

Timber Harvest in Wisconsin



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In 2013, Wisconsin produced 2.1 million cords of pulpwood annually, most of which was sugar maple, red maple, aspen, red pine, and northern red oak. This is a 4% decrease from 2007 pulpwood production.

On public lands, 2.4% of county forest, 1.7% of state forest and only 0.8% of national forest accessible acres were harvested in 2016. Harvested volume per acre is highest on national forest lands but value per acre is highest on county lands.

There are approximately 639 million oven-dry tons of biomass in Wisconsin, 57% of which is located in the northern part of the state. About $\frac{2}{3}$ of this is considered merchantable.

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“How much pulpwood do we produce?”

Pulpwood production by species and region of the state

Table 1. Pulpwood production by species (standard cords)

	2007	2013	Percent change
Sugar maple	313,709	314,296	0.2%
Aspen	375,838	296,232	-21%
Soft maple	310,678	279,127	-10%
Red oak	233,617	190,502	-18%
Red pine	160,380	185,563	16%
Paper birch	242,602	148,438	-39%
Jack pine	70,425	114,963	63%
Ash	89,906	102,734	14%
White pine	73,567	64,996	-12%
Balsam fir	58,361	51,718	-11%
Spruce	80,274	39,542	-51%
Hemlock	15,791	24,848	57%
White oak	49,364	12,502	-75%
Basswood	82,835	10,970	-87%
Yellow birch	27,641	7,255	-74%
Tamarack	5,221	5,120	-2%
Beech	2,557	4,115	61%
Northern white-cedar	352	1,414	302%
Elm	19,059	800	-96%
Black cherry	567	730	29%
Hickory	442	556	26%
Black walnut	247	0	-100%
Total	2,216,451	2,126,087	-4%

*Standard cords unpeeled , not including composite

Source: Ronald Piva, USDA Forest Service, Northern Research Station, St. Paul MN

Pulpwood production decreased 4% from 2007 to 2013 (Table 1). Five species groups accounted for 70% of pulpwood: sugar maple, soft maple, aspen, red pine and the red oaks.

Among major species, some of the largest gains in pulpwood production were for jack pine, red pine, ash and hemlock and some of the largest losses were in aspen, paper birch, spruce, basswood, red and white oaks (Figure 1).

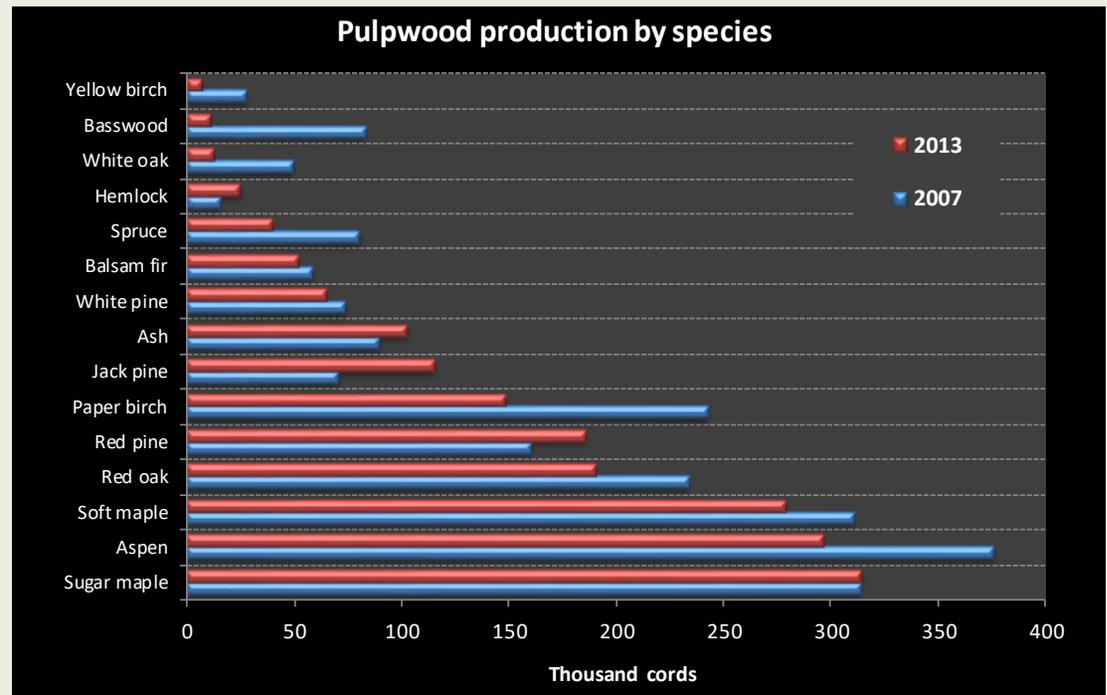


Figure 1. Pulpwood production by species

Source: Ronald Piva, USDA Forest Service, Northern Research Station, St. Paul MN



“How much fuelwood do we produce?”
Fuelwood production by species and region of the state

Table 2. Industrial fuelwood production (cords) 2013*

	Central	Northeast	Northwest	Southwest	Total
Aspen	3,251	5,423	19,775	287	28,736
Hard maple	2,002	2,850	12,495	8	17,356
Soft maple	1,295	2,173	9,634	149	13,250
Red oak	709	89	9,592	652	11,043
Red pine	840	1,750	3,776	114	6,480
White pine	501	1,167	3,764	409	5,841
Ash	43	4	4,617	501	5,165
White birch	125	458	3,917	130	4,631
Basswood	918	47	3,308	35	4,308
Tamarack	-	583	986	-	1,569
Hemlock	500	500	250		1,250
White oak	25	-	634	112	771
Jack pine	250	167	200	3	620
Balsam fir	167	167	108	-	442
Spruce	167	167	104	2	439
Hickory	-	-	225	175	400
Black cherry	-	-	170	39	209
Beech	-	-	38	2	40
Elm	-	-	19	10	29
Cedar	-	-	10	1	21
Yellow birch	0	3	17	-	19
Grand Total	10,793	15,547	73,641	2,627	102,618

*Fuelwood production in the southeast region was negligible.

Aspen, maples and red oak accounted for over 70% of fuelwood production in 2013 with pines making up another 13% (Figure 2). Northwest Wisconsin produced about 72% of all fuelwood (Table 2).

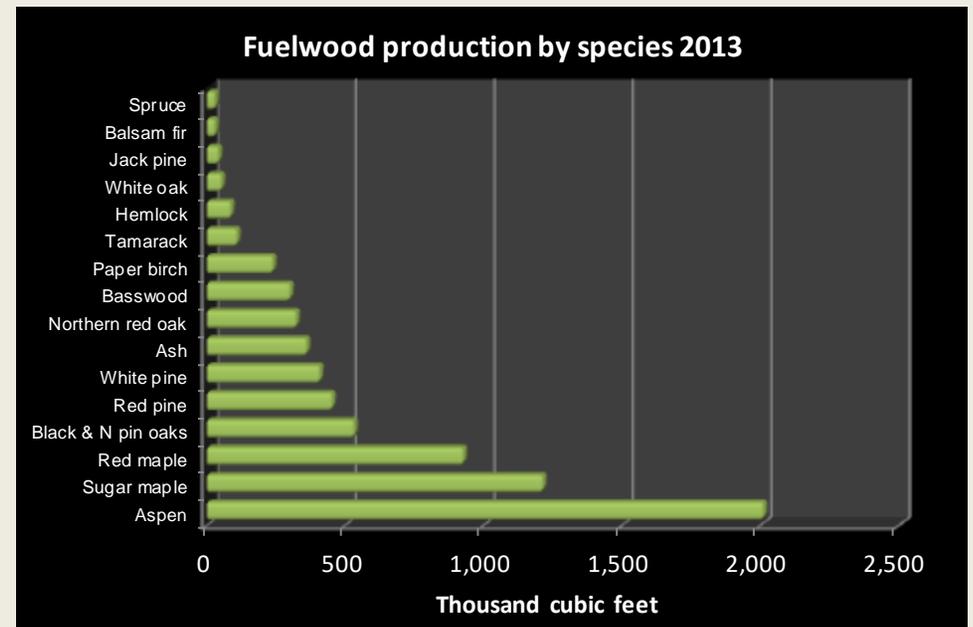


Figure 2. Fuelwood production by species (thousand cubic feet).
 Source: Ronald Piva, USDA Forest Service, Northern Research Station, St. Paul MN



"How much wood do we produce on state and county lands?"

Timber sales on state and county lands in Wisconsin

State and county forestlands generated about \$50.4 million worth of timber revenue in 2016 (Table 3). Although county lands accounted for c. 75% of total sales and cords harvested, sales on state forests are larger (90 acres per sale compared to 66 on county lands) and generate higher revenues per sale. County forests, however, generate more revenue per acre.

Of the 2.4 million acres of county forests, 40,616 were harvested in 2016 (a decrease of 18% from 2014). The value of this timber, however, was up 10% over 2014. Of the approximately one million acres of state land, 14,794 were harvested in 2016 (a decrease of 11% over 2014). Stumpage value on state lands, however, remained unchanged.

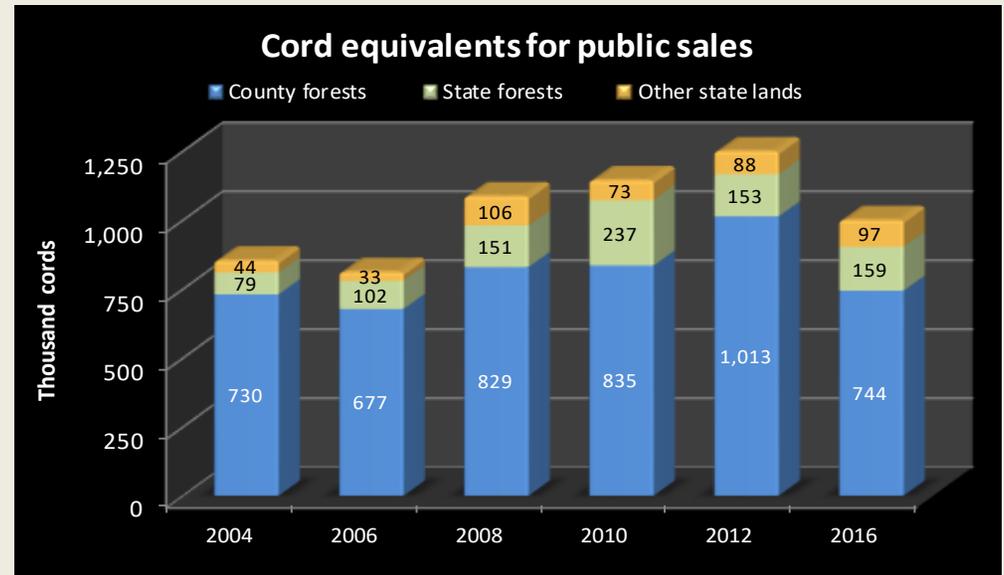


Figure 3. Cord equivalent sales on public lands.
Source: Douglas Brown, Dept of Natural Resources, Madison WI

Table 3. 2016 completed sales on public lands ("B" notices)

	# Sales completed	# Acres harvested	Acres per sale	# MBF harvested	# Cords harvested	All products: # Cord Equiv	Stumpage value	Value per sale	Value per acre
State Forests	101	9,087	90	2,915	152,442	158,940	\$7,166,709	\$70,958	\$789
Other State Lands	125	5,707	46	2,332	92,343	97,495	\$3,878,130	\$31,025	\$680
County Forests	615	40,616	66	19,109	831,182	743,787	\$39,383,277	\$64,038	\$970
Total	841	55,410	66	24,356	1,075,967	1,000,222	\$50,428,116	\$55,476	\$842

Source: Douglas Brown, Dept of Natural Resources, Madison WI

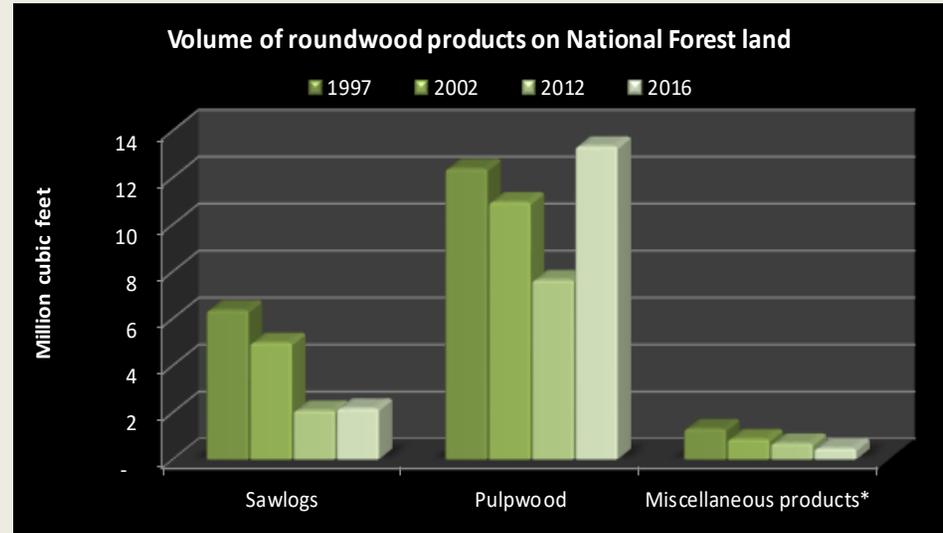
“How much wood do we produce on national forest lands?”

Volume of roundwood by product on federal lands

Only 10,720 acres were harvested on the Chequamegon and Nicolet national forests in 2016 compared to 55,410 acres on state and county lands (Table 4). Total stumpage value in 2016 was about \$8.1 million on federal lands, compared to a total of \$50.4 million on state and county lands.

A comparison between the federal, state, and county shows that the national forests are harvesting only 1.2% of their accessible acreage annually (compared to an average 1.9% for state and county). On state lands, volume per acre and sale value per harvested acre are lower than on county and forest service properties.

Harvest on the national forests by product in 2016 was: sawlogs – 2,188 mcf, pulpwood – 13,343 mcf, fuelwood – 396 mcf and miscellaneous products (biomass) – 87 mcf (Figure 4).



*Miscellaneous products include fuelwood and green and dry biomass.
 Figure 4 . Roundwood production on national forest lands. Source: Tina Baumann, Timber Resource Specialist, USDA Forest Service, Chequamegon-Nicolet National Forests (FY16 data)

Table 4. A comparison of harvest levels on federal, state, and county lands (2014).

Landowner	Total acres forested	Total acres harvested	Percent of forested acres that are harvested	Volume harvested (cord equiv)	Volume per harvested acre (cord equiv/acre)	Total sale value	Sale value per harvested acre
Forest service ¹	1,319,000 total (864,000 legally accessible)	10,720	0.8% of total acres (1.1% of accessible)	207,326 (99,331 MBF)	19.3	\$8,100,543	\$756
State ²	979,081	14,794	1.7%	256,435	17.3	\$11,044,839	\$747
County ²	1,989,975	40,616	2.4%	743,787	18.3	\$39,383,277	\$970

¹Tina Baumann, Timber Resource Specialist, USDA Forest Service, Chequamegon-Nicolet National Forests (FY16 data)

²Source: Douglas Brown, Dept of Natural Resources, Madison WI (2016 CY data)



“What kind of forest products do we harvest?”

Wisconsin’s roundwood production by species group and product

Total roundwood production was approx. 312 million cft in 2013, of which over half is pulpwood and 30% sawlogs and veneer (Table 5 and Figure 5).

Table 5. Industrial roundwood production by species group and product, 2013 (thousand cubic feet).

Species	Pulp products	Comp products	Saw logs	Veneer logs	Industrial fuelwood	Other products	Total
Aspen	23,402	29,881	10,119	1,167	2,012	2,470	71,062
Sugar maple	24,829	523	12,189	1,249	1,215	-	41,221
Red pine	14,659	751	15,114	440	454	1,326	33,198
Red maple	22,079	841	5,497	127	928	16	30,414
N red oak	10,397		12,902	830	533		25,203
Jack pine	9,071	233	4,133	1	43		13,524
Ash	8,116	18	3,804	274	362		12,935
Black & N pin oak	4,671		5,797	373	240		11,312
White pine	5,135	141	3,916	37	409	348	10,393
Basswood	867	4,117	3,795	103	302	387	9,872
Paper birch	6,769	78	1,157	168	324		8,821
White oak	989	-	4,141	388	54		5,626
Balsam fir	4,075	263	151	-	31		4,551
Spruce	3,116	28	598	194	31	18	4,015
Hemlock	1,963	-	147	-	88		2,285
Yellow birch	573	56	959	111	1		1,702
Black walnut	-	-	1,139	160	-		1,299
Black cherry	58	-	935	49	15		1,071
Hickory	44	-	733	58	28		891
Elm	63	-	464	56	2		587
N white-cedar	111		74		1		288
Beech	325	-	93	18	3		442
Tamarack	403	-	25	4	110		653
Minor species	26,269	-	474	106	5	133	26,854
Total	167,985	36,930	88,358	5,911	7,188	4,697	312,007

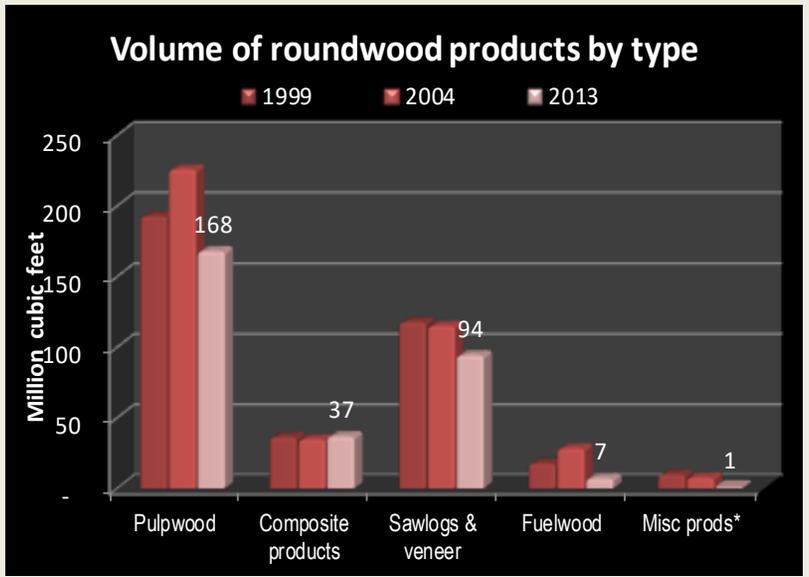


Figure 5. Volume of roundwood by year and product.
 *Miscellaneous products include posts, poles and pilings.
 Source: Ronald Piva, USDA Forest Service, Northern Research Station, St. Paul MN



“How much woody biomass do we have and where?”

Biomass volume by unit and species group

Table 6. All live tree and sapling aboveground biomass on forestland (million oven-dry short tons) by species group and region of the state.

Species group	Northeast	Northwest	Central	Southwest	Southeast	Total
Ash	10.4	15.7	6.5	4.5	9.6	46.6
Aspen	17.9	26.2	7.5	4.0	2.1	57.8
Balsam Fir	5.7	5.3	0.3	0.0	0.1	11.4
Basswood	6.5	6.8	2.3	3.7	2.3	21.6
Beech	0.7	0.0	0.0	0.0	0.5	1.2
Black cherry	4.0	5.1	16.4	6.0	2.1	33.6
Black walnut	1.9	1.6	2.0	3.5	2.6	11.6
Elm	0.0	0.0	0.1	2.2	1.4	3.7
Sugar maple	1.1	1.7	1.6	5.5	2.3	12.3
Hemlock	5.8	2.7	0.7	0.0	0.4	9.7
Hickory	0.2	0.2	1.7	7.4	2.3	11.8
Jack pine	1.2	1.9	2.3	0.0	0.0	5.5
Black & N pin oaks	11.3	19.2	12.4	15.9	3.6	62.3
N red oak	6.7	3.6	0.7	0.0	2.5	13.5
White-cedar	4.8	5.8	2.1	2.2	0.9	15.9
Paper Birch	19.0	28.3	19.8	3.4	2.7	73.2
Red pine	11.2	9.2	9.4	1.6	0.8	32.1
Red maple	5.1	4.4	0.7	0.2	0.4	10.8
Spruce	35.9	31.4	5.7	6.9	3.8	83.8
Tamarack	3.6	3.8	1.1	0.0	0.2	8.8
White oaks	0.8	6.6	11.5	14.7	7.2	40.8
White pine	10.5	6.8	10.7	2.2	1.8	32.0
Yellow birch	3.9	5.2	1.1	0.1	0.4	10.6
Minor species	2.6	3.2	5.1	9.9	7.5	28.3
Total	170.7	194.7	121.8	94.0	57.7	638.8

There were 639 million oven-dry tons (ODT) of biomass on timberland in Wisconsin in 2016 (437 of which was classified as merchantable). This is an increase of 94 million ODT or 19%, since 1996. As with volume, most biomass is located in northern Wisconsin (58%) with lesser amounts in southern (24%) and central (19%) parts of the state (Figure 6).

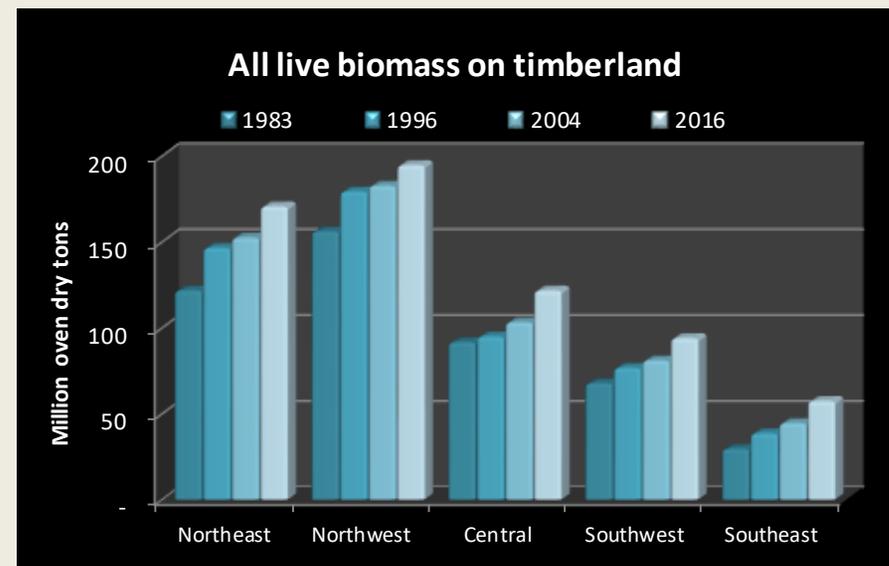


Figure 6. All live biomass on timberland (million oven-dry tons). Source: USDA Forest Inventory and Analysis data.

[Control & click for a table of Biomass by County](#)