

MAINE STATE LEGISLATURE

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2020 Wood Processor Report

Including Import and Export Information

Compiled from 2020 Wood Processor Reports
pursuant to 12 M.R.S. § 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 2020, 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 2020, the Maine Forest Service received wood processor reports from 114 primary processing mills (sawmills, pulp and paper mills), 36 portable sawmills, 85 firewood dealers, 106 loggers and brokers who may have exported wood, 25 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 any or all of the following: tree limbs and tops, cull trees, and smaller trees not suitable for higher value products. Usually used as energy fuel, biomass chips may also be used 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 11.9 million green ton equivalents in 2020, down 16% from 14.2 million green ton equivalents in 2019. Seventy six percent of the processing total (9.1 million green ton equivalents) was harvested in Maine, while 24% (2.8 million green ton equivalents) was imported.

 Maine landowners harvested 11 million green ton equivalents of wood in 2020, down 15% from 2019 (13.1 million green ton equivalents). Eighteen percent (2.1 million green ton equivalents) of the 2020 harvest was exported, down 14% from 2019 (2.4 million green ton equivalents).

 Maine's pulp and paper producers processed 6.3 million green tons of pulpwood, down significantly (27%) from 2019 (8.7 million green tons). Seventy-three percent of the pulpwood originated from Maine's forests; 27%

 •Biomass harvesting volume was 1.5 million tons in 2020, down 8% from 2019 (1.6 million tons). Biomass energy facilities consumed 1.5 million tons in 2020, up 5% from 2019 (1.4 million tons). Eighty-nine percent originated from Maine's forests; 11% was imported.

 Maine's sawlog processing in 2020 remained stable at 0.88 billion board feet, a small change from 0.87 billion board feet in 2019.

 Maine's forest products industry imported 2.8 million green tons during 2020, down 19% from 2019 (3.5 million tons). 2.1 million green tons were exported in 2020, down 14% from 2019 (2.4 million tons).

SAWLOGS

2020 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	435	6,378	436	42	0	7,291	40	147	49	148	146	1,607	132	45	343	2,657	9,948
AROOSTOOK	187,454	2,703	100	11,949	86	202,292	807	5,146	4,057	8,826	7,784	61	600	46,259	290	73,830	276,122
CUMBERLAND	233	14,525	861	0	0	15,619	250	76	43	137	250	277	39	0	1	1,073	16,692
FRANKLIN	12,510	8,117	318	125	8	21,078	17	1,735	629	1,380	363	450	233	46	4,036	8,889	29,967
HANCOCK	4,890	5,986	400	73	0	11,349	3	451	99	233	80	81	215	56	630	1,848	13,197
KENNEBEC	3,895	9,101	1,875	13	26	14,910	94	86	145	475	237	366	132	60	397	1,992	16,902
KNOX	1,287	561	228	4	0	2,080	24	108	72	43	165	595	53	31	1	1,092	3,172
LINCOLN	5,334	4,309	1,342	0	0	10,985	56	139	18	72	160	584	76	69	2	1,176	12,161
OXFORD	10,746	36,493	2,765	500	0	50,504	775	1,017	587	1,215	1,253	2,021	436	53	967	8,324	58,828
PENOBSCOT	29,228	9,054	12,056	1,467	5	51,810	115	1,937	1,511	2,723	715	610	996	4,362	1,305	14,274	66,084
PISCATAQUIS	27,558	3,920	261	238	3	31,980	1	771	1,994	3,773	756	294	1,115	283	626	9,613	41,593
SAGadahoc	646	2,340	365	1	1	3,353	5	29	7	26	15	21	7	0	28	138	3,491
SOMERSET	28,318	13,851	766	518	65	43,518	20	1,374	1,121	3,259	662	1,575	489	152	3,630	12,282	55,800
WALDO	8,819	3,155	643	304	0	12,921	33	257	77	217	100	408	72	21	0	1,185	14,106
WASHINGTON	17,122	2,034	164	158	0	19,478	0	83	110	207	67	32	162	4,108	515	5,284	24,762
YORK	56	21,181	1,208	0	0	22,445	311	57	55	139	519	1,172	69	32	14	2,368	24,813
Maine wood processed:	338,531	143,708	23,788	15,392	194	521,613	2,551	13,413	10,574	22,873	13,272	10,154	4,826	55,577	12,785	146,025	667,638
Exported from Maine without processing:	174,316	18,578	4,645	9,889	19	207,447	27	7,085	6,571	8,886	14,304	7,438	2,472	41	17,089	63,913	271,360
Total harvested from Maine forests:	512,847	162,286	28,433	25,281	213	729,060	2,578	20,498	17,145	31,759	27,576	17,592	7,298	55,618	29,874	209,938	938,998
Imported from out of state:	56,145	74,131	7,272	19	1,197	138,764	347	6,463	1,443	3,407	1,604	4,089	1,338	51,242	6,745	76,678	215,442
Total processed by Maine Forest Products Industry:	394,676	217,839	31,060	15,411	1,391	660,377	2,898	19,876	12,017	26,280	14,876	14,243	6,164	106,819	19,530	222,703	883,080

- Notes:**
1. Sawlogs include logs, veneer, boltwood, studwood, palletwood, etc. Green tons converted to MBF @ 5 green tons = 1 MBF.
 2. Other Softwood includes larch, pitch pine, and others.
 3. Sawlog volumes reported here are log volumes as scaled when delivered to the mill.

PULPWOOD

2020 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	Mixed / Other Softwood	Total Softwood	Aspen	Mixed / Other Hardwood	Total Hardwood	Mixed Wood	Total Pulpwood	SAWMILL RESIDUE Green Tons
ANDROSCOGGIN	150	2,264	3,493	0	15,030	20,937	930	23,792	24,722	0	45,659	36,943
AROOSTOOK	11,771	*	5,973	0	13,229	31,137	7,297	672,519	679,816	0	710,953	1,695
CUMBERLAND	312	6,998	*	0	19,669	47,062	*	38,514	39,278	0	86,340	24,647
FRANKLIN	47,994	7,064	15,848	0	12,739	83,645	14,668	341,497	356,165	0	439,810	51,995
HANCOCK	29,813	2,728	20,727	0	33,004	86,272	7,473	61,597	69,070	0	155,342	11,791
KENNEBEC	2,715	5,226	16,211	0	16,935	41,087	3,185	61,292	64,477	0	105,564	9,584
KNOX	217	262	838	0	*	2,876	*	9,488	10,113	0	12,989	30
LINCOLN	1,412	1,548	7,178	0	15,238	25,376	1,293	23,630	24,923	0	50,299	0
OXFORD	18,511	*	55,539	0	43,251	129,792	9,627	344,940	354,567	0	484,359	81,829
PENOBSCOT	82,360	8,628	58,053	0	91,318	240,359	36,041	412,079	448,120	0	688,479	33,328
PISCATAQUIS	98,845	6,934	8,504	0	19,971	134,254	15,964	352,088	368,052	0	502,306	28,149
SAGadahoc	138	1,093	4,555	0	*	9,810	889	11,470	12,359	0	22,169	1,433
SOMERSET	156,582	15,568	24,572	0	41,309	238,031	27,753	440,172	467,925	0	705,956	78,731
WALDO	9,005	1,111	6,216	0	7,041	23,373	3,867	51,819	55,686	0	79,059	14,251
WASHINGTON	10,937	1,856	*	0	136,599	161,126	6,692	260,004	266,696	0	427,822	0
YORK	*	8,457	16,897	0	19,538	44,923	*	49,754	51,027	0	95,950	318
Maine wood processed:	470,793	82,392	276,421	0	490,454	1,320,060	138,341	3,154,655	3,292,996	0	4,613,056	374,724
Exported from Maine without processing:	372,610	1,718	208	0	70,069	444,605	10,878	255,083	265,961	0	710,566	174,246
Total harvested from Maine forests:	843,403	84,110	276,629	0	560,523	1,764,665	149,219	3,409,738	3,558,957	0	5,323,622	548,970
Imported from out of state:	159,199	19,114	38,979	0	300,487	517,779	215,665	969,196	1,184,861	0	1,702,640	233,365
Total processed by Maine Forest Products Industry:	629,992	101,506	315,400	0	790,941	1,837,839	354,006	4,123,851	4,477,857	0	6,315,696	608,089

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:

* Due to a limited number of reports, data could not be displayed but is included in the totals.

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

2020 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	154,085	10,695	5,044	998
Aroostook	34,700	81,600	1,327	11,574
Cumberland	102,199	96,389	0	967
Franklin	206,565	5,420	86	3,117
Hancock	14,426	606	0	5,081
Kennebec	104,833	4,818	0	4,366
Knox	30,074	271	0	2,091
Lincoln	52,745	15	0	670
Oxford	156,824	47,999	0	4,924
Penobscot	120,138	7,585	0	18,284
Piscataquis	38,725	26,423	0	17,279
Sagadahoc	17,781	76	0	402
Somerset	57,949	58,514	0	20,098
Statewide*	0	0	0	10,420
Waldo	83,173	154,119	0	2,589
Washington	918	758	0	958
York	155,960	646	0	3,299
Maine wood processed:	1,331,095	495,934	6,457	107,117
Exported from Maine without processing:	159,882	312,111	0	1,417
Total harvested from Maine Forests:	1,490,977	808,045	6,457	108,534
Imported from out of state:	162,621	93,171	13,602	6,015
Total processed by Maine Forest Products Industry:	1,493,716	589,105	20,059	113,132

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

Wood Imports and Exports

Import Origins

States:

Connecticut
Massachusetts
New Hampshire
New York
Rhode Island
Vermont
Washington

Provinces:

New Brunswick
Quebec

Countys:

Washington

Export Destinations

States:

Indiana
Massachusetts
Michigan
New Hampshire
Vermont

Provinces:

Canada
New Brunswick
Quebec

Countries:

Asia
China
Thailand

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

SUMMARY

2020 Wood flow in Maine as reported to the Maine Forest Service

<u>Product</u>	<u>Harvest, Export, Import, Instate Processing</u>	<u>Total Volume in 2020</u>	<u>Total Volume in Green Tons</u>
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	667,638	2,903,927
	b. Exported from Maine without processing	271,360	1,191,605
	c. Total harvested from Maine forests (a+b=c)	938,998	4,095,531
	d. Imported from out of state	215,442	943,967
	f. Total processed by Maine Forest Products Industry (a+d=e)	883,080	3,847,894
Pulpwood (in green tons)	a. Maine wood processed	4,613,056	4,613,056
	b. Exported from Maine without processing	710,566	710,566
	c. Total harvested from Maine forests (a+b=c)	5,323,622	5,323,622
	d. Imported from out of state	1,702,640	1,702,640
	f. Total processed by Maine Forest Products Industry (a+d=e)	6,315,696	6,315,696
Biomass Chips (in green tons)	a. Maine wood processed	1,331,095	1,331,095
	b. Exported from Maine without processing	159,882	159,882
	c. Total harvested from Maine forests (a+b=c)	1,490,977	1,490,977
	d. Imported from out of state	162,621	162,621
	f. Total processed by Maine Forest Products Industry (a+d=e)	1,493,716	1,493,716
Firewood / Pellets (in cords) <u>Note on conversion:</u> 1 cord = 2.5 green tons	a. Maine wood processed	107,117	267,793
	b. Exported from Maine without processing	1,417	3,543
	c. Total harvested from Maine forests (a+b=c)	108,534	271,335
	d. Imported from out of state	6,015	15,038
	f. Total processed by Maine Forest Products Industry (a+d=e)	113,132	282,830
Totals (in green tons)	a. Maine wood processed		9,115,870
	b. Exported from Maine without processing		2,065,595
	c. Total harvested from Maine forests (a+b=c)		11,181,465
	d. Imported from out of state		2,824,265
	f. Total processed by Maine Forest Products Industry (a+d=e)		11,940,136

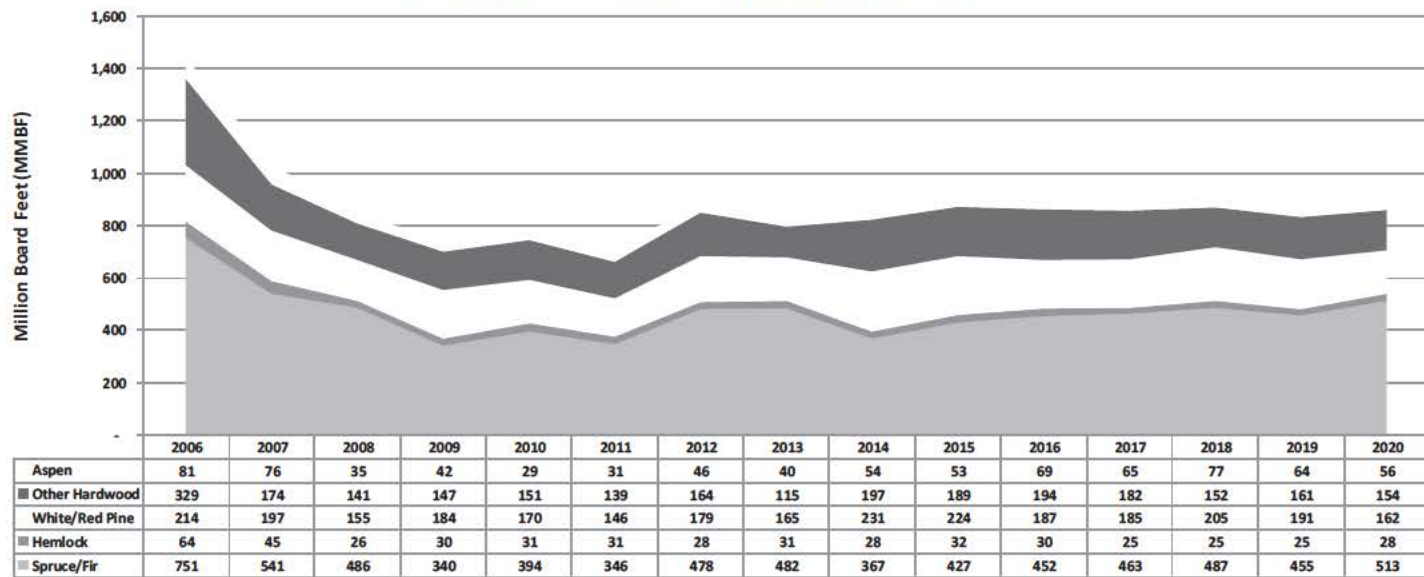
Wood Harvesting Trends (2006-2020)

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 15 years.

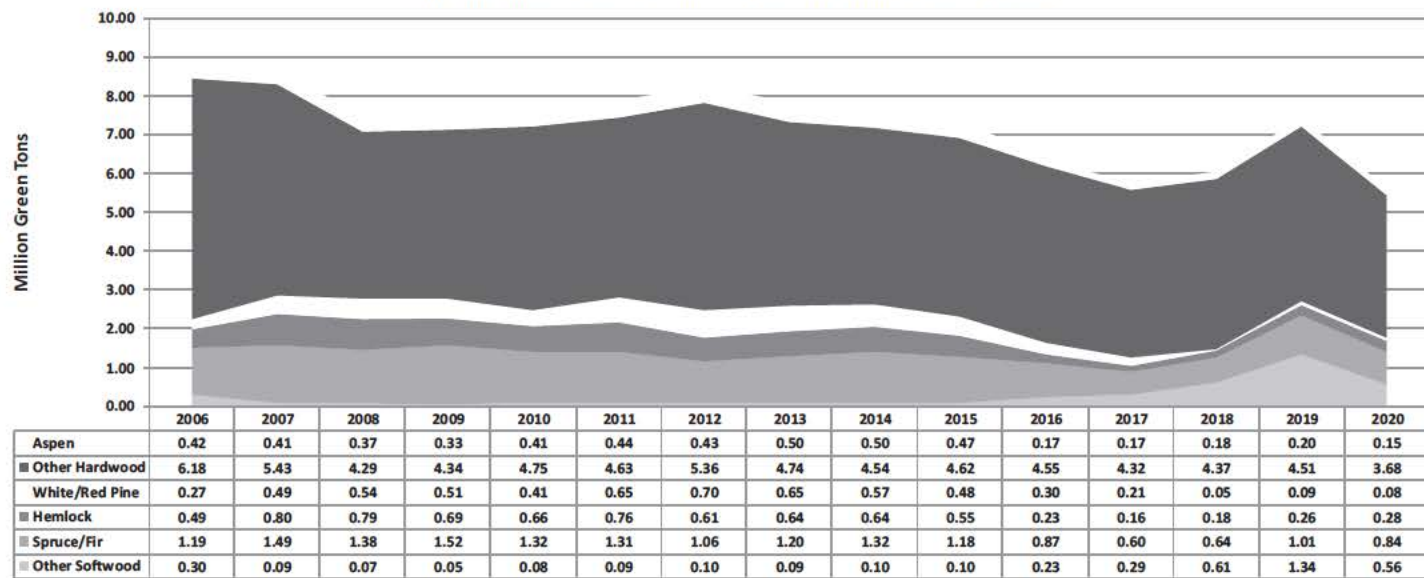
The two graphs to the right show the harvest volumes for selected species for sawlogs and pulpwood. These volumes include exported volumes.



Sawlog harvest levels of selected species in Maine (2006 - 2020)

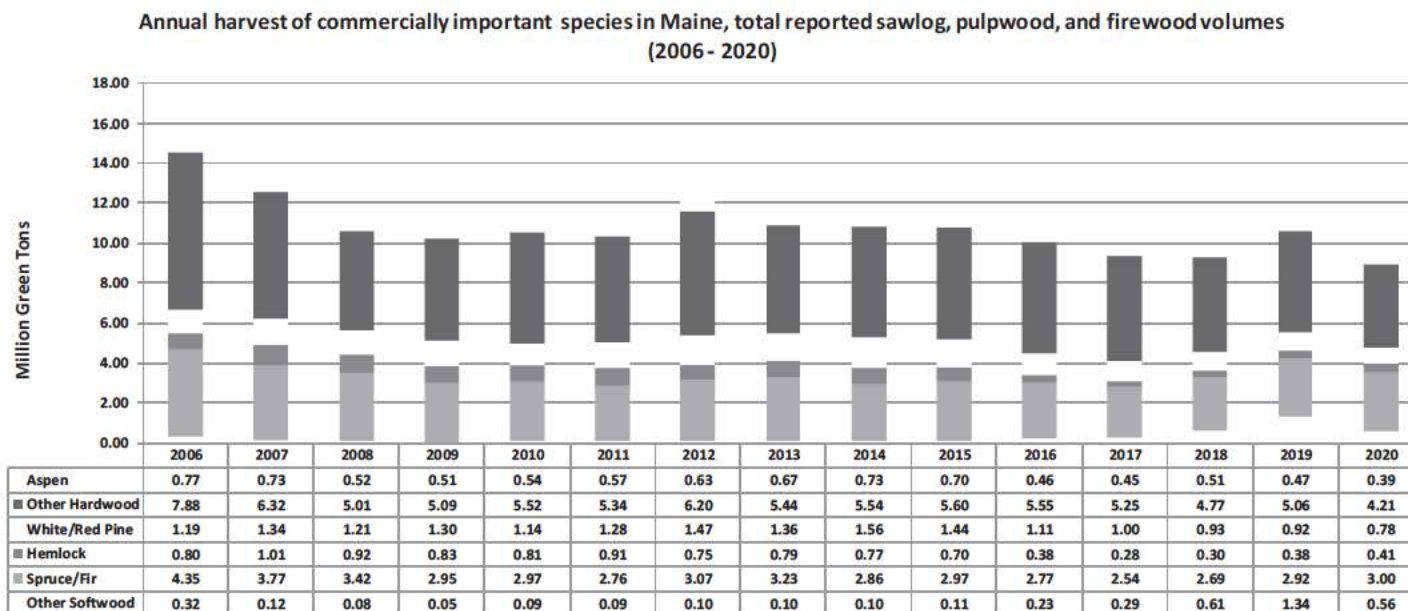


Pulpwood harvest levels of selected species in Maine (2006 - 2020)



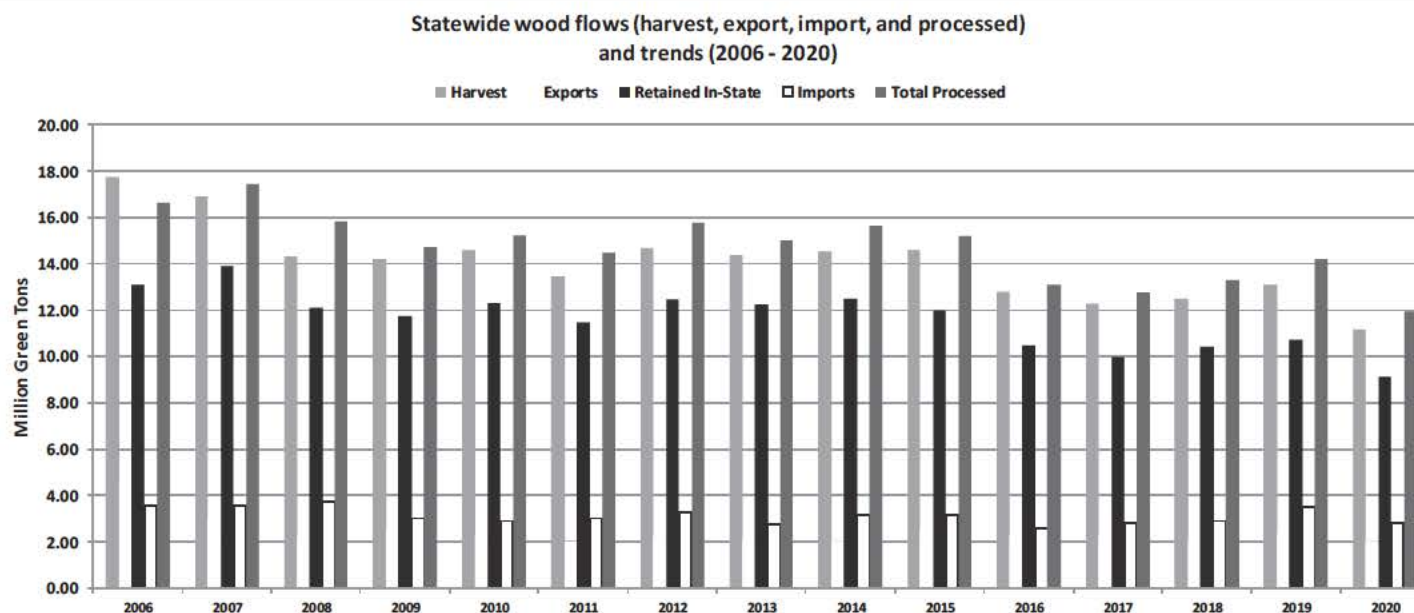
Wood Harvesting Trends (2006-2020)

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



Statewide Wood Flows (2006-2020)

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>
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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