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2013 Wood Processor Report, Including Import and Export Information

Maine Forest Service
Forest Policy and Management Division

Maine Department of Agriculture, Conservation and Forestry

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2013 Wood Processor Report

Including Import and Export Information

Compiled from 2013 Wood Processor Reports
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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 2013, 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, other miscellaneous products, and imports and exports.

How was this information collected?

In 2013, the Maine Forest Service received wood processor reports from 114 primary processing mills (sawmills, pulp and paper mills), 37 portable sawmills, 92 firewood dealers, 36 loggers and brokers who may have exported wood, 24 concentration yards, and 7 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 M.R.S. §8884, sub-§3, "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. Pellets:

wood fuel generally made from dried wood fiber compressed into uniform diameter for burning.

8. Pulpwood:

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

9. 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.


10. Sawmill residues:


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


11. 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 15.0 million green ton equivalents in 2013, down from 15.8 million green ton equivalents in 2012. Eighty-two percent of the processing total (12.2 million green ton equivalents) was harvested in Maine, while 18% (2.8 million green ton equivalents) was imported.

 Maine landowners harvested 14.4 million green ton equivalents of wood in 2013, down from 2012 (14.7 million green ton equivalents). Fifteen percent (2.1 million green ton equivalents) of the 2013 harvest was exported, similar to 2012 (2.2 million green ton equivalents).

 Maine's pulp and paper producers processed 8.7 million green tons of pulpwood, down 0.9 million tons (-9%) from 2012 consumption. Seventy-eight percent of the pulpwood originated from Maine's forests; 22% was imported.

 Biomass harvesting volume was 2.7 million tons in 2013, a 14% increase from 2012 (2.36 million tons). Biomass energy facilities consumed 2.8 million tons in 2013, up 7% from 2012 (2.6 million tons). Eighty-six percent originated from Maine's forests; 14% was imported.

 Maine's sawlog processing in 2013 was 0.73 billion board feet, up slightly from 2012 (0.72 billion board feet).

 Maine's forest products industry imported 2.8 million green tons during 2013, compared to 3.3 million tons in 2012. 2.1 million green tons were exported in 2013, compared to 2.2 million tons in 2012.

SAWLOGS

2013 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	132	10,541	262	1	4	10,940	68	329	322	326	291	346	76	21	0	1,779	12,719
AROOSTOOK	76,330	708	756	12,409	141	90,344	758	6,950	5,899	13,169	4,305	44	190	38,688	374	70,377	160,721
CUMBERLAND	362	17,673	2,605	0	1	20,641	154	138	182	96	393	901	64	14	0	1,942	22,583
FRANKLIN	13,883	7,155	264	25	31	21,358	220	2,137	579	1,947	784	533	260	59	1,200	7,719	29,077
HANCOCK	9,985	2,451	95	239	17	12,787	0	670	216	480	121	363	221	32	829	2,932	15,719
KENNEBEC	653	11,284	2,034	61	15	14,047	166	1,160	87	839	985	643	103	44	1	4,028	18,075
KNOX	84	2,810	804	0	0	3,698	0	74	1	7	8	30	2	0	0	122	3,820
LINCOLN	298	7,743	1,419	1	0	9,461	3	39	1	3	3	14	8	1	0	72	9,533
OXFORD	18,875	36,958	1,623	0	2	57,458	450	1,874	916	2,466	1,926	2,155	504	116	598	11,005	68,463
PENOBSCOT	50,606	11,294	15,346	2,168	14	79,428	23	2,663	2,234	5,458	1,282	206	600	180	625	13,271	92,699
PISCATAQUIS	34,937	2,937	2,391	157	17	40,439	377	2,269	3,512	6,408	2,466	263	704	24	501	16,524	56,963
SAGadahoc	243	3,609	634	0	0	4,486	6	3	2	1	7	15	2	0	0	36	4,522
SOMERSET	42,681	11,770	1,068	573	37	56,129	690	2,983	2,903	4,721	1,753	436	798	42	771	15,097	71,226
WALDO	2,839	8,802	615	216	0	12,472	7	387	182	114	179	714	44	10	8	1,645	14,117
WASHINGTON	19,473	1,192	94	523	14	21,296	0	379	228	431	72	264	104	466	679	2,623	23,919
YORK	31	17,206	1,140	0	6	18,383	125	21	18	31	350	797	60	2	0	1,404	19,787
Maine wood processed:	271,412	154,133	31,150	16,373	299	473,367	3,047	22,076	17,282	36,497	14,925	7,724	3,740	39,699	5,586	150,576	623,943
Exported from Maine without processing:	210,957	10,825	337	7,298	0	229,417	0	643	6,527	7,620	3,112	3,166	3,351	1	1,739	26,159	255,576
Total harvested from Maine forests:	482,369	164,958	31,487	23,671	299	702,784	3,047	22,719	23,809	44,117	18,037	10,890	7,091	39,700	7,325	176,735	879,519
Imported from out of state:	1,291	52,948	683	468	0	55,390	187	4,769	1,306	2,472	2,812	365	50	41,599	1,107	54,667	110,057
Total processed by Maine Forest Products Industry:	272,703	207,081	31,833	16,841	299	528,757	3,234	26,845	18,588	38,969	17,737	8,089	3,790	81,298	6,693	205,243	734,000

- 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.

Pulp mill closures and curtailments have created incomplete data sets resulting in under reporting.

PULPWOOD

2013 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	SAWMILL RESIDUE Green Tons
ANDROSCOGGIN	1,317	30,744	16,557	0	10,460	59,078	5,593	55,430	61,023	0	120,101	0
AROOSTOOK	78,920	2,571	36,375	0	2,123	119,989	87,102	1,016,512	1,103,614	0	1,223,603	81,135
CUMBERLAND	944	83,817	37,414	0	12,777	134,952	4,889	60,207	65,096	0	200,048	1,033
FRANKLIN	65,966	17,166	22,595	0	5,254	110,981	38,452	273,734	312,186	0	423,167	58,264
HANCOCK	53,290	17,908	22,388	0	1,237	94,823	26,693	92,470	119,163	0	213,986	7,778
KENNEBEC	9,065	35,514	24,073	0	9,042	77,694	10,052	50,540	60,592	0	138,286	32
KNOX	7,626	4,312	3,636	0	1,086	16,660	3,005	14,948	17,953	0	34,613	0
LINCOLN	6,084	26,484	10,939	0	5,159	48,666	4,081	17,037	21,118	0	69,784	3,210
OXFORD	56,392	180,333	69,566	0	10,133	316,424	33,285	458,215	491,500	0	807,924	0
PENOBSCOT	190,481	24,959	199,522	0	2,563	417,525	90,672	762,758	853,430	0	1,270,955	60,486
PISCATAQUIS	114,777	14,898	46,558	0	866	177,099	41,551	340,123	381,674	0	558,773	188,030
SAGADAHOC	1,365	11,485	6,052	0	3,451	22,353	2,549	9,583	12,132	0	34,485	0
SOMERSET	164,758	77,370	61,984	0	5,189	309,301	57,569	643,858	701,427	0	1,010,728	27,633
WALDO	34,614	33,923	15,544	0	3,183	87,264	18,736	82,675	101,411	0	188,675	13,171
WASHINGTON	142,280	10,822	28,483	0	991	182,576	33,374	138,245	171,619	0	354,195	0
YORK	742	71,562	27,084	0	6,306	105,694	5,210	53,348	58,558	0	164,252	12,114
Maine wood processed:	928,621	643,868	628,770	0	79,820	2,281,079	462,813	4,069,683	4,532,496	0	6,813,575	452,886
Exported from Maine without processing:	273,082	3,571	7,769	0	14,613	299,035	41,111	412,111	453,222	0	752,257	192,508
Total harvested from Maine forests:	1,201,703	647,439	636,539	0	94,433	2,580,114	503,924	4,481,794	4,985,718	0	7,565,832	645,394
Imported from out of state:	117,716	293,532	84,222	0	70,043	565,513	162,930	1,167,871	1,330,801	0	1,896,314	348,992
Total processed by Maine Forest Products Industry:	1,046,337	937,400	712,992	0	149,863	2,846,592	625,743	5,237,554	5,863,297	0	8,709,889	801,878

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.

Wood Imports and Exports

2013 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	149,797	39,143	15,823	1,235
Aroostook	332,127	244,219	4,973	11,750
Cumberland	33,737	19,096	3,144	1,703
Franklin	199,301	61,172	0	19,756
Hancock	100,656	972	0	790
Kennebec	91,030	6,387	665	3,265
Knox	22,583	666	0	685
Lincoln	41,509	2,938	888	1,040
Oxford	145,178	141,545	1,173	8,091
Penobscot	351,414	52,966	521	11,586
Piscataquis	150,228	73,239	1,181	7,487
Sagadahoc	18,547	22	1,148	619
Somerset	244,835	93,796	0	17,812
Statewide*	0	0	0	12,129
Waldo	164,268	7,997	0	2,823
Washington	226,816	1,911	0	294
York	148,480	15,162	2,651	1,161
Maine wood processed:	2,420,506	761,231	32,167	102,226
Exported from Maine without processing:	272,695	225,313	0	1,976
Total harvested from Maine Forests:	2,693,201	986,544	32,167	104,202
Imported from out of state:	388,804	390,340	166,430	770
Total processed by Maine Forest Products Industry:	2,809,310	1,151,571	198,597	102,996

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

* This is the sixth 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 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 addition, this is the sixth year we have received reports from Maine's pellet mills. We have included reported volumes for pellet production under this section also.

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

SUMMARY

2013 Wood flow in Maine as reported to the Maine Forest Service

Product	Harvest, Export, Import, Instate Processing	Total Volume in 2013	Total Volume in Green Tons
Sawlogs (in MBF) 1 MBF = 1,000 board feet <i>Note on conversions: see conversion table at the end of report</i>	a. Maine wood processed	623,943	2,739,298
	b. Exported from Maine without processing	255,576	1,093,860
	c. Total harvested from Maine forests (a+b=c)	879,519	3,833,158
	d. Imported from out of state	110,057	480,375
	f. Total processed by Maine Forest Products Industry (a+d=e)	734,000	3,219,673
Pulpwood (in green tons)	a. Maine wood processed	6,813,575	6,813,575
	b. Exported from Maine without processing	752,257	752,257
	c. Total harvested from Maine forests (a+b=c)	7,565,832	7,565,832
	d. Imported from out of state	1,896,314	1,896,314
	f. Total processed by Maine Forest Products Industry (a+d=e)	8,709,889	8,709,889
Biomass Chips (in green tons)	a. Maine wood processed	2,420,506	2,420,506
	b. Exported from Maine without processing	272,695	272,695
	c. Total harvested from Maine forests (a+b=c)	2,693,201	2,693,201
	d. Imported from out of state	388,804	388,804
	f. Total processed by Maine Forest Products Industry (a+d=e)	2,809,310	2,809,310
Firewood / Pellets (in cords) <i>Note on conversion: 1 cord = 2.5 green tons</i>	a. Maine wood processed	102,226	255,565
	b. Exported from Maine without processing	1,976	4,940
	c. Total harvested from Maine forests (a+b=c)	104,202	260,505
	d. Imported from out of state	770	1,925
	f. Total processed by Maine Forest Products Industry (a+d=e)	102,996	257,490
Totals (in green tons)	a. Maine wood processed		12,228,944
	b. Exported from Maine without processing		2,123,752
	c. Total harvested from Maine forests (a+b=c)		14,352,696
	d. Imported from out of state		2,767,418
	f. Total processed by Maine Forest Products Industry (a+d=e)		14,996,362

Pulp mill closures and curtailments have created incomplete data sets resulting in under reporting.

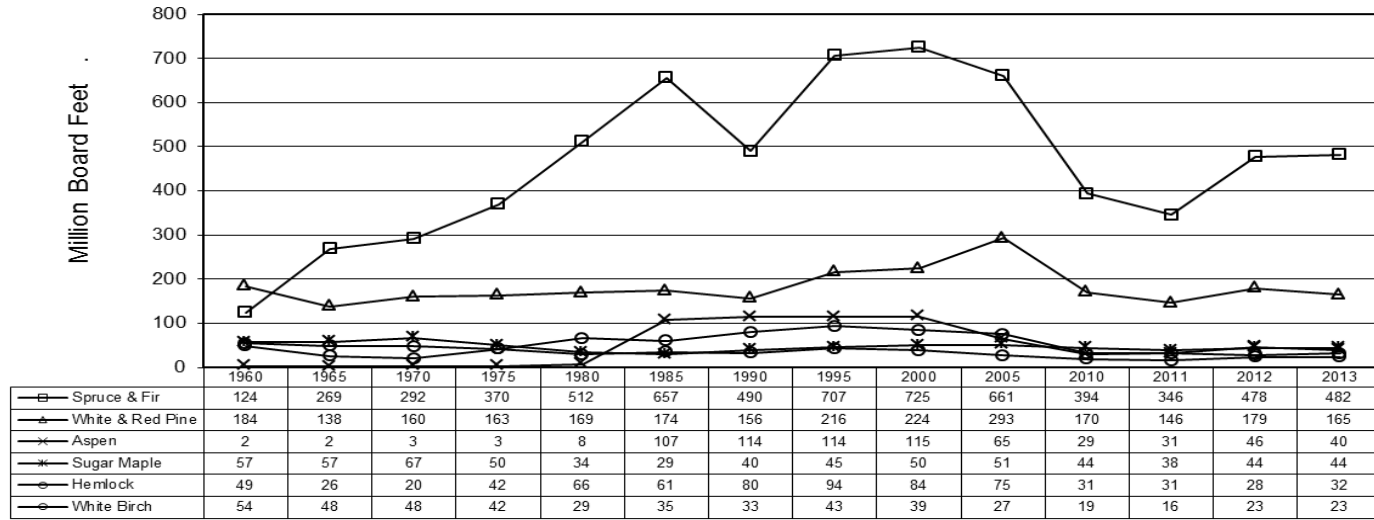
Wood Harvesting Trends (1960-2013)

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 50 years.

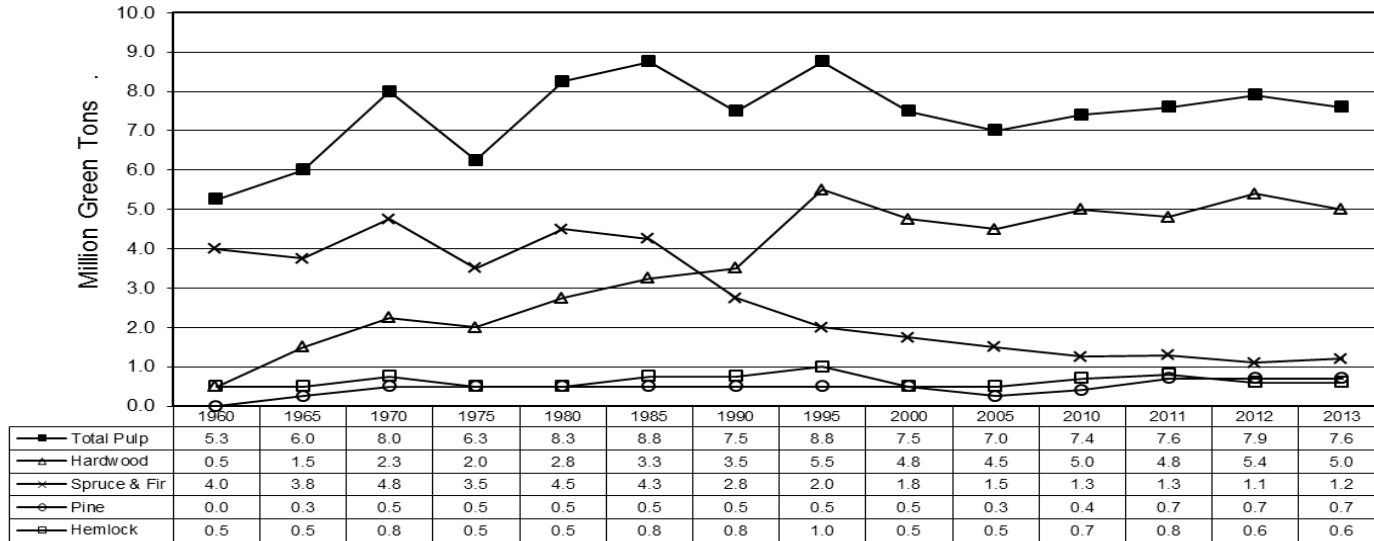
The two graphs to the right show the harvest volumes for selected species for sawlogs and pulpwood. These volumes include exported volumes.



Harvest Levels of Selected Species for Sawlogs in Maine (1960 to 2013)



Harvest Levels of Selected Species for Pulpwood in Maine (1960 to 2013)

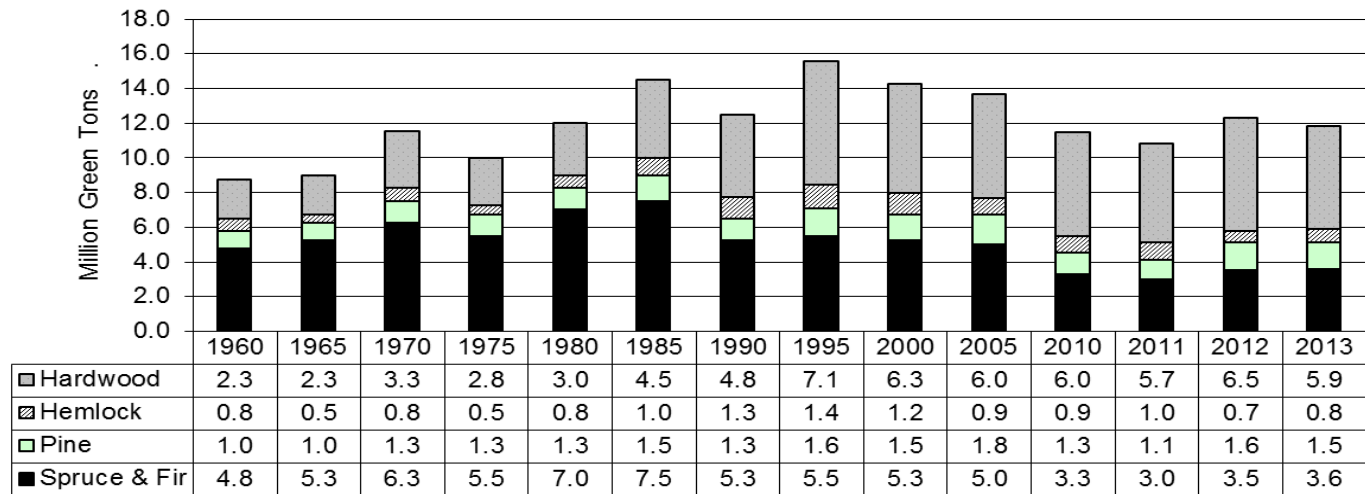


Wood Harvesting Trends (1960-2013)

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



Harvest Commercially Important Species in Maine (1960 - 2013)

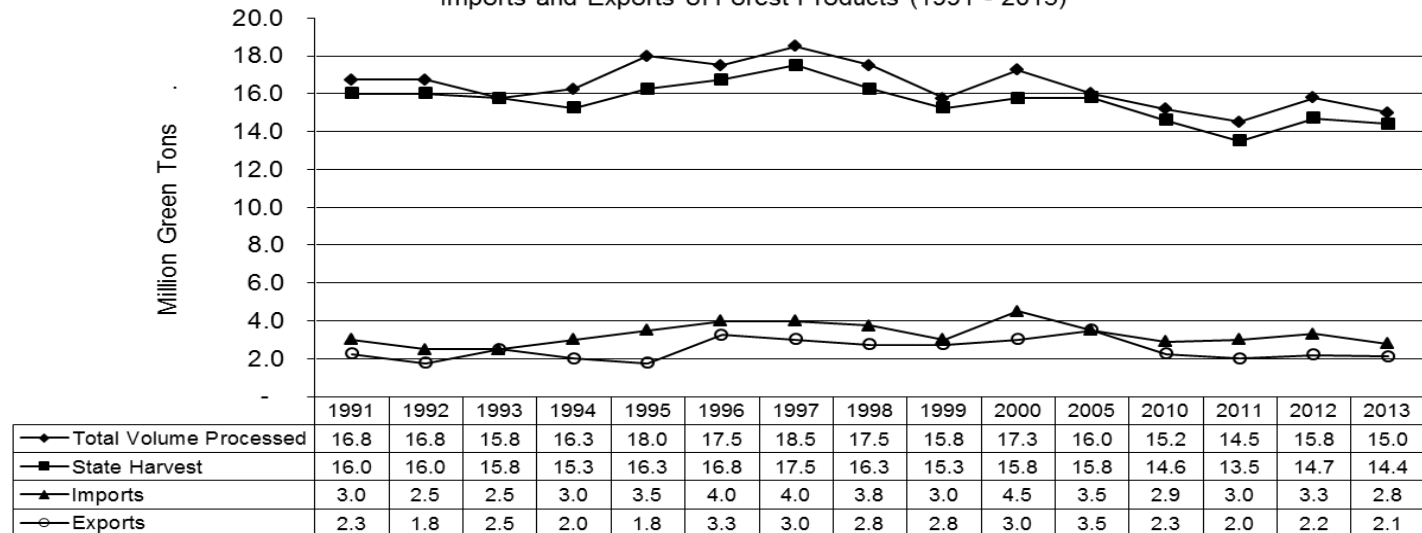


Import and Export Trends (1990-2013)

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



Imports and Exports of Forest Products (1991 - 2013)



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