BIG CREEK
"Growing Redwoods for the Future"

February 22, 2013

CAL FIRE
Resource Management
135 Ridgway Avenue
Santa Rosa, CA 95402

RE: Valencia NTMP, #1-01NTMP-018 SCR,
Minor Amendment to Update the Sustainability Analysis

Dear Forest Practice Program Manager,

Since the approval of the NTMP in 2001, the NTMP area has been logged once, Unit 1 in 2001 and Units 2/3 in 2002. The purpose of this amendment is to provide an update to the Sustainability Analysis and also provide other information that has become relevant since the approval on the NTMP.
Topics covered in the amendment include the following:

New name for the Timber and Timberland Owner
Sustainability Analysis Update

An NTO for Unit 1 will be submitted in February, 2013. Per the NTMP, the County of Santa Cruz Department of Public Works and the California Department of Mines and Geology shall be notified so that county road concerns and slope stability conditions can be evaluated if necessary. A botanical survey will be completed prior to submission of the NTO and raptor surveys will be completed at the beginning of the breeding period and results will subsequently be submitted to CAL FIRE and the California Department of Fish and Wildlife. Soon after, a major amendment to add 13 acres to Unit 1 that have been re-zoned from Special Use to Timber Production since the approval of the NTMP will be submitted.

New name for the Timber and Timberland Owner
The NTMP was submitted by Timber and Timberland Owner, California Polytechnic State University Foundation, which has since changed its name to Cal Poly Corporation. Contact information for Cal Poly Corporation is:
Building 15
1 Grand Avenue
San Luis Obispo, CA 93407
(805) 756-1131

Sustainability Analysis Update
The Continuous Forest Inventory plots in Units 1 and 2 were completely re-measured in 2012. These plots were originally measured in 2001 and were last visited following the harvest in 2001 for Unit 1 and in 2002 for Unit 2, to record the trees harvested from each plot. Re-measurement

methodology followed the same protocol as the original cruise, but expanded the regeneration component to encompass trees down to 1 inch diameter, seedling regeneration below 1 inch, and understory vegetation composition. To update the sustainability analysis, the 2001 inventory data was compiled for inventory statistics. To simulate the 2002 harvest, 2001 data was grown one year before harvested trees were removed from the inventory. After harvested trees were removed, the residual trees were recompiled and grown an additional 10 years to reflect modeled conditions of 2012. The modeled 2012 data was recompiled before reporting the estimated grown 2012 data. The modeling analysis of 2002 post-harvest timber inventory which has been grown for 10 years reports that 18,352 MMBF is present in Units 1 and 2 as of 2012. However, the actual 2012 inventory data, which is the most accurate record of current timber volume for the tract, reported 22,366 MMBF in Units 1 and 2 at the completion of the cruise.

ASSUMPTIONS:

1. No ingrowth was added to the grown 2002 data.
2. Stand BR_2 did not exist in the 2001 data, but did exist in the 2012 data for plots 42, 54 and 60. These plots were moved to the BR_2 stand in the 2001 data
3. No site trees for stand BR_1 were taken during the inventory process. To compensate for this, site trees from stand HW_1 were duplicated. The HW_1 stand was picked because both stands exhibited a similarly under-performing conifer component.
4. Four volume equations were initially used to model volume, including: Standard Taper, Bulletin 1907 (FORSEE), Local (developed in 2000 at Valencia) and Spaulding (RW only) /Scribner (DF only).
5. The Spaulding/Scribner Volume Model was selected as the best volume model to use due to its origins and mid-level projections. The volume model was set up for an 8" top DIB.
6. Only trees 12" DBH and greater were compiled for volume.

REPORTS:

Four compilations have been processed with these datasets:

1. 2001 Pre-Harvest Inventory
2. 2002 Post-Harvest Inventory (2001 data grown 1 year and Status 2 harvest trees removed)
3. 2002 post harvest data grown to 2012 (10 years)
4. Actual 2012 Inventory Data

Each compilation includes four reports:

1. Entire Tract Conifer Summary
2. Conifer Summary by Management Unit
3. Per Acre Stand Statistics
4. Per-Acre Stand & Stock Tables are available upon request

The reports listed above are included in this amendment as an attachment. According to the levels set by the NTMP, the property has reached a regulated state of at least 30,000 board feet per acre in Unit 1 and 21,000 board feet per acre in Unit 2, in stand types containing conifer. Per the NTMP sustainability analysis, harvest shall not exceed the growth of the forest since the previous entry. Growth is reported at approximately 6.98 MMBF; therefore the 2013 harvest in Unit 1 and 2014 harvest in Unit 2 shall not exceed 6.98 MMBF volume harvested. Even though this is the legal standard, the landowner is committed to sound forestry and may reduce their cut to a level of 4-5 MMBF for this harvest entry to achieve their various goals.

Thank you for your review of this NTMP update. Please don't hesitate to contact me if you have any questions at (831) 457-6383 or nadiah@big-creek.com.

Sincerely,

Nadia Hamey
RPF #2788

FORSEE Inventory Reports Attached (16 pages)

Cal Poly - Valencia Creek Tract

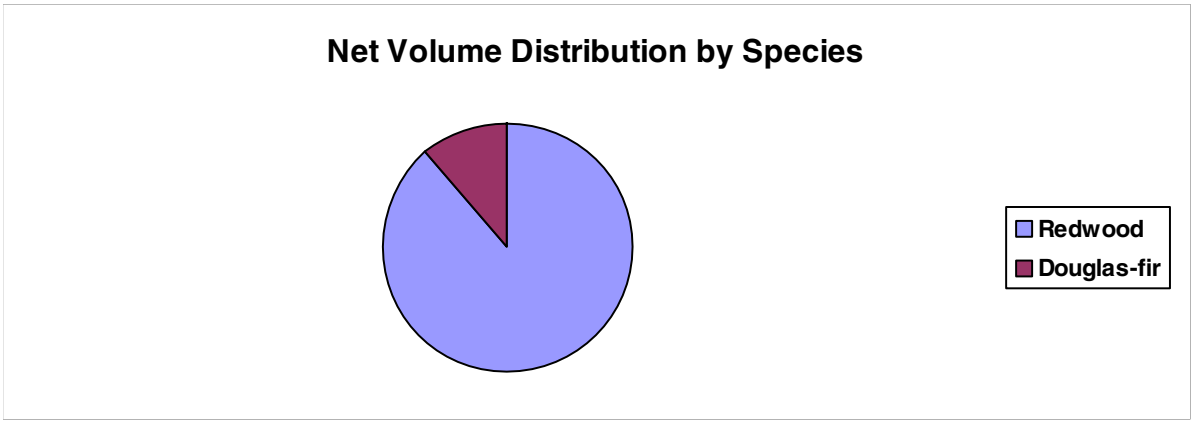
Spaulding (RW) & Scribner (DF) Vol. Eqns.

2002 Post-Harvest Timber Inventory

Entire Tract Conifer Summary - All Timber Stands

All Trees 563 *Acres* *Total Plots:* 82

Species Group	Basal Area	Trees	16 foot logs to a 6 inch top i.b. Thousands of Board Feet Scribner Log Scale Net	Gross	Cull	Unmerch
Redwood	149.21	61,261	13,662	13,662	0	0
Douglas-fir	13.10	6,806	1,722	1,722	0	0
All Conifers	162.31	*68,067*	*15,384*	*15,384*	*0*	*0*
Standard Error	453.40	4,485.3	1,324.0	1,324.0		
% Standard Error	9.34%	6.59%	8.6%	8.6%		



Basis: 2001 Timber Inventory

Cal Poly - Valencia Creek Tract

Spaulding (RW) & Scribner (DF) Vol. Eqns.

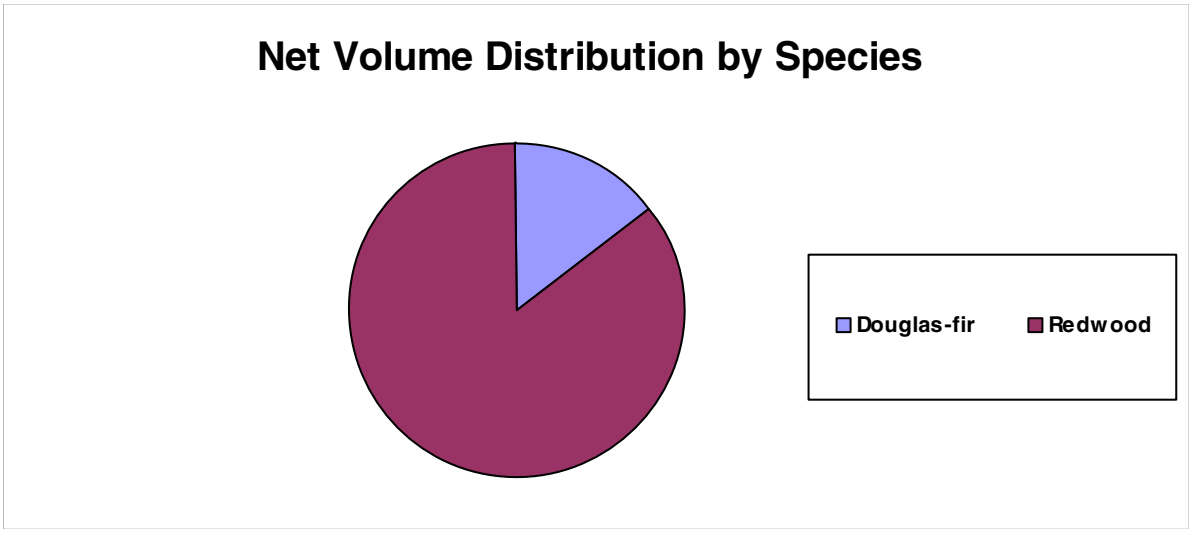
2002 Post-Harvest Timber Inventory

Management Unit Conifer Summary, All Timber Stands

Trees 8 inches DBH and larger 239 *Acres* 3 *Strata* 41 *Total Plots*

Unit: **1**

Species Group	*Basal Area*	16 foot logs to a 6 inch top i.b. Thousands of Board Feet Scribner Log Scale				
		Trees	*Net*	*Gross*	*Cull*	*Unmerch*
Redwood	157.97	34,387	6,167	6,167	0	0
Douglas-fir	17.86	3,285	1,086	1,086	0	0
All Conifers	***175.83***	***37,672***	***7,253***	***7,253***	***0***	***0***
Standard Error	1067.7	3,004.3	767.0	767.0		
% Standard Error	607.18%	7.97%	10.6%	10.6%		



Basis: 2001 Timber Inventory

Cal Poly - Valencia Creek Tract

Spaulding (RW) & Scribner (DF) Vol. Eqns.

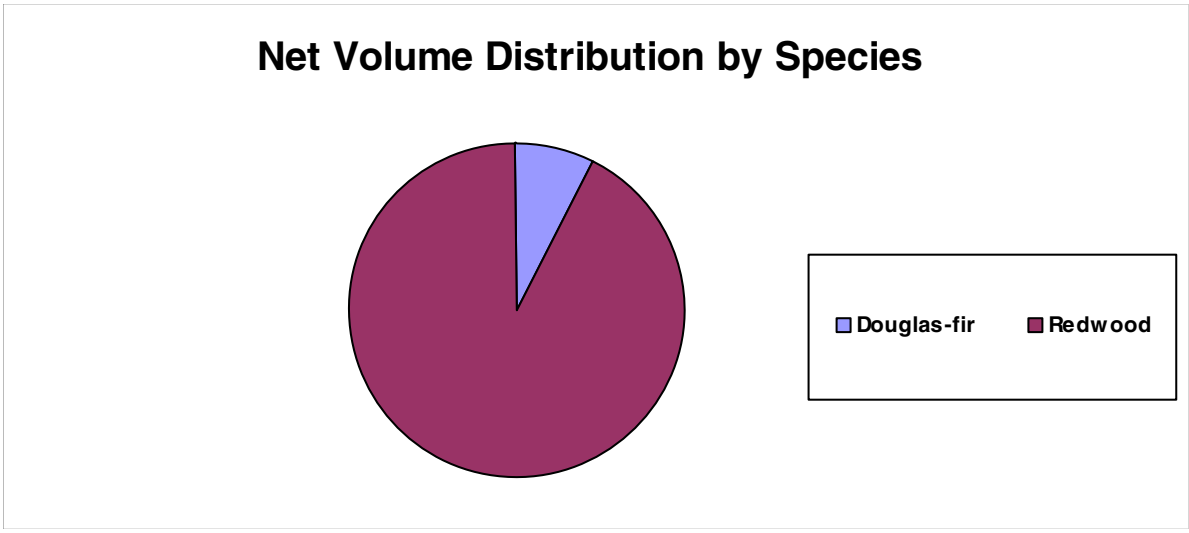
2002 Post-Harvest Timber Inventory

Management Unit Conifer Summary, All Timber Stands

Trees 8 inches DBH and larger 324 *Acres* 3 *Strata* 41 *Total Plots*

Unit: **2**

Species Group	*Basal Area*	16 foot logs to a 6 inch top i.b. Thousands of Board Feet Scribner Log Scale				
		Trees	*Net*	*Gross*	*Cull*	*Unmerch*
Redwood	142.74	26,874	7,495	7,495	0	0
Douglas-fir	9.59	3,521	635	635	0	0
All Conifers	***152.33***	***30,395***	***8,131***	***8,131***	***0***	***0***
Standard Error	17.53	3,330.5	1,079.2	1,079.2		
% Standard Error	11.51%	10.96%	13.3%	13.3%		



Basis: 2001 Timber Inventory

Cal Poly - Valencia Creek Tract
Spaulding (RW) & Scribner (DF) Vol. Eqns.
2002 Post-Harvest Timber Inventory

Unit: **1**

Per Acre Stand Statistics

Stand RW_1 Acres: **209.9** Number of Plots: **39**

Volume Units: Conifers in Board Feet to 6" Top; Hardwoods in Cubic Feet to 4" Top

Species	Trees per Acre	SE TPA	%SE TPA	BA	SE BA	%SE BA	Gross Vol	SE Gross Vol	%SE Gross Vol	Net Vol	SE Net Vol	%SE Net Vol
Conifers	176.41	14.31	8.11%	195.76	17.89	9.14%	33,772	3,654	10.82%	33,772	3,654	10.82%
Redwood	161.15	14.89	9.24%	177.29	19.16	10.81%	29,139	3,760	12.90%	29,139	3,760	12.90%
Douglas-fir	15.26	3.66	23.98%	18.47	6.07	32.86%	4,633	1,511	32.62%	4,633	1,511	32.62%
Hardwoods	178.33	24.05	13.49%	78.02	12.71	16.29%	2,263	436	19.26%	2,263	436	19.26%
Tanoak	147.18	25.19	17.12%	55.25	11.32	20.49%	1,325	318	23.99%	1,325	318	23.99%
Madrone	18.46	5.62	30.44%	17.44	5.91	33.89%	821	286	34.79%	821	286	34.79%
Live Oak	11.54	3.62	31.37%	4.99	2.30	46.09%	109	59	54.35%	109	59	54.35%
Big Leaf Maple	1.15	0.65	56.52%	0.34	0.26	76.47%	9	9	100.00%	9	9	100.00%
Totals	**354.74**	**22.84**	**6.44%**	**273.78**	**15.66**	**5.72%**						

Cal Poly - Valencia Creek Tract
Spaulding (RW) & Scribner (DF) Vol. Eqns.
2002 Post-Harvest Timber Inventory

Unit: **1**

Per Acre Stand Statistics

Stand HW_1 Acres: **25.7** Number of Plots: **1**

Volume Units: Conifers in Board Feet to 6" Top; Hardwoods in Cubic Feet to 4" Top

Species	Trees per Acre	SE TPA	%SE TPA	BA	SE BA	%SE BA	Gross Vol	SE Gross Vol	%SE Gross Vol	Net Vol	SE Net Vol	%SE Net Vol
Hardwoods	15.00	225.00	00.00%	3.30	10.89	330.00%	0	0	#Num!	0	0	#Num!
Madrone	15.00	225.00	00.00%	3.30	10.89	330.00%	0	0	#Num!	0	0	#Num!

Cal Poly - Valencia Creek Tract
Spaulding (RW) & Scribner (DF) Vol. Eqns.
2002 Post-Harvest Timber Inventory

Unit: **2**

Per Acre Stand Statistics

Stand RW_2 Acres: **258.6** Number of Plots: **32**

Volume Units: Conifers in Board Feet to 6" Top; Hardwoods in Cubic Feet to 4" Top

Species	Trees per Acre	SE TPA	%SE TPA	BA	SE BA	%SE BA	Gross Vol	SE Gross Vol	%SE Gross Vol	Net Vol	SE Net Vol	%SE Net Vol
Conifers	111.41	12.78	11.47%	173.80	21.16	12.17%	28,476	4,005	14.06%	28,476	4,005	14.06%
Redwood	99.84	13.04	13.06%	162.17	21.69	13.37%	26,052	4,083	15.67%	26,052	4,083	15.67%
Douglas-fir	11.56	3.90	33.74%	11.63	4.31	37.06%	2,424	1,093	45.09%	2,424	1,093	45.09%
Hardwoods	115.31	14.46	12.54%	78.22	10.26	13.12%	2,107	382	18.11%	2,107	382	18.11%
Tanoak	61.72	12.80	20.74%	36.36	8.30	22.83%	749	193	25.71%	749	193	25.71%
Madrone	11.88	3.89	32.74%	13.04	3.87	29.68%	488	143	29.24%	488	143	29.24%
Live Oak	41.25	9.06	21.96%	28.74	8.37	29.12%	870	352	40.42%	870	352	40.42%
Big Leaf Maple	0.16	0.16	00.00%	0.04	0.04	100.00%	0	0	#Num!	0	0	#Num!
Totals	**226.72**	**17.75**	**7.83%**	**252.02**	**18.44**	**7.32%**						

Cal Poly - Valencia Creek Tract
Spaulding (RW) & Scribner (DF) Vol. Eqns.
2002 Post-Harvest Timber Inventory

Unit: **2**

Per Acre Stand Statistics

Stand BR_2 | Acres: **23.0** | Number of Plots: **3**

Volume Units: Conifers in Board Feet to 6" Top; Hardwoods in Cubic Feet to 4" Top

Species	Trees per Acre	SE TPA	%SE TPA	BA	SE BA	%SE BA	Gross Vol	SE Gross Vol	%SE Gross Vol	Net Vol	SE Net Vol	%SE Net Vol
Conifers	20.00	15.28	76.40%	110.80	61.02	55.07%	19,197	11,818	61.56%	19,197	11,818	61.56%
Redwood	18.33	13.64	74.41%	107.90	58.67	54.37%	18,829	11,484	60.99%	18,829	11,484	60.99%
Douglas-fir	1.67	1.67	00.00%	2.90	2.90	100.00%	368	368	100.00%	368	368	100.00%
Hardwoods	30.00	27.54	91.80%	22.73	22.68	99.78%	275	275	100.00%	275	275	100.00%
Live Oak	30.00	27.54	91.80%	22.73	22.68	99.78%	275	275	100.00%	275	275	100.00%
Totals	**50.00**	**21.79**	**43.58%**	**133.53**	**41.55**	**31.12%**						

Basis: 2001 Timber Inventory

Cal Poly - Valencia Creek Tract
Spaulding (RW) & Scribner (DF) Vol. Eqns.
2002 Post-Harvest Timber Inventory

Unit: **2**

Per Acre Stand Statistics

Stand HW_2 | Acres: **42.2** | Number of Plots: **6**

Volume Units: Conifers in Board Feet to 6" Top; Hardwoods in Cubic Feet to 4" Top

Species	Trees per Acre	SE TPA	%SE TPA	BA	SE BA	%SE BA	Gross Vol	SE Gross Vol	%SE Gross Vol	Net Vol	SE Net Vol	%SE Net Vol
Conifers	26.67	4.77	17.89%	43.42	13.47	31.02%	7,705	3,194	41.46%	7,705	3,194	41.46%
Redwood	15.00	5.00	33.33%	42.67	13.78	32.29%	7,705	3,194	41.46%	7,705	3,194	41.46%
Douglas-fir	11.67	4.94	42.33%	0.75	0.39	52.00%	0	0	#Num!	0	0	#Num!
Hardwoods	228.33	52.66	23.06%	178.42	15.05	8.44%	4,191	306	7.29%	4,191	306	7.29%
Tanoak	25.00	14.78	59.12%	33.28	24.35	73.17%	1,012	786	77.73%	1,012	786	77.73%
Madrone	30.00	10.33	34.43%	21.98	6.37	28.98%	636	239	37.51%	636	239	37.51%
Live Oak	173.33	59.77	34.48%	123.15	29.10	23.63%	2,544	539	21.17%	2,544	539	21.17%
Totals	**255.00**	**54.47**	**21.36%**	**221.83**	**17.42**	**7.85%**						

Cal Poly - Valencia Creek Tract

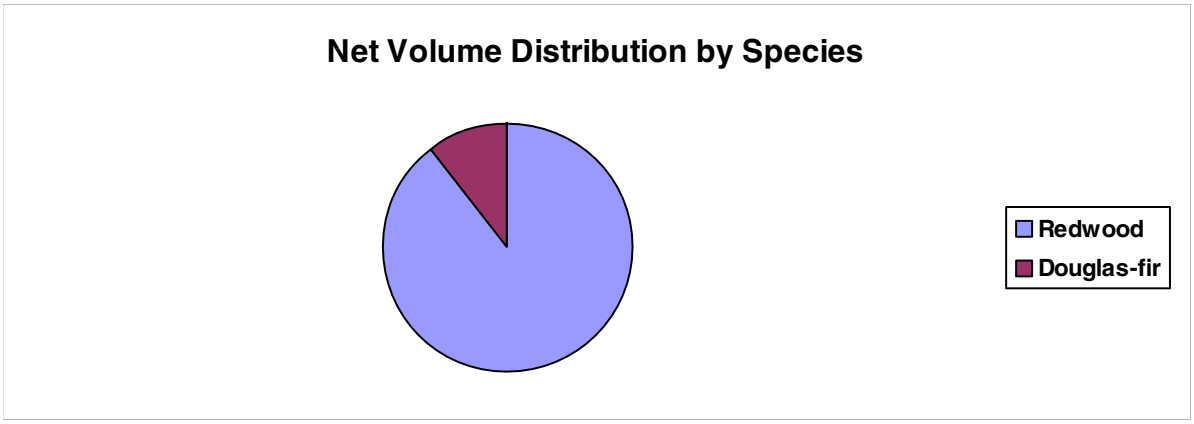
Spaulding (RW) & Scribner (DF) Vol. Eqns.

2012 Timber Inventory

Entire Tract Conifer Summary - All Timber Stands

All Trees 563 Acres Total Plots: 82

Species Group	Basal Area	Trees	16 foot logs to a 6 inch top i.b. Thousands of Board Feet Scribner Log Scale Net	Gross	Cull	Unmerch
Redwood	192.73	82,018	19,990	19,990	0	0
Douglas-fir	16.42	6,725	2,377	2,377	0	0
All Conifers	209.15	*88,742*	*22,366*	*22,366*	*0*	*0*
Standard Error	324.59	6,315.5	1,816.9	1,816.9		
% Standard Error	8.63%	7.12%	8.1%	8.1%		



Basis: 2012 Timber Inventory

Cal Poly - Valencia Creek Tract

Spaulding (RW) & Scribner (DF) Vol. Eqns.

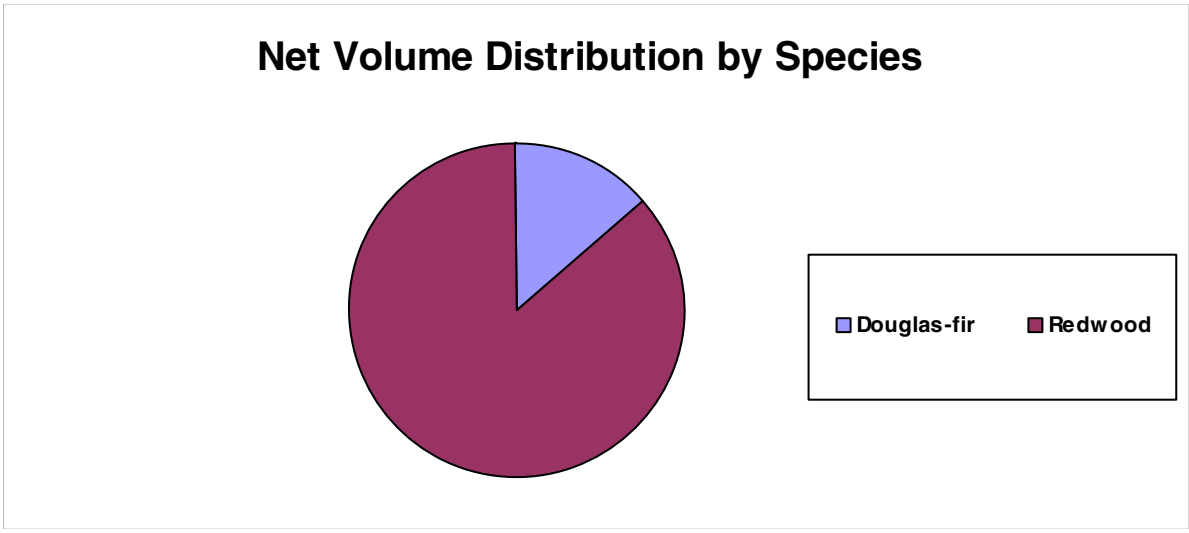
2012 Timber Inventory

Management Unit Conifer Summary, All Timber Stands

Trees 8 inches DBH and larger 239 *Acres* 3 *Strata* 39 *Total Plots*

Unit: **1**

Species Group	*Basal Area*	16 foot logs to a 6 inch top i.b. Thousands of Board Feet Scribner Log Scale				
		Trees	*Net*	*Gross*	*Cull*	*Unmerch*
Redwood	208.09	39,964	9,420	9,420	0	0
Douglas-fir	22.65	2,522	1,530	1,530	0	0
All Conifers	***230.74***	***42,486***	***10,950***	***10,950***	***0***	***0***
Standard Error	1470.9	3,496.7	1,110.3	1,110.3		
% Standard Error	637.46%	8.23%	10.1%	10.1%		



Basis: 2012 Timber Inventory

Cal Poly - Valencia Creek Tract

Spaulding (RW) & Scribner (DF) Vol. Eqns.

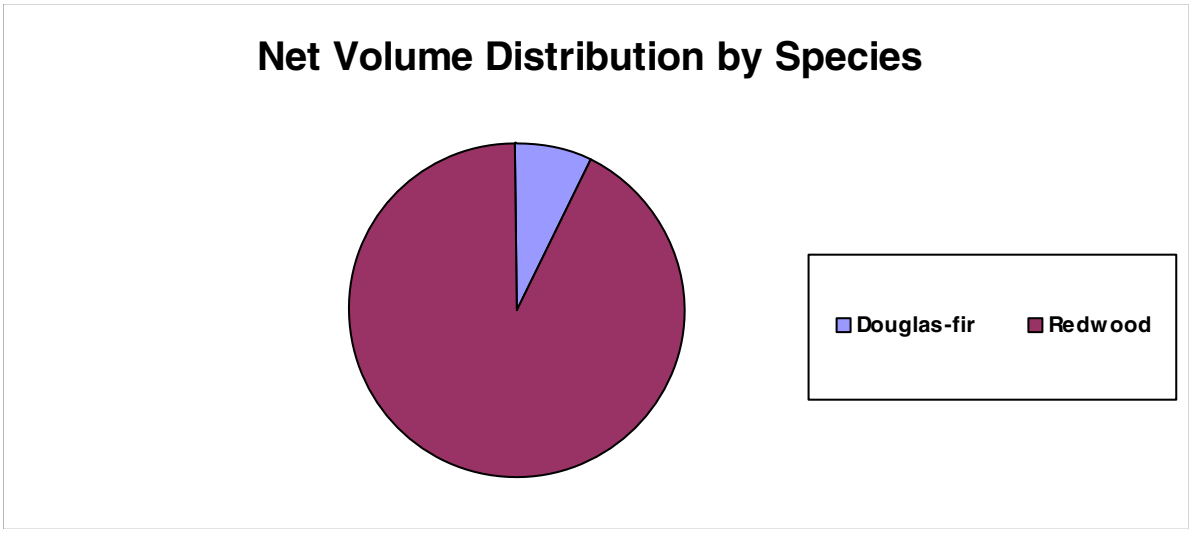
2012 Timber Inventory

Management Unit Conifer Summary, All Timber Stands

Trees 8 inches DBH and larger 324 *Acres* 3 *Strata* 43 *Total Plots*

Unit: **2**

Species Group	*Basal Area*	16 foot logs to a 6 inch top i.b. Thousands of Board Feet Scribner Log Scale				
		Trees	*Net*	*Gross*	*Cull*	*Unmerch*
Redwood	181.40	42,054	10,570	10,570	0	0
Douglas-fir	11.83	4,203	847	847	0	0
All Conifers	***193.23***	***46,256***	***11,417***	***11,417***	***0***	***0***
Standard Error	21.42	5,259.1	1,438.1	1,438.1		
% Standard Error	11.09%	11.37%	12.6%	12.6%		



Basis: 2012 Timber Inventory

Cal Poly - Valencia Creek Tract
Spaulding (RW) & Scribner (DF) Vol. Eqns.
2012 Timber Inventory

Unit: **1**

Per Acre Stand Statistics

Stand RW_1 Acres: **209.9** Number of Plots: **37**

Volume Units: Conifers in Board Feet to 6" Top; Hardwoods in Cubic Feet to 4" Top

Species	Trees per Acre	SE TPA	%SE TPA	BA	SE BA	%SE BA	Gross Vol	SE Gross Vol	%SE Gross Vol	Net Vol	SE Net Vol	%SE Net Vol
Conifers	198.51	16.66	8.39%	257.45	23.59	9.16%	51,108	5,290	10.35%	51,108	5,290	10.35%
Redwood	186.89	17.38	9.30%	234.10	25.45	10.87%	44,605	5,546	12.43%	44,605	5,546	12.43%
Douglas-fir	11.62	3.46	29.78%	23.35	7.38	31.61%	6,503	2,037	31.33%	6,503	2,037	31.33%
Hardwoods	170.00	21.16	12.45%	91.74	16.48	17.96%	3,212	677	21.07%	3,212	677	21.07%
Tanoak	146.89	21.69	14.77%	72.81	14.60	20.05%	2,240	527	23.52%	2,240	527	23.52%
Madrone	11.22	3.87	34.49%	12.94	5.01	38.72%	803	329	40.94%	803	329	40.94%
Totals	**368.51**	**18.84**	**5.11%**	**349.19**	**20.39**	**5.84%**						

Cal Poly - Valencia Creek Tract

Spaulding (RW) & Scribner (DF) Vol. Eqns.

2012 Timber Inventory

Unit: **1**

Per Acre Stand Statistics

Stand HW_1 Acres: **25.7** Number of Plots: **1**

Volume Units: Conifers in Board Feet to 6" Top; Hardwoods in Cubic Feet to 4" Top

Species	Trees per Acre	SE TPA	%SE TPA	BA	SE BA	%SE BA	Gross Vol	SE Gross Vol	%SE Gross Vol	Net Vol	SE Net Vol	%SE Net Vol
Hardwoods	15.00	225.00	00.00%	7.40	54.76	740.00%	117	13,715	711.00%	117	13,715	711.00%
Madrone	15.00	225.00	00.00%	7.40	54.76	740.00%	117	13,715	711.00%	117	13,715	711.00%

Cal Poly - Valencia Creek Tract

Spaulding (RW) & Scribner (DF) Vol. Eqns.

2012 Timber Inventory

Unit: **2**

Per Acre Stand Statistics

Stand RW_2 Acres: **258.6** Number of Plots: **33**

Volume Units: Conifers in Board Feet to 6" Top; Hardwoods in Cubic Feet to 4" Top

Species	Trees per Acre	SE TPA	%SE TPA	BA	SE BA	%SE BA	Gross Vol	SE Gross Vol	%SE Gross Vol	Net Vol	SE Net Vol	%SE Net Vol
Conifers	169.24	20.24	11.96%	217.49	25.68	11.81%	39,112	5,246	13.41%	39,112	5,246	13.41%
Redwood	156.67	20.21	12.90%	203.28	26.31	12.94%	35,900	5,349	14.90%	35,900	5,349	14.90%
Douglas-fir	12.58	3.80	30.21%	14.22	5.12	36.01%	3,212	1,392	43.33%	3,212	1,392	43.33%
Hardwoods	142.42	19.84	13.93%	83.62	12.14	14.52%	2,605	575	22.08%	2,605	575	22.08%
Tanoak	83.79	17.87	21.33%	36.84	8.48	23.02%	861	215	24.95%	861	215	24.95%
Madrone	15.00	5.96	39.73%	19.54	8.72	44.63%	884	441	49.86%	884	441	49.86%
Totals	**311.67**	**27.66**	**8.87%**	**301.12**	**21.53**	**7.15%**						

Cal Poly - Valencia Creek Tract

Spaulding (RW) & Scribner (DF) Vol. Eqns.

2012 Timber Inventory

Unit: **2**

Per Acre Stand Statistics

Stand BR_2 Acres: **23.0** Number of Plots: **3**

Volume Units: Conifers in Board Feet to 6" Top; Hardwoods in Cubic Feet to 4" Top

Species	Trees per Acre	SE TPA	%SE TPA	BA	SE BA	%SE BA	Gross Vol	SE Gross Vol	%SE Gross Vol	Net Vol	SE Net Vol	%SE Net Vol
Conifers	28.33	15.90	56.12%	144.20	78.51	54.45%	31,735	18,511	58.33%	31,735	18,511	58.33%
Redwood	25.00	14.43	57.72%	140.17	75.31	53.73%	31,029	17,897	57.68%	31,029	17,897	57.68%
Douglas-fir	3.33	1.67	50.15%	4.03	4.03	100.00%	706	706	100.00%	706	706	100.00%
Hardwoods	33.33	28.33	85.00%	26.70	26.15	97.94%	446	446	100.00%	446	446	100.00%
Tanoak	1.67	1.67	00.00%	0.23	0.23	100.00%	0	0	#Num!	0	0	#Num!
Totals	**61.67**	**15.90**	**25.78%**	**170.90**	**55.42**	**32.43%**						

Basis: 2012 Timber Inventory

Cal Poly - Valencia Creek Tract

Spaulding (RW) & Scribner (DF) Vol. Eqns.

2012 Timber Inventory

Unit: **2**

Per Acre Stand Statistics

Stand HW_2 Acres: **42.2** Number of Plots: **7**

Volume Units: Conifers in Board Feet to 6" Top; Hardwoods in Cubic Feet to 4" Top

Species	Trees per Acre	SE TPA	%SE TPA	BA	SE BA	%SE BA	Gross Vol	SE Gross Vol	%SE Gross Vol	Net Vol	SE Net Vol	%SE Net Vol
Conifers	43.57	8.07	18.52%	71.27	20.34	28.54%	13,562	5,094	37.56%	13,562	5,094	37.56%
Redwood	22.86	7.14	31.23%	69.83	20.90	29.93%	13,562	5,094	37.56%	13,562	5,094	37.56%
Douglas-fir	20.71	8.41	40.61%	1.44	0.77	53.47%	0	0	#Num!	0	0	#Num!
Hardwoods	232.86	42.73	18.35%	186.13	18.07	9.71%	5,390	711	13.18%	5,390	711	13.18%
Tanoak	35.71	25.88	72.47%	7.63	6.60	86.50%	230	210	91.51%	230	210	91.51%
Madrone	36.43	12.52	34.37%	39.61	13.36	33.73%	1,457	559	38.39%	1,457	559	38.39%
Totals	**276.43**	**46.12**	**16.68%**	**257.40**	**21.11**	**8.20%**						