THE CONTRIBUTION OF THE FOREST PRODUCTS INDUSTRY IN WYOMING

PART 3: SALES, EMPLOYMENT AND MULTIPLIER EFFECT

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INTRODUCTION

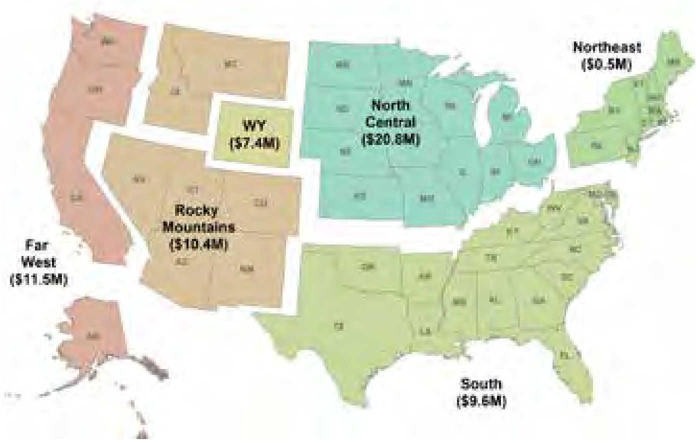
This Forest Industry Brief is part of a series of reports presenting findings from a Bureau of Business and Economic Research census of Wyoming's primary forest products manufacturers for the calendar year 2014. Part III of the series presents information on sales and employment associated with primary wood product manufacturing, the economic contribution of forest products manufacturing in the state, and an analysis of the broader forest industry and how it has changed over time.

WYOMING'S PRIMARY PRODUCT SALES VALUE AND MARKETS

The 2014 census in Wyoming identified 28 active primary forest products manufacturers, producing an array of products including lumber, wood pellets, house logs, posts, poles, rails and firewood. These facilities reported total sales of $62.5 million, free on board (f.o.b.) the producing mill. This represented a 100 percent increase from the $31.3 million in sales reported in 2010, in constant 2014 dollars. Industry capacity significantly increased when two sizeable, inactive sawmills restarted in 2011-12. Sales of lumber and other sawn products continue to account for more than three-quarters of the total sales value, doubling to $53 million in 2014. The next largest sector, posts and poles, also saw sales double, rising to $5 million for 2014.

Approximately $55 million of Wyoming's primary wood products sales occurred outside the state. The leading geographic market reported for Wyoming's primary wood products was the North Central Region (33 percent), followed by the Rockies (29 percent) and the Far West (18 percent) (Figure 1). About $7.4 million (12 percent) of the total primary product sales stayed in-state, with lumber and other sawn products accounting for the majority ($5.6 million). Mills distributed their products through their own distribution channels or through independent

Figure 1. Destination and sales value of Wyoming's primary wood products, 2014.



wholesalers and selling agents. Because of subsequent wholesaling transactions, the geographic destination reported here may not precisely reflect the final delivery points of shipments.

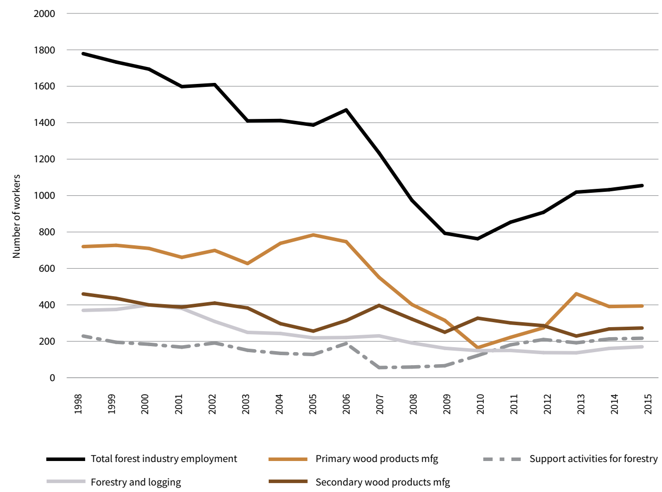
WYOMING'S FOREST INDUSTRY EMPLOYMENT AND LABOR INCOME

Primary forest products manufacturers are just one component of the broader forest industry in Wyoming. The classification of forest industries used here follows the North American Industry Classification System (NAICS) available online via the U.S. Department of Commerce. The forest industry can be found in four categories: NAICS 113 – forestry and logging, NAICS 1153 – forestry support activities, NAICS 321 – wood products manufacturing and NAICS 322 – paper manufacturing. These categories include employees who work in both the primary and secondary wood products and paper manufacturing sectors. County Business Patterns data from the U.S. Census Bureau are used to distinguish primary from secondary manufacturing employment and labor income. It should be noted that these four NAICS categories underestimate total employment in the forest industry, because they do not include log hauling (trucking) companies, lumber and construction material wholesalers, road construction and maintenance contractors, and forest management services performed by government agencies or nonprofit organizations. The Bureau of Labor Statistics' Quarterly Census of Employment and Wages data are coupled with Bureau of Economic Analysis data to determine forestry support activities. These publicly available data sources provide another point of comparison for estimates of employees and labor income for primary forest products manufacturers, as well as additional information on the larger forest industry.

In 2014, total employment in the forest industry in Wyoming was estimated at 1,032 full- and part-time workers. In addition to the approximately 391 workers employed in the manufacturing of primary wood products as discussed above, we estimate that roughly 161 workers were employed in forestry and logging, 213 workers provided supporting activities for forestry operations and the remaining 268 workers were employed in the secondary manufacturing of wood products. Workers in the forest industry earned just over $39 million (constant 2014 dollars) in labor income or worker earnings. Labor income includes wages and salaries, some benefits and earnings of the self-employed.

Since 2010, the lowest point of the recession, employment in primary manufacturing has led the recovery increasing by 137 percent, followed by support activities for forestry, which increased 75 percent. While forestry and logging employment only grew by 8 percent, secondary manufacturing declined during the period by 18 percent (Figure 2). Employment in primary wood products manufacturing experienced the most severe declines over the last decade, falling nearly 80 percent between 2005 and 2010 as a result of mill closures and curtailments.

Figure 2. Employment in Wyoming's forest industry, 1998 to 2015.

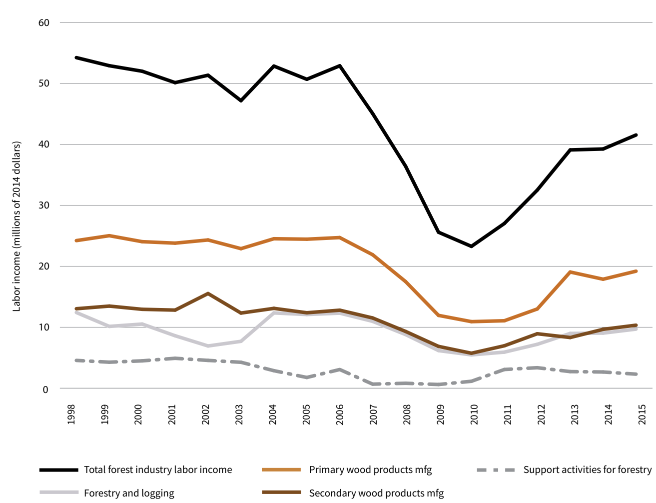


Labor income growth for primary forest product manufacturers has lagged behind employment. Since 2010, inflation-adjusted earnings (2014 dollars) in the primary forest products sector grew by 64 percent, roughly half the growth in employment. The average primary manufacturing employee earned $45,693 in 2014. However, earnings in forestry and logging grew by 65 percent (Figure 3) outpacing the 8 percent growth in forestry and logging employment.

Earnings in the secondary wood products manufacturing sector increased by 68 percent despite the simultaneous decrease in secondary employment. This incongruous trend may indicate that while there are fewer workers, those that are employed are working more hours.

The support activities for forestry classification encompasses a variety of activities, including wildfire suppression and prevention activities, tree thinning and planting, as well as pest

Figure 3. Inflation-adjusted earnings in Wyoming's forest products industry, 1998 to 2015.



management. The employment and wage growth experienced in this category may be explained by a number of interrelated factors. First, the timing of the upward trend (2009-10) coincides with federal investments in infrastructure made through the American Reinvestment and Recovery Act (ARRA). Second, as timber harvest levels have declined, businesses previously involved in commercial timber harvesting have diversified into non-commercial thinning, fuels reduction and wildfire suppression activities, thus potentially leading to a reclassification of these businesses from forestry and logging to support activities for forestry. Finally, investments in non-commercial forest management activities likely increased in western states, including Wyoming during this time due to extensive mortality in the wake of the mountain pine beetle epidemic.

CONTRIBUTION OF WYOMING'S FOREST PRODUCTS MANUFACTURERS

In addition to employing more than 650 people earning approximately $27.5 million in labor income, Wyoming's forest products manufacturers create additional economic benefits by relying upon other industries for raw and intermediate inputs and services, thus bolstering employment and wages in additional sectors. This reliance requires subsequent purchasing of inputs by those supporting industries, expanding the ripple effect of the forest products industry across a multitude of sectors within Wyoming's economy.

Using the Bureau of Economic Analysis' RIMS II multipliers[1], the Bureau of Business and Economic Research estimates that primary and secondary forest products manufacturing in Wyoming supports more than 1,600 full- and part-time jobs. It also supports an associated $64 million in labor income across sectors including forestry and logging, forestry support, trucking, wholesale trade and management, for example. These broader economic benefits of the forest products industry reflect the additional jobs generated from the inputs purchased by the forest products industry as it conducts business, the wages brought home by the workers, and the subsequent spending that occurs in Wyoming's economy.

See also, **Part 1: Wyoming's Timber Harvest, Products and Flow** (BBER-FIB-01), and **Part 2: Wyoming's Industry Sectors, Capacity and Outputs** (BBER-FIB-02).

ABOUT THE DATA

This survey effort is the fifth application of its kind in Wyoming and presents information from primary wood product manufacturers located both within the state, as well as facilities in surrounding states that receive timber harvested from Wyoming. Primary forest product manufacturers are firms that process timber into products such as lumber, as well as facilities like wood pellet plants utilizing wood fiber residue directly from timber processors. Through a written questionnaire, phone or in-person interview, timber-processing and residue-utilizing facilities provided information about their 2014 operations, including:

- Plant location, production, capacity, and employment.
- Volume of raw material received, by county and ownership.
- Species of timber received and live/dead proportions.
- Finished product volumes, types, sales value, and market locations.
- Volume, utilization and marketing of manufacturing residue.

In the event of a nonresponsive facility, data collected in previous surveys were updated using current data collected for facilities of a similar size, product type and location.

The University of Montana's Bureau of Business and Economic Research (BBER) and the USDA Forest Service's Forest Inventory and Analysis (FIA) Program at the Rocky Mountain Research Station (Ogden, Utah) cooperated in the analysis and preparation of this report. In collaboration with the FIA programs at the Rocky Mountain and Pacific Northwest Research Stations, BBER has developed the Forest Industries Data Collection System to collect, compile, analyze and make available state and county information on the operations of the forest products industry. Information collected from manufacturers is stored at the BBER in Missoula, Montana.

Additional information not presented here, including the full set of data tables and active facility map, are available on our website www.bber.umt.edu/FIR/S_WY.asp and upon request. However, individual firm-level data are confidential and will not be released.

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[1] The Bureau of Economic Analysis does not endorse any resulting estimates and/or conclusions about the contribution of a given sector on an area.

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A full set of data tables are also available at: http://www.bber.umt.edu/pubs/forest/fidacs/WY2014Tables.pdf