### 2022

# Timber Supply, Clarksville, Arkansas





UNIVERSITY OF ARKANSAS AT MONTICELLO connecting people and forests University of Arkansas at Monticello College of Forestry, Agriculture, and Natural Resources

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or by contacting the Arkansas Center for Forest Business:

Dr. Matthew Pelkki pelkki@uamont.edu (870) 460-1949

Dr. Sagar Godar Chhetri chhetri@uamont.edu (870) 460-1294

The University of Arkansas at Monticello College of Forestry, Agriculture, and Natural Resources P.O. Box 3468 Monticello, AR 71656-3468

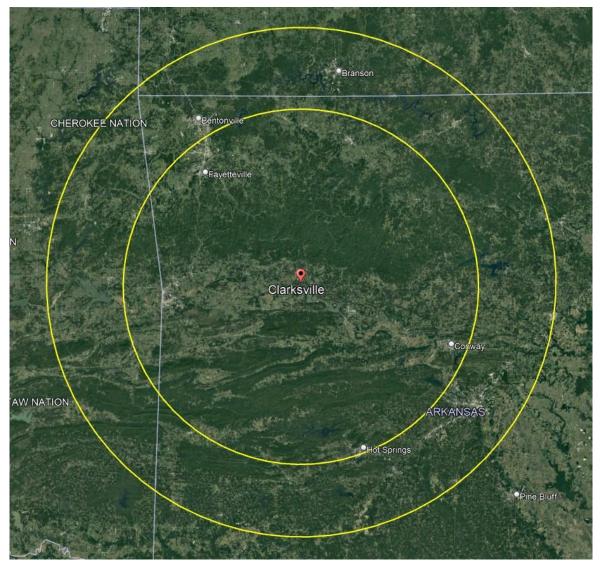


Figure 1. 70 and 100-mile radii around Clarksville, Arkansas.

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#### Summary

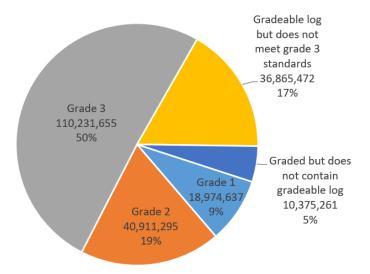
The timber resources in the 70-miles surrounding Clarksville, Arkansas can support additional harvests greater than 2.3 million tons per year in pine saw logs and 0.2 million tons in pine pulpwood and top wood. Within 100 miles, these values increase to 4.0 and 7.9 million tons per year in saw logs and pulpwood/top wood, respectively. Annual hardwood surplus within 70 miles is 3.1 million tons of sawtimber and 1.3 million tons of pulpwood. When the supply area is increased to a 100-mile radius, the annual surplus in hardwood sawtimber is 5.1 million tons, but there is a DEFICIT of 4.8 million tons in pulpwood.

This data comes from the most recent FIA data (AR-2020, MO-2019, and OK-2018) 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**

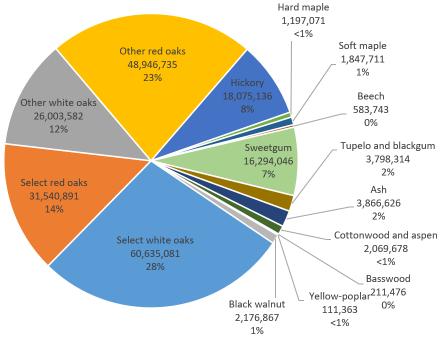
- There are 6.2 and 12.2 million acres of timber land within 70 and 100 miles, respectively, of Clarksville, Arkansas
- Upland hardwood is the dominant forest type in the region (55%) followed by pine (24%) and Oak/Pine (12%)
- Naturally regenerated forests cover account for 89% of all forestland in the region, but 42% of pine forests are artificially regenerated. Only 2% of non-pine forests are artificially regenerated
- 73% of the timberland is privately owned. Forest growing stock, growth, and removals are generally proportional to ownership.
- Within 70 miles of Clarksville
  - 103.6 million tons of pine growing stock, 82.4 million tons of which is pine saw timber and 21.2 million tons of pulpwood and top wood
  - 245.3 million tons of hardwood growing stock, 121.4 million tons of which is saw timber and 123.9 million tons is pulpwood and top wood
  - Annual surplus in pine growth is 2.3 million tons in saw timber and 0.2 million tons in pulpwood
  - Annual surplus in hardwood growth is 3.1 million tons in saw timber and 1.3 million tons in pulpwood
- Within 100 miles of Clarksville
  - 200.7 million tons of pine growing stock, 153.4 million tons of which is pine saw timber and 47.2 million tons of pulpwood and top wood
  - 453.1 million tons of hardwood growing stock, 221.5 million tons of which is saw timber and 231.5 million tons is pulpwood and top wood
  - Annual surplus in pine growth is 4.1 million tons in saw timber and 7.9 million tons in pulpwood
  - Annual surplus in hardwood growth is 5.1 million tons in saw timber, but there is an annual deficit of 4.8 million tons in hardwood pulpwood and topwood.
  - Hardwood resources consist primarily of various oak species, beech, sweetgum, and tupelo/blackgum. 28% of the hardwood sawtimber would be considered high-grade trees suitable for factory grade lumber production.

Hardwood resources are plentiful in the region, but only 28% of the resources are considered "high quality" (Grades 1 and 2) which will produce substantial proportions of grade lumber (Figure 2). Grade 3 trees represent 50% of the sawtimber resource in the region and will produce some factory lumber but the majority of grade 3 and lower trees will largely produce crossties and pallet wood.



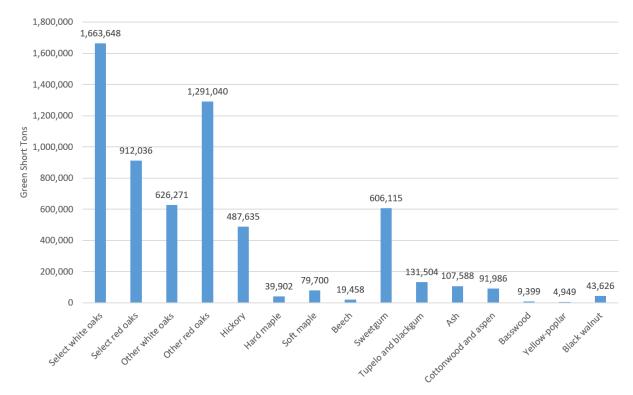
*Figure 2. Hardwood saw timber resources by tree trade within a 100-mile radius of Clarksville, Arkansas. Volumes are saw timber in green short tons.* 

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 (14%) and select white oak (28%) are present as well. Select species are generally those preferred for factory grade lumber production.



*Figure 3. Major hardwood species groups present within a 100-mile radius of Clarksville, Arkansas. Volume numbers are saw timber in green short tons.* 

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Many species present could sustain substantial increases in their sustainable harvest levels. Most of these species are bottomland hardwoods. (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 100-mile radius of Clarksville, Arkansas.* 

#### Purpose/Objectives

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

- Timberland area within 70 and 100 miles aerial radius of Clarksville, Arkansas by ownership and forest type group (Tables 1 and 2)
- Timberland area within 100 miles aerial radius of Clarksville, 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), Missouri (2019), and Oklahoma (2019) 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 35.471472 degrees north latitude and 93.466573 degrees west longitude (Clarksville, 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 Clarksville, Arkansas.

	0	wnership group	
Forest type group	Total	Public	Private
Total	6,229,366	2,243,564	3,985,802
Loblolly / shortleaf pine group	1,432,522	779,584	652,938
Other eastern softwoods group	150,034	2,999	147,035
Pinyon / juniper group	1,640	0	1,640
Oak / pine group	730,408	280,322	450,085
Oak / hickory group	3,507,324	1,079,861	2,427,464
Oak / gum / cypress group	181,582	53,685	127,897
Elm / ash / cottonwood group	183,844	35,223	148,622
Other hardwoods group	13,277	7,278	5,998
Nonstocked	28,735	4,613	24,123

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

	Ownership grou	р
Total	Public	Private
12,201,836	3,309,240	8,892,596
2,946,898	1,069,632	1,877,265
303,720	51,587	252,133
12,715	0	12,715
1,490,518	434,746	1,055,772
6,682,854	1,585,877	5,096,976
345,012	85,873	259,139
330,604	56,864	273,740
3,839	0	3,839
23,756	7,278	16,478
61,921	17,383	44,538
	12,201,836 2,946,898 303,720 12,715 1,490,518 6,682,854 345,012 330,604 3,839 23,756	TotalPublic12,201,8363,309,2402,946,8981,069,632303,72051,58712,71501,490,518434,7466,682,8541,585,877345,01285,873330,60456,8643,839023,7567,278

		Stand origin	
Forest type group	Total	Natural stands	Clear evidence of
			artificial regeneration
Total	12,201,836	10,803,201	1,398,635
Loblolly / shortleaf pine group	2,946,898	1,695,000	1,251,897
Other eastern softwoods group	303,720	303,720	0
Pinyon / juniper group	12,715	12,715	0
Oak / pine group	1,490,518	1,418,155	72,363
Oak / hickory group	6,682,854	6,645,601	37,252
Oak / gum / cypress group	345,012	321,250	23,761
Elm / ash / cottonwood group	330,604	324,288	6,316
Maple / beech / birch group	3,839	3,839	0
Other hardwoods group	23,756	23,756	0
Nonstocked	61,921	54,876	7,045
Oak / gum / cypress group Elm / ash / cottonwood group Maple / beech / birch group Other hardwoods group	345,012 330,604 3,839 23,756	321,250 324,288 3,839 23,756	23,761 6,316 0 0

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

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 Clarksville, Arkansas.

#### TOTAL MERCHANTABLE BOLE GROWING STOCK IN TONS

	Ownership group			
Species group	Total	Public	Private	Not available
Total	357,486,022	161,007,298	196,478,724	0
Pines	103,635,121	65,857,373	37,777,748	0
Other softwoods	8,535,429	1,389,032	7,146,397	0
Soft hardwoods	39,899,223	15,638,355	24,260,868	0
Hard hardwoods	205,416,249	78,122,538	127,293,711	0
SAWLOG PORTION OF GROWING STOCK IN TONS				

Species group	Total	Public	Private	Not available
Total	206,971,254	105,935,896	101,035,357	0
Pines	82,409,865	55,372,617	27,037,248	0
Other softwoods	3,171,804	588,189	2,583,615	0
Soft hardwoods	17,410,508	7,719,538	9,690,970	0
Hard hardwoods	103,979,077	42,255,553	61,723,525	0

#### PULPWOOD and TOPWOOD PORTION OF GROWING STOCK IN TONS

		Ownership	group	
Species group	Total	Public	Private	Not available
Total	150,514,768	55,071,402	95,443,367	0
Pines	21,225,256	10,484,756	10,740,500	0
Other softwoods	5,363,625	800,843	4,562,782	0
Soft hardwoods	22,488,715	7,918,817	14,569,898	0
Hard hardwoods	101,437,172	35,866,985	65,570,186	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 Clarksville, Arkansas.

#### MERCHANTABLE BOLE BIOMASS NET ANNUAL GROWTH IN TONS

		Owne	ership group	
Species group	Total	Public	Private	Not available
Total	10,147,311	3,847,265	6,293,737	6,308
Pines	4,283,586	1,879,280	2,388,759	15,546
Other softwoods	322,094	47,138	274,956	0
Soft hardwoods	1,321,453	465,709	856,773	-1,029
Hard hardwoods	4,220,178	1,455,139	2,773,248	-8,210

#### SAWLOG PORTION OF NET ANNUAL GROWTH IN TONS

	Ownership group			
Species group	Total	Public	Private	Not available
Total	7,591,125	3,261,021	4,322,541	7,563
Pines	3,697,679	1,877,879	1,806,988	12,812
Other softwoods	148,769	25,465	123,303	0
Soft hardwoods	711,185	270,973	439,847	364
Hard hardwoods	3,033,493	1,086,705	1,952,402	-5,614

#### PULPWOOD and TOPWOOD PORTION OF NET ANNUAL GROWTH IN TONS

		Own	ership group	
Species group	Total	Public	Private	Not available
Total	2,556,186	586,244	1,971,196	-1,254
Pines	585,907	1,401	581,771	2,734
Other softwoods	173,326	21,673	151,653	0
Soft hardwoods	610,268	194,736	416,926	-1,393
Hard hardwoods	1,186,685	368,434	820,847	-2,596

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 Clarksville, Arkansas.

#### MERCHANTABLE BOLE BIOMASS ANNUAL REMOVALS IN TONS

	Ownership group			
Species group	Total	Public	Private	Not available
Total	2,931,690	413,079	2,050,288	468,322
Pines	1,733,636	341,391	1,238,035	154,211
Other softwoods	32,505	4,795	27,710	0
Soft hardwoods	165,378	938	118,136	46,304
Hard hardwoods	1,000,171	65 <i>,</i> 955	666,408	267,808

#### SAWLOG PORTION OF ANNUAL REMOVALS IN TONS

	Ownership group			
Species group	Total	Public	Private	Not available
Total	1,984,546	313,036	1,380,553	290,958
Pines	1,354,659	289,486	931,480	133,693
Other softwoods	10,267	1,982	8,286	0
Soft hardwoods	65,228	0	45,049	20,179
Hard hardwoods	554,392	21,568	395,738	137,086

#### PULPWOOD and TOPWOOD PORTION OF ANNUAL REMOVALS IN TONS

	Ownership group			
Species group	Total	Public	Private	Not available
Total	947,143	100,044	669,735	177,364
Pines	378,977	51,905	306,555	20,518
Other softwoods	22,238	2,814	19,424	0
Soft hardwoods	100,150	938	73,086	26,125
Hard hardwoods	445,779	44,387	270,670	130,722

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 Clarksville, Arkansas.

#### MERCHANTABLE BOLE BIOMASS ANNUAL NET SURPLUS IN TONS

		Owne	ership group	
Species group	Total	Public	Private	Not available
Total	7,215,621	3,434,186	4,243,449	-462,014
Pines	2,549,949	1,537,889	1,150,725	-138,664
Other softwoods	289,590	42,343	247,247	0
Soft hardwoods	1,156,075	464,770	738,637	-47,332
Hard hardwoods	3,220,007	1,389,184	2,106,840	-276,017

#### SAWLOG PORTION OF ANNUAL NET SURPLUS IN TONS

		Owne	ership group	
Species group	Total	Public	Private	Not available
Total	5,606,578	2,947,986	2,941,988	-283,395
Pines	2,343,020	1,588,392	875,508	-120,880
Other softwoods	138,501	23,484	115,018	0
Soft hardwoods	645,956	270,973	394,798	-19,815
Hard hardwoods	2,479,101	1,065,137	1,556,664	-142,700

#### PULPWOOD and TOPWOOD PORTION OF ANNUAL NET SURPLUS IN TONS

		Own	ership group	
Species group	Total	Public	Private	Not available
Total	1,609,043	486,200	1,301,461	-178,619
Pines	206,929	-50,503	275,217	-17,784
Other softwoods	151,088	18,859	132,229	0
Soft hardwoods	510,119	193,797	343,839	-27,517
Hard hardwoods	740,906	324,047	550,177	-133,317

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 Clarksville, Arkansas.

	TOTAL MERCHANTAB	LE BOLE GROWING	STOCK IN TONS	
	Ownership group			
Species Group	Total	Public	Private	Not available
Total	669,899,687	227,315,411	442,584,276	0
Pines	200,699,094	91,789,742	108,909,352	0
Other softwoods	16,146,257	2,984,865	13,161,392	0
Soft hardwoods	70,226,784	19,382,867	50,843,917	0
Hard hardwoods	382,827,552	113,157,937	269,669,615	0
	SAWLOG PORTIO	N OF GROWING STO	CK IN TONS	
		Owners	ship group	
Species Group	Total	Public	Private	Not available
Total	380,201,720	146,691,779	233,509,941	0
Pines	153,463,200	76,659,718	76,803,481	0
Other softwoods	5,219,091	932,933	4,286,158	0
Soft hardwoods	30,606,157	9,132,574	21,473,583	0
Hard hardwoods	190,913,272	59,966,554	130,946,719	0

#### PULPWOOD and TOPWOOD PORTION OF GROWING STOCK IN TONS

		Owners	ship group	
Species Group	Total	Public	Private	Not available
Total	289,697,967	80,623,632	209,074,335	0
Pines	47,235,894	15,130,024	32,105,871	0
Other softwoods	10,927,166	2,051,932	8,875,234	0
Soft hardwoods	39,620,627	10,250,293	29,370,334	0
Hard hardwoods	191,914,280	53,191,383	138,722,896	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 Clarksville, Arkansas.

#### MERCHANTABLE BOLE BIOMASS NET ANNUAL GROWTH IN TONS

		Owne	rship group	
Species Group	Total	Public	Private	Not available
Total	27,075,713	6,933,020	20,107,815	34,877
Pines	17,265,492	4,442,729	12,802,861	19,903
Other softwoods	7,110,331	1,873,212	5,224,392	12,727
Soft hardwoods	513,125	81,117	430,813	1,194
Hard hardwoods	2,186,764	535,961	1,649,750	1,053

#### SAWLOG PORTION OF NET ANNUAL GROWTH IN TONS

		Owne	rship group	
Species Group	Total	Public	Private	Not available
Total	14,874,986	4,484,220	10,366,058	24,707
Pines	8,102,661	2,622,958	5,462,841	16,861
Other softwoods	228,155	37,505	190,337	313
Soft hardwoods	1,256,167	322,500	932,651	1,015
Hard hardwoods	5,288,003	1,501,257	3,780,229	6,518

#### PULPWOOD and TOPWOOD PORTION OF NET ANNUAL GROWTH IN TONS

		Owne	ership group	
Species Group	Total	Public	Private	Not available
Total	12,200,727	2,448,800	9,741,757	10,170
Pines	9,162,832	1,819,771	7,340,020	3,042
Other softwoods	6,882,176	1,835,707	5,034,055	12,414
Soft hardwoods	-743,042	-241,383	-501,839	179
Hard hardwoods	-3,101,239	-965,295	-2,130,479	-5,465

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 Clarksville, Arkansas.

#### MERCHANTABLE BOLE BIOMASS ANNUAL REMOVALS IN TONS

		Own	ership group	
Species Group	Total	Public	Private	Not available
Total	7,752,325	759,968	6,244,329	748,028
Pines	5,312,503	536,437	4,590,165	185,900
Other softwoods	79,824	8,769	30,587	40,468
Soft hardwoods	387,194	9,745	292,099	85,350
Hard hardwoods	1,972,805	205,017	1,331,477	436,310

#### SAWLOG PORTION OF ANNUAL REMOVALS IN TONS

		Own	ership group	
Species Group	Total	Public	Private	Not available
Total	5,568,353	538,903	4,509,340	520,110
Pines	4,074,263	420,314	3,489,460	164,488
Other softwoods	46,038	3,220	9,416	33,402
Soft hardwoods	206,620	7,126	146,767	52,726
Hard hardwoods	1,241,432	108,242	863,696	269,494

#### PULPWOOD and TOPWOOD PORTION OF ANNUAL REMOVALS IN TONS

		Own	ership group	
Species Group	Total	Public	Private	Not available
Total	2,183,972	221,065	1,734,989	227,918
Pines	1,238,240	116,123	1,100,705	21,412
Other softwoods	33,785	5,548	21,171	7,066
Soft hardwoods	180,574	2,619	145,332	32,623
Hard hardwoods	731,372	96,774	467,782	166,816

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 Clarksville, Arkansas.

#### MERCHANTABLE BOLE BIOMASS ANNUAL NET SURPLUS IN TONS

	Ownership group			
Species Group	Total	Public	Private	Not available
Total	19,323,388	6,173,052	13,863,486	-713,150
Pines	11,952,990	3,906,291	8,212,695	-165,997
Other softwoods	7,030,508	1,864,444	5,193,804	-27,740
Soft hardwoods	125,930	71,372	138,713	-84,155
Hard hardwoods	213,959	330,944	318,273	-435,258

#### SAWLOG PORTION OF ANNUAL NET SURPLUS IN TONS

	Ownership group						
Species Group	Total	Public	Private	Not available			
Total	9,306,633	3,945,317	5,856,718	-495,403			
Pines	4,028,398	2,202,644	1,973,381	-147,627			
Other softwoods	182,117	34,285	180,921	-33,089			
Soft hardwoods	1,049,547	315,374	785,884	-51,711			
Hard hardwoods	4,046,571	1,393,014	2,916,533	-262,976			

#### PULPWOOD and TOPWOOD PORTION OF ANNUAL NET SURPLUS IN TONS

Ownership group						
Total	Public	Private	Not available			
10,016,755	2,227,735	8,006,767	-217,747			
7,924,592	1,703,647	6,239,315	-18,370			
6,848,391	1,830,159	5,012,883	5,348			
-923,616	-244,002	-647,171	-32,444			
-3,832,612	-1,062,070	-2,598,260	-172,282			
	10,016,755 7,924,592 6,848,391 -923,616	TotalPublic10,016,7552,227,7357,924,5921,703,6476,848,3911,830,159-923,616-244,002	TotalPublicPrivate10,016,7552,227,7358,006,7677,924,5921,703,6476,239,3156,848,3911,830,1595,012,883-923,616-244,002-647,171			

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 Clarksville, Arkansas.

	Growing Stock Volume in green short tons							
Species group	Total	Grade 1	Grade 2	Grade 3	Gradeable log but does not meet grade 3 standards	Graded but does not contain gradeable log	Annual Sustainable Harvest Increase	
Total	217,358,320	18,974,637	40,911,295	110,231,655	36,865,472	10,375,261	6,396,789	
Select white oaks	60,635,081	5,598,673	13,321,562	31,236,504	7,861,978	2,616,363	1,663,648	
Select red oaks	31,540,891	3,486,275	8,923,732	13,311,960	4,273,578	1,545,346	912,036	
Other white oaks	26,003,582	584,024	3,006,193	15,002,596	6,134,497	1,276,273	626,271	
Other red oaks	48,946,735	3,366,311	7,501,806	24,092,648	11,975,480	2,010,490	1,291,040	
Hickory	18,075,136	712,274	2,928,886	10,603,677	3,131,798	698,501	487,635	
Hard maple	1,197,071	0	36,180	702,036	398,555	60,301	39,902	
Soft maple	1,847,711	50,506	42,553	797,686	643,997	312,968	79,700	
Beech	583,743	0	96,775	256,104	116,128	114,736	19,458	
Sweetgum	16,294,046	2,854,927	2,661,857	8,501,024	1,387,144	889,095	606,115	
Tupelo and blackgum	3,798,314	162,289	652,613	2,077,550	577,151	328,711	131,504	
Ash	3,866,626	561,800	734,875	2,053,062	210,458	306,432	107,588	
Cottonwood and aspen	2,069,678	1,398,678	383,058	287,942	0	0	91,986	
Basswood	211,476	0	77,340	134,136	0	0	9,399	
Yellow-poplar	111,363	95,312	0	0	16,051	0	4,949	
Black walnut	2,176,867	103,571	543,865	1,174,731	138,656	216,044	43,626	
Other eastern soft hardwoods	6,732,661	394,289	1,230,425	3,288,270	1,212,686	606,990	258,844	
Other eastern hard hardwoods	751,240	0	0	551,503	161,251	38,485	23,088	

#### **GLOSSARY OF TERMS**

Average annual net growth of growing stock: The annual change in volume of sound wood in live sawtimber and poletimber trees, and the total volume of trees entering these classes through ingrowth, less volume losses resulting from natural causes, over the last 5 years of inventory. Annual net growth is annual gross growth – annual mortality.

**Average annual removals from growing stock**: The average net growing-stock volume in growing-stock trees removed annually for roundwood forest products and the volume of removals for other purposes (i.e. land conversion).

**Annual net surplus:** The difference between average annual net growth and average annual net removals.

**Forest type:** A classification of forestland based upon and named for the tree species that forms the plurality of live-tree stocking. A forest type classification for a field location indicates the predominant live-tree species cover for the field location; hardwoods and softwoods are the first group to be determine predominant group, and Forest Type is selected from the predominant group.

**Forest type group:** A combination of forest types that share closely associated species or site requirements.

**Growing stock tree**: All live trees 5.0 inches (12.7) cm) DBH or larger that meet (now or prospectively) regional merchantability requirements in terms of saw-log length, grade, and cull deductions. Excludes rough and rotten cull trees.

**Log grade**: A log classification based on external characteristics as indicators of quality or value. Also see Tree grade. (See USDA, 2003 on tree grading field techniques.)

**Merchantable**: Refers to a pulpwood or sawlog section that meets pulpwood or sawlog specifications, respectively.

**Net annual growth**: The average annual net increase in the volume of trees during the period between inventories. Components include the increment in net volume of trees at the beginning of the specific year surviving to its end, plus the net volume of trees reaching the minimum size class during the year, minus the volume of trees that died during the year, and minus the net volume of trees that became cull trees during the year.

**Net volume in cubic feet:** The gross volume in cubic feet less deductions for rot, roughness, and poor form. Volume is computed for the central stem from a 1-foot stump to a minimum 4.0-inch top diameter outside bark, or to the point where the central stem breaks into limbs.

**Nonstocked**: Forestland stocked with less than 10 percent of full stocking with all live trees. Examples are recently cutover areas or recently reverted agricultural fields.

**Other red oaks**: A group of species in the genus *Quercus* that includes scarlet oak, northern pin oak, southern red oak, bear oak, shingle oak, laurel oak, blackjack oak, water oak, pin oak, willow oak, and black oak.

**Other white oaks**: A group of species in the genus *Quercus* that includes overcup oak, chestnut oak, and post oak.

Other softwoods: softwood species other than pines. Will include redcedar, bald cypress, and cypress

Pulpwood: Roundwood, whole-tree chips, or wood residues used for the production of wood pulp.

**Saw log**: A log meeting minimum standards of diameter, length, and defect, including logs at least 8 feet long, sound and straight, and with a minimum diameter inside bark of 6 inches for softwoods and 8 inches for hardwoods, or meeting other combinations of size and defect specified by regional standards.

**Sawtimber tree**: A live tree of commercial species containing at least a 12-foot sawlog or two noncontiguous saw logs 8 feet or longer, and meeting regional specifications for freedom from defect. Softwoods must be at least 9.0 inches d.b.h. Hardwoods must be at least 11.0 inches diameter outside bark (d.o.b.).

**Select red oaks**: A group of species in the genus *Quercus* that includes cherrybark oak, northern red oak, and Shumard oak.

**Select white oaks**: A group of species in the genus *Quercus* that includes white oak, swamp white oak, bur oak, swamp chestnut oak, and chinkapin oak.

**Timberland**: Forestland that is producing or is capable of producing crops of industrial wood and not withdrawn from timber utilization by statute or administrative regulation. (Note: Areas qualifying as timberland are capable of producing in excess of 20 cubic feet per acre per year of industrial wood in natural stands. Currently inaccessible and inoperable areas are included.)

**Tons:** Tons expressed in this report are short tons (2000 pounds) and are expressed in green weight. Tons in this report are calculated from net volume in cubic feet, which excludes bark.

Topwood: Merchantable pulpwood that is found above the sawlog portion of sawtimber trees.

Adapted from Forest Inventory and Analysis Glossary of Terms. Last accessed July 3, 2021.

https://www.nrs.fs.fed.us/fia/data-tools/state-reports/glossary/

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