


Forestry in the Last Frontier

CHANGES, CHALLENGES, AND CHARACTERS IN ALASKA'S FOREST INDUSTRY

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Bureau of Business and Economic Research

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

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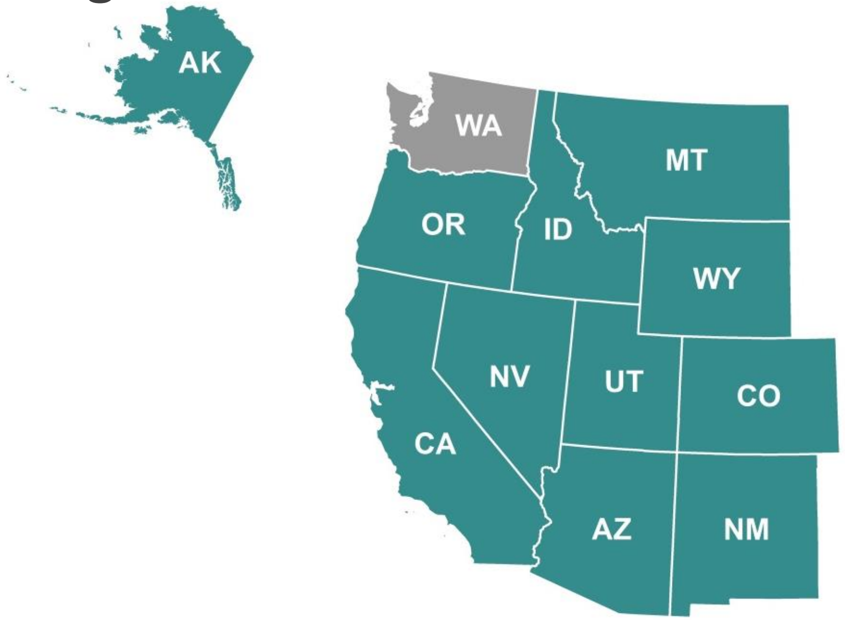
Forest Industry Research Program

- 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



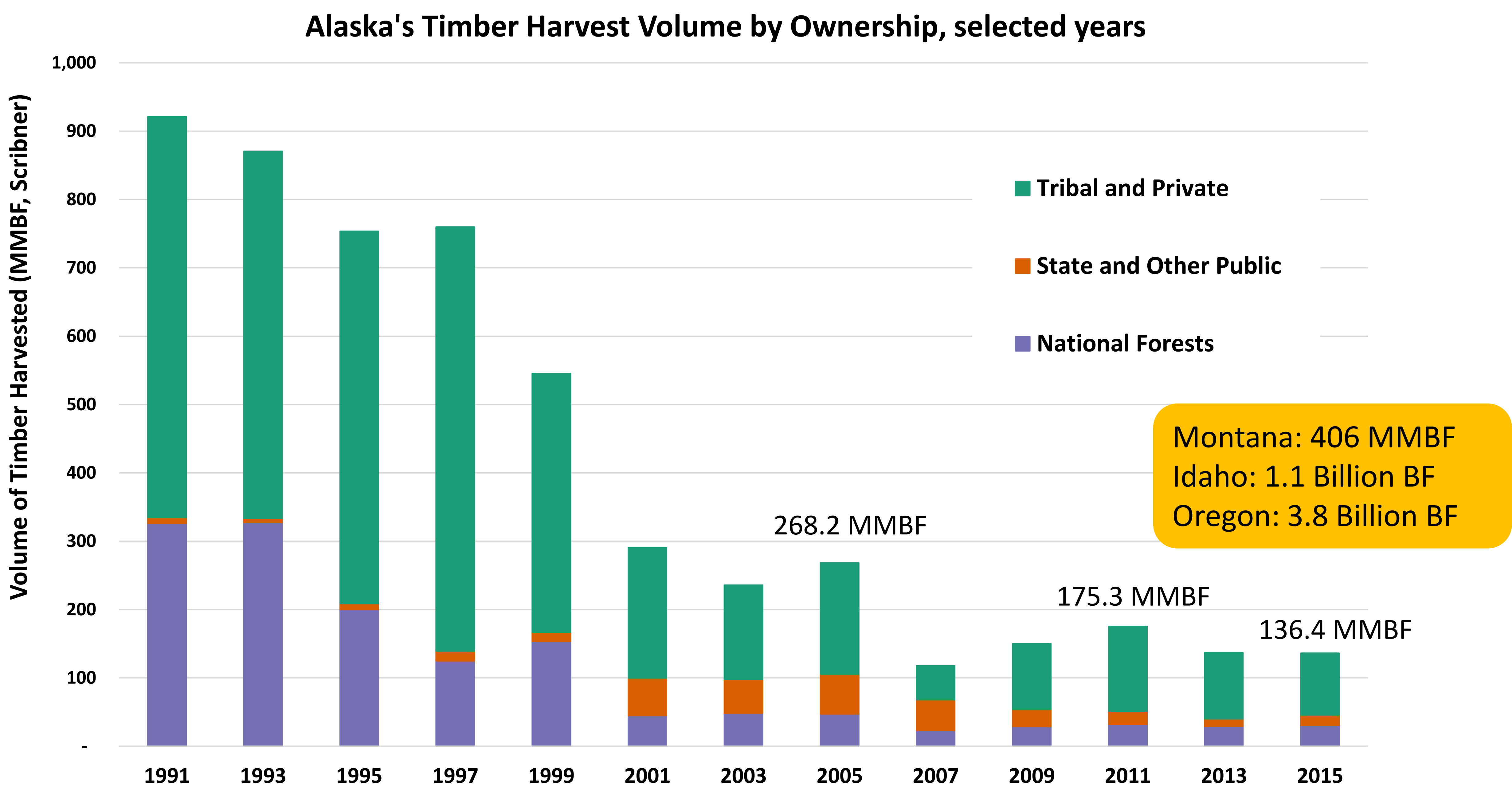
Sate Industry Census

- Mill type, location, capacity, equipment, employment

- Timber harvest volume, use, species, size, county and ownership
- Mill residue volume and wood fiber use
- Product volume, sales and market locations

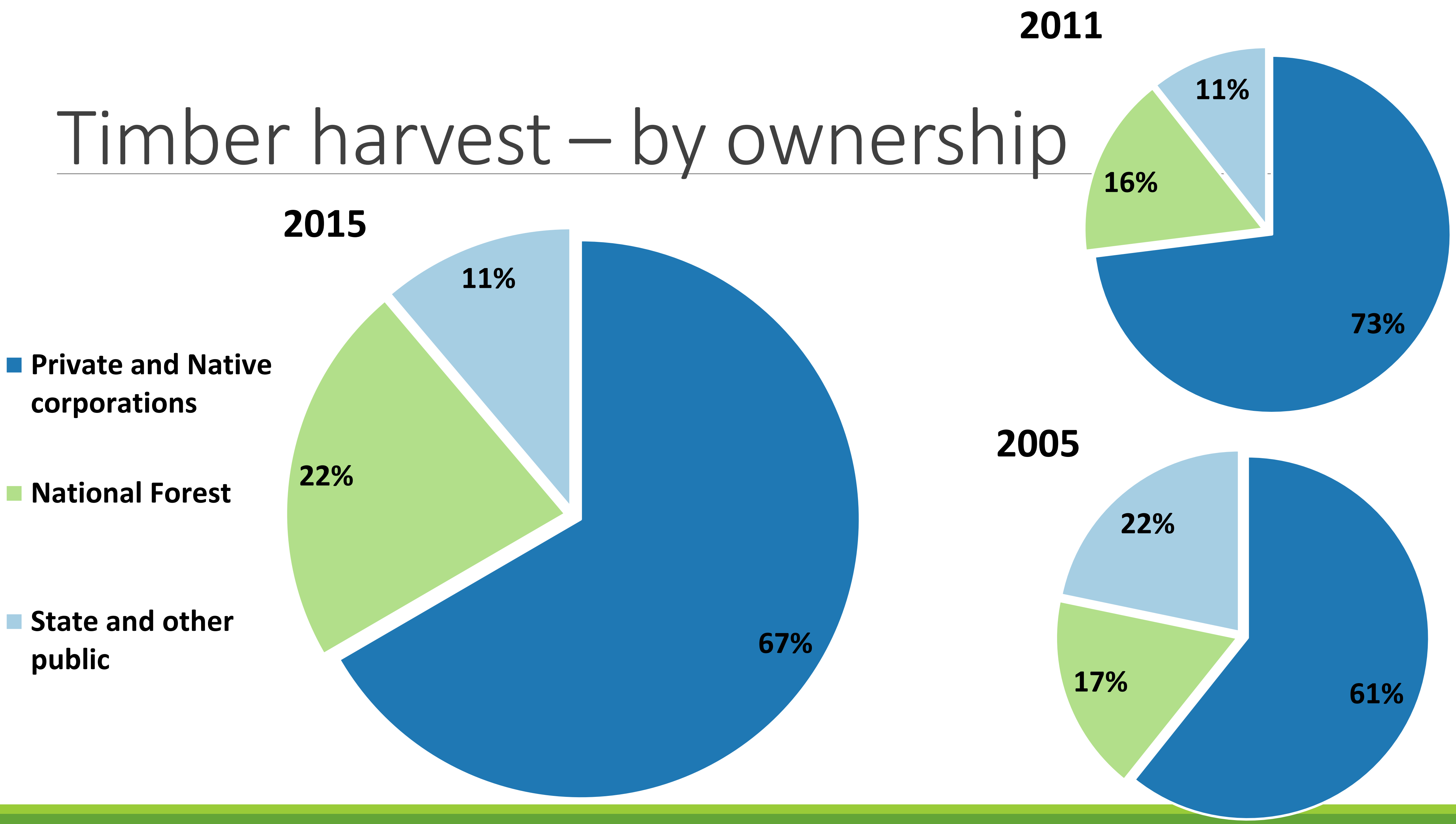
Alaska's Timber Harvest & Forest Industry

- 3rd effort of this kind in Alaska (2005, 2011, **2015**)
- Effort to describe:
  - Flow of timber harvested
  - Changes in the structure of the industry
  - Quantify volumes and uses of wood fiber
- Data received for 51 of the 60 active facilities
  - 80% of the harvest was captured through quantitative methods

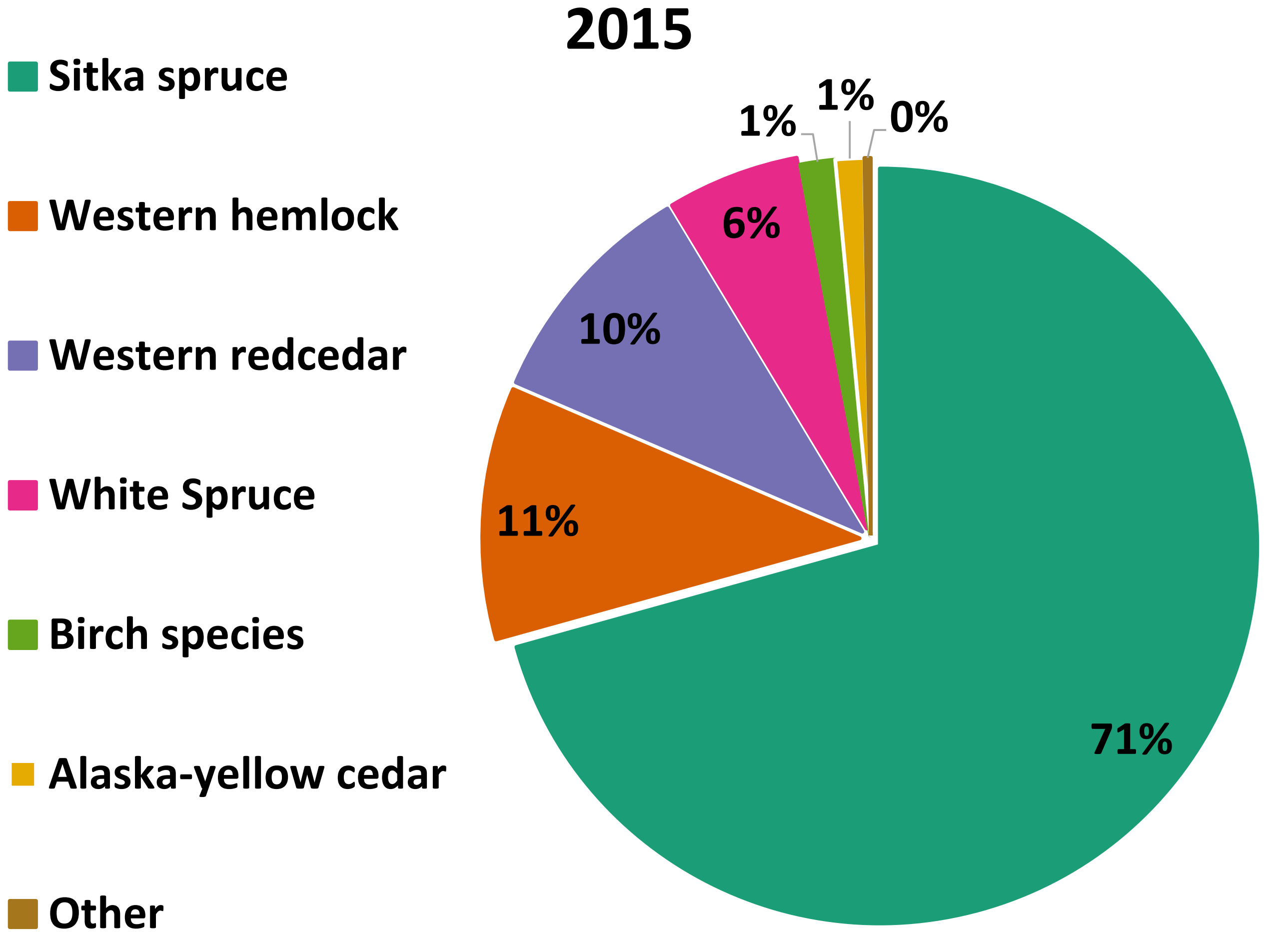


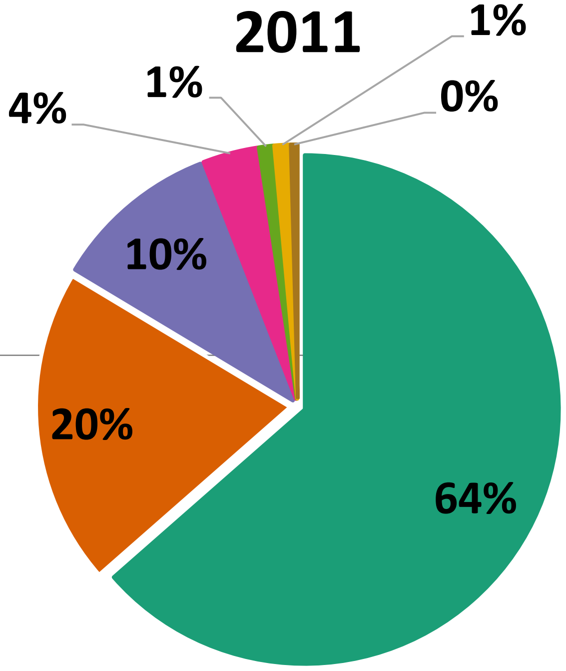
Alaska's Timber Harvest Volume by Ownership, selected years
Volume of Timber Harvested (MMBF, Scribner)
1,000
900
800
700
600
500
400
300
200
100
-
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
Tribal and Private
State and Other Public
National Forests
268.2 MMBF
175.3 MMBF
136.4 MMBF
Montana: 406 MMBF
Idaho: 1.1 Billion BF
Oregon: 3.8 Billion BF

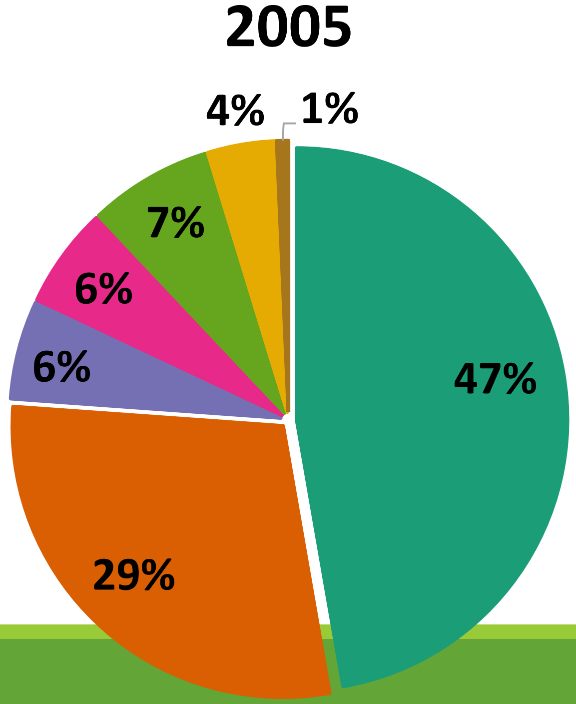
Timber harvest – by ownership



Timber Harvest – by species

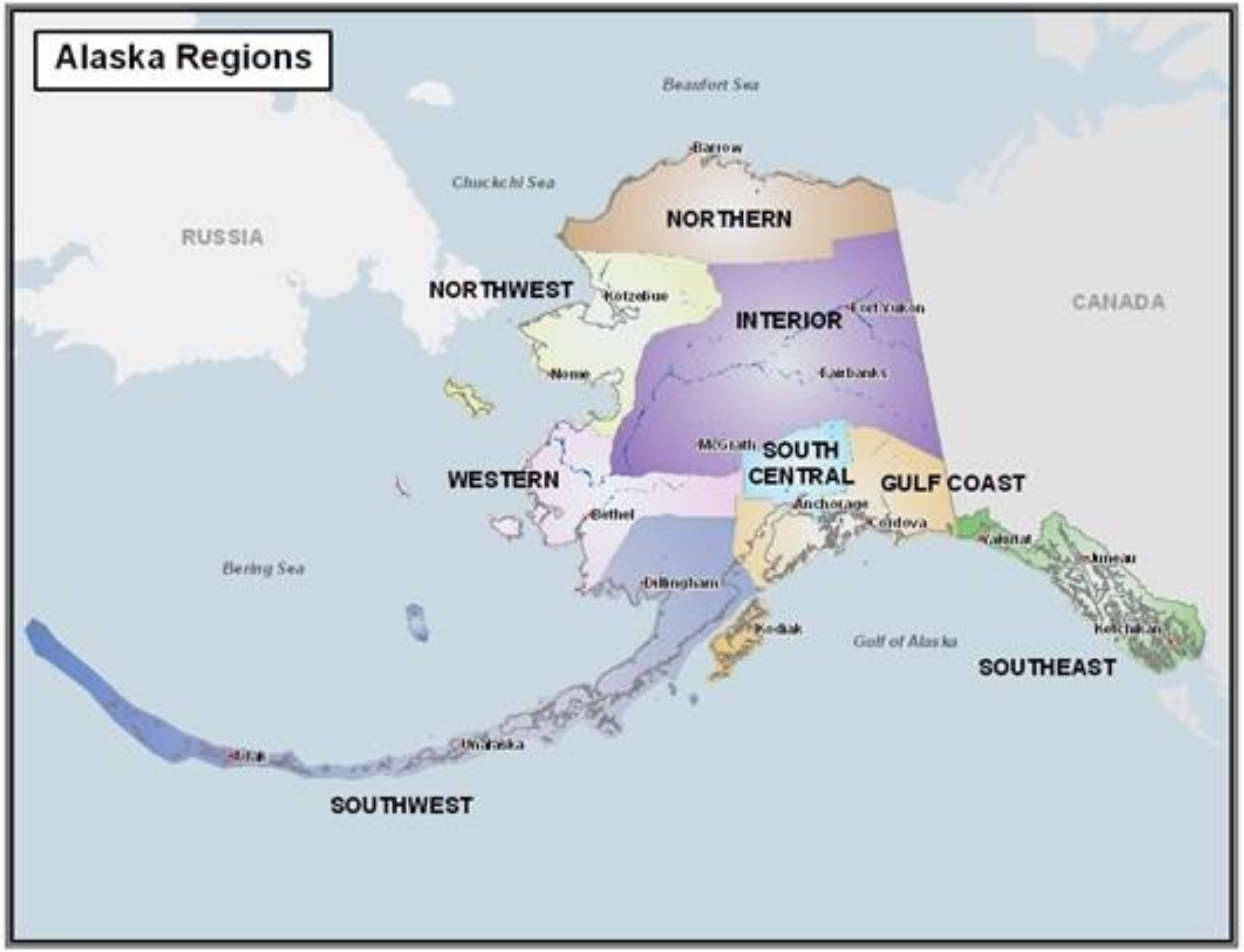






Timber Harvest – by resource area

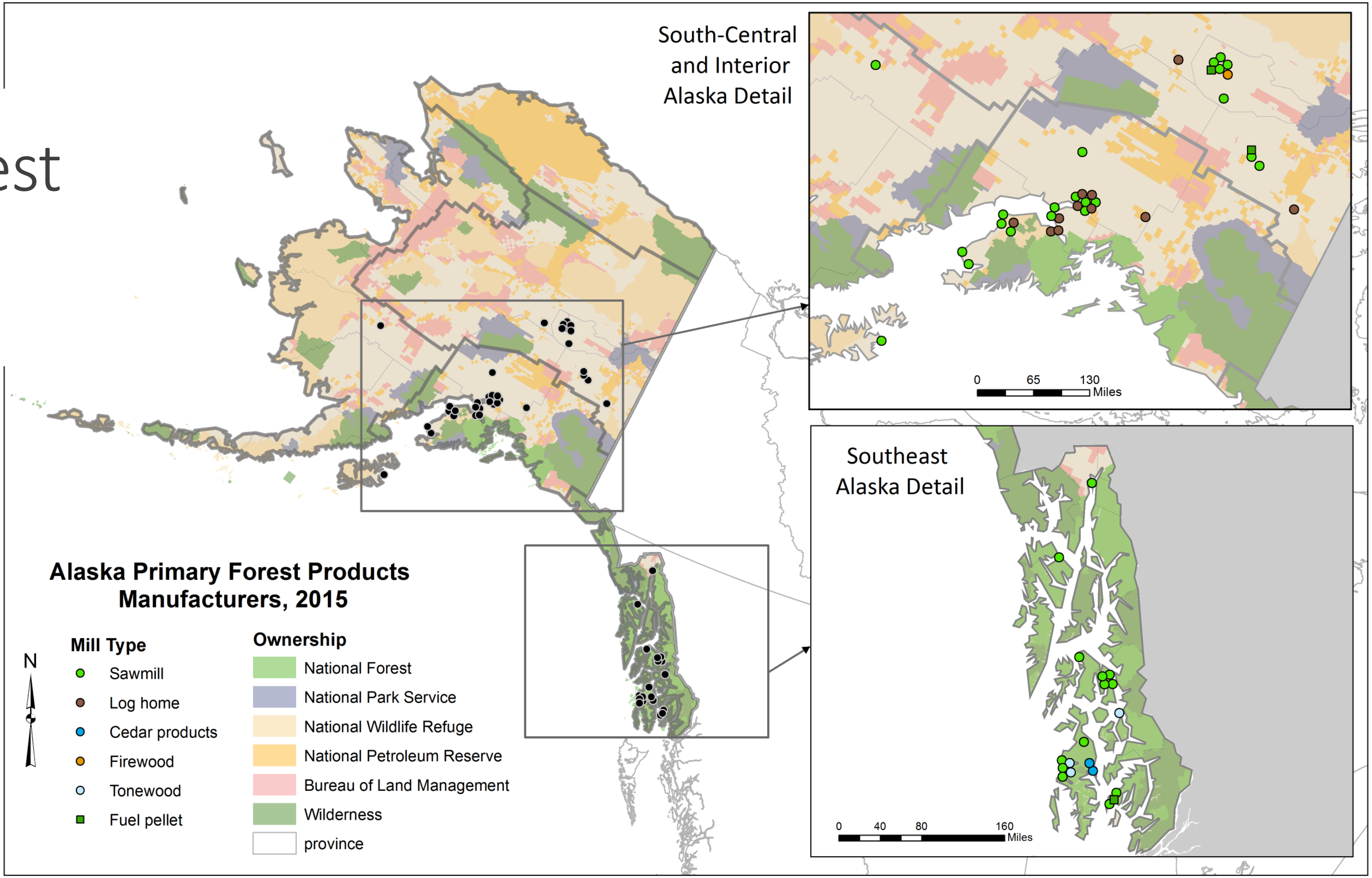
- **Southeast** accounted for more than half (**56%**) of the timber harvest
  - Decrease in proportion of harvest volume
- **Southcentral and Western** resource areas accounted for **38%**
- **Interior Alaska** contributed almost **6%**
  - Increase in proportion of harvest volume



Harvest by product

Product type	2011	2015
	----- *percent* -----	
Sawlogs	96.6%	93.7%
House logs	0.8%	1.0%
Fuelwood	2.4%	4.2%
Other products	0.2%	1.2%
Total	100%	100%

Alaska's Forest Products Industry

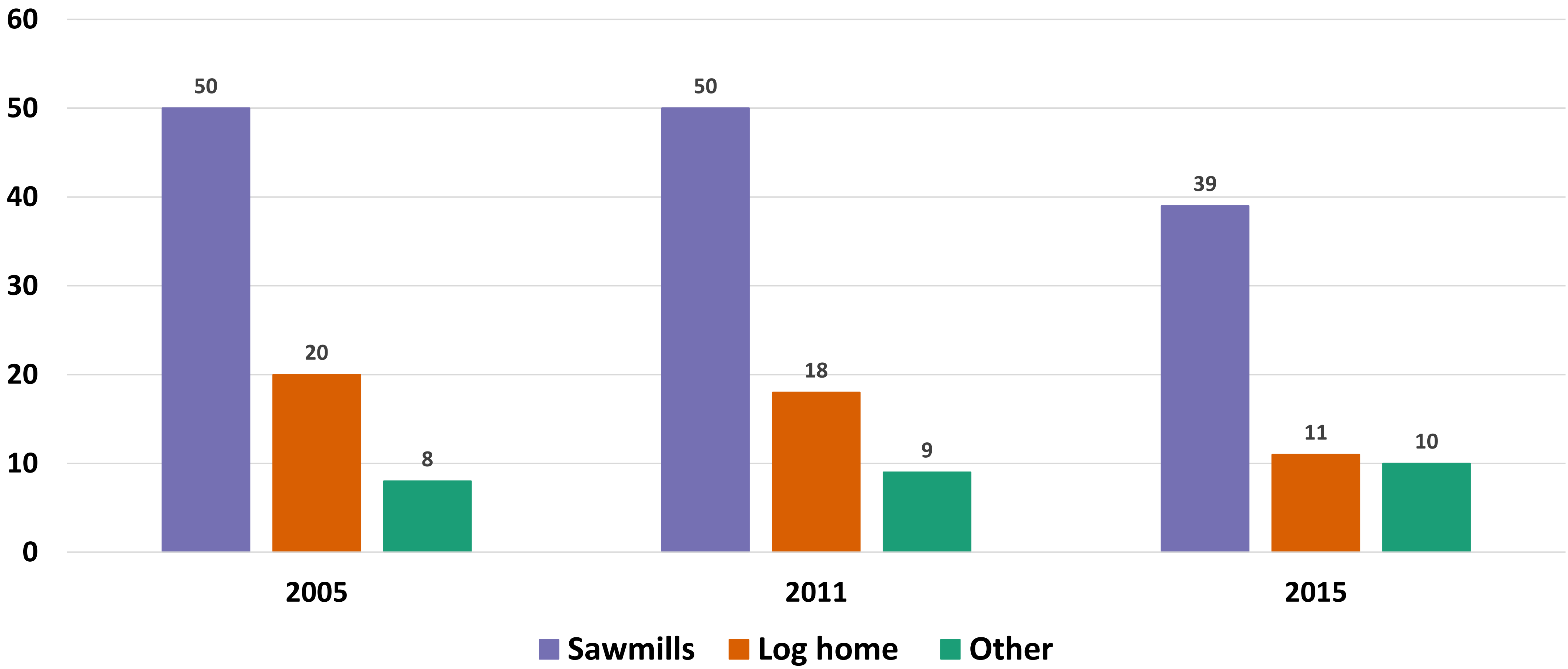


Alaskan primary processors

- 39 sawmills
- 11 log home manufacturers
- 10 “other” primary facilities including:
  - Fuelwood/energy products
  - Cedar products
  - Tonewood
- A decline in primary processing facilities

Cello

Composition of Alaska's Forest Products Industry

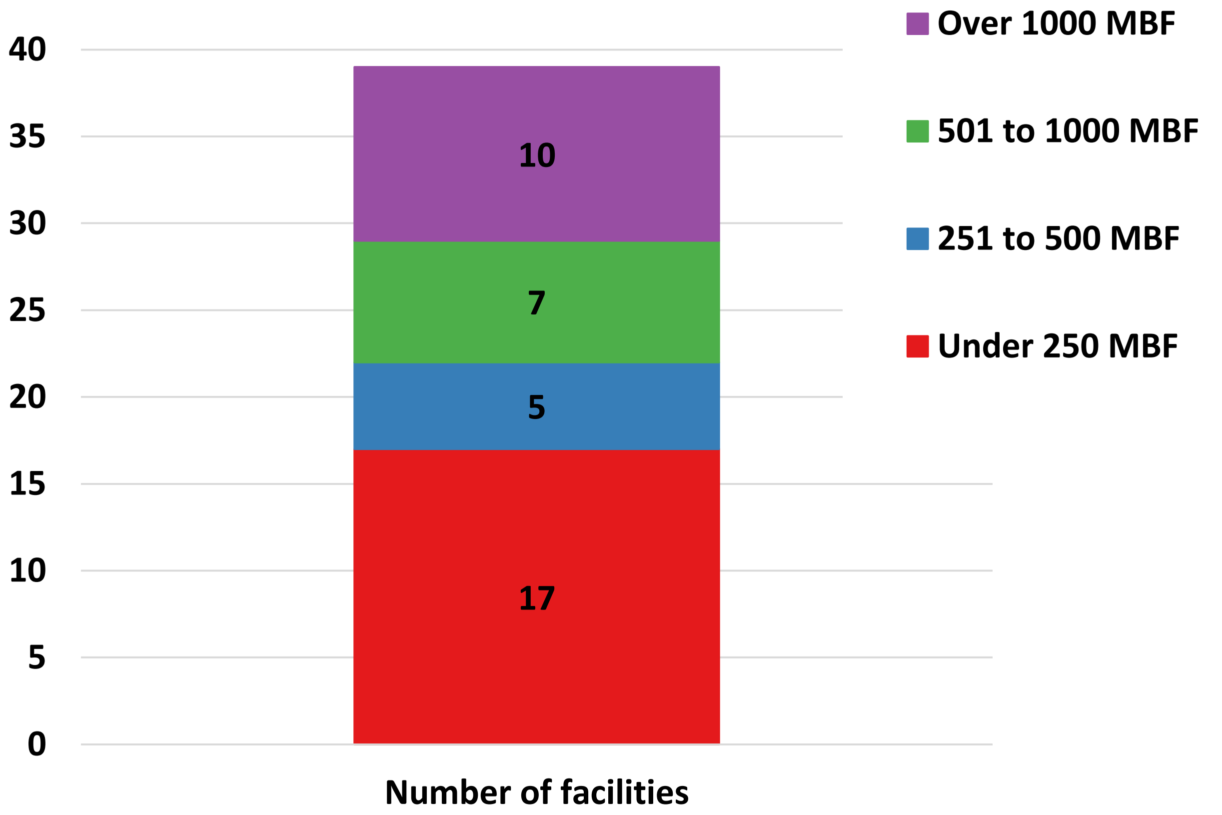


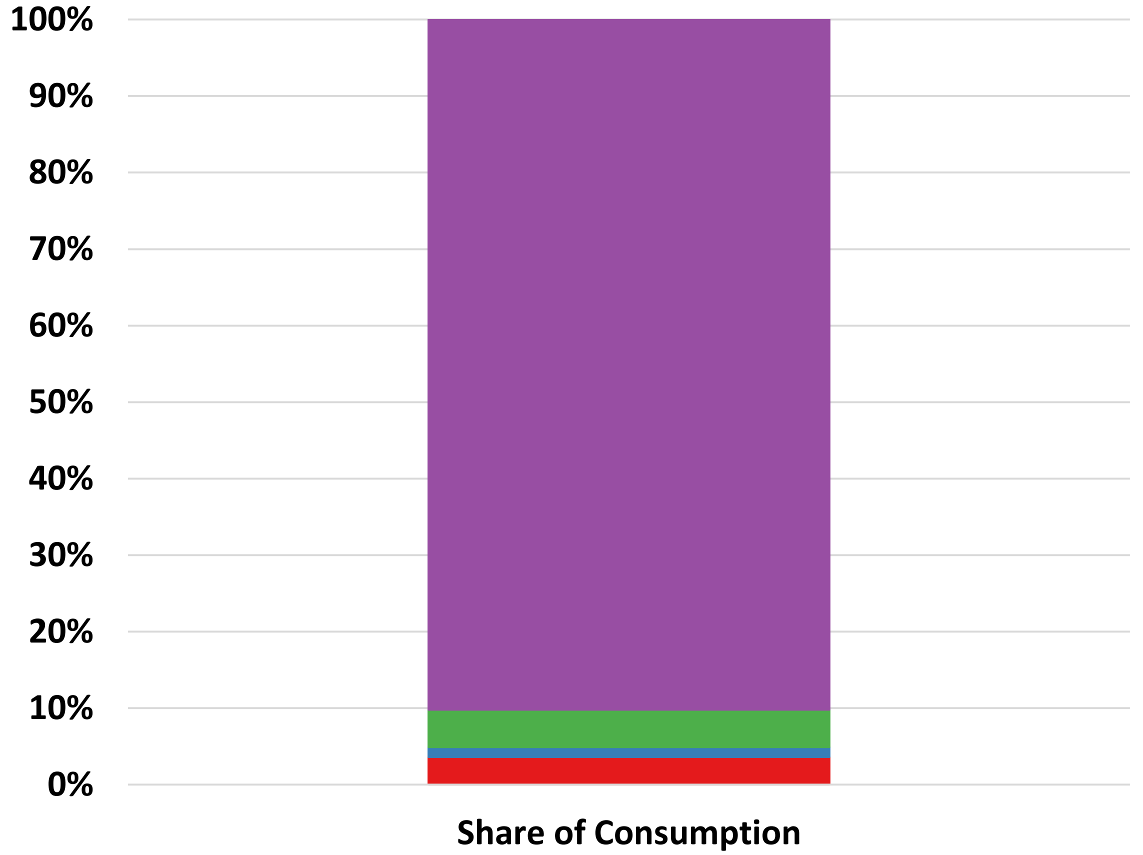
Alaskan Sawmills

- Sawmills comprise the largest sector in Alaska
  - Timber harvested
  - Sales value
  - Employment
- Produced > 30 MMBF of lumber in 2015
  - Recovered an average of 1.33 bf of lumber tally per bf of Scribner processed
- Generated over 38,000 BDTs of residue
  - Energy
  - Pulp (export)
  - Landscaping/playground fill
  - Animal bedding

Alaska timber-p
sawmill size clas

	Size Class	Capacity Utilization
	Over 1000 MBF	23.7%
	501 to 1000 MBF	19.1%
	251 to 500 MBF	16.7%
	Under 250 MBF	34.7%





Total capacity : 97.7 MMBF

Timber Receipts and Flow

136.4 MMBF

- Alaska facilities received > 31 MMBF
- All timber originated in Alaska
- Approximately 54% came from USFS land
- Western red cedar was the most common species (35%)
- Nearly 67% of receipts originated in Southeast Alaska
- Alaska is predominantly an exporter of timber
  - 23% of total harvest was processed in Alaskan facilities

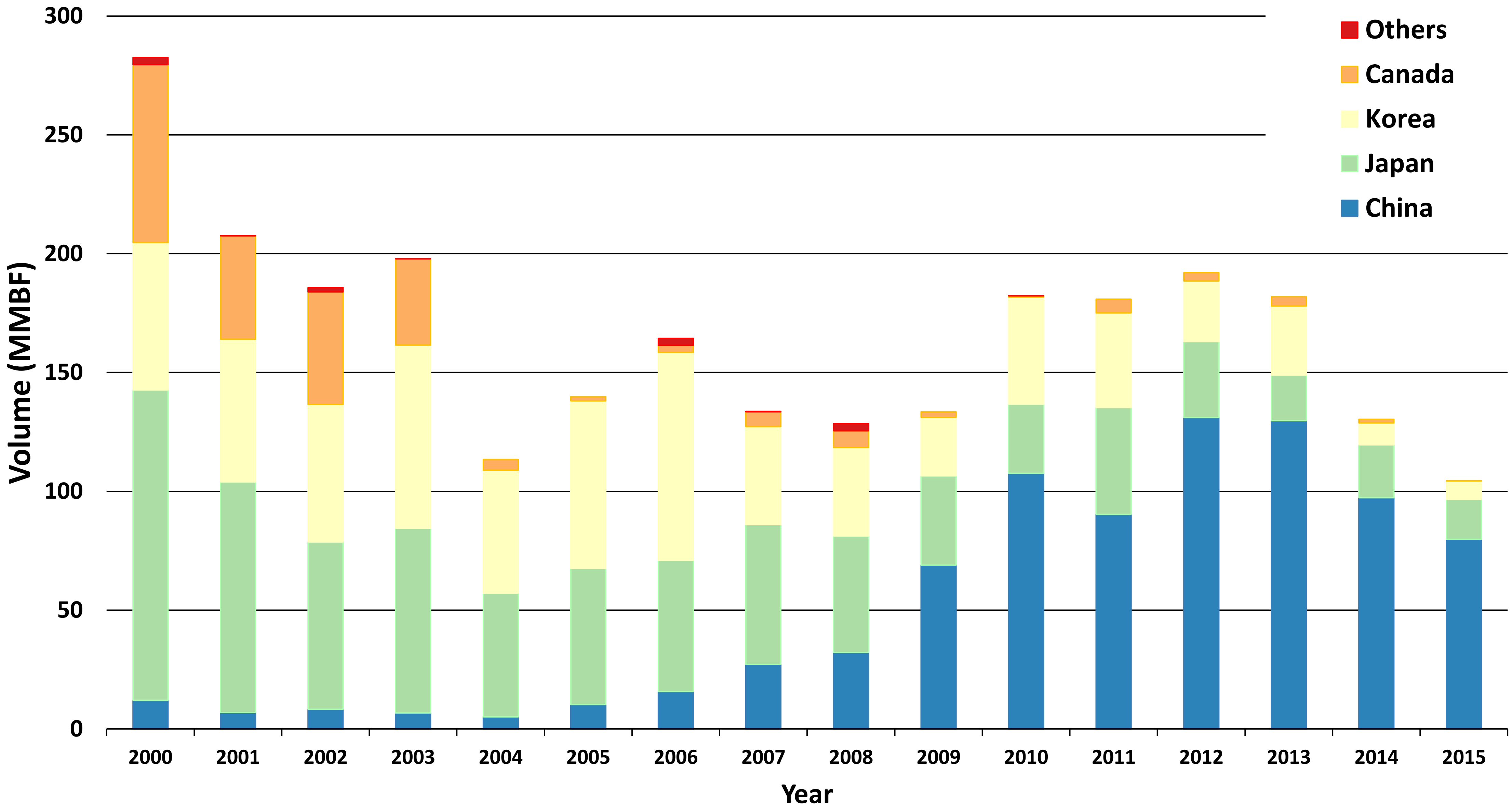
Alaska Log Exports

- United States International Trade Commission (USITC)
- Predominantly Sitka spruce
- China remains the dominant consumer in the west coast export market
- Export volume decreased dramatically between 2011 and 2015
- 731,225 cubic meters exported in 2015

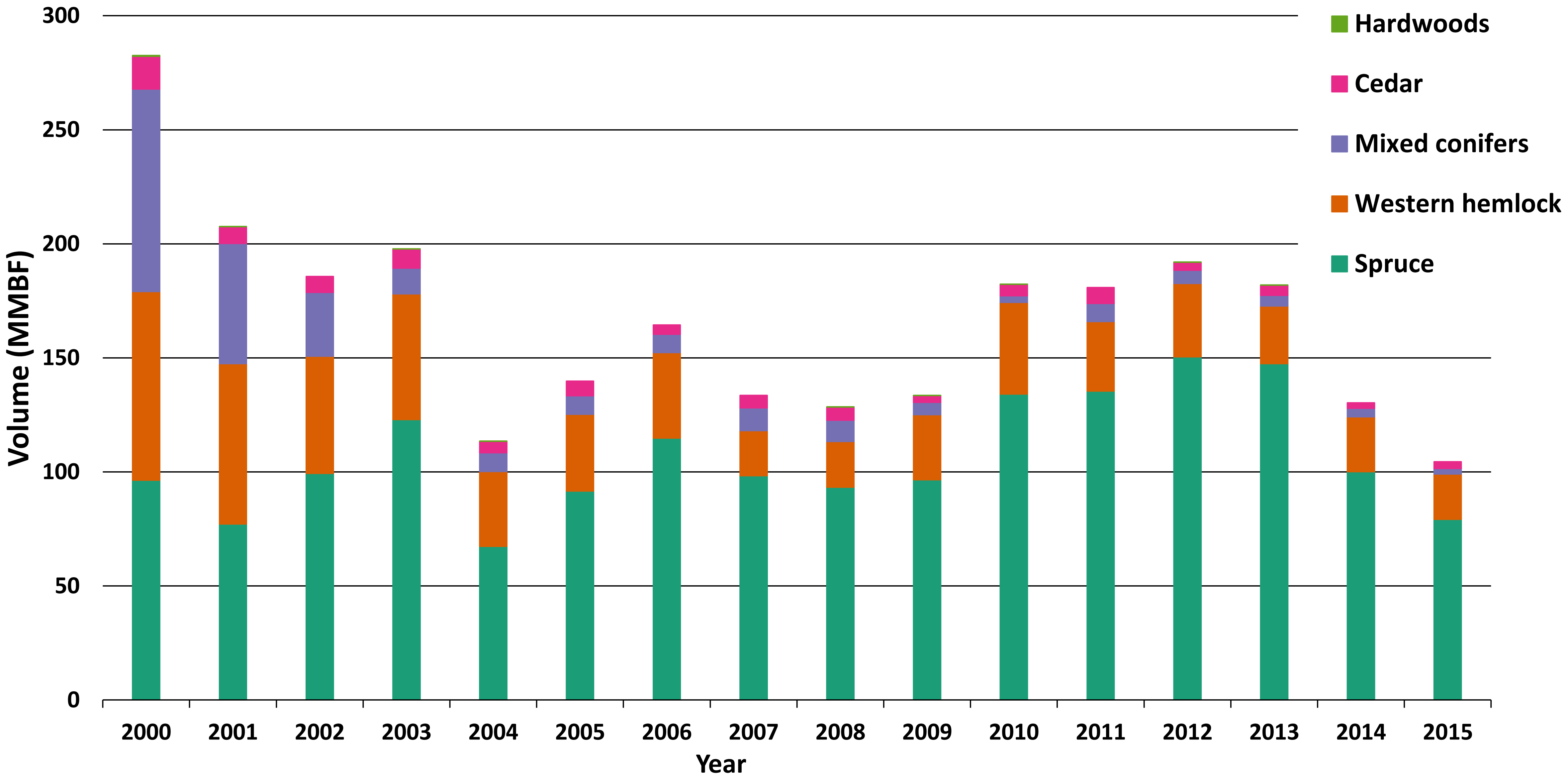
$731{,}225\ m^3\ \cancel{\frac{bf}{4.53}}\ 161{,}418\ MBF$

$$731{,}225\ m^3 \times \frac{1\ mbf}{7\ m^3} = 104{,}460\ MBF$$

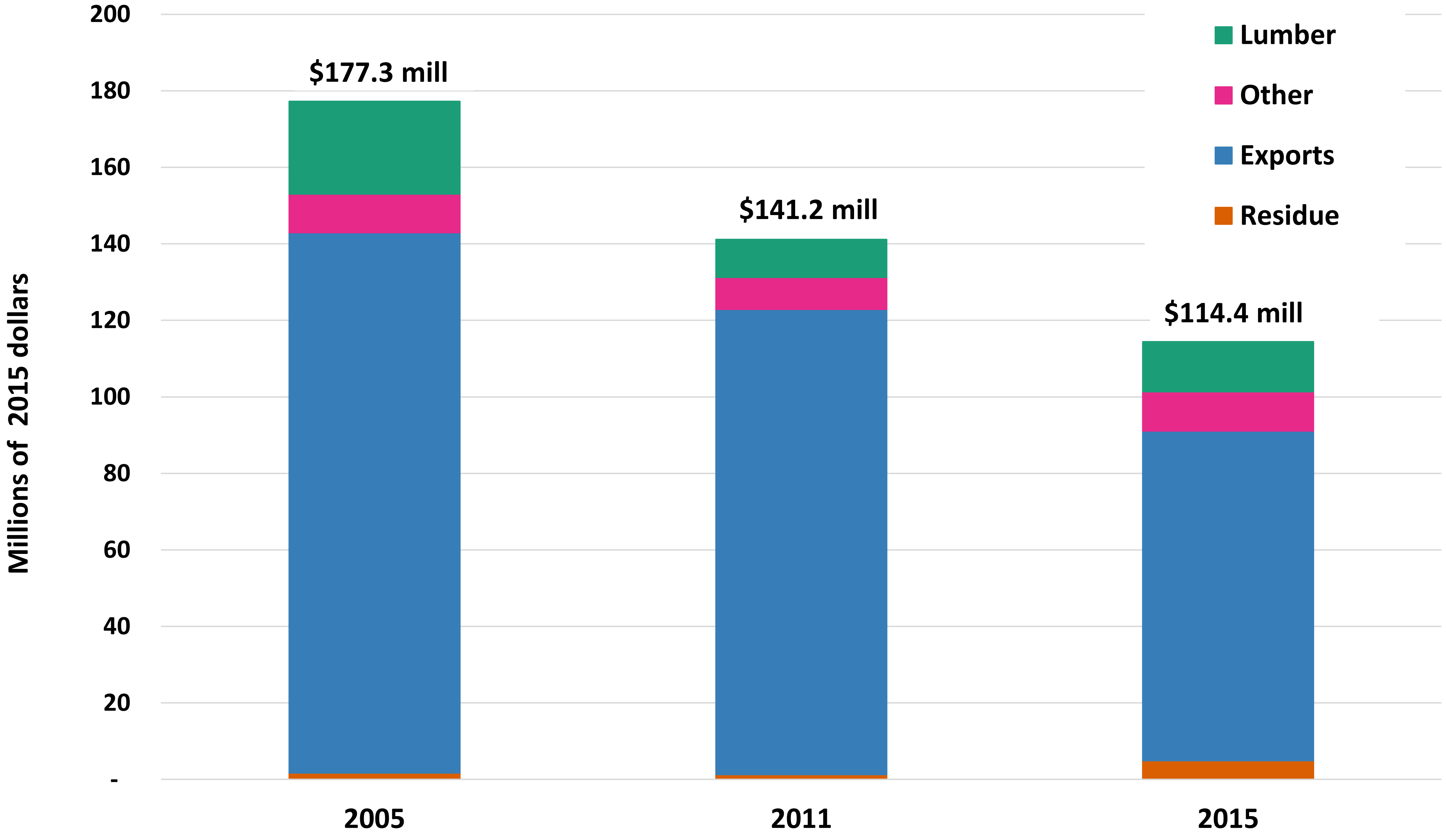
Alaska Log Export Volume (MMBF) by Country



Alaska Log Export Volume (MMBF) by Species



Sales of primary products, residue and export logs



Sales Value

Table 14—Destination and sales value of Alaska's primary wood products and sawmill residue, free on board (f.o.b.) the producing facility in 2015

Product	Alaska	West Coast[a]	Other States	Pacific Rim	Canada	2015 Total
	Thousands of 2015 dollars					
Lumber	5,964	4,718	1,087	1,141	149	13,059
Other[b]	9,464	713	--	--	79	10,256
Total primary product	**15,427**	**5,431**	**1,087**	**1,141**	**228**	**23,314**
Residues[c]						4,886[e]
Sawlog and pulpwood exports[d]						86,207[e]
2015 Total sales value						**114,407**
2011 Total sales value[f]						141,158
2005 Total sales value[g]						177,278

[a] West Coast states include California, Hawaii, Oregon, and Washington.

[b] Other products include house logs, firewood, wood pellets, cedar products and tonewood.

[c] Residue products include firewood, garden mulch, animal bedding and wood chips for park/playground fill and landscaping.

[d] United States Internationl Trade Commission (USITC) Dataweb tool.

[e] Data pooled across destinations to prevent disclosure of confidential information.

[f] From Berg et al. (2014).

[g] From Halbrook et al. (2009).

Alaska Industry Highlights

- Harvest, exports and capacity have decreased
- Fewer active primary processing facilities
  - 6 new ones identified
- 54% of timber processed by facilities supplied by USFS
- Increase in timber receipts and lumber production (up 50%)
- Capacity utilization increased
- Increased sales of primary products and residue
- Reported 163 FTE employment (up from 150 in 2011)

Challenges and Data Limitations

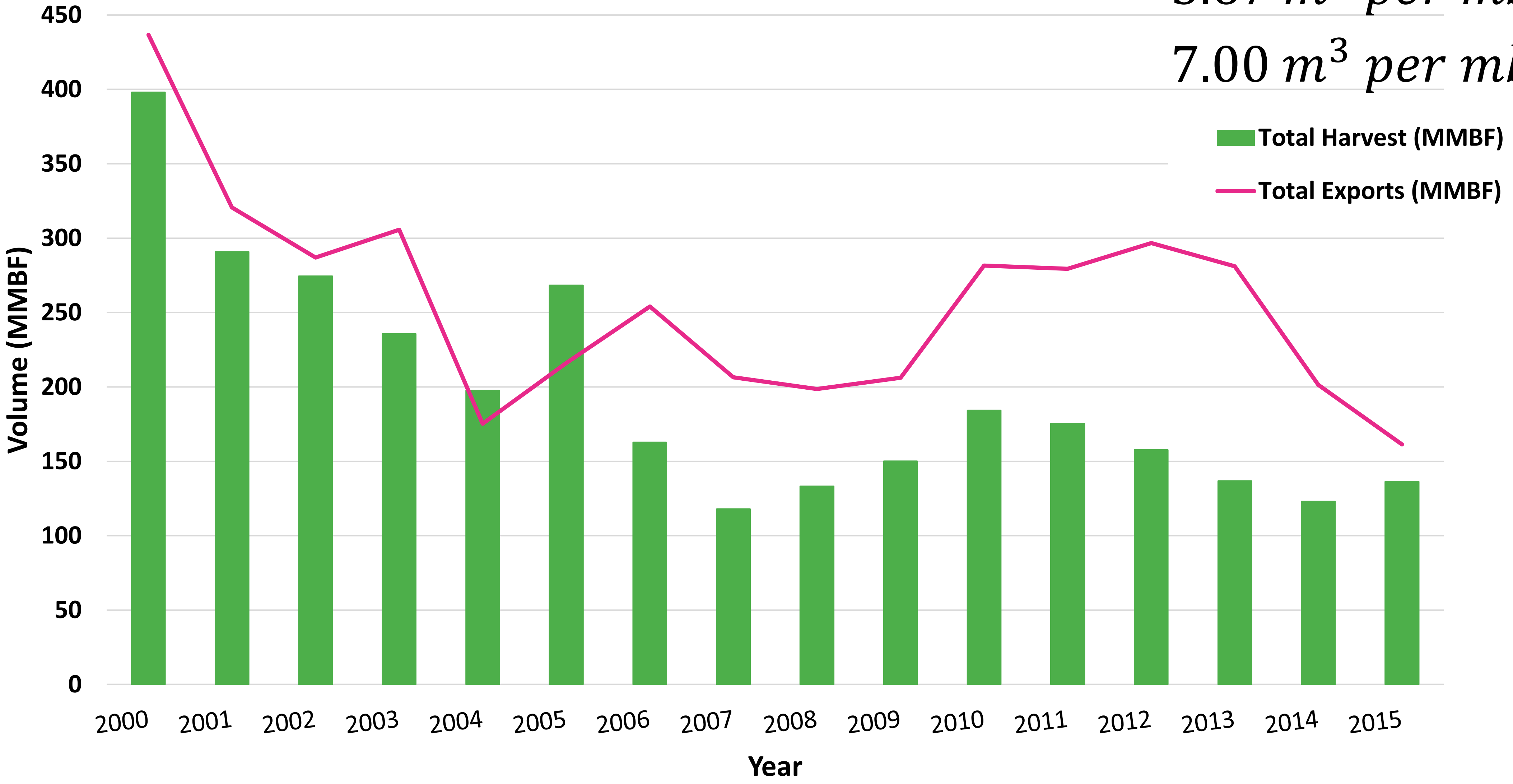
- Survey research hurdles -- nonresponsive facilities
  - Returned mail
  - No email or cell phone coverage
  - The "Alaska Way"
- Multi-product sawmills
- Cross-check survey data against available information
  - USDA Forest Service Cut and Sold Reports and export permits
  - Challenges to private and Native Corporation data
  - U.S. International Trade Commission (USITC) export data

Exports - Conversion Factors

$4.53\ m^3\ per\ mbf$

$5.67\ m^3\ per\ mbf$

$7.00\ m^3\ per\ mbf$



Daniels et al. *in prep*

Exports – Conversion Factors

- Lack of knowledge regarding conversion factors
- Dissimilar conversion factors may be inflating MBF log export volumes
  - larger than harvest by an average of 55% between 2006 and 2011
- Used to help estimate total harvest in Alaska
  - increased difficulty for tracking disposition of timber harvest
- Challenge to estimate size and extent of timber markets for policy/economic development
- Where does the conversion happen, and what factors are being used?

Future of Forestry in Last Frontier

- Increased understanding/exposure to operations in Alaska
- Timber availability
- Transition to young growth
- Data uncertainties and policy implications
- Logging utilization study

BBER's Periodic Census

- Detailed data to inform policy makers

- Help provide perspective on forest industry
- Inform research entities/industry associations

- Connect with landowners and gain on-the-ground insight

Special thanks to

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Many hospitable Alaskans!

Thank you!

Any questions?

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