



*Michigan Department of Natural Resources*

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# **MICHIGAN PRIMARY MILL SURVEY 2014**



**Forest Resources Division**

IC4002 (04/27/2016)

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For information or assistance on this publication, contact the Forest Resources Division, Michigan Department of Natural Resources, P.O. Box 30452, Lansing, MI 48909-7952.

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## INTRODUCTION

Michigan primary mills were canvassed in 2015 as part of a periodic census of industry conducted by the Michigan Department of Natural Resources (MDNR), in cooperation with the USDA Forest Service (USDA FS). Mills were canvassed to determine status and composition of the industry, amount of wood receipts by mills and production from Michigan forest lands, interstate movement of industrial roundwood, type of finished products produced, and amount and uses of mill residues. Aggregate data from the survey has been summarized in this report, and will be used in the 2014 Timber Product Output report to be prepared by the USDA FS. **See the forthcoming TPO report for a full analysis of roundwood production and mill receipts volumes.** Individual mill volume responses will be kept confidential. Only primary mills were canvassed - those that process roundwood in the form of pulpwood, bolts, posts, poles, cabin logs, sawlogs, or that receive wood chips directly from the forest. Ninety-two percent (92%) of known mills participated in the survey; 8%, or about 31 mills, could not be contacted or would not participate.

### Key Definitions:

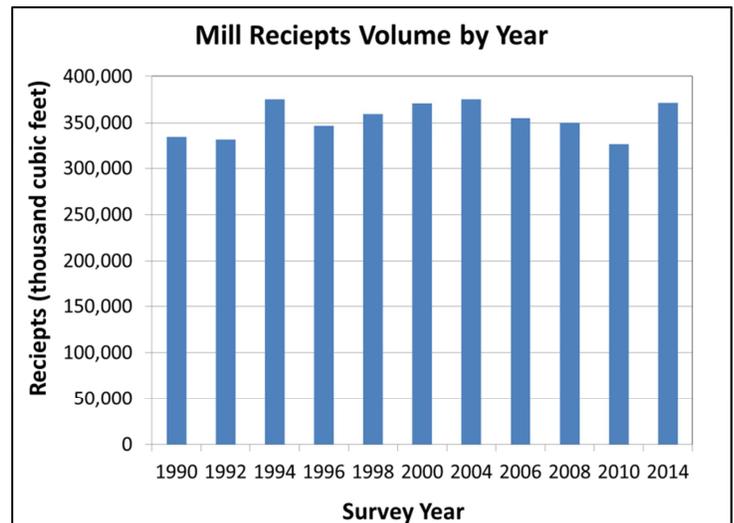
**Production** = total roundwood volume harvested within the state (both processed in the state and unprocessed wood exported)

**Receipts** = total roundwood volume processed by mills in the state (both in-state harvests, and imports from other states/countries)

**Roundwood** = wood harvested from forests in the form of sawlogs, cabin logs, posts, poles, bolts, pulpwood, or chips.

## ROUNDWOOD RECEIPTS

The total volume of roundwood received by Michigan mills increased by 15% from 325 million cubic feet in 2010, to 371 million cubic feet in 2014. Consumption of wood products increased significantly in 2013 and 2014. Receipts by pulp and composite board plants, industrial fuelwood consumers, and 'other' mills were up notably since 2010, driven by the gradual recovery of the housing market, continued strong demand for industrial wood products, and the addition of a large new mulch plant in southern lower Michigan. The veneer mill receipts estimate shown below is underestimated; one of the larger veneer companies would not participate in the survey.



Industrial Roundwood Receipts in Thousand Cubic Feet, By Mill Type and Survey Year<sup>1</sup>.

Kind of Mill	Survey Year										
	1990	1992	1994	1996	1998	2000	2004	2006	2008	2010	2014
Saw mills	99,359	101,646	105,717	92,450	128,058	131,773	137,672	139,324	112,338	128,538	128,134
Veneer mills	6,784	6,498	7,184	8,634	5,928	9,372	6,431	6,378	5,947	5,091	4,038
Pulp and composite product mills	207,623	200,610	235,647	222,367	212,921	215,123	214,303	175,544	190,956	164,045	197,978
Industrial fuelwood <sup>2</sup>	15,445	18,030	23,799	19,372	8,195	8,870	10,088	27,359	31,105	19,563	26,362
Post, pole, piling mills	2,869	3,027	2,409	2,947	2,478	3,841	4,395	5,731	7,380	6,174	5,111
Other products <sup>3</sup>	2,528	1,072	726	1,147	1,646	1,884	2,183	634	2,030	2,337	9,792
<b>Total</b>	<b>334,607</b>	<b>330,882</b>	<b>375,480</b>	<b>346,916</b>	<b>359,226</b>	<b>370,863</b>	<b>375,072</b>	<b>354,970</b>	<b>349,755</b>	<b>325,748</b>	<b>371,414</b>

<sup>1</sup>Adapted from Haugen, David E. 2016. **Michigan timber industry, 2010**. Resource Update FS-78. Newtown Square, PA: USDA FS, NRS. 5 p.

<sup>2</sup>Does not include residential fuelwood.

<sup>3</sup>Other mills includes cabin log mills, handle mills, mine timber mills, and other miscellaneous mills.

## NUMBER OF MILLS

The number of active mills that participated in the survey declined by 2% in 2014; 46 mills were idle, 38 mills closed that had been active in 2010, and 13 active mills would not participate in the survey. An additional 18 mills could not be located within the time available. The number of large sawmills and industrial fuelwood plants increased in 2014. An additional veneer mill co-located with a large sawmill was identified that was active, but not broken out in the 2010 data. The number of mills can be misleading; new mills are discovered in proportion to effort put into site visits. Most are small firms.

Number of Active Primary Wood-Using Mills by Mill Type and Survey Year<sup>1</sup>.

Kind of Mill	Mill Size	Survey Year										
		1990	1992	1994	1996	1998	2000	2004	2006	2008	2010	2014
Sawmills <sup>2</sup>	Large	26	30	35	28	36	36	37	37	33	37	40
	Medium	107	106	101	96	94	82	65	69	58	47	54
	Small	211	187	152	163	157	144	131	136	144	132	119
	<b>Total</b>	<b>344</b>	<b>323</b>	<b>288</b>	<b>287</b>	<b>287</b>	<b>262</b>	<b>233</b>	<b>242</b>	<b>235</b>	<b>216</b>	<b>213</b>
Veneer mills		7	7	5	4	5	5	4	4	4	4	6
Pulp mills		6	6	6	6	6	6	6	4	4	3	3
Particleboard mills		5	5	5	6	6	6	6	4	4	4	4
Industrial fuelwood <sup>3</sup>		8	7	9	5	4	5	4	6	6	6	8
Post, pole, piling mills		19	7	7	10	13	12	10	12	13	12	8
Other products <sup>4</sup>		16	11	9	14	15	13	13	14	17	18	14
<b>Grant Total</b>		<b>405</b>	<b>366</b>	<b>329</b>	<b>332</b>	<b>336</b>	<b>309</b>	<b>276</b>	<b>286</b>	<b>283</b>	<b>263</b>	<b>259</b>

<sup>1</sup>Mills that produce more than one product are counted only for the product they process the most of.

<sup>2</sup> Adapted from Haugen, David E. 2016. Michigan timber industry, 2010. Resource Update FS-78. Newtown Square, PA: USDA FS, NRS. 5 p.

<sup>3</sup>Size defined by annual lumber production volume: Large - >5 million board feet; Medium - 1 million to 5 million board feet; Small - <1 million board feet.

<sup>4</sup>Does not include residential fuelwood.

<sup>5</sup>Includes plants producing mulch, mine timbers, excelsior, shavings, etc.

## REGIONAL RECEIPT AND PROCESSING OF ROUNDWOOD

Hardwood and softwood species group roundwood receipts trends followed the same pattern as total receipts, and are about the same as 2004 levels. About 92% of the wood processed by Michigan mills came from Michigan. Wisconsin and Canada were the largest sources of imported roundwood.

Roundwood Receipts by State or Country of Origin (Standard Cords)

Major Species Groups	Ontario, Canada	MI	WI	Other States	Total
Hardwood	75,646	3,150,146	188,091	3,683	3,420,655
Softwood	5,029	1,225,778	95,978	0	1,323,696
<b>Total</b>	<b>80,676</b>	<b>4,375,924</b>	<b>284,069</b>	<b>3,683</b>	<b>4,744,352</b>
<b>Percent of Total</b>	<b>1.7%</b>	<b>92.2%</b>	<b>6.0%</b>	<b>0.1%</b>	<b>100.0%</b>

One-half of the roundwood received was processed by mills in Michigan's western Upper Peninsula (WUP), and about 38% by mills in the northern Lower Peninsula (NLP), and the least was processed in the eastern Upper Peninsula (EUP). The largest percentage of wood received from Michigan sources came from the NLP, followed by the WUP.

Receipts Volume by Location or Mill

Region	MCF	MBF	CORDS	PERCENT
<b>WUP</b>	187,919	250,731	2,383,705	51%
<b>EUP</b>	11,199	24,850	141,759	3%
<b>NLP</b>	141,052	453,130	1,815,982	38%
<b>SLP</b>	31,245	107,611	402,906	8%
<b>Grand Total</b>	<b>371,414</b>	<b>836,321</b>	<b>4,744,352</b>	<b>100%</b>

Receipts Volume from Each Region (Source of Wood)

Region	MCF	MBF	CORDS	PERCENT
<b>WUP</b>	108,851	123,874	1,421,639	29%
<b>EUP</b>	37,189	49,922	470,746	10%
<b>NLP</b>	165,157	487,648	2,059,362	44%
<b>SLP</b>	33,394	105,603	410,152	9%
<b>IMPORTED</b>	30,214	69,275	382,453	8%
<b>Grand Total</b>	<b>374,804</b>	<b>836,321</b>	<b>4,744,352</b>	<b>100%</b>

**SPECIES PROCESSED**

Aspen, hard and soft maple, oak, and red pine comprised about 70% of the total volume in cords processed in 2014. Among sawlog receipts, species comprising the most volume, were red pine, hard maple, red oak, aspen, and soft maple.

Analysis of roundwood receipts indicate consumption has increased significantly for some species relative to 2004 levels. Annual consumption of basswood and red oak increased by 25+% from 10 years ago; northern white cedar, red pine, and spruce by ~50%; ash has more than doubled. Red pine consumption increased from about 34 to 52 million cubic feet, an increase of about 227,000 cords. By contrast, jack pine consumption appears to have decreased by about 75% since 2004, falling from about 458,000 to 118,000 cords in 2014.

**KEY PRODUCTS PRODUCED**

About 54% of the volume received by Michigan mills was used for production of paper, pulp, and composite board products (oriented strand board, composite siding, hardboard, and plywood), in total about 2.5 million cords.

Sawmills received 34% of total roundwood or about 1.6 million cords for production of grade lumber, dimension lumber, pallet cut stock, crane mats and other industrial lumber. Of this, sawmills whose key product was pallet cut stock received about 227,000 cords, equivalent to about 5% of total roundwood receipts. Energy plants and one pellet plant received the equivalent of about 376,000 cords of chips from roundwood and harvest residues, or about 7.9% of total roundwood receipts.

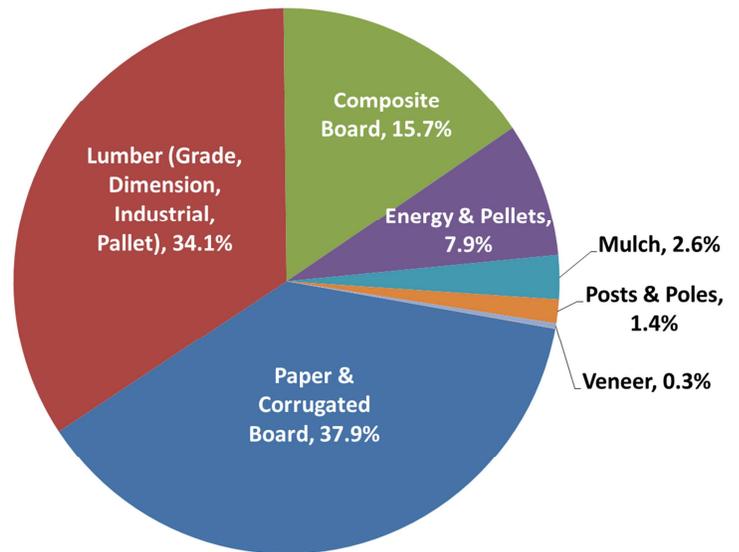
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**Roundwood Receipts by species, in Standard Cords & Thousand Board Feet (international 1/4")**

Species	Cords	Percent of		
		Total Cords	MBF Sawlogs	Percent of Total MBF
balsam fir	78,893	2%	8,519	1%
spruce	130,081	3%	16,206	2%
eastern white pine	131,315	3%	25,841	3%
jack pine	118,521	2%	35,092	4%
red pine	664,895	14%	229,204	27%
northern white-cedar	89,335	2%	3,546	0%
American basswood	143,890	3%	14,688	2%
American beech	74,187	2%	8,935	1%
aspen/balsam poplar	1,051,741	22%	97,046	12%
ash	147,434	3%	25,151	3%
red oak	377,652	8%	124,972	15%
soft maple	544,662	11%	62,151	7%
hard maple	690,284	15%	130,236	16%
other spp.	501,462	11%	54,733	7%
<b>Total</b>	<b>4,744,352</b>	<b>100%</b>	<b>836,321</b>	<b>100%</b>

**Key Products Produced as Percent of Total Roundwood Receipts, 2014**



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