

Alaska's Forest Products Industry and Timber Harvest, 2011

The University of Montana's Bureau of Business and Economic Research (BBER), in conjunction with the Pacific Northwest Forest Inventory and Analysis (PNW-FIA) Program of the US Forest Service, conducted a census of Alaska's timber processors that operated during calendar year 2011. Through a written questionnaire or phone interview, timber-processing and residue-utilizing facilities provided information about their 2011 operations, including:

- Plant location, production, capacity, and employment
- Log lengths, small- and large-end diameters
- Volume of raw material received, by borough/census area, 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

The facility-level information was then compiled and summarized. Because this study is based on a census, rather than sample of firms, there is no statistical error associated with the estimates presented. Possibilities of reporting and measurement error exist, but are minimized by cross checking data against other public and private information sources and through checking data for internal consistency.

The enclosed summary data tables and figures are reviewed by wood products researchers, state and federal agency personnel, and members of the state's forest products industry. Readers of our 2005 "Alaska's Timber Harvest and Forest Products Industry, 2005" (PNW-GTR-787) report will note several changes in 2011 table content. Because forest product activity had generally dropped since 2005, 2011 data were often pooled across shrinking industry sectors to prevent disclosing individual firm information.

Missing and contradictory Alaska log export information has complicated the computation of total 2011 timber harvest volume. To remedy this problem, we combined 2011 mill census information with published timber harvest data to report statewide harvest volumes in tables 1, 2, and 4.

A report is currently being prepared that will include these tables along with historical information and current industry trends. This and past reports can be found at: http://www.bber.umt.edu/FIR/H_States.asp.

In the meantime, we offer this "core" information to our data users and other interested individuals. We would appreciate your feedback on the clarity and utility of this information. We encourage you to contact us if you have any additional questions about the data. However, firm-level data are confidential and will not be released.

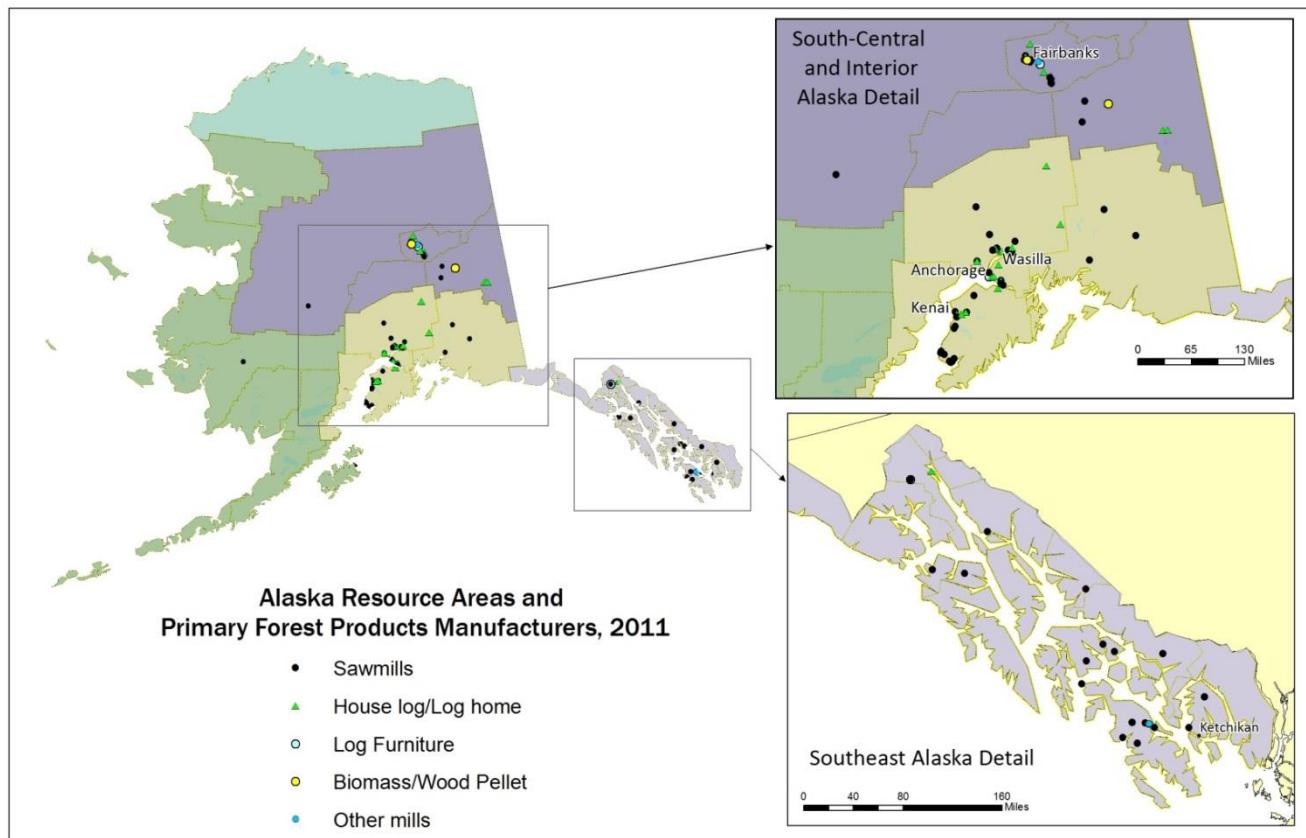
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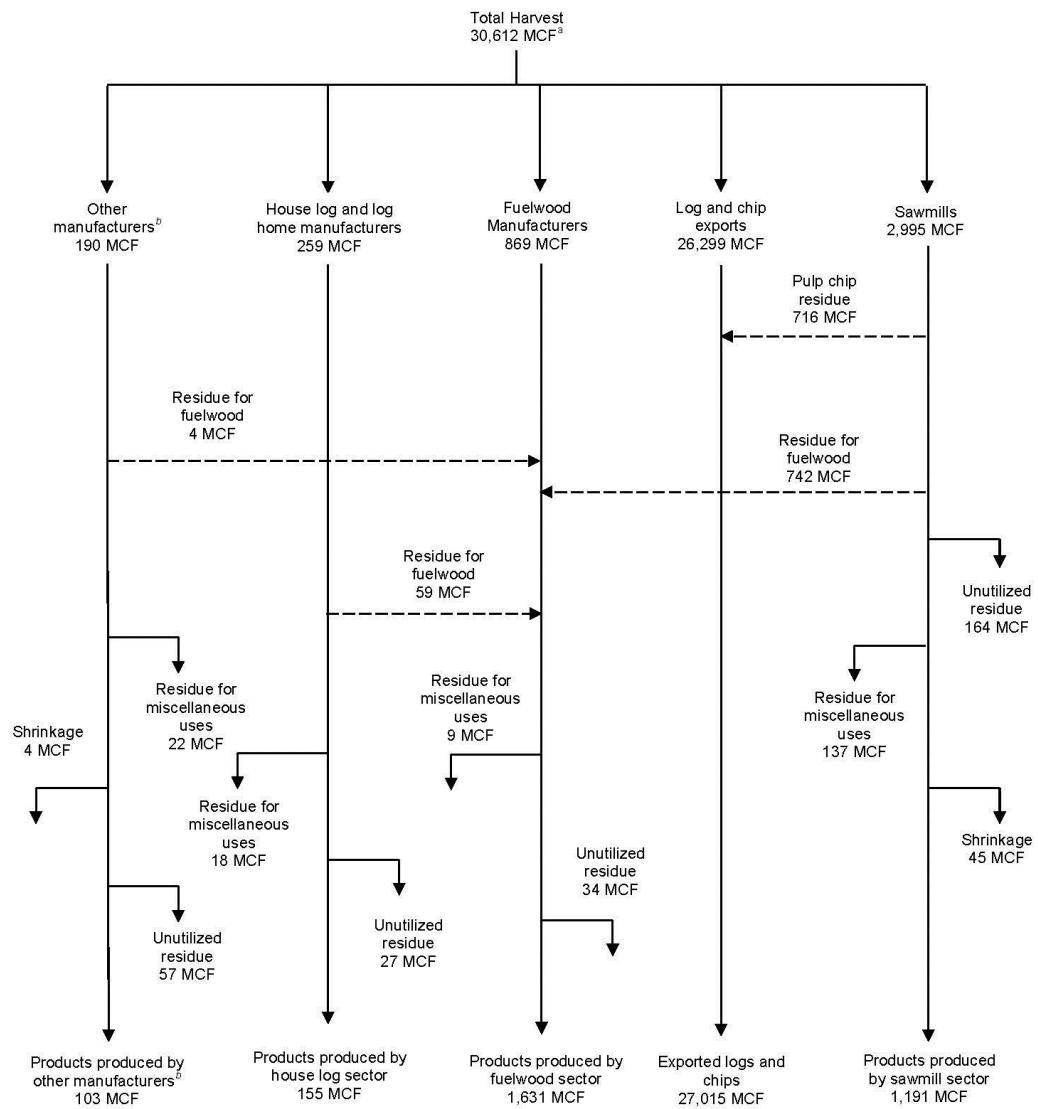


2011 Alaska Timber Harvest and Forest Industry Highlights

- A total of 77 active Alaska facilities were identified:
 - 50 Sawmills.
 - 18 Log home plants.
 - 9 other facilities that produced fuelwood products, cedar products, log furniture, tonewood, and novelty items.
- Alaska's total timber harvest in 2011 was 175.3 million board feet (MMBF) Scribner, approximately 35 percent less than the 2005 timber harvest.
- Sawlogs made up nearly 97 percent of the total harvest. Southeast Alaska boroughs/census areas contributed more than 80 percent of this volume.
- Alaskan timber exports increased more than 27 percent since 2005.
- Alaska sawmills recovered an average of 1.19 board feet lumber tally per board foot of Scribner input, a 9 percent decrease from 2005. This reduction in overrun parallels findings in other western states.
- Although the number of Alaska sawmills remained unchanged from 2005, 13 of the sawmills active in 2005 shuttered their facilities and became inactive, and 5 sawmills had closed completely by 2011.
- Timber processing capacity in the sawmill sector fell by more than 40 percent since 2005 to 108,829 MBF Scribner annually.
- Alaska's 50 sawmills produced just over 21.2 million feet of lumber, 38 percent less than in 2005. House log production fell by more than 55 percent from 2005 to 2011.
- Capacity utilization in Alaska's sawmill and house log sectors fell to less than 16 percent in 2011, the lowest of any western state.
- Alaska's primary forest products industry shipped products valued at \$17.4 million (fob the producing mill) in 2011. Sawlog and pulpwood exports contributed \$115.8 million.
- Fuelwood products (firewood and wood pellets) generated more than \$3 million in sales, up from just over \$20,000 in 2005. The majority of these 2011 products were sold in interior Alaska.



Use of Alaska's 2011 timber harvest



^a Thousand cubic feet (MCF) excludes bark.

^b Other manufacturers include manufacturers of log furniture, tonewood, novelty items, and cedar products.

This figure demonstrates the utilization of Alaska's timber harvest in cubic feet. By converting all mill inputs from board feet Scribner to cubic feet, inputs are measured in the same units as outputs, thus accounting for both mill residues and timber products. This facilitates the analysis of wood fiber flows from different components of the industry which often express outputs in different units. The following factors convert Scribner board foot volume to cubic feet and were developed from log size specifications and product and residue recovery information provided by processors of Alaska's 2011 timber harvest:

- 5.78 board feet per cubic foot for sawlogs
- 5.05 board feet per cubic foot for house logs
- 4.61 board feet per cubic foot for all other products

Alaska 2011 Tables

The following tables will form the “heart” of the 2011 Alaska forest industry report. They emulate the format of tables included in BBER’s “Alaska’s Timber Harvest and Forest Products Industry, 2005” (PNW-GTR-787) to facilitate a time series comparison of information. Data have been rounded to nearest whole numbers.

Table 1—Alaska timber harvest by ownership class and product type, 2011

Ownership class	Sawlogs	House logs	Fuelwood	Other products ^a	All products
<i>----- Thousand board feet, Scribner -----</i>					
Private	98,097	191	1,423	300	100,011
National Forest	35,568	73	143	91	35,875
State & other public	35,646	1,046	2,689	-	39,380
All owners	169,312	1,309	4,255	391	175,266

^aOther timber products include cedar product logs, logs for furniture, tonewood, and novelty items.

Table 2—Alaska timber harvest by species and product type, 2011

Species	Sawlogs	Other products ^{ab}	All products
----- <i>Thousand board feet, Scribner-----</i>			
Sitka spruce	111,165	198	111,363
Western hemlock	35,011	148	35,159
Western redcedar	18,042	321	18,362
Alaska-yellow cedar	1,644	142	1,786
White spruce	2,920	3,253	6,173
Birch species	335	1,326	1,660
Other ^c	196	566	762
All species	169,312	5,954	175,266

^aOther products include houselogs, fuelwood logs, cedar products logs, logs for furniture, tonewood, and novelty items.

^bProducts by species were combined to prevent disclosure.

^cOther species include cottonwood, quaking aspen, black spruce, lodgepole pine, mountain ash, red alder, sugar maple, and Douglas-fir.

Table 3
Alaska timber resource and borough/census areas

Resource area	Borough/Census Area
Interior	
	Fairbanks North Star Borough
	Denali Borough
	Southeast Fairbanks Census Area
South-central	
	Anchorage Borough
	Kenai Peninsula Borough
	Matanuska-Susitna Borough
	Valdez-Cordova Census Area
Southeast	
	Haines Borough
	Juneau Borough
	Ketchikan Gateway Borough
	Prince of Wales-Outer Ketchikan Census Area
	Sitka Borough
	Skagway-Hoonah-Angoon Census Area
	Wrangell-Petersburg Census Area
	<u>Yakutat Borough</u>
Western	
	Bethel Census Area
	Kodiak Island Borough

Table 4—Alaska timber harvest by resource area, 2011

Resource area	Harvest Volume	Percentage of total
<i>Thousand board feet, Scribner</i>		
Interior	6,427	3.7
South-central & Western ^a	26,599	15.2
Southeast	142,241	81.2
State total	175,266	100

^aResource areas combined to avoid disclosure.

Table 5—Timber volume received by Alaska facilities by ownership class and product type, 2011

Ownership class	Sawlogs	House logs	Fuelwood ^a	Other products ^b	All products
----- <i>Thousand board feet, Scribner</i> -----					
Private & tribal	1,450	191	1,423	300	3,364
National Forest	11,792	73	143	91	12,099
State & other public	4,062	1,046	2,689	0	7,796
All owners	17,305	1,309	4,255	391	23,259

^aIncludes residential firewood and industrial fuelwood received and processed by Alaskan facilities.

^bOther timber products include logs for furniture, tonewood, novelty items, and cedar products.

Table 6—Timber volume received by Alaska facilities by species and product type, 2011

Species	Sawlogs	House logs	Fuelwood ^a	Other products ^b	All products
----- <i>Thousand board feet, Scribner</i> -----					
Sitka spruce	4,928	128	58	c	5,114
Western hemlock	2,966	83	65	c	3,114
Western redcedar	5,639	21	11	c	5,671
Alaska-yellow cedar	320	29	23	c	373
White spruce	2,920	932	2,321	c	6,174
Birches	335	87	1,239	c	1,660
Other ^d	196	28	538	391 ^c	762
All species	17,305	1,309	4,255	391	23,259

^aIncludes residential firewood and industrial fuelwood received and processed by Alaskan facilities.

^bOther timber products include logs for furniture, tonewood, novelty items, and cedar products.

^cSpecies combined to avoid disclosure.

^dOther species include black cottonwood, quaking aspen, Douglas-fir, sugar maple, lodgepole pine, red alder, willow, mountain ash, and black spruce.

Table 7—Timber volume received by Alaska facilities by resource area and product type, 2011

Resource area	Sawlogs	House logs	Fuelwood ^a	Other products ^b	All products
<i>----- Thousand board feet, Scribner -----</i>					
Southeast	13,136	165	120	391	13,812
South-central & Western ^c	1,532	642	848	<i>d</i>	3,022
Interior	2,637	502	3,287	-	6,425
All areas	17,305	1,309	4,255	391	23,259

^aIncludes residential firewood and industrial fuelwood received and processed by Alaskan facilities.

^bOther timber products include logs for furniture, tonewood, novelty items, and cedar products.

^cResource areas combined to avoid disclosure.

^dLess than 0.5 MBF Scribner.

Table 8—Alaska lumber, house log, and fuelwood production by resource area, 2011

Resource area	Lumber and other sawn products		
	Thousand board feet, lumber tally	House logs	Fuelwood Products ^a
Southeast	16,084	68	391
South-central & Western ^c	2,490	184	1,819
Interior	2,648	127	11,112
All areas	21,222	378	13,322

^aIncludes firewood and wood pellets.

^bBone dry unit (BDU) = 2,400 pounds of oven dry wood.

^cResource areas combined to avoid disclosure.

Table 9—Number of active timber-processing facilities by borough/census area and product produced, 2011

Borough/census area	Lumber	House logs	Other^a	Total
Anchorage Borough	1	3	1	5
Bethel Census Area	1	-	-	1
Fairbanks North Star Borough	5	3	2	10
Haines Borough	1	1	-	2
Juneau Borough	-	-	-	0
Kenai Peninsula Borough	7	4	1	12
Ketchikan Gateway Borough	4	-	-	4
Kodiak Island Borough	2	-	-	2
Matanuska-Susitna Borough	8	4	-	12
Prince of Wales-Outer Ketchikan Census Area	8	-	4	12
Skagway-Hoonah-Angoon Census Area	3	-	-	3
Southeast Fairbanks Census Area	3	3	1	7
Valdez-Cordova Census Area	1	-	-	1
Wrangell-Petersburg Census Area	6	-	-	6
2011 State total	50	18	9	77
2005 State total^b	50	20	8	78

^aOther facilities include producers of fuelwood products, cedar products, log furniture, tonewood, and novelty items.

^bFrom Halbrook et al. (2009).

Table 10—Alaska annual lumber production and average overrun by mill size, 2011

Annual lumber production size class	Number of mills	2011 Lumber production ^a	Percentage of total	Average Overrun
<i>Thousand board feet, lumber tally</i>				
< 150 MBF lumber tally	34	1,189	6	1.17
150 to 500 MBF lumber tally	9	1,813	9	1.03
> 500 MBF lumber tally	7	17,556	85	1.21
Total	50	20,558	100	1.19

^aDoes not include sawn products from the house log sector.

Table 11—Alaska production capacity^a by resource area and sector, 2011

Resource area^b	Lumber production capacity	House log production capacity
	<i>Thousand board feet, lumber tally</i>	<i>Thousand lineal feet</i>
Southeast	105,695	30
South-central & Western ^c	8,906	836
Interior	22,730	874
All resource areas	137,331	1,740

^aIncludes mills active during 2011.

^bSee table 4 for a list of borough/census areas located within resource areas.

^cResource areas combined to avoid disclosure.

Table 12—Alaska annual timber-processing capacity^a and use by size class and sector, 2011

Annual timber-processing capacity size class	Number of active facilities	Annual capacity		2011 Timber use	
		Timber-processing capacity	Percentage of sector capacity	Volume processed	Capacity utilization within size class
Thousand board feet, Scribner		Thousand board feet, Scribner	Percent	Thousand board feet, Scribner	Percent
Sawmill sector					
< 250 MBF	20	2,883	2.6	837	29.0
251-500 MBF	6	2,272	2.1	255	11.2
501-1000 MBF	11	7,865	7.2	2,392	30.4
>1000 MBF	13	95,809	88.0	13,831	14.4
Sawmill sector total	50	108,829	100	17,315	15.9
House log & other^b sectors					
<500 MBF	23	2,916	12.2	1,119	38.4
>501 MBF	4	21,049	87.8	2,307	11.0
House log sector total	27	23,965	100	3,426	14.3
Combined sector totals	77	132,794		20,741	15.6

^aIncludes mills active during 2011 only.

^bOther sectors include cedar products, log furniture, tonewood, and novelty item manufacturers.

Table 13—Alaska sawmill^a residue factors, 2011

Type of residue	BDU ^b per MBF lumber tally
Coarse	0.71
Sawdust	0.17
Planer shavings	0.14 ^c
Bark	0.17
Total	1.05

^aIncludes sawmills producing only lumber and no other products.

^bBone-dry unit (BDU = 2,400 lb of oven-dry wood) of residue generated for every 1,000 board feet of lumber manufactured.

^cThis factor represents only the few Alaska mills that planed lumber. The combined planer shavings factor was .01 for all sawmills, whether or not the mills planed lumber.

Table 14—Production and disposition of mill residue from Alaska's forest products industry, 2011

Type of residue	Residue disposition				
	Pulp chips	Fuelwood ^a	Other uses ^b	Unused	Total
Bone dry units ^c					
Coarse	10,090	4,267	103	1,004	15,464
Sawdust	-	2,802	803	593	4,198
Shavings/peelings	-	148	604	141	893
Bark	-	3,232	418	552	4,202
All residues	10,090	10,449	1,928	2,290	24,757

^aFuel wood uses include fuel for heating and wood pellet production.

^bOther uses primarily include animal bedding, mulch, and landscape material.

^cBone dry unit (BDU) = 2,400 pounds of oven dry wood.

Table 15—Destination and sales value of Alaska's primary wood products and mill residue, 2011

Product	Alaska	West Coast ^a	Other States	Pacific Rim	Other Countries ^b	Total
<i>Thousands of 2011 dollars</i>						
Lumber	5,312	2,448	673	945	62	9,440
Other ^c	7,304	141	60	120	338	7,963
Total primary product	12,616	2,589	733	1,065	400	17,403
Residues ^d					1,186 ^e	
Sawlog and pulpwood exports ^f					115,823 ^g	
Total sales value						134,412

^aWest Coast states include California, Hawaii, Oregon, and Washington.

^bOther Countries include Canada and countries located in Europe and the Middle East.

^cOther products include house logs, firewood, wood pellets, cedar products, furniture, tonewood, and novelty items.

^dResidue products include firewood, garden mulch, animal bedding, and pulp-quality wood chips.

^eData pooled across destinations to prevent disclosure of confidential information.

^fDerived from Alexander (2012).