Forest Products Industries' Economic Contributions: New Hampshire, 2023

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New Hampshire Division of Forests and Lands
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Photo Credit: Raju Pokharel

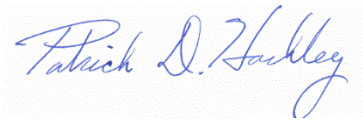
Foreword

New Hampshire has a rich natural and cultural heritage tied to its 4.7 million acres of forestland. The New Hampshire Division of Forests and Lands with Federal, State and Private partners implements various programs that support forest stewardship, conservation, forest health, urban and community forestry and more throughout the State. The ability to improve forest health, address forest needs, and enhance forest values is reliant on a strong and resilient forest industry. Economic, ecological and community benefits can work in tandem.

State Forest Industry economic contribution reports have provided important insights and benchmarking over multiple decades to the health and resilience of the forest industry – forestry, logging, primary forest products, furniture and more.

This report follows the format of prior reports. Using the most recent IMPLAN data, it provides objective data that quantifies the State's forest industry including facts, figures, and context that informs policy and affirms anecdotal trends that industry professionals have observed since 2017. This report has the added benefit of comparing 2023 forest industry economic contributions to those in 2017 quantifying the impacts of market and policy changes over that period of time.

We are grateful to the Northeast-Midwest State Foresters Alliance (NMSFA), its Utilization and Marketing Committee, and the excellent work of Michigan State University faculty who developed this report in coordination with the Division of Forests and Lands and UNH Cooperative Extension.



Patrick Hackley

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Executive Summary

Based on 2023 FIA estimates, New Hampshire contains approximately 4.78 million acres of forest land, representing about 83 percent of its total land area. Of this forest base, 94.0 percent (4.49 million acres) is classified as timberland capable of producing commercial volumes of wood, while 6.0 percent consists of reserved or low-productivity forestland. Private ownership accounts for the majority of forest land at 72.9 percent (3.48 million acres), followed by state and local governments (9.6 percent; 0.46 million acres) and federal ownership (17.4 percent; 0.83 million acres). This report summarizes the economic contribution of forest products industries in New Hampshire using IMPLAN 2023 data. This report also captures the pre-and post-COVID snapshots of forest products industries in New Hampshire and shows the changes in last five years.

Forest Product Industries

This report presents seven forest products industries, which are based on 32 economic sectors in IMPLAN: Forestry, Logging, Primary solid wood products, Secondary solid wood products, Wood furniture, Pulp, paper, and paperboard mills, and Secondary paperboard and other paper products. In 2023, these industries directly supported 5,993 jobs and generated $1.69 billion in output, $570 million in value added, and $418 million in labor income. When indirect and induced effects are included, the sector supported 10,064 total jobs, $2.61 billion in output, $1.13 billion in value added, and $741 million in labor income. Among the top sectors (excluding forest products sectors) impacted by forest products industries in terms of output and employment were wholesale trade, real estate, trucking, restaurants, hospitals, and business services. This group of sectors reflects spending by forest products companies, their suppliers, and individuals.

Leading Forest Products Industry Groups (direct contribution)

Among the seven forest-products groups, Forestry was the largest direct employer in 2023 (1,246 jobs), followed by Logging (1,103 jobs) and Primary solid wood products (1,033 jobs). In dollar terms, Primary solid wood products produced the highest direct output at $601.5 million, while Secondary solid wood products generated $342.8 million and Wood furniture contributed $187.5 million. Pulp, Paper, and Paperboard Mills, though smaller in employment (379 jobs), remained a key contributor with $295.2 million in output. Secondary Paperboard and Other Paper Products produced $142.4 million in output and supported 276 jobs. Forestry, while the smallest contributor in dollar terms, provided essential upstream inputs to logging and manufacturing industries.

Leading Individual Forest Products Sectors (direct contribution)

Across the 32 forest-product sectors reported in IMPLAN, Commercial Logging was the top employer in 2023 with 1,103 jobs, and also ranked first in labor income ($76.1 million). Sawmills were the leading industry in both value added ($88.4 million) and output ($370.3 million). Although New Hampshire's paper mill activity is limited in employment terms, the IMPLAN sector results indicate relatively high output and value added per job for Paper Mills in 2023, which leads the sector to rank highly in total output ($295.2 million) and value added ($66.1 million) within this 32-sector specification.. Overall, the top-performing industries illustrate the importance of primary wood processing, and logging in driving the state's forest-sector economy.

New Hampshire's Forest Products Industries Compared to Other New Hampshire Industries

Among New Hampshire's four major natural-resource sectors, forest products, mining and oil & gas, agriculture, and commercial fishing/hunting/trapping, the forest products sector ranked first in employment, labor income, and output, and second in value added in 2023. Forest products directly supported 5,993 jobs, which is more than agriculture (5,532 jobs), mining (1,615 jobs), and commercial fishing, hunting, and trapping (37 jobs), and represents about 45.5 percent of total natural-resources employment. The sector generated $417.6 million in labor income, exceeding mining ($189.4 million), agriculture ($26.4 million), and fishing ($2.5 million). In terms of output, forest products produced $1.69 billion, higher than both mining ($1.18 billion), agriculture ($322.8 million), and fishing ($21.8 million). For value added, mining was largest at $637.1 million, followed by forest products at $569.7 million, agriculture at $187.3 million, and fishing at $18.9 million. These comparisons show that forest products are the leading employer and income generator among New Hampshire's natural-resource sectors and one of the two largest contributors in both output and value added.

Five-years Trends in New Hampshire's Forest Products Industries Economic Contribution[1]

Since 2017, the direct jobs in forest products industries decreased by 17.8 percent, direct output decreased by 16.6%, value-added decreased by 28.5 percent, labor income decreased by 5.9 percent (all in 2023 dollars). On the other hand, the average labor income per jobs increased by about 14.4 percent. Nominal and inflation-adjusted (2023 dollar) values for all years are provided in the Appendix B.

[1] Unless otherwise stated, dollar values and year-to-year comparisons in this report are in 2023 dollars (inflation-adjusted).

Glossary

Forestry Terms

Average annual harvest removals: The estimated volume of trees that were live at the time of the previous inventory and were either cut and removed by direct human activity related to harvesting or died as a result of silvicultural or land-clearing activity by the time of the current inventory.

Average annual mortality: The volume of trees that were live at the time of the previous inventory and are dead in the current inventory.

Average annual net growth: The change in merchantable bole volume of growing-stock trees (at least five inches diameter at breast height [DBH]) after deducting mortality volume, in cubic feet, on forest land.

Forest land: Land that is at least 10 percent stocked by trees of any size, including land that formerly had such tree cover and that will be naturally or artificially regenerated. Forest land includes transition zones, such as areas between heavily forested and non-forested lands that are at least 10 percent stocked with trees and forest areas adjacent to urban and built-up lands, including pinyon-juniper and chaparral areas in the western U.S., and afforested areas. The minimum area for classification of forest land is one acre and 120 feet wide, measured stem-to-stem from the outermost edge. Unimproved roads and trails, streams, and clearings in forest areas are classified as forest land if less than 120 feet wide.

Growing stock: Live trees of commercial species that meet minimum merchantability standards (at least five inches DBH). In general, these trees have at least one solid eight-foot section, are reasonably free of form defect on the merchantable bole, and at least 34 percent or more of the volume is merchantable. Excludes rough or rotten cull trees.

Timberland: A subset of forest land that produces or can produce crops of industrial wood and is not withdrawn from timber utilization by statute or administrative regulation. (Note: Areas qualifying as timberland can produce at least 20 cubic feet per acre per year of industrial wood in natural stands. Currently inaccessible and inoperable areas are included.)

Economic Contribution Terms

Direct effects/contributions: The direct contribution represents the economic activities (output, employment, labor income, and value-added) that occur within an industry or sector as a result of its existing production to satisfy current (exogenous) final demand. In contribution analysis, the direct effect corresponds to the sector's own production activities that maintain the structure of the regional economy. For example, the direct contribution of the forest products industry reflects its ongoing production and employment required to meet current local and export demand for forest-based goods. **Employment**: The number of full- and part-time jobs associated with an industry.

Indirect effects/contributions: The indirect contribution captures the inter-industry linkages created when the industry purchases goods and services from other local industries. These transactions stimulate additional production, employment, and income along the supply chain. For instance, demand for wood products generates additional output in sectors such as transportation, wholesale trade, and equipment manufacturing that supply inputs to the forest industry. The magnitude of indirect contribution reflects the degree of interdependence and strength of local supply-chain relationships.

Induce effects/contributions: The induced contribution measures the additional economic activity generated by household spending of labor income earned through direct and indirect effects. When workers employed in the forest products and related supply-chain sectors spend their income on goods and services, such as housing, healthcare, or retail, it further stimulates regional economic activity. This household feedback effect represents the cyclical flow of income and expenditures within the economy.

Labor income: The dollar total of employee compensation and proprietor income; the latter is associated with self-employed individuals.

Output: The dollar measure of production within an area; it is also viewed as sales.

Social Accounting Matrix (SAM) multipliers: These multipliers are derived by dividing the sum of direct, indirect, and induced effects by the direct effects. The social accounts include payments made between households, households and government, and more. These are available for output, employment, labor income, and value-added and are used to assess the effects of changes in industry activity (i.e., "ripple effects").

Total effects/contributions: The sum of direct, indirect, and induced effects.

Value-added (also known as gross state product, or GSP): The sum of labor income, other property income (e.g., rents and profits), and indirect business taxes (e.g., excise and sales

taxes). It is the difference between an industry's total output and the cost of its intermediate inputs. The sum of value-added for all economic sectors within the region equals the total GSP.

Introduction

The Forest Industry, comprised of multiple industry sectors, is an integral component of New Hampshire's economy. It provides jobs, raw materials, and finished goods that generate additional economic activity throughout the state, region, and nation. Forests in New Hampshire have always supported local and state economies and generated employment and income (Leefers et al. 2020). These forests form the foundation for a wide array of industry sectors including logging, sawmills, pulp and paper, and other primary and secondary wood products manufacturing. The New Hampshire Division of Forests and Lands (NHDFL) administers most state-owned forestlands, managing them for multiple benefits such as wildlife habitat, watershed protection, recreation, and sustainable forest-based economic activity. According to the Division's FY 2023 Annual Report, the state managed over 2,400 acres of timber sales generating approximately $2.25 million in timber revenue during the fiscal year (New Hampshire Division of Forests and Lands 2023[2]). This revenue supports the Forest Management and Protection Fund, which reinvests in reforestation, forest health, and stewardship programs that contribute to New Hampshire's sustainable timber economy. Collectively, the Forest Products Industry (FPI) contributes directly to the economic development of the region, while also supporting rural livelihoods, providing raw materials for construction and packaging, and generating substantial downstream linkages to other industries (Poudel and Dahal 2025; Lamsal et al. 2025a).

Across public and private land, approximately $34 million in timber sale revenue was generated in 2023 resulting in $3.4 million of timber tax revenue for municipalities in the state (NH Department of Revenue Administration 2024). The scale and diversity of activities across the FPI underscore its role as a major part of the broader manufacturing economy, contributing to value added and sustaining consumer demand (Lamsal et al. 2025b).

A state report on FPI contributions on New Hampshire was last published by Leefers et al. (2020) using 2017 IMPLAN data. The present update extends that effort using 2023 data, allowing for a comparison across time. This analysis measures how the performance of forest sector industries in New Hampshire has shifted between 2017 and 2023 in terms of employment, output, labor income, and the Gross State Product (GSP), also known as value added[3]. Tracking these changes is essential, as it provides a clear picture of both long-term

[2] (https://www.nhdfl.dncr.nh.gov/sites/g/files/ehbemt866/files/documents/dfl-annual-report-fy2023.pdf last accessed 11/10/2025)

[3] The 2017 results in this report are based on data from the IMPLAN Pro desktop version, whereas the 2018–2023 results are based on the IMPLAN web platform. Because there are minor differences between the Pro and web versions, the 2017 estimates shown here may not exactly match 2017 results reproduced from the web version. To maintain consistency with the original 2017 report and ensure a valid basis for comparison and trend analysis, we use the original 2017 IMPLAN Pro data, and IMPLAN web data for all years from 2018 through 2023.

trends and the more recent disruptions caused by the COVID-19 pandemic and volatility in biomass markets when Senate Bill 129 (2017) and Senate Bill 365 (2018) led to the closure of several Class III biomass plants. The pandemic and biomass plant closures had economy-wide effects on supply chains, consumer demand, and labor markets (Poudel and Dahal 2025; Lamsal et al. 2025b), and this report therefore captures the pre- and post-COVID conditions of the FPI within the region.

This trend analysis can be used in multiple ways by related stakeholders. For policymakers, it offers a benchmark for monitoring the health of one of the State's key resource-based industries and helps inform workforce development, investment, and rural economic policies. For industry stakeholders, it provides insight into productivity, competitiveness, and sectoral resilience, supporting strategic planning. For researchers and forest managers, it offers a consistent regional framework that connects forest resources with industrial performance and economic outcomes.

The data used in this report were derived from the U.S. Forest Service Forest Inventory and Analysis (FIA) database and from Impact Analysis for Planning (IMPLAN). These data and related information are presented in four major sections: (i) Forest Resources of New Hampshire, (ii) Economic Contributions of the New Hampshire FPIs, (iii) Comparing FPIs with other industries and neighbor states, and (iv) Summary. We acknowledge that, due to rounding, some values in the tables and figures may not sum to the exact total indicated.

Forest Resources of New Hampshire

According to 2023 estimates from the USDA Forest Inventory and Analysis (FIA) program, New Hampshire's total land area totals 5.74 million acres. Of this, 4.78 million acres, or 83.3 percent, meet the FIA definition of forest land, while the remaining 0.96 million acres, or 16.7 percent, are classified as non-forest land. FIA defines forest land as land at least 10 percent stocked by trees of any size, including areas that formerly supported such tree cover and that will be naturally or artificially regenerated. Within New Hampshire's forest land base, timberland accounts for 4.49 million acres, or 93.3 percent (Figure 1), and represents unreserved forest capable of producing at least 20 cubic feet of wood per acre per year. Reserved forestland comprises 285,844 thousand acres, or 6 percent, and is withdrawn from timber utilization by legal or administrative designation. Other forestland totals 4,756 acres, or 0.1 percent, consisting of unreserved forests of low productivity, generally yielding less than 20 cubic feet per acre per year. In practical terms, approximately 4.4 million acres are available and biophysically suitable for commercial timber management, while about 290,600 acres are either reserved or too low in productivity to contribute materially to timber supply.

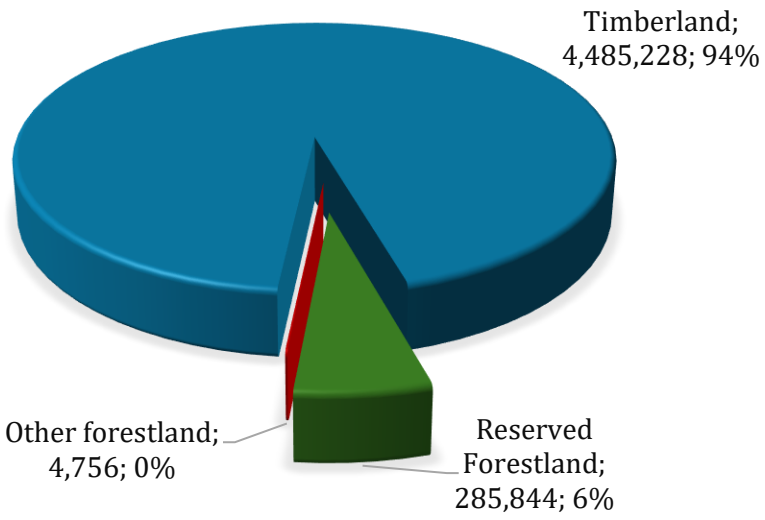

Figure 1: New Hampshire Forest Land area in acres by Land use type, 2023 (US Forest Service).

Ownership of New Hampshire's 4.78 million acres of forest land is distributed among federal, state, local, and private entities, with private owners holding the majority share. Private landowners manage 3.48 million acres, or 73 percent of the total forest land. State and local governments are responsible for 459,575 acres (10 percent), while federal ownership totals 833,525 acres (17 percent). Within the federal category, National Forests account for 759,841 acres (16 percent), and other federal agencies manage 73,684 acres (1 percent) (Figure 2).

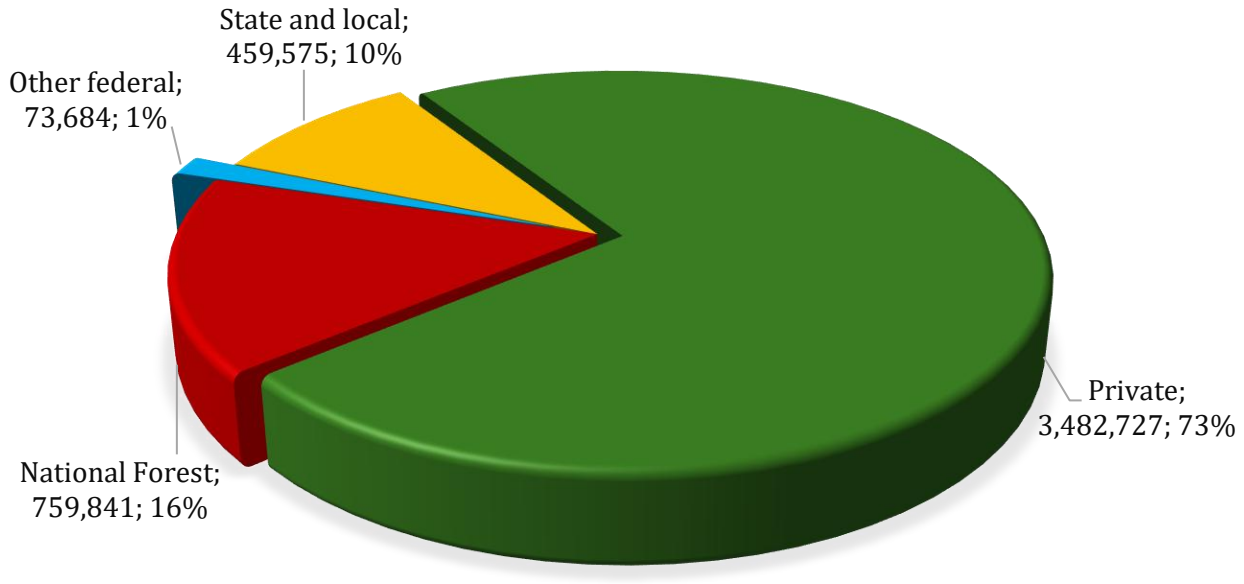

Figure 2: New Hampshire Forest Land area in acres by Ownership group, 2023 (US Forest Service).

Hardwoods dominate New Hampshire's 4.78 million acres of forest land. The maple/beech/birch forest-type group is the most extensive, occupying 2.45 million acres, or 51 percent of the total forest area (Figure 3). The white/red/jack pine and oak/hickory groups each account for about 12 percent, covering 588,115 acres and 571,310 acres, respectively. The spruce/fir group follows with 469,338 acres (10 percent), and the oak/pine type covers 338,642 acres (7 percent). The remaining 363,322 acres, or 8 percent is distributed among several smaller forest-type groups, including aspen/birch, elm/ash/cottonwood, other hardwoods, and a small proportion of non-stocked or exotic stands. Taken together, hardwood-dominated forests, including maple/beech/birch, oak/hickory, oak/pine, and other mixed hardwood types, represent roughly 77 percent of New Hampshire's forest land. Conifer-dominated types such as spruce/fir and white/red/jack pine account for about 22 percent, with the remaining area (<1 percent) classified as non-stocked.

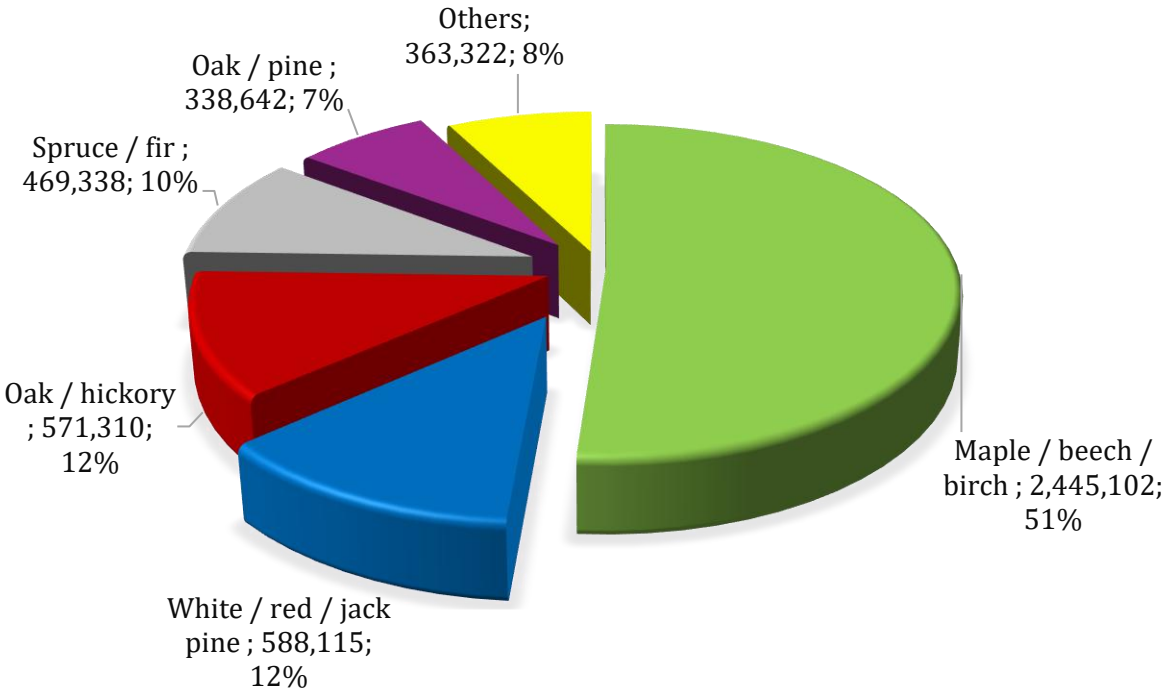

Figure 3*:* New Hampshire Forest Land area in acres by Forest type group, 2023 (US Forest Service).

New Hampshire's timber resources are highly valued for their use in millwork, flooring, and furniture production, among other durable goods. The state's diverse mix of hardwood and softwood species supports a broad spectrum of forest-based industries, ranging from forestry and commercial logging to the manufacture of secondary paper and wood products. The estimated volume of standing timber suitable for forest products (i.e., the marketable volume of growing stock) is approximately 12.09 billion cubic feet, or about 152 million standard cords (Table 1). Of this total, hardwoods account for 6.78 billion cubic feet (56 percent) and softwoods for 5.32 billion (44 percent). About 73 percent of the volume is on private lands, 15 percent on National Forest lands, 11 percent on state and local lands, and the remainder on other federal holdings. Average annual net growth is 205 million cubic feet, while harvest removals average 89.7 million cubic feet and mortality totals 79.9 million cubic feet per year. Net growth exceeds removals by a ratio of about 2.3 to 1, indicating that removals remain well below net biological growth. Because net growth is already net of mortality, the implied net change in growing-stock volume is net growth minus harvest removals, which is positive, indicating an increase in growing-stock volume statewide. Average annual harvest removals equal roughly 0.7 percent of standing volume, or about 1.1 million standard cords. Mortality represents another 0.6 percent, suggesting that New Hampshire's growing stock inventory remains in a condition of positive net growth.

Table 1: Characteristics of Growing Stock in New Hampshire, 2023. †

Description	Species group	National Forest	Other federal	State and local	Private	Not available	**Total**
Net volume	Hardwood	1,057,162	103,373	686,397	4,931,127	0	**6,778,059**
	Softwood	715,884	121,130	601,240	3,876,986	0	**5,315,240**
	Total	**1,773,046**	**224,503**	**1,287,638**	**8,808,114**	**0**	**12,093,300**
Average annual gross growth	Hardwood	19,438	2,051	14,788	114,982	281	**151,540**
	Softwood	21,094	2,882	14,122	94,625	630	**133,354**
	Total	**40,532**	**4,933**	**28,911**	**209,607**	**911**	**284,894**
Average annual net growth	Hardwood	10,498	1,072	10,561	88,232	281	**110,645**
	Softwood	13,550	1,872	10,070	68,252	630	**94,374**
	Total	**24,048**	**2,945**	**20,631**	**156,484**	**911**	**205,018**
Average annual harvest removals	Hardwood	186	0	1,474	39,699	0	**41,359**
	Softwood	453	0	3,432	44,444	0	**48,329**
	Total	**639**	**0**	**4,906**	**84,142**	**0**	**89,687**
Average annual mortality	Hardwood	8,940	978	4,228	26,750	0	**40,895**
	Softwood	7,545	1,010	4,052	26,373	0	**38,980**
	Total	**16,484**	**1,988**	**8,280**	**53,123**	**0**	**79,875**

† All amounts are in thousands of cubic feet.

Note: **Growing stock** is all live trees of commercial species that meet minimum merchantability standards. **Net volume** is net volume in cubic feet of growing stock for timber species, for trees greater than or equal to five inches in diameter, from a one-foot stump to a minimum four-inch top diameter, or to where the central stem breaks into limbs, all of which are less than four inches in diameter. **Net growth** is the average annual net growth of growing stock, in cubic feet, on forest land. **Annual mortality** is the average annual cubic foot mortality of live growing-stock trees (at least four inches DBH), in cubic feet, on forest land. **Harvest removals** are the average annual harvest removals, in cubic feet, of growing stock trees on forest land.

Economic contribution of the Forest Product Industries, 2023

The FPIs in this study are defined as 32 IMPLAN industries that were aggregated into seven analytic groups for consistent reporting with the 2017 report and across all NMSFA states. This report follows the same industry grouping framework used in the 2017 report, which was originally developed through consultation with state forestry agencies and other stakeholders and represent a working consensus on what constitutes the regional FPI (Leefers et al. 2020; Poudel and Dahal 2025). The complete list of industries and groupings are presented in Appendix A.

The FPI encompasses a wide range of activities that begin with forest management and timber harvesting and extend through the conversion of raw materials into high-value finished goods. These activities include timber tract operations, nurseries, logging, sawmills, wood preservation, pulp and paper manufacturing, furniture production, and related downstream sectors (Poudel and Dahal 2025). The FPI is a cornerstone of the New Hampshire economy, not only providing direct employment in logging, milling, and manufacturing but also supporting a much larger network of indirect and induced jobs in transportation, warehousing, wholesale trade, and retail (Leefers et al. 2020). Its health has far-reaching consequences for rural communities, where it is an important source of year-round employment, and for regional supply chains that depend on steady flows of wood, fiber, and paper products (Lamsal et al. 2025a).

Measuring these contributions requires more than simply counting jobs, mills, or other establishments. Contribution analysis is essentially a descriptive, ex-post accounting framework that traces how industries interact within a regional economy and support the economy (Lamsal et al. 2025b, Watson et al. 2015). It not only measures the direct transactions tied to a sector, but also the indirect effects in supplier industries and the induced effects from household spending that ripple outward. Economic contribution analysis depends on standardized frameworks that can translate government statistics into regional input–output models. The Bureau of Economic Analysis (BEA) provides the foundation through its Benchmark Input-Output Accounts, which map the flow of goods and services across industries and establish the structure of GDP by industry (BEA 2023). The Bureau of Labor Statistics (BLS) complements this with the Quarterly Census of Employment and Wages (QCEW) and occupational data, which provide details on employment and payroll. Further, the U.S. Census Bureau adds extra detail with the Economic Census and County Business Patterns, which track establishments, receipts, and industry-level production. Impact Analysis for Planning (IMPLAN) harmonizes these data sources into a consistent input-output modeling framework for estimating regional economic contributions (IMPLAN 2023). IMPLAN is widely used in forest-sector economic research to

estimate employment, output, labor income, and value-added effects associated with forest-products industries. Several forest-sector studies have also paired IMPLAN with FIA data to link forest resource conditions with regional economic outcomes, including timber-product output in Ohio (Coronado et al. 2014), domestic hardwood substitution for imported trailer decking in New York (Pokharel et al. 2023), and potential mass timber processing facility development in Michigan (Khanal et al. 2024). IMPLAN also provides a bridge table that is important for defining the forest-products sectors included in this report. The bridge table is useful in both directions: it aggregates NAICS industries into IMPLAN sectors for modeling and identifies the NAICS components represented within each IMPLAN sector. Although this does not by itself constitute a formal sector disaggregation within IMPLAN, it provides the basis for constructing partial-sector estimates when external data are available.

This distinction is particularly important for forest sector analysis because several IMPLAN sectors contain both forestry and non-forestry components (Poudel and Dahal 2025). In this study, the IMPLAN bridge table was used to identify the relevant NAICS-defined activities embedded within broader IMPLAN sectors, and external data were then used to approximate the forest-related share of selected mixed sectors. For example, IMPLAN Sector 10 (All Other Crop Farming) includes a wide variety of agricultural activities such as alfalfa, peanut, and hemp farming, also in addition to maple syrup production. Using USDA maple syrup production data, only the maple syrup portion of Sector 10 was included in the FPI.. Similarly, IMPLAN Sector 19 (Support Activities for Agriculture and Forestry) encompasses a broad spectrum of NAICS industries, including soil preparation, crop harvesting, farm labor contracting, and specialized support services for forestry. To avoid overstating the sector, only Support Activities for Forestry were retained in the FPI totals, using BLS employment and establishment data. Thus, the partial-sector estimates reported here reflect analyst-defined allocations based on the IMPLAN bridge table and supplementary data, rather than an automatic sector split performed within IMPLAN. In the 2017 report, several additional sectors were treated as partial sectors, IMPLAN 40 (Electric Power Generation, Biomass), IMPLAN 352 (Institutional Furniture Manufacturing), and IMPLAN 356 (Showcase, Partition, Shelving, and Locker Manufacturing), but in 2023, following stakeholder consensus and due to limited data to isolate wood-based components, these are treated as full sectors; consequently, the 2023 economic contribution estimates for these specific sectors appear higher and are not directly comparable to the 2017 figures. Any comparison between years should therefore be interpreted with caution.

Further, the 2023 analysis implemented the mixed endogenous-exogenous closure using the Output- and Employment -based multipliers formulation approach (Miller and Blair 2022; Lamsal et al. 2025a), whereas the 2017 report used the equivalent matrix-inversion approach. Since these approaches are alternative computational expressions of the same input–output

framework and, under the same closure assumptions, these formulations are theoretically equivalent and yield the same multipliers and results.

Note on Data Consistency (2017 vs. 2018–2023): *Readers should interpret the sharp variance between 2017 and 2018 data with caution. The 2017 figures presented in this report are retained from previous studies that used the desktop-based IMPLAN Pro software. Data for 2018 through 2023 were generated using the modernized IMPLAN Cloud (Web) platform, which utilizes updated accounting frameworks and regional purchase coefficients. Although both sets of estimates are based on the same underlying input–output/SAM framework, they are not fully comparable in construction. IMPLAN revised its industry classification structure over time, moving from the 536-industry scheme used for 2013–2017 data years to the 546-industry scheme used for 2018–2022, and later to the 528-industry scheme beginning in 2023. IMPLAN also documents differences in trade-flow and regional purchase coefficient estimation between legacy Pro-era workflows and the current cloud environment. In addition, this report applies updated aggregation and sector-inclusion rules for selected forest-related industries. Accordingly, differences between 2017 and later years may reflect methodological discontinuity in addition to underlying economic change. Comparisons spanning 2017 to 2018 should therefore be interpreted with caution.*

Economic Performance Trends of Forest Product Industry (2017-2023)

Figures 4 and 5 illustrate the structural adjustments within New Hampshire's Forest Sector over the seven-year study period. As shown in Figure 4, the sector has experienced a broad contraction in physical scale or total jobs. Total direct employment declined by 17.8% (a loss of roughly 1,300 jobs), falling from 7,289 in 2017 to 5,993 in 2023. Real Industry Output followed a nearly parallel downward trajectory, decreasing by 16.6% to $1.69 billion[4]. Unlike scenarios where output remains static while jobs fall (pure capital deepening), the New Hampshire data suggests a general consolidation of the industry's footprint, though a recovery in output is visible between 2022 and 2023 despite continued lower employment levels. The downward trend has been attributed largely to the loss of low grade markets, and specifically, the loss of approximately 1 million green tons of New Hampshire biomass markets starting in 2017. This precipitated multiple years of contraction in the logging sector and downstream industries, which was compounded by the loss of additional low grade markets in adjacent states. While

[4] Real output is 16.6% lower than 2017 and the comparison has been adjusted for inflation in this report. If comparing the previously published forest industry economic contribution report for New Hampshire (Public Sector Consultants and Andrew Fast, 2020) to this one, the nominal output will look similar since the comparison has not been inflation-adjusted.

the forest industry has stabilized somewhat, market loss, inflation, tariffs, and global trade uncertainty continue to weigh on the forest industry's outlook.

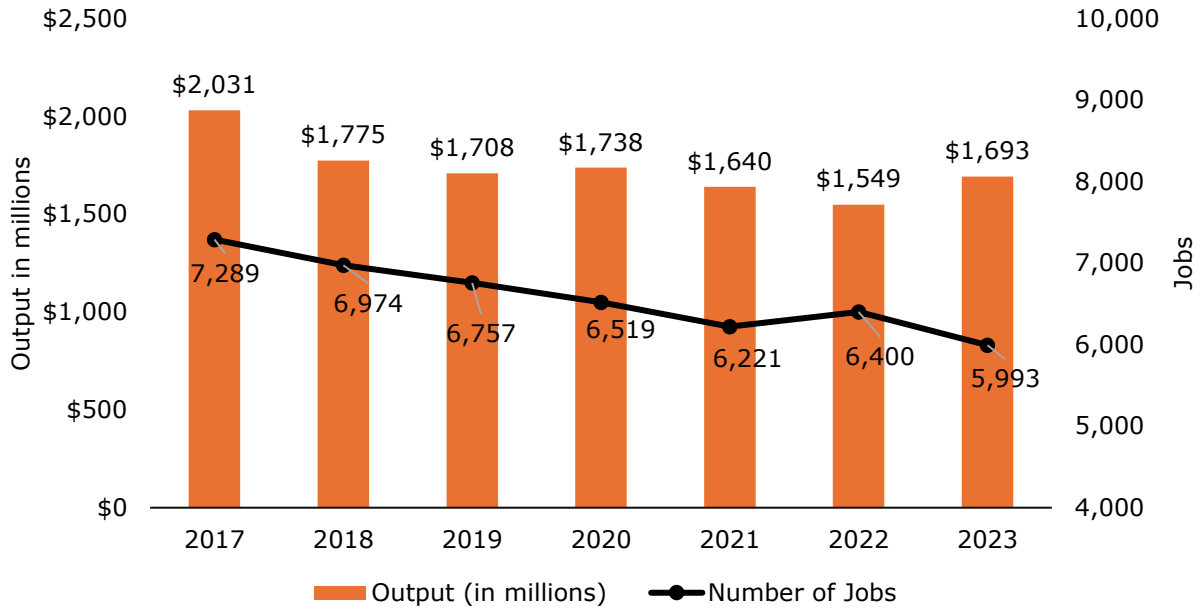

Figure 4: Direct output and employment, 2017–2023, New Hampshire state forest products industries.

Figure 5 provides the trend of value added and labor income (includes employee compensation and proprietor income). While Real Value Added, the sector's contribution to Gross State Product (GSP), experienced volatility early in the period, it has stabilized in the $560–$590 million range since 2021. The most significant structural trend, however, is observed in Labor Income. While employment contracted by nearly 18%, total real Labor Income declined by only 5.9%.

This divergence, a sharp drop in headcount against a relatively resilient total payroll, signals a significant gain in labor productivity and workforce composition. As the sector has consolidated, the average real labor income per worker has risen by 14.5%, increasing from approximately $60,914. in 2017 to $69,748 in 2023. This suggests that while New Hampshire's Forest Sector has reduced its total capacity, the remaining operations have shifted toward higher-efficiency, higher-value roles, likely driven by increased mechanization in logging and processing or a shift toward higher-margin or automated primary and secondary manufacturing.

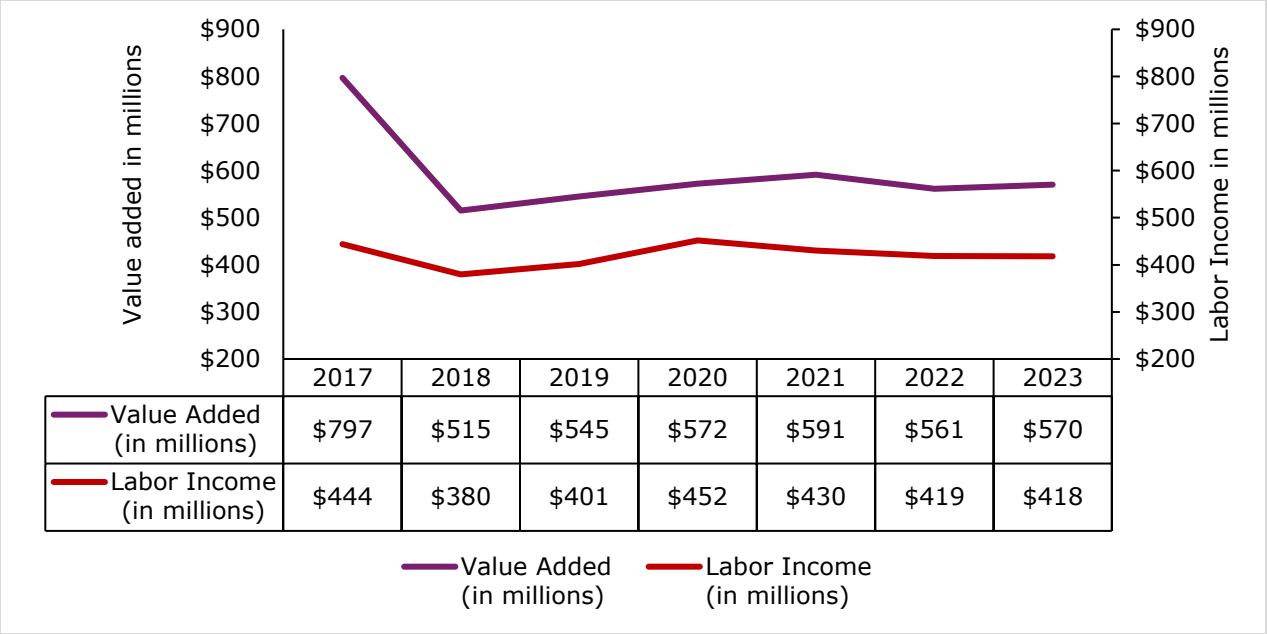

Figure 5: Direct value-added and labor income, 2017–2023, New Hampshire state, forest products industries.

Direct and Total Contributions by Forest Product Industry Groups

In 2023, New Hampshire's forest products industries directly employed 5,993 individuals, generated $1.69 billion in output, and contributed around $570 million in value-added to the state economy (Table 2). However, the sector's influence extends well beyond these direct operations. When accounting for indirect supply-chain purchases and induced household spending, the sector's total economic contribution reached 10,064 jobs and $2.61 billion in total output.

Table 2*:* Statewide Economic Contribution of Forest Products Industries, 2023. †

	Employment	Labor Income	Value-added	Output
Direct in 2023	5,993	$417,627	$569,665	$1,693,400
Compared to 2017	-17.8%	-5.9%	-28.5%	-16.6%
Total in 2023	10,064	$741,441	$1,127,753	$2,611,023
Compared to 2017	-21.9%	-12.9%	-21.0%	-16.2%
Multipliers in 2023	1.68	1.78	1.98	1.54

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2023 dollars value.

Comparing these results with 2017 values reveals that the wider economic footprint is contracting more sharply than the direct industry itself. While direct employment declined by 17.8% from 2017 to 2023, the total employment impact fell by 21.9%. This disparity suggests that efficiency gains or consolidations within the core forest sector are having an amplified downward effect on the supporting industries and local service sectors that rely on forest-related spending. Furthermore, the substantial 28.5% drop in direct Value-Added indicates a shift in the sector's cost structure or profitability over the six-year period, even as gross output declined at a slower rate of 16.6%.

The calculated multipliers highlight the sector's deep integration into the broader state economy. The Value-Added multiplier of 1.98 is particularly notable, suggesting that for every dollar of wealth created directly by forest industries, essentially another dollar ($0.98) is created elsewhere in the New Hampshire economy. Additionally, the employment multiplier of 1.68 indicates that every 100 direct job in the forest industry supports roughly 68 additional jobs in other sectors, underscoring the industry’s role as a foundational economic driver.

Table 3 reports the direct economic contributions of the seven industry groups, while Table 4 presents their total contributions including multiplier effects. In 2023, the upstream sectors accounted for the highest number of employment, with Forestry (1,246 jobs) and Logging (1,103 jobs) combined representing nearly 40% of the sector's direct workforce. However, the financial data reveals a stark contrast in capital intensity. While Forestry employed the most individuals, it generated the lowest output ($40.6 million). Conversely, the manufacturing sectors demonstrated significantly higher labor productivity. Primary Solid Wood Products generated the highest direct output ($601.5 million) and Value-Added ($176.2 million) with a smaller workforce than the extraction sectors. Similarly, Pulp, Paper, and Paperboard Mills displayed the highest capital intensity, generating nearly $295 million in output with only 379 workers.

When supply-chain and induced effects are included (Table 4), the rankings shift to reflect the depth of inter-industry linkages. Primary Solid Wood Products emerges as the overwhelming economic engine of the state's forest sector, supporting 3,046 total jobs and nearly $1 billion in total economic output. The strong multiplier effect in this sub-sector suggests that sawmills and wood processing facilities maintain deep backward linkages to local logging and forestry operations, as well as strong forward linkages to secondary manufacturing and construction. Taken together, the solid wood value chain drives the majority of New Hampshire’s forest economy. The combined Primary and Secondary Solid Wood Products sectors accounted for 55.7% of the sector's total direct output ($944.2 million).

Table 3: Direct Economic Contributions in New Hampshire state, Industry Groups, 2023. †

Industries	Employment	Labor Income	Value-Added	Output
1.Forestry	1,246	$29,038	$36,301	$40,592
2.Logging	1,103	$76,074	$78,892	$83,409
3.Primary Solid Wood Products	1,033	$82,641	$176,191	$601,484
4.Secondary Solid Wood Products	1,001	$75,760	$122,418	$342,759
5.Wood Furniture	957	$84,565	$59,865	$187,514
6.Pulp, Paper, and Paperboard mills	379	$46,097	$66,110	$295,202
7.Secondary Paperboard and other Paper Products	276	$23,453	$29,889	$142,439
Total	**5,993**	**$417,627**	**$569,665**	**$1,693,400**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2023 dollars value.

Table 4: Total Economic Contributions in New Hampshire state, Industry Groups, 2023. †

Industries	Employment	Labor Income	Value- Added	Output
1.Forestry	1,365	$37,282	$51,274	$63,766
2.Logging	1,444	$97,977	$117,554	$141,857
3.Primary Solid Wood Products	3,046	$238,994	$423,501	$995,380
4.Secondary Solid Wood Products	1,955	$149,383	$244,477	$555,809
5.Wood Furniture	1,630	$135,900	$147,419	$333,160
6.Pulp, Paper, and Paperboard mills	1,102	$105,873	$165,857	$462,528
7.Secondary Paperboard and other Paper Products	616	$50,914	$76,189	$220,112
Total	**10,064**	**$741,441**	**$1,127,753**	**$2,611,023**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2023 dollars.

Note: *In Table 4, readers may observe that the sum of the economic contributions for the individual industries exceeds the reported total contribution for the Forest Sector as a whole as*

presented in Table 2. This difference is intentional and results from the "mixed-model" approach used to ensure accuracy.

In Input-Output (I-O) analysis, simply adding the total contributions of individual sectors results in double-counting. This occurs because the output of one forest industry often serves as an input for another. For example, logs harvested by the Logging sector are inputs for the Furniture sector. If modeled individually and summed, the model counts both the direct value of the logs and the associated supply-chain ripples (indirect effects) twice: once as a production requirement for the Furniture, and again as a direct output of the Logging sector. To provide the most accurate estimate, the aggregated total is calculated by treating the forest industries as a single economic unit. This method mathematically nets out all inter-industry transactions within the sector, ensuring that the final results reflect only the new economic value generated for the state economy.

Forestry

Economic Contribution of Forestry

Table 5 presents the economic contribution of the Forestry sector. This group includes three primary industries: (1) timber tract operations, which involve managing forest lands primarily for the sale of standing timber; (2) maple syrup production (classified under “all other crop farming”); and (3) support activities for forestry. Support activities are diverse and include estimating (cruising) timber, wildland firefighting, forest pest control, and consulting on silviculture, reforestation, and forest economics. Firms providing these support services are essential for maintaining the health and commercial viability of the timber base.

In 2023, the sector directly supported 1,246 jobs and generated $40.6 million in direct output. While Forestry serves as the biological foundation for the entire wood products value chain, its financial profile differs significantly from the manufacturing sectors. The data reveals a highly labor-intensive industry where a significant portion of gross revenue flows directly to workers rather than to intermediate supplies. Specifically, nearly 71% of the sector’s direct output is allocated to Labor Income ($29.0 million out of $40.6 million).

This structural characteristic explains the sector’s unique multiplier effects. The employment multiplier is approximately 1.10, indicating that for every 100 jobs in Forestry, roughly 10 additional jobs are supported elsewhere in the state. Analyzing the components of this multiplier reveals that the economic ripple effects are driven almost entirely by workforce spending rather than business supply chains.

- Indirect Effect: The sector generated negligible indirect impacts, supporting only 8 jobs and $2.0 million in output. This reflects the land-intensive nature of timber growing;

unlike a sawmill that requires constant inputs of energy, parts, and logistics, forestry operations have minimal business-to-business purchasing requirements.

- Induced Effect: In contrast, the induced effect supported 111 jobs and $21.2 million in output. Because such a high percentage of the sector's revenue is retained as labor income, the primary economic contribution beyond the forest itself comes from the income spent by foresters and loggers within their local communities.

When these effects are combined, the Forestry industry contributed a total of 1,365 jobs, $63.8 million in output, and $51.3 million in value-added to the New Hampshire economy in 2023. The total output multiplier of 1.57 implies that every $100 of output generated by forest management activities generates an additional $57 of economic activity throughout the state.

Table 5: Direct, Indirect, and Induced Economic Contributions of the Forestry Industry in New Hampshire, 2023. †

	Employment	Labor Income	Value-Added	Output
Direct	1,246	$29,038	$36,301	$40,592
Indirect	8	$594	$1,117	$1,981
Induced	111	$7,650	$13,856	$21,193
Total	**1,365**	**37,282**	**51,274**	**63,766**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2023 dollars.

Trend Analysis: Forestry (2017–2023)

As illustrated in Figure 6, the Forestry industry in New Hampshire exhibits substantial year-over-year volatility, a characteristic pattern for a sector driven by biological cycles, seasonal weather conditions, and fluctuating commodity markets. After reaching a peak of $48.5 million in direct output in 2022, the sector's financial contribution contracted significantly in the final year of the study. Between 2022 and 2023, direct output fell by 16.3% (from $48.5 million to $40.6 million), while direct employment experienced a steeper decline of 23.7%, shedding nearly 400 jobs to finish the period at 1,246.

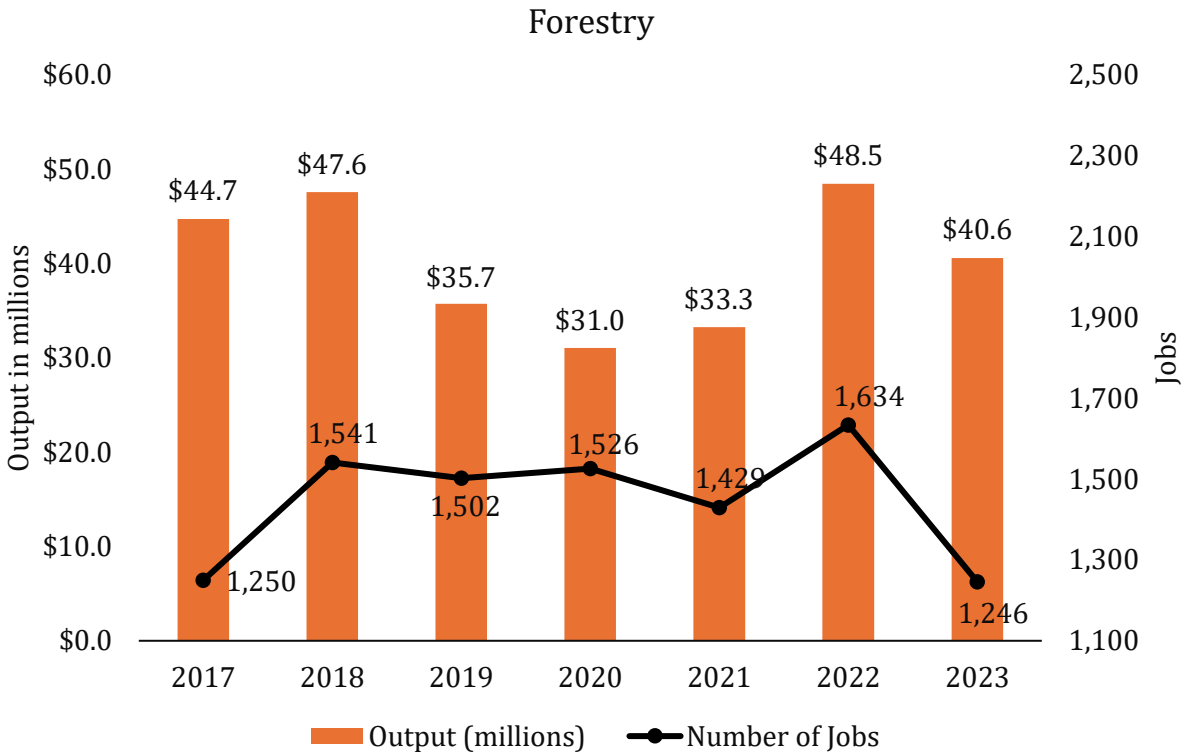

Figure 6: Trend in direct employment and output for the Forestry industry in New Hampshire, 2017–2023.

Logging

Economic Contribution of Logging

The commercial logging sector consists of establishments primarily engaged in cutting and transporting timber, and other products such as in-woods chips. Table 6 outlines the economic contributions of the Logging sector. In 2023, the sector served as a critical source of employment, directly supporting 1,103 jobs. The sector generated $83.4 million in direct industry output and $78.9 million in Value-Added.

Multipliers for Logging reveal an industry that is highly labor-intensive with significant downstream impacts on local communities. The sector demonstrates a powerful link between industry activity and household spending. The Induced effects generated $55.6 million in output, which is nearly 20 times larger than the Indirect effects ($2.8 million). Similar to Forestry sector, this disparity is driven by the sector's unique cost structure: a massive portion of Logging's direct output flows directly into Labor Income ($76.1 million out of $83.4 million in output, or 91.2% of total output).

Because a high percentage of revenue is paid out as wages to workers who live locally, the re-spending of those wages creates a substantial "induced" ripple throughout the state economy.

Similar to the Forestry sector, Logging has a relatively small supply chain footprint (only $2.8 million in indirect output). This reflects the nature of the business, where major inputs are primarily fuel, equipment, and stumpage, rather than processed intermediate goods.

When combining these effects, the Logging industry contributed a total of 1,444 jobs, $141.9 million in output, and $117.6 million in value-added to the state economy. The implied Output Multiplier is 1.70, meaning that for every $1.00 of timber harvested, an additional $0.70 of economic activity is generated elsewhere in New Hampshire. This indicates a stronger economic ripple effect than the Forestry sector (1.57), largely due to the higher volume of income circulating back into the economy.

Table 6: Direct, Indirect, and Induced Economic Contributions of the Logging Industry in New Hampshire, 2023. †

	Employment	Labor Income	Value-Added	Output
Direct	1,103	$76,074	$78,892	$83,409
Indirect	50	$1,814	$2,276	$2,798
Induced	292	$20,089	$36,385	$55,649
Total	**1,444**	**97,977**	**117,554**	**141,857**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2023 dollars.

Trend Analysis: Logging (2017–2023)

As detailed in Figure 7, the Logging industry has faced a challenging seven-year period marked by a steady erosion of the workforce and significant volatility in output. Employment has followed a consistent downward trend, declining by 36.3% from the reported peak of 1,732 jobs in 2017 to a period low of 1,103 in 2023.

Financial output, however, displays a more complex pattern driven by both market forces and accounting methodologies. While the sector reported $332.8 million in output in 2017, the subsequent years reveal a recalibrated baseline, with output peaking at $123.0 million in 2021 before contracting again.

Since 2017, the sector has faced a genuine and acute downturn. Despite some stability in 2020 and 2021, direct output dropped by 32.2% over the last two years, falling from $123.0 million in 2021 to $83.4 million in 2023. The contraction seen in recent years is linked to regional demand shocks, particularly the instability in low-grade wood markets including biomass plant closures in New Hampshire and regional reduction in biomass and pulp markets. With limited outlets for low-grade products, depressed pricing and quotas, many New Hampshire loggers have sold whole tree harvesting equipment, reduced the number of employees and crews that they employ, or exited the profession.

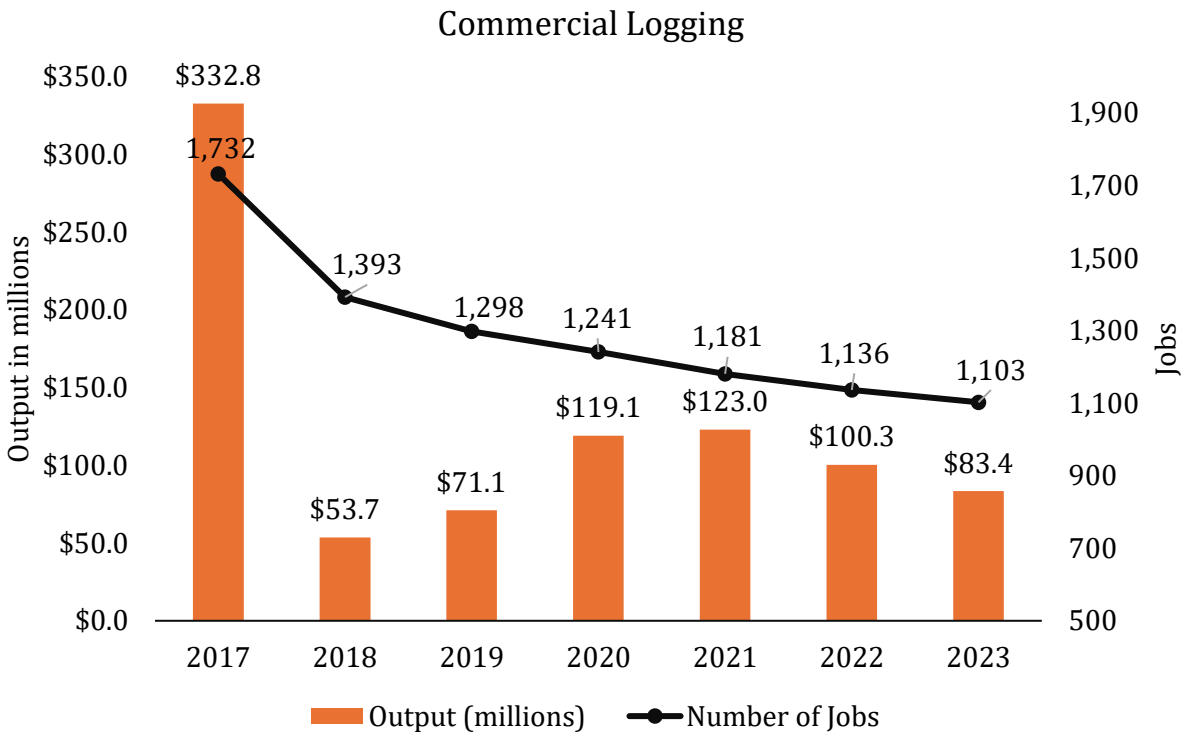

Figure 7: Trend in direct employment and output for the Logging industry in New Hampshire, 2017–2023.

Primary Solid Wood Products

Economic Contribution of Primary Solid Wood Products

Table 7 outlines the economic contributions of the Primary Solid Wood Products industry. In New Hampshire, this sector includes wood-based electric power generation (biomass), sawmills, veneer and plywood manufacturing, and reconstituted wood product industries (note: unlike other states in the region, the Wood preservation sector is not present in New Hampshire). In 2023, this manufacturing sector directly employed 1,033 workers and generated $601.5 million in direct output. Notably, this sector generates the highest Value-Added per unit of output among the manufacturing groups ($176.2 million in direct Value-Added), reflecting the significant economic gains achieved by processing raw timber into finished lumber and structural products.

The Primary Solid Wood Products industry exhibits the strongest backward linkages in the entire New Hampshire forest economy, characterized by an exceptionally high employment multiplier. Unlike the Forestry and Logging sectors, where induced effects (household spending) were dominant, this sector is driven by deep supply chain purchases.

The data reveals a critical structural dynamic: the Indirect Employment effect supports 1,327 jobs, a figure that effectively exceeds the sector's own direct workforce (1,033 jobs). The implied Employment Multiplier is 2.95 (3,046 Total / 1,033 Direct). This means that every 100 direct jobs in primary wood manufacturing support an additional 195 jobs elsewhere in the state economy. This underscores the sector's role as the "keystone" industry that anchors the wider forest supply chain; without the demand generated here, the extraction sectors would lack a local market.

When aggregating direct, indirect, and induced effects, the Primary Solid Wood Products industry contributed a total of 3,046 jobs, $995.4 million in output, and $423.5 million in value-added to the state economy in 2023. By supporting over 3,000 jobs statewide, roughly 30% of the entire forest sector's total employment impact, this industry serves as the primary economic engine for New Hampshire's rural counties.

Table 7: Direct, Indirect, and Induced Economic Contributions of the Primary Solid Wood Products Industry in New Hampshire, 2023. †

	Employment	Labor Income	Value-Added	Output
Direct	1,033	$82,641	$176,191	$601,484
Indirect	1,327	$109,156	$161,768	$263,128
Induced	686	$47,198	$85,543	$130,767
Total	**3,046**	**$238,994**	**$423,501**	**$995,380**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2023 dollars.

Trend Analysis: Primary Solid Wood Products (2017–2023)

As illustrated in Figure 8, the Primary Solid Wood Products industry has demonstrated significant resilience, effectively decoupling its financial performance from the sharp contractions seen in the upstream logging sector. The industry faced some headwinds in 2021 and 2022 including a return to post Covid-19 lumber prices, tariff uncertainty, as well as temporary and permanent mill closures. However, the industry largely recovered in 2023.

Most notably, while the Logging sector continued to shrink in 2023, the Primary Solid Wood sector expanded substantially. Direct output rose by 21.3% year-over-year, climbing from a period low of $495.7 million in 2022 to a record high of $601.5 million in 2023. This growth trajectory reflects New Hampshire's remaining large sawmills and wood processing facilities making significant capital improvements to improve efficiency and profitability.

The employment numbers have demonstrated remarkable stability despite these operational disruptions. Employment held steady at roughly 1,000 to 1,030 jobs throughout the entire 2018–2023 period. This stability in employment, combined with the sharp rebound in output,

suggests a period of capital deepening, where facilities are generating higher value per worker through automation and improved yield recovery, rather than by simply adding headcount.

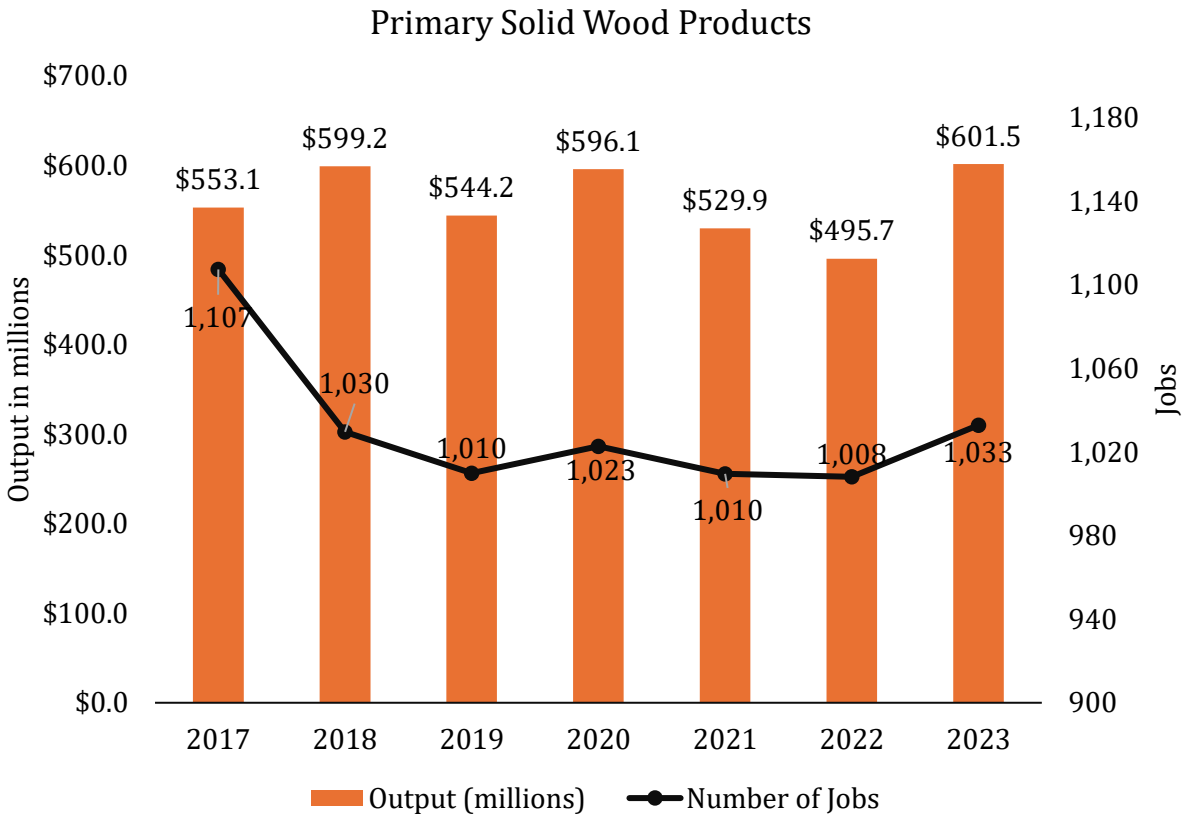

Figure 8: Trend in direct employment and output for the Primary Solid Wood Products industry in New Hampshire, 2017–2023.

Secondary Solid Wood Products

Economic Contribution of Secondary Solid Wood Products

Table 8 presents the economic contribution of the Secondary Solid Wood Products industry. This diverse value-added sector encompasses industries such as engineered wood member and truss manufacturing; wood windows and doors manufacturing; millwork and flooring; wood container and pallet manufacturing; prefabricated wood building manufacturing; and miscellaneous wood product manufacturing. In 2023, this sector directly employed 1,001 workers and generated $342.8 million in direct output.

The sector exhibits a healthy employment multiplier of 1.95, indicating that for every 100 jobs created in secondary manufacturing, roughly 95 additional jobs are supported elsewhere in the New Hampshire economy. While robust, this multiplier is notably lower than that of the Primary Solid Wood sector (2.95). This distinction reflects the upstream supply chain dynamics: while Primary manufacturers purchase raw timber from labor-intensive logging operations, Secondary

manufacturers primarily purchase processed lumber from capital-intensive sawmills or import intermediate wood components. Consequently, the Indirect Employment effect (529 jobs) is roughly half the size of the direct workforce, whereas in the Primary sector, the indirect workforce exceeded the direct workforce.

When fully aggregated, the sector supports a total of 1,955 jobs and contributes nearly $556 million in total economic output. Financially, the sector acts as an effective value multiplier, contributing a total of $244.5 million in Value-Added to the GSP. A key structural feature of this group is its high retention of value; the ratio of direct Value-Added to Output in this sector (35.7%) is higher than in the Primary sector (29.3%), reflecting the economic lift achieved by transforming rough lumber into high-value finished construction components and specialized wood products.

Table 8: Direct, Indirect, and Induced Economic Contributions of the Secondary Solid Wood Products Industry in New Hampshire, 2023. †

	Employment	Labor Income	Value-Added	Output
Direct	1,001	$75,760	$122,418	$342,759
Indirect	529	$44,360	$69,001	$131,935
Induced	425	$29,262	$53,058	$81,115
Total	**1,955**	**$149,383**	**$244,477**	**$555,809**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2023 dollars.

Trend Analysis: Secondary Solid Wood Products (2017–2023)

As illustrated in Figure 9, the Secondary Solid Wood Products industry displays a distinct inverse relationship between workforce size and financial output, indicating a structural shift toward higher-value manufacturing. Over the seven-year period, real output expanded by 19.4%, rising from $287.2 million in 2017 to a record high of $342.8 million in 2023. In stark contrast, direct employment contracted by 14.4% over the same timeframe, falling from 1,170 jobs to 1,001.

The trend line reveals that the industry faced its most significant challenges during the onset of the pandemic. New Hampshire's secondary manufacturers experienced a contraction in 2020, with employment hitting a period low of 941 jobs and output dipping to $288.9 million. However, the sector has staged a robust recovery in the post-pandemic market. Between 2022 and 2023 alone, output surged by 12.8% (from $304.0 million to $342.8 million), while employment remained relatively flat. This suggests that New Hampshire facilities, which produce engineered wood, millwork, and pallets, have achieved significant gains in labor efficiency. By 2023, the average output per worker had risen to approximately $342,000, up significantly from $245,000 per worker in 2017. This confirms that while the sector employs

fewer people than it did six years ago, the positions that remain are supporting significantly higher levels of economic productivity.

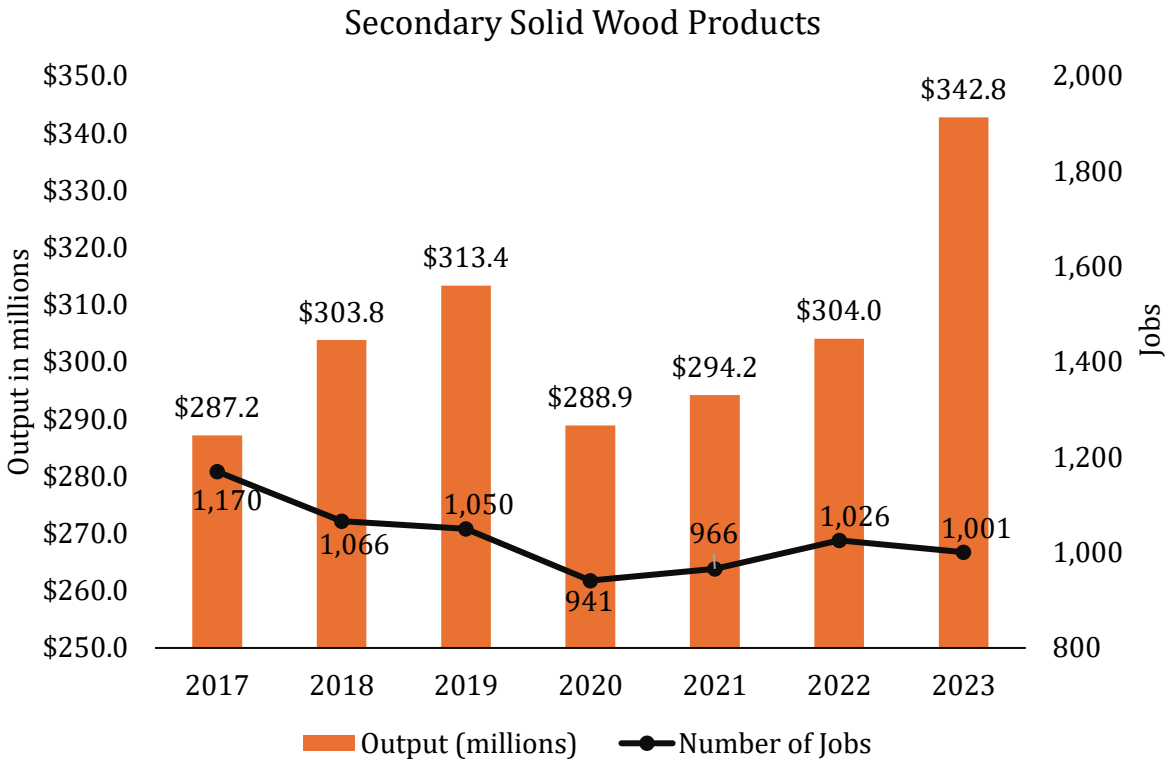

Figure 9: Trend in direct employment and output for the Secondary Solid Wood Products industry in New Hampshire, 2017–2023.

Wood Furniture

Economic Contribution of Wood Furniture

Table 9 outlines the economic contributions of the Wood Furniture industry. This group includes manufacturers of wood kitchen cabinets and countertops, upholstered and non-upholstered household furniture, institutional furniture, custom architectural woodwork, and showcase/partition manufacturing. (Note: Wood office furniture manufacturing is not present in the New Hampshire forest economy). In 2023, this sector directly employed 957 workers and generated $187.5 million in direct output.

The data highlights that Wood Furniture manufacturing operates with a different economic structure than the primary processing sectors. It is significantly more labor-intensive relative to its output, with nearly 45% of its direct gross output flowing directly to workers as Labor Income ($84.6 million out of $187.5 million). This high labor share reflects the "craft" nature of the industry, creating high-value custom goods (such as cabinetry and millwork) that rely more on skilled labor than on automated throughput.

This labor-intensity dictates the sector's multiplier dynamics. The Employment Multiplier is 1.70, meaning that every 100 direct jobs support an additional 70 jobs elsewhere. Interestingly, the Induced Employment effect (392 jobs) exceeds the Indirect Employment effect (281 jobs). This signals that the sector's primary leverage on the state economy comes from the wages paid to its workforce, who subsequently spend that income in the local service economy, rather than from heavy demands on the industrial supply chain.

When fully aggregated, the Wood Furniture industry contributed a total of 1,630 jobs, $333.2 million in output, and $147.4 million in value-added to the New Hampshire economy in 2023. While smaller in volume than the Primary Solid Wood sector, it remains a vital source of value-added manufacturing, converting processed lumber into high-value consumer and industrial goods.

Table 9: Direct, Indirect, and Induced Economic Contributions of the Wood Furniture Industry in New Hampshire, 2023. †

	Employment	Labor Income	Value-Added	Output
Direct	957	$84,565	$59,865	$187,514
Indirect	281	$24,395	$38,722	$70,976
Induced	392	$26,940	$48,832	$74,670
Total	**1,630**	**$135,900**	**$147,419**	**$333,160**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2023 dollars.

Trend Analysis: Wood Furniture Industry (2017–2023)

As illustrated in Figure 10, the Wood Furniture industry in New Hampshire has experienced a persistent structural contraction over the seven-year study period, reflecting the intense competitive pressures facing domestic manufacturing. Between 2017 and 2022, the sector saw a steady erosion in both output and employment, with real output falling from a peak of $225.3 million in 2018 to a period low of $183.3 million in 2022.

The trend for 2023, however, offers signs of financial stabilization even as the workforce continues to consolidate. While direct employment dipped slightly to reach a new low of 957 jobs (a cumulative decline of 19% since 2017), real industry output posted its first year-over-year increase since 2021. Output rose by 2.3%, climbing from $183.3 million in 2022 to $187.5 million in 2023.

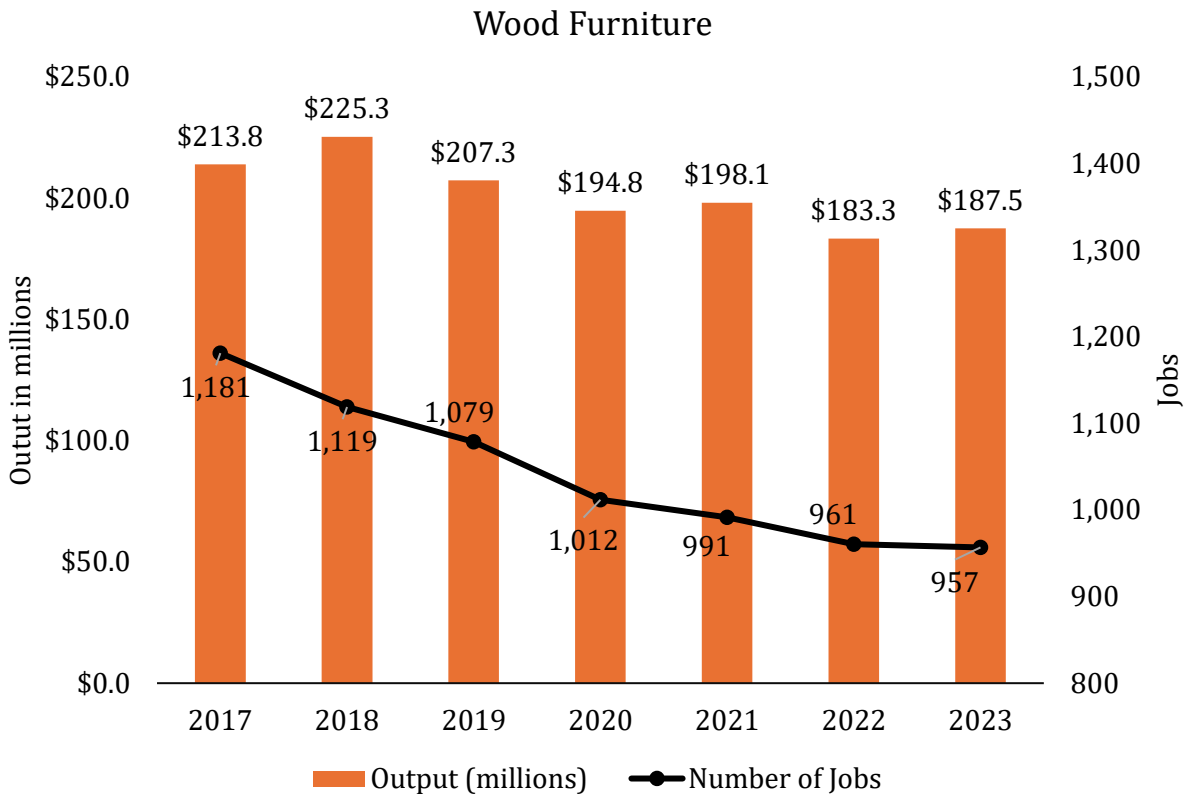

Figure 10: Trend in direct employment and output for the Wood Furniture industry in New Hampshire, 2017–2023.

Pulp, Paper, and Paperboard Mills

Economic Contribution of Pulp, Paper, and Paperboard Mills

Table 10 details the economic contribution of the Pulp, Paper, and Paperboard Mills industry. It is important to interpret these figures within New Hampshire's specific industrial context: unlike neighboring states with fully integrated pulp-and-paper complexes, New Hampshire's sector is comprised exclusively of Paper Mills, with no operating pulp mills or paperboard manufacturing facilities in 2023. Despite this narrower industrial base, the sector remains the most capital-intensive component of the state's forest economy.

In 2023, these mills generated substantial financial flows despite a relatively small direct workforce. While employing only 379 workers (ranking well below Forestry and Logging), the sector generated $295.2 million in Direct Output. This divergence between low headcount and high output signals an advanced level of automation and high-value production.

A defining characteristic of this industry is its "inverted" employment profile. The sector serves as an economic anchor, where the supply chain workforce exceeds the workforce inside the facility itself. Specifically, the Indirect Employment (420 jobs) is larger than the Direct

Employment (379 jobs). This indicates that the mills' operational requirements, massive inputs of energy, maintenance services, logistics, and wholesale materials, sustain a larger external workforce than the mills employ directly. Consequently, the sector exhibits a strong Employment Multiplier of 2.91.

When fully aggregated, the sector supports a total of 1,102 jobs and generates $462.5 million in total economic output. Furthermore, the quality of direct employment in this sector is exceptional. With total labor income of $46.1 million distributed among 379 workers, the average annual labor income per direct job is approximately $121,600. This shows that while the paper sector has a smaller footprint in New Hampshire than in the past, it remains a critical source of high-income, high-skill technical employment.

Table 10: Direct, Indirect, and Induced Economic Contributions of the Pulp, Paper, and Paperboard Mills Industry in New Hampshire, 2023. †

	Employment	Labor Income	Value-Added	Output
Direct	379	$46,097	$66,110	$295,202
Indirect	420	$38,924	$61,931	$109,518
Induced	303	$20,852	$37,816	$57,809
Total	**1,102**	**$105,873**	**$165,857**	**$462,528**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2023 dollars.

Trend Analysis: Pulp, Paper, and Paperboard Mills (2017–2023)

As illustrated in Figure 11, Paper Mills in New Hampshire has navigated a period of significant volatility but finished the study period with a distinct operational rebound. While the long-term trend reflects a structural contraction from the 2017 peak of $360.9 million, the sector has successfully stabilized following a low point in 2022. Between 2017 and 2022, the industry faced headwinds consistent with regional manufacturing trends, with real output declining by nearly 24%. However, 2023 marked a pivotal year of recovery. Direct output increased by 8.1% year-over-year, rising from $273.1 million in 2022 to $295.2 million in 2023. This recent uptick likely reflects the successful restructuring and capitalization of key assets, such as the Gorham Paper and Tissue facility (operating as White Mountain Paper), which has focused on operational viability and deferred maintenance improvements, including significant energy efficiency upgrades and new boiler infrastructure (Business NH Magazine, 2024; NHSaves, 2023). The data suggests that New Hampshire’s paper sector has been corrected and is now operating on a more sustainable, albeit smaller, specialty-focused footing.

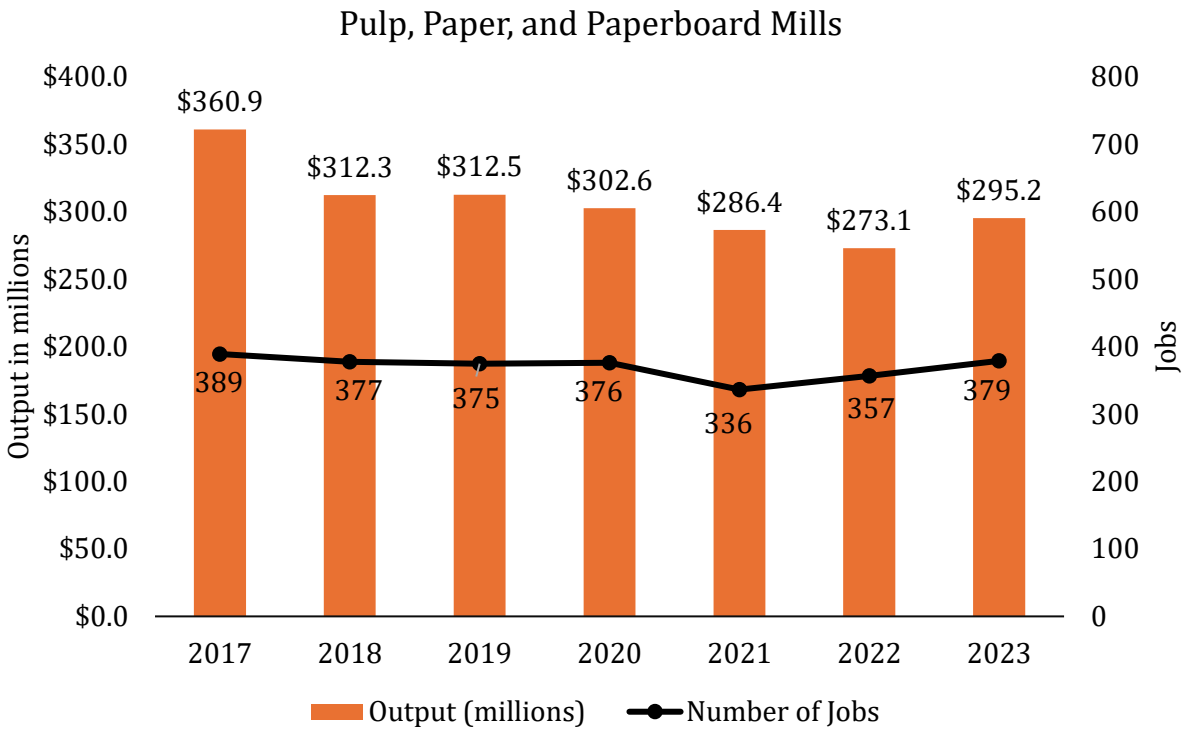

Figure 11: Trend in direct employment and output for the Pulp, Paper, and Paperboard Mills industry in New Hampshire, 2017–2023.

Secondary Paperboard and Other Paper Products

Economic Contribution of Secondary Paperboard and Other Paper Products

Table 11 outlines the economic contribution of the Secondary Paperboard and Other Paper Products industry. This group includes manufacturers of paperboard containers, paper bags, coated and treated paper, stationery, and other converted paper products (note: Sanitary paper product manufacturing is not present in the New Hampshire forest economy). Facilities in this group primarily operate as "converters," manufacturing finished goods from purchased pulp, paperboard, or recycled materials.

In 2023, this converting sector was the smallest direct employer among New Hampshire's seven forest product industry groups, supporting 276 workers and generating $142.4 million in direct output. Despite its smaller physical footprint, the sector maintains a solid connection to the regional supply chain.

The sector exhibits a healthy Employment Multiplier of 2.23, meaning that for every 100 jobs in a box plant or paper converter, roughly 123 additional jobs are supported throughout the state economy. A closer look at the data shows that the Indirect Employment (195 jobs) is substantial relative to the direct workforce (276 jobs). This ratio suggests that while these manufacturers

are significant purchasers of intermediate goods, the lack of in-state Paperboard Mills likely forces some reliance on imported materials.

In terms of total contribution, the sector supports a total of 616 jobs and contributes $220.1 million in total economic output. Additionally, the sector serves as a consistent value generator; with a direct Value-Added of nearly $30 million, it converts intermediate paper inputs into specialized packaging and consumer goods that serve the state's broader retail and logistics sectors.

Table 11: Direct, Indirect, and Induced Economic Contributions of the Secondary Paperboard and Other Paper Products Industry in New Hampshire, 2023. †

	Employment	Labor Income	Value-Added	Output
Direct	276	$23,453	$29,889	$142,439
Indirect	195	$17,481	$28,201	$50,002
Induced	145	$9,981	$18,099	$27,672
Total	**616**	**$50,914**	**$76,189**	**$220,112**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2023 dollars.

Trend Analysis: Secondary Paperboard and Other Paper Products (2017–2023)

As illustrated in Figure 12, the Secondary Paperboard and Other Paper Products industry in New Hampshire has faced a sustained structural contraction, diverging significantly from national trends often associated with the e-commerce packaging boom. Unlike regions that saw expansion in box manufacturing, New Hampshire's specific portfolio of converting facilities, likely weighted toward coated paper, stationery, and specialty products, has experienced a steady reduction in capacity.

Over the seven-year period, the sector contracted by approximately 40% in both physical and financial terms. Real industry output declined from $238.4 million in 2017 to $142.4 million in 2023. Direct employment tracked this downward trajectory almost exactly, falling from 460 jobs in 2017 to 276 jobs in 2023.

The sharpest correction occurred between 2020 and 2021, where the sector shed nearly 25% of its workforce (dropping from 401 to 308 jobs) in a single year. However, the data for the final two years (2022–2023) indicates that this period of rapid consolidation may be concluding. Between 2022 and 2023, the rate of decline flattened significantly, with output stabilizing near the $142 million mark and employment holding steady at roughly 275 jobs. This suggests that the sector has reached a new, smaller operational baseline focused on its most viable core products.

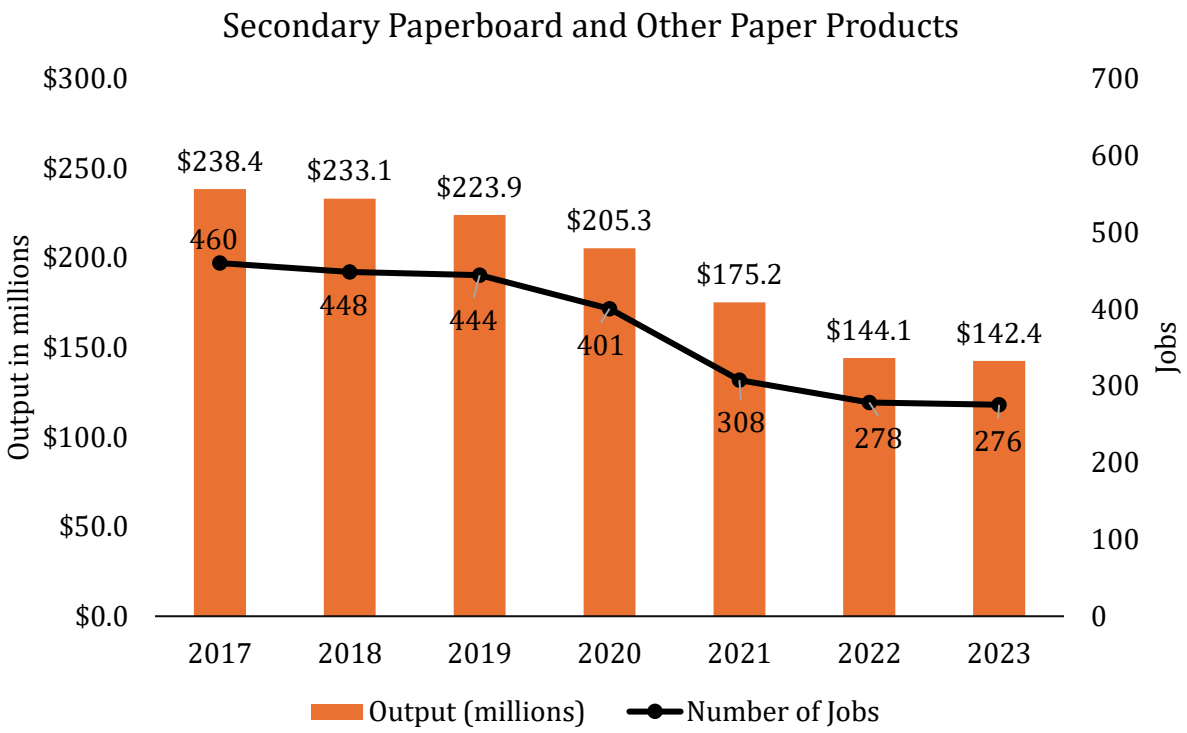

Figure 12: Trend in direct employment and output for the Secondary Paperboard and Other Paper Products industry in New Hampshire, 2017–2023.

Top Forest Product Sectors

New Hampshire's forest-products sector is represented by 25 IMPLAN industries, as seven forest-related sectors, used for the analysis: cut stock and planing, manufactured homes, upholstered household furniture, wood office furniture, pulp mills, paperboard mills, and sanitary paper products, do not appear in the state's 2023 industry mix.

Commercial Logging serves as the sector's primary employment engine, ranking first with 1,103 jobs (accounting for 18.4 percent of all direct forest sector employment). It is followed by Sawmills with 741 jobs (12.4 percent) and Support Activities for Agriculture and Forestry with 693 jobs (11.6 percent). Notably, the employment profile in New Hampshire is heavily weighted toward the extraction and biological phases of production; the top four employers (Logging, Sawmills, Support Activities for Forestry, and Maple Syrup Production) are all upstream sectors, together employing over 50 percent of the industry's direct workforce.

However, the contribution to Labor Income shifts toward the manufacturing base. Commercial Logging remains the top generator of income, contributing $76.1 million (18.2 percent of the sector total), but Sawmills follows closely with $53.1 million (12.7 percent), and Paper Mills ranks third with $46.1 million (11.0 percent) despite having a smaller workforce.

In terms of Output, economic activity is distinctively concentrated in solid wood manufacturing. Sawmills produced $370.3 million in 2023 (21.9 percent of total forest-products output), solidifying their role as the sector's fiscal heavyweight. Paper Mills followed with $295.2 million (17.4 percent), and Prefabricated Wood Building Manufacturing ranked third with $146.8 million (8.7 percent). The top five industries, which notably includes Biomass Electric Power Generation ($113.6 million, 6.7 percent), together account for nearly 62 percent of the sector's entire direct output.

A similar trend is visible in Value-Added, where Sawmills contributed $88.4 million (15.5 percent) to the state's Gross Domestic Product. Commercial Logging ranked second ($78.9 million, 13.8 percent), followed by Paper Mills ($66.1 million, 11.6 percent). This data highlights a structural divergence from neighboring states like Maine: whereas Maine's value-added is dominated by paper manufacturing, New Hampshire's economic value is primarily driven by the lumber and solid wood supply chain.

Table 12: Top five industries in terms of direct Economic Contributions in New Hampshire state, 2023. †

Rank	Employment	Labor Income	Value added	Output
1	Commercial logging (1,103)	Commercial logging ($76,074)	Sawmills ($88,353)	Sawmills ($370,283)
2	Sawmills (741)	Sawmills ($53,071)	Commercial logging ($78,892)	Paper mills ($295,202)
3	Support activities for forestry (693)	Paper mills ($46,097)	Paper mills ($66,110)	Prefabricated wood building manufacturing ($146,835)
4	Maple Syrup Production (520)	Wood kitchen cabinet and countertop manufacturing ($40,108)	Prefabricated wood building manufacturing ($53,576)	Electric power generation - Biomass ($113,602)
5	Wood kitchen cabinet and countertop manufacturing (393)	Prefabricated wood building manufacturing ($30,977)	Electric power generation - Biomass ($52,196)	Paperboard container manufacturing ($109,453)

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2023 dollars value.

Top Non-Forest Industries supported by the Forest Sector in 2023

Excluding the forest-products industries themselves, New Hampshire included 414 IMPLAN sectors in 2023. The forest sector supported at least one job in 150 industries and at least ten jobs in 92 of those industries. In addition to 5,993 direct jobs, the sector supported 4,070 indirect and induced jobs across the state's economy. These additional jobs due to ripple effects are concentrated in logistics, wholesale trade, real estate, and household services. Table 13 highlights the top ten non-forest industries most heavily impacted by this economic activity in 2023. Together, these ten sectors account for 1,317 jobs, representing approximately 32.4 percent of all indirect and induced employment generated by the forest economy.

Table 13: Top Ten Industries Impacted by New Hampshire state's Forest Products Industries in terms of number of jobs in 2023.

Industries	Number of Jobs
Wholesale - Other durable goods merchant wholesalers	262
Other real estate	177
Full-service restaurants	131
Hospitals	123
Couriers and messengers	122
Warehousing and storage	116
Management of companies and enterprises	102
Employment services	97
Limited-service restaurants	97
Truck transportation	90
Total	**1,317**

The composition of these top sectors reveals the specific mechanisms through which the forest sector stimulates the wider New Hampshire economy:

Logistics and Commercial Trade: The strongest linkages are found in the movement and wholesale trade of physical goods. Wholesale - Other Durable Goods ranks as the single largest sector (262 jobs) supported by Forest industries, likely reflecting the network of lumber yards and building material distributors that rely on local production. When combined with Couriers and Messengers (122 jobs), Warehousing and Storage (116 jobs), and Truck Transportation (90 jobs), it becomes clear that the forest sector is a primary driver of the state's logistics infrastructure, requiring a robust network to transport raw timber and distribute finished goods.

Induced Household Spending: The prominence of Other Real Estate (177 jobs), Full-Service Restaurants (131 jobs), and Hospitals (123 jobs) illustrates the "induced" power of the forest workforce. These jobs are supported not by mill supply chains, but by the wages spent by forest-sector employees in their local communities. The high ranking of real estate and dining suggests that the salaries paid to loggers and mill workers are a critical source of revenue for local housing markets and the service economy.

Business Support Services: Notably, Management of Companies and Enterprises (102 jobs) and Employment Services (97 jobs) also appear in the top ten. This indicates that forest product firms are significant consumers of corporate support services, relying on external firms for administrative oversight and staffing solutions.

In terms of economic output, the forest sector's influence shifts toward capital-intensive infrastructure, trade, and service sectors. As detailed in Table 14, the top ten industries supported by forest-sector activity generated a combined $364 million in 2023. The dominant category involves the movement and wholesale distribution of goods, reflecting the forest industry's reliance on logistics to move high volumes of timber and finished products.

The leading sector is Wholesale - Other Durable Goods, generating $98.8 million in output. When combined with Nondurable Goods Wholesalers ($25.3 million), the wholesale trade sector alone accounts for over $124 million in economic activity supported by the forest industry. Similar to regional trends, the output rankings highlight the sector's significant energy footprint. Electric Power Transmission and Distribution ranks third with $46.0 million, driven by the electricity consumption of processing facilities. Similarly, Truck Transportation generated $19.8 million, underscoring the critical role of freight in the supply chain.

The presence of Owner-Occupied Housing as the second-largest sector ($54.4 million) is a significant indicator of the induced effect. In economic modeling, this sector represents the imputed value of homeownership. Its high ranking confirms that forest sector jobs, particularly the manufacturing roles identified in previous tables, sustain high levels of homeownership and household wealth in New Hampshire. This is further supported by the Other Real Estate sector, which contributed an additional $35.6 million. Additionally, the sector supports $25.4 million in output for Hospitals, further reflecting the essential spending power of the forest workforce within their local communities.

Table 14: Top Ten Industries impacted by New Hampshire State's Forest Products Industries in terms of output production in 2023. †

Industries	Output
Wholesale - Other durable goods merchant wholesalers	$98,757
Owner-occupied housing	$54,389
Electric power transmission and distribution	$45,960
Other real estate	$35,615
Management of companies and enterprises	$26,102
Hospitals	$25,410
Wholesale - Other nondurable goods merchant wholesalers	$25,333
Truck transportation	$19,849
Data processing, hosting, and related services	$16,855
Insurance agencies, brokerages, and related activities	$15,740
Total	**$364,010**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2023 dollars value.

Importance of the Forest Products Industries in Context

Natural Resources and Agricultural Industries

To contextualize the economic importance of the forest economy, Table 15 compares the direct contributions of New Hampshire's four primary natural resource sectors: Forest Products, Agriculture, Commercial Fishing/Hunting, and Mining. The data shows that the Forest Products industry remains the primary employer and source of labor income within the state's natural resource base.

The Forest Products sector is the largest employer among these groups, supporting 5,993 jobs. This accounts for 45.5 percent of the total natural resources workforce, edging out Agriculture (5,532 jobs) and significantly exceeding Mining (1,615 jobs). In terms of wealth generation for workers, the forest sector's dominance is even more pronounced. With $417.6 million in Labor Income, the forest industry generated 65.7 percent of the total income produced by these four sectors combined. This is more than double the labor income of Mining ($189.4 million) and nearly sixteen times that of Agriculture ($26.4 million).

However, the Value-Added (GSP) metrics reveal a unique dynamic in New Hampshire not present in other regions. While Forest Products contributed a substantial $569.7 million to the state GSP, the Mining, Oil, and Gas sector actually ranked first in this specific category with

$637.1 million. This suggests that while Forestry is the dominant labor-provider, the Mining sector is currently operating with higher capital intensity per worker.

The comparative trend analysis highlights significant volatility across the natural resource landscape. The Forest Products sector experienced a contraction, with employment declining by 17.8% and Value-Added dipping by 5.9%. However, this decline was moderate compared to the steep losses in other traditional sectors. Commercial Fishing saw employment collapse by 83.2%, and Agriculture, despite retaining a high number of jobs, saw its Labor Income plummet by 85.8%, indicating a severe profitability crisis in the farm sector. Conversely, the Mining sector exhibited explosive growth, with Value-Added surging by 253.1% over the study period.

Table 15: Natural Resources and Agricultural Production Industries in New Hampshire state, 2023. †

Industry	Employment	Δ 2017††	Labor Income	Δ 2017††	Value-Added	Δ 2017††	Output	Δ 2017††
1. Forest Products	5,993	-17.8%	$417,627	-5.9%	$569,665	-28.5%	$1,693,400	-16.6%
2. Commercial fishing, hunting & trapping	37	-83.2%	$2,548	-74.5%	$18,869	43.3%	$21,796	59.5%
3. Mining, and oil & gas production	1,615	8.1%	$189,445	253.1%	$637,123	803.0%	$1,179,620	414.4%
4. Agriculture production (plant crops and animals)	5,532	-25.9%	$26,355	-85.8%	$187,330	-57.6%	$322,775	-52.9%
Total	**13,178**	**-20.0%**	**$635,975**	**-8.2%**	**$1,412,987**	**6.8%**	**$3,217,591**	**8.7%**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2023 dollars value.
†† All percentage differences are calculated in real terms using 2023 constant dollars.

Manufacturing Industries

To assess the relative standing of the forest sector within New Hampshire's industrial base, Table 16 compares "Forest Products Manufacturing" against the state's other major manufacturing groups. Note that in this context, "Forest Products" refers specifically to the manufacturing sub-sectors (Groups 3 through 7), excluding the extraction activities of forestry and logging and other non-manufacturing sectors (IMPLAN codes 10, 15, 16, 19, 40, 124, and 125; see Appendix A). Forest products manufacturing accounts for 59% of total forest-sector employment, 71% of value added and labor income, and 86% of total forest-sector output. Unlike the dominant position seen in some neighboring regions, the data reveals that the forest sector in New Hampshire operates as a specialized mid-tier component of a highly diversified advanced manufacturing economy.

In terms of scale, the manufacturing landscape is defined by a "Big Two" dynamic involving high-tech sectors: Computer and Electronic Product Manufacturing and Fabricated Metal Manufacturing. Computer and Electronic Products ranks first with 14,553 jobs and $6.66 billion in output, followed by Fabricated Metal with 11,950 jobs. By comparison, Forest Products Manufacturing ranks eighth across most major economic metrics, employing 3,547 people and generating $1.46 billion in direct output.

While it does not lead the rankings, the Forest Products sector remains a vital contributor, accounting for 5.0 percent of New Hampshire's total manufacturing workforce and 4.6 percent of its total manufacturing output. The sector's financial contribution exceeds that of well-known industries such as Transportation Equipment ($1.17 billion) and Textiles ($830 million).

The data also highlights the competitive productivity of forest manufacturing. The sector generates approximately $410,430 in output per worker ($1.46B / 3,547). This figure is remarkably consistent with the broader state manufacturing average of $448,747 and actually outperforms the state's second-largest employer, Fabricated Metal Manufacturing, which generates roughly $373,000 per worker. This suggests that while New Hampshire's forest product facilities are smaller in aggregate scale than the tech giants, they maintain high operational efficiency and capital intensity.

Table 16: Manufacturing Industries in New Hampshire state, 2023. †

Manufacturing Industries	Employment	Labor Income	Value Added	Output
Computer and Electronic Product	14,553	$2,163,404	$1,739,562	$6,658,371
Fabricated Metal	11,950	$1,100,352	$1,629,827	$4,457,397
Machinery	7,107	$760,854	$1,096,092	$2,791,872
Miscellaneous	4,744	$491,046	$521,890	$1,313,583
Plastics and Rubber Products	4,516	$384,448	$402,167	$1,898,736
Food	4,375	$317,049	$594,828	$2,584,240
Electrical Equipment	4,116	$442,041	$806,100	$2,303,439
Forest Products	3,547	$298,473	$402,276	$1,455,796
Chemical	2,605	$363,012	$766,008	$2,345,099
Textiles and Apparel	2,597	$211,867	$228,281	$830,139
Printing	2,273	$141,356	$198,206	$431,692
Transportation Equipment	2,210	$238,373	$330,430	$1,165,538
Primary Metal	2,206	$216,594	$203,337	$1,567,660
Nonmetallic Mineral Product	2,110	$248,399	$302,996	$822,643
Beverage and Tobacco Product	1,743	$111,931	$269,698	$785,520
Petroleum and Coal	292	$42,052	$165,370	$424,208
Total	**70,944**	**$7,531,251**	**$9,657,070**	**$31,835,933**
Compared to 2017	**-3.0%**	**1.5%**	**-11.9%**	**-2.1%**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2023 dollars value.

Summary

The forest products industry in New Hampshire functions as a specialized, highly integrated economic system connecting rural land management with advanced manufacturing. Using 2023 IMPLAN data, this study conducts a contribution analysis to capture the full scope of direct activity and supply-chain ripples. In 2023, the sector directly supported 5,993 jobs, produced $1.69 billion worth of output and generated $417.6 million in labor income and $569.7 million in value-added (GSP).

Performance trends since 2017 reveal a complex contraction. While direct employment fell by 17.8 percent, the sector's contribution to state GDP (Value-Added) declined even more sharply, dropping by 28.5 percent. This indicates that the industry is not only shrinking in size but also facing challenges in value generation per worker. However, a divergence appears in workforce compensation: Labor Income declined by only 5.9 percent, significantly less than the drop in employment. This suggests that while the sector is contracting in scale and productivity, the remaining jobs are becoming increasingly income-intensive, preserving high earnings for the core workforce despite the broader downturn in output and value-added.

In the broader context of the state economy, the forest sector acts as the primary anchor of the natural resource base. It remains the largest employer among peer sectors, supporting nearly 46 percent of the state's natural resource workforce and generating more than double the labor income of the Mining sector and sixteen times that of Agriculture. Within the industrial landscape, it operates as a specialized mid-tier player. While smaller in volume than the state's massive Computer and Electronic manufacturing sectors, the forest products industry maintains a competitive productivity rate, generating approximately $410,000 in output per worker, a figure consistent with the statewide manufacturing average.

The economic impact extends well beyond the woods and mills. As detailed in the analysis, the forest sector’s supply chain exerts a heavy influence on the state’s infrastructure and trade networks. The top non-forest industries supported by the sector include Wholesale Trade (over $124 million in supported output), Electric Power Transmission, and Truck Transportation. Furthermore, the induced spending of the forest workforce is a critical driver of local wealth, sustaining over $54 million in activity within the Owner-Occupied Housing sector. Overall, New Hampshire's forest products industry remains one of the major sectors of the state’s rural economy, providing critical high-income manufacturing employment and sustaining a vast logistics and energy supply chain.

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Appendix A: Forest Products Industries Groupings and IMPLAN Sectors

A1: Forestry Industry Grouping and IMPLAN Sectors

Industry Code	Industry name
10	All other crop farming*
15	Forestry, forest products, and timber tract production
19	Support activities for agriculture and forestry-*

Note: Sectors with an "*" indicate that only a portion of the sector is included in the forest products industries.

A2: Logging Industry Grouping and IMPLAN Sector

Industry Code	Industry name
16	Commercial logging

A3: Primary Solid Wood Products Industry Grouping and IMPLAN Sectors

Industry Code	Industry name
40	Electric power generation – Biomass**
124	Sawmills
125	Wood preservation***
126	Veneer and plywood manufacturing
128	Reconstituted wood product manufacturing

Note: Sectors with "**" indicate that it is treated as **full sector** in 2023; however in 2017 it was treated as a **partial (wood component only)** so the numbers are not strictly comparable. Sectors denoted by "***" indicate that the corresponding FPI is not present in New Hampshire.

A4: Secondary Solid Wood Products Industry Grouping and IMPLAN Sectors.

Industry Code	Industry name
127	Engineered wood member and truss manufacturing
129	Wood windows and door manufacturing
130	Cut stock, resawing lumber, and planning***
131	Other millwork, including flooring
132	Wood container and pallet manufacturing
133	Manufactured home (mobile home) manufacturing***
134	Prefabricated wood building manufacturing
135	All other miscellaneous wood product manufacturing

A5: Wood Furniture Industry Grouping and IMPLAN Sectors.

Industry Code	Industry name
348	Wood kitchen cabinet and countertop manufacturing
349	Upholstered household furniture manufacturing
350	Non-upholstered wood household furniture manufacturing
352	Institutional furniture manufacturing**
353	Wood office furniture manufacturing***
354	Custom architectural woodwork and millwork
356	Showcase, partition, shelving, and locker manufacturing**

Note: Sectors with "**" indicate that it is treated as **full sector** in 2023; however in 2017 it was treated as a **partial (wood component only)** so the numbers are not strictly comparable.
Sectors denoted by "***" indicate that the corresponding FPI is not present in New Hampshire.

A6: Pulp, Paper, and Paperboard Mills Industry Grouping and IMPLAN Sectors.

Industry Code	Industry name
136	Pulp mills***
137	Paper mills
138	Paperboard mills***

Sectors denoted by "***" indicate that the corresponding FPI is not present in New Hampshire.

A7: Secondary Paperboard and Other Paper Products Industry Grouping and IMPLAN Sectors.

Industry Code	Industry name
139	Paperboard container manufacturing
140	Paper bag and coated and treated paper manufacturing
141	Stationery product manufacturing
142	Sanitary paper product manufacturing***
143	All other converted paper product manufacturing

Sectors denoted by "***" indicate that the corresponding FPI is not present in New Hampshire.

Appendix B. Detailed Economic Contribution Results of 2023

B1: Direct Economic Contribution by IMPLAN Sector, 2023

B1.1: Direct Economic Contributions, Forestry Sector Details, 2023. †

Industries	Employment	Labor Income	Value-Added	Output
All other crop farming	520	$743	$4,979	$7,444
Forestry, forest products, and timber tract production	33	$2,555	$4,682	$5,009
Support activities for agriculture and forestry	693	$25,739	$26,639	$28,139
Total	**1,246**	**$29,038**	**$36,301**	**$40,592**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2023 dollars value.

B1.2: Direct Economic Contributions, Logging Sector Details (2023, in 2023 USD). †

Industries	Employment	Labor Income	Value-Added	Output
Commercial logging	1,103	$76,074	$78,892	$83,409
Total	**1,103**	**$76,074**	**$78,892**	**$83,409**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2023 dollars value.

B1.3: Direct Economic Contributions, Primary Solid Wood Products Sector Details (2023, in 2023 USD). †

Industries	Employment	Labor Income	Value-Added	Output
Electric power generation - Biomass	97	$14,042	$52,196	$113,602
Sawmills	741	$53,071	$88,353	$370,283
Wood preservation	0	$0	$0	$0
Veneer and plywood manufacturing	116	$9,661	$17,846	$47,237
Reconstituted wood product manufacturing	79	$5,866	$17,796	$70,362
Total	**1,033**	**$82,641**	**$176,191**	**$601,484**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2023 dollars value.

B1.4: Direct Economic Contributions, Secondary Solid Wood Products Sector Details (2023, in 2023 USD). †

Industries	Employment	Labor Income	Value-Added	Output
Engineered wood member and truss manufacturing	36	$3,212	$4,813	$15,433
Wood windows and door manufacturing	87	$6,008	$8,573	$26,350
Cut stock, resawing lumber, and planing	0	$0	$0	$0
Other millwork, including flooring	196	$17,282	$29,305	$71,479
Wood container and pallet manufacturing	119	$6,685	$8,966	$29,542
Manufactured home (mobile home) manufacturing	0	$0	$0	$0
Prefabricated wood building manufacturing	370	$30,977	$53,576	$146,835
All other miscellaneous wood product manufacturing	192	$11,596	$17,184	$53,120
Total	**1,001**	**$75,760**	**$122,418**	**$342,759**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2023 dollars value.

B1.5: Direct Economic Contributions, Wood Furniture Sector Details (2023, 2023 USD). †

Industries	Employment	Labor Income	Value-Added	Output
Wood kitchen cabinet and countertop manufacturing	393	$40,108	$44,238	$90,082
Upholstered household furniture manufacturing	1	$67	$74	$189
Non-upholstered wood household furniture manufacturing	212	$12,833	$14,113	$39,383
Institutional furniture manufacturing	122	$10,491	$11,617	$30,230
Wood office furniture manufacturing	0	$0	$0	$0
Custom architectural woodwork and millwork	150	$15,650	-$16,533	$7,117
Showcase, partition, shelving, and locker manufacturing	79	$5,417	$6,355	$20,513
Total	**957**	**$84,565**	**$59,865**	**$187,514**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2023 dollars value.

B1.6: Direct Economic Contributions, Pulp, Paper, and Paperboard Mills Sector Details (2023, in 2023 USD). †

Industries	Employment	Labor Income	Value-Added	Output
Pulp mills	0	$0	$0	$0
Paper mills	379	$46,097	$66,110	$295,202
Paperboard mills	0	$0	$0	$0
Total	**379**	**$46,097**	**$66,110**	**$295,202**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2023 dollars value.

B1.7: Direct Economic Contributions, Secondary Paperboard and Other Paper Products Sector Details (2023, in 2023 USD). †

Industries	Employment	Labor Income	Value-Added	Output
Paperboard container manufacturing	197	$16,222	$20,744	$109,453
Paper bag and coated and treated paper manufacturing	10	$1,734	$2,109	$5,594
Stationery product manufacturing	14	$1,056	$1,222	$5,958
Sanitary paper product manufacturing	0	$0	$0	$0
All other converted paper product manufacturing	54	$4,441	$5,813	$21,434
Total	**276**	**$23,453**	**$29,889**	**$142,439**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2023 dollars value.

B2: Direct Economic Contribution by IMPLAN Sector, 2017 (2017 USD)

B2.1: Direct Economic Contributions, Forestry Sector Details (2017, in Nominal 2017 USD). †

Industries	Employment	Labor Income	Value-Added	Output
All other crop farming	724	2,284	2,814	6,699
Forestry, forest products, and timber tract production	50	1,785	1,027	2,348
Support activities for agriculture and forestry	475	27,517	24,814	26,637
Total	**1,250**	**$31,586**	**$28,655**	**$35,685**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2023 dollars value.

B2.2: Direct Economic Contributions, Logging Sector Details (2017, in Nominal 2017 USD). †

Industries	Employment	Labor Income	Value-Added	Output
Commercial logging	1,732	$58,933	$227,514	$265,556
Total	**1,732**	**$58,933**	**$227,514**	**$265,556**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2017 dollars value.

B2.3: Direct Economic Contributions, Primary Solid Wood Products Sector Details (2017, in Nominal 2017 USD). †

Industries	Employment	Labor Income	Value-Added	Output
Electric power generation - Biomass	172	$19,564	$80,888	$151,881
Sawmills	763	$44,443	$53,804	$221,844
Wood preservation	31	$1,812	$3,967	$18,638
Veneer and plywood manufacturing	110	$6,545	$8,457	$31,382
Reconstituted wood product manufacturing	32	$2,113	$4,089	$17,545
Total	**1,107**	**$74,477**	**$151,205**	**$441,289**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2017 dollars value.

B2.4: Direct Economic Contributions, Secondary Solid Wood Products Sector Details (2017, in Nominal 2017 USD). †

Industries	Employment	Labor Income	Value-Added	Output
Engineered wood member and truss manufacturing	11	$471	$567	$2,262
Wood windows and door manufacturing	84	$4,616	$6,112	$19,297
Cut stock, resawing lumber, and planing	0	$0	$0	$0
Other millwork, including flooring	238	$15,305	$22,248	$55,476
Wood container and pallet manufacturing	143	$5,865	$7,109	$21,720
Manufactured home (mobile home) manufacturing	0	$0	$0	$0
Prefabricated wood building manufacturing	382	$25,819	$29,938	$73,297
All other miscellaneous wood product manufacturing	313	$14,330	$19,089	$57,065
Total	**1,170**	**$66,404**	**$85,063**	**$229,118**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2017 dollars value.

B2.5: Direct Economic Contributions, Wood Furniture Sector Details (2017, in Nominal 2017 USD). †

Industries	Employment	Labor Income	Value-Added	Output
Wood kitchen cabinet and countertop manufacturing	527	$31,229	$29,811	$77,423
Upholstered household furniture manufacturing	0	$0	$0	$0
Non-upholstered wood household furniture manufacturing	305	$13,119	$11,856	$35,019
Institutional furniture manufacturing	67	$3,663	$3,453	$11,978
Wood office furniture manufacturing	0	$0	$0	$0
Custom architectural woodwork and millwork	180	$12,075	$11,414	$28,513
Showcase, partition, shelving, and locker manufacturing	102	$4,196	$3,823	$17,690
Total	**1,181**	**$64,282**	**$60,358**	**$170,622**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2017 dollars value.

B2.6: Direct Economic Contributions, Pulp, Paper, and Paperboard Mills Sector Details (2017, in Nominal 2017 USD). †

Industries	Employment	Labor Income	Value-Added	Output
Pulp mills	0	$0	$0	$0
Paper mills	389	$38,080	$60,568	$287,943
Paperboard mills	0	$0	$0	$0
Total	**389**	**$38,080**	**$60,568**	**$287,943**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2017 dollars value.

B2.7: Direct Economic Contributions, Secondary Paperboard and Other Paper Products Sector Details (2017, in Nominal 2017 USD). †

Industries	Employment	Labor Income	Value-Added	Output
Paperboard container manufacturing	172	$10,781	$14,109	$76,444
Paper bag and coated and treated paper manufacturing	230	$14,330	$19,255	$95,326
Stationery product manufacturing	11	$642	$848	$3,816
Sanitary paper product manufacturing	0	$0	$0	$0
All other converted paper product manufacturing	47	$3,467	$4,067	$14,612
Total	**460**	**$29,220**	**$38,278**	**$190,198**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2017 dollars value.

B3: Direct Economic Contribution by IMPLAN Sector, 2017 (2023 USD)

B3.1: Direct Economic Contributions, Forestry Sector Details (2017, in 2023 USD). †

Industries	Employment	Labor Income	Value-Added	Output
All other crop farming	50	$2,183	$1,256	$2,943
Forestry, forest products, and timber tract production	475	$33,646	$30,341	$33,385
Support activities for agriculture and forestry	724	$2,792	$3,440	$8,396
Total	**1,250**	**$38,621**	**$35,038**	**$44,724**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2023 dollars value.

B3.2: Direct Economic Contributions, Logging Sector Details (2017, in 2023 USD). †

Industries	Employment	Labor Income	Value-Added	Output
Commercial logging	1732	$72,059	$278,189	$332,827
Total	**1,732**	**$72,059**	**$278,189**	**$332,827**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2023 dollars value.

B3.3: Direct Economic Contributions, Primary Solid Wood Products Sector Details (2017, in 2023 USD). †

Industries	Employment	Labor Income	Value-Added	Output
Electric power generation - Biomass	172	$23,921	$98,904	$190,355
Sawmills	763	$54,342	$65,788	$278,042
Wood preservation	31	$2,215	$4,851	$23,359
Veneer and plywood manufacturing	110	$8,003	$10,340	$39,332
Reconstituted wood product manufacturing	32	$2,584	$5,000	$21,989
Total	**1,107**	**$91,065**	**$184,883**	**$553,077**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2023 dollars value.

B3.4: Direct Economic Contributions, Secondary Solid Wood Products Sector Details (2017, in 2023 USD). †

Industries	Employment	Labor Income	Value-Added	Output
Engineered wood member and truss manufacturing	11	$575	$693	$2,835
Wood windows and door manufacturing	84	$5,644	$7,474	$24,186
Cut stock, resawing lumber, and planing	0	$0	$0	$0
Other millwork, including flooring	238	$18,714	$27,203	$69,529
Wood container and pallet manufacturing	143	$7,171	$8,693	$27,223
Manufactured home (mobile home) manufacturing	0	$0	$0	$0
Prefabricated wood building manufacturing	382	$31,569	$36,606	$91,865
All other miscellaneous wood product manufacturing	313	$17,522	$23,341	$71,521
Total	**1,170**	**$81,195**	**$104,009**	**$287,159**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2023 dollars value.

B3.5: Direct Economic Contributions, Wood Furniture Sector Details (2017, in 2023 USD). †

Industries	Employment	Labor Income	Value-Added	Output
Wood kitchen cabinet and countertop manufacturing	527	$38,184	$36,451	$97,035
Upholstered household furniture manufacturing	0	$0	$0	$0
Non-upholstered wood household furniture manufacturing	305	$16,041	$14,497	$43,890
Institutional furniture manufacturing	67	$4,478	$4,222	$15,012
Wood office furniture manufacturing	0	$0	$0	$0
Custom architectural woodwork and millwork	180	$14,765	$13,956	$35,736
Showcase, partition, shelving, and locker manufacturing	102	$5,131	$4,675	$22,171
Total	**1181**	**$78,599**	**$73,801**	**$213,844**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2023 dollars value.

B3.6: Direct Economic Contributions, Pulp, Paper, and Paperboard Mills Sector Details (2017, in 2023 USD). †

Industries	Employment	Labor Income	Value-Added	Output
Pulp mills	0	$0	$0	$0
Paper mills	389	$46,561	$74,058	$360,885
Paperboard mills	0	$0	$0	$0
Total	**389**	**$46,561**	**$74,058**	**$360,885**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2023 dollars value.

B3.7: Direct Economic Contributions, Secondary Paperboard and Other Paper Products Sector Details (2017, in real 2023 Dollars). †

Industries	Employment	Labor Income	Value-Added	Output
Paperboard container manufacturing	172	$13,182	$17,251	$95,809
Paper bag and coated and treated paper manufacturing	230	$17,522	$23,544	$119,475
Stationery product manufacturing	11	$785	$1,036	$4,782
Sanitary paper product manufacturing	0	$0	$0	$0
All other converted paper product manufacturing	47	$4,240	$4,972	$18,313
Total	**460**	**$35,728**	**$46,804**	**$238,379**

† All monetary values (Labor Income, Value-Added, and Output) are in thousands of U.S. dollars, adjusted to 2023 dollars value.