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Pulpwood Production in the Lake States, 1993

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ABSTRACT.—Pulpwood production in the Lake States increased from 8.8 million cords in 1992 to 9.4 million cords in 1993. Michigan, Minnesota, and Wisconsin pulpwood production is shown by county and species group.

KEY WORDS: Residue, roundwood, whole tree chips, Minnesota, Michigan, Wisconsin.

Pulpwood production² in the Lake States—Michigan, Minnesota, and Wisconsin—increased to 9.4 million cords in 1993 from 8.8 million cords in 1992.³ Wisconsin produced 3.3 million cords, Michigan produced 3.2 million cords, and Minnesota produced 3.0 million cords in 1993 (table 1). Ninety-three percent of the pulpwood produced came from roundwood (including chips from roundwood); the remainder came from mill residues such as slabs, edgings, veneer cores, and chips from these materials (fig. 1).

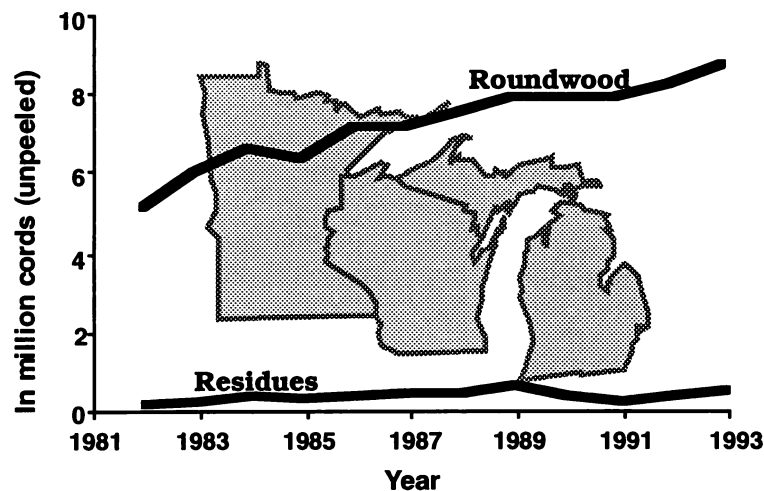


Figure 1.—Pulpwood production, Lake States, 1982-1993.

ROUNDWOOD

Roundwood production totaled 8.7 million cords and was equally distributed among the three Lake States. More than three-fourths of the harvested species were hardwoods. Aspen accounted for more than half of the total production (4.5 million cords). The other major species were pine (1.2 million cords), maple (1.1 million cords), spruce-fir (0.6 million cords), and birch (0.5 million cords) (fig. 2).

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² Includes logs, bolts, and wood residue used in manufacturing particleboard, waferboard, oriented strand board, and medium density fiberboard.

³ Previous year's data are from "Pulpwood Production in the Lake States, 1992," Research Note NC-365, 1994.

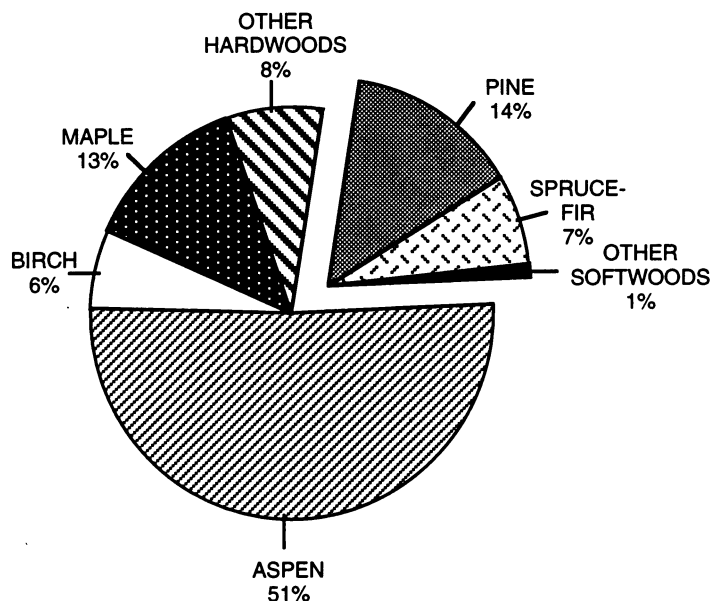


Figure 2.—Distribution of roundwood production by major species group, Lake States, 1993.

In 1993, whole tree chips (WTC) supplied 603 thousand cords or 7 percent of the roundwood production, an 8-percent increase over 1992. Michigan was the major WTC producer with 377 thousand cords, followed by Minnesota with 136 thousand cords and Wisconsin with 90 thousand cords.

Counties harvesting more than 150 thousand cords each were Delta, Iron, and Marquette in Michigan; Beltrami, Cass, Itasca, Koochiching, and St. Louis in Minnesota; and Bayfield, Marinette, Oneida, and Vilas in Wisconsin. These 12 counties contributed 38 percent of the pulpwood production from roundwood in the Lake States in 1993.

MILL RESIDUES

Pulpwood production from mill residues amounted to 690 thousand cords in 1993, a 13-percent increase over 1992. Production from softwood and hardwood residues by State was:

State	Softwood (Thousand standard cords, unpeeled)	Hardwood
Michigan	72	174
Minnesota	36	76
Wisconsin	68	264

Table 1.--Lake States pulpwood production from roundwood by county and species group, 1993

(In standard cords, unpeeled)

MINNESOTA												
Unit and county 1/	All species	Pine	Spruce	Balsam fir	Hemlock	Tamarack	Cedar	Aspen	Birch	Oak	Maple	Other hardwoods
ASPEN-BIRCH												
Carlton	45,591	1,792	2,122	9,223	--	29	--	26,350	3,350	--	1,806	919
Cook	75,708	11,302	13,293	6,440	--	42	--	42,086	2,546	--	--	--
Koochiching	447,623	8,081	49,230	26,370	--	1,165	--	323,181	347	--	--	39,250
Lake	96,616	2,971	16,913	8,491	--	210	--	52,676	11,767	--	2,042	1,545
St. Louis	664,866	31,399	43,053	63,184	--	259	--	480,773	9,354	--	6,800	30,042
Total	1,330,403	55,545	124,611	113,707	--	1,705	--	925,066	27,364	--	10,649	71,756
NORTHERN PINE												
Aitkin	106,198	1,999	833	5,426	--	--	--	90,907	1,352	--	3,145	2,536
Becker	96,620	1,721	17	735	--	--	--	93,983	--	--	--	163
Beltrami	179,600	8,698	6,141	10,523	--	541	--	148,820	2,701	--	--	2,175
Cass	164,789	7,006	1,405	6,199	--	--	--	146,644	1,370	--	--	2,164
Clearwater	68,790	375	460	1,970	--	50	--	65,486	--	--	--	449
Crow Wing	85,921	10,773	--	385	--	--	--	73,933	295	--	46	490
Hubbard	117,023	6,058	217	441	--	--	--	106,985	424	--	--	2,899
Itasca	409,215	7,752	20,053	55,649	--	--	--	309,582	5,182	--	3,673	7,324
Lake of the Woods	46,597	18,280	2,191	2,117	--	251	--	23,012	2	--	--	745
Mahnomen	25,745	--	--	--	--	--	--	25,541	--	--	--	204
Roseau	23,965	15,031	1,302	96	--	--	--	6,972	--	--	--	564
Wadena	16,257	2,895	--	--	--	--	--	13,280	--	--	--	82
Total	1,340,720	80,589	32,619	83,542	--	842	--	1,105,144	11,326	--	6,864	19,795
CENTRAL HARDWOOD												
Benton	43	43	--	--	--	--	--	--	--	--	--	--
Chisago	356	97	--	--	--	--	--	260	--	--	--	--
Goodhue	54	22	--	--	--	--	--	33	--	--	--	--
Isanti	1,535	1,442	--	--	--	--	--	94	--	--	--	--
Kanabec	9,685	214	--	--	--	--	--	9,270	121	--	79	--
Mille Lacs	38,128	7,474	--	44	--	--	--	30,611	--	--	--	--
Morrison	17,094	1,681	42	--	--	--	--	15,371	--	--	--	--
Olmsted	26	26	--	--	--	--	--	--	--	--	--	--
Otter Tail	6,755	349	--	--	--	--	--	6,283	--	--	--	122
Pine	87,126	8,216	609	1,703	--	--	--	67,711	3,293	--	3,476	2,118
Sherburne	365	352	13	--	--	--	--	--	--	--	--	--
Todd	1,922	164	--	--	--	--	--	1,757	--	--	--	--
Total	163,089	20,081	664	1,747	--	--	--	131,388	3,414	--	3,555	2,241
PRAIRIE												
Clay	15	--	--	--	--	--	--	15	--	--	--	--
Kittson	179	--	--	--	--	--	--	179	--	--	--	--
Marshall	3,348	--	--	--	--	--	--	3,308	--	--	--	41
Norman	6,485	--	--	--	--	--	--	6,485	--	--	--	--
Pennington	4,664	--	--	--	--	--	--	4,664	--	--	--	--
Polk	5,818	--	--	--	--	--	--	5,818	--	--	--	--
Red Lake	2,579	--	--	--	--	--	--	2,579	--	--	--	--
Sibley	13	13	--	--	--	--	--	--	--	--	--	--
Total	23,101	13	--	--	--	--	--	23,048	--	--	--	41
State total	2,857,313	156,227	157,894	198,997	--	2,547	--	2,184,646	42,104	--	21,067	93,833

(Table 1 continued on next page)

(Table 1 continued)

MICHIGAN												
Unit and county 1/	All species	Pine	Spruce	Balsam fir	Hemlock	Tamarack	Cedar	Aspen	Birch	Oak	Maple	Other hardwoods
E. UPPER PENINSULA												
Alger	104,039	16,335	2,432	8,410	2,585	524	631	16,595	9,015	806	37,946	8,760
Chippewa	106,049	34,512	3,779	8,501	1,895	483	605	36,136	4,638	66	10,307	5,128
Delta	174,773	27,579	3,622	10,961	3,365	744	815	58,357	16,680	765	40,107	11,779
Luce	75,241	18,823	4,063	5,589	3,192	331	368	7,531	4,801	641	25,487	4,415
Mackinac	96,397	11,225	3,425	5,495	1,241	243	405	38,174	6,803	347	22,776	6,261
Menominee	95,902	8,909	3,293	4,403	1,250	244	285	32,699	15,309	782	22,941	5,786
Schoolcraft	125,634	32,004	5,935	11,240	3,815	907	837	21,624	6,286	706	33,912	8,368
Total	778,034	149,387	26,550	54,599	17,343	3,476	3,946	211,117	63,530	4,113	193,478	50,495
W. UPPER PENINSULA												
Baraga	62,997	4,666	2,349	2,915	4,056	223	124	32,317	2,150	415	8,594	5,189
Dickinson	138,240	24,410	5,949	9,321	2,641	526	634	57,103	11,291	452	19,079	6,834
Gogebic	98,284	5,210	2,500	1,906	689	--	--	35,392	4,703	3,035	34,190	10,659
Houghton	140,643	8,385	3,401	4,260	1,097	133	159	45,070	11,860	1,821	49,553	14,905
Iron	187,856	10,160	9,805	7,105	1,149	225	272	64,109	15,845	2,813	61,138	15,234
Keweenaw	5,288	638	516	42	6	--	--	1,211	780	58	1,766	270
Marquette	301,233	54,464	12,072	16,762	9,431	1,033	1,196	77,683	31,508	1,845	75,486	19,755
Ontonagon	116,087	6,665	2,274	1,318	877	--	--	60,514	2,551	1,533	29,978	10,378
Total	1,050,628	114,597	38,865	43,630	19,946	2,139	2,384	373,398	80,687	11,972	279,784	83,225
N. LOWER PENINSULA												
Alcona	51,246	9,769	6	13	--	--	--	27,245	3,559	4,328	4,391	1,936
Alpena	21,185	698	161	165	--	--	9	13,491	2,119	714	2,658	1,170
Antrim	21,260	4,694	--	--	--	--	--	8,080	1,783	--	5,858	845
Arenac	13,288	366	--	--	--	--	--	9,320	877	1,138	1,524	62
Bay	1,571	--	--	--	--	--	--	1,331	90	--	151	--
Benzie	8,824	--	--	--	--	--	--	2,815	448	451	3,770	1,341
Charlevoix	7,713	282	--	--	--	--	--	2,742	365	15	3,595	714
Cheboygan	66,320	13,512	425	990	--	--	94	36,472	3,044	1,441	8,676	1,665
Clare	44,576	1,121	--	--	--	--	--	32,759	1,782	2,069	6,151	693
Crawford	36,113	18,833	--	--	--	--	--	10,587	190	3,636	2,769	98
Emmet	19,923	1,532	52	218	--	--	27	10,681	1,551	--	5,405	457
Gladwin	28,187	260	--	--	--	--	--	22,229	885	1,263	3,034	516
Grand Traverse	13,298	2,626	--	--	--	--	--	5,201	687	1,098	2,901	786
Iosco	15,176	126	--	--	--	--	--	11,270	1,537	396	1,518	329
Isabella	24,661	183	--	--	--	--	--	18,125	276	4,050	1,309	717
Kalkaska	16,670	4,594	--	--	--	--	--	9,160	477	504	1,915	21
Lake	49,865	302	--	--	--	--	--	15,885	747	21,516	8,602	2,811
Leelanau	4,896	--	--	--	--	--	--	1,937	487	521	732	1,218
Manistee	60,929	279	--	--	--	--	--	28,011	3,382	9,629	12,514	7,116
Mason	29,930	24	--	--	--	--	--	17,700	2,082	5,772	3,074	1,279
Mecosta	37,341	62	--	--	--	--	--	27,742	810	4,770	2,934	1,020
Midland	13,275	--	--	--	--	--	--	7,836	739	1,168	3,516	16
Missaukee	42,274	1,359	--	--	--	--	--	25,033	1,896	4,870	8,016	1,100
Montmorency	54,246	3,419	26	80	--	--	4	32,779	3,431	5,999	7,039	1,469
Newaygo	35,947	--	--	--	--	--	--	18,367	563	13,309	3,125	582
Oceana	22,110	--	--	--	--	--	--	12,439	852	5,210	2,601	1,008
Ogemaw	29,945	3,023	--	--	--	--	--	16,100	1,399	5,280	2,920	1,225
Osceola	37,351	30	--	--	--	--	--	26,756	2,104	3,472	4,562	426
Oscoda	44,537	15,724	--	--	--	--	--	20,398	1,926	3,533	2,391	565
Otsego	34,977	13,951	64	100	--	--	3	10,333	1,471	563	7,804	688
Presque Isle	42,281	564	970	1,130	--	--	19	25,522	5,822	851	5,384	2,019
Roscommon	50,803	15,890	--	--	--	--	--	22,100	1,592	3,811	6,984	428
Wexford	34,828	2,747	--	--	--	--	--	14,332	1,785	5,824	5,579	4,562
Total	1,015,544	115,970	1,705	2,696	--	--	156	544,777	50,758	117,199	143,399	38,883
S. LOWER PENINSULA												
Allegan	9,885	--	--	--	--	--	--	1,953	--	7,899	33	--
Barry	13,136	--	--	--	--	--	--	225	2,362	406	8,772	1,370
Calhoun	251	--	--	--	--	--	--	--	--	251	--	--
Cass	1,418	--	--	--	--	--	--	--	--	1,075	343	--
Clinton	1,387	--	--	--	--	--	--	--	121	669	237	359
Eaton	5,560	--	--	--	--	--	--	377	--	2,448	2,375	359
Gratiot	150	--	--	--	--	--	--	83	--	--	67	--
Hillsdale	14	14	--	--	--	--	--	--	--	--	--	--
Kalamazoo	4,719	--	--	--	--	--	--	2,515	--	1,131	713	359
Kent	8,134	--	--	--	--	--	--	4,001	--	3,863	269	--
Montcalm	3,023	17	--	--	--	--	--	856	--	2,150	--	--
Muskegon	9,362	--	--	--	--	--	--	1,534	--	7,828	--	--
Ottawa	2,162	--	--	--	--	--	--	201	--	1,961	--	--
Saginaw	123	--	--	--	--	--	--	--	--	--	123	--
Shiawassee	540	--	--	--	--	--	--	253	--	287	--	--
St. Joseph	3,855	--	--	--	--	--	--	172	--	2,867	817	--
Tuscola	381	--	--	--	--	--	--	381	--	--	--	--
Van Buren	399	--	--	--	--	--	--	--	--	358	41	--
Total	64,499	31	--	--	--	--	--	12,550	2,483	33,193	13,791	2,450
State total	2,908,704	379,984	67,120	100,925	37,288	5,615	6,486	1,141,842	197,459	166,477	630,452	175,054

(Table 1 continued on next page)

(Table 1 continued)

WISCONSIN												
Unit and county 1/	All species	Pine	Spruce	Balsam fir	Hemlock	Tamarack	Cedar	Aspen	Birch	Oak	Maple	Other hardwoods
NORTHEASTERN												
Florence	83,521	3,715	1,389	2,557	2,185	137	3	41,935	8,076	1,147	18,580	3,797
Forest	107,817	5,926	2,975	4,668	1,992	136	--	31,730	10,043	3,959	36,068	10,322
Langlade	123,778	9,176	1,225	5,213	946	224	--	51,296	13,948	3,473	26,057	12,218
Lincoln	107,272	10,062	884	2,826	700	151	--	43,583	11,263	5,173	19,619	13,012
Marquette	159,370	47,513	914	3,435	461	233	11	59,453	18,977	1,693	22,308	4,374
Menominee	69,527	6,706	198	916	9,114	96	58	24,799	4,404	1,019	15,582	6,635
Oconto	67,653	13,440	177	714	156	--	--	31,199	7,002	793	11,241	2,929
Oneida	155,198	22,660	2,616	5,743	449	811	--	46,385	22,765	8,076	29,761	15,933
Shawano	24,420	1,667	43	95	1,193	--	--	13,133	1,312	493	4,850	1,635
Vilas	154,944	20,539	3,032	3,339	219	232	--	61,268	30,977	3,656	24,858	6,823
Total	1,053,500	141,403	13,454	29,506	17,414	2,019	71	404,780	128,769	29,480	208,926	77,679
NORTHWESTERN												
Ashland	70,231	5,449	4,645	2,842	276	623	--	28,804	6,072	2,937	15,633	2,950
Barron	19,539	2,089	75	--	--	9	--	11,258	1,455	955	2,429	1,269
Bayfield	198,719	56,047	1,660	1,807	30	371	--	90,590	24,844	4,208	14,895	4,267
Burnett	71,159	30,934	150	11	--	--	--	30,715	1,382	2,123	3,587	2,256
Douglas	149,559	75,172	1,547	8,454	--	44	--	43,782	12,282	576	6,717	986
Iron	138,342	5,369	3,463	5,161	1,184	355	75	66,889	9,341	6,928	29,969	9,609
Polk	24,179	5,144	--	--	--	--	--	16,373	902	291	1,006	463
Price	132,931	4,945	3,367	6,267	1,006	836	--	59,144	11,905	6,974	21,152	17,336
Rusk	83,524	2,051	342	338	146	1,082	--	40,948	7,453	4,462	18,207	8,496
Sawyer	146,607	7,247	2,310	3,133	260	1,135	--	60,513	22,253	6,475	32,728	10,552
Taylor	70,108	943	947	2,181	1,180	411	--	34,734	5,669	2,129	14,332	7,582
Washburn	116,408	29,182	727	1,118	127	96	--	60,664	10,456	2,766	9,410	1,860
Total	1,221,306	224,573	19,233	31,312	4,210	4,963	75	544,414	114,013	40,824	170,064	67,624
CENTRAL												
Adams	76,660	60,783	--	--	--	88	--	2,280	521	11,344	983	661
Chippewa	50,034	3,500	55	38	56	150	--	32,509	3,334	1,885	5,985	2,524
Clark	76,384	4,445	66	68	--	23	--	38,635	4,937	9,977	13,535	4,699
Eau Claire	34,508	18,844	83	--	--	--	--	6,214	964	4,305	3,216	884
Jackson	92,915	55,070	33	--	--	10	--	17,865	2,215	9,076	5,722	2,924
Juneau	34,855	25,897	--	--	--	--	--	994	375	6,134	945	509
Marathon	58,460	7,192	141	235	1,167	40	--	26,843	2,551	2,324	11,267	6,700
Marquette	12,576	11,370	11	--	11	--	--	48	87	774	187	86
Monroe	27,006	20,460	6	--	--	--	--	1,220	153	4,252	556	358
Portage	30,085	19,397	33	159	191	51	--	5,075	514	1,414	2,108	1,144
Waupaca	14,865	8,301	77	16	53	9	--	3,825	238	134	1,492	719
Waushara	30,737	27,991	154	--	--	--	--	743	138	1,158	361	193
Wood	36,248	13,839	173	--	14	19	--	15,962	695	1,598	2,403	1,547
Total	575,333	277,089	833	516	1,492	389	--	152,213	16,724	54,373	48,759	22,945
SOUTHWESTERN												
Buffalo	5,920	1,476	40	--	--	--	--	3,948	63	95	235	62
Crawford	281	242	--	--	--	--	--	10	--	2	17	10
Dunn	20,273	10,838	38	24	--	--	--	6,786	392	708	922	565
Grant	352	232	--	--	11	--	--	--	17	11	69	11
Iowa	547	535	--	--	--	--	--	--	2	3	3	4
La Crosse	3,432	3,075	42	--	--	--	--	44	25	15	170	60
Lafayette	17	--	--	13	--	--	--	--	--	4	--	*
Pepin	2,083	1,841	--	--	--	--	--	209	3	1	17	11
Pierce	983	728	--	15	--	--	--	226	1	--	6	7
Richland	1,153	1,153	--	--	--	--	--	--	--	--	--	*
Sauk	8,177	7,184	14	11	--	--	--	52	81	546	220	68
St. Croix	8,294	1,783	111	--	11	--	--	5,896	117	19	306	52
Trempealeau	6,035	4,821	332	--	--	--	--	491	46	40	178	127
Vernon	145	97	--	--	--	--	--	--	--	48	--	--
Total	57,692	34,002	576	63	23	--	--	17,662	749	1,495	2,142	979
SOUTHEASTERN												
Brown	10,358	215	--	13	--	--	--	8,448	147	116	572	848
Calumet	22	19	--	--	--	--	--	--	--	--	2	1
Columbia	5,459	4,533	23	--	--	--	--	13	2	870	6	12
Dane	1,352	1,352	--	--	--	--	--	--	--	--	--	--
Dodge	36	22	14	--	--	--	--	--	--	--	--	--
Door	309	25	--	--	11	--	--	204	8	--	58	3
Fond Du Lac	54	--	--	--	--	--	--	--	1	52	2	*
Green	487	417	--	--	--	--	--	--	12	11	38	9
Green Lake	2,410	1,343	7	--	--	--	--	93	116	473	240	136
Jefferson	83	30	--	--	--	--	--	52	--	--	--	*
Kenosha	63	63	--	--	--	--	--	--	--	--	--	--
Kewaunee	48	--	--	--	34	--	--	--	3	3	4	4
Manitowoc	272	167	27	--	--	--	--	--	5	24	42	7
Milwaukee	23	23	--	--	--	--	--	--	--	--	--	*
Outagamie	1,914	204	11	--	--	--	--	840	100	42	611	106
Ozaukee	189	189	--	--	--	--	--	--	--	--	--	*
Racine	*	--	--	--	--	--	--	--	--	--	--	*
Rock	1,626	1,604	22	--	--	--	--	--	--	--	--	--
Sheboygan	1,003	957	36	--	--	--	--	--	1	--	8	1
Walworth	1,314	1,303	--	--	--	--	--	--	2	2	7	--
Washington	869	819	--	11	--	--	--	--	8	10	12	9
Waukesha	1,270	1,228	41	--	--	--	--	--	--	--	--	*
Winnebago	382	227	13	--	--	--	--	--	2	132	4	3
Total	29,540	14,737	193	24	45	--	--	9,650	407	1,737	1,604	1,142
State total	2,937,371	691,807	34,289	61,420	23,185	7,371	146	1,128,718	260,661	127,910	431,495	170,371
Total Lake States	8,703,388	1,228,018	259,303	361,342	60,473	15,533	6,632	4,455,206	500,224	294,387	1,083,014	439,258

* = less than 1 standard cord, unpeeled.

1/ Includes only those counties that supplied pulpwood in 1993.

