



Wyoming's Forest Products Industry and Timber Harvest, 2014

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Part III: Sales, Employment, and Economic Contribution

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Introduction

This Resource Bulletin presents findings from a census of Wyoming's primary forest products manufacturers for calendar year 2014. Part III of the series presents information on sales value and employment associated with primary wood products manufacturing, the economic impact of forest products manufacturing in the State, and an analysis of the broader forest industry and how it has changed over time.

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 and in surrounding States that receive timber harvested from Wyoming. Primary forest product manufacturers are firms that process timber into products such as lumber, and other facilities, like wood pellet plants, that use the wood fiber residue directly from timber processors. Through a written questionnaire or 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, and
- 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 as well as calculated proportional changes across the industry. Manual updates to previous survey information also considered observed market trends or changes.

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 (FIDACS) 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 an 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.

Wyoming's Primary Product Sales Value and Markets

The 2014 FIDACS 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 (McIver et al. 2014). Industry capacity significantly increased when two sizeable, inactive sawmills restarted in 2011–2012. Sales of lumber and other sawn products continue to account for more than three-quarters of 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 (fig. 1). The leading geographic market reported for Wyoming’s primary wood products was the North Central Region (33 percent) followed by the Rockies (17 percent) and the Far West (18 percent). About \$7.4 million (12 percent) of total primary product sales stayed within Wyoming, 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 wholesalers

and selling agents. Because of subsequent wholesaling transactions, the geographic destination reported here may not precisely reflect 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 encompasses four sectors: NAICS 113—forestry and logging; NAICS 1153—forestry support activities; NAICS 321—wood products manufacturing; and NAICS 322—paper manufacturing. These sectors include employees who work in both the primary and secondary wood products and paper manufacturing industries. County Business Patterns (CBP) data from the U.S. Census Bureau are used to distinguish primary from secondary manufacturing

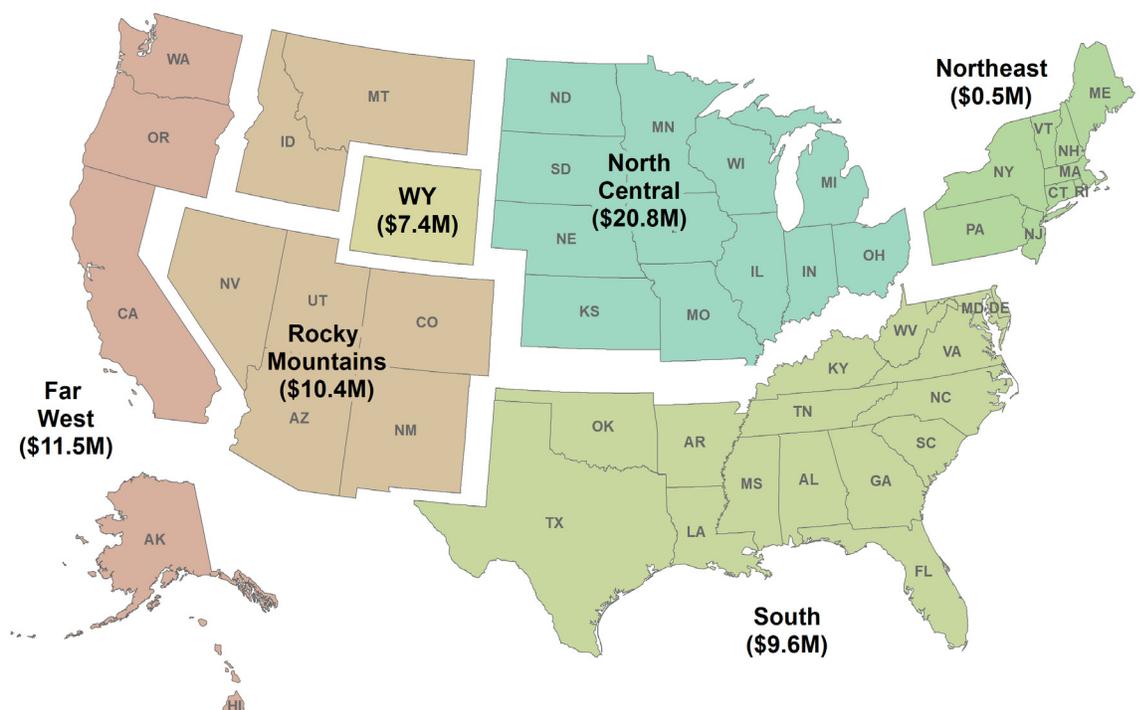


Figure 1—Destination and sales value of Wyoming’s primary wood products, 2014.

employment and labor income. It should be noted that these four NAICS sectors underestimate total employment associated with the forest industry because they do not reflect the additional employment stimulated through demand for services from 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' (BLS) 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 the 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 an estimated 1,032 full- and part-time workers (DOC BEA 2016a,b; DOC CB 2016; DOL BLS 2016). In addition to the approximately 391 workers employed in the manufacturing of primary wood products, 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 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.

While 2009 signaled the official end of the recession (NBER 2010), 2010 saw the lowest levels of employment for Wyoming's forest industry in the last two decades. Since 2010, employment in primary manufacturing has led the recovery, more than doubling during this time, followed by support activities for forestry, which increased 75 percent. While forestry and logging employment only grew

by 8 percent, secondary manufacturing actually declined during the period by 18 percent (fig. 2).

Labor income growth for primary forest products manufacturers has lagged behind employment (USDC BEA 2016; USDC CB 2016; USDL BLS 2016). Since 2010, earnings in the primary forest products sector grew by 64 percent (constant 2014 dollars), roughly half of the growth in employment (137 percent) over the same 5-year period. The significant growth in employment in this sector can be attributed to a number of previously idle mills resuming production. The average primary manufacturing employee earned \$45,693 in 2014.

In contrast, earnings have outpaced employment growth in the forestry and logging sector since 2010 (fig. 3). This trend indicates that existing workers in the sector are working more days out of the year than they were in 2010 in response to increased demand from additional mills operating in the State.

Earnings in the secondary wood products manufacturing sector increased by 68 percent despite the simultaneous decrease in secondary employment. This incongruous trend of labor income relative to employment in the secondary wood products manufacturing sector could arise due to a variety of factors, including: general wage increases in the sector, technological advancements, or improvements in retained worker productivity. It may also 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, and pest management. The employment and wage growth experienced in this category may be explained by a number of interrelated factors. First, the timing of



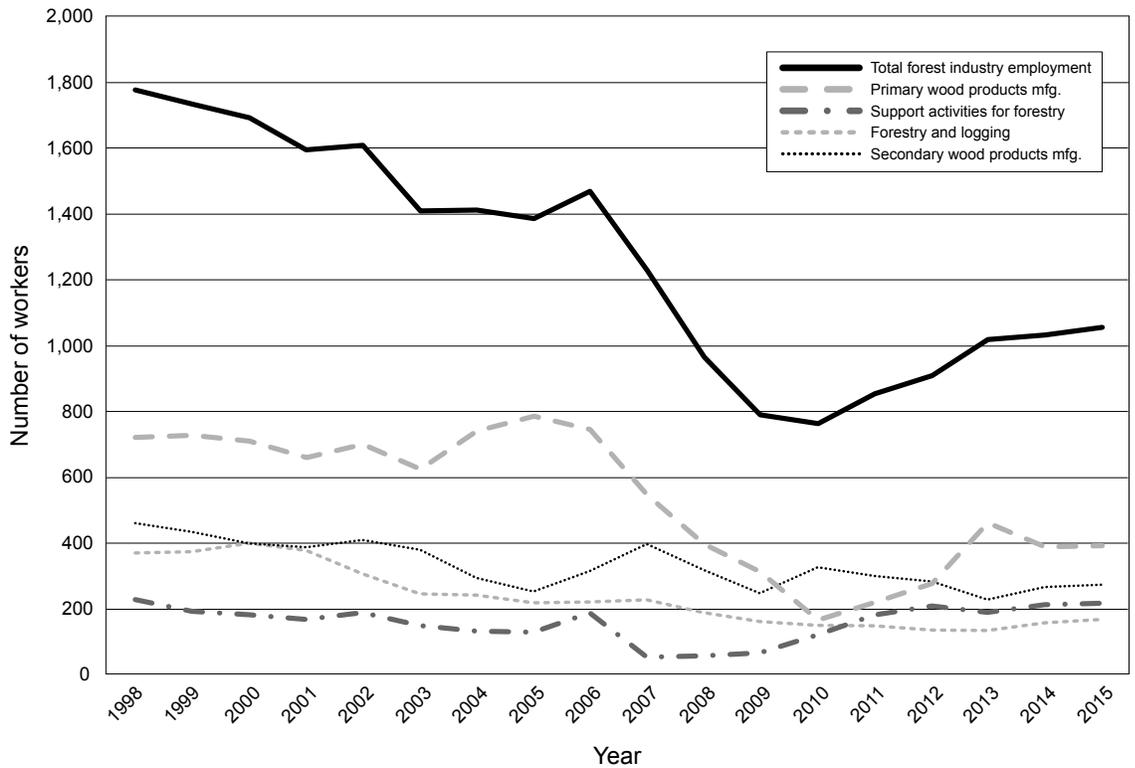


Figure 2—Employment in Wyoming's forest industry, 1990–2014. Source: U.S. Census Bureau 2015; U.S. Department of Commerce 2015, Bureau of Business and Economic Research.

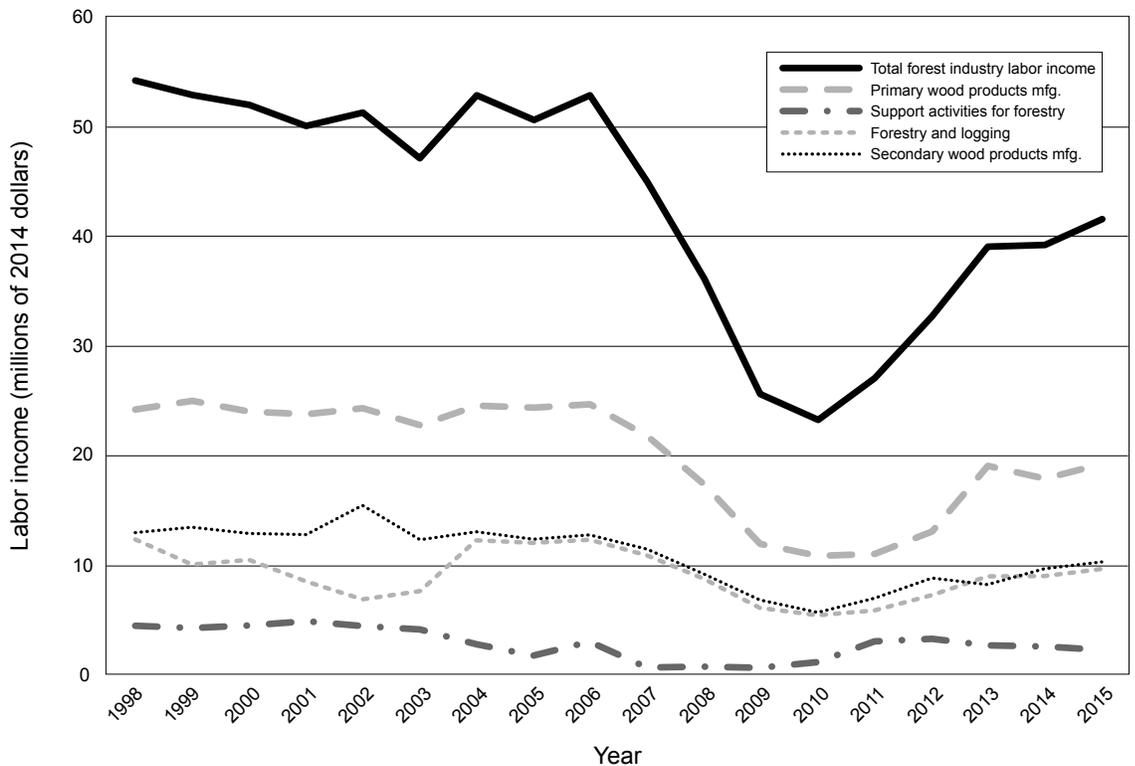


Figure 3—Inflation-adjusted earnings in Wyoming's forest products industry, 1990–2014. U.S. Census Bureau 2013; U.S. Department of Commerce 2013, Bureau of Business and Economic Research.

the upward trend (2009–2010) coincides with Federal investments in infrastructure made through the American Reinvestment and Recovery Act. 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 tree mortality in the wake of the mountain pine beetle epidemic.

Contribution of Wyoming's Forest Industry to the State's Economy

Economic contribution analyses measure gross changes in economic activity that can be associated with the effects of an industry, event, or policy on an existing regional economy (Watson et al. 2007). For this report, we assess the contribution of Wyoming's forest industry as dollars spent on intermediate inputs, taxes, labor and, in turn, by households, which generate economic opportunities as they cycle through the State's economy.

Primary and secondary wood products manufacturers and forestry, logging, and forestry support firms directly contribute approximately 1,032 jobs and \$39.2 million in labor income to the State. Using regional data and existing linkages within Wyoming's economy represented by the Bureau of Economic Analysis' RIMS II multipliers, BBER estimates that the wood products manufacturing sector alone supports more than 1,600 full- and part-time jobs and an associated \$63.6 million in labor income (table 1). Thus, for every primary wood products manufacturing job in the State, another 1.5 jobs are supported in related sectors, and for every \$1 dollar paid in labor income by wood products manufacturers another \$1.30 is paid in supporting sectors. Likewise, BBER estimates that the 161 people employed in forestry and logging support an additional 84 full- and part-time jobs in supporting sectors such as equipment sales and repair. It should be noted that we do not provide total employment and labor income for the entire forest industry to avoid double counting since some employment and labor income shows up as both direct contributions to their sector as well as indirect contributions to other sectors.

See also, Part I: Wyoming's Timber Harvest, Products, and Flow (RMRS-RB-27-1), Part II: Wyoming's Industry Sectors, Capacity, and Outputs (RMRS-RB-27-2), and Part IV, Supplemental Tables (RMRS-RB-27-4).





Table 1—Average annual employment and labor income contributions from Wyoming's forest industry, 2014.

Sector	Direct employment	Indirect and induced employment	Total employment contribution ^a	Direct labor income	Indirect and induced labor income	Total labor income contribution ^a
Primary wood products mfg	391	572	963	\$17,877	\$23,446	\$41,323
Secondary wood products mfg	268	148	416	9,658	7,192	16,850
Forestry and logging	161	84	245	9,039	5,251	14,290
Forestry support activities	213	36	249	2,660	832	3,492

-----thousand 2014 dollars-----

^a Indirect and induced employment and labor income cannot be summed across multiple sectors due to some employment and income showing up as both direct contributions to their sector and indirect contributions to other sectors.

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Air drying yard at a sawmill. Photo credit: USDA Forest Service - Northeastern Area, USDA Forest Service, Bugwood.org.

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