

Timber Basket of the Interior West: A Forest Products Industry Perspective in Idaho

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Timber Measurements Society

Coeur d' Alene Idaho

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Bureau of Business and Economic Research

- The University of Montana, Missoula
- Research branch within UM College of Business Administration
- Regional economic analysis
- Survey research
- Industry analysis
 - Health care
 - Manufacturing
 - Energy
 - Forest products



Forest Industry Research Program

- Rocky Mountain Research Station (RMRS)
- Pacific Northwest Research Station (PNWRS)
- FIA Timber Product Output (TPO) data collection in the west
- Describe industry structure, capacity, condition and changes over time
- Logging utilization studies



State-level Forest Industry Census

- Mill type, location, capacity, equipment, employment.
- Timber harvest volume, use, species, size, county and ownership.
- Product volume, sales and market locations. Provide insight into trends in sales, employment, and the economic contributions of the primary wood products **industry to the state's economy.**
- Mill residue volume and wood fiber use.



Idaho's Forest Products Industry & Timber Harvest

- BBER time series, 9 reports beginning in 1973 through 2015, a series of 3 briefs.

- THE FOREST PRODUCTS INDUSTRY IN IDAHO PART ONE: TIMBER HARVEST, PRODUCTS AND FLOW.

- THE FOREST PRODUCTS INDUSTRY IN IDAHO PART TWO: INDUSTRY SECTORS, CAPACITY AND OUTPUTS.

- THE FOREST PRODUCTS INDUSTRY IN IDAHO PART THREE: SALES, EMPLOYMENT AND CONTRIBUTION TO THE STATE'S ECONOMY.



THE FOREST PRODUCTS INDUSTRY IN IDAHO

PART 1: TIMBER HARVEST, PRODUCTS AND FLOW

BY ERIKA THOMPSON AND TODD A. MORGAN

INTRODUCTION



THE FOREST PRODUCTS INDUSTRY IN IDAHO

PART 3: SALES, EMPLOYMENT AND CONTRIBUTION TO THE STATE'S ECONOMY

BY ERIKA THOMPSON, ERIK A. SHENKEL AND TODD A. MORGAN

INTRODUCTION



THE FOREST PRODUCTS INDUSTRY IN IDAHO

PART 2: INDUSTRY SECTORS, CAPACITY AND OUTPUTS

BY ERIKA THOMPSON AND TODD A. MORGAN

INTRODUCTION

The Forest Industry Brief is part of a series of reports presenting findings from a Bureau of Business and Economic Research (BBER) study of Idaho's primary forest products industry. Part 2 of this series presents information on the forest products industry sectors that process timber and mill residue into finished products in 2015.

IDAHO'S FOREST PRODUCTS INDUSTRY

During 2015, 38 primary forest products facilities were active in Idaho with the majority located near forest resources in the northern and western portions of the state (Figure 1). These plants produced a variety of products, including lumber and other sawn products, veneer and plywood, house logs, posts, poles, utility poles, fence boards, cedar shakes and shingles, log furniture, firewood, and wood-related products like particle board, pulp and paper, fuel pellets, bark, animal bedding and much more. The industry generated more than \$1.65 billion in sales during 2015, including mill residuals and residual-related products. Sales were up approximately 12 percent (in constant 2015 dollars) from 2014, but still below processing levels of \$1.9 to \$2.2 billion (Strommen and others 2014).

Although the total number of active facilities (38) was unchanged from 2014 (Strommen and others 2014), four facilities that were active in 2014 closed permanently: a small sawmill, a utility pole yard, a log home facility and a bark and mulch plant. Five other facilities were inactive during 2015. Five new facilities

opened during 2015: two post and pole facilities, two wood pellet plants and a log home facility. One log home facility and three sawmills, inactive during 2014, also resumed operations bringing the total number of active sawmills to 28 during 2015.

The largest impact on the forest products industry in Idaho since the 2011 mill census was the overall improvement in markets for wood products with demand sectors approaching processing levels, as measured by production and sales. The log home industry was still substantially depressed compared to processing levels, but made modest gains in 2015.

TIMBER RECEIVED BY IDAHO MILLS

Idaho mills received 1.12 billion board feet (MMBF) of timber for processing during 2015 (Table 1). Timber volume received at Idaho mills differed from the state's timber harvest because some timber harvested in Idaho was processed in other states and some of the timber processed in Idaho was harvested outside the state. Almost 84.3 MMBF (7.5 percent) of the timber used by Idaho facilities during 2015 came from out-of-state. Over 90 MMBF (47 percent) of out-of-state timber came from Washington with an additional 22 MMBF (26 percent) from Montana. About 15 MMBF (18 percent) came from Canada with small volumes from Oregon, Wyoming and Utah. Forest timberlands supplied 186 percent (207.5 MMBF) of the total volume processed by Idaho mills during 2015, up slightly from 55 percent (647.9 MMBF) in 2011, but down considerably from the 74 percent (815.5 MMBF) reported in 2006 (Reisch

percent higher than 2011 sales (Table 1). Wood products manufactured within Idaho were mostly sold outside the state while about \$17.4 million (20 percent) of sales value stayed in-state. However, the in-state proportion of sales was higher in 2015 relative to 2011 (10 percent) and represented a larger share compared to both the 2006 and 2001 (34 percent) survey years.

Lumber was the main driver behind the shift to greater in-state sales. In-state lumber sales were more than tripled in total dollars from 2011 to 2015, and the in-state proportion of sales increased from just 8 percent in 2011 to 20 percent in 2015. Lumber, plywood and other sawn products accounted for \$140 million (36 percent) of total in-state sales and the largest share of sales in each of the other regions. The leading geographic market areas reported for primary wood products were Idaho and Rocky Mountain states (46 percent combined) followed by North Central states (21 percent) and then states located in the Far West (14 percent) and South (13 percent). MFB 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.

IDAHO'S PRIMARY PRODUCT SALES VALUE AND MARKETS

The 2015 mill census identified 68 active primary forest products manufacturers in Idaho producing an array of products, including lumber and other sawn products, pulp and paper, veneer and plywood, log homes, posts, poles, log furniture and other products. Idaho manufacturers reported a total sales value of primary wood products, mill residuals and residual-related products (e.g., pulp and paper, particle board, fuel pellets, bark and landscape material) of more than \$1.85 billion, five on board (fob) the producing mill. This represented a 12 percent increase from the \$1.67 billion in total sales during 2014 (Strommen and others 2014). Primary product sales alone, including mill residuals and residual-related products, exceeded \$875 million during 2015 – almost 56

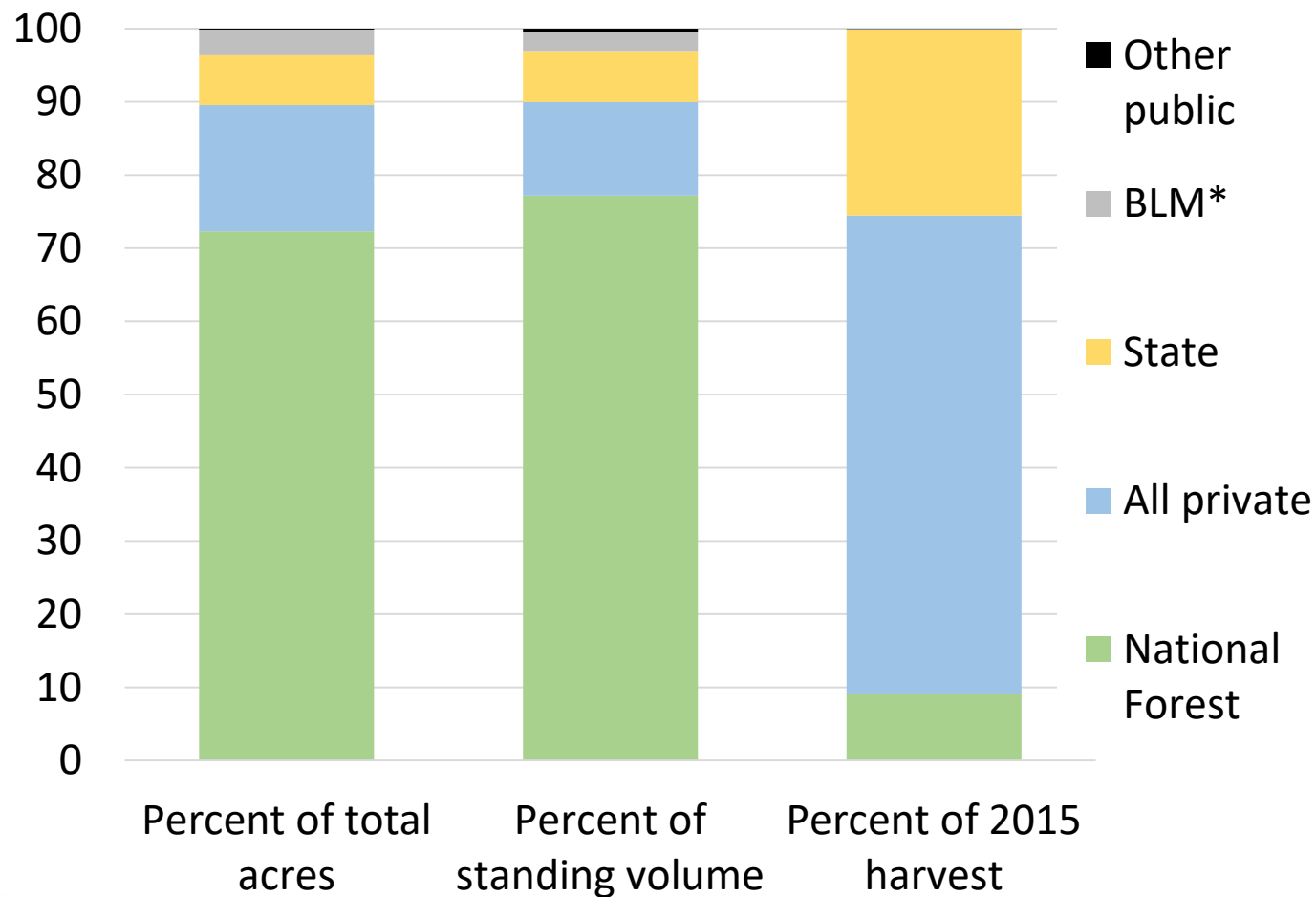
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IDAHO'S FOREST INDUSTRY EMPLOYMENT AND LABOR INCOME

The primary forest products manufacturing characteristic in BBER's periodic census represents just one component of the

Percentage of Idaho timberland by ownership class in acres, standing volume and volume of harvest, 2015.
(Source: FIA, FIDO online tool)



*Timberland = Capable of producing 20 cubic feet (cf) of wood per acre per year (Helms 1998).

2015 Resource ownership and harvest snapshot

- National forests accounted for 72% of **Idaho's non-reserved** timberland and less than 10% of timber harvest volume in 2015.
- In 1990 and earlier USFS accounted for 40-50% of the yearly timber harvest.
- Since 1990 private and state timberlands have supplied the majority of the harvest.

* BLM = Bureau of Land

- **Idaho's total 2015 timber harvest was over 1.13 billion** board feet (BBF) Scribner, about 6.5 percent higher than 2011 and 52 percent higher than the 2009 recession low of 746 million board feet (MMBF) Scribner.
- The harvest of timber for house logs more than doubled from 2011, indicating some improvement for a sector hit hard by the recession.

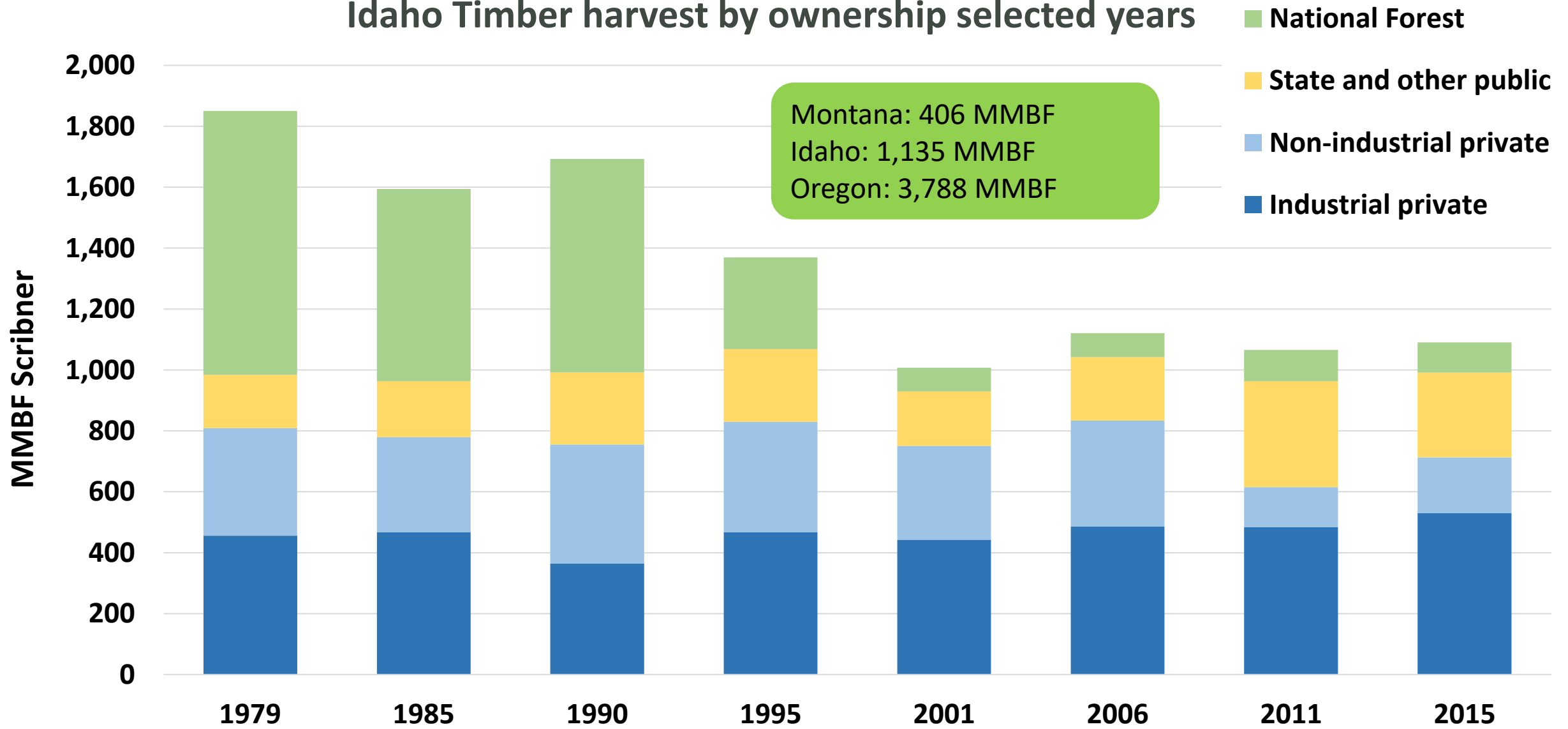


Conversion factors calculated from data:

- 4.60 board feet Scribner per cubic foot for saw and veneer logs
- 4.60 board feet Scribner per cubic foot for house logs
- 2.81 board feet Scribner per cubic foot for pulpwood
- 3.52 board feet Scribner per cubic foot for other products



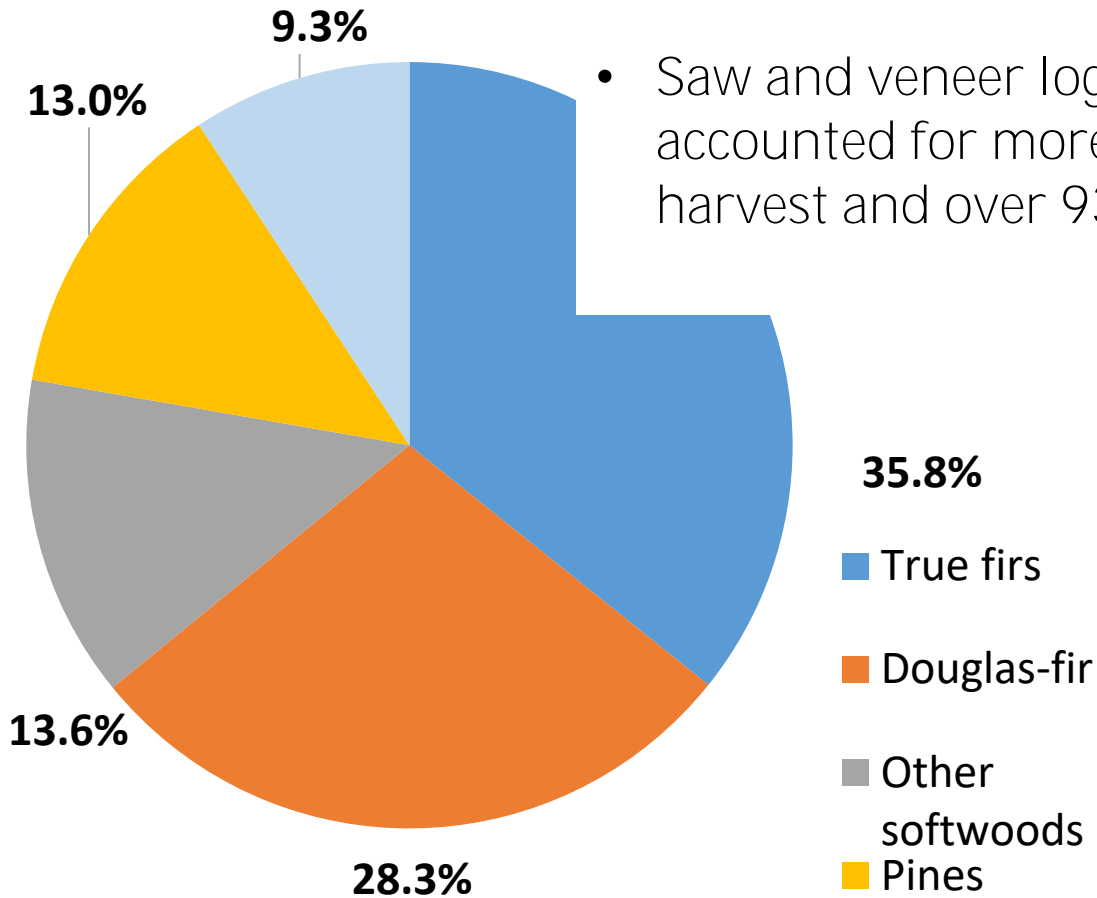
Idaho Timber harvest by ownership selected years



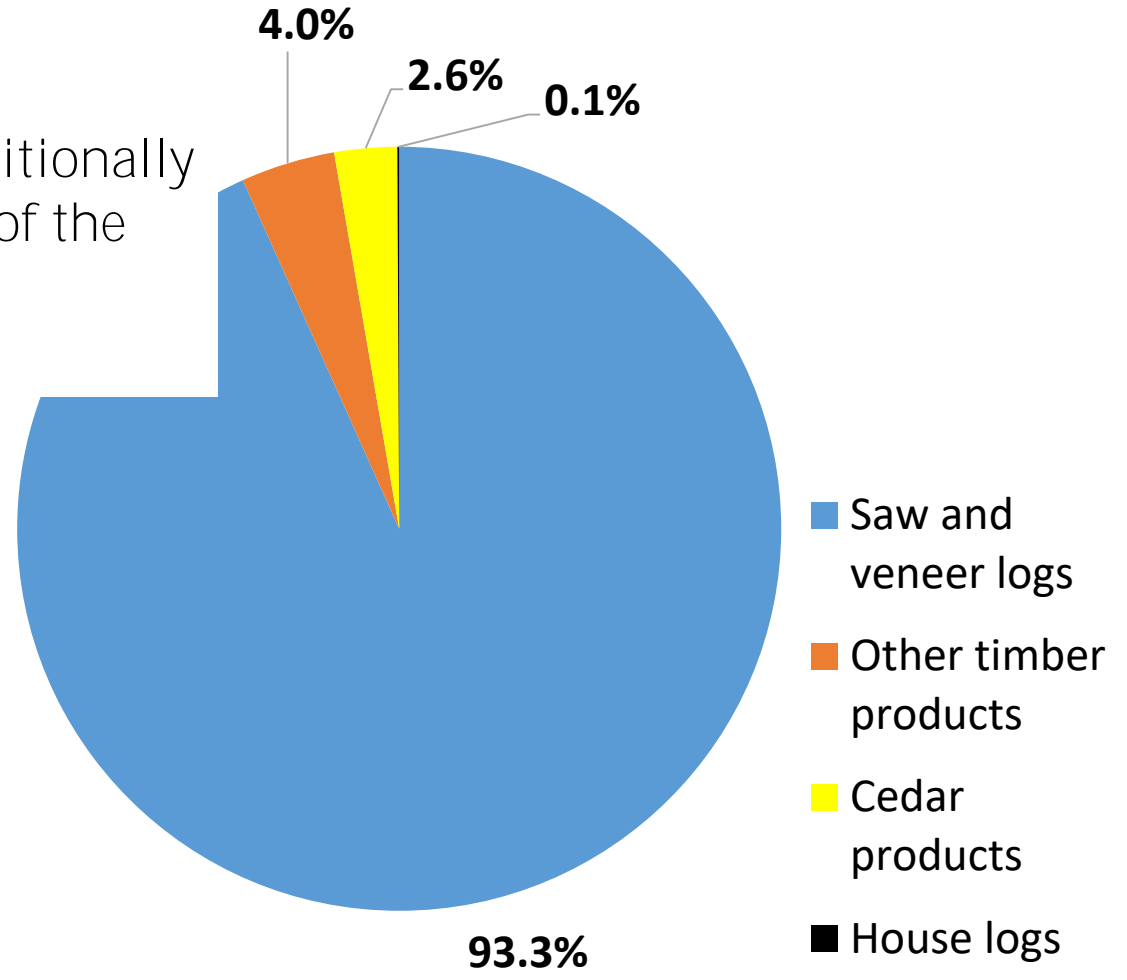
- True firs and Douglas-fir have accounted for more than 50% of the total harvest since the 1990's and nearly 65% in 2015

- Saw and veneer logs have traditionally accounted for more that 80% of the harvest and over 93% in 2015

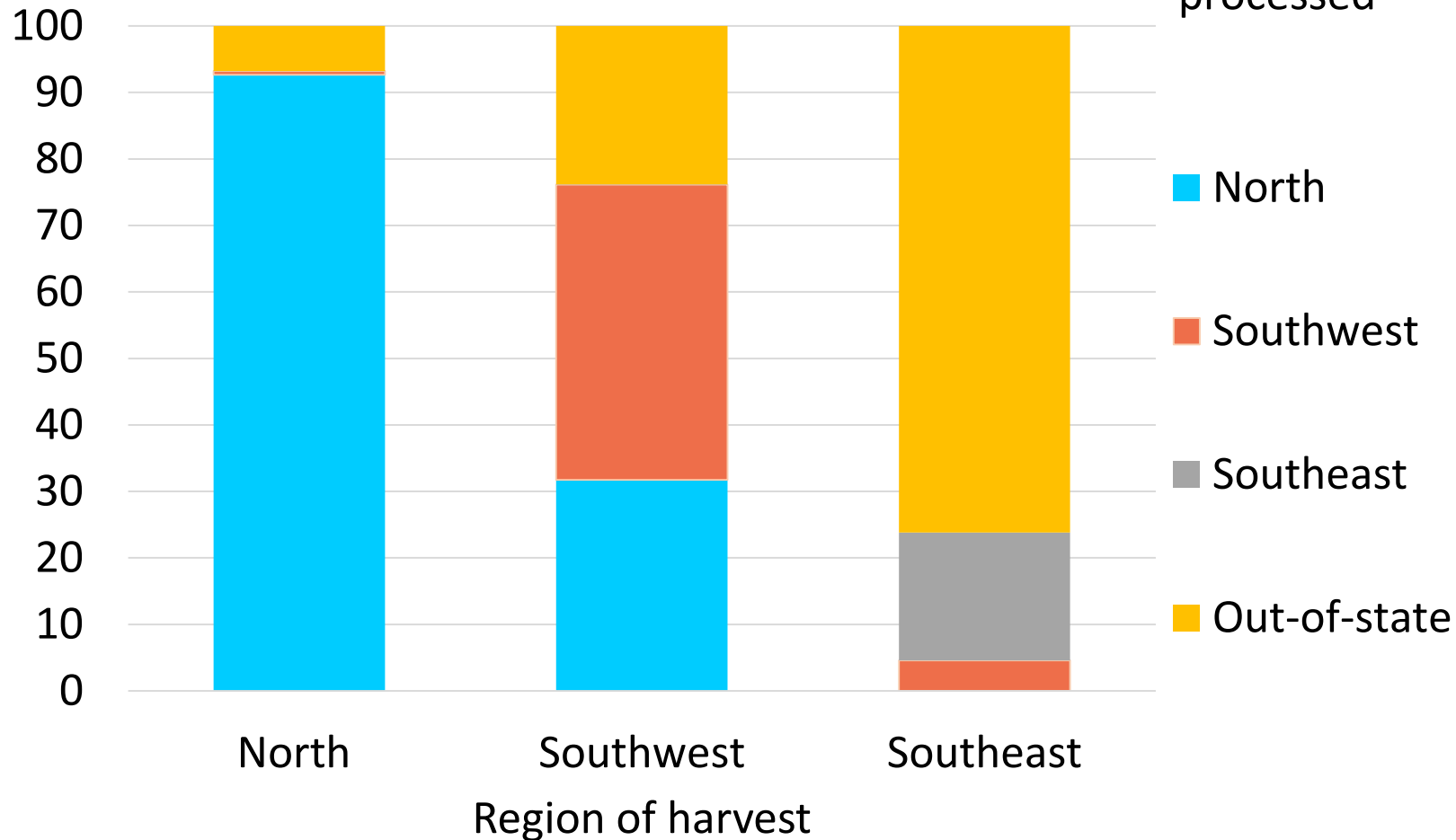
Harvest by species



Harvest by product



Flow of timber harvest, percent of total

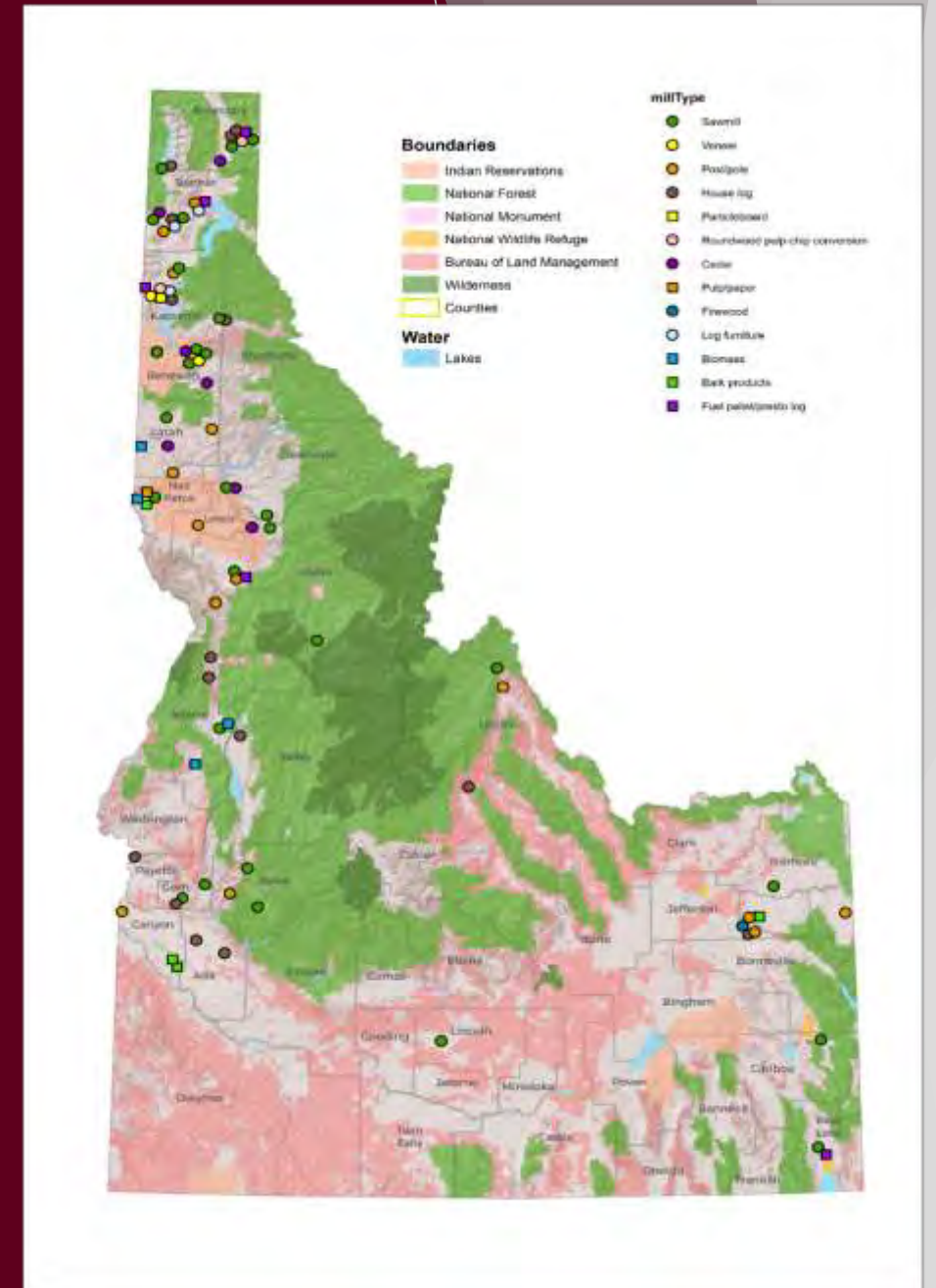


- About 93% of the trees harvested in North Idaho were processed in region.
- 76% of the trees harvested in Southeast Idaho were processed out-of-state.
- In 2015 Idaho was a net exporter of 12 million board feet Scribner. The first census since 1996 that Idaho was not a net importer of timber.

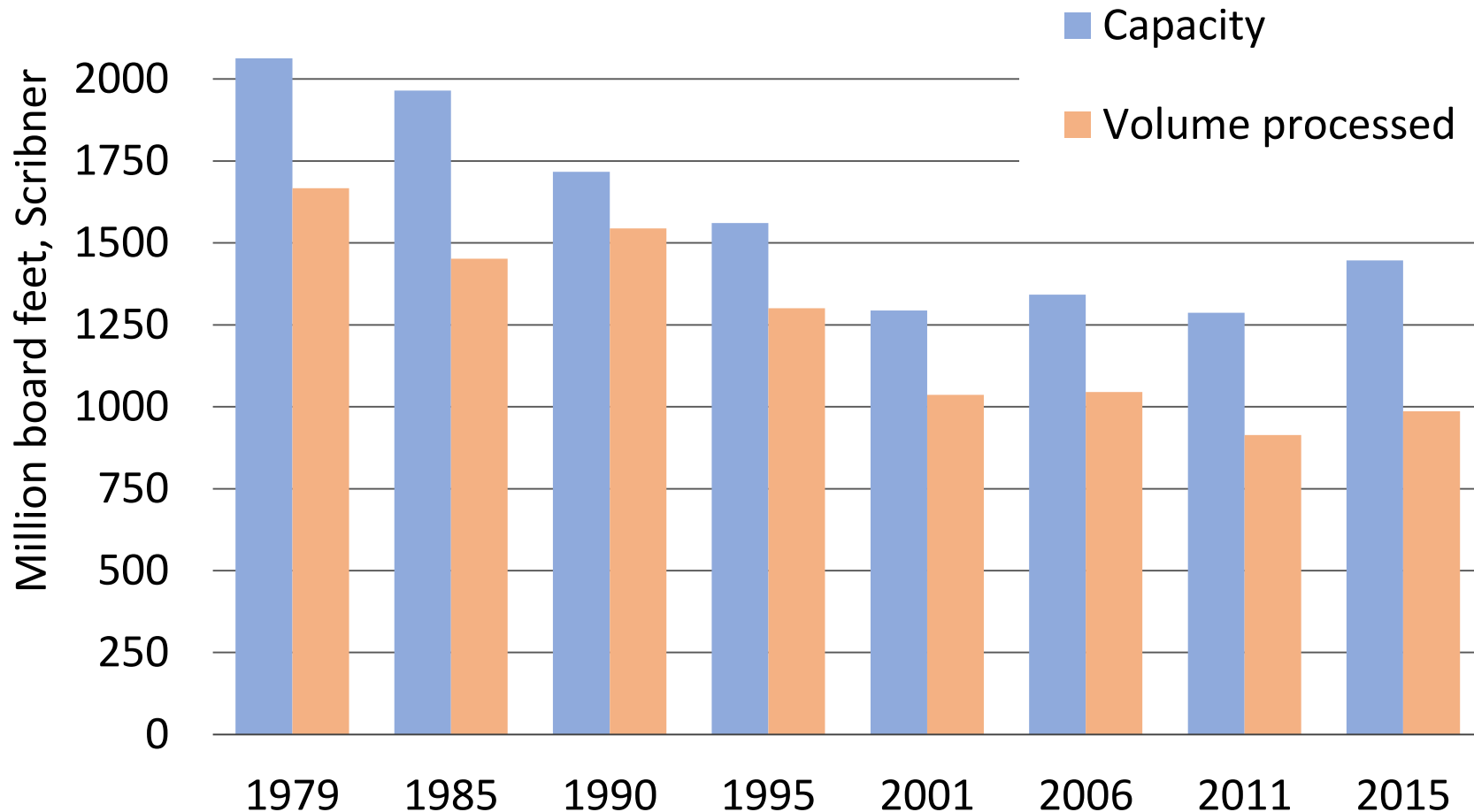
Idaho's Forest Products Industry 2015

- 28 sawmills
- 18 residue related facilities
- 18 post , pole utility pole, log furniture and firewood producers
- 15 log home/houselog manufacturers
- 7 cedar products manufacturers
- 2 plywood/veneer plants

88 active primary wood products facilities 2015

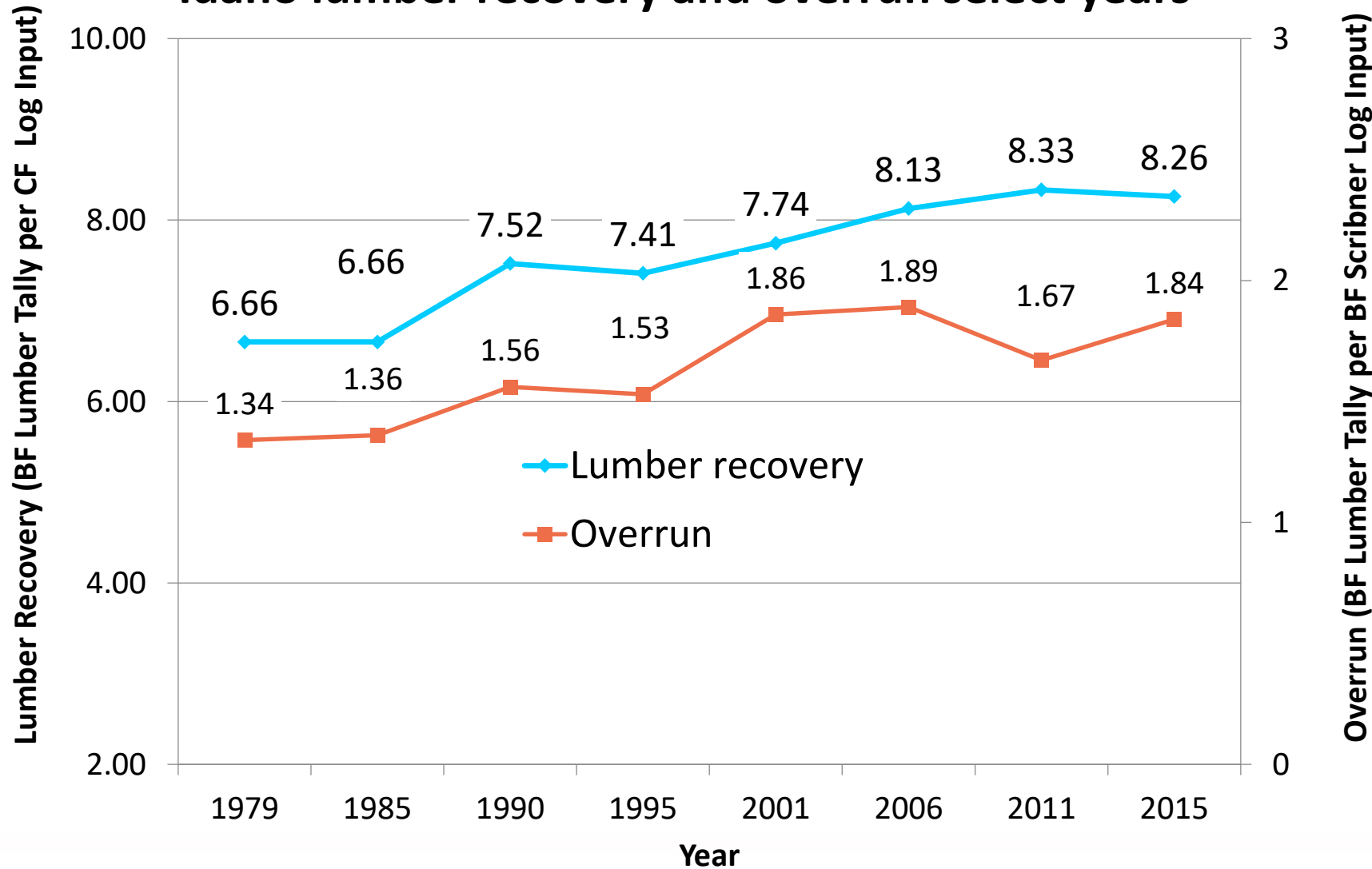


Capacity to process sawtimber: sawmills, plywood/veneer, houselogs, and utility poles

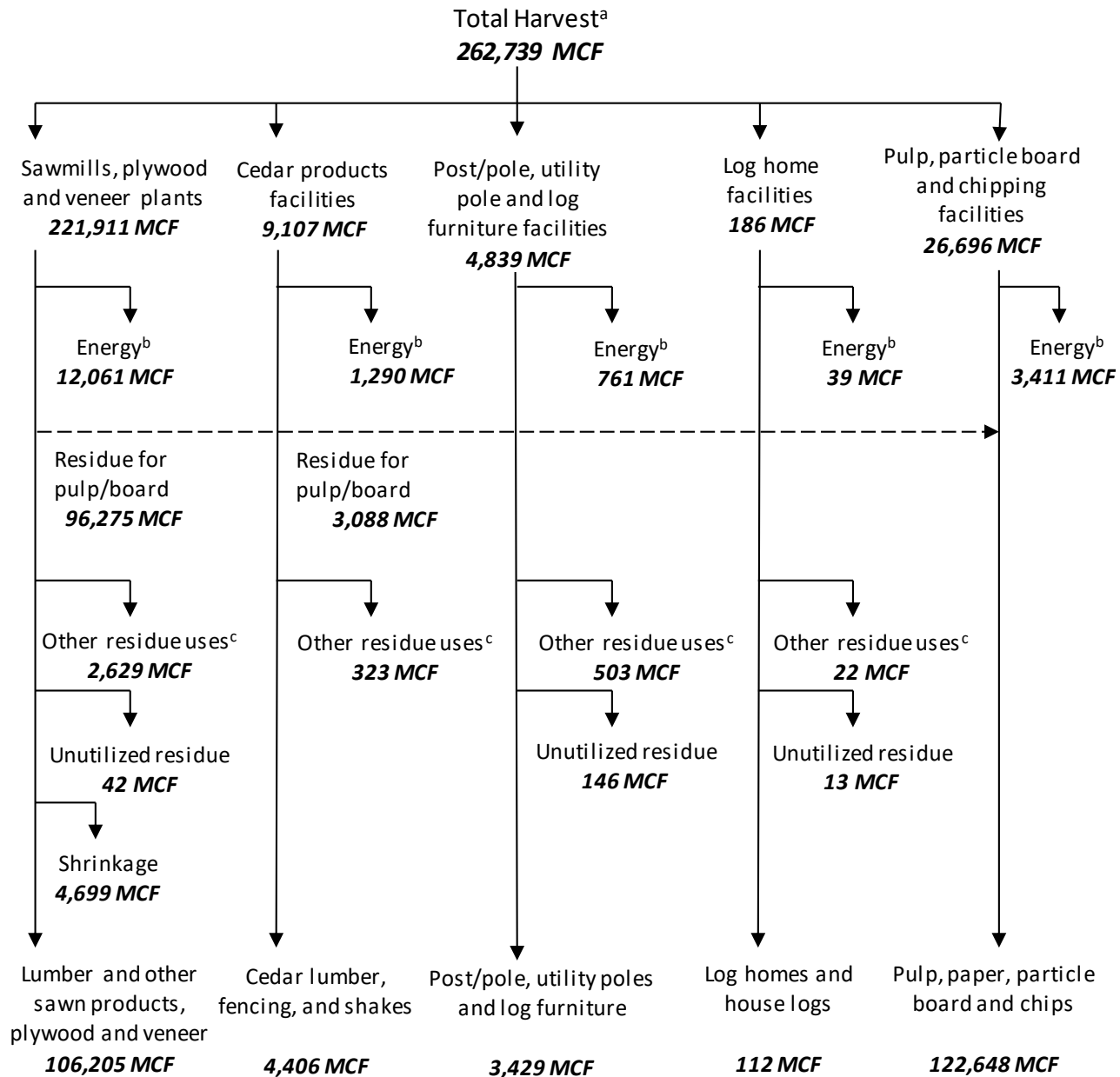


- Capacity to process sawtimber exceeded 1.4 BBF Scribner during 2015, about 12 percent higher than in 2011.
- Capacity utilization was about 68 percent of capacity overall and 69% for sawmills.
- Sawmill capacity has reached a level nearly equal to that in 1995 with about half the number of facilities.

Idaho lumber recovery and overrun select years



- Idaho’s 28 active sawmills produced about 1.7 billion board feet of lumber during 2015, and recovered an average of 1.84 board feet lumber tally per board foot Scribner of log input.
- Sawmills produced 90% (1.4 million **bdu’s**) of all mill residues and less than one percent went unutilized.



^a Harvest volume does not include bark.

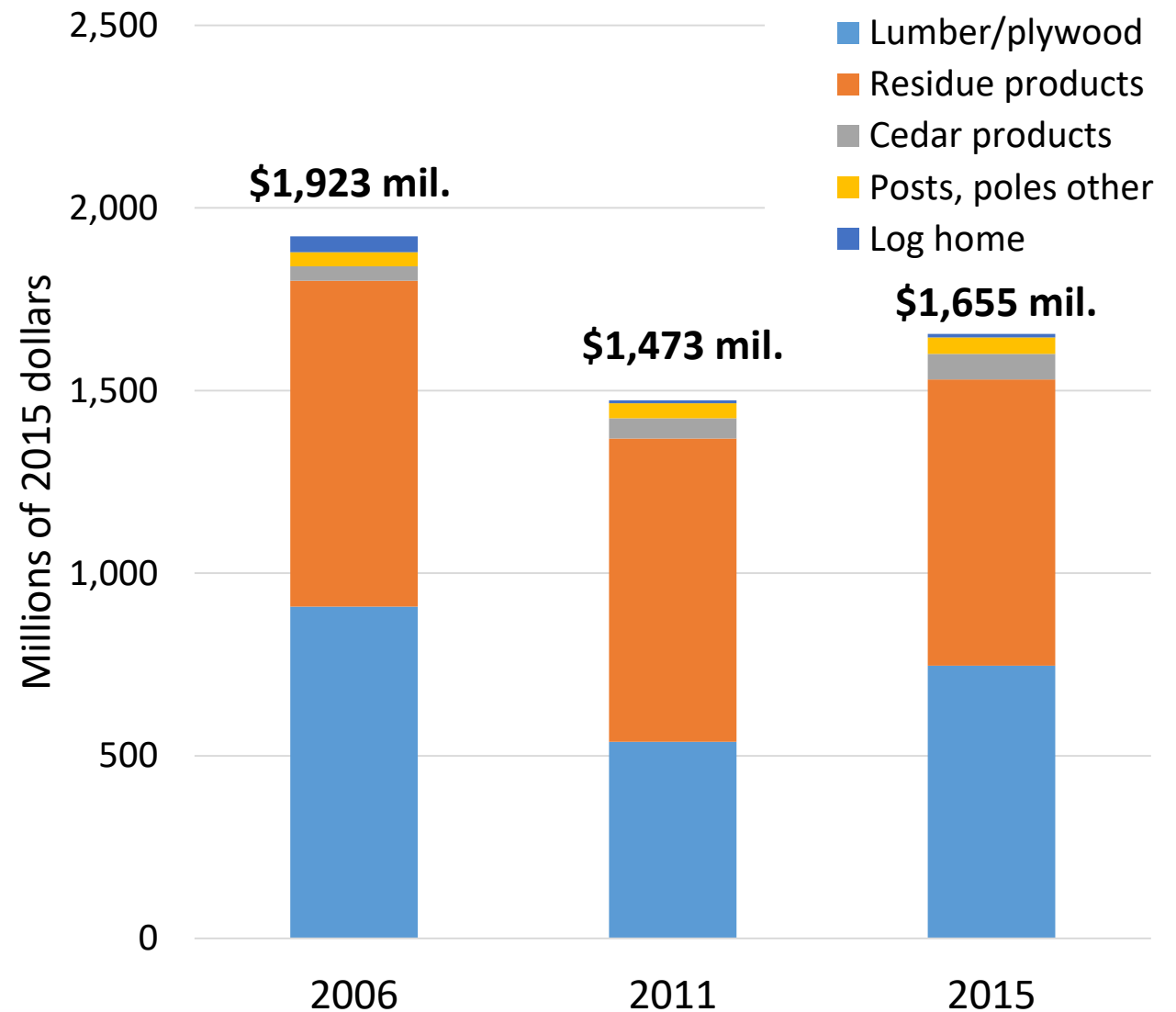
^b Energy includes residue used internally for energy or sold for hog fuel, wood pellets, or compressed fuel logs.

^c Other uses include landscape, mulch, and animal bedding.

- Sawmills received 84% of the raw log wood fiber harvested in Idaho and used 40% of the total wood fiber to make finished products.
- Residue product facilities received 10% of the raw log wood fiber harvested in Idaho and used 47% of the total wood fiber to make finished products.
- Smaller sectors had proportionally more unused wood fiber primarily due to constrained ability to sell their residuals.

- Idaho's primary wood products industry generated more than \$1.65 billion in sales, including mill residue. Sales were up approximately 12 percent over 2011, but still below pre-recession levels.
- The in-state proportion of finished product sales increased from 10 percent of total sales in 2011 to 20, marking the highest proportion of in-state sales since 1995.
- Cedar products sales continued to increase as a proportion of total sales from 38% to 42% in 2015.

Idaho primary wood products sales values 2015



Employment & Labor Income

By Kate Marcille, Forest Economist BBER

- 2015 total industry employment estimated at 11,823 full- and part-time workers
- Wood products manufacturing (54%)
- Total direct earnings of \$805 million
- For every million board feet (MMBF) harvested in Idaho during 2015, approximately 10 jobs and \$709,000 in labor income are directly provided in the forest industry.

Forest industry employment in Idaho stimulates *additional economic activity and opportunities* through employment and wages spent throughout the state economy



Source: USDC BEA 2017; USDC CB 2017; USDL BLS

Removals from Forest Inventory



TPO mill surveys

Logging utilization studies

FIA P-2 plots

Thank you!

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