

2011 Wood Processor Report

Including Import and Export Information

Compiled from 2011 Wood Processor Reports
pursuant to 12 MRSA § 8884

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Department of Agriculture, Conservation and Forestry

Maine Forest Service

Forest Policy and Management

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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 2011, 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 2011, the Maine Forest Service received wood processor reports from 130 primary processing mills (sawmills, pulp and paper mills), 42 portable sawmills, 85 firewood dealers, 32 loggers and brokers who may have exported wood, 28 concentration yards, and 9 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 §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' len

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 14.5 million green ton equivalents in 2011, down from 15.7 million green ton equivalents in 2010. Seventy-nine percent of the supply (11.5 million green ton equivalents) was harvested in Maine, while 21% (3.0 million green ton equivalents) was imported.



Maine landowners harvested 13.5 million green ton equivalents of wood in 2011, down from 2010 (14.6 million green ton equivalents). Fifteen percent (2.0 million green ton equivalents) of the 2011 harvest was exported, down from 2010 (2.3 million green ton equivalents).



Maine's pulp and paper producers processed 9.0 million green tons of pulpwood, up .09 million tons (1%) from 2010 consumption. Seventy-five percent of the pulpwood originated from Maine's forests; 25% was imported.



Biomass harvesting volume was 2.4 million tons in 2011, down 31% from 2010 (3.5 million tons). Biomass energy facilities consumed 2.4 million tons in 2011, down 33% from 2010 (3.6 million tons). Eighty-six percent originated from Maine's forests; 14% was imported.



Maine's sawlog processing in 2011 was 0.6 billion board feet, down slightly from 2010 (0.7 billion board feet).



Maine's forest products industry imported 3.0 million green tons during 2011, compared to 2.9 million tons in 2010. 2.0 million green tons were exported in 2011, compared to 2.3 million tons in 2010.

SAWLOGS

2011 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	79	8,426	473	103	0	9,081	56	165	416	1,128	177	725	178	12	85	2,942	12,023
AROOSTOOK	75,199	400	3	10,279	129	86,010	141	1,681	2,415	3,937	4,180	3	120	29,664	282	42,423	128,433
CUMBERLAND	201	13,102	5,348	0	3	18,654	125	49	108	24	203	409	49	9	11	987	19,641
FRANKLIN	16,265	4,919	111	45	0	21,340	298	1,171	1,178	2,373	512	824	595	56	1,159	8,166	29,506
HANCOCK	7,414	4,685	151	474	88	12,812	14	272	203	390	110	242	213	28	644	2,116	14,928
KENNEBEC	1,054	12,440	1,685	10	0	15,189	207	662	148	574	144	1,481	252	116	56	3,640	18,829
KNOX	274	3,893	367	7	3	4,544	0	14	1	2	3	193	4	9	0	226	4,770
LINCOLN	647	7,563	770	7	0	8,987	15	21	15	24	34	277	37	4	5	432	9,419
OXFORD	11,926	29,958	671	0	0	42,555	466	1,278	1,137	2,323	545	1,762	586	69	673	8,839	51,394
PENOBSCOT	34,938	9,228	15,576	2,027	66	61,835	87	3,310	3,482	4,622	550	582	958	175	497	14,263	76,098
PISCATAQUIS	28,730	4,158	1,776	724	46	35,434	836	2,823	3,167	7,571	2,583	1,459	1,210	601	365	20,615	56,049
SAGadahoc	8	1,649	95	0	0	1,752	0	2	0	0	3	129	8	0	7	149	1,901
SOMERSET	34,156	9,536	550	537	8	44,787	1,133	2,362	2,458	2,317	1,120	2,182	1,403	48	754	13,777	58,564
WALDO	1,898	6,233	264	185	0	8,580	9	88	55	87	14	393	64	7	28	745	9,325
WASHINGTON	21,580	2,031	118	722	73	24,524	14	158	185	245	59	360	112	113	581	1,827	26,351
YORK	18	17,029	1,140	0	15	18,202	235	97	97	28	307	106	44	4	58	976	19,178
Maine wood processed:	234,387	135,250	29,098	15,120	431	414,286	3,636	14,153	15,065	25,645	10,544	11,127	5,833	30,915	5,205	122,123	536,409
Exported from Maine without processing:	111,385	10,253	1,642	9,843	1	133,124	1,148	1,807	8,054	11,847	4,507	4,194	3,111	381	13,540	48,589	181,713
Total harvested from Maine forests:	345,772	145,503	30,740	24,963	432	547,410	4,784	15,960	23,119	37,492	15,051	15,321	8,944	31,296	18,745	170,712	718,122
Imported from out of state:	2,206	46,677	926	1,670	0	51,479	96	3,561	650	1,537	2,935	82	127	27,123	13	36,124	87,603
Total processed by Maine Forest Products Industry:	236,593	181,927	30,024	16,790	431	465,765	3,732	17,714	15,715	27,182	13,479	11,209	5,960	58,038	5,218	158,247	624,012

- 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

2011 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	864	28,361	16,542	0	7,110	52,877	4,439	45,076	49,515	0	102,392
AROOSTOOK	61,163	7,581	26,119	0	270	95,133	52,990	930,007	982,997	0	1,078,130
CUMBERLAND	1,489	74,947	35,695	0	9,052	121,183	2,374	42,352	44,726	0	165,909
FRANKLIN	69,530	17,244	24,288	0	4,692	115,754	50,635	250,050	300,685	0	416,439
HANCOCK	92,803	15,100	23,571	0	2,177	133,651	27,562	114,530	142,092	0	275,743
KENNEBEC	8,709	36,924	25,976	0	10,574	82,183	12,257	45,668	57,925	0	140,108
KNOX	15,867	9,227	7,510	0	1,715	34,319	2,712	15,673	18,385	0	52,704
LINCOLN	4,199	23,930	12,521	0	4,221	44,871	5,209	11,810	17,019	0	61,890
OXFORD	49,657	160,533	78,446	0	19,740	308,376	23,007	456,422	479,429	0	787,805
PENOBSCOT	186,186	31,308	252,170	0	3,445	473,109	64,477	769,054	833,531	0	1,306,640
PISCATAQUIS	115,280	24,733	59,054	0	924	199,991	38,457	403,960	442,417	0	642,408
SAGadahoc	1,111	9,699	6,006	0	1,712	18,528	1,925	5,237	7,162	0	25,690
SOMERSET	140,056	69,668	70,892	0	5,998	286,614	51,409	581,109	632,518	0	919,132
WALDO	26,966	32,595	12,190	0	3,380	75,131	11,454	86,069	97,523	0	172,654
WASHINGTON	180,343	23,204	69,047	0	4,750	277,344	24,544	131,614	156,158	0	433,502
YORK	122	84,167	29,256	0	3,645	117,190	3,202	32,489	35,691	0	152,881
Maine wood processed:	954,345	649,221	749,283	0	83,405	2,436,254	376,653	3,921,120	4,297,773	0	6,734,027
Exported from Maine without processing:	355,075	4,568	8,736	0	8,467	376,846	60,758	442,653	503,411	0	880,257
Total harvested from Maine forests:	1,309,420	653,789	758,019	0	91,872	2,813,100	437,411	4,363,773	4,801,184	0	7,614,284
Imported from out of state:	168,370	372,248	165,826	0	56,457	762,901	143,591	1,392,987	1,536,578	0	2,299,479
Total processed by Maine Forest Products Industry:	1,122,715	1,021,469	915,109	0	139,862	3,199,155	520,244	5,314,107	5,834,351	0	9,033,506

SAWMILL RESIDUE

Green Tons

0
63,887
1,553
51,357
1,500
0
0
2,558
6,053
43,551
134,066
0
70,002
3,316
0
1,242
379,085
238,248
617,333
266,530
645,615

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.

2011 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	140,827	6,330	16,797	1,052
Aroostook	192,735	61,815	3	5,754
Cumberland	86,026	11,956	8,591	3,213
Franklin	246,101	32,921	448	25,518
Hancock	123,690	22,405	0	1,661
Kennebec	116,863	2,446	1,903	6,001
Knox	25,773	527	477	591
Lincoln	45,228	3,238	2,572	1,158
Oxford	163,121	45,388	191	3,132
Penobscot	233,241	162,148	545	8,546
Piscataquis	152,674	113,640	374	13,666
Sagadahoc	16,796	358	337	349
Somerset	216,030	153,626	827	24,986
Statewide*	0	11,806	0	5,713
Waldo	82,856	6,194	0	1,437
Washington	159,271	4,877	0	575
York	111,701	15,450	5,336	3,126
Maine wood processed:				106,478
Exported from Maine without processing:				0
Total harvested from Maine Forests:				106,478
Imported from out of state:				190
Total processed by Maine Forest Products Industry:				106,668

*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	Massachusetts
Massachusetts	Michigan
New Hampshire	New Hampshire
New York	New York
Rhode Island	Vermont
Vermont	<u>Provinces:</u>
<u>Provinces:</u>	New Brunswick
New Brunswick	Quebec
Nova Scotia	<u>Countries:</u>
Quebec	China
	France
	Thailand

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

SUMMARY**2011 Wood flow in Maine as reported to the Maine Forest Service**

Product	Harvest, Export, Import, Instate Processing	Total Volume in 2011	Total Volume in Green Tons
Sawlogs (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	536,409	2,353,770
	b. Exported from Maine without processing	181,713	805,703
	c. Total harvested from Maine forests (a+b=c)	718,122	3,159,473
	d. Imported from out of state	87,603	379,286
	f. Total processed by Maine Forest Products Industry (a+d=e)	624,012	2,733,056
Pulpwood (in green tons)	a. Maine wood processed	6,734,027	6,734,027
	b. Exported from Maine without processing	880,257	880,257
	c. Total harvested from Maine forests (a+b=c)	7,614,284	7,614,284
	d. Imported from out of state	2,299,479	2,299,479
	f. Total processed by Maine Forest Products Industry (a+d=e)	9,033,506	9,033,506
Biomass Chips (in green tons)	a. Maine wood processed	2,112,933	2,112,933
	b. Exported from Maine without processing	315,314	315,314
	c. Total harvested from Maine forests (a+b=c)	2,428,247	2,428,247
	d. Imported from out of state	332,475	332,475
	f. Total processed by Maine Forest Products Industry (a+d=e)	2,445,408	2,445,408
Firewood / Pellets (in cords) <u>Note on conversion:</u> 1 cord = 2.5 green tons	a. Maine wood processed	106,478	266,195
	b. Exported from Maine without processing	0	0
	c. Total harvested from Maine forests (a+b=c)	106,478	266,195
	d. Imported from out of state	190	475
	f. Total processed by Maine Forest Products Industry (a+d=e)	106,668	266,670
Totals (in green tons)	a. Maine wood processed		11,466,925
	b. Exported from Maine without processing		2,001,274
	c. Total harvested from Maine forests (a+b=c)		13,468,199
	d. Imported from out of state		3,011,715
	f. Total processed by Maine Forest Products Industry (a+d=e)		14,478,640

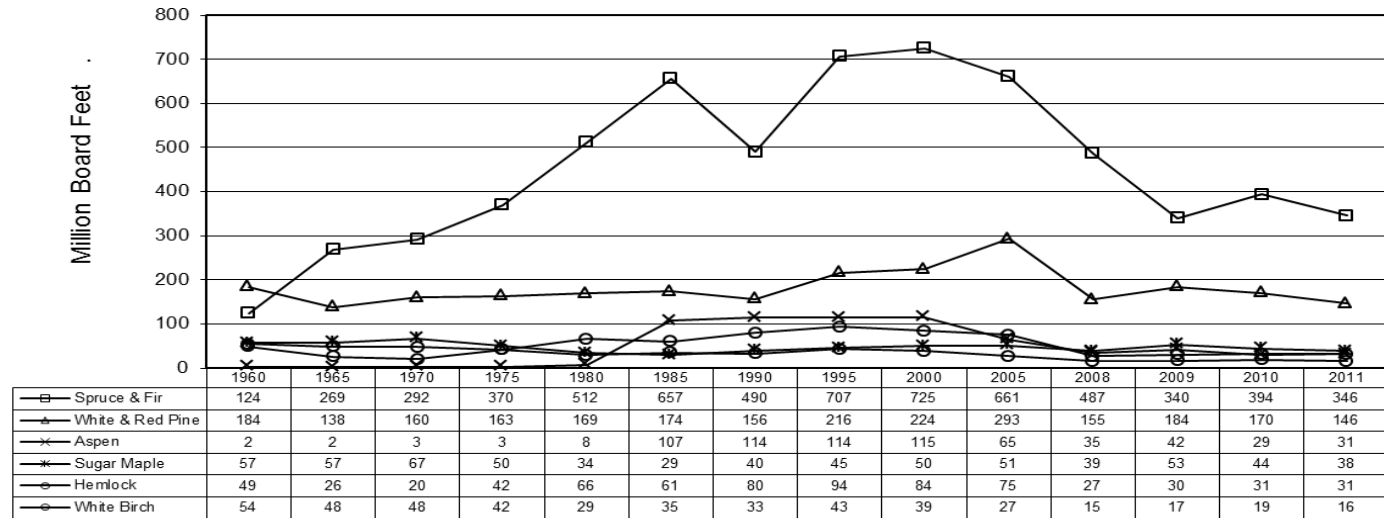
Wood Harvesting Trends (1960-2011)

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.

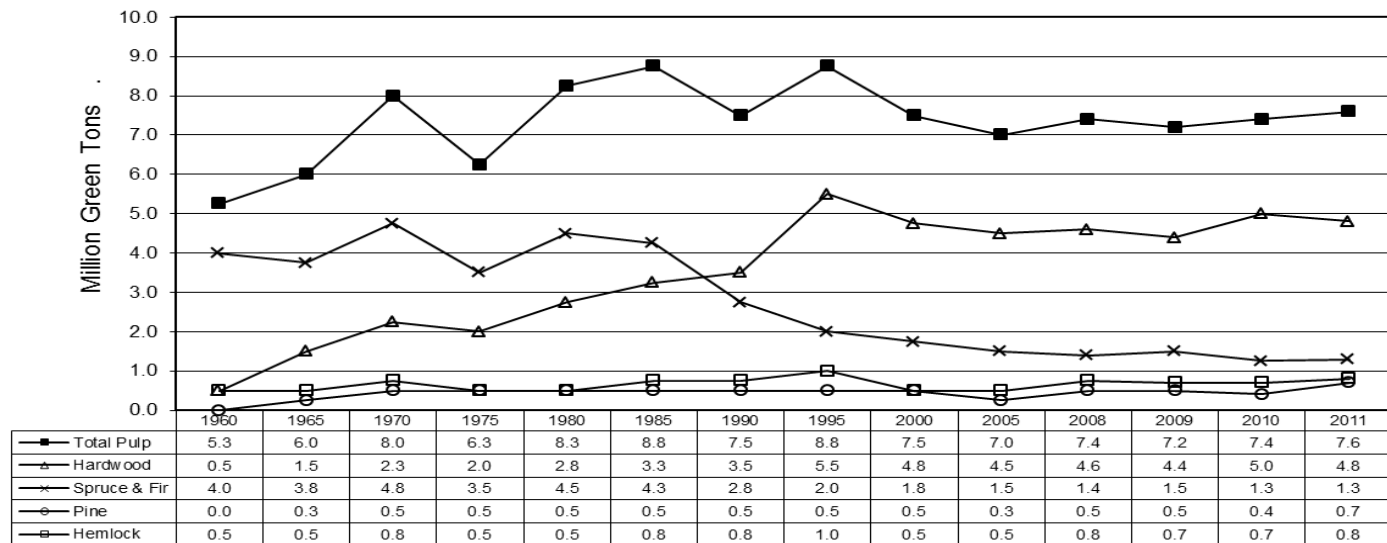
The two graphs to the right show the harvest volumes for selected species for sawlogs and pulpwood. These volumes include exported volumes.



Harvest Levels of Selected Species for Sawlogs in Maine (1960 to 2011)



Harvest Levels of Selected Species for Pulpwood in Maine (1960 to 2011)

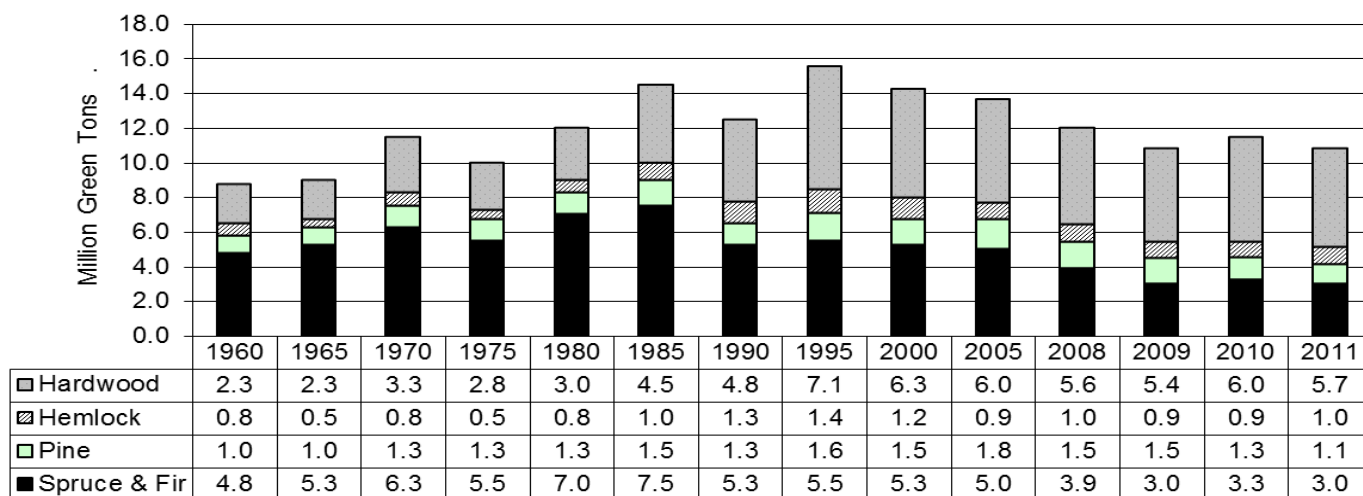


Wood Harvesting Trends (1960-2011)

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



Harvest Commercially Important Species in Maine (1960 - 2011)

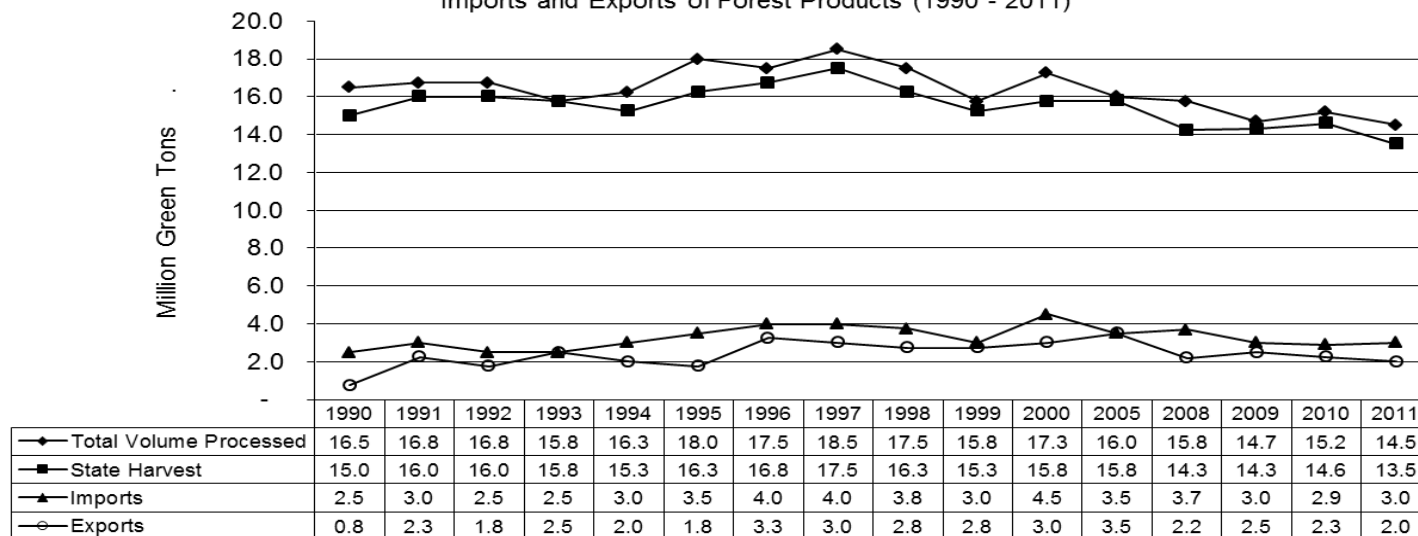


Import and Export Trends (1990-2011)

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



Imports and Exports of Forest Products (1990 - 2011)



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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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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