

# **2008 Wood Processor Report**

## **Including Import and Export Information**

Compiled from 2008 Wood Processor Reports  
pursuant to 12 MRSA § 8884

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## What is the purpose of the Wood Processor Report?

Each year, the Maine Forest Service collects information from Maine primary wood processors regarding the volume of wood processed in Maine. Information is also collected for volumes imported into Maine or exported from Maine.

*This report summarizes, for 2008, the volume of wood harvested in Maine, processed by Maine mills, and imported into or exported from Maine.*

Wood flow data is summarized for sawlogs, pulpwood, biomass chips, and imports and exports.

## How was this information collected?

In 2008, the Maine Forest Service received wood processor reports from 155 primary processing mills (sawmills, pulp and paper mills), 59 portable sawmills, 25 firewood dealers, 34 loggers and brokers who may have exported wood, 22 concentration yards, and 10 mills that burn some form of wood for energy. Volume information contained in these individual reports is confidential and by law shall not be made public, except that summary reports may be published using aggregated data which does not reveal the activities of an individual person or firm (12 MRSA chapter 805, subchapter 5, "Forest Landowner and Wood Processor Reporting Requirements").

## Interpreting Harvest, Export, Import, and Processed by the Maine Forest Products Industry

### Maine wood processed

wood that is harvested in Maine and used by a Maine primary processing facility.

### Exported from Maine without processing

wood that is harvested in Maine and exported out of state without processing by a Maine mill.

### Imported from out of state

wood that is imported from out of state (not harvested in Maine) and processed by a Maine mill.

### Total processed by Maine Forest Products Industry

total volume of wood processed in Maine, regardless of origin.

## Definitions and Notes

### 1. Biomass Chips:

produced in the woods by chipping the entire tree, including branches and tops. Usually used as energy fuel, they may also be suitable for sludge composting, playground padding, and mulch.

### 2. Bole/Stem Pulp Chips:

produced in the woods by chipping the lower portion of the tree. These chips are not free of bark, but are suitable for use in pulp mills.

### 3. Cords (cfs):

a stack of fuel wood, pulpwood, or other material that measures 4 x 4 x 8 feet, or 128 cubic feet.

### 4. Construction and Demolition Waste (C and D Waste):

ground up wooden debris left over from construction and demolition that is burned by wood to energy facilities.

### 5. Firewood:

roundwood that is burned for home heating.

### 6. Hog Fuel:

any woody residue produced from mills, such as sawdust, bark or shavings, and used as energy fuel.

### 7. Pulpwood:

roundwood that is used for the production of wood pulp. Generally sold as tree length, 16', 8' or 4' lengths.

### 8. Sawlogs:

a log that meets minimum standards of diameter, length, and defect, intended for sawing into boards or lumber. Includes sawlogs, studwood, pallet logs, boltwood, and veneer logs.


### 9. Sawmill residues:


clean, pulp-quality chips made from debarked slabs and edgings at sawmills. Used by pulp and paper mills to produce wood pulp.


### 10. Thousand Board Feet (MBF)


One thousand board feet. One board foot is the amount of wood contained in an unfinished board 1" thick, 12" long, and 12" wide.


## Report Highlights


 Maine's forest products industry consumed 15.8 million green ton equivalents in 2008, down from 17.0 green ton equivalent in 2007. Seventy-seven percent of the supply (12.1 million green ton equivalents) was harvested in Maine, while 23% (3.7 million green ton equivalents) was imported.

 Maine landowners harvested 14.3 million green ton equivalents of wood in 2008, down from 16.6 million green ton equivalents in 2007. Fifteen percent (2.2 million green ton equivalents) of the 2008 harvest was exported, down from 2007 (3.2 million green ton equivalents).

 Maine's pulp and paper producers processed 9.1 million green tons of pulpwood, up slightly from 2007 consumption. Seventy-two percent of the pulpwood originated from Maine's forests; 28% was imported.

 Biomass harvesting volume was 3.1 million tons in 2008, down from 2007 (3.5 million tons). Biomass energy facilities consumed 3.7 million tons in 2008, the same as reported in 2007. Eighty percent originated from Maine's forests; 20% was imported.

 Maine's sawlog production in 2008 was .7 billion board feet, down from 2007 (.9 billion board feet).

 During 2008, Maine's forest products industry imported 3.7 million green tons, while 2.2 million green tons were exported.

# SAWLOGS

## 2008 Wood flow in Maine as reported to the Maine Forest Service (in MBF)

County	Spruce and Fir	White and Red Pine	Hemlock	Cedar	Other Softwood	Total Softwood	Beech	White Birch	Yellow Birch	Sugar Maple	Red Maple	Oak	Ash	Aspen	Other Hardwood	Total Hardwood	Total Sawlogs
ANDROSCOGGIN	34	8,387	749	0	1	9,171	61	215	491	238	302	152	40	165	8	1,672	10,843
AROOSTOOK	118,678	5,099	1,087	11,472	1,606	137,942	413	2,975	3,669	10,680	3,084	47	82	31,700	1,429	54,079	192,021
CUMBERLAND	206	17,680	4,220	0	19	22,125	37	23	11	39	92	85	21	4	15	327	22,452
FRANKLIN	11,554	6,164	421	37	42	18,218	449	1,048	656	2,605	1,377	707	529	51	28	7,450	25,668
HANCOCK	269	6,738	671	94	0	7,772	89	98	55	100	86	109	82	6	201	826	8,598
KENNEBEC	113	11,400	727	59	5	12,304	130	688	44	187	328	286	127	27	25	1,842	14,146
KNOX	401	2,537	266	0	2	3,206	1	48	2	3	21	71	4	6	15	171	3,377
LINCOLN	423	3,179	528	22	0	4,152	33	67	11	35	230	89	1,719	3	16	2,203	6,355
OXFORD	7,506	29,866	864	8	0	38,244	487	602	819	1,409	883	730	382	56	43	5,411	43,655
PENOBSCOT	17,570	10,763	13,187	4,009	16	45,545	159	1,953	1,644	1,993	590	293	463	1,772	1,207	10,074	55,619
PISCATAQUIS	81,349	5,317	1,389	1,084	2	89,141	774	1,249	3,590	8,523	2,537	910	1,088	1,082	467	20,220	109,361
SAGadahoc	28	1,373	28	0	1	1,430	0	204	0	0	0	4	0	0	0	208	1,638
SOMERSET	39,559	10,806	470	242	414	51,491	928	2,744	2,001	2,229	2,130	1,336	1,045	51	1,132	13,596	65,087
WALDO	433	6,183	354	225	1	7,196	5	189	21	41	18	94	12	33	112	525	7,721
WASHINGTON	2,183	3,819	62	528	3	6,595	13	86	69	70	18	21	9	1	3	290	6,885
YORK	7	12,806	616	0	5	13,434	0	8	0	0	13	41	0	2	0	64	13,498
<b>Maine wood processed:</b>	280,313	142,117	25,639	17,780	2,117	467,966	3,579	12,197	13,083	28,152	11,709	4,975	5,603	34,959	4,701	118,958	586,924
<b>Exported from Maine without processing:</b>	206,183	13,049	819	13,940	26	234,017	452	2,297	4,187	11,045	3,614	7,985	2,660	196	24,450	56,886	290,903
<b>Total harvested from Maine forests:</b>	486,496	155,166	26,458	31,720	2,143	701,983	4,031	14,494	17,270	39,197	15,323	12,960	8,263	35,155	29,151	175,844	877,827
<b>Imported from out of state:</b>	9,167	53,204	139	1,001	0	63,511	9	862	203	812	513	586	126	24,566	5,621	33,298	96,809
<b>Total processed by Maine Forest Products Industry:</b>	289,480	195,321	25,778	18,781	2,117	531,477	3,588	13,059	13,286	28,964	12,222	5,561	5,729	59,525	10,322	152,256	683,733

- Notes:**
1. Sawlogs include logs, veneer, boltwood, studwood, palletwood, etc. Green ton converted to MBF @ 5 green tons = 1 MBF.
  2. Other Softwood includes larch, pitch pine, and others.

## PULPWOOD

**2008 Wood flow in Maine as reported to the Maine Forest Service (in Green Tons), including both solid wood and bole/stem pulp chips (Totals do not add up due to rounding)**

County	Spruce and Fir	White and Red Pine	Hemlock	Cedar	Other Softwood	Total Softwood	Aspen	Other Hardwood	Total Hardwood	Mixed Wood	Total Pulpwood
ANDROSCOGGIN	1,652	34,779	22,935	0	3,191	62,557	8,808	49,629	58,437	0	120,994
AROOSTOOK	134,492	2,447	39,195	0	43	176,177	29,505	713,032	742,537	0	918,714
CUMBERLAND	1,727	76,550	36,322	0	2,274	116,873	2,814	41,738	44,552	0	161,425
FRANKLIN	101,953	15,870	24,477	0	2,969	145,269	36,978	305,136	342,114	0	487,383
HANCOCK	71,164	23,787	28,287	0	6,487	129,725	29,082	130,740	159,822	0	289,547
KENNEBEC	7,321	37,612	18,569	0	3,681	67,183	10,134	30,737	40,871	0	108,054
KNOX	8,517	6,173	3,459	0	386	18,535	1,935	10,182	12,117	0	30,652
LINCOLN	5,657	21,410	8,828	0	1,750	37,645	4,413	8,398	12,811	0	50,456
OXFORD	50,893	73,761	75,070	0	6,373	206,097	30,383	347,091	377,474	0	583,571
PENOBSCOT	233,449	35,044	333,117	0	4,368	605,978	62,085	626,335	688,420	0	1,294,398
PISCATAQUIS	249,192	21,235	57,768	0	3,366	331,561	53,430	400,046	453,476	0	785,037
SAGadahoc	332	3,903	4,020	0	669	8,924	1,782	1,345	3,127	0	12,051
SOMERSET	185,162	77,907	69,633	0	2,627	335,329	60,574	763,743	824,317	0	1,159,646
WALDO	25,238	32,934	11,802	0	3,787	73,761	10,431	28,877	39,308	0	113,069
WASHINGTON	122,922	25,738	33,232	0	2,843	184,735	8,753	114,093	122,846	0	307,581
YORK	928	49,636	23,505	0	639	74,708	2,797	26,362	29,159	0	103,867
<b>Maine wood processed:</b>	1,200,599	538,786	790,219	0	45,453	2,575,057	353,904	3,597,484	3,951,388	0	6,526,445
<b>Exported from Maine without processing:</b>	176,514	182	2,584	0	25,465	204,745	19,502	602,437	621,939	0	826,684
<b>Total harvested from Maine forests:</b>	1,377,113	538,968	792,803	0	70,918	2,779,802	373,406	4,199,921	4,573,327	0	7,353,129
<b>Imported from out of state:</b>	376,446	357,072	201,339	0	45,074	979,931	198,255	1,388,412	1,586,667	0	2,566,598
<b>Total processed by Maine Forest Products Industry:</b>	1,577,045	895,858	991,558	0	90,527	3,554,988	552,159	4,985,896	5,538,055	0	9,093,043

SAWMILL RESIDUE <i>Green Tons</i>
3,435
21,423
8,105
17,934
2,173
3,762
0
3,080
89,361
32,276
53,840
0
18,036
387
0
13,600
267,412
83,294
350,706
116,263
383,675

Sawmill residues are clean, pulp-quality wood chips made from slabs and edgings at sawmills. The volume is reported here as an additional input to the pulp and paper mills and pellet mills. Sawmill residues are a by-product of the sawing process, and are not included as additional harvest volumes from Maine's forests.

### Pulpwood Notes:

1. Other Softwood is comprised of bole chips of which specific species information was not collected.
2. Aspen volumes are based upon pure loads.
3. Other Hardwood is comprised of all hardwood species except aspen sold in pure loads.

# 2008 Wood Flow in Maine as reported to the Maine Forest Service (in Green Tons)

County	BIOMASS CHIPS	Further utilization of wood already tallied.	C AND D WASTE	FIREWOOD / PELLET* CORDS
		HOG FUEL		
Androscoggin	131,589	9,649	22,410	97
Aroostook	550,139	169,489	0	7,031
Cumberland	95,108	18,849	14,516	1,725
Franklin	277,090	15,137	0	4,487
Hancock	154,853	0	528	20
Kennebec	74,706	266	2,489	291
Knox	25,994	0	334	1,001
Lincoln	73,989	95	3,307	600
Oxford	99,523	23,709	202	2,395
Penobscot	414,759	137,208	5,966	1,738
Piscataquis	196,673	41,670	2,048	2,740
Sagadahoc	19,435	541	182	168
Somerset	454,486	115,362	265	6,675
Statewide*	6,380	10,396	0	4,649
Waldo	56,213	12,519	0	574
Washington	181,741	28,174	0	0
York	124,472	5,200	12,473	2,180
<b>Maine wood processed:</b>				
	2,937,150	588,264	64,720	36,371
<b>Exported from Maine without processing:</b>				
	110,581	57,054	0	180
<b>Total harvested from Maine Forests:</b>				
	3,047,731	645,318	64,720	36,551
<b>Imported from out of state:</b>				
	740,292	268,198	71,440	0
<b>Total processed by Maine Forest Products Industry:</b>				
	3,677,442	856,462	136,160	36,371

\*Volumes reported with no indication of originating county were identified as Statewide volume.

## Wood Imports and Exports

<u>Import Origins</u>	<u>Export Destinations</u>
<u>States:</u>	<u>States:</u>
Connecticut	Connecticut
Maryland	Illinois
Massachusetts	Michigan
New Hampshire	New Hampshire
New York	New York
Pennsylvania	Vermont
Rhode Island	<u>Provinces:</u>
Vermont	New Brunswick
<u>Provinces:</u>	Nova Scotia
New Brunswick	Quebec
Nova Scotia	<u>Countries:</u>
Ontario	China
Quebec	Japan
	Thailand

\* This is the first Wood Processor Report to separately report firewood as a new product. Report forms were sent to known firewood dealers. In the past some firewood was uniquely identified and reported to MFS as an export, and MFS grouped these minor volumes into the pulpwood product. This first attempt is by no means a complete accounting of the volume of processed firewood merchandized, sold, or distributed within Maine, or as an export or import. The only previous estimation of annual firewood consumption is a survey conducted by the State Planning Office in the early 1990's. That survey estimated an annual processing, sale, distribution and consumption of 400,000 cords. MFS will continue to improve its survey methods in order to obtain a consistent and reliable estimate of annual firewood processing.

In additional, this is the first year we have received reports from Maine's pellet mills. We have included reported volumes for pellet production under this section also.

**SUMMARY****2008 Wood flow in Maine as reported to the Maine Forest Service**

<b>Product</b>	<b>Harvest, Export, Import, Instate Processing</b>	<b>Total Volume in 2008</b>	<b>Total Volume in Green Tons</b>
<b>Sawlogs</b> (in MBF) 1 MBF = 1,000 board feet  <u>Note on conversions:</u> see conversion table at the end of report	a. Maine wood processed	586,924	2,555,814
	b. Exported from Maine without processing	290,903	1,272,374
	c. Total harvested from Maine forests (a+b=c)	877,827	3,828,188
	d. Imported from out of state	96,809	422,777
	f. Total processed by Maine Forest Products Industry (a+d=e)	683,733	2,978,591
<b>Pulpwood</b> (in green tons)	a. Maine wood processed	6,526,445	6,526,445
	b. Exported from Maine without processing	826,684	826,684
	c. Total harvested from Maine forests (a+b=c)	7,353,129	7,353,129
	d. Imported from out of state	2,566,598	2,566,598
	f. Total processed by Maine Forest Products Industry (a+d=e)	9,093,043	9,093,043
<b>Biomass Chips</b> (in green tons)	a. Maine wood processed	2,937,150	2,937,150
	b. Exported from Maine without processing	110,581	110,581
	c. Total harvested from Maine forests (a+b=c)	3,047,731	3,047,731
	d. Imported from out of state	740,292	740,292
	f. Total processed by Maine Forest Products Industry (a+d=e)	3,677,442	3,677,442
<b>Firewood / Pellets</b> (in cords)  <u>Note on conversion:</u> 1 cord = 2.5 green tons	a. Maine wood processed	36,371	90,928
	b. Exported from Maine without processing	180	450
	c. Total harvested from Maine forests (a+b=c)	36,551	91,378
	d. Imported from out of state	0	0
	f. Total processed by Maine Forest Products Industry (a+d=e)	36,371	90,928
<b>Totals</b> (in green tons)	a. Maine wood processed		12,110,337
	b. Exported from Maine without processing		2,210,089
	c. Total harvested from Maine forests (a+b=c)		14,320,426
	d. Imported from out of state		3,729,667
	f. Total processed by Maine Forest Products Industry (a+d=e)		15,840,004

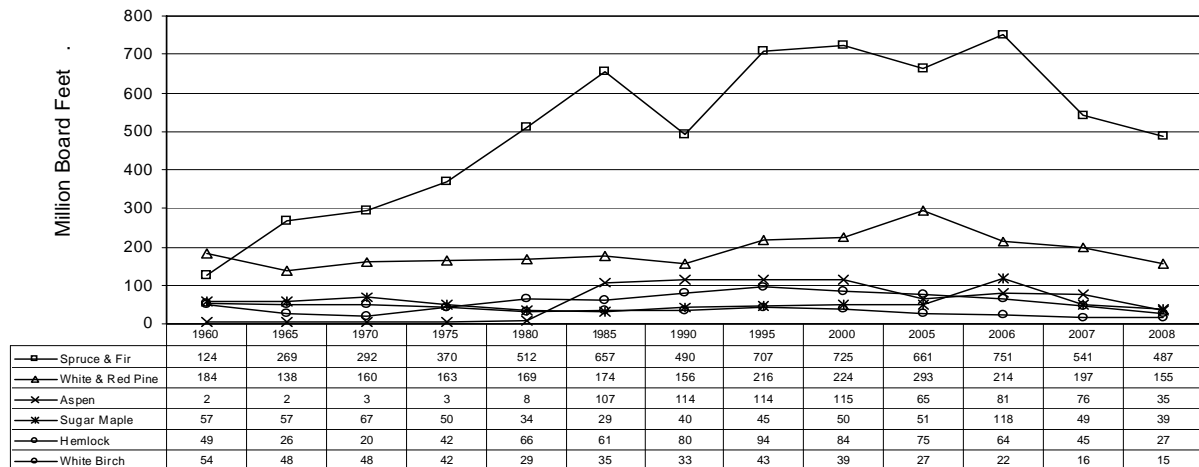
## Wood Harvesting Trends (1960-2008)

The Maine Forest Service has been collecting data on volume of wood harvested since the late 1940's. The following three charts illustrate wood harvesting trends over the past 49 years.

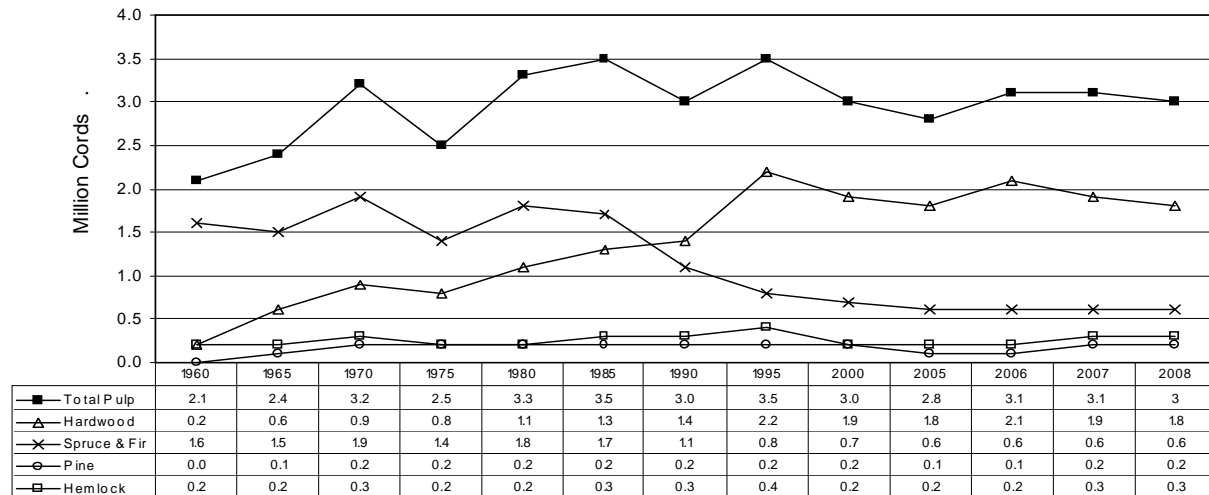
The two graphs to the right show the harvest volumes for selected species for sawlogs and pulpwood. These volumes include exported volumes.



Harvest Levels of Selected Species for Saw logs in Maine (1960 to 2006)

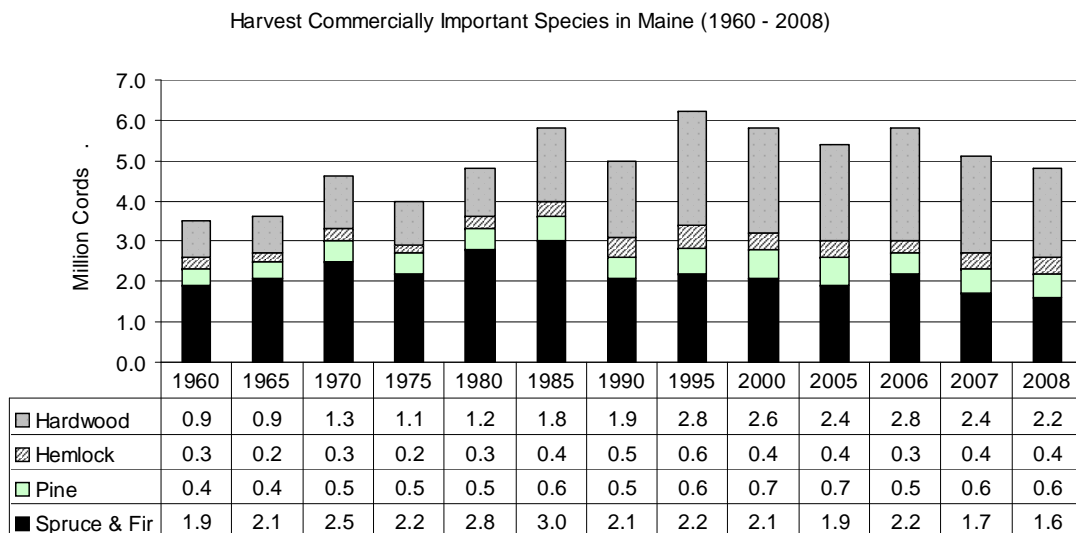


Harvest Levels of Selected Species for Pulpwood in Maine (1960 to 2006)



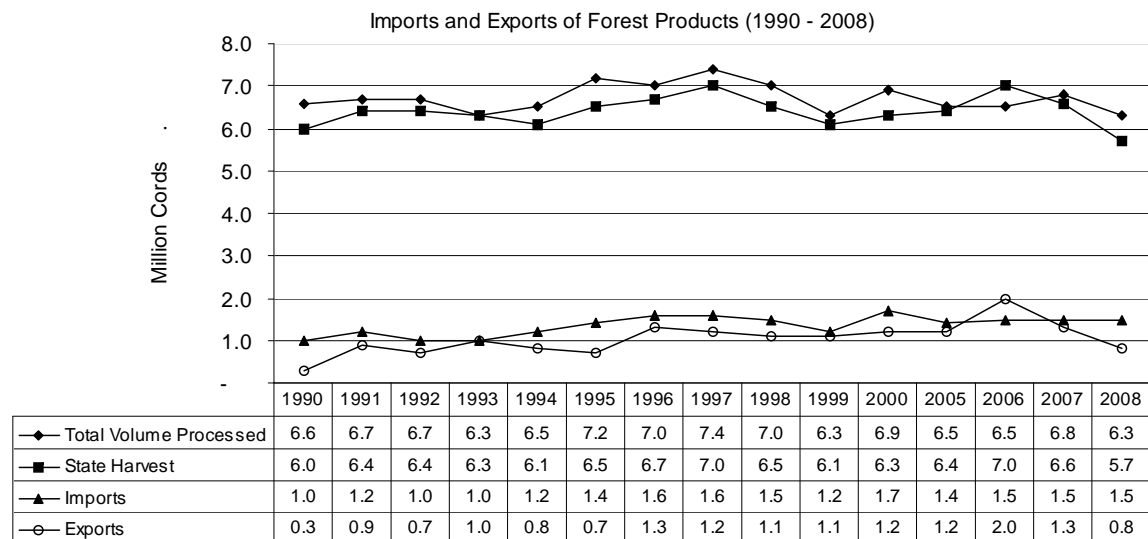
## Wood Harvesting Trends (1960-2008)

The graph to the right shows the volumes for commercially important species.



## Import and Export Trends (1990-2008)

The graph to the right shows the volumes of forest products being exported from Maine, imported into Maine, and processed within Maine.





## Conversion Table MBF/Weight Equivalents for various Maine Commercial Tree Species

These conversions are used by the Maine Forest Service.

Users of this report may wish to confirm the conversion rate(s) used by individual mills and/or contractors who purchase wood.

<u>Species</u>	<u>MBF</u>	<u>Tons</u>
<b>Spruce Fir</b>	1	4.2
<b>White Pine</b>	1	4.3
<b>Red Pine</b>	1	4.3
<b>Hemlock</b>	1	4.8
<b>Cedar</b>	1	3.4
<b>Tamarack (Larch)</b>	1	4.8
<b>Beech</b>	1	4.5
<b>White Birch</b>	1	4.5
<b>Yellow Birch</b>	1	5.4
<b>Sugar Maple</b>	1	5.4
<b>Red Maple</b>	1	4.5
<b>White Oak</b>	1	5.4
<b>Red Oak</b>	1	5.4
<b>Ash</b>	1	4.5
<b>Aspen/Poplar</b>	1	4.3
<b>Softwood</b>	1	4.6
<b>Hardwood</b>	1	5.4
<b>Mixed Wood</b>	1	4.6

***For purposes of comparing volumes, a rough conversion of 1 MBF = 2 cords is commonly used.***

These conversions factors are handy for making estimates and for forest inventory purposes, but are advisory only. The weight of a particular volume of wood varies greatly by species, time of year and other factors.

It is illegal in Maine to convert from one system of measurement to another for the basis of payment (e.g. convert a mill payment for pulpwood in dollars per ton to a landowner payment in dollars per cord).



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from the Maine Forest Service.

[www.maineforestservice.gov](http://www.maineforestservice.gov)

[www.bewoodswise.org](http://www.bewoodswise.org)

## Maine Forest Service District Foresters

The Maine Forest Service has 10 District Foresters who provide technical assistance and educational services to landowners, loggers, schools and educational institutions, municipalities and other stakeholders. District Foresters conduct educational workshops, field demonstrations, media presentations, and can provide limited one-on-one contact with individual landowners.

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