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Timber Supply, Prescott, Arkansas



University of Arkansas at
Monticello
College of Forestry,
Agriculture, and Natural
Resources

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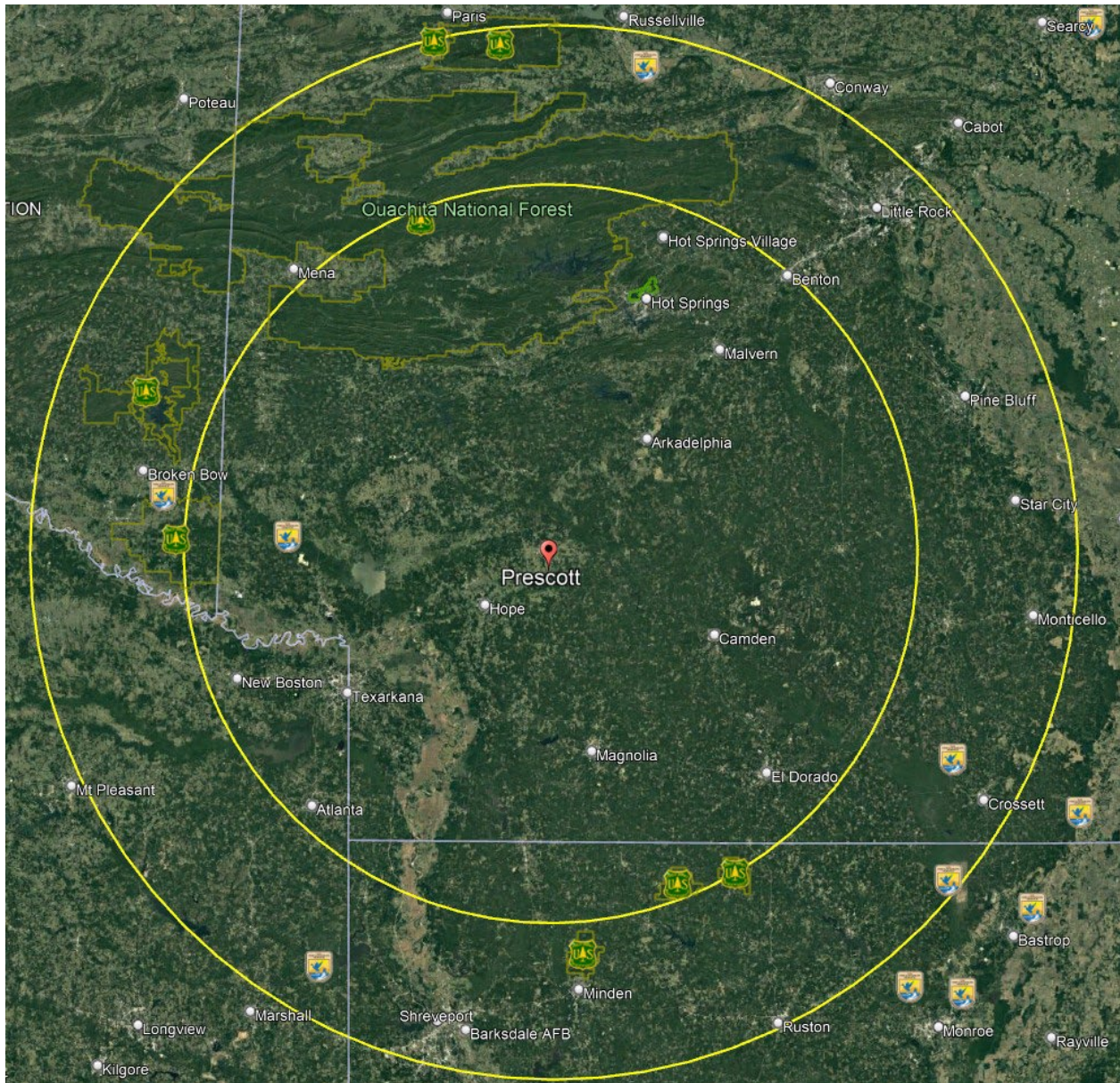


Figure 1. 70 and 100 mile radii around Prescott, Arkansas.

Summary

The timber resources in the 70-miles surrounding Prescott, Arkansas can support additional harvests greater than 4.8 million tons per year in pine saw logs and 2.5 million tons in pine pulpwood and top wood. Within 100 miles, these values increase to 8.2 and 2.9 million tons per year in saw logs and pulpwood/top wood, respectively. Annual hardwood removals within 70 miles could increase by 1.7 million tons in saw logs and 0.6 million tons in pulpwood and top wood, with these values increasing to 2.5 and 0.9 million tons, respectively, in a 100-mile radius.

This data comes from the most recent FIA data (AR-2020, LA/OK-2018, and TX-2017) and does not reflect changes in forest cover, growth, or removals from that time to present. Changes in existing mill production and other forest disturbances could have a substantial effect on the values provided here, and those changes will likely increase over time.

Highlights of Tables

- There are 7.5 and 14.3 million acres of timber land within 70 and 100 miles, respectively, of Prescott, Arkansas
- Pine is the dominant forest type in the region (51%) followed by bottomland hardwoods (32%) and upland hardwoods (12%)
- Naturally regenerated forests cover account for 67% of all forestland in the region, but 58% of pine covertypes are artificially regenerated. Only 7% of non-pine forests are artificially regenerated
- 84% of the forest land is privately owned with the Ouachita National Forest being the major public landowner. Forest growing stock, growth, and removals are generally proportional to ownership.
- Within 70 miles of Prescott
 - 251 million tons of pine growing stock, 183 million tons of which is pine saw timber and 68 million tons of pulpwood and top wood
 - 193 million tons of hardwood growing stock, 106 million tons of which is saw timber and 87 million tons is pulpwood and top wood
 - Annual surplus in pine growth is 4.8 million tons in saw timber and 2.5 million tons in pulpwood
 - Annual surplus in hardwood growth is 1.6 million tons in saw timber and 0.6 million tons in pulpwood
 - Hardwood resources consist primarily of various oak species and sweetgum with 34% of the volume being in high grade trees suitable for factory grade lumber production.
- Within 100 miles of Prescott
 - 447 million tons of pine growing stock, 327 million tons of which is pine saw timber and 120 million tons of pulpwood and top wood
 - 352 million tons of hardwood growing stock, 188 million tons of which is saw timber and 164 million tons is pulpwood and top wood
 - Annual surplus in pine growth is 8.2 million tons in saw timber and 2.9 million tons in pulpwood
 - Annual surplus in hardwood growth is 2.5 million tons in saw timber and 0.9 million tons in pulpwood

Hardwood resources are plentiful in the region, but only 34% of the resources are considered “high quality” (Grades 1 and 2) which will produce substantial proportions of grade lumber (Figure 2). Grade 3 trees will produce some factory lumber but the majority of grade 3 and lower trees will largely produce crossties and pallet wood.

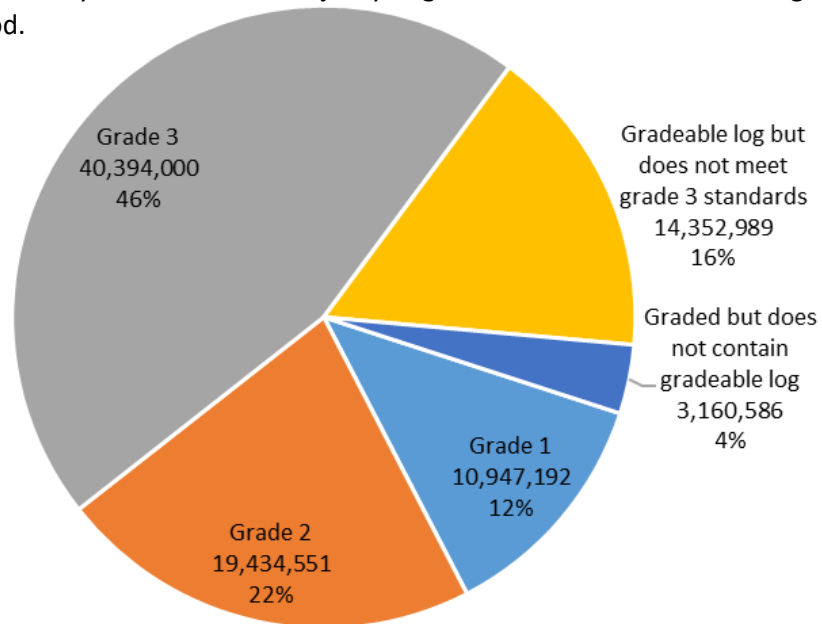


Figure 2. Hardwood saw timber resources by tree trade within a 70 mile radius of Prescott, Arkansas. Volumes are saw timber in green short tons.

The species groups present in the region are largely red and white oaks and sweetgum, which combined make up 87% of the total hardwood saw timber. Select red oak (15%) and select white oak (18%) are present as well. Select species are generally those preferred for factory grade lumber production.

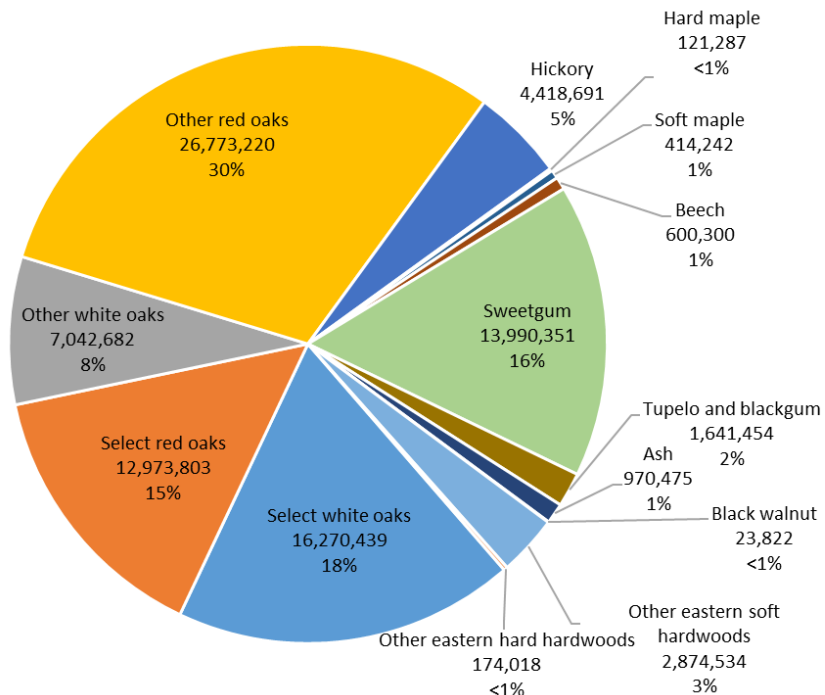


Figure 3. Major hardwood species groups present within a 70-mile radius of Prescott, Arkansas. Volume numbers are saw timber in green short tons.

Many species present could sustain substantial increases in their sustainable harvest levels. These include oaks and particularly sweetgum (Figure 4).

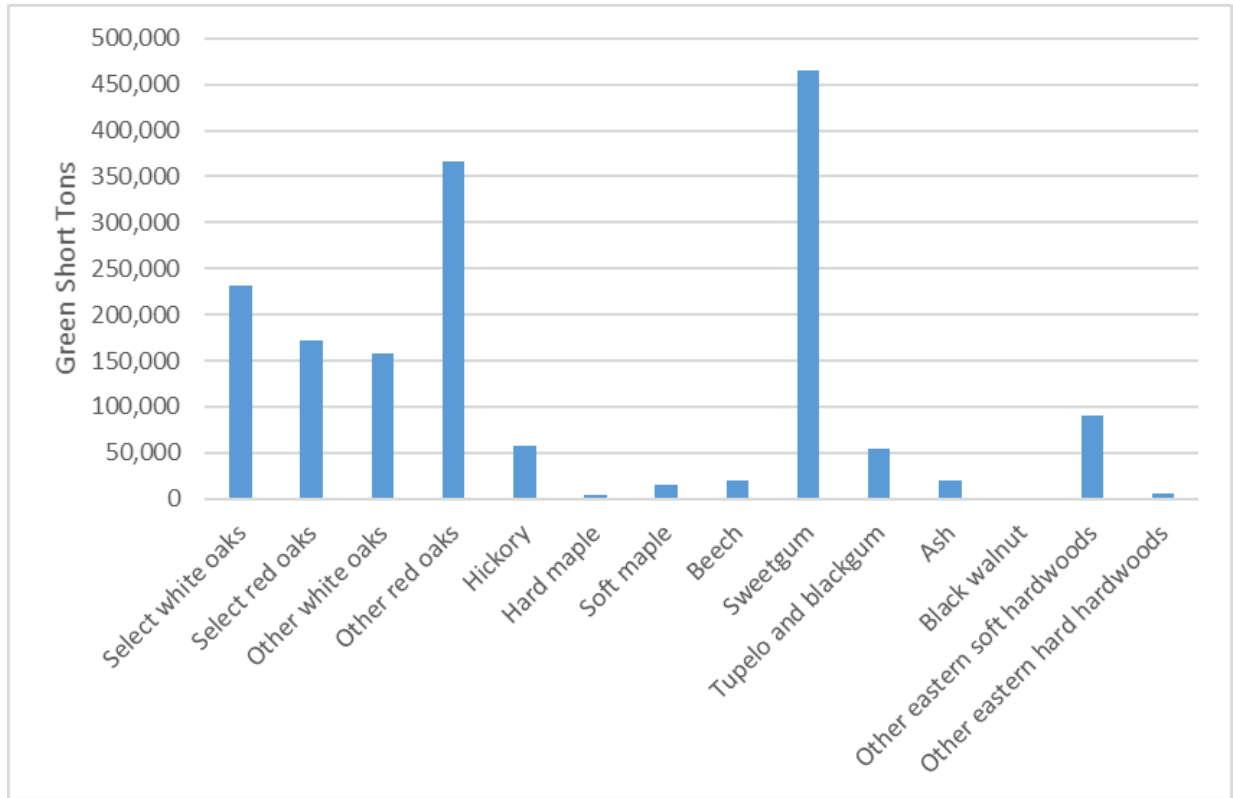


Figure 4. Sustainable annual allowable increase in saw timber harvesting in various species groups. Values are in saw timber green short tons per year within a 70 mile radius of Prescott, Arkansas.

Purpose/Objectives

The purpose of this analysis is to create a one-time snapshot of merchantable timber around Prescott Arkansas. The data tables attached will provide information on the following:

- Timberland area within 70 and 100 miles aerial radius of Prescott, Arkansas by ownership and forest type group (Tables 1 and 2)
- Timberland area within 100 miles aerial radius of Prescott, Arkansas by forest type group and stand origin (Table 3)
- Within 70 miles and 100 miles for major species groups and ownership groups:
 - Current growing stock for merchantable bole, saw logs, and pulpwood/top wood (Table 4 and 8)
 - Annual net growth for merchantable bole, saw logs, and pulpwood/top wood (Table 5 and 9)
 - Annual removals group for merchantable bole, saw logs, and pulpwood/top wood (Table 6 and 10)
 - Annual net surplus for merchantable bole, saw logs, and pulpwood/top wood (Table 7 and 11)
- Hardwood saw timber growing stock by grade and estimates of sustainable surplus (or deficit) by species group (Table 12)

Methods

The USDA Forest Service Forest Inventory and Analysis (FIA) database is the source of the data for these tables. Data comes from the Arkansas (2020), Louisiana (2018), Oklahoma (2018) and Texas (2017) inventories, which, at the time of this report are the most current available. The online software EVALIDATOR and DATIM processed the database queries for these reports. EVALIDATOR and DATIM can be accessed on the FIA National Program website (<https://www.fia.fs.fed.us/tools-data/>).

Some specifics to the database queries are important to note:

- The center of the analysis radii of 70 and 100 miles is 33.802611 degrees north latitude and - 93.381006 degrees west longitude (center of Prescott, Arkansas)
- The results show acre and tonnages based on timberland based on FIA definition (FIADEF)
- Ownership categories are either PUBLIC or PRIVATE
- Areas are in acres
- Tree biomass is reported in GREEN SHORT TONS

This report is an initial survey of timber resources. The Arkansas Center for Forest Business upon request can provide more detailed analysis and information regarding the region.

Table 1. Timberland acres by forest type group and ownership within a 70-mile radius of Prescott, Arkansas.

Forest type group	Ownership group		
	Total	Public	Private
Total	7,488,241	937,526	6,550,715
Loblolly / shortleaf pine group	3,943,752	383,959	3,559,793
Other eastern softwoods group	1,669	0	1,669
Oak / pine group	940,864	172,502	768,362
Oak / hickory group	1,583,977	306,050	1,277,927
Oak / gum / cypress group	749,189	38,309	710,881
Elm / ash / cottonwood group	183,445	24,448	158,997
Maple / beech / birch group	1,477	0	1,477
Other hardwoods group	18,364	4,806	13,558
Exotic hardwoods group	5,701	5,701	0
Nonstocked	59,802	1,752	58,050

Table 2. Timberland acres by forest type group and ownership within a 100-mile radius of Prescott, Arkansas.

Forest type group	Ownership group		
	Total	Public	Private
Total	14,270,629	2,215,476	12,055,153
Loblolly / shortleaf pine group	7,304,460	996,329	6,308,132
Other eastern softwoods group	36,842	0	36,842
Oak / pine group	1,745,628	405,043	1,340,584
Oak / hickory group	3,192,585	575,636	2,616,950
Oak / gum / cypress group	1,416,468	167,833	1,248,636
Elm / ash / cottonwood group	418,976	55,516	363,461
Maple / beech / birch group	1,477	0	1,477
Other hardwoods group	27,194	4,806	22,388
Exotic hardwoods group	21,691	5,701	15,990
Nonstocked	105,307	4,613	100,695

Table 3. Stand origin by acres and forest cover type within 100-mile radius of Prescott, Arkansas.

Forest type group	Total acres	Acres of Natural stands	Acres with clear evidence of artificial regeneration
Loblolly / shortleaf pine group	7,304,460	3,096,650	4,207,811
Other eastern softwoods group	36,842	36,842	0
Oak / pine group	1,745,628	1,484,926	260,702
Oak / hickory group	3,192,585	3,049,553	143,032
Oak / gum / cypress group	1,416,468	1,385,048	31,420
Elm / ash / cottonwood group	418,976	405,387	13,589
Maple / beech / birch group	1,477	1,477	0
Other hardwoods group	27,194	27,194	0
Exotic hardwoods group	21,691	21,691	0
Nonstocked	105,307	89,825	15,483

Table 4. Growing stock of merchantable bole biomass, saw log portion, and pulpwood/top wood portion in green tons by major species group and major ownership group within 70 miles of Prescott, Arkansas.

TOTAL MERCHANTABLE BOLE GROWING STOCK IN TONS				
Major species group	Total	Ownership group		
		Public	Private	Not available
Total	449,255,921	67,954,549	381,301,372	0
Pines	250,685,921	34,027,747	216,658,174	0
Other softwoods	5,177,461	585,890	4,591,572	0
Soft hardwoods	52,356,401	6,069,583	46,286,817	0
Hard hardwoods	141,036,138	27,271,329	113,764,809	0

SAWLOG PORTION OF GROWING STOCK IN TONS				
Major species group	Total	Ownership group		
		Public	Private	Not available
Total	292,983,486	47,681,410	245,302,076	0
Pines	182,562,371	29,083,277	153,479,094	0
Other softwoods	3,946,169	412,504	3,533,664	0
Soft hardwoods	21,648,334	2,727,753	18,920,581	0
Hard hardwoods	84,826,613	15,457,876	69,368,737	0

PULPWOOD and TOPWOOD PORTION OF GROWING STOCK IN TONS				
Major species group	Total	Ownership group		
		Public	Private	Not available
Total	156,272,435	20,273,139	135,999,296	0
Pines	68,123,550	4,944,470	63,179,080	0
Other softwoods	1,231,292	173,386	1,057,908	0
Soft hardwoods	30,708,067	3,341,830	27,366,236	0
Hard hardwoods	56,209,525	11,813,453	44,396,072	0

Table 5. Annual net growth of merchantable bole biomass, saw log portion, and pulpwood/top wood portion in green tons by major species group and major ownership group within 70 miles of Prescott, Arkansas.

MERCHANTABLE BOLE BIOMASS NET ANNUAL GROWTH IN TONS				
Major species group	Total	Ownership group		
		Public	Private	Not available
Total	23,921,937	1,620,226	22,287,607	14,104
Pines	18,262,200	1,004,244	17,248,848	9,108
Other softwoods	141,093	18,017	123,076	0
Soft hardwoods	1,514,307	104,752	1,405,239	4,316
Hard hardwoods	4,004,338	493,214	3,510,444	680

SAWLOG PORTION OF NET ANNUAL GROWTH IN TONS				
Major species group	Total	Ownership group		
		Public	Private	Not available
Total	16,637,806	1,425,920	15,203,729	8,157
Pines	13,088,986	959,804	12,121,025	8,157
Other softwoods	116,454	12,204	104,250	0
Soft hardwoods	678,339	73,363	604,976	0
Hard hardwoods	2,754,028	380,549	2,373,478	0

PULPWOOD and TOPWOOD PORTION OF NET ANNUAL GROWTH IN TONS				
Major species group	Total	Ownership group		
		Public	Private	Not available
Total	7,284,130	194,305	7,083,878	5,947
Pines	5,173,214	44,440	5,127,823	951
Other softwoods	24,639	5,813	18,826	0
Soft hardwoods	835,968	31,389	800,263	4,316
Hard hardwoods	1,250,310	112,664	1,136,966	680

Table 6. Annual removals of merchantable bole biomass, saw log portion, and pulpwood/top wood portion in green tons by major species group and major ownership group within 70 miles of Prescott, Arkansas.

MERCHANTABLE BOLE BIOMASS ANNUAL REMOVALS IN TONS				
Major species group	Total	Ownership group		
		Public	Private	Not available
Total	14,181,964	367,667	13,709,974	104,323
Pines	10,908,826	256,212	10,601,922	50,691
Other softwoods	3,757	1,436	2,321	0
Soft hardwoods	878,917	4,422	847,206	27,289
Hard hardwoods	2,390,465	105,597	2,258,526	26,343

SAWLOG PORTION OF ANNUAL REMOVALS IN TONS				
Major species group	Total	Ownership group		
		Public	Private	Not available
Total	10,042,743	250,733	9,753,965	38,045
Pines	8,270,267	182,058	8,062,285	25,925
Other softwoods	1,252	0	1,252	0
Soft hardwoods	251,141	0	251,141	0
Hard hardwoods	1,520,083	68,675	1,439,288	12,120

PULPWOOD and TOPWOOD PORTION OF ANNUAL REMOVALS IN TONS				
Major species group	Total	Ownership group		
		Public	Private	Not available
Total	4,139,221	116,934	3,956,009	66,278
Pines	2,638,558	74,154	2,539,637	24,767
Other softwoods	2,505	1,436	1,069	0
Soft hardwoods	627,776	4,422	596,065	27,289
Hard hardwoods	870,382	36,922	819,238	14,222

Table 7. Annual surplus of merchantable bole biomass, saw log portion, and pulpwood/top wood portion in green tons by major species group and major ownership group within 70 miles of Prescott, Arkansas.

MERCHANTABLE BOLE BIOMASS ANNUAL NET SURPLUS IN TONS				
Major Species group	Total	Ownership group		
		Public	Private	Not available
Total	9,739,973	1,252,558	8,577,633	-90,218
Pines	7,353,374	748,031	6,646,926	-41,583
Other softwoods	137,336	16,581	120,755	0
Soft hardwoods	635,390	100,330	558,033	-22,973
Hard hardwoods	1,613,872	387,617	1,251,918	-25,663

SAWLOG PORTION OF ANNUAL NET SURPLUS IN TONS				
Major Species group	Total	Ownership group		
		Public	Private	Not available
Total	6,595,063	1,175,187	5,449,764	-29,888
Pines	4,818,719	777,746	4,058,740	-17,767
Other softwoods	115,201	12,204	102,997	0
Soft hardwoods	427,199	73,363	353,836	0
Hard hardwoods	1,233,945	311,874	934,191	-12,120

PULPWOOD and TOPWOOD PORTION OF ANNUAL NET SURPLUS IN TONS				
Major Species group	Total	Ownership group		
		Public	Private	Not available
Total	3,144,909	77,371	3,127,869	-60,331
Pines	2,534,655	-29,715	2,588,186	-23,816
Other softwoods	22,134	4,377	17,758	0
Soft hardwoods	208,192	26,967	204,198	-22,973
Hard hardwoods	379,928	75,743	317,728	-13,542

Table 8. Growing stock of merchantable bole biomass, saw log portion, and pulpwood/top wood portion in green tons by major species group and major ownership group within 100 miles of Prescott, Arkansas.

TOTAL MERCHANTABLE BOLE GROWING STOCK IN TONS				
Major species group	Total	Ownership group		Not available
		Public	Private	
Total	811,200,748	165,600,840	645,599,908	0
Pines	446,990,563	88,063,020	358,927,543	0
Other softwoods	12,442,705	3,797,510	8,645,195	0
Soft hardwoods	91,786,853	14,409,462	77,377,391	0
Hard hardwoods	259,980,627	59,330,848	200,649,778	0

SAWLOG PORTION OF GROWING STOCK IN TONS				
Major species group	Total	Ownership group		Not available
		Public	Private	
Total	524,247,221	116,796,613	407,450,608	0
Pines	327,270,418	75,008,028	252,262,389	0
Other softwoods	8,857,812	2,897,054	5,960,758	0
Soft hardwoods	38,813,634	7,328,570	31,485,064	0
Hard hardwoods	149,305,357	31,562,961	117,742,397	0

PULPWOOD and TOPWOOD PORTION OF GROWING STOCK IN TONS				
Major species group	Total	Ownership group		Not available
		Public	Private	
Total	286,953,527	48,804,227	238,149,300	0
Pines	119,720,145	13,054,992	106,665,154	0
Other softwoods	3,584,893	900,456	2,684,437	0
Soft hardwoods	52,973,219	7,080,892	45,892,327	0
Hard hardwoods	110,675,270	27,767,887	82,907,381	0

Table 9. Annual net growth of merchantable bole biomass, saw log portion, and pulpwood/top wood portion in green tons by major species group and major ownership group within 100 miles of Prescott, Arkansas.

MERCHANTABLE BOLE BIOMASS NET ANNUAL GROWTH IN TONS				
Major species group	Total	Ownership group		
		Public	Private	Not available
Total	41,394,415	3,738,762	37,604,945	50,707
Pines	31,359,118	2,435,197	28,888,712	35,208
Other softwoods	352,989	92,993	259,995	0
Soft hardwoods	2,787,301	228,695	2,559,932	-1,326
Hard hardwoods	6,895,006	981,876	5,896,306	16,824

SAWLOG PORTION OF NET ANNUAL GROWTH IN TONS				
Major species group	Total	Ownership group		
		Public	Private	Not available
Total	28,750,049	3,407,518	25,303,413	39,118
Pines	22,760,186	2,416,532	20,313,269	30,384
Other softwoods	270,973	81,641	189,333	0
Soft hardwoods	1,301,063	171,261	1,133,033	-3,231
Hard hardwoods	4,417,827	738,084	3,667,778	11,964

PULPWOOD and TOPWOOD PORTION OF NET ANNUAL GROWTH IN TONS				
Major species group	Total	Ownership group		
		Public	Private	Not available
Total	12,644,365	331,245	12,301,532	11,589
Pines	8,598,932	18,665	8,575,443	4,824
Other softwoods	82,015	11,353	70,663	0
Soft hardwoods	1,486,238	57,435	1,426,899	1,905
Hard hardwoods	2,477,179	243,792	2,228,527	4,860

Table 10. Annual removals of merchantable bole biomass, saw log portion, and pulpwood/top wood portion in green tons by major species group and major ownership group within 100 miles of Prescott, Arkansas.

MERCHANTABLE BOLE BIOMASS ANNUAL REMOVALS IN TONS				
Major species group	Total	Ownership group		
		Public	Private	Not available
Total	26,545,876	849,081	24,911,801	784,995
Pines	20,291,585	660,034	19,295,568	335,983
Other softwoods	14,846	4,705	10,141	0
Soft hardwoods	1,603,402	13,306	1,518,047	72,048
Hard hardwoods	4,636,043	171,035	4,088,044	376,964

SAWLOG PORTION OF ANNUAL REMOVALS IN TONS				
Major species group	Total	Ownership group		
		Public	Private	Not available
Total	17,814,285	604,319	16,684,298	525,669
Pines	14,599,257	505,505	13,817,454	276,298
Other softwoods	5,133	2,883	2,250	0
Soft hardwoods	462,274	3,403	441,235	17,636
Hard hardwoods	2,747,622	92,528	2,423,359	231,735

PULPWOOD and TOPWOOD PORTION OF ANNUAL REMOVALS IN TONS				
Major species group	Total	Ownership group		
		Public	Private	Not available
Total	8,731,591	244,762	8,227,503	259,326
Pines	5,692,328	154,529	5,478,114	59,685
Other softwoods	9,714	1,822	7,891	0
Soft hardwoods	1,141,128	9,903	1,076,812	54,412
Hard hardwoods	1,888,421	78,507	1,664,685	145,229

Table 11. Annual surplus of merchantable bole biomass, saw log portion, and pulpwood/top wood portion in green tons by major species group and major ownership group within 100 miles of Prescott, Arkansas.

MERCHANTABLE BOLE BIOMASS ANNUAL NET SURPLUS IN TONS				
Major species group	Total	Ownership group		
		Public	Private	Not available
Total	14,848,538	2,889,682	12,693,145	-734,288
Pines	11,067,533	1,775,163	9,593,144	-300,774
Other softwoods	338,142	88,289	249,854	0
Soft hardwoods	1,183,900	215,389	1,041,885	-73,374
Hard hardwoods	2,258,963	810,841	1,808,262	-360,140

SAWLOG PORTION OF ANNUAL NET SURPLUS IN TONS				
Major species group	Total	Ownership group		
		Public	Private	Not available
Total	10,935,764	2,803,199	8,619,116	-486,551
Pines	8,160,929	1,911,027	6,495,815	-245,914
Other softwoods	265,840	78,758	187,083	0
Soft hardwoods	838,789	167,857	691,798	-20,866
Hard hardwoods	1,670,205	645,556	1,244,420	-219,771

PULPWOOD and TOPWOOD PORTION OF ANNUAL NET SURPLUS IN TONS				
Major species group	Total	Ownership group		
		Public	Private	Not available
Total	3,912,775	86,483	4,074,029	-247,737
Pines	2,906,604	-135,864	3,097,329	-54,861
Other softwoods	72,302	9,531	62,771	0
Soft hardwoods	345,110	47,532	350,086	-52,508
Hard hardwoods	588,758	165,285	563,842	-140,369

Table 12. Hardwood saw timber growing stock and sustainable harvest increase in green tons of saw log portion of growing stock on timberland within 70 miles of Prescott, Arkansas.

Species group	Growing Stock Volume in green short tons						Annual Sustainable Harvest Increase
	Total	Grade 1	Grade 2	Grade 3	Gradeable log but does not meet grade 3 standards	Graded but does not contain gradeable log	
Total	88,289,318	10,947,192	19,434,551	40,394,000	14,352,989	3,160,586	1,660,275
Select white oaks	16,270,439	2,537,575	3,770,606	7,076,455	2,337,185	548,618	231,215
Select red oaks	12,973,803	3,499,436	4,140,452	3,837,545	1,470,902	25,467	171,764
Other white oaks	7,042,682	585,396	1,569,566	3,453,378	1,161,807	272,535	158,104
Other red oaks	26,773,220	2,119,637	5,532,209	13,095,359	4,948,991	1,077,025	366,146
Hickory	4,418,691	401,738	966,180	1,866,490	1,141,418	42,865	57,238
Hard maple	121,287	0	0	98,805	22,482	0	4,043
Soft maple	414,242	0	22,388	185,985	175,837	30,032	14,638
Beech	600,300	0	25,540	510,149	64,611	0	20,010
Sweetgum	13,990,351	1,583,262	2,705,863	7,021,350	1,834,525	845,350	465,337
Tupelo and blackgum	1,641,454	54,085	351,131	784,035	385,579	66,624	54,820
Ash	970,475	0	172,063	625,817	58,074	114,521	19,830
Black walnut	23,822	0	0	0	23,822	0	794
Other eastern soft hardwoods	2,874,534	166,064	178,551	1,814,860	605,691	109,368	90,535
Other eastern hard hardwoods	174,018	0	0	23,773	122,065	28,181	5,801