

Economic and Community Contribution Analysis of the Forest Product Industry in Colorado

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- The forest product industry in Colorado is innovative and provides various economic and ecological benefits.
- The contribution of the forest product industry in terms of output and value added is over \$6,088M (0.59% of total state output) and over \$2,843M (0.49% of state GDP) respectively.
- The estimated economic impact of 2024 USDA Wood Innovation Program Grants to the state is 4.71 times larger than the total amount of grants awarded.

This REDI Report summarizes the results of a longer study to quantify forest sector impacts on the state's economy. The study was conducted through the support of Colorado State University (CSU)'s Office of Engagement and Extension's summer internship program.¹ The longer report is based on complementary qualitative and quantitative data on economic and ecological contributions of the forest product industry in Colorado and includes an assessment of the impact of recent public investment.

We define the range of the forest product industry in Colorado using 3-digit NAICS codes: (113) forestry and logging, (115) support activities for agriculture and forestry, (321) wood product manufacturing, and (337) furniture and related-product manufacturing. Data for these industry sectors were collected from the Bureau of Economic Analysis (BEA) and the U.S. Census Bureau to examine historical trends and to summarize the current state of the industry.

We provide an economic contribution analysis of the forest product industry using 2022 baseline data and an input-output model of the Colorado economy based on final demand in each industry sector. This analysis gives a measure of economic contribution compared to gross statistics about employment, value-added, and output from government agencies. Table 1 summarizes the results. We find that the base contribution of the forest product industry is over \$6,088M in output (0.59% of total state output) with 25,499 jobs (0.58% of state employment) and over \$2,843M in value added (0.49% of state GDP) to Colorado's economy. The base contribution metric includes direct, indirect, and induced effects.

We then use information about the 2024 awards cycle of the USDA Wood Innovation Program Grants to conduct an economic impact analysis assessing the importance of public funding to the forest product industry in the state. This analysis estimates dollar values of economic activities in every industry sector in Colorado that is influenced by the circulation of external grants through supply chains. We estimate that \$3.6M in awards to businesses in Colorado will translate into \$17.2M value of economic activities, which is 4.71 times the total grant amount. Table 2 further summarizes the economic impact analysis of the program.

¹ The full report, "Economic and Community Contributions of the Forest Product Industry in Colorado," is available upon request from CSU Extension and/or REDI@CSU and includes additional details about methodology as well as additional findings.

Finally, we describe a wide variety of additional agricultural and ecological contributions of the forest product industry from a qualitative perspective incorporating survey data. For example, beetle-killed and dead trees that otherwise cannot be commercialized can be used to produce compost for agriculture and utilizing overcrowded tree stock in dense forests can reduce the risk of large-scale wildfires and protect watersheds, thus providing additional economic and ecological benefits. We conclude with a summary of present and emerging trends in Colorado's forest product industry, focusing on the businesses contacted and visited through this internship that provide illustrations of how innovation by producers impacts the scope of forest sector contributions.

Table 1. Economic contribution of Colorado's forest product industry using 2022 base values

Industry Sector	Base Contribution	Direct Effect	Indirect/Induced Effect	Total	Gross Contribution
113 Forestry and Logging	Output	\$75,740,145	\$93,406,539	\$169,146,684	\$215,824,064
	Employment	734	515	1,248	1,982
	Value Added	\$52,588,952	\$49,613,773	\$102,202,725	\$142,064,309
115 Support Activity for Agriculture and Forestry	Output	\$59,960,491	\$76,562,081	\$136,522,573	\$523,682,812
	Employment	1,783	338	2,121	15,562
	Value Added	\$50,793,154	\$42,370,132	\$93,163,286	\$443,274,067
321 Wood Product Manufacturing	Output	\$634,188,507	\$1,263,084,167	\$1,897,272,674	\$2,498,102,426
	Employment	1,885	4,730	6,616	6,664
	Value Added	\$198,650,965	\$635,203,848	\$833,854,813	\$702,217,999
337 Furniture and Related Product Manufacturing	Output	\$1,328,647,469	\$2,556,489,452	\$3,885,136,921	\$2,564,770,174
	Employment	5,487	10,027	15,514	10,532
	Value Added	\$461,233,118	\$1,353,039,545	\$1,814,272,663	\$885,319,014
Forest Product Industry (aggregation)	Output	\$2,098,536,612	\$3,989,542,239	\$6,088,078,851	\$5,802,379,476
	Employment	9,889	15,610	25,499	34,739
	Value Added	\$763,266,188	\$2,080,227,298	\$2,843,493,487	\$2,172,875,389

Table 2. Potential economic impact of USDA Wood Innovation Program Grants

Industry Sector in 3-digit NAICS	Change in Final Demand		IMPACT	New Output
111 - Crop Production	\$0		\$36,107	\$2,494,978,393
112 - Animal Production and Aquaculture	\$0		\$63,601	\$6,440,116,642
113 - Forestry and Logging	\$314,000	Eagle Wood Cutting and Processing, KFB forestry, Route Millworks	\$359,737	\$123,714,049
114 - Fishing, Hunting and Trapping	\$0		\$488	\$74,548,198
115 - Support Activities for Agriculture and Forestry	\$1,050,000	Biochar Now, Lignum Support	\$1,076,146	\$366,716,413
211 - Oil and Gas Extraction	\$0		\$215,118	\$24,526,663,495
212 - Mining (except Oil and Gas)	\$0		\$23,860	\$2,864,389,930
213 - Support Activities for Mining	\$0		\$75,669	\$12,748,199,943
221 - Utilities	\$600,000	EcoTech Biofuels, Yosemite Clean Energy	\$921,806	\$14,189,571,139
23 - Construction	\$0		\$123,378	\$54,012,825,437
311 - Food Manufacturing	\$0		\$150,071	\$18,478,866,043
312 - Beverage and Tobacco Product Manufacturing	\$0		\$35,452	\$4,872,739,896
313 - Textile Mills	\$0		\$341	\$34,398,290
314 - Textile Product Mills	\$0		\$2,680	\$294,919,909
315 - Apparel Manufacturing	\$0		\$2,082	\$233,388,747
316 - Leather and Allied Product Manufacturing	\$0		\$413	\$46,485,250
321 - Wood Product Manufacturing	\$1,703,000	Golden West Pine Mill, Colorado School of Mines, Redstone Timber Frames, Timber Age Builders	\$1,901,492	\$1,774,719,460