

**Sartain-Williams Timberlands
Tract 5571**

30°53'15.6"N
93°49'7.2"W

This 224 acre tract is located northwest of Newton along Big Cow Creek. Approximately ½ of the acreage is young pine plantation. The remaining land is comprised of SMZs (Streamside Management Zones) along Big Cow Creek and minor branches. These acres comprise the merchantable timber stands and they contain a total of 7,416 tons of mixed natural and planted pine and hardwood with an estimated value of \$96,124. The pine component accounts for 56% of the total volume and 77% of the value. Most of the timber is accessible for harvest with minor difficulty due to slope, terrain and wetness. However, few of the acres are convertible and most should not be harvested aggressively (exceptions include the perimeter of some of the areas). Conservative selective harvests are recommended to maintain the integrity of the SMZs. It is likely that roughly ½ of the timber value is available for extraction during any single harvest interval (7-10 years).

GPS coordinates reference the point of access at the southern tip of the tract.

The timber inventory was compiled from data collected from 30 sample points distributed across the timber acreage.

5571— Merchantable Timber (109 acres)

<i>PRODUCT</i>	<i>TONS</i>	<i>DOLLARS</i>	<i>\$/TON</i>
pine pulpwood	1,091	\$7,640	\$7.00
pine topwood	481	\$3,367	\$7.00
pine chip-n-saw	1,665	\$28,310	\$17.00
pine small sawlogs (11.5" to 13.5" dbh)	277	\$7,766	\$28.00
pine sawlogs (>13.5" dbh)	676	\$27,046	\$40.00
Total Pine	4,190	\$74,129	\$17.69
hardwood pulpwood	1,965	\$7,862	\$4.00
hardwood topwood	507	\$2,029	\$4.00
hardwood sawlogs	754	\$12,104	\$16.05
Total Hardwood	3,226	\$21,995	\$6.82
TOTAL	7,416	\$96,124	\$12.96

Tree Abundance

Fifty-six percent of the trees growing in the merchantable stands are pine species and 44% are hardwood. PINE PULPWOOD and CHIP-N-SAW account for 48% of the trees (29% and 19%). HARDWOOD PULPWOOD comprises 39% of the trees. **The average total number of trees is 139 per acre**, indicating moderately high stocking. The two pine sawlog categories combined account for 8% of the total trees.

Stand Density

Stand density is an indication of crowding and is measured by basal area (defined as the sum of the cross-sectional area of all trees on one acre). The calculation of basal area is a function of the **number and size** of trees in the forest.

Pine trees comprise 52% of the average stand density, hardwood 48%. **The average total basal area for all trees in the merchantable stands is 68 square feet per acre**, indicating moderate stand density. HARDWOOD PULPWOOD is the most prominent category impacting stand density accounting for 31% of the total.

The average tree measures 9.1" dbh. Pine trees average 8.7" and hardwood trees average 8.7".

Timber Volume

Tree height and form are added to the function to calculate timber volume. Pine timber accounts for 56% of the total timber volume, hardwood 44%. HARDWOOD PULPWOOD continues as the most prominent product category accounting for 26% of the total timber volume. Pine CHIP-N-SAW accounts for 22%.

PINE & HARDWOOD TOPWOOD area added to the analysis for the timber volume and value distributions. Topwood is derived from the sawlog trees (and chip-n-saw) and is the portion of the tree that is utilized for pulpwood after sawtimber is merchandized. Pine sawlog trees typically generate more topwood than hardwood sawlog trees.

The average total timber volume is 68 tons per acre, almost 2½ truck loads per acre.

Timber Value

Timber value is assigned to the timber volume in a stair-stepped manner. That is, value increases at an uneven rate with jumps that are triggered by product thresholds rather than by gradual gradations. Some smoothing of the value to volume and tree size ratio is realized in "log sorts" offered (or required) by certain mills but "blended" pricing is more applicable for inventory and appraisal studies.

Pine trees account for 77% of the timber value, hardwoods 23%. CHIP-N-SAW accounts for 29% of the total value (38% of the pine value). The two pine sawlog categories combined comprise 36% of the total timber value with only 8% of the trees.

The average total timber value for all trees in the merchantable stands is \$881.69 per acre.

Timber Inventory Summary for 5571

Sartain-Williams Timberlands 5571 109 acres		<i>per acre</i>				avg dbh
		trees	basal area	tons	stumpage	
Loblolly	pine pulpwood	40.3	10.3	10.0	\$70.10	6.7
	pine topwood			4.4	\$30.89	
	chip-n-saw	26.5	13.3	15.3	\$259.70	9.5
	pine small sawlogs (12-13")	4.4	3.7	2.5	\$71.20	12.3
	pine sawlogs (>13")	6.4	8.0	6.2	\$248.10	15.1
	total pine	77.6	35.3	38.4	\$679.99	8.7
Hardwood	hardwood pulpwood	54.4	21.3	18.0	\$72.10	8.7
	hardwood sawlogs	6.9	11.3	6.9	\$111.00	16.9
	hardwood topwood			4.7	\$18.60	
	total hardwood	61.3	32.6	29.6	\$201.70	9.7
Total		138.9	67.9	68.0	\$881.69	9.1

Sartain-Williams Timberlands 5571 109 acres		<i>tract total</i>			
		trees	basal area	tons	stumpage
Loblolly	pine pulpwood	4398	1126	1091	\$7,640
	pine topwood			481	\$3,367
	chip-n-saw	2889	1453	1665	\$28,310
	pine small sawlogs (12-13")	481	400	277	\$7,766
	pine sawlogs (>13")	697	872	676	\$27,046
	total pine	8465	3851	4190	\$74,129
Hardwood	hardwood pulpwood	4951	2325	1965	\$7,862
	hardwood sawlogs	754	1235	754	\$12,104
	hardwood topwood			507	\$2,029
	total hardwood	5705	3560	3226	\$21,995
Total		14170	7411	7416	\$96,124

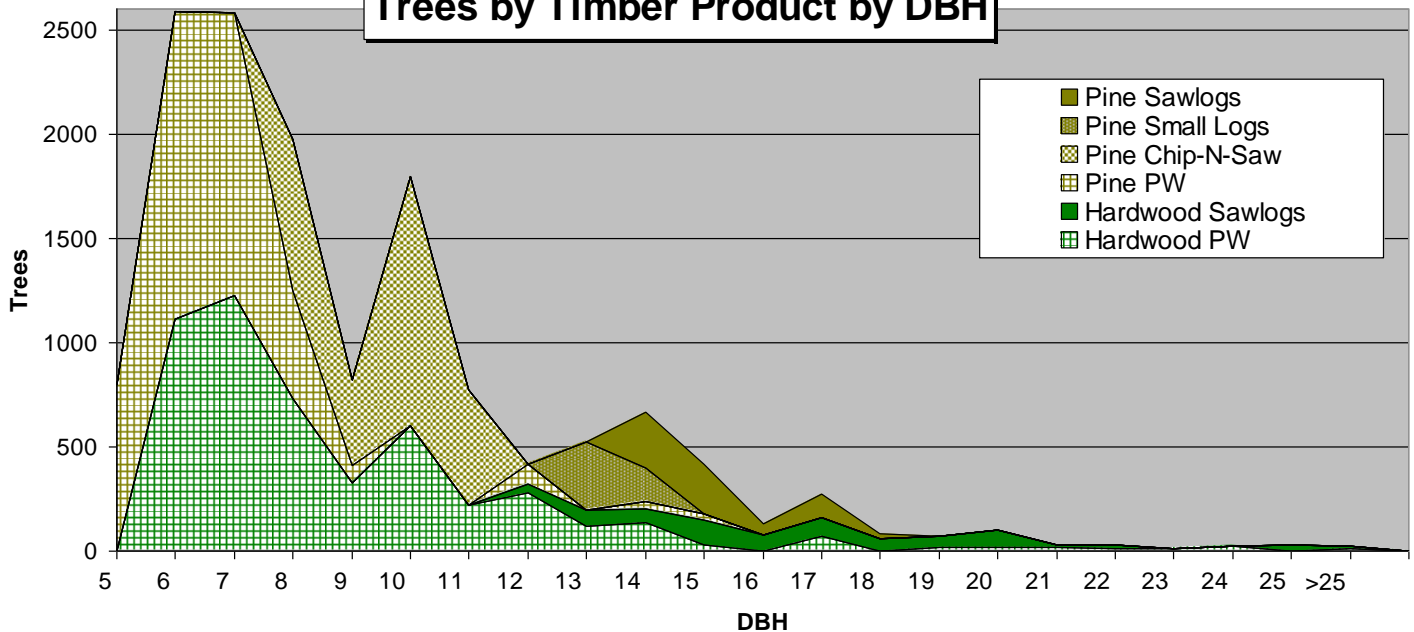
Sartain-Williams Timberlands

Tract 5571

Pine Stock & Stand Table

DBH	Total Pine		Pine PW			Chip-N-Saw			Pine Small Logs (12-13" dbh)			Pine Sawlogs (>13" dbh)			Pine Tops
	trees	tons	trees	tons	avg. total height	trees	tons	avg. total height	trees	tons	avg. log height	trees	tons	avg. log height	tons
5	799	96	799	96	48										
6	1480	274	1480	274	54										
7	1360	341	1360	341	52										
8	1249	456	520	172	48	729	283	66							1
9	493	250	82	43	70	411	206	68							1
10	1199	774				1199	760	72							14
11	551	428				551	416	72							12
12	417	341	93	76	55				324	170	29				95
13	158	158							158	108	33				50
14	306	368	34	47	75							272	219	34	102
15	267	370	30	42	60							237	223	34	105
16	52	81										52	52	32	29
17	115	213										115	156	40	57
18	21	41										21	26	31	15
19	0	0													
20	0	0													
21	0	0													
22	0	0													
23	0	0													
24	0	0													
25	0	0													
>25	0	0													
total	8467	4191	4398	1091		2890	1665		482	278		697	676		481

**SWT - 5571 (109 acres)-
Trees by Timber Product by DBH**



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Hardwood Stock & Stand Table

DBH	Total Hdwd		Hdwd PW		Hdwd Sawlogs		Hdwd Tops
	trees	tons	trees	tons	trees	tons	tons
5	0	0					
6	1110	150	1110	150			
7	1224	235	1224	235			
8	729	184	729	184			
9	329	127	329	127			
10	600	292	600	292			
11	220	140	220	140			
12	324	223	278	188	46	24	11
13	197	162	118	100	79	35	27
14	204	223	136	152	68	50	21
15	148	194	30	30	118	116	48
16	78	119			78	75	44
17	161	229	69	101	92	65	63
18	62	110			62	86	24
19	73	139	18	29	55	69	41
20	100	228	17	28	83	111	89
21	30	72	15	32	15	18	22
22	28	85	14	46	14	18	21
23	13	33	13	33			
24	23	59	23	59			
25	32	125			32	45	80
>25	21	97	10	39	11	42	16
total	5705	3226	4951	1965	754	754	507

