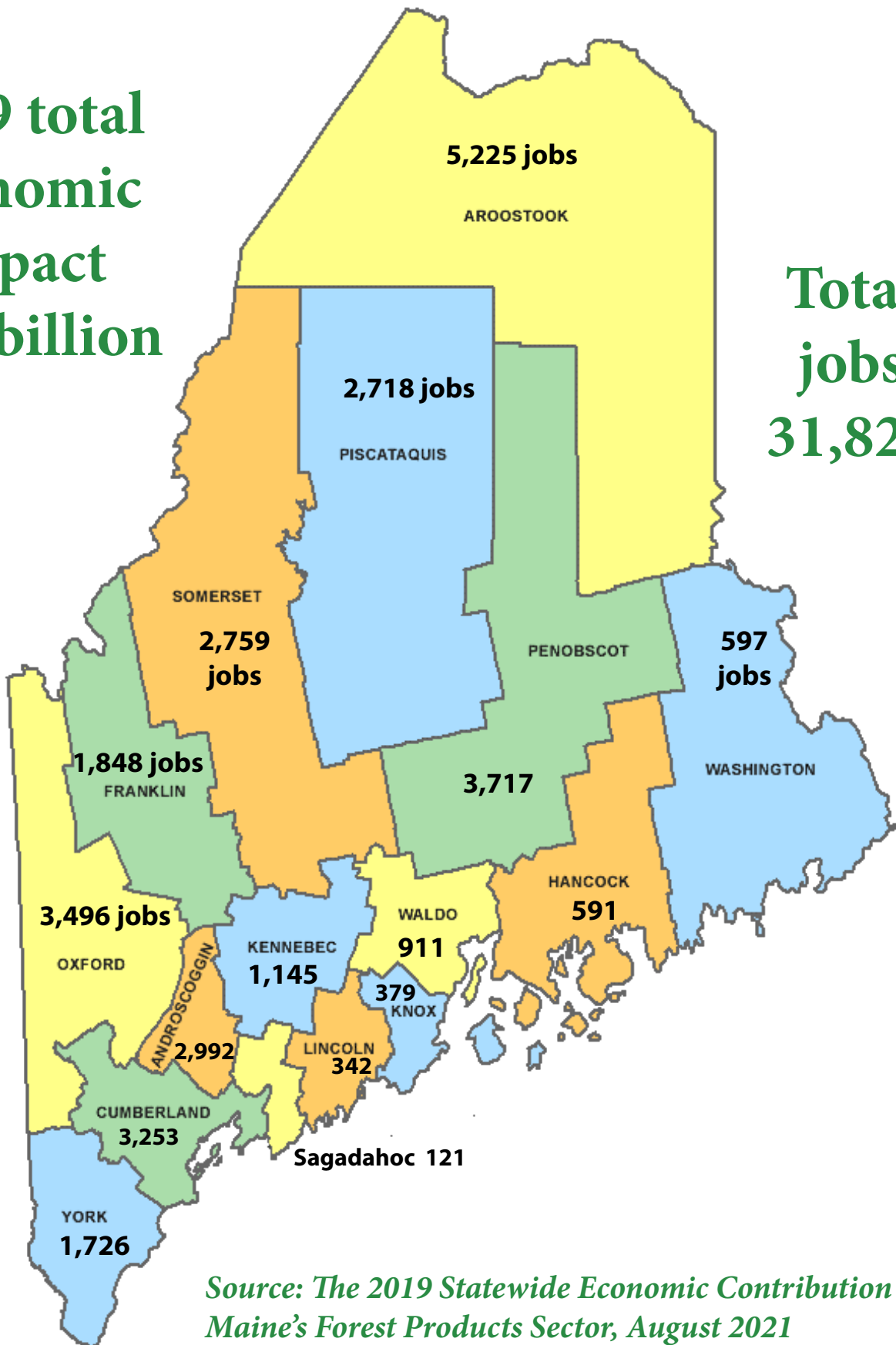


# Maine Forest Products Essentials

2019 total  
economic  
impact  
\$8.1 billion

Total  
jobs  
31,822



Source: *The 2019 Statewide Economic Contribution of  
Maine's Forest Products Sector, August 2021*

## Maine forest industry at a glance

Economic impact	2011	2014	2019	Employment*	2011	2014	2019
<b>Total impact</b>	\$8 billion	\$9.8 billion	\$8.1 billion	<b>Direct jobs</b>	17,075	16,551	12,218
<b>Total payroll</b>	\$1.9 billion	\$2.1 billion	\$1.7 billion	<b>Total jobs</b>	38,789	38,956	31,822
<b>Total state and local taxes paid</b>	\$302.2 million	\$318.5 million	\$276 million	<b>Jobs associated with forest products</b>	About 1 out of 20.5	About 1 out of 20.8	About 1 out of 25

\* Full-time and part-time. **Source:** Economic contribution of Maine's forest products industry, 2011 research, Todd Gabe, University of Maine; 2014 research, Mindy Crandall and James Anderson, UMaine; 2019 research, Megan Bailey, and Shledon Green, Margaret Chase Smith Policy Center. See Pages 7-13 for complete report on *The 2019 Statewide Economic Contribution of Maine's Forest Products Sector*.

## Maine forest products exports

Industry rank among total state exports		2019	2020	% Change 2019- 20
1	Paper	320,824,484	231,085,706	-28%
5	Forestry Products (not elsewhere specified)	111,789,024	100,728,432	-9.9%
11	Wood Products	64,204,592	67,369,853	5%
<b>Totals</b>		496,818,100	399,183,991	-19.65

*Source: Maine: International Trade Center, WISERTrade, State NAICS Database*

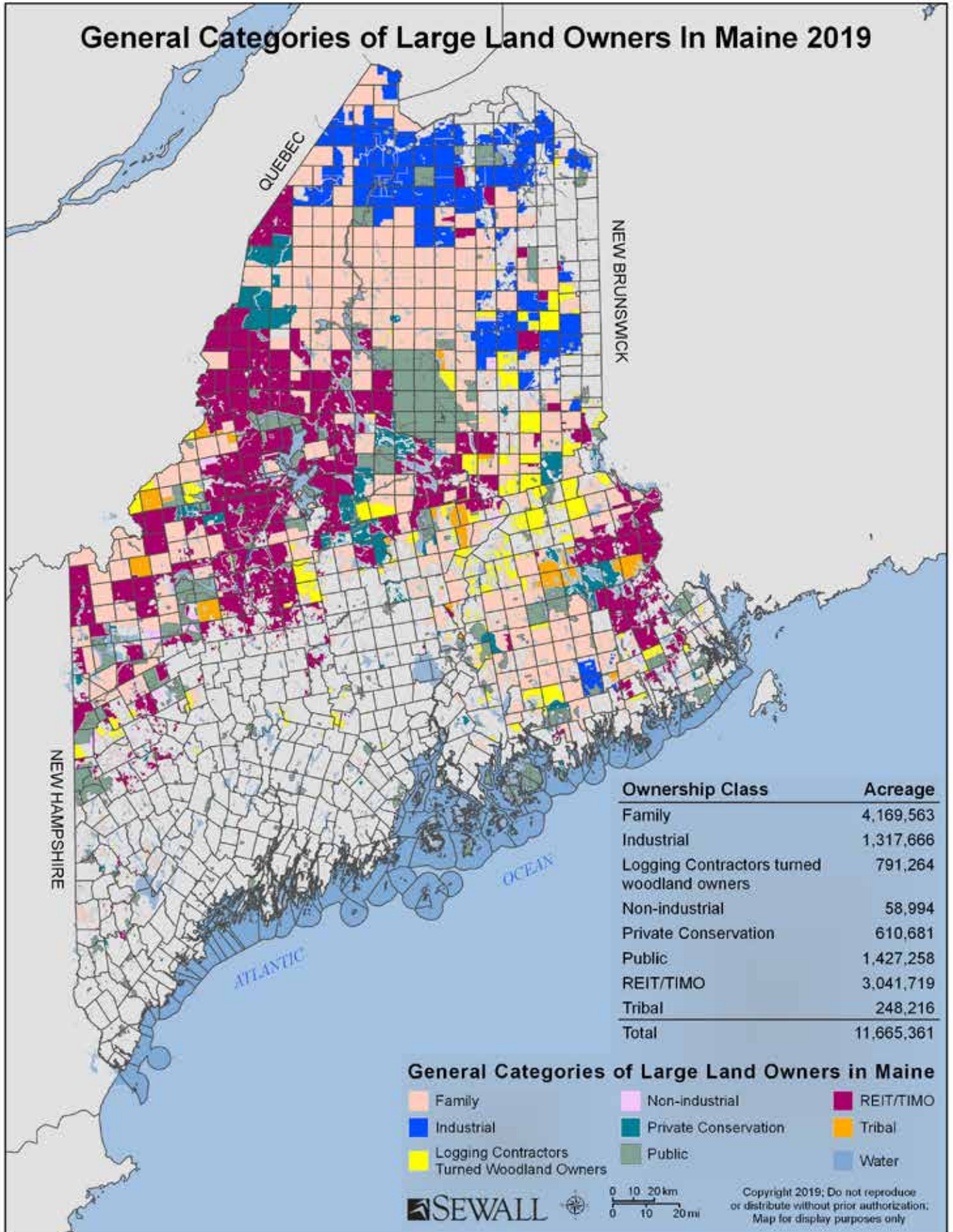
## 2019 forestland acres and ownership

### Certified acres

<b>Total acres forested</b>	17.6 million	Total Maine land: 88.8%	8.3 million acres statewide are certified as sustainably managed by independent auditors of the Sustainable Forestry Initiative, Forest Stewardship Council and American Tree Farm System -- about 50 percent of Maine's working forest.
<b>Privately owned acres</b>	16.1 million	92% of forested land	
<b>State/local government</b>	1.2 million	6.7% of forested land	
<b>U.S. Forest Service</b>	55,488	0.3% of forested land	
<b>Other federal agencies</b>	173,734	1.0% of forested land	

*Source: USDA Forest Service, Forest Inventory and Analysis Program, Mon Aug 30 20:36:30 GMT 2021. Forest Inventory EVALIDator web-application Version 1.8.0.01. St. Paul, MN: U.S. Department of Agriculture, Forest Service, Northern Research Station. [Available only online at <http://apps.fs.usda.gov/Evalidator/evalidator.jsp>]*

# General Categories of Large Land Owners In Maine 2019





# Where Maine's wood goes

*In 2019, Maine's forest products industry consumed 14.2 million green ton equivalents, up from 13.3 million in 2018.*



**Firewood and pellets  
to heat homes 2%**



**Sawlogs for lumber 35%**



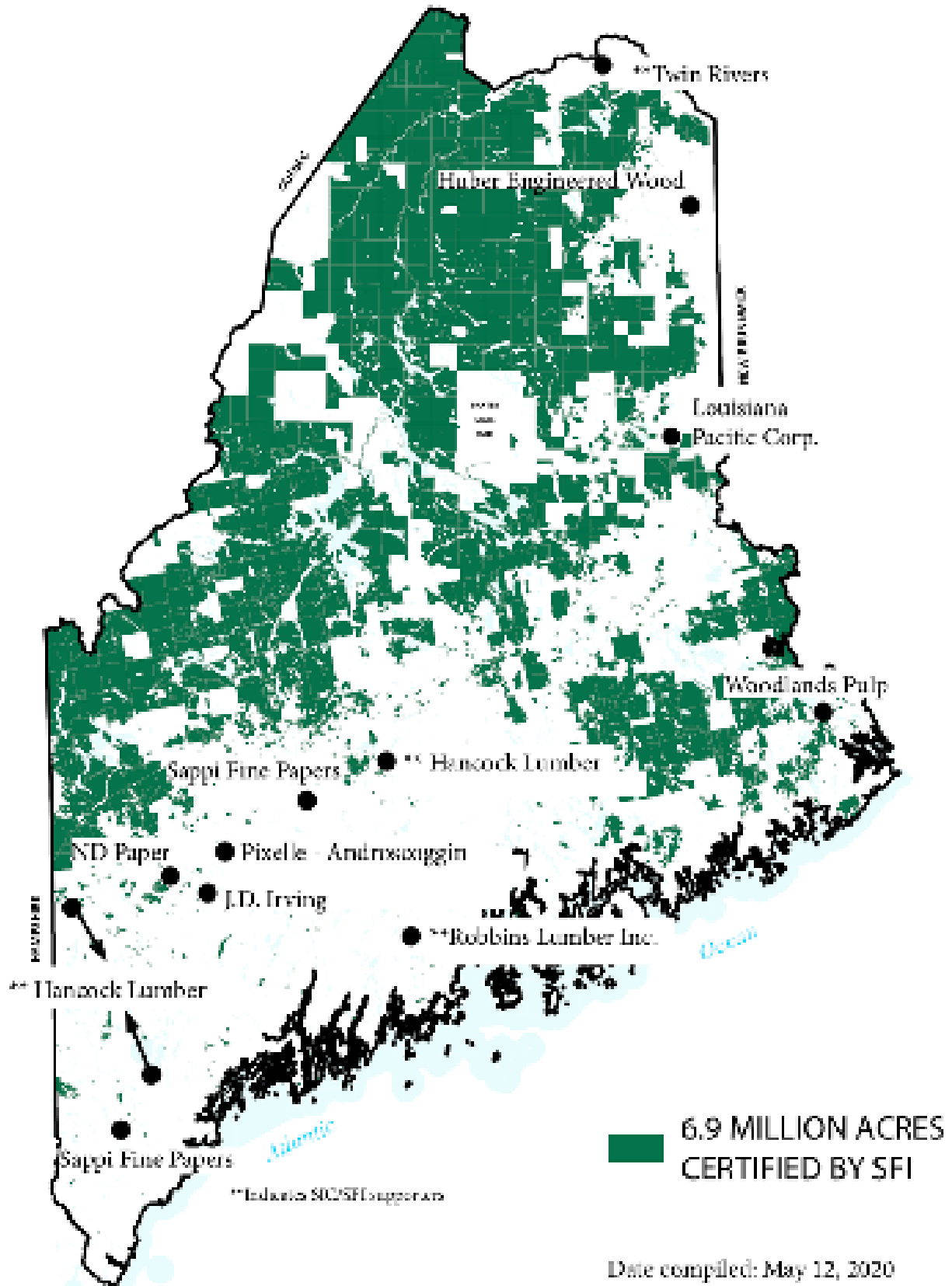
**Biomass for electricity 18%**



**Pulpwood for  
paper, packaging  
and tissue 45%**

*Source: Maine Forest Service, August 2021*

# SFI certified land in the State of Maine





## 29 - Sustainable Forest Lands

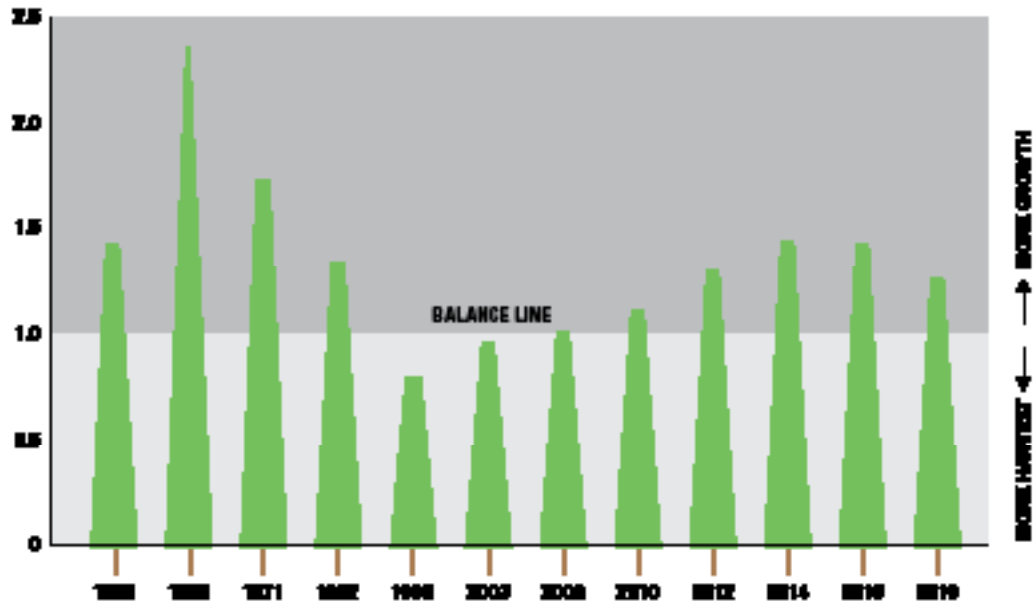


Maine's Growth to Harvest Ratio Is Stable

**Benchmark:** A net growth-to-removal ratio of approximately 1:1 will be maintained over time.

**Source:** Department of Agriculture, Conservation, and Forestry, Maine Forest Service

### TIMBERLAND GROWTH-TO-REMOVAL RATIO, 1960-2019



The sustainable management of Maine's forests is measured by the growth to harvest ratio. A net growth value above one means growth exceeds harvest, and a value below one means harvest exceeds growth. Forests cover nearly 88% of Maine's land area. Private landowners manage 84% of forested acreage, with much of it accessible to the public. Forests provide habitat for wildlife, help protect air and water quality, offer recreational opportunities, and supply

raw materials for products ranging from paper to alternative fuels. Sustainable forestry supports Maine's economy, environment, and quality of life.

Since 2016, Maine has maintained net forest growth-to-removal ratios slightly in favor of growth over harvest. The growth-to-harvest ratio fell slightly from 1.36 in 2016 to 1.27 in 2019.



“Maine has a land-use tradition that is unique in the nation. In Maine, landowners have traditionally allowed members of the public to use their property for a wide variety of recreational activities free of charge.”

– James M. Acheson, Professor of Anthropology, University of Maine, Maine Policy Review (2006)

**THE 2019 STATEWIDE ECONOMIC CONTRIBUTION OF MAINE'S FOREST PRODUCTS SECTOR<sup>1</sup>**

September 2021

Megan Bailey and Sheldon Green<sup>2</sup>

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<sup>1</sup>This analysis was funded in part by the Maine Forest Products Council

<sup>2</sup> Megan Bailey is a Research Associate in the Margaret Chase Smith Policy Center; Sheldon Green is a Research Assistant in the Margaret Chase Smith Policy Center

## EXECUTIVE SUMMARY

Maine's forest products sector includes (but is not limited to) businesses, organizations, and individuals involved with logging and forestry, paper and related product manufacturing, sawmills and wood-product manufacturing, wood furniture manufacturing, the generation of biomass electricity, and the Maine Forest Service.

The forest products sector contributes *directly* to the Maine economy through its day-to-day operations (e.g. direct sales, wages, employment of workers). In addition to these direct impacts, every dollar that is spent on local purchases by any business, organization or individual involved in the forest products sector circulates throughout Maine's economy and is used by other businesses and organizations to pay their employees, taxes, and purchase more goods and services. This "multiplier effect" is a crucial component to consider when studying the total economic contribution of the forest products sector to the state of Maine. When considering these multiplier effects, Maine's forest products sector contributed an estimated \$8.1 billion in total output and over 31,000 full and part-time jobs to the state economy in 2019.

## HIGHLIGHTS OF MAIN FINDINGS

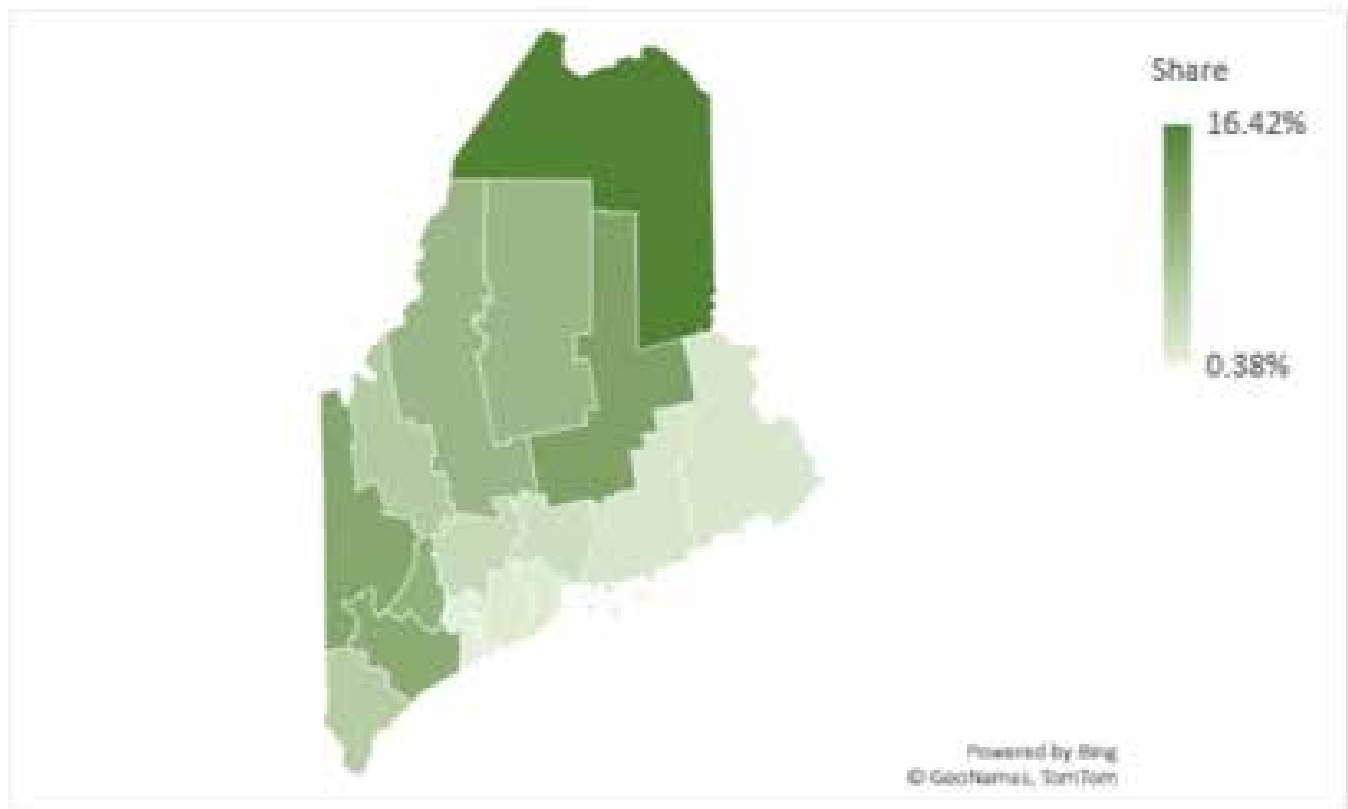
- The estimated overall annual (2019) economic contribution of Maine's forest products sector, including multiplier effects, was an estimated \$8.1 billion in output, over 31,000 jobs, and \$1.7 billion in labor income (Table 2).
- The total employment impact of 31,822 jobs in 2019 is equivalent to about 4 percent of the jobs in Maine. Put another way, roughly 1 out of 25 jobs in Maine is associated with the forest products sector.
- The total economic contribution of Maine's forest products sector in 2019 was associated with an estimated fiscal impact of \$276 million in state and local taxes. This tax impact is equivalent to 3.4 percent of the forest product sector's total (output) economic contribution.
- Maine's forest products sector had a total, including multiplier effects, value-added impact of an estimated \$2.8 billion. This is equivalent to 4.14 percent of the state's gross domestic product in 2019. Put another way, about \$1 out of every \$25 in Maine gross state product is associated with the forest products industry.



## 2019 Forest Products Economic Impact: September 2021

- The Maine forest products sector impacts businesses across the entire state through the activities of forest products companies (organizations and individuals) and the purchases that they (and their employees) make. The total employment impact varies from an estimated 121 jobs in Sagadahoc County to 5,225 jobs in Aroostook County (see Table 4).
- The forest products sector in Maine impacts businesses of all types through the purchases made by forest product sector companies (organizations and individuals) and their employees. For example, the 19,604 full- and part-time jobs counted in the forest product industry's multiplier effects includes 644 jobs in real estate, 589 jobs in full-service restaurants, and 552 jobs in hospitals (see Table 5).

**Map 1. Maine Forest Products Industry Employment Impact by County, 2019**



BACKGROUND

The forest products sector in Maine consists of businesses, organizations, and individuals involved in one of eight primary areas. These are harvesting, biomass electricity generation, sawmills, plywood and veneer, pulp and paper manufacturing, wood furniture, wood products manufacturing and the Maine Forest Service. Table 1, below, shows a breakdown of industries that make up the forest products industry and its supporting sectors.

**Table 1. Breakdown of Industries Related to Maine's Forest Products Industry**

Sector	Industries Included in Sector	Description
Forest Products Sector	Harvesting, Logging, and Other Inputs	Forestry and logging Support activities for agriculture and forestry Electric power generation - Biomass Sawmill, woodworking, and paper machinery
	Intermediate Manufacturing and Processing	Wood Product Manufacturing Paper Manufacturing
	Final Manufacturing	Wood kitchen cabinet and countertop manufacturing Non-upholstered wood household furniture manufacturing Wood office furniture manufacturing Custom architectural woodwork and millwork
Forest Products Support Sector	Regeneration and Management	Greenhouse, nursery, and floriculture production Management consulting services
	Machinery Lease and Repair	Farm machinery and equipment manufacturing Commercial and industrial machinery and equipment rental and leasing Commercial and industrial machinery and equipment rental and maintenance
	Transportation	Rail transportation Truck transportation
	Research	Environmental and other technical consulting services Scientific research and development services

2019 Forest Products Economic Impact: September 2021

TOTAL ANNUAL STATEWIDE ECONOMIC CONTRIBUTION

**Table 2. Total Annual Statewide Economic Contribution of Maine's Forest Products Sector, 2019**

	Direct	Indirect	Induced	Total
Output	\$4,744,711,433	\$2,139,538,095	\$1,171,989,524	\$8,056,239,053
Employment	12,218	11,446	8,158	31,822
Labor Income	\$682,264,395	\$622,919,769	\$374,111,171	\$1,679,295,335

Notes: Direct output, employment and labor income figures were estimated using information from the U.S. Census Bureau Annual Survey of Manufacturers, the County Business Patterns of the U.S. Census Bureau, Nonemployer Statistics of the U.S. Census Bureau, budget figures for the Maine Forest Service, and the 2019 Maine IMPLAN model; multiplier effects are estimated using an economic impact (IMPLAN) model of the Maine economy; values are in 2019 dollars.

**Table 3. Total Annual Statewide Economic Contribution of Maine's Forest Products Sector by Sector Category, 2019**

	Direct Contribution	Multiplier Effects (Indirect + Induced)			Total Contribution
	Forest Products Sector	Forest Products Sector	Forest Products Support Sectors	Non-Forest Products Sectors	
Output	\$4,744,711,433	\$566,910,208	\$218,813,508	\$2,525,803,904	\$8,056,239,053
Employment	12,218	3,462	1,292	14,849	31,822
Labor Income	\$682,264,395	\$147,982,348	\$91,092,498	\$757,956,094	\$1,679,295,335

Notes: Industry categories are as defined in Table 1; direct output, employment and labor income figures were estimated using information from the U.S. Census Bureau Annual Survey of Manufacturers, the County Business Patterns of the U.S. Census Bureau, Nonemployer Statistics of the U.S. Census Bureau, budget figures for the Maine Forest Service, and the 2019 Maine IMPLAN model; multiplier effects are estimated using an economic impact (IMPLAN) model of the Maine economy; values are in 2019 dollars; the forest products sector is included in the direct contribution and the multiplier effect because inter-industry spending occurs (e.g. sawmills and paper product manufacturers (counted in the direct contribution) purchase goods and services from businesses involved in logging (counted in the multiplier effects)).

## 2019 Forest Products Economic Impact: September 2021

### DETAIL: EMPLOYMENT IMPACTS

**Table 4. Maine Forest Products Industry Employment Impact by County, 2019**

County	Total Employment Impact
Androscoggin	2,992
Aroostook	5,225
Cumberland	3,253
Franklin	1,848
Hancock	591
Kennebec	1,145
Knox	379
Lincoln	342
Oxford	3,496
Penobscot	3,717
Piscataquis	2,718
Sagadahoc	121
Somerset	2,759
Waldo	911
Washington	597
York	1,726
<b>TOTAL</b>	<b>31,822</b>

Notes: County-level employment figures are generated using data from County Business Patterns and Nonemployer Statistics of the U.S. Census Bureau. County employment shares are based on direct employment in selected industries (NAICS 113, 1153, 321, 322, 337110, 337122, 337212) and these shares are applied to the statewide total employment impact.

## 2019 Forest Products Economic Impact: September 2021

**Table 5. Industries Impacted by Maine’s Forest Products Sector, 2019**

	Included in Sectors	Total Employment Impact
Forest Products Sector	Paper Manufacturing	4,909
	Wood Product Manufacturing	4,808
	Forestry and Logging	4,187
	Other	1,766
	<b>Subtotal</b>	<b>15,680</b>
Forest Products Support Sector	Truck Transportation	708
	Rail Transportation	138
	Management Consulting	105
	Other	341
	<b>Subtotal</b>	<b>1,292</b>
Non-Forest Products Sectors	Management of companies	646
	Real estate	644
	Full-service restaurants	589
	Hospitals	552
	Limited-service restaurants	362
	Services to buildings	348
	Architectural, engineering, and related services	215
	Accounting, tax preparation, bookkeeping, and payroll services	210
	Other	11,283
	<b>Subtotal</b>	<b>14,849</b>
<b>TOTAL</b>		<b>31,822</b>

Notes: The forest products industry employment impact of 15,680 full and part-time jobs includes the direct employment of 12,218 and 3,462 jobs counted in the multiplier effects (Table 3). The forest products support industry sectors and non-forest product industry sectors listed by title have the largest employment impacts as estimated by the 2019 Maine IMPLAN model. Employment figures count full and part-time jobs that are located in Maine. Numbers may not sum to totals due to rounding.