

MAINE STATE LEGISLATURE

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1997 Wood Processor Report

including Import/Export Information

Data Collected Under the Provisions of

Title 12 MRSA §8884

January 1999



Maine Forest Service
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What is in this report?

This report shows the volume of wood that was processed by Maine mills, imported from out of state, and exported from Maine without processing during 1997.

- Tables display wood flow details for: Sawlogs, Pulpwood, Biomass Chips and Imports and Exports.
- Sawlogs and Pulpwood figures appear in a species-by-county matrix.
- Biomass figures appear by county.
- Import and export figures are tallied by species only.

How was this information collected?

The Maine Forest Service (MFS) collects information on woodflow through the Annual Wood Processor Report. The information contained in this report is based on the 1997 wood processor reporting forms.

For 1997, reports were received from 333 primary processing mills, 234 loggers and brokers who may have exported, and from 58 mills that burn some form of wood for energy. These businesses report wood volumes processed by species and county of origin.

What is the purpose of the Wood Processor Report

Each year, the Maine Forest Service collects information from Maine primary wood processors regarding the volumes of wood processed in Maine. Information is also collected for volumes imported or exported to or from Maine. Volume information contained in these 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 (under the provisions of 12MRSA § 8884, "Forest Landowner and Wood Processor Reporting Requirements"). Information in this database is tabulated and used for additional purposes as well.

Notes on reading this report.

This wood processor report is arranged so that you can look up volumes by county, imports, exports, and state totals. Maine's sixteen counties are listed here.

| | | | |
|--------------|----------|-------------|------------|
| Androscoggin | Hancock | Oxford | Somerset |
| Aroostook | Kennebec | Penobscot | Waldo |
| Cumberland | Knox | Piscataquis | Washington |
| Franklin | Lincoln | Sagadahoc | York |

The information provided for each county is organized into three (3) major product sections.

| Product | *Unit of Measure |
|---------------|------------------|
| Sawlogs | MBF |
| Pulpwood | cords |
| Biomass Chips | green tons |

*Note: Volumes also appear as cords (on the summary page) for the purpose of having a common measurement unit for comparison and for calculating grand totals across product types.

Wood flow is tallied by: Sawlogs, Pulpwood and Biomass Chips.

Sawlog Species in this report

| | | | | | | | | | |
|-----------|--------------|------------------|--------------|-------------|-----------------|-----------|-----------|-------|----------------|
| Soft wood | Spruce & Fir | White & Red Pine | Hemlock | Cedar | Other Softwood | | | | |
| Hard wood | Beech | White Birch | Yellow Birch | Sugar Maple | Red(soft) Maple | Oak (all) | Ash (all) | Aspen | Other Hardwood |

Pulpwood Species in this report

| | | | | | |
|----------|--------------|------------------|---------|-------|----------------|
| Softwood | Spruce & Fir | White & Red Pine | Hemlock | Cedar | Other Softwood |
| Hardwood | Aspen | Other Hardwood | | | |

Biomass Chips in this report

| |
|-------------|
| All Species |
|-------------|

Definitions and Notes

1. **Biomass Chips** are produced in the woods using the entire tree, stem or bole, branches and top. These chips usually go to wood to energy facilities; however they are suitable for sludge composting, play ground padding, and mulch.
2. **Bole/Stem Chips** are usually produced in the woods using portable chippers and are made from the lower portion of the tree minus limbs and top. These chips may not be bark free but are suitable for use in pulp mills. There are some stationary tree-length chipping operations.
3. **Cords (cds)** (MFS Rules Chapter 20 Definition). A "cord" is a unit of measure of wood products 4 feet wide, 4 feet high, and 8 feet long, or its equivalent, containing 128 cubic feet when the wood is ranked and well stowed. Any voids that will accommodate a stick, log or bolt of average dimensions to those in the pile shall be deducted from the measured volume.
4. **Hog fuel** is any woody residue from the woods or mills (such as sawdust, bark, and shavings) and can be biomass chips measured in either green or dry (bone dry) tons.
5. **Mill residues** are clean, pulp quality chips, made from slabs and edgings at sawmills, etc. Measured in green tons, mill residues come from the sawlog component of the volumes reported and therefore are not drain figures. They do make up a part of the volumes of fiber used to make pulp and should be added to the volume of pulpwood to get the total amount of wood used to make paper.
6. **Pulpwood** includes: tree length; long length; 4', 8', 16'; bole or stem chips converted to cords for comparison with previous figures.
7. **Sawlogs** includes sawlogs, studwood, palletwood, boltwood and veneer.
8. **Thousand board feet (MBF)** One thousand board feet. One board foot is a piece of wood 1" thick by 12" long by 12" wide.

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

- **Maine wood processed** is wood that was harvested in Maine and utilized by a Maine primary processing facility.
- **Exported from Maine without processing** is wood that was harvested in Maine and exported out of the state without primary processing by a Maine mill.
- **Imported from out-of-state** is wood that is imported from out of state (not harvested in Maine) and primary-processed by a Maine mill.
- **Total processed by Maine Forest Products Industry** is the amount of wood that was primary-processed in Maine regardless of origin.
- Pulpwood figures include pulp-quality bole or stem chips that are produced by many of Maine's whole tree chipper operators. These chippers also produce biomass which is burned for energy by many mills and wood-fired electrical generating facilities.
- Conversions: 1 MBF = 2 cords 1 cord = 2.5 green tons

Sawlogs¹ Woodflow in Maine as Reported to the Maine Forest Service (Converted to MBF)

| County | Softwood | | | | | | Hardwood | | | | | | | | | | All Species |
|--|----------------|------------------|---------------|---------------|-----------------------------|------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|------------------|
| | Spruce & Fir | White & Red Pine | Hemlock | Cedar | Other Softwood ² | Total Softwood | Beech | White Birch | Yellow Birch | Sugar Maple | Red Maple | Oak | Ash | Aspen | Other Hardwood | Total Hardwood | Grand Total |
| Androscoggin | 195 | 7,440 | 1,645 | 79 | 0 | 9,359 | 243 | 384 | 112 | 115 | 105 | 326 | 104 | 94 | 242 | 1,725 | 11,084 |
| Aroostook | 135,995 | 3,651 | 6,842 | 22,856 | 1,460 | 170,804 | 2,897 | 5,409 | 2,145 | 7,564 | 6,077 | 175 | 1,531 | 105,965 | 3,759 | 135,522 | 306,326 |
| Cumberland | 219 | 25,027 | 2,774 | 0 | 0 | 28,020 | 361 | 252 | 138 | 65 | 301 | 525 | 27 | 7 | 420 | 2,096 | 30,116 |
| Franklin | 14,823 | 28,710 | 261 | 102 | 3 | 43,899 | 1,555 | 7,591 | 4,109 | 8,925 | 3,088 | 796 | 1,023 | 371 | 444 | 27,902 | 71,801 |
| Hancock | 20,538 | 9,755 | 7,827 | 536 | 19 | 38,675 | 98 | 1,590 | 228 | 615 | 135 | 44 | 163 | 1,227 | 15 | 4,115 | 42,790 |
| Kennebec | 213 | 19,415 | 2,040 | 120 | 0 | 21,788 | 139 | 1,154 | 168 | 143 | 307 | 1,421 | 216 | 206 | 84 | 3,838 | 25,626 |
| Knox | 534 | 2,992 | 183 | 0 | 1 | 3,710 | 25 | 456 | 10 | 46 | 37 | 212 | 4 | 13 | 0 | 803 | 4,513 |
| Lincoln | 350 | 6,181 | 432 | 1 | 1 | 6,965 | 15 | 263 | 145 | 161 | 162 | 891 | 323 | 401 | 2 | 2,363 | 9,328 |
| Oxford | 10,964 | 47,149 | 2,753 | 1 | 0 | 60,867 | 3,228 | 6,383 | 3,044 | 3,145 | 2,251 | 2,761 | 1,033 | 368 | 3,061 | 25,274 | 86,141 |
| Penobscot | 82,618 | 21,683 | 22,430 | 3,948 | 58 | 130,737 | 2,778 | 4,430 | 1,557 | 3,405 | 2,694 | 203 | 1,466 | 1,018 | 221 | 17,772 | 148,509 |
| Piscataquis | 83,279 | 9,825 | 5,770 | 794 | 15 | 99,683 | 1,442 | 4,541 | 1,522 | 5,715 | 2,869 | 269 | 1,279 | 624 | 99 | 18,360 | 118,043 |
| Sagadahoc | 35 | 2,279 | 263 | 1 | 0 | 2,578 | 10 | 93 | 1 | 0 | 11 | 201 | 5 | 2 | 10 | 333 | 2,911 |
| Somerset | 32,568 | 11,340 | 821 | 1,180 | 84 | 45,993 | 2,269 | 5,739 | 1,174 | 3,876 | 2,331 | 589 | 747 | 1,927 | 467 | 19,119 | 65,112 |
| Waldo | 3,769 | 13,207 | 1,860 | 371 | 4 | 19,211 | 62 | 1,799 | 47 | 226 | 89 | 515 | 311 | 102 | 39 | 3,190 | 22,401 |
| Washington | 27,424 | 7,348 | 15,057 | 619 | 40 | 50,488 | 33 | 722 | 94 | 93 | 94 | 14 | 81 | 2,636 | 213 | 3,980 | 54,468 |
| York | 74 | 20,218 | 1,225 | 0 | 3 | 21,520 | 58 | 50 | 23 | 49 | 87 | 187 | 26 | 4 | 83 | 567 | 22,087 |
| Maine wood processed | 413,598 | 236,220 | 72,183 | 30,608 | 1,688 | 754,297 | 15,213 | 40,856 | 14,517 | 34,143 | 20,638 | 9,129 | 8,339 | 114,965 | 9,159 | 266,959 | 1,021,256 |
| + Exported from Maine without processing | 357,854 | 25,624 | 7,294 | 21,895 | 57 | 412,724 | 915 | 1,846 | 6,564 | 16,335 | 3,569 | 5,323 | 3,548 | 8,133 | 11,685 | 57,918 | 470,642 |
| = Total harvested from Maine forests | 771,452 | 261,844 | 79,477 | 52,503 | 1,745 | 1,167,021 | 16,128 | 42,702 | 21,081 | 50,478 | 24,207 | 14,452 | 11,887 | 123,098 | 20,844 | 324,877 | 1,491,898 |
| Imported from out of state | 63,358 | 44,523 | 1,849 | 10,641 | 0 | 120,371 | 1,537 | 8,812 | 3,224 | 3,396 | 2,838 | 1,928 | 785 | 26,192 | 2,234 | 50,946 | 171,317 |
| Total processed by Maine forest products industry | 476,956 | 280,743 | 74,032 | 41,249 | 1,688 | 874,668 | 16,750 | 49,668 | 17,741 | 37,539 | 23,476 | 11,057 | 9,124 | 141,157 | 11,393 | 317,905 | 1,192,573 |

Notes: 1. *Sawlogs* includes logs, veneer, boltwood, studwood, palletwood, etc. Cords converted to MBF @ 2 cords = 1 MBF.

2. *Other Softwood* includes larch, pitch pine, and a few others.

Pulpwood Woodflow in Maine as Reported to the Maine Forest Service (converted to cords)

| County | Softwood | | | | | | Hardwood | | | All Species |
|--|----------------|------------------|----------------|--------------|-----------------------------|------------------|--------------------|-----------------------------|------------------|------------------|
| | Spruce & Fir | White & Red Pine | Hemlock | Cedar | Other softwood ¹ | Total pulpwood | Aspen ² | Other ³ hardwood | Total roundwood | Grand Total |
| Androscoggin | 4,204 | 21,903 | 6,349 | 0 | 0 | 32,456 | 4,899 | 26,577 | 31,476 | 63,932 |
| Aroostook | 88,210 | 2,005 | 41,389 | 0 | 2,080 | 133,684 | 6,752 | 317,252 | 324,004 | 457,688 |
| Cumberland | 1,760 | 30,070 | 8,338 | 0 | 149 | 40,317 | 2,428 | 19,941 | 22,369 | 62,686 |
| Franklin | 54,241 | 14,819 | 16,931 | 0 | 0 | 85,991 | 18,346 | 145,155 | 163,501 | 249,492 |
| Hancock | 58,630 | 7,091 | 8,222 | 0 | 67 | 74,010 | 4,958 | 76,718 | 81,676 | 155,686 |
| Kennebec | 19,176 | 21,611 | 56,844 | 0 | 0 | 97,631 | 11,494 | 29,554 | 41,048 | 138,679 |
| Knox | 24,063 | 5,748 | 1,558 | 0 | 0 | 31,369 | 1,799 | 10,504 | 12,303 | 43,672 |
| Lincoln | 12,147 | 12,160 | 2,154 | 0 | 0 | 26,461 | 1,514 | 5,533 | 7,047 | 33,508 |
| Oxford | 45,387 | 39,023 | 36,845 | 0 | 1,385 | 122,640 | 20,875 | 139,572 | 160,447 | 283,087 |
| Penobscot | 116,726 | 20,148 | 73,260 | 0 | 14 | 210,148 | 23,000 | 263,514 | 286,514 | 496,662 |
| Piscataquis | 113,309 | 7,065 | 20,031 | 0 | 0 | 140,405 | 18,856 | 363,483 | 382,339 | 522,744 |
| Sagadahoc | 1,964 | 5,739 | 1,826 | 0 | 0 | 9,529 | 1,315 | 2,880 | 4,195 | 13,724 |
| Somerset | 82,899 | 11,659 | 28,794 | 0 | 0 | 123,352 | 26,594 | 272,417 | 299,011 | 422,363 |
| Waldo | 38,216 | 10,036 | 6,178 | 0 | 98 | 54,528 | 10,228 | 37,192 | 47,420 | 101,948 |
| Washington | 30,573 | 7,844 | 3,477 | 0 | 196 | 42,090 | 833 | 70,499 | 71,332 | 113,422 |
| York | 542 | 31,164 | 6,046 | 0 | 0 | 37,752 | 2,594 | 16,221 | 18,815 | 56,567 |
| Maine wood processed | 692,047 | 248,085 | 318,242 | 0 | 3,989 | 1,262,363 | 156,485 | 1,797,012 | 1,953,497 | 3,215,860 |
| | | | | | | | | | | |
| + Exported from Maine without processing | 100,419 | 5,475 | 1,839 | 9,900 | 517 | 118,150 | 19,111 | 116,986 | 136,097 | 254,247 |
| | | | | | | | | | | |
| = Total harvested from Maine forests | 792,466 | 253,560 | 320,081 | 9,900 | 4,506 | 1,380,513 | 175,596 | 1,913,998 | 2,089,594 | 3,470,107 |
| | | | | | | | | | | |
| + Imported from out of state | 250,105 | 59,408 | 85,703 | 0 | 2,644 | 397,860 | 119,321 | 546,771 | 666,092 | 1,063,952 |
| | | | | | | | | | | |
| Total processed by Maine Forest Products Industry | 942,152 | 307,493 | 403,945 | 0 | 6,633 | 1,660,223 | 275,806 | 2,343,783 | 2,619,589 | 4,279,812 |

Notes

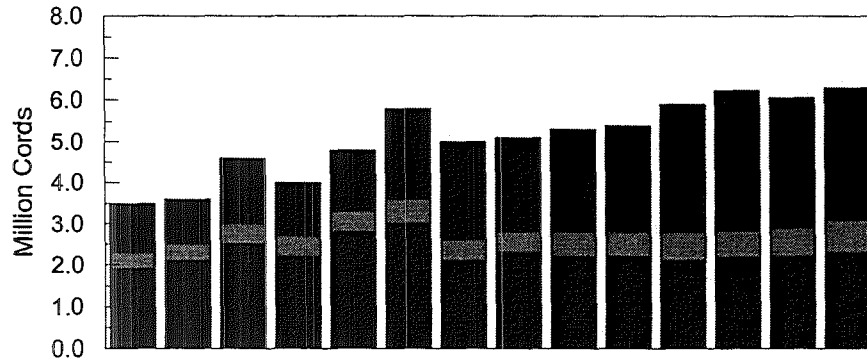
1. Other softwood is comprised of bole chips for which specific species information was not collected.
2. Aspen volumes are based on pure loads.
3. "Other hardwood" is comprised of all hardwood species except aspen sold in pure loads.

Mill residues: 1,609,509 tons of mill residues were obtained from Maine sawmills, boltermills, and for manufacture into pulp. These figures are not included in the pulpwood volumes presented elsewhere in this report. This does not represent a drain on the forest resource; but rather, a further utilization of wood already included in the tally.

Wood Harvesting Trends in Maine, 1960 to 1997

The Maine Forest Service has been collecting data on the volume of wood harvested since the late 1940's. The following charts illustrate wood harvesting trends over the past 35 years.

Harvest of Commercially Important Species in Maine, 1960 to 1997 Sawlogs and Pulpwood Combined

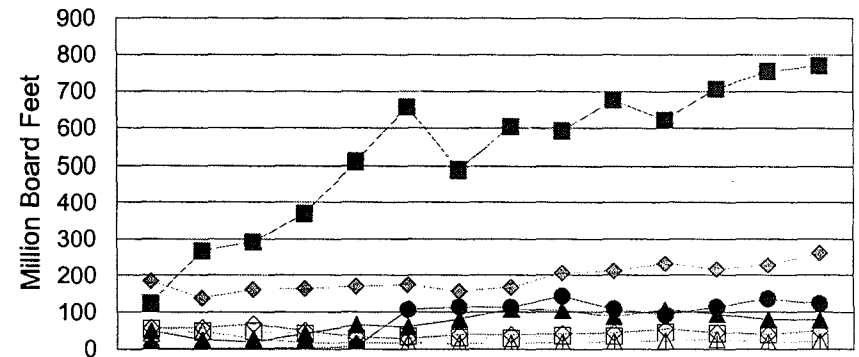


| | 1960 | 1965 | 1970 | 1975 | 1980 | 1985 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| ■ Spruce & Fir | 1.9 | 2.1 | 2.5 | 2.2 | 2.8 | 3.0 | 2.1 | 2.3 | 2.2 | 2.2 | 2.1 | 2.2 | 2.2 | 2.3 |
| ▨ Pine | 0.4 | 0.4 | 0.5 | 0.5 | 0.5 | 0.6 | 0.5 | 0.5 | 0.6 | 0.6 | 0.7 | 0.6 | 0.7 | 0.8 |
| ▧ Hemlock | 0.3 | 0.2 | 0.3 | 0.2 | 0.3 | 0.4 | 0.5 | 0.4 | 0.5 | 0.5 | 0.6 | 0.6 | 0.5 | 0.5 |
| ▩ Hardwood | 0.9 | 0.9 | 1.3 | 1.1 | 1.2 | 1.8 | 1.9 | 1.9 | 2.0 | 2.1 | 2.5 | 2.8 | 2.6 | 2.7 |

The graph above shows harvest volumes for commercially important species only. The total harvests are slightly higher.

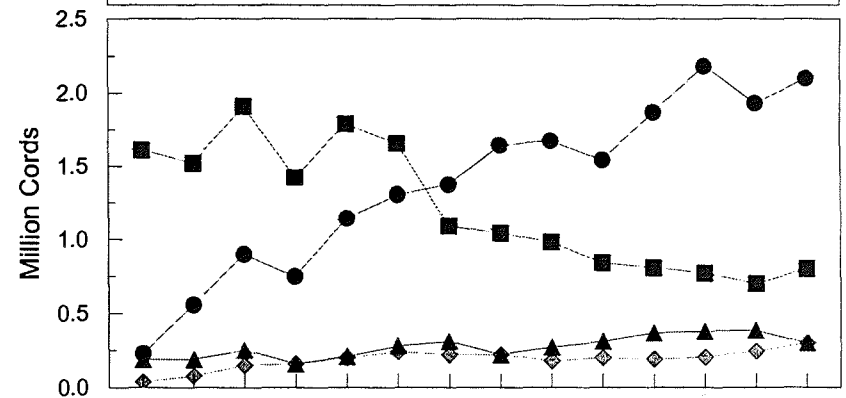
- The volume of spruce and fir harvested peaked during the mid 1980's in response to the spruce budworm epidemic.
- Spruce and fir harvest volume has stabilized since 1990.
- The harvest of hardwood species has increased during the 1990's, as paper makers substitute hardwood for spruce and fir pulp. (See Pulpwood Harvest Levels at right.)

Harvest Levels of Selected Sawlogs in Maine, 1960 to 1997



| | 1960 | 1965 | 1970 | 1975 | 1980 | 1985 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| ■ Spruce & Fir | 124 | 269 | 292 | 370 | 512 | 657 | 490 | 605 | 594 | 677 | 622 | 707 | 754 | 771 |
| ◆ Pine | 164 | 138 | 160 | 163 | 169 | 174 | 156 | 166 | 205 | 212 | 233 | 216 | 228 | 262 |
| ▲ Hemlock | 49 | 26 | 20 | 42 | 66 | 61 | 80 | 108 | 104 | 88 | 107 | 94 | 79 | 79 |
| ⊠ White Birch | 54 | 48 | 48 | 42 | 29 | 35 | 33 | 29 | 36 | 36 | 45 | 43 | 40 | 21 |
| ◇ Sugar Maple | 57 | 57 | 67 | 50 | 34 | 29 | 40 | 39 | 42 | 45 | 55 | 45 | 41 | 50 |

Pulpwood Harvest Levels in Maine, 1960 - 1997



| | 1960 | 1965 | 1970 | 1975 | 1980 | 1985 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| ■ Spruce & Fir | 1.6 | 1.5 | 1.9 | 1.4 | 1.8 | 1.6 | 1.1 | 1.0 | 1.0 | 0.8 | 0.8 | 0.8 | 0.7 | 0.8 |
| ◆ Pine | 0.0 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 |
| ▲ Hemlock | 0.2 | 0.2 | 0.3 | 0.2 | 0.2 | 0.3 | 0.3 | 0.2 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 | 0.3 |
| ● Hardwood | 0.2 | 0.6 | 0.9 | 0.8 | 1.1 | 1.3 | 1.4 | 1.6 | 1.7 | 1.5 | 1.9 | 2.2 | 1.9 | 2.1 |
| Total Pulp | 2.1 | 2.4 | 3.2 | 2.5 | 3.3 | 3.5 | 3.0 | 3.1 | 3.1 | 2.9 | 3.2 | 3.5 | 3.3 | 3.5 |

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