.4  
 Mean Diameter                                10.9 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 23.3 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	17.7	23.7
200#N	None	22.8	22.7
400#N	None	22.4	21.5
200#N	200#N	28.0	27.2
400#N	200#N	15.3	25.3
0#N	N+K	27.7	28.0
200#N	N+K	.	.
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	5.1	-1.0	28.8	-4.2
Old 400#N	4.7	-2.2	26.6	-9.3
400#N-200#N	-0.4	-1.2	-1.8	-5.3
New 200#N	-0.9	4.1	-4.2	18.8
N+K on Cont	10.0	4.3	56.5	18.1
N+K on Treat	.	.	.	.
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 265

MALLORY CREEK

Region: Northern Idaho

Ownership: Potlatch

Legal Description: T41N R2E Section 18 Meridian: Boise

Stand Characteristics at Time of Retreatment:

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-----
Age                38 years
Trees per Acre    310 trees/acre
Basal Area        174.5 sq.ft/acre
Total Volume      4367 cu.ft/acre
CCF               203.0
Relative Density Index 54.6
Mean Diameter     10.2 in
    
```

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 32.0 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	31.6	32.4
200#N	None	29.9	29.8
400#N	None	26.9	29.3
200#N	200#N	36.3	35.6
400#N	200#N	32.6	32.1
0#N	N+K	36.8	37.2
200#N	N+K	.	.
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-1.7	-2.6	-5.4	-8.0
Old 400#N	-4.7	-3.1	-14.9	-9.6
400#N-200#N	-3.0	-0.5	-10.0	-1.7
New 200#N	6.1	4.3	21.3	14.6
N+K on Cont	5.2	4.8	16.5	14.8
N+K on Treat	.	.	.	.
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 266

DOUGLAS FALLS #1

Region: Northeast Washington

Ownership: Washington DNR

Legal Description: T36N R39E Section 16

Meridian: Willamette

Stand Characteristics at Time of Retreatment:

Age	89 years
Trees per Acre	243 trees/acre
Basal Area	142.0 sq.ft/acre
Total Volume	3742 cu.ft/acre
CCF	160.7
Relative Density Index	44.1
Mean Diameter	10.3 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 13.6 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	14.5	15.0
200#N	None	14.0	14.1
400#N	None	16.0	15.3
200#N	200#N	13.0	18.3
400#N	200#N	19.3	19.1
0#N	N+K	19.6	20.0
200#N	N+K	.	.
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-0.5	-0.9	-3.4	-6.0
Old 400#N	1.5	0.3	10.3	2.0
400#N-200#N	2.0	1.2	14.3	8.5
New 200#N	1.1	4.0	7.7	27.2
N+K on Cont	5.1	5.0	35.2	33.3
N+K on Treat	.	.	.	.
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 267

DOUGLAS FALLS #2

Region: Northeast Washington

Ownership: Washington DNR

Legal Description: T36N R39E Section 16

Meridian: Willamette

Stand Characteristics at Time of Retreatment:

Age	87 years
Trees per Acre	205 trees/acre
Basal Area	136.3 sq.ft/acre
Total Volume	3768 cu.ft/acre
CCF	149.7
Relative Density Index	41.0
Mean Diameter	11.0 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 13.5 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	14.8	14.9
200#N	None	13.4	13.7
400#N	None	16.0	15.7
200#N	200#N	.	.
400#N	200#N	.	.
0#N	N+K	17.7	18.3
200#N	N+K	20.2	19.7
400#N	N+K	21.4	21.2

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-1.4	-1.2	-9.5	-8.1
Old 400#N	1.2	0.8	8.1	5.4
400#N-200#N	2.6	2.0	19.4	14.6
New 200#N	.	.	.	.
N+K on Cont	2.9	3.4	19.6	22.8
N+K on Treat	6.1	5.7	41.5	39.1
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 268

SHEEP CREEK

Region: Northeast Washington      Ownership: Inland Empire  
 Legal Description: T40N R39E Section 8      Meridian: Willamette

Stand Characteristics at Time of Retreatment:

```
-----
Age                61 years
Trees per Acre    335 trees/acre
Basal Area        210.9 sq.ft/acre
Total Volume      6341 cu.ft/acre
CCF               228.3
Relative Density Index 64.2
Mean Diameter     10.8 in
-----
```

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common  
 expected 4 year growth of 19.7 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	18.4	18.7
200#N	None	16.7	16.7
400#N	None	18.3	18.9
200#N	200#N	24.4	23.7
400#N	200#N	18.3	20.1
0#N	N+K	22.5	23.0
200#N	N+K	.	.
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-1.7	-2.0	-9.2	-10.7
Old 400#N	-0.1	0.2	-0.5	1.1
400#N-200#N	1.6	2.2	9.6	13.2
New 200#N	3.9	4.1	22.0	23.0
N+K on Cont	4.1	4.3	22.3	23.0
N+K on Treat	.	.	.	.
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 269

UPPER BURNT FORK CR

Region: Montana

Ownership: Champion

Legal Description: T15N R16W Section 27 Meridian: Principal

Stand Characteristics at Time of Retreatment:

Age	63 years
Trees per Acre	313 trees/acre
Basal Area	160.5 sq.ft/acre
Total Volume	3342 cu.ft/acre
CCF	183.8
Relative Density Index	51.5
Mean Diameter	9.7 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 9.9 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	9.8	11.0
200#N	None	11.2	11.2
400#N	None	7.1	10.7
200#N	200#N	13.0	13.1
400#N	200#N	9.6	11.5
0#N	N+K	6.4	13.1
200#N	N+K	.	.
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	1.4	0.2	14.3	1.8
Old 400#N	-2.7	-0.3	-27.6	-2.7
400#N-200#N	-4.1	-0.5	-36.6	-4.5
New 200#N	2.1	1.3	23.5	12.3
N+K on Cont	-3.4	2.1	-34.7	19.1
N+K on Treat	.	.	.	.
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 270

HOWARD CREEK

Region: Montana

Ownership: Champion

Legal Description: T12N R23W Section 19 Meridian: Principal

Stand Characteristics at Time of Retreatment:

Age	55 years
Trees per Acre	243 trees/acre
Basal Area	140.9 sq.ft/acre
Total Volume	3022 cu.ft/acre
CCF	153.2
Relative Density Index	43.8
Mean Diameter	10.4 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 11.5 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	12.2	12.3
200#N	None	12.3	12.3
400#N	None	12.0	11.6
200#N	200#N	.	.
400#N	200#N	.	.
0#N	N+K	12.5	13.0
200#N	N+K	13.5	13.8
400#N	N+K	9.1	9.3

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	0.1	0.0	0.8	0.0
Old 400#N	-0.2	-0.7	-1.6	-5.7
400#N-200#N	-0.3	-0.7	-2.4	-5.7
New 200#N	.	.	.	.
N+K on Cont	0.3	0.7	2.5	5.7
N+K on Treat	-0.9	-0.4	-7.0	-3.3
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 271 WHITNEY CREEK

Region: Montana Ownership: Champion  
 Legal Description: T25N R27W Section 7 Meridian: Principal

Stand Characteristics at Time of Retreatment:

-----  
 Age 63 years  
 Trees per Acre 343 trees/acre  
 Basal Area 152.7 sq.ft/acre  
 Total Volume 3654 cu.ft/acre  
 CCF 167.5  
 Relative Density Index 50.7  
 Mean Diameter 9.1 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 13.8 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	10.8	13.7
200#N	None	12.1	12.8
400#N	None	.	.
200#N	200#N	.	.
400#N	200#N	9.7	13.8
0#N	N+K	3.9	15.4
200#N	N+K	12.5	14.9
400#N	N+K	14.8	14.3

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	1.3	-0.9	12.0	-6.6
Old 400#N	.	.	.	.
400#N-200#N	.	.	.	.
New 200#N	.	.	.	.
N+K on Cont	-6.9	1.7	-63.9	12.4
N+K on Treat	0.4	2.1	3.3	16.4
New 200#K	5.1	0.5	52.6	3.6



Installation Summary: Adjusted Growth Following Retreatment

Installation 272

INDIAN CREEK

Region: Montana

Ownership: Champion

Legal Description: T25N R27W Section 5 Meridian: Principal

Stand Characteristics at Time of Retreatment:

Age	63 years
Trees per Acre	507 trees/acre
Basal Area	133.6 sq.ft/acre
Total Volume	3175 cu.ft/acre
CCF	168.2
Relative Density Index	50.6
Mean Diameter	7.0 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 14.3 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	12.8	14.8
200#N	None	10.1	11.7
400#N	None	.	.
200#N	200#N	.	.
400#N	200#N	12.7	15.8
0#N	N+K	18.0	20.6
200#N	N+K	13.7	19.3
400#N	N+K	10.8	13.7

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-2.7	-3.1	-21.1	-20.9
Old 400#N	.	.	.	.
400#N-200#N	.	.	.	.
New 200#N	.	.	.	.
N+K on Cont	5.2	5.8	40.6	39.2
N+K on Treat	3.6	7.6	35.6	65.0
New 200#K	-1.9	-2.1	-15.0	-13.3

Installation Summary: Adjusted Growth Following Retreatment

Installation 273

LITTLE BEAVER CREEK

Region: Northern Idaho

Ownership: Potlatch

Legal Description: T37N R5E Section 1 Meridian: Boise

Stand Characteristics at Time of Retreatment:

Age	42 years
Trees per Acre	393 trees/acre
Basal Area	195.1 sq.ft/acre
Total Volume	4850 cu.ft/acre
CCF	237.1
Relative Density Index	63.1
Mean Diameter	9.6 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 39.0 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	19.5	33.9
200#N	None	41.0	41.2
400#N	None	31.5	30.6
200#N	200#N	.	.
400#N	200#N	.	.
0#N	N+K	39.4	40.0
200#N	N+K	34.9	34.8
400#N	N+K	35.7	35.2

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	21.5	7.3	110.3	21.5
Old 400#N	12.0	-3.3	61.5	-9.7
400#N-200#N	-9.5	-10.6	-23.2	-25.7
New 200#N	.	.	.	.
N+K on Cont	19.9	6.1	102.1	18.0
N+K on Treat	-1.0	-0.9	-2.6	-2.5
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 274

CAREYWOOD CREEK

Region: Northern Idaho

Ownership: IDL

Legal Description: T54N R2W Section 16 Meridian: Boise

Stand Characteristics at Time of Retreatment:

-----

Age	66 years
Trees per Acre	163 trees/acre
Basal Area	155.3 sq.ft/acre
Total Volume	4747 cu.ft/acre
CCF	155.1
Relative Density Index	42.6
Mean Diameter	13.4 in

Growth in 4 Years Following Retreatment:

-----

Note: all increments have been adjusted to a common expected 4 year growth of 17.0 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	11.9	15.0
200#N	None	15.8	15.7
400#N	None	14.2	15.4
200#N	200#N	.	.
400#N	200#N	.	.
0#N	N+K	5.4	16.5
200#N	N+K	17.7	17.2
400#N	N+K	16.8	16.7

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	3.9	0.7	32.8	4.7
Old 400#N	2.3	0.4	19.3	2.7
400#N-200#N	-1.6	-0.3	-10.1	-1.9
New 200#N	.	.	.	.
N+K on Cont	-6.5	1.5	-54.6	10.0
N+K on Treat	2.2	1.4	15.0	9.0
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 275 SMITH LAKE

Region: Northern Idaho Ownership: IDL  
 Legal Description: T63N R1E Section 36 Meridian: Boise

Stand Characteristics at Time of Retreatment:

-----  
 Age 81 years  
 Trees per Acre 322 trees/acre  
 Basal Area 200.3 sq.ft/acre  
 Total Volume 5663 cu.ft/acre  
 CCF 219.9  
 Relative Density Index 61.2  
 Mean Diameter 10.7 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 18.2 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	14.9	15.4
200#N	None	.	.
400#N	None	18.2	17.7
200#N	200#N	16.9	17.0
400#N	200#N	.	.
0#N	N+K	-5.7	19.4
200#N	N+K	15.5	15.6
400#N	N+K	4.5	16.2

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	.	.	.	.
Old 400#N	3.3	2.3	22.1	14.9
400#N-200#N	.	.	.	.
New 200#N	.	.	.	.
N+K on Cont	-20.6	4.0	-138.3	26.0
N+K on Treat	-13.7	-1.5	-75.3	-8.5
New 200#K	-1.4	-1.4	-8.3	-8.2

Installation Summary: Adjusted Growth Following Retreatment

Installation 276

MILL CREEK

Region: Central Idaho

Ownership: Boise Cascade

Legal Description: T19N R1E Section 34 Meridian: Boise

Stand Characteristics at Time of Retreatment:

-----

Age	67 years
Trees per Acre	230 trees/acre
Basal Area	171.0 sq.ft/acre
Total Volume	4451 cu.ft/acre
CCF	180.4
Relative Density Index	50.0
Mean Diameter	11.7 in

Growth in 4 Years Following Retreatment:

-----

Note: all increments have been adjusted to a common expected 4 year growth of 17.7 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	16.2	16.6
200#N	None	0.8	15.2
400#N	None	4.6	16.2
200#N	200#N	-6.6	15.3
400#N	200#N	15.6	14.9
0#N	N+K	17.7	17.5
200#N	N+K	.	.
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-15.4	-1.4	-95.1	-8.4
Old 400#N	-11.6	-0.4	-71.6	-2.4
400#N-200#N	3.8	1.0	475.0	6.6
New 200#N	1.8	-0.6	66.7	-3.8
N+K on Cont	1.5	0.9	9.3	5.4
N+K on Treat	.	.	.	.
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 277                      LITTLE MUD CREEK #2

Region: Central Idaho                      Ownership: Boise Cascade  
 Legal Description: T20N R1E Section 34      Meridian: Boise

Stand Characteristics at Time of Retreatment:

-----  
 Age    69 years  
 Trees per Acre                              235 trees/acre  
 Basal Area                                  171.8 sq.ft/acre  
 Total Volume                                4379 cu.ft/acre  
 CCF    181.2  
 Relative Density Index                      50.5  
 Mean Diameter                                11.6 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 22.2 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	20.6	20.4
200#N	None	20.6	20.2
400#N	None	3.8	18.8
200#N	200#N	.	.
400#N	200#N	.	.
0#N	N+K	7.3	22.3
200#N	N+K	21.0	21.0
400#N	N+K	19.8	20.0

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	0.0	-0.2	0.0	-1.0
Old 400#N	-16.8	-1.6	-81.6	-7.8
400#N-200#N	-16.8	-1.4	-81.6	-6.9
New 200#N	.	.	.	.
N+K on Cont	-13.3	1.9	-64.6	9.3
N+K on Treat	8.2	1.0	67.2	5.1
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 278

WET GULCH

Region: Central Idaho

Ownership: Boise Cascade

Legal Description: T7N R5E Section 19 Meridian: Boise

Stand Characteristics at Time of Retreatment:

-----

Age	98 years
Trees per Acre	178 trees/acre
Basal Area	125.1 sq.ft/acre
Total Volume	3442 cu.ft/acre
CCF	133.4
Relative Density Index	37.1
Mean Diameter	11.3 in

Growth in 4 Years Following Retreatment:

-----

Note: all increments have been adjusted to a common expected 4 year growth of 15.9 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	10.3	11.8
200#N	None	.	.
400#N	None	10.7	10.5
200#N	200#N	11.5	11.1
400#N	200#N	.	.
0#N	N+K	13.7	14.1
200#N	N+K	-6.6	9.6
400#N	N+K	11.4	11.0

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	.	.	.	.
Old 400#N	0.4	-1.3	3.9	-11.0
400#N-200#N	.	.	.	.
New 200#N	.	.	.	.
N+K on Cont	3.4	2.3	33.0	19.5
N+K on Treat	0.7	0.5	6.5	4.8
New 200#K	-18.1	-1.5	-157.4	-13.5

Installation Summary: Adjusted Growth Following Retreatment

Installation 279 HENRY CREEK

Region: Central Idaho Ownership: Boise Cascade  
 Legal Description: T7N R5E Section 28 Meridian: Boise

Stand Characteristics at Time of Retreatment:

-----  
 Age 85 years  
 Trees per Acre 207 trees/acre  
 Basal Area 167.7 sq.ft/acre  
 Total Volume 4989 cu.ft/acre  
 CCF 168.4  
 Relative Density Index 48.0  
 Mean Diameter 12.3 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 18.1 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	11.6	12.0
200#N	None	11.3	11.5
400#N	None	5.7	10.0
200#N	200#N	3.0	10.9
400#N	200#N	-0.2	11.9
0#N	N+K	10.1	13.5
200#N	N+K	.	.
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-0.3	-0.5	-2.6	-4.2
Old 400#N	-5.9	-2.0	-50.9	-16.7
400#N-200#N	-5.6	-1.5	-49.6	-13.0
New 200#N	-7.1	0.6	-83.5	6.0
N+K on Cont	-1.5	1.5	-12.9	12.5
N+K on Treat	.	.	.	.
New 200#K	.	.	.	.



Installation Summary: Adjusted Growth Following Retreatment

Installation 280

SMITH CREEK

Region: Central Idaho

Ownership: IDL

Legal Description: T7N R5E Section 2 Meridian: Boise

Stand Characteristics at Time of Retreatment:

Age	71 years
Trees per Acre	227 trees/acre
Basal Area	155.7 sq.ft/acre
Total Volume	4106 cu.ft/acre
CCF	161.8
Relative Density Index	46.4
Mean Diameter	11.3 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 20.1 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	11.8	12.3
200#N	None	12.4	12.3
400#N	None	9.6	9.5
200#N	200#N	.	.
400#N	200#N	.	.
0#N	N+K	14.3	14.8
200#N	N+K	9.6	13.5
400#N	N+K	3.0	13.3

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	0.6	0.0	5.1	0.0
Old 400#N	-2.2	-2.8	-18.6	-22.8
400#N-200#N	-2.8	-2.8	-22.6	-22.8
New 200#N	.	.	.	.
N+K on Cont	2.5	2.5	21.2	20.3
N+K on Treat	-4.7	2.5	-42.7	22.9
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 281

O'NEIL HILL

Region: Northern Idaho

Ownership: Potlatch

Legal Description: T46N R1E Section 32 Meridian: Boise

Stand Characteristics at Time of Retreatment:

Age	50 years
Trees per Acre	442 trees/acre
Basal Area	234.0 sq.ft/acre
Total Volume	6579 cu.ft/acre
CCF	265.0
Relative Density Index	74.3
Mean Diameter	10.0 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 23.3 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	18.3	20.9
200#N	None	12.7	21.8
400#N	None	19.6	22.1
200#N	200#N	.	.
400#N	200#N	.	.
0#N	N+K	13.2	26.3
200#N	N+K	21.9	24.0
400#N	N+K	22.0	23.9

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-5.6	0.9	-30.6	4.3
Old 400#N	1.3	1.2	7.1	5.7
400#N-200#N	6.9	0.3	54.3	1.4
New 200#N	.	.	.	.
N+K on Cont	-5.1	5.4	-27.9	25.8
N+K on Treat	5.8	2.0	35.9	9.1
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 282 COOK MTN

Region: Central Washington Ownership: Washington DNR  
 Legal Description: T33N R24E Section 15 Meridian: Willamette

Stand Characteristics at Time of Retreatment:

-----  
 Age 75 years  
 Trees per Acre 310 trees/acre  
 Basal Area 134.3 sq.ft/acre  
 Total Volume 3282 cu.ft/acre  
 CCF 158.6  
 Relative Density Index 44.9  
 Mean Diameter 9.0 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 21.4 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	15.6	16.2
200#N	None	13.3	12.7
400#N	None	13.3	12.9
200#N	200#N	.	.
400#N	200#N	.	.
0#N	N+K	19.5	20.1
200#N	N+K	13.4	15.0
400#N	N+K	10.7	10.2

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-2.3	-3.5	-14.7	-21.6
Old 400#N	-2.3	-3.3	-14.7	-20.4
400#N-200#N	0.0	0.2	0.0	1.6
New 200#N	.	.	.	.
N+K on Cont	3.9	3.9	25.0	24.1
N+K on Treat	-1.3	-0.2	-9.4	-1.6
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 283                      SUMMIT CREEK

Region: Central Washington              Ownership: Washington DNR  
 Legal Description: T33N R24E Section 4      Meridian: Willamette

Stand Characteristics at Time of Retreatment:

-----  
 Age    81 years  
 Trees per Acre                                283 trees/acre  
 Basal Area                                    133.8 sq.ft/acre  
 Total Volume                                 3121 cu.ft/acre  
 CCF    156.5  
 Relative Density Index                      43.8  
 Mean Diameter                                9.3 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
           expected 4 year growth of 24.1 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	15.6	16.5
200#N	None	.	.
400#N	None	14.4	13.2
200#N	200#N	17.5	17.5
400#N	200#N	.	.
0#N	N+K	19.5	20.5
200#N	N+K	18.4	18.3
400#N	N+K	6.5	14.3

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	.	.	.	.
Old 400#N	-1.2	-3.3	-7.7	-20.0
400#N-200#N	.	.	.	.
New 200#N	.	.	.	.
N+K on Cont	3.9	4.0	25.0	24.2
N+K on Treat	-7.9	1.1	-54.9	8.3
New 200#K	0.9	0.8	5.1	4.6

Installation Summary: Adjusted Growth Following Retreatment

Installation 284

N.F. VALLEY CREEK

Region: Montana

Ownership: Flathead (BIA)

Legal Description: T17N R21W Section 22 Meridian: Principal

Stand Characteristics at Time of Retreatment:

Age	81 years
Trees per Acre	155 trees/acre
Basal Area	155.3 sq.ft/acre
Total Volume	4408 cu.ft/acre
CCF	153.4
Relative Density Index	41.8
Mean Diameter	13.5 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 11.2 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	13.2	13.3
200#N	None	11.9	12.2
400#N	None	.	.
200#N	200#N	12.6	12.6
400#N	200#N	13.5	13.6
0#N	N+K	14.5	14.2
200#N	N+K	.	.
400#N	N+K	4.1	12.2

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-1.3	-1.1	-9.8	-8.3
Old 400#N	.	.	.	.
400#N-200#N	.	.	.	.
New 200#N	0.7	0.4	5.9	3.3
N+K on Cont	1.3	0.9	9.8	6.8
N+K on Treat	.	.	.	.
New 200#K	-9.4	-1.4	-69.6	-10.3

Installation Summary: Adjusted Growth Following Retreatment

Installation 285

S.F. VALLEY CREEK

Region: Montana

Ownership: Flathead (BIA)

Legal Description: T16N R21W Section 2 Meridian: Principal

Stand Characteristics at Time of Retreatment:

Age	78 years
Trees per Acre	153 trees/acre
Basal Area	131.7 sq.ft/acre
Total Volume	3408 cu.ft/acre
CCF	137.7
Relative Density Index	37.1
Mean Diameter	12.6 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 9.7 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	11.9	12.0
200#N	None	9.9	9.8
400#N	None	11.1	10.9
200#N	200#N	9.9	10.1
400#N	200#N	10.1	10.0
0#N	N+K	10.4	10.6
200#N	N+K	.	.
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-2.0	-2.2	-16.8	-18.3
Old 400#N	-0.8	-1.1	-6.7	-9.2
400#N-200#N	1.2	1.1	12.1	11.2
New 200#N	-0.5	-0.3	-4.8	-2.9
N+K on Cont	-1.5	-1.4	-12.6	-11.7
N+K on Treat	.	.	.	.
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 286

BLACK ROCK CREEK

Region: Northern Idaho

Ownership: BLM (Idaho)

Legal Description: T48N R1W Section 8 Meridian: Boise

Stand Characteristics at Time of Retreatment:

Age	89 years
Trees per Acre	240 trees/acre
Basal Area	240.2 sq.ft/acre
Total Volume	8006 cu.ft/acre
CCF	240.1
Relative Density Index	65.2
Mean Diameter	13.6 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 18.8 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	12.1	17.1
200#N	None	17.3	17.5
400#N	None	.	.
200#N	200#N	15.6	15.6
400#N	200#N	16.5	16.4
0#N	N+K	18.0	18.3
200#N	N+K	.	.
400#N	N+K	20.9	20.2

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	5.2	0.4	43.0	2.3
Old 400#N	.	.	.	.
400#N-200#N	.	.	.	.
New 200#N	-1.7	-1.9	-9.8	-10.9
N+K on Cont	5.9	1.2	48.8	7.0
N+K on Treat	.	.	.	.
New 200#K	4.4	3.8	26.7	23.2

Installation Summary: Adjusted Growth Following Retreatment

Installation 287

JIM FORD CREEK

Region: Northern Idaho

Ownership: Potlatch

Legal Description: T35N R4E Section 8 Meridian: Boise

Stand Characteristics at Time of Retreatment:

Age	63 years
Trees per Acre	428 trees/acre
Basal Area	205.0 sq.ft/acre
Total Volume	5741 cu.ft/acre
CCF	238.9
Relative Density Index	66.9
Mean Diameter	9.4 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 21.3 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	20.2	20.8
200#N	None	7.4	16.5
400#N	None	11.2	17.5
200#N	200#N	17.0	22.7
400#N	200#N	5.1	19.5
0#N	N+K	13.8	25.9
200#N	N+K	.	.
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-12.8	-4.3	-63.4	-20.7
Old 400#N	-9.0	-3.3	-44.6	-15.9
400#N-200#N	3.8	1.0	51.4	6.1
New 200#N	1.7	4.1	18.8	24.1
N+K on Cont	-6.4	5.1	-31.7	24.5
N+K on Treat	.	.	.	.
New 200#K	.	.	.	.



Installation Summary: Adjusted Growth Following Retreatment

Installation 288

MICA MTN

Region: Northern Idaho

Ownership: Inland Empire

Legal Description: T49N R5W Section 33 Meridian: Boise

Stand Characteristics at Time of Retreatment:

Age	60 years
Trees per Acre	302 trees/acre
Basal Area	289.1 sq.ft/acre
Total Volume	9758 cu.ft/acre
CCF	276.3
Relative Density Index	79.2
Mean Diameter	13.4 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 23.7 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	16.8	21.7
200#N	None	23.4	22.8
400#N	None	14.5	19.1
200#N	200#N	.	.
400#N	200#N	.	.
0#N	N+K	-3.5	24.3
200#N	N+K	26.4	26.0
400#N	N+K	23.6	23.9

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	6.6	1.1	39.3	5.1
Old 400#N	-2.3	-2.6	-13.7	-12.0
400#N-200#N	-8.9	-3.7	-38.0	-16.2
New 200#N	.	.	.	.
N+K on Cont	-20.3	2.6	-120.8	12.0
N+K on Treat	6.1	4.0	31.9	19.1
New 200#K	.	.	.	.

Installation Summary: Adjusted Growth Following Retreatment

Installation 289 GROUSE MTN

Region: Northeast Washington Ownership: Inland Empire  
 Legal Description: T40N R40E Section 8 Meridian: Willamette

Stand Characteristics at Time of Retreatment:

-----  
 Age 57 years  
 Trees per Acre 405 trees/acre  
 Basal Area 210.7 sq.ft/acre  
 Total Volume 6022 cu.ft/acre  
 CCF 242.3  
 Relative Density Index 67.3  
 Mean Diameter 9.8 in

Growth in 4 Years Following Retreatment:

-----  
 Note: all increments have been adjusted to a common  
 expected 4 year growth of 23.6 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	19.1	19.8
200#N	None	.	.
400#N	None	19.5	19.6
200#N	200#N	14.9	20.6
400#N	200#N	5.9	22.6
0#N	N+K	15.9	24.7
200#N	N+K	23.3	23.1
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	.	.	.	.
Old 400#N	0.4	-0.2	2.1	-1.0
400#N-200#N	.	.	.	.
New 200#N	-13.6	3.0	-69.7	15.3
N+K on Cont	-3.2	4.9	-16.8	24.7
N+K on Treat	.	.	.	.
New 200#K	8.4	2.5	56.4	12.1

Installation Summary: Adjusted Growth Following Retreatment

Installation 290

GRASS MTN

Region: Northeast Washington

Ownership: Inland Empire

Legal Description: T39N R40E Section 1

Meridian: Willamette

Stand Characteristics at Time of Retreatment:

Age	81 years
Trees per Acre	393 trees/acre
Basal Area	201.2 sq.ft/acre
Total Volume	5746 cu.ft/acre
CCF	231.8
Relative Density Index	64.6
Mean Diameter	9.7 in

Growth in 4 Years Following Retreatment:

Note: all increments have been adjusted to a common expected 4 year growth of 17.6 sq.ft/acre

Treatments		Four Year Growth/Acre	
OLD	NEW	Net BA	Gross BA
0#N	None	9.1	17.1
200#N	None	-17.6	12.7
400#N	None	-6.2	13.7
200#N	200#N	17.9	18.3
400#N	200#N	.	.
0#N	N+K	18.0	19.6
200#N	N+K	.	.
400#N	N+K	.	.

Four Year Response/Acre

Effect	Absolute		Percent	
	Net BA	Gross BA	Net BA	Gross BA
Old 200#N	-26.7	-4.4	-293.4	-25.7
Old 400#N	-15.3	-3.4	-168.1	-19.9
400#N-200#N	11.4	1.0	64.8	7.9
New 200#N	35.5	5.6	201.7	44.1
N+K on Cont	8.9	2.5	97.8	14.6
N+K on Treat	.	.	.	.
New 200#K	.	.	.	.

**SECTION III**

**Experimental Design Statistical Models  
for Four Year Douglas-fir Retreatment Response  
Growth versus Treatment and Parent Material**

- Table 1. Four Year Gross BA Growth by Treatment and Parent Material
- Table 2. Four Year Gross BA Growth Point Estimates by Treatment and Parent Material
- Table 3. Four Year Net BA Growth by Treatment and Parent Material
- Table 4. Four Year Net BA Growth Point Estimates by Treatment and Parent Material

**TABLE 1. 4 Year Results Following Retreatment for 1981 and 1982 Sites  
Growth versus Treatment and Parent Material**

**General Linear Models Procedure**

Dependent Variable: AGBAI 4 Year Gross BA Growth (ft <sup>2</sup> /a)					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	124	24789.286923	199.913604	63.33	0.0001
Error	411	1297.384184	3.156653		
Corrected Total	535	26086.671107			

R-Square	C.V.	Root MSE	AGBAI Mean
0.950266	11.01514	1.7766971	16.129585

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Parent Material	4	8177.355065	2044.338766	647.63	0.0001
Installation(PMater)	85	15603.697263	183.572909	58.15	0.0001
Treatments	7	903.648671	129.092667	40.90	0.0001
PMater*Treatments	28	104.585924	3.735212	1.18	0.2410

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Parent Material	4	7933.266128	1983.316532	628.30	0.0001
Installation(PMater)	85	15079.639200	177.407520	56.20	0.0001
Treatments	7	690.328423	98.618346	31.24	0.0001
PMater*Treatments	28	104.585924	3.735212	1.18	0.2410

TABLE 2. 4 Year Results Following Retreatment for 1981 and 1982 Sites  
Growth versus Treatment and Parent Material

General Linear Models Procedure

Dependent Variable: AGBAI 4 Year Gross BA Growth (ft<sup>2</sup>/a)

PMater	Treatments	AGBAI LSMEAN	Std Err LSMEAN	Pr >  T  H0:LSMEAN=0	LSMEAN Number
Basalt	Control	14.2558606	0.3243790	0.0001	1
Basalt	0, N+K	16.9899436	0.3326793	0.0001	2
Basalt	200, N	14.9994936	0.4363441	0.0001	3
Basalt	200, N+K	14.4217040	0.4361757	0.0001	4
Basalt	200N	13.2471965	0.3783493	0.0001	5
Basalt	400, N	13.6614062	0.4230428	0.0001	6
Basalt	400, N+K	14.2188029	0.4654927	0.0001	7
Basalt	400N	12.9285752	0.3797492	0.0001	8
Granite	Control	13.0794364	0.4927671	0.0001	9
Granite	0, N+K	16.0556227	0.4927671	0.0001	10
Granite	200, N	13.4466240	0.7013438	0.0001	11
Granite	200, N+K	14.6690572	0.6524869	0.0001	12
Granite	200N	12.4569881	0.5430226	0.0001	13
Granite	400, N	14.0208889	0.7016413	0.0001	14
Granite	400, N+K	13.1822711	0.6102004	0.0001	15
Granite	400N	11.4519875	0.5733535	0.0001	16
Metamorphic	Control	24.4632086	0.4587412	0.0001	17
Metamorphic	0, N+K	26.5285111	0.4587412	0.0001	18
Metamorphic	200, N	25.8102365	0.5793132	0.0001	19
Metamorphic	200, N+K	25.3606102	0.6142909	0.0001	20
Metamorphic	200N	22.9608754	0.5484304	0.0001	21
Metamorphic	400, N	25.3069977	0.6140630	0.0001	22
Metamorphic	400, N+K	25.3604717	0.6145004	0.0001	23
Metamorphic	400N	21.6751246	0.5301755	0.0001	24
Mixed	Control	14.7980674	0.3565397	0.0001	25
Mixed	0, N+K	17.7655157	0.3718269	0.0001	26
Mixed	200, N	16.2236338	0.4936392	0.0001	27
Mixed	200, N+K	16.7122307	0.4757144	0.0001	28
Mixed	200N	13.3095366	0.4192415	0.0001	29
Mixed	400, N	15.2714023	0.5943315	0.0001	30
Mixed	400, N+K	14.9212213	0.4428049	0.0001	31
Mixed	400N	13.6131494	0.3953974	0.0001	32
Sedimentary	Control	13.5182553	0.6281573	0.0001	33
Sedimentary	0, N+K	14.6351541	0.6281573	0.0001	34
Sedimentary	200, N	12.5788881	0.7428831	0.0001	35
Sedimentary	200, N+K	12.8601074	0.9295547	0.0001	36
Sedimentary	200N	11.4889726	0.7419768	0.0001	37
Sedimentary	400, N	12.1875009	0.6791242	0.0001	38
Sedimentary	400, N+K	11.7137994	1.0882574	0.0001	39
Sedimentary	400N	11.9133711	0.7421988	0.0001	40

Pr > |T| H0: LSMEAN(i)=LSMEAN(j)

i/j	1	2	3	4	5	6	7	8	9
1	.	0.0001	0.1722	0.7604	0.0436	0.2655	0.9480	0.0082	0.0468
2	0.0001	.	0.0003	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
3	0.1722	0.0003	.	0.3575	0.0029	0.0248	0.2323	0.0003	0.0037
4	0.7604	0.0001	0.3575	.	0.0452	0.2182	0.7436	0.0099	0.0420
5	0.0436	0.0001	0.0029	0.0452	.	0.4658	0.1053	0.5557	0.7873
6	0.2655	0.0001	0.0248	0.2182	0.4658	.	0.3852	0.1990	0.3707
7	0.9480	0.0001	0.2323	0.7436	0.1053	0.3852	.	0.0335	0.0936
8	0.0082	0.0001	0.0003	0.0099	0.5557	0.1990	0.0335	.	0.8085
9	0.0468	0.0001	0.0037	0.0420	0.7873	0.3707	0.0936	0.8085	.
10	0.0024	0.1168	0.1094	0.0134	0.0001	0.0003	0.0070	0.0001	0.0001

TABLE 2. (Continued)

4 Year Results Following Retreatment for 1981 and 1982 Sites

Growth versus Treatment and Parent Material

General Linear Models Procedure

Dependent Variable: AGBAI 4 Year Gross BA Growth (ft<sup>2</sup>/a)

Pr > |T| H0: LSMEAN(i)=LSMEAN(j)

i/j	1	2	3	4	5	6	7	8	9
11	0.2956	0.0001	0.0608	0.2384	0.8025	0.7933	0.3595	0.5163	0.6686
12	0.5710	0.0016	0.6740	0.7528	0.0601	0.1958	0.5746	0.0216	0.0526
13	0.0047	0.0001	0.0003	0.0050	0.2332	0.0809	0.0142	0.4771	0.3965
14	0.7613	0.0002	0.2369	0.6278	0.3323	0.6611	0.8143	0.1717	0.2728
15	0.1211	0.0001	0.0158	0.0992	0.9280	0.5191	0.1776	0.7243	0.8958
16	0.0001	0.0001	0.0001	0.0001	0.0093	0.0021	0.0002	0.0324	0.0319
17	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
18	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
19	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
20	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
21	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
22	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
23	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
24	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
25	0.2613	0.0001	0.7209	0.5045	0.0030	0.0406	0.3238	0.0004	0.0049
26	0.0001	0.1208	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
27	0.0009	0.1987	0.0639	0.0065	0.0001	0.0001	0.0033	0.0001	0.0001
28	0.0001	0.6326	0.0083	0.0004	0.0001	0.0001	0.0002	0.0001	0.0001
29	0.0750	0.0001	0.0055	0.0667	0.9122	0.5550	0.1474	0.5010	0.7223
30	0.1344	0.0120	0.7125	0.2498	0.0043	0.0279	0.1640	0.0010	0.0047
31	0.2261	0.0002	0.8999	0.4221	0.0043	0.0403	0.2749	0.0007	0.0057
32	0.2096	0.0001	0.0190	0.1704	0.5041	0.9336	0.3220	0.2125	0.3987
33	0.2974	0.0001	0.0535	0.2381	0.7118	0.8502	0.3708	0.4222	0.5829
34	0.5919	0.0010	0.6341	0.7803	0.0591	0.1992	0.5946	0.0206	0.0520
35	0.0392	0.0001	0.0052	0.0330	0.4232	0.2061	0.0621	0.6753	0.5748
36	0.1570	0.0001	0.0378	0.1291	0.6999	0.4331	0.1920	0.9457	0.8350
37	0.0007	0.0001	0.0001	0.0007	0.0354	0.0113	0.0020	0.0849	0.0749
38	0.0063	0.0001	0.0005	0.0059	0.1736	0.0662	0.0140	0.3414	0.2884
39	0.0257	0.0001	0.0053	0.0214	0.1840	0.0961	0.0349	0.2925	0.2536
40	0.0040	0.0001	0.0004	0.0038	0.1101	0.0414	0.0088	0.2240	0.1913

Pr > |T| H0: LSMEAN(i)=LSMEAN(j)

i/j	10	11	12	13	14	15	16	17	18
1	0.0024	0.2956	0.5710	0.0047	0.7613	0.1211	0.0001	0.0001	0.0001
2	0.1168	0.0001	0.0016	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001
3	0.1094	0.0608	0.6740	0.0003	0.2369	0.0158	0.0001	0.0001	0.0001
4	0.0134	0.2384	0.7528	0.0050	0.6278	0.0992	0.0001	0.0001	0.0001
5	0.0001	0.8025	0.0601	0.2332	0.3323	0.9280	0.0093	0.0001	0.0001
6	0.0003	0.7933	0.1958	0.0809	0.6611	0.5191	0.0021	0.0001	0.0001
7	0.0070	0.3595	0.5746	0.0142	0.8143	0.1776	0.0002	0.0001	0.0001
8	0.0001	0.5163	0.0216	0.4771	0.1717	0.7243	0.0324	0.0001	0.0001
9	0.0001	0.6686	0.0526	0.3965	0.2728	0.8958	0.0319	0.0001	0.0001
10	.	0.0025	0.0907	0.0001	0.0181	0.0003	0.0001	0.0001	0.0001
11	0.0025	.	0.2157	0.2690	0.5558	0.7811	0.0272	0.0001	0.0001
12	0.0907	0.2157	.	0.0100	0.5114	0.0874	0.0002	0.0001	0.0001
13	0.0001	0.2690	0.0100	.	0.0755	0.3778	0.2057	0.0001	0.0001
14	0.0181	0.5558	0.5114	0.0755	.	0.3782	0.0054	0.0001	0.0001
15	0.0003	0.7811	0.0874	0.3778	0.3782	.	0.0410	0.0001	0.0001
16	0.0001	0.0272	0.0002	0.2057	0.0054	0.0410	.	0.0001	0.0001
17	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	.	0.0016
18	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0016	.
19	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0690	0.3316
20	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.2425	0.1284

TABLE 2. (Continued)

4 Year Results Following Retreatment for 1981 and 1982 Sites

Growth versus Treatment and Parent Material

General Linear Models Procedure

Dependent Variable: AGBAI 4 Year Gross BA Growth (ft<sup>2</sup>/a)

Pr > |T| H0: LSMEAN(i)=LSMEAN(j)

i/j	10	11	12	13	14	15	16	17	18
21	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0362	0.0001
22	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.2716	0.1118
23	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.2427	0.1285
24	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
25	0.0393	0.0866	0.8623	0.0004	0.3240	0.0227	0.0001	0.0001	0.0001
26	0.0059	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
27	0.8098	0.0013	0.0581	0.0001	0.0106	0.0001	0.0001	0.0001	0.0001
28	0.3383	0.0001	0.0118	0.0001	0.0016	0.0001	0.0001	0.0001	0.0001
29	0.0001	0.8668	0.0804	0.2147	0.3846	0.8636	0.0092	0.0001	0.0001
30	0.3103	0.0478	0.4953	0.0005	0.1746	0.0146	0.0001	0.0001	0.0001
31	0.0876	0.0762	0.7493	0.0005	0.2785	0.0216	0.0001	0.0001	0.0001
32	0.0001	0.8362	0.1671	0.0860	0.6129	0.5538	0.0020	0.0001	0.0001
33	0.0016	0.9394	0.2046	0.2019	0.5938	0.7014	0.0155	0.0001	0.0001
34	0.0759	0.2075	0.9702	0.0090	0.5146	0.0979	0.0002	0.0001	0.0001
35	0.0001	0.3962	0.0351	0.8947	0.1590	0.5306	0.2305	0.0001	0.0001
36	0.0025	0.6148	0.1120	0.7083	0.3195	0.7722	0.1980	0.0001	0.0001
37	0.0001	0.0559	0.0014	0.2930	0.0136	0.0787	0.9686	0.0001	0.0001
38	0.0001	0.1979	0.0087	0.7568	0.0612	0.2765	0.4084	0.0001	0.0001
39	0.0003	0.1815	0.0203	0.5415	0.0755	0.2399	0.8316	0.0001	0.0001
40	0.0001	0.1340	0.0055	0.5548	0.0397	0.1874	0.6230	0.0001	0.0001

Pr > |T| H0: LSMEAN(i)=LSMEAN(j)

i/j	19	20	21	22	23	24	25	26	27
1	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.2613	0.0001	0.0009
2	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.1208	0.1987
3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.7209	0.0001	0.0639
4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.5045	0.0001	0.0065
5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0030	0.0001	0.0001
6	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0406	0.0001	0.0001
7	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.3238	0.0001	0.0033
8	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0004	0.0001	0.0001
9	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0049	0.0001	0.0001
10	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0393	0.0059	0.8098
11	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0866	0.0001	0.0013
12	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.8623	0.0001	0.0581
13	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0004	0.0001	0.0001
14	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.3240	0.0001	0.0106
15	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0227	0.0001	0.0001
16	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
17	0.0690	0.2425	0.0362	0.2716	0.2427	0.0001	0.0001	0.0001	0.0001
18	0.3316	0.1284	0.0001	0.1118	0.1285	0.0001	0.0001	0.0001	0.0001
19	.	0.6016	0.0005	0.5474	0.6018	0.0001	0.0001	0.0001	0.0001
20	0.6016	.	0.0042	0.9515	0.9999	0.0001	0.0001	0.0001	0.0001
21	0.0005	0.0042	.	0.0044	0.0036	0.0948	0.0001	0.0001	0.0001
22	0.5474	0.9515	0.0044	.	0.9516	0.0001	0.0001	0.0001	0.0001
23	0.6018	0.9999	0.0036	0.9516	.	0.0001	0.0001	0.0001	0.0001
24	0.0001	0.0001	0.0948	0.0001	0.0001	.	0.0001	0.0001	0.0001
25	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	.	0.0001	0.0200
26	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	.	0.0127
27	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0200	0.0127	.
28	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0014	0.0810	0.4844
29	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0068	0.0001	0.0001
30	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.4959	0.0004	0.2065



TABLE 2. (Continued)

4 Year Results Following Retreatment for 1981 and 1982 Sites

Growth versus Treatment and Parent Material

General Linear Models Procedure

Dependent Variable: AGBAI 4 Year Gross BA Growth (ft<sup>2</sup>/a)

Pr > |T| H0: LSMEAN(i)=LSMEAN(j)

i/j	19	20	21	22	23	24	25	26	27
31	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.8291	0.0001	0.0530
32	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0259	0.0001	0.0001
33	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0772	0.0001	0.0008
34	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.8217	0.0001	0.0474
35	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0074	0.0001	0.0001
36	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0523	0.0001	0.0015
37	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
38	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0007	0.0001	0.0001
39	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0074	0.0001	0.0002
40	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0001	0.0001

Pr > |T| H0: LSMEAN(i)=LSMEAN(j)

i/j	28	29	30	31	32	33	34	35	36
1	0.0001	0.0750	0.1344	0.2261	0.2096	0.2974	0.5919	0.0392	0.1570
2	0.6326	0.0001	0.0120	0.0002	0.0001	0.0001	0.0010	0.0001	0.0001
3	0.0083	0.0055	0.7125	0.8999	0.0190	0.0535	0.6341	0.0052	0.0378
4	0.0004	0.0667	0.2498	0.4221	0.1704	0.2381	0.7803	0.0330	0.1291
5	0.0001	0.9122	0.0043	0.0043	0.5041	0.7118	0.0591	0.4232	0.6999
6	0.0001	0.5550	0.0279	0.0403	0.9336	0.8502	0.1992	0.2061	0.4331
7	0.0002	0.1474	0.1640	0.2749	0.3220	0.3708	0.5946	0.0621	0.1920
8	0.0001	0.5010	0.0010	0.0007	0.2125	0.4222	0.0206	0.6753	0.9457
9	0.0001	0.7223	0.0047	0.0057	0.3987	0.5829	0.0520	0.5748	0.8350
10	0.3383	0.0001	0.3103	0.0876	0.0001	0.0016	0.0759	0.0001	0.0025
11	0.0001	0.8668	0.0478	0.0762	0.8362	0.9394	0.2075	0.3962	0.6148
12	0.0118	0.0804	0.4953	0.7493	0.1671	0.2046	0.9702	0.0351	0.1120
13	0.0001	0.2147	0.0005	0.0005	0.0860	0.2019	0.0090	0.8947	0.7083
14	0.0016	0.3846	0.1746	0.2785	0.6129	0.5938	0.5146	0.1590	0.3195
15	0.0001	0.8636	0.0146	0.0216	0.5538	0.7014	0.0979	0.5306	0.7722
16	0.0001	0.0092	0.0001	0.0001	0.0020	0.0155	0.0002	0.2305	0.1980
17	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
18	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
19	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
20	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
21	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
22	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
23	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
24	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
25	0.0014	0.0068	0.4959	0.8291	0.0259	0.0772	0.8217	0.0074	0.0523
26	0.0810	0.0001	0.0004	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
27	0.4844	0.0001	0.2065	0.0530	0.0001	0.0008	0.0474	0.0001	0.0015
28	.	0.0001	0.0674	0.0051	0.0001	0.0001	0.0087	0.0001	0.0003
29	0.0001	.	0.0069	0.0090	0.5980	0.7824	0.0800	0.3922	0.6596
30	0.0674	0.0069	.	0.6440	0.0227	0.0433	0.4623	0.0049	0.0294
31	0.0051	0.0090	0.6440	.	0.0293	0.0687	0.7099	0.0070	0.0460
32	0.0001	0.5980	0.0227	0.0293	.	0.8983	0.1693	0.2198	0.4564
33	0.0001	0.7824	0.0433	0.0687	0.8983	.	0.2094	0.3348	0.5578
34	0.0087	0.0800	0.4623	0.7099	0.1693	0.2094	.	0.0351	0.1144
35	0.0001	0.3922	0.0049	0.0070	0.2198	0.3348	0.0351	.	0.8166
36	0.0003	0.6596	0.0294	0.0460	0.4564	0.5578	0.1144	0.8166	.
37	0.0001	0.0333	0.0001	0.0001	0.0119	0.0375	0.0013	0.3035	0.2575
38	0.0001	0.1605	0.0007	0.0008	0.0704	0.1510	0.0085	0.6944	0.5627
39	0.0001	0.1720	0.0043	0.0066	0.1017	0.1517	0.0206	0.5225	0.4172
40	0.0001	0.1022	0.0005	0.0006	0.0439	0.0996	0.0054	0.5229	0.4269

TABLE 2. (Continued)

4 Year Results Following Retreatment for 1981 and  
1982 Sites

Growth versus Treatment and Parent Material

General Linear Models Procedure

Dependent Variable: AGBAI 4 Year Gross BA Growth (ft<sup>2</sup>/a)

Pr > |T| H0: LSMEAN(i)=LSMEAN(j)

i/j	37	38	39	40
1	0.0007	0.0063	0.0257	0.0040
2	0.0001	0.0001	0.0001	0.0001
3	0.0001	0.0005	0.0053	0.0004
4	0.0007	0.0059	0.0214	0.0038
5	0.0354	0.1736	0.1840	0.1101
6	0.0113	0.0662	0.0961	0.0414
7	0.0020	0.0140	0.0349	0.0088
8	0.0849	0.3414	0.2925	0.2240
9	0.0749	0.2884	0.2536	0.1913
10	0.0001	0.0001	0.0003	0.0001
11	0.0559	0.1979	0.1815	0.1340
12	0.0014	0.0087	0.0203	0.0055
13	0.2930	0.7568	0.5415	0.5548
14	0.0136	0.0612	0.0755	0.0397
15	0.0787	0.2765	0.2399	0.1874
16	0.9686	0.4084	0.8316	0.6230
17	0.0001	0.0001	0.0001	0.0001
18	0.0001	0.0001	0.0001	0.0001
19	0.0001	0.0001	0.0001	0.0001
20	0.0001	0.0001	0.0001	0.0001
21	0.0001	0.0001	0.0001	0.0001
22	0.0001	0.0001	0.0001	0.0001
23	0.0001	0.0001	0.0001	0.0001
24	0.0001	0.0001	0.0001	0.0001
25	0.0001	0.0007	0.0074	0.0005
26	0.0001	0.0001	0.0001	0.0001
27	0.0001	0.0001	0.0002	0.0001
28	0.0001	0.0001	0.0001	0.0001
29	0.0333	0.1605	0.1720	0.1022
30	0.0001	0.0007	0.0043	0.0005
31	0.0001	0.0008	0.0066	0.0006
32	0.0119	0.0704	0.1017	0.0439
33	0.0375	0.1510	0.1517	0.0996
34	0.0013	0.0085	0.0206	0.0054
35	0.3035	0.6944	0.5225	0.5229
36	0.2575	0.5627	0.4172	0.4269
37	.	0.4893	0.8625	0.6885
38	0.4893	.	0.7152	0.7859
39	0.8625	0.7152	.	0.8826
40	0.6885	0.7859	0.8826	.

**TABLE 3. 4 Year Results Following Retreatment for 1981 and 1982 Sites  
Growth versus Treatment and Parent Material**

General Linear Models Procedure

Dependent Variable: ANBAI 4 Year Net BA Growth (ft <sup>2</sup> /a)					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	124	40673.099129	328.008864	4.91	0.0001
Error	411	27430.844102	66.741713		
Corrected Total	535	68103.943231			

R-Square	C.V.	Root MSE	ANBAI Mean
0.597221	66.91458	8.1695602	12.208939

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Parent Material	4	10744.825881	2686.206470	40.25	0.0001
Installation(PMater)	85	27441.279834	322.838586	4.84	0.0001
Treatments	7	670.298209	95.756887	1.43	0.1896
PMater*Treatments	28	1816.695205	64.881972	0.97	0.5084

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Parent Material	4	10337.272404	2584.318101	38.72	0.0001
Installation(PMater)	85	26866.494270	316.076403	4.74	0.0001
Treatments	7	602.474948	86.067850	1.29	0.2539
PMater*Treatments	28	1816.695205	64.881972	0.97	0.5084

TABLE 4. 4 Year Results Following Retreatment for 1981 and 1982 Sites  
Growth versus Treatment and Parent Material

General Linear Models Procedure

Dependent Variable: ANBAI 4 Year Net BA Growth (ft<sup>2</sup>/a)

PMater	Treatments	ANBAI LSMEAN	Std Err LSMEAN	Pr >  T  H0:LSMEAN=0	LSMEAN Number
Basalt	Control	9.7493943	1.4915508	0.0001	1
Basalt	0, N+K	10.8555660	1.5297170	0.0001	2
Basalt	200, N	8.7336119	2.0063855	0.0001	3
Basalt	200, N+K	11.3295029	2.0056114	0.0001	4
Basalt	200N	9.7682122	1.7397154	0.0001	5
Basalt	400, N	7.1643515	1.9452240	0.0003	6
Basalt	400, N+K	12.5759554	2.1404158	0.0001	7
Basalt	400N	10.0068602	1.7461523	0.0001	8
Granite	Control	4.1714041	2.2658283	0.0663	9
Granite	0, N+K	11.4386240	2.2658283	0.0001	10
Granite	200, N	9.2750447	3.2249000	0.0042	11
Granite	200, N+K	11.3379435	3.0002477	0.0002	12
Granite	200N	7.0403065	2.4969115	0.0050	13
Granite	400, N	11.6432225	3.2262680	0.0003	14
Granite	400, N+K	-0.4188487	2.8058068	0.8814	15
Granite	400N	7.3129482	2.6363786	0.0058	16
Metamorphic	Control	19.6318929	2.1093714	0.0001	17
Metamorphic	0, N+K	23.4482429	2.1093714	0.0001	18
Metamorphic	200, N	24.2378236	2.6637824	0.0001	19
Metamorphic	200, N+K	23.2020724	2.8246158	0.0001	20
Metamorphic	200N	19.9226221	2.5217777	0.0001	21
Metamorphic	400, N	21.2464825	2.8235677	0.0001	22
Metamorphic	400, N+K	24.0707571	2.8255789	0.0001	23
Metamorphic	400N	18.3070064	2.4378385	0.0001	24
Mixed	Control	12.0172829	1.6394310	0.0001	25
Mixed	0, N+K	13.0801133	1.7097244	0.0001	26
Mixed	200, N	14.1127392	2.2698384	0.0001	27
Mixed	200, N+K	14.2572824	2.1874168	0.0001	28
Mixed	200N	9.4631940	1.9277450	0.0001	29
Mixed	400, N	15.2234336	2.7328389	0.0001	30
Mixed	400, N+K	13.4750498	2.0360936	0.0001	31
Mixed	400N	9.4774223	1.8181055	0.0001	32
Sedimentary	Control	12.5010476	2.8883757	0.0001	33
Sedimentary	0, N+K	10.6509210	2.8883757	0.0003	34
Sedimentary	200, N	6.2157956	3.4159049	0.0695	35
Sedimentary	200, N+K	12.0235700	4.2742533	0.0051	36
Sedimentary	200N	9.8021455	3.4117375	0.0043	37
Sedimentary	400, N	10.0893227	3.1227304	0.0013	38
Sedimentary	400, N+K	9.0617361	5.0039954	0.0709	39
Sedimentary	400N	9.2444763	3.4127584	0.0070	40

Pr > |T| H0: LSMEAN(i)=LSMEAN(j)

i/j	1	2	3	4	5	6	7	8	9
1	.	0.6049	0.6847	0.5276	0.9935	0.2922	0.2792	0.9108	0.0404
2	0.6049	.	0.3978	0.8501	0.6399	0.1341	0.5112	0.7129	0.0149
3	0.6847	0.3978	.	0.3687	0.7007	0.5660	0.2011	0.6277	0.1325
4	0.5276	0.8501	0.3687	.	0.5618	0.1425	0.6622	0.6177	0.0185
5	0.9935	0.6399	0.7007	0.5618	.	0.3188	0.3082	0.9235	0.0508
6	0.2922	0.1341	0.5660	0.1425	0.3188	.	0.0672	0.2784	0.3168
7	0.2792	0.5112	0.2011	0.6622	0.3082	0.0672	.	0.3563	0.0073
8	0.9108	0.7129	0.6277	0.6177	0.9235	0.2784	0.3563	.	0.0420
9	0.0404	0.0149	0.1325	0.0185	0.0508	0.3168	0.0073	0.0420	.
10	0.5338	0.8312	0.3720	0.9713	0.5590	0.1531	0.7154	0.6170	0.0239

TABLE 4. (Continued) 4 Year Results Following Retreatment for 1981 and 1982 Sites  
Growth versus Treatment and Parent Material

General Linear Models Procedure

Dependent Variable: ANBAI 4 Year Net BA Growth (ft<sup>2</sup>/a)

Pr > |T| H0: LSMEAN(i)=LSMEAN(j)

i/j	1	2	3	4	5	6	7	8	9
11	0.8939	0.6581	0.8867	0.5888	0.8930	0.5755	0.3943	0.8419	0.1961
12	0.6357	0.8862	0.4710	0.9981	0.6511	0.2438	0.7371	0.7016	0.0573
13	0.3522	0.1933	0.5973	0.1812	0.3706	0.9688	0.0931	0.3308	0.3953
14	0.5944	0.8255	0.4442	0.9342	0.6092	0.2352	0.8097	0.6558	0.0588
15	0.0015	0.0005	0.0083	0.0007	0.0022	0.0269	0.0003	0.0017	0.2038
16	0.4217	0.2458	0.6683	0.2260	0.4374	0.9638	0.1220	0.3948	0.3667
17	0.0002	0.0008	0.0002	0.0046	0.0003	0.0001	0.0193	0.0005	0.0001
18	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.0001	0.0001
19	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0007	0.0001	0.0001
20	0.0001	0.0001	0.0001	0.0007	0.0001	0.0001	0.0029	0.0001	0.0001
21	0.0006	0.0023	0.0006	0.0080	0.0010	0.0001	0.0269	0.0013	0.0001
22	0.0004	0.0013	0.0003	0.0044	0.0006	0.0001	0.0148	0.0008	0.0001
23	0.0001	0.0001	0.0001	0.0003	0.0001	0.0001	0.0013	0.0001	0.0001
24	0.0029	0.0100	0.0026	0.0276	0.0046	0.0004	0.0780	0.0059	0.0001
25	0.3068	0.6047	0.2058	0.7907	0.3473	0.0571	0.8359	0.4017	0.0053
26	0.1429	0.3328	0.0999	0.5069	0.1753	0.0229	0.8541	0.2093	0.0018
27	0.1089	0.2347	0.0765	0.3587	0.1295	0.0206	0.6226	0.1524	0.0021
28	0.0894	0.2032	0.0635	0.3244	0.1090	0.0158	0.5830	0.1296	0.0015
29	0.9066	0.5718	0.7933	0.5027	0.9065	0.4017	0.2805	0.8345	0.0760
30	0.0795	0.1639	0.0563	0.2513	0.0930	0.0167	0.4461	0.1085	0.0020
31	0.1407	0.3043	0.0979	0.4533	0.1671	0.0256	0.7610	0.1967	0.0024
32	0.9080	0.5622	0.7837	0.4942	0.9081	0.3855	0.2705	0.8338	0.0685
33	0.3978	0.6149	0.2847	0.7392	0.4181	0.1262	0.9834	0.4603	0.0238
34	0.7817	0.9501	0.5859	0.8471	0.7936	0.3173	0.5926	0.8488	0.0783
35	0.3437	0.2158	0.5254	0.1974	0.3546	0.8094	0.1154	0.3236	0.6182
36	0.6157	0.7971	0.4863	0.8832	0.6253	0.3014	0.9081	0.6625	0.1053
37	0.9887	0.7783	0.7873	0.6997	0.9929	0.5022	0.4914	0.9574	0.1699
38	0.9218	0.8257	0.7151	0.7384	0.9285	0.4271	0.5117	0.9816	0.1258
39	0.8953	0.7319	0.9515	0.6742	0.8940	0.7240	0.5188	0.8586	0.3738
40	0.8922	0.6669	0.8974	0.5987	0.8913	0.5967	0.4087	0.8425	0.2163

Pr > |T| H0: LSMEAN(i)=LSMEAN(j)

i/j	10	11	12	13	14	15	16	17	18
1	0.5338	0.8939	0.6357	0.3522	0.5944	0.0015	0.4217	0.0002	0.0001
2	0.8312	0.6581	0.8862	0.1933	0.8255	0.0005	0.2458	0.0008	0.0001
3	0.3720	0.8867	0.4710	0.5973	0.4442	0.0083	0.6683	0.0002	0.0001
4	0.9713	0.5888	0.9981	0.1812	0.9342	0.0007	0.2260	0.0046	0.0001
5	0.5590	0.8930	0.6511	0.3706	0.6092	0.0022	0.4374	0.0003	0.0001
6	0.1531	0.5755	0.2438	0.9688	0.2352	0.0269	0.9638	0.0001	0.0001
7	0.7154	0.3943	0.7371	0.0931	0.8097	0.0003	0.1220	0.0193	0.0003
8	0.6170	0.8419	0.7016	0.3308	0.6558	0.0017	0.3948	0.0005	0.0001
9	0.0239	0.1961	0.0573	0.3953	0.0588	0.2038	0.3667	0.0001	0.0001
10	.	0.5833	0.9786	0.1928	0.9586	0.0011	0.2360	0.0084	0.0001
11	0.5833	.	0.6493	0.5870	0.5972	0.0271	0.6357	0.0075	0.0003
12	0.9786	0.6493	.	0.2751	0.9464	0.0034	0.3149	0.0243	0.0010
13	0.1928	0.5870	0.2751	.	0.2546	0.0490	0.9404	0.0001	0.0001
14	0.9586	0.5972	0.9464	0.2546	.	0.0061	0.3058	0.0388	0.0023
15	0.0011	0.0271	0.0034	0.0490	0.0061	.	0.0470	0.0001	0.0001
16	0.2360	0.6357	0.3149	0.9404	0.3058	0.0470	.	0.0003	0.0001
17	0.0084	0.0075	0.0243	0.0001	0.0388	0.0001	0.0003	.	0.2015
18	0.0001	0.0003	0.0010	0.0001	0.0023	0.0001	0.0001	0.2015	.
19	0.0003	0.0004	0.0014	0.0001	0.0028	0.0001	0.0001	0.1760	0.8164
20	0.0013	0.0013	0.0042	0.0001	0.0073	0.0001	0.0001	0.3118	0.9444

TABLE 4. (Continued)

4 Year Results Following Retreatment for 1981 and 1982 Sites

Growth versus Treatment and Parent Material

General Linear Models Procedure

Dependent Variable: ANBAI 4 Year Net BA Growth (ft<sup>2</sup>/a)

Pr > |T| H0: LSMEAN(i)=LSMEAN(j)

i/j	10	11	12	13	14	15	16	17	18
21	0.0127	0.0096	0.0291	0.0003	0.0438	0.0001	0.0006	0.9296	0.2842
22	0.0070	0.0055	0.0166	0.0002	0.0256	0.0001	0.0003	0.6471	0.5325
23	0.0005	0.0006	0.0021	0.0001	0.0040	0.0001	0.0001	0.2088	0.8600
24	0.0397	0.0260	0.0722	0.0013	0.1001	0.0001	0.0023	0.6813	0.1115
25	0.8362	0.4489	0.8426	0.0964	0.9177	0.0001	0.1305	0.0046	0.0001
26	0.5634	0.2978	0.6142	0.0466	0.6941	0.0001	0.0672	0.0163	0.0002
27	0.4049	0.2206	0.4612	0.0367	0.5316	0.0001	0.0513	0.0756	0.0027
28	0.3713	0.2018	0.4322	0.0303	0.5028	0.0001	0.0433	0.0777	0.0026
29	0.5070	0.9601	0.5994	0.4429	0.5622	0.0039	0.5107	0.0004	0.0001
30	0.2870	0.1601	0.3389	0.0276	0.3976	0.0001	0.0378	0.2023	0.0177
31	0.5042	0.2714	0.5559	0.0465	0.6314	0.0001	0.0650	0.0363	0.0007
32	0.5000	0.9564	0.5962	0.4305	0.5590	0.0033	0.4995	0.0003	0.0001
33	0.7724	0.4566	0.7802	0.1534	0.8431	0.0014	0.1854	0.0468	0.0024
34	0.8302	0.7508	0.8691	0.3449	0.8189	0.0062	0.3938	0.0124	0.0004
35	0.2033	0.5153	0.2606	0.8456	0.2487	0.1342	0.7994	0.0009	0.0001
36	0.9038	0.6080	0.8956	0.3147	0.9434	0.0154	0.3488	0.1112	0.0170
37	0.6897	0.9107	0.7355	0.5140	0.6952	0.0212	0.5640	0.0147	0.0007
38	0.7267	0.8561	0.7732	0.4461	0.7295	0.0127	0.4973	0.0117	0.0004
39	0.6655	0.9714	0.6966	0.7179	0.6648	0.0992	0.7573	0.0523	0.0084
40	0.5925	0.9948	0.6453	0.6025	0.6098	0.0293	0.6545	0.0100	0.0004

Pr > |T| H0: LSMEAN(i)=LSMEAN(j)

i/j	19	20	21	22	23	24	25	26	27
1	0.0001	0.0001	0.0006	0.0004	0.0001	0.0029	0.3068	0.1429	0.1089
2	0.0001	0.0001	0.0023	0.0013	0.0001	0.0100	0.6047	0.3328	0.2347
3	0.0001	0.0001	0.0006	0.0003	0.0001	0.0026	0.2058	0.0999	0.0765
4	0.0001	0.0007	0.0080	0.0044	0.0003	0.0276	0.7907	0.5069	0.3587
5	0.0001	0.0001	0.0010	0.0006	0.0001	0.0046	0.3473	0.1753	0.1295
6	0.0001	0.0001	0.0001	0.0001	0.0001	0.0004	0.0571	0.0229	0.0206
7	0.0007	0.0029	0.0269	0.0148	0.0013	0.0780	0.8359	0.8541	0.6226
8	0.0001	0.0001	0.0013	0.0008	0.0001	0.0059	0.4017	0.2093	0.1524
9	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0053	0.0018	0.0021
10	0.0003	0.0013	0.0127	0.0070	0.0005	0.0397	0.8362	0.5634	0.4049
11	0.0004	0.0013	0.0096	0.0055	0.0006	0.0260	0.4489	0.2978	0.2206
12	0.0014	0.0042	0.0291	0.0166	0.0021	0.0722	0.8426	0.6142	0.4612
13	0.0001	0.0001	0.0003	0.0002	0.0001	0.0013	0.0964	0.0466	0.0367
14	0.0028	0.0073	0.0438	0.0256	0.0040	0.1001	0.9177	0.6941	0.5316
15	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
16	0.0001	0.0001	0.0006	0.0003	0.0001	0.0023	0.1305	0.0672	0.0513
17	0.1760	0.3118	0.9296	0.6471	0.2088	0.6813	0.0046	0.0163	0.0756
18	0.8164	0.9444	0.2842	0.5325	0.8600	0.1115	0.0001	0.0002	0.0027
19	.	0.7936	0.2451	0.4367	0.9664	0.0983	0.0001	0.0005	0.0040
20	0.7936	.	0.3933	0.6297	0.8250	0.1911	0.0007	0.0023	0.0125
21	0.2451	0.3933	.	0.7257	0.2723	0.6475	0.0089	0.0252	0.0876
22	0.4367	0.6297	0.7257	.	0.4860	0.4393	0.0049	0.0138	0.0496
23	0.9664	0.8250	0.2723	0.4860	.	0.1301	0.0003	0.0010	0.0063
24	0.0983	0.1911	0.6475	0.4393	0.1301	.	0.0329	0.0799	0.2087
25	0.0001	0.0007	0.0089	0.0049	0.0003	0.0329	.	0.6550	0.4559
26	0.0005	0.0023	0.0252	0.0138	0.0010	0.0799	0.6550	.	0.7157
27	0.0040	0.0125	0.0876	0.0496	0.0063	0.2087	0.4559	0.7157	.
28	0.0040	0.0127	0.0904	0.0510	0.0063	0.2170	0.4143	0.6709	0.9641
29	0.0001	0.0001	0.0011	0.0006	0.0001	0.0047	0.3110	0.1633	0.1249
30	0.0186	0.0430	0.2071	0.1261	0.0249	0.4003	0.3159	0.5056	0.7484

TABLE 4. (Continued)

4 Year Results Following Retreatment for 1981 and 1982 Sites

Growth versus Treatment and Parent Material

General Linear Models Procedure

Dependent Variable: ANBAI 4 Year Net BA Growth (ft<sup>2</sup>/a)

Pr > |T| H0: LSMEAN(i)=LSMEAN(j)

i/j	19	20	21	22	23	24	25	26	27
31	0.0014	0.0055	0.0473	0.0261	0.0025	0.1290	0.5785	0.8816	0.8364
32	0.0001	0.0001	0.0009	0.0005	0.0001	0.0039	0.2980	0.1515	0.1143
33	0.0030	0.0084	0.0536	0.0310	0.0044	0.1253	0.8843	0.8631	0.6611
34	0.0006	0.0020	0.0160	0.0090	0.0010	0.0435	0.6810	0.4696	0.3466
35	0.0001	0.0001	0.0013	0.0008	0.0001	0.0042	0.1265	0.0731	0.0549
36	0.0157	0.0297	0.1122	0.0725	0.0192	0.2023	0.9989	0.8186	0.6662
37	0.0009	0.0026	0.0175	0.0101	0.0014	0.0432	0.5587	0.3909	0.2935
38	0.0006	0.0020	0.0147	0.0084	0.0010	0.0387	0.5849	0.4014	0.2979
39	0.0077	0.0143	0.0533	0.0345	0.0093	0.0975	0.5749	0.4477	0.3585
40	0.0006	0.0017	0.0122	0.0070	0.0009	0.0313	0.4644	0.3156	0.2356

Pr > |T| H0: LSMEAN(i)=LSMEAN(j)

i/j	28	29	30	31	32	33	34	35	36
1	0.0894	0.9066	0.0795	0.1407	0.9080	0.3978	0.7817	0.3437	0.6157
2	0.2032	0.5718	0.1639	0.3043	0.5622	0.6149	0.9501	0.2158	0.7971
3	0.0635	0.7933	0.0563	0.0979	0.7837	0.2847	0.5859	0.5254	0.4863
4	0.3244	0.5027	0.2513	0.4533	0.4942	0.7392	0.8471	0.1974	0.8832
5	0.1090	0.9065	0.0930	0.1671	0.9081	0.4181	0.7936	0.3546	0.6253
6	0.0158	0.4017	0.0167	0.0256	0.3855	0.1262	0.3173	0.8094	0.3014
7	0.5830	0.2805	0.4461	0.7610	0.2705	0.9834	0.5926	0.1154	0.9081
8	0.1296	0.8345	0.1085	0.1967	0.8338	0.4603	0.8488	0.3236	0.6625
9	0.0015	0.0760	0.0020	0.0024	0.0685	0.0238	0.0783	0.6182	0.1053
10	0.3713	0.5070	0.2870	0.5042	0.5000	0.7724	0.8302	0.2033	0.9038
11	0.2018	0.9601	0.1601	0.2714	0.9564	0.4566	0.7508	0.5153	0.6080
12	0.4322	0.5994	0.3389	0.5559	0.5962	0.7802	0.8691	0.2606	0.8956
13	0.0303	0.4429	0.0276	0.0465	0.4305	0.1534	0.3449	0.8456	0.3147
14	0.5028	0.5622	0.3976	0.6314	0.5590	0.8431	0.8189	0.2487	0.9434
15	0.0001	0.0039	0.0001	0.0001	0.0033	0.0014	0.0062	0.1342	0.0154
16	0.0433	0.5107	0.0378	0.0650	0.4995	0.1854	0.3938	0.7994	0.3488
17	0.0777	0.0004	0.2023	0.0363	0.0003	0.0468	0.0124	0.0009	0.1112
18	0.0026	0.0001	0.0177	0.0007	0.0001	0.0024	0.0004	0.0001	0.0170
19	0.0040	0.0001	0.0186	0.0014	0.0001	0.0030	0.0006	0.0001	0.0157
20	0.0127	0.0001	0.0430	0.0055	0.0001	0.0084	0.0020	0.0001	0.0297
21	0.0904	0.0011	0.2071	0.0473	0.0009	0.0536	0.0160	0.0013	0.1122
22	0.0510	0.0006	0.1261	0.0261	0.0005	0.0310	0.0090	0.0008	0.0725
23	0.0063	0.0001	0.0249	0.0025	0.0001	0.0044	0.0010	0.0001	0.0192
24	0.2170	0.0047	0.4003	0.1290	0.0039	0.1253	0.0435	0.0042	0.2023
25	0.4143	0.3110	0.3159	0.5785	0.2980	0.8843	0.6810	0.1265	0.9989
26	0.6709	0.1633	0.5056	0.8816	0.1515	0.8631	0.4696	0.0731	0.8186
27	0.9641	0.1249	0.7484	0.8364	0.1143	0.6611	0.3466	0.0549	0.6662
28	.	0.1060	0.7893	0.7893	0.0919	0.6281	0.3201	0.0481	0.6420
29	0.1060	.	0.0836	0.1564	0.9957	0.3822	0.7325	0.4082	0.5853
30	0.7893	0.0836	.	0.6159	0.0856	0.4940	0.2508	0.0401	0.5286
31	0.7893	0.1564	0.6159	.	0.1468	0.7830	0.4247	0.0687	0.7593
32	0.0919	0.9957	0.0856	0.1468	.	0.3762	0.7311	0.3998	0.5839
33	0.6281	0.3822	0.4940	0.7830	0.3762	.	0.6508	0.1608	0.9263
34	0.3201	0.7325	0.2508	0.4247	0.7311	0.6508	.	0.3220	0.7903
35	0.0481	0.4082	0.0401	0.0687	0.3998	0.1608	0.3220	.	0.2978
36	0.6420	0.5853	0.5286	0.7593	0.5839	0.9263	0.7903	0.2978	.
37	0.2723	0.9311	0.2156	0.3558	0.9331	0.5463	0.8495	0.4614	0.6897
38	0.2749	0.8646	0.2167	0.3643	0.8656	0.5710	0.8950	0.3979	0.7173
39	0.3420	0.9404	0.2805	0.4144	0.9378	0.5520	0.7834	0.6472	0.6484
40	0.2169	0.9555	0.1722	0.2877	0.9520	0.4668	0.7532	0.5272	0.6119

TABLE 4. (Continued)

4 Year Results Following Retreatment for 1981 and  
1982 Sites

Growth versus Treatment and Parent Material

General Linear Models Procedure

Dependent Variable: ANBAI 4 Year Net BA Growth (ft<sup>2</sup>/a)

		Pr >  T  H0: LSMEAN(i)=LSMEAN(j)			
i/j	37	38	39	40	
1	0.9887	0.9218	0.8953	0.8922	
2	0.7783	0.8257	0.7319	0.6669	
3	0.7873	0.7151	0.9515	0.8974	
4	0.6997	0.7384	0.6742	0.5987	
5	0.9929	0.9285	0.8940	0.8913	
6	0.5022	0.4271	0.7240	0.5967	
7	0.4914	0.5117	0.5188	0.4087	
8	0.9574	0.9816	0.8586	0.8425	
9	0.1699	0.1258	0.3738	0.2163	
10	0.6897	0.7267	0.6655	0.5925	
11	0.9107	0.8561	0.9714	0.9948	
12	0.7355	0.7732	0.6966	0.6453	
13	0.5140	0.4461	0.7179	0.6025	
14	0.6952	0.7295	0.6648	0.6098	
15	0.0212	0.0127	0.0992	0.0293	
16	0.5640	0.4973	0.7573	0.6545	
17	0.0147	0.0117	0.0523	0.0100	
18	0.0007	0.0004	0.0084	0.0004	
19	0.0009	0.0006	0.0077	0.0006	
20	0.0026	0.0020	0.0143	0.0017	
21	0.0175	0.0147	0.0533	0.0122	
22	0.0101	0.0084	0.0345	0.0070	
23	0.0014	0.0010	0.0093	0.0009	
24	0.0432	0.0387	0.0975	0.0313	
25	0.5587	0.5849	0.5749	0.4644	
26	0.3909	0.4014	0.4477	0.3156	
27	0.2935	0.2979	0.3585	0.2356	
28	0.2723	0.2749	0.3420	0.2169	
29	0.9311	0.8646	0.9404	0.9555	
30	0.2156	0.2167	0.2805	0.1722	
31	0.3558	0.3643	0.4144	0.2877	
32	0.9331	0.8656	0.9378	0.9520	
33	0.5463	0.5710	0.5520	0.4668	
34	0.8495	0.8950	0.7834	0.7532	
35	0.4614	0.3979	0.6472	0.5272	
36	0.6897	0.7173	0.6484	0.6119	
37	.	0.9507	0.9013	0.9088	
38	0.9507	.	0.8633	0.8555	
39	0.9013	0.8633	.	0.9765	
40	0.9088	0.8555	0.9765	.	



## SECTION IV

### Experimental Design Statistical Models for Four Year Douglas-fir Retreatment Response Growth versus Treatment and Vegetation Series

- Table 1. Four Year Gross BA Growth by Treatment and Vegetation Series
- Table 2. Four Year Gross BA Growth Point Estimates by Treatment and Vegetation Series
- Table 3. Four Year Net BA Growth by Treatment and Vegetation Series
- Table 4. Four Year Net BA Growth Point Estimates by Treatment and Vegetation Series

**TABLE 1. 4 Year Results Following Retreatment for 1981 and 1982 Sites  
Growth versus Treatment and Vegetation Series**

General Linear Models Procedure

Dependent Variable: AGBAI 4 Year Gross BA Growth (ft <sup>2</sup> /a)					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	110	24799.536752	225.450334	74.44	0.0001
Error	425	1287.134355	3.028551		
Corrected Total	535	26086.671107			
	R-Square	C.V.	Root MSE	AGBAI Mean	
	0.950659	10.78933	1.7402734	16.129585	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Series	2	13168.344819	6584.172409	2174.03	0.0001
Installation(Series)	87	10612.707509	121.985144	40.28	0.0001
Treatments	7	903.648671	129.092667	42.63	0.0001
Series*Treatments	14	114.835754	8.202554	2.71	0.0008

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Series	2	12771.636367	6385.818184	2108.54	0.0001
Installation(Series)	87	10454.567030	120.167437	39.68	0.0001
Treatments	7	857.711627	122.530232	40.46	0.0001
Series*Treatments	14	114.835754	8.202554	2.71	0.0008

**TABLE 2. 4 Year Results Following Retreatment for 1981 and 1982 Sites  
Growth versus Treatment and Vegetation Series**

General Linear Models Procedure

Dependent Variable: AGBAI 4 Year Gross BA Growth (ft<sup>2</sup>/a)

Series	Treatments	AGBAI LSMEAN	Std Err LSMEAN	Pr >  T  HO:LSMEAN=0	LSMEAN Number
Cedar/Hemlock	Control	26.4302823	0.4493367	0.0001	1
Cedar/Hemlock	0, N+K	28.9491915	0.4493367	0.0001	2
Cedar/Hemlock	200, N	29.5012425	0.5674648	0.0001	3
Cedar/Hemlock	200, N+K	27.5754862	0.6019240	0.0001	4
Cedar/Hemlock	200N	24.3596883	0.5372475	0.0001	5
Cedar/Hemlock	400, N	27.1469267	0.5674648	0.0001	6
Cedar/Hemlock	400, N+K	27.4301231	0.6019240	0.0001	7
Cedar/Hemlock	400N	23.5265588	0.5372475	0.0001	8
Douglas-fir	Control	12.8881278	0.2490366	0.0001	9
Douglas-fir	0, N+K	15.3614525	0.2542985	0.0001	10
Douglas-fir	200, N	13.1392143	0.3352046	0.0001	11
Douglas-fir	200, N+K	13.7039627	0.3231073	0.0001	12
Douglas-fir	200N	11.8635554	0.2980046	0.0001	13
Douglas-fir	400, N	12.7335096	0.3560504	0.0001	14
Douglas-fir	400, N+K	12.4167919	0.3354495	0.0001	15
Douglas-fir	400N	11.7286636	0.2776909	0.0001	16
Grand Fir	Control	15.2975944	0.3349158	0.0001	17
Grand Fir	0, N+K	18.0621925	0.3444537	0.0001	18
Grand Fir	200, N	15.7342070	0.4539962	0.0001	19
Grand Fir	200, N+K	16.2123411	0.4886337	0.0001	20
Grand Fir	200N	14.1072171	0.3676372	0.0001	21
Grand Fir	400, N	15.2030286	0.4539510	0.0001	22
Grand Fir	400, N+K	15.6951118	0.4535278	0.0001	23
Grand Fir	400N	13.5293581	0.3998623	0.0001	24

Pr > |T| HO: LSMEAN(i)=LSMEAN(j)

i/j	1	2	3	4	5	6	7	8	9
1	.	0.0001	0.0001	0.1281	0.0033	0.3227	0.1839	0.0001	0.0001
2	0.0001	.	0.4461	0.0681	0.0001	0.0132	0.0438	0.0001	0.0001
3	0.0001	0.4461	.	0.0229	0.0001	0.0031	0.0145	0.0001	0.0001
4	0.1281	0.0681	0.0229	.	0.0001	0.6117	0.8621	0.0001	0.0001
5	0.0033	0.0001	0.0001	0.0001	.	0.0004	0.0002	0.2777	0.0001
6	0.3227	0.0132	0.0031	0.6117	0.0004	.	0.7371	0.0001	0.0001
7	0.1839	0.0438	0.0145	0.8621	0.0002	0.7371	.	0.0001	0.0001
8	0.0001	0.0001	0.0001	0.0001	0.2777	0.0001	0.0001	.	0.0001
9	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	.
10	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
11	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.5485
12	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0465
13	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0085
14	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.7224
15	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.2605
16	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0020
17	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
18	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
19	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
20	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
21	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0063
22	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
23	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
24	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.1742

TABLE 2. (Continued)

4 Year Results Following Retreatment for 1981 and 1982 Sites

Growth versus Treatment and Vegetation Series

General Linear Models Procedure

Dependent Variable: AGBAI 4 Year Gross BA Growth (ft<sup>2</sup>/a)

Pr > |T| H0: LSMEAN(i)=LSMEAN(j)

i/j	10	11	12	13	14	15	16	17	18
1	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
2	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
6	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
7	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
8	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
9	0.0001	0.5485	0.0465	0.0085	0.7224	0.2605	0.0020	0.0001	0.0001
10	.	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.8794	0.0001
11	0.0001	.	0.2341	0.0053	0.3999	0.1366	0.0012	0.0001	0.0001
12	0.0001	0.2341	.	0.0001	0.0484	0.0049	0.0001	0.0007	0.0001
13	0.0001	0.0053	0.0001	.	0.0605	0.2193	0.7411	0.0001	0.0001
14	0.0001	0.3999	0.0484	0.0605	.	0.5271	0.0285	0.0001	0.0001
15	0.0001	0.1366	0.0049	0.2193	0.5271	.	0.1191	0.0001	0.0001
16	0.0001	0.0012	0.0001	0.7411	0.0285	0.1191	.	0.0001	0.0001
17	0.8794	0.0001	0.0007	0.0001	0.0001	0.0001	0.0001	.	0.0001
18	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	.
19	0.4742	0.0001	0.0003	0.0001	0.0001	0.0001	0.0001	0.4394	0.0001
20	0.1232	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.1233	0.0020
21	0.0052	0.0524	0.4105	0.0001	0.0076	0.0007	0.0001	0.0171	0.0001
22	0.7609	0.0003	0.0074	0.0001	0.0001	0.0001	0.0001	0.8670	0.0001
23	0.5214	0.0001	0.0004	0.0001	0.0001	0.0001	0.0001	0.4811	0.0001
24	0.0001	0.4550	0.7343	0.0009	0.1379	0.0336	0.0002	0.0008	0.0001

Pr > |T| H0: LSMEAN(i)=LSMEAN(j)

i/j	19	20	21	22	23	24
1	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
2	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
6	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
7	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
8	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
9	0.0001	0.0001	0.0063	0.0001	0.0001	0.1742
10	0.4742	0.1232	0.0052	0.7609	0.5214	0.0001
11	0.0001	0.0001	0.0524	0.0003	0.0001	0.4550
12	0.0003	0.0001	0.4105	0.0074	0.0004	0.7343
13	0.0001	0.0001	0.0001	0.0001	0.0001	0.0009
14	0.0001	0.0001	0.0076	0.0001	0.0001	0.1379
15	0.0001	0.0001	0.0007	0.0001	0.0001	0.0336
16	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002
17	0.4394	0.1233	0.0171	0.8670	0.4811	0.0008
18	0.0001	0.0020	0.0001	0.0001	0.0001	0.0001
19	.	0.4843	0.0060	0.3935	0.9523	0.0003
20	0.4843	.	0.0007	0.1404	0.4253	0.0001
21	0.0060	0.0007	.	0.0611	0.0068	0.2906
22	0.3935	0.1404	0.0611	.	0.4516	0.0062
23	0.9523	0.4253	0.0068	0.4516	.	0.0004
24	0.0003	0.0001	0.2906	0.0062	0.0004	.

**TABLE 3. 4 Year Results Following Retreatment for 1981 and 1982 Sites  
Growth versus Treatment and Vegetation Series**

General Linear Models Procedure

Dependent Variable: ANBAI 4 Year Net BA Growth (ft <sup>2</sup> /a)					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	110	40208.706250	365.533693	5.57	0.0001
Error	425	27895.236981	65.635852		
Corrected Total	535	68103.943231			
	R-Square	C.V.	Root MSE	ANBAI Mean	
	0.590402	66.35790	8.1015956	12.208939	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Series	2	12502.245376	6251.122688	95.24	0.0001
Installation(Series)	87	25683.860340	295.216786	4.50	0.0001
Treatments	7	670.298209	95.756887	1.46	0.1802
Series*Treatments	14	1352.302326	96.593023	1.47	0.1180

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Series	2	12563.069453	6281.534726	95.70	0.0001
Installation(Series)	87	25685.870817	295.239894	4.50	0.0001
Treatments	7	818.437751	116.919679	1.78	0.0893
Series*Treatments	14	1352.302326	96.593023	1.47	0.1180

**TABLE 4. 4 Year Results Following Retreatment for 1981 and 1982 Sites  
Growth versus Treatment and Vegetation Series**

General Linear Models Procedure

Dependent Variable: ANBAI 4 Year Net BA Growth (ft<sup>2</sup>/a)

Series	Treatments	ANBAI LSMEAN	Std Err LSMEAN	Pr >  T  H0:LSMEAN=0	LSMEAN Number
Cedar/Hemlock	Control	21.4532395	2.0918230	0.0001	1
Cedar/Hemlock	0, N+K	23.0317751	2.0918230	0.0001	2
Cedar/Hemlock	200, N	28.1407718	2.6417518	0.0001	3
Cedar/Hemlock	200, N+K	24.4023707	2.8021718	0.0001	4
Cedar/Hemlock	200N	17.2582279	2.5010793	0.0001	5
Cedar/Hemlock	400, N	23.0510014	2.6417518	0.0001	6
Cedar/Hemlock	400, N+K	26.9811239	2.8021718	0.0001	7
Cedar/Hemlock	400N	20.6574627	2.5010793	0.0001	8
Douglas-fir	Control	9.7963556	1.1593545	0.0001	9
Douglas-fir	0, N+K	11.9096520	1.1838508	0.0001	10
Douglas-fir	200, N	8.5460569	1.5604975	0.0001	11
Douglas-fir	200, N+K	11.5854427	1.5041801	0.0001	12
Douglas-fir	200N	9.1250533	1.3873179	0.0001	13
Douglas-fir	400, N	10.0466678	1.6575419	0.0001	14
Douglas-fir	400, N+K	6.5404605	1.5616375	0.0001	15
Douglas-fir	400N	7.9999493	1.2927503	0.0001	16
Grand Fir	Control	8.8319776	1.5591528	0.0001	17
Grand Fir	0, N+K	11.4394421	1.6035552	0.0001	18
Grand Fir	200, N	10.4671179	2.1135150	0.0001	19
Grand Fir	200, N+K	13.2964254	2.2747647	0.0001	20
Grand Fir	200N	10.6394139	1.7114826	0.0001	21
Grand Fir	400, N	10.0115592	2.1133044	0.0001	22
Grand Fir	400, N+K	14.5923800	2.1113345	0.0001	23
Grand Fir	400N	10.3218545	1.8615021	0.0001	24

Pr > |T| H0: LSMEAN(i)=LSMEAN(j)

i/j	1	2	3	4	5	6	7	8	9
1	.	0.5939	0.0478	0.3995	0.1989	0.6356	0.1147	0.8073	0.0001
2	0.5939	.	0.1302	0.6953	0.0773	0.9955	0.2594	0.4669	0.0001
3	0.0478	0.1302	.	0.3414	0.0032	0.1682	0.7679	0.0391	0.0001
4	0.3995	0.6953	0.3414	.	0.0613	0.7310	0.5082	0.3176	0.0001
5	0.1989	0.0773	0.0032	0.0613	.	0.1099	0.0097	0.3413	0.0071
6	0.6356	0.9955	0.1682	0.7310	0.1099	.	0.3173	0.5154	0.0001
7	0.1147	0.2594	0.7679	0.5082	0.0097	0.3173	.	0.0975	0.0001
8	0.8073	0.4669	0.0391	0.3176	0.3413	0.5154	0.0975	.	0.0001
9	0.0001	0.0001	0.0001	0.0001	0.0071	0.0001	0.0001	0.0001	.
10	0.0001	0.0001	0.0001	0.0001	0.0539	0.0001	0.0001	0.0017	0.2037
11	0.0001	0.0001	0.0001	0.0001	0.0033	0.0001	0.0001	0.0001	0.5210
12	0.0001	0.0001	0.0001	0.0001	0.0526	0.0002	0.0001	0.0020	0.3474
13	0.0001	0.0001	0.0001	0.0001	0.0047	0.0001	0.0001	0.0001	0.7099
14	0.0001	0.0001	0.0001	0.0001	0.0167	0.0001	0.0001	0.0005	0.9017
15	0.0001	0.0001	0.0001	0.0001	0.0003	0.0001	0.0001	0.0001	0.0953
16	0.0001	0.0001	0.0001	0.0001	0.0011	0.0001	0.0001	0.0001	0.3004
17	0.0001	0.0001	0.0001	0.0001	0.0045	0.0001	0.0001	0.0001	0.6199
18	0.0002	0.0001	0.0001	0.0001	0.0508	0.0002	0.0001	0.0020	0.4068
19	0.0002	0.0001	0.0001	0.0001	0.0387	0.0002	0.0001	0.0020	0.7810
20	0.0086	0.0017	0.0001	0.0022	0.2419	0.0054	0.0002	0.0300	0.1711
21	0.0001	0.0001	0.0001	0.0001	0.0295	0.0001	0.0001	0.0010	0.6836
22	0.0001	0.0001	0.0001	0.0001	0.0274	0.0001	0.0001	0.0012	0.9289
23	0.0215	0.0047	0.0001	0.0054	0.4158	0.0128	0.0005	0.0646	0.0471
24	0.0001	0.0001	0.0001	0.0001	0.0266	0.0001	0.0001	0.0010	0.8107

TABLE 4. (Continued)

4 Year Results Following Retreatment for 1981 and  
1982 Sites

Growth versus Treatment and Vegetation Series

General Linear Models Procedure

Dependent Variable: ANBAI 4 Year Net BA Growth (ft<sup>2</sup>/a)

Pr > |T| H0: LSMEAN(i)=LSMEAN(j)

i/j	10	11	12	13	14	15	16	17	18
1	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002
2	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
4	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
5	0.0539	0.0033	0.0526	0.0047	0.0167	0.0003	0.0011	0.0045	0.0508
6	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002
7	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
8	0.0017	0.0001	0.0020	0.0001	0.0005	0.0001	0.0001	0.0001	0.0020
9	0.2037	0.5210	0.3474	0.7099	0.9017	0.0953	0.3004	0.6199	0.4068
10	.	0.0862	0.8654	0.1286	0.3603	0.0063	0.0266	0.1167	0.8136
11	0.0862	.	0.1690	0.7848	0.5035	0.3743	0.7865	0.8969	0.1967
12	0.8654	0.1690	.	0.2361	0.5005	0.0176	0.0724	0.2044	0.9471
13	0.1286	0.7848	0.2361	.	0.6686	0.2177	0.5540	0.8884	0.2757
14	0.3603	0.5035	0.5005	0.6686	.	0.1330	0.3369	0.5938	0.5462
15	0.0063	0.3743	0.0176	0.2177	0.1330	.	0.4771	0.2997	0.0292
16	0.0266	0.7865	0.0724	0.5540	0.3369	0.4771	.	0.6814	0.0957
17	0.1167	0.8969	0.2044	0.8884	0.5938	0.2997	0.6814	.	0.2443
18	0.8136	0.1967	0.9471	0.2757	0.5462	0.0292	0.0957	0.2443	.
19	0.5518	0.4650	0.6666	0.5958	0.8757	0.1359	0.3199	0.5339	0.7123
20	0.5889	0.0858	0.5307	0.1182	0.2489	0.0147	0.0436	0.1062	0.5023
21	0.5419	0.3666	0.6782	0.4922	0.8036	0.0776	0.2192	0.4354	0.7336
22	0.4337	0.5772	0.5443	0.7260	0.9896	0.1872	0.4172	0.6535	0.5882
23	0.2684	0.0218	0.2467	0.0310	0.0911	0.0023	0.0080	0.0287	0.2319
24	0.4721	0.4651	0.5978	0.6065	0.9121	0.1204	0.3062	0.5398	0.6468

Pr > |T| H0: LSMEAN(i)=LSMEAN(j)

i/j	19	20	21	22	23	24
1	0.0002	0.0086	0.0001	0.0001	0.0215	0.0001
2	0.0001	0.0017	0.0001	0.0001	0.0047	0.0001
3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
4	0.0001	0.0022	0.0001	0.0001	0.0054	0.0001
5	0.0387	0.2419	0.0295	0.0274	0.4158	0.0266
6	0.0002	0.0054	0.0001	0.0001	0.0128	0.0001
7	0.0001	0.0002	0.0001	0.0001	0.0005	0.0001
8	0.0020	0.0300	0.0010	0.0012	0.0646	0.0010
9	0.7810	0.1711	0.6836	0.9289	0.0471	0.8107
10	0.5518	0.5889	0.5419	0.4337	0.2684	0.4721
11	0.4650	0.0858	0.3666	0.5772	0.0218	0.4651
12	0.6666	0.5307	0.6782	0.5443	0.2467	0.5978
13	0.5958	0.1182	0.4922	0.7260	0.0310	0.6065
14	0.8757	0.2489	0.8036	0.9896	0.0911	0.9121
15	0.1359	0.0147	0.0776	0.1872	0.0023	0.1204
16	0.3199	0.0436	0.2192	0.4172	0.0080	0.3062
17	0.5339	0.1062	0.4354	0.6535	0.0287	0.5398
18	0.7123	0.5023	0.7336	0.5882	0.2319	0.6468
19	.	0.3741	0.9499	0.8750	0.1757	0.9587
20	0.3741	.	0.3557	0.3024	0.6678	0.3061
21	0.9499	0.3557	.	0.8174	0.1463	0.9007
22	0.8750	0.3024	0.8174	.	0.1327	0.9128
23	0.1757	0.6678	0.1463	0.1327	.	0.1316
24	0.9587	0.3061	0.9007	0.9128	0.1316	.

**SECTION V**

**Experimental Design Statistical Models  
for Four Year Douglas-fir Retreatment Response  
Growth versus Treatment and Initial Potassium Condition**

- Table 1. Four Year Gross BA Growth by Treatment and Initial Potassium Condition
- Table 2. Four Year Gross BA Growth Point Estimates by Treatment and Initial Potassium Condition
- Table 3. Four Year Net BA Growth by Treatment and Initial Potassium Condition
- Table 4. Four Year Net BA Growth Point Estimates by Treatment and Initial Potassium Condition



**TABLE 1. 4 Year Results Following Retreatment for 1981 and 1982 Sites  
Growth versus Treatment and Initial Potassium Condition**

General Linear Models Procedure

Dependent Variable: AGBAI 4 Year Gross BA Growth (ft <sup>2</sup> /a)					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	105	24121.057956	229.724361	71.09	0.0001
Error	400	1292.646180	3.231615		
Corrected Total	505	25413.704135			
	R-Square	C.V.	Root MSE	AGBAI Mean	
	0.949136	11.09947	1.7976694	16.196001	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
K Status	2	819.995700	409.997850	126.87	0.0001
Installation(K Status)	82	22415.616097	273.361172	84.59	0.0001
Treatments	7	819.619808	117.088544	36.23	0.0001
K Status*Treatments	14	65.826350	4.701882	1.45	0.1251

Source	DF	Type III SS	Mean Square	F Value	Pr > F
K Status	2	721.612500	360.806250	111.65	0.0001
Installation(K Status)	82	22073.944292	269.194443	83.30	0.0001
Treatments	7	298.741474	42.677353	13.21	0.0001
K Status*Treatments	14	65.826350	4.701882	1.45	0.1251

**TABLE 2. 4 Year Results Following Retreatment for 1981 and 1982 Sites  
Growth versus Treatment and Initial Potassium Condition**

General Linear Models Procedure

Dependent Variable: AGBAI 4 Year Gross BA Growth (ft<sup>2</sup>/a)

K Status	Treatments	AGBAI LSMEAN	Std Err LSMEAN	Pr >  T  H0:LSMEAN=0	LSMEAN Number
Good	Control	14.2343441	0.3832644	0.0001	1
Good	0, N+K	17.1147639	0.3832644	0.0001	2
Good	200, N	15.0764306	0.4786260	0.0001	3
Good	200, N+K	15.4872610	0.5419760	0.0001	4
Good	200N	12.9663143	0.4447529	0.0001	5
Good	400, N	14.0943585	0.4978314	0.0001	6
Good	400, N+K	15.1526787	0.5687041	0.0001	7
Good	400N	13.2444318	0.4172951	0.0001	8
Other	Control	16.8927496	0.2405839	0.0001	9
Other	0, N+K	19.5575144	0.2484412	0.0001	10
Other	200, N	17.8497644	0.3367493	0.0001	11
Other	200, N+K	17.7694122	0.3052559	0.0001	12
Other	200N	15.4443771	0.2885245	0.0001	13
Other	400, N	17.0352889	0.3490582	0.0001	14
Other	400, N+K	16.5446864	0.3200635	0.0001	15
Other	400N	15.0900121	0.2751251	0.0001	16
Poor	Control	13.9857559	0.6355721	0.0001	17
Poor	0, N+K	14.7211045	0.6355721	0.0001	18
Poor	200, N	13.7830976	0.8326899	0.0001	19
Poor	200, N+K	13.8784942	0.9434582	0.0001	20
Poor	200N	14.0283796	0.6869684	0.0001	21
Poor	400, N	13.8899540	0.8334981	0.0001	22
Poor	400, N+K	14.3466748	0.7509173	0.0001	23
Poor	400N	12.8772352	0.8314687	0.0001	24

Pr > |T| H0: LSMEAN(i)=LSMEAN(j)

i/j	1	2	3	4	5	6	7	8	9
1	.	0.0001	0.1704	0.0598	0.0314	0.8238	0.1813	0.0814	0.0001
2	0.0001	.	0.0010	0.0146	0.0001	0.0001	0.0044	0.0001	0.6240
3	0.1704	0.0010	.	0.5789	0.0015	0.1459	0.9204	0.0041	0.0008
4	0.0598	0.0146	0.5789	.	0.0004	0.0661	0.6620	0.0011	0.0183
5	0.0314	0.0001	0.0015	0.0004	.	0.0914	0.0025	0.6497	0.0001
6	0.8238	0.0001	0.1459	0.0661	0.0914	.	0.1750	0.1939	0.0001
7	0.1813	0.0044	0.9204	0.6620	0.0025	0.1750	.	0.0076	0.0051
8	0.0814	0.0001	0.0041	0.0011	0.6497	0.1939	0.0076	.	0.0001
9	0.0001	0.6240	0.0008	0.0183	0.0001	0.0001	0.0051	0.0001	.
10	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
11	0.0001	0.1505	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001	0.0214
12	0.0001	0.1823	0.0001	0.0003	0.0001	0.0001	0.0001	0.0001	0.0248
13	0.0120	0.0006	0.5107	0.9444	0.0001	0.0195	0.6476	0.0001	0.0001
14	0.0001	0.8782	0.0010	0.0168	0.0001	0.0001	0.0050	0.0001	0.7371
15	0.0001	0.2543	0.0111	0.0937	0.0001	0.0001	0.0335	0.0001	0.3858
16	0.0705	0.0001	0.9804	0.5138	0.0001	0.0808	0.9210	0.0003	0.0001
17	0.7378	0.0001	0.1712	0.0730	0.1895	0.8931	0.1720	0.3301	0.0001
18	0.5123	0.0014	0.6554	0.3596	0.0242	0.4380	0.6131	0.0528	0.0015
19	0.6228	0.0003	0.1789	0.0871	0.3874	0.7485	0.1752	0.5634	0.0004
20	0.7269	0.0016	0.2582	0.1400	0.3823	0.8397	0.2481	0.5392	0.0021
21	0.7936	0.0001	0.2114	0.0962	0.1951	0.9381	0.2082	0.3300	0.0001
22	0.7076	0.0005	0.2178	0.1089	0.3288	0.8334	0.2115	0.4890	0.0006
23	0.8941	0.0011	0.4130	0.2188	0.1145	0.7796	0.3927	0.2002	0.0013
24	0.1391	0.0001	0.0224	0.0089	0.9248	0.2099	0.0244	0.6933	0.0001

TABLE 2. (Continued)

4 Year Results Following Retreatment for 1981 and 1982 Sites

Growth versus Treatment and Initial Potassium Condition

General Linear Models Procedure

Dependent Variable: AGEBAI 4 Year Gross BA Growth (ft<sup>2</sup>/a)

Pr > |T| H0: LSMEAN(i)=LSMEAN(j)

i/j	10	11	12	13	14	15	16	17	18
1	0.0001	0.0001	0.0001	0.0120	0.0001	0.0001	0.0705	0.7378	0.5123
2	0.0001	0.1505	0.1823	0.0006	0.8782	0.2543	0.0001	0.0001	0.0014
3	0.0001	0.0001	0.0001	0.5107	0.0010	0.0111	0.9804	0.1712	0.6554
4	0.0001	0.0002	0.0003	0.9444	0.0168	0.0937	0.5138	0.0730	0.3596
5	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.1895	0.0242
6	0.0001	0.0001	0.0001	0.0195	0.0001	0.0001	0.0808	0.8931	0.4380
7	0.0001	0.0001	0.0001	0.6476	0.0050	0.0335	0.9210	0.1720	0.6131
8	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.3301	0.0528
9	0.0001	0.0214	0.0248	0.0001	0.7371	0.3858	0.0001	0.0001	0.0015
10	.	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
11	0.0001	.	0.8617	0.0001	0.0885	0.0061	0.0001	0.0001	0.0001
12	0.0001	0.8617	.	0.0001	0.1193	0.0048	0.0001	0.0001	0.0001
13	0.0001	0.0001	0.0001	.	0.0005	0.0112	0.3767	0.0373	0.3007
14	0.0001	0.0885	0.1193	0.0005	.	0.3099	0.0001	0.0001	0.0015
15	0.0001	0.0061	0.0048	0.0112	0.3099	.	0.0007	0.0004	0.0108
16	0.0001	0.0001	0.0001	0.3767	0.0001	0.0007	.	0.1116	0.5946
17	0.0001	0.0001	0.0001	0.0373	0.0001	0.0004	0.1116	.	0.4138
18	0.0001	0.0001	0.0001	0.3007	0.0015	0.0108	0.5946	0.4138	.
19	0.0001	0.0001	0.0001	0.0601	0.0004	0.0021	0.1369	0.8467	0.3711
20	0.0001	0.0001	0.0001	0.1133	0.0018	0.0078	0.2184	0.9249	0.4593
21	0.0001	0.0001	0.0001	0.0581	0.0001	0.0010	0.1522	0.9637	0.4596
22	0.0001	0.0001	0.0001	0.0788	0.0006	0.0031	0.1723	0.9272	0.4283
23	0.0001	0.0001	0.0001	0.1732	0.0013	0.0074	0.3532	0.7139	0.7037
24	0.0001	0.0001	0.0001	0.0037	0.0001	0.0001	0.0119	0.2901	0.0789

Pr > |T| H0: LSMEAN(i)=LSMEAN(j)

i/j	19	20	21	22	23	24
1	0.6228	0.7269	0.7936	0.7076	0.8941	0.1391
2	0.0003	0.0016	0.0001	0.0005	0.0011	0.0001
3	0.1789	0.2582	0.2114	0.2178	0.4130	0.0224
4	0.0871	0.1400	0.0962	0.1089	0.2188	0.0089
5	0.3874	0.3823	0.1951	0.3288	0.1145	0.9248
6	0.7485	0.8397	0.9381	0.8334	0.7796	0.2099
7	0.1752	0.2481	0.2082	0.2115	0.3927	0.0244
8	0.5634	0.5392	0.3300	0.4890	0.2002	0.6933
9	0.0004	0.0021	0.0001	0.0006	0.0013	0.0001
10	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
11	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
12	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
13	0.0601	0.1133	0.0581	0.0788	0.1732	0.0037
14	0.0004	0.0018	0.0001	0.0006	0.0013	0.0001
15	0.0021	0.0078	0.0010	0.0031	0.0074	0.0001
16	0.1369	0.2184	0.1522	0.1723	0.3532	0.0119
17	0.8467	0.9249	0.9637	0.9272	0.7139	0.2901
18	0.3711	0.4593	0.4596	0.4283	0.7037	0.0789
19	.	0.9414	0.8212	0.9265	0.6202	0.4433
20	0.9414	.	0.8987	0.9930	0.6924	0.4212
21	0.8212	0.8987	.	0.8971	0.7555	0.2893
22	0.9265	0.9930	0.8971	.	0.6880	0.3997
23	0.6202	0.6924	0.7555	0.6880	.	0.1952
24	0.4433	0.4212	0.2893	0.3997	0.1952	.

**TABLE 3. 4 Year Results Following Retreatment for 1981 and 1982 Sites  
Growth versus Treatment and Initial Potassium Condition**

General Linear Models Procedure

Dependent Variable: ANBAI 4 Year Net BA Growth (ft<sup>2</sup>/a)

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	105	38871.312994	370.202981	5.30	0.0001
Error	400	27956.191421	69.890479		
Corrected Total	505	66827.504415			
	R-Square	C.V.	Root MSE	ANBAI Mean	
	0.581666	69.01245	8.3600525	12.113832	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
K Status	2	257.254060	128.627030	1.84	0.1601
Installation(K Status)	82	37322.243846	455.149315	6.51	0.0001
Treatments	7	573.550407	81.935772	1.17	0.3175
K Status*Treatments	14	718.264681	51.304620	0.73	0.7400

Source	DF	Type III SS	Mean Square	F Value	Pr > F
K Status	2	225.908480	112.954240	1.62	0.2000
Installation(K Status)	82	37298.739511	454.862677	6.51	0.0001
Treatments	7	464.040435	66.291491	0.95	0.4688
K Status*Treatments	14	718.264681	51.304620	0.73	0.7400

**TABLE 4. 4 Year Results Following Retreatment for 1981 and 1982 Sites Growth versus Treatment and Initial Potassium Condition**

General Linear Models Procedure

Dependent Variable: ANBAI 4 Year Net BA Growth (ft<sup>2</sup>/a)

K Status	Treatments	ANBAI LSMEAN	Std Err LSMEAN	Pr >  T  HO:LSMEAN=0	LSMEAN Number
Good	Control	10.8331571	1.7823692	0.0001	1
Good	0, N+K	15.1792360	1.7823692	0.0001	2
Good	200, N	11.9487915	2.2258476	0.0001	3
Good	200, N+K	15.8546225	2.5204567	0.0001	4
Good	200N	11.4718247	2.0683212	0.0001	5
Good	400, N	8.7055760	2.3151622	0.0002	6
Good	400, N+K	12.5890321	2.6447555	0.0001	7
Good	400N	10.7716617	1.9406289	0.0001	8
Other	Control	12.1666726	1.1188340	0.0001	9
Other	0, N+K	13.2406528	1.1553744	0.0001	10
Other	200, N	13.2713871	1.5660508	0.0001	11
Other	200, N+K	13.9154576	1.4195908	0.0001	12
Other	200N	10.1842533	1.3417815	0.0001	13
Other	400, N	13.5035474	1.6232935	0.0001	14
Other	400, N+K	11.9292312	1.4884537	0.0001	15
Other	400N	11.6384441	1.2794679	0.0001	16
Poor	Control	6.3287708	2.9557249	0.0329	17
Poor	0, N+K	9.3341915	2.9557249	0.0017	18
Poor	200, N	7.6958737	3.8724200	0.0476	19
Poor	200, N+K	11.8981560	4.3875476	0.0070	20
Poor	200N	12.3709105	3.1947429	0.0001	21
Poor	400, N	11.8826563	3.8761788	0.0023	22
Poor	400, N+K	14.0490024	3.4921370	0.0001	23
Poor	400N	7.1395280	3.8667407	0.0656	24

Pr > |T| HO: LSMEAN(i)=LSMEAN(j)

i/j	1	2	3	4	5	6	7	8	9
1	.	0.0854	0.6958	0.1046	0.8152	0.4669	0.5822	0.9814	0.5267
2	0.0854	.	0.2579	0.8269	0.1753	0.0273	0.4172	0.0952	0.1531
3	0.6958	0.2579	.	0.2568	0.8763	0.3014	0.8569	0.6903	0.9304
4	0.1046	0.8269	0.2568	.	0.1854	0.0426	0.3591	0.1096	0.1819
5	0.8152	0.1753	0.8763	0.1854	.	0.3729	0.7388	0.8058	0.7678
6	0.4669	0.0273	0.3014	0.0426	0.3729	.	0.2843	0.4967	0.1791
7	0.5822	0.4172	0.8569	0.3591	0.7388	0.2843	.	0.5830	0.8831
8	0.9814	0.0952	0.6903	0.1096	0.8058	0.4967	0.5830	.	0.5338
9	0.5267	0.1531	0.9304	0.1819	0.7678	0.1791	0.8831	0.5338	.
10	0.2577	0.3620	0.6067	0.3464	0.4557	0.0804	0.8215	0.2750	0.5053
11	0.3047	0.4218	0.6273	0.3845	0.4883	0.1031	0.8244	0.3167	0.5667
12	0.1769	0.5795	0.4567	0.5030	0.3306	0.0558	0.6588	0.1918	0.3345
13	0.7713	0.0257	0.4976	0.0477	0.6018	0.5809	0.4179	0.8035	0.2561
14	0.2687	0.4874	0.5728	0.4334	0.4401	0.0905	0.7684	0.2809	0.4985
15	0.6372	0.1624	0.9942	0.1807	0.8576	0.2422	0.8280	0.6363	0.8987
16	0.7138	0.1074	0.9038	0.1366	0.9454	0.2682	0.7464	0.7094	0.7556
17	0.1926	0.0107	0.1296	0.0146	0.1548	0.5271	0.1153	0.2097	0.0655
18	0.6643	0.0911	0.4802	0.0940	0.5538	0.8671	0.4123	0.6846	0.3707
19	0.4622	0.0799	0.3416	0.0782	0.3903	0.8230	0.2974	0.4781	0.2680
20	0.8222	0.4888	0.9918	0.4347	0.9300	0.5202	0.8928	0.8145	0.9527
21	0.6745	0.4431	0.9137	0.3925	0.8134	0.3534	0.9581	0.6690	0.9519
22	0.8058	0.4402	0.9882	0.3908	0.9255	0.4820	0.8804	0.7979	0.9439
23	0.4126	0.7733	0.6123	0.6753	0.5258	0.2029	0.7391	0.4125	0.6080
24	0.3862	0.0597	0.2817	0.0597	0.3238	0.7284	0.2454	0.4017	0.2124

TABLE 4. (Continued)

4 Year Results Following Retreatment for 1981 and  
1982 Sites

Growth versus Treatment and Initial Potassium Condition

## General Linear Models Procedure

Dependent Variable: ANBAI 4 Year Net BA Growth (ft<sup>2</sup>/a)

Pr &gt; |T| H0: LSMEAN(i)=LSMEAN(j)

i/j	10	11	12	13	14	15	16	17	18
1	0.2577	0.3047	0.1769	0.7713	0.2687	0.6372	0.7138	0.1926	0.6643
2	0.3620	0.4218	0.5795	0.0257	0.4874	0.1624	0.1074	0.0107	0.0911
3	0.6067	0.6273	0.4567	0.4976	0.5728	0.9942	0.9038	0.1296	0.4802
4	0.3464	0.3845	0.5030	0.0477	0.4334	0.1807	0.1366	0.0146	0.0940
5	0.4557	0.4883	0.3306	0.6018	0.4401	0.8576	0.9454	0.1548	0.5538
6	0.0804	0.1031	0.0558	0.5809	0.0905	0.2422	0.2682	0.5271	0.8671
7	0.8215	0.8244	0.6588	0.4179	0.7684	0.8280	0.7464	0.1153	0.4123
8	0.2750	0.3167	0.1918	0.8035	0.2809	0.6363	0.7094	0.2097	0.6846
9	0.5053	0.5667	0.3345	0.2561	0.4985	0.8987	0.7556	0.0655	0.3707
10	.	0.9874	0.7112	0.0863	0.8947	0.4848	0.3523	0.0300	0.2191
11	0.9874	.	0.7640	0.1421	0.9167	0.5425	0.4148	0.0386	0.2399
12	0.7112	0.7640	.	0.0601	0.8507	0.3232	0.2345	0.0212	0.1631
13	0.0863	0.1421	0.0601	.	0.1148	0.3851	0.4353	0.2356	0.7936
14	0.8947	0.9167	0.8507	0.1148	.	0.4833	0.3727	0.0340	0.2170
15	0.4848	0.5425	0.3232	0.3851	0.4833	.	0.8833	0.0914	0.4334
16	0.3523	0.4148	0.2345	0.4353	0.3727	0.8833	.	0.1000	0.4748
17	0.0300	0.0386	0.0212	0.2356	0.0340	0.0914	0.1000	.	0.4726
18	0.2191	0.2399	0.1631	0.7936	0.2170	0.4334	0.4748	0.4726	.
19	0.1708	0.1827	0.1323	0.5441	0.1674	0.3081	0.3343	0.7791	0.7368
20	0.7675	0.7683	0.6620	0.7089	0.7317	0.9947	0.9547	0.2931	0.6282
21	0.7981	0.8003	0.6589	0.5284	0.7521	0.9003	0.8316	0.1658	0.4858
22	0.7372	0.7399	0.6227	0.6791	0.6999	0.9911	0.9523	0.2552	0.6014
23	0.8262	0.8391	0.9718	0.3022	0.8874	0.5769	0.5173	0.0923	0.3034
24	0.1314	0.1424	0.1008	0.4574	0.1299	0.2484	0.2700	0.8678	0.6523

Pr &gt; |T| H0: LSMEAN(i)=LSMEAN(j)

i/j	19	20	21	22	23	24
1	0.4622	0.8222	0.6745	0.8058	0.4126	0.3862
2	0.0799	0.4888	0.4431	0.4402	0.7733	0.0597
3	0.3416	0.9918	0.9137	0.9882	0.6123	0.2817
4	0.0782	0.4347	0.3925	0.3908	0.6753	0.0597
5	0.3903	0.9300	0.8134	0.9255	0.5258	0.3238
6	0.8230	0.5202	0.3534	0.4820	0.2029	0.7284
7	0.2974	0.8928	0.9581	0.8804	0.7391	0.2454
8	0.4781	0.8145	0.6690	0.7979	0.4125	0.4017
9	0.2680	0.9527	0.9519	0.9439	0.6080	0.2124
10	0.1708	0.7675	0.7981	0.7372	0.8262	0.1314
11	0.1827	0.7683	0.8003	0.7399	0.8391	0.1424
12	0.1323	0.6620	0.6589	0.6227	0.9718	0.1008
13	0.5441	0.7089	0.5284	0.6791	0.3022	0.4574
14	0.1674	0.7317	0.7521	0.6999	0.8874	0.1299
15	0.3081	0.9947	0.9003	0.9911	0.5769	0.2484
16	0.3343	0.9547	0.8316	0.9523	0.5173	0.2700
17	0.7791	0.2931	0.1658	0.2552	0.0923	0.8678
18	0.7368	0.6282	0.4858	0.6014	0.3034	0.6523
19	.	0.4865	0.3544	0.4370	0.2300	0.9193
20	0.4865	.	0.9312	0.9980	0.6959	0.4111
21	0.3544	0.9312	.	0.9219	0.7241	0.3004
22	0.4370	0.9980	0.9219	.	0.6821	0.3964
23	0.2300	0.6959	0.7241	0.6821	.	0.1903
24	0.9193	0.4111	0.3004	0.3964	0.1903	.