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Forest Industry Research Program
Bureau of Business and Economic Research
University of Montana – Missoula
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WASATCH ACTIVE FOREST MANAGEMENT STRATEGY AREA

Introduction:

This document provides information about the Wasatch Active Forest Management Strategy Area (AFMSA). It was generated by the Forest Industry Research Program of the Bureau of Business and Economic Research (BBER) at the University of Montana - Missoula. The mill survey data underlying these analyses were collected under joint venture agreements with the USDA Forest Service's Forest Inventory and Analysis program at the Pacific Northwest Research Station (#21-JV-11261979-053) and Rocky Mountain Research Station (#20-JV-11221638-171). The landscape analyses and summary tables were developed under agreement #23-PA-11132400-368, and the residuals tables were developed under agreement #25-JV-11261936-106.

The data used in these analyses are the results of periodic censuses of each of the western states, as well as annual sample surveys of the same. Using data from both types of surveys allows us to provide time-series data, though it necessitates providing estimates as percentages rather than actual volume.

While BBER collects data at the mill level, mill-level data are confidential and will not be released.

Methods and Definitions:

The Wasatch AFMSA covers a defined area that includes pieces of several counties. The combined area of the counties "touched" by this area constitutes its "Study Area" (for details, see fig. 1 and table 1). Defining a Study Area that covers entire counties is necessary to enable analysis, as the county is the smallest geographic area of mill survey data by BBER and FIA-TPO.

Further, BBER analysis of timber flow indicates that timber harvested within the Study Area is processed by facilities located both inside and outside this specific area. All counties that contain one or more facilities that process timber harvested within the Study Area constitute the "Timber Processing Area" (TPA) (for details, see fig. 1 and table 4).

In these tables, “capacity” refers to the maximum total volume of timber (excluding pulpwood and fuelwood) that existing timber processors could utilize annually, given firm market demand for products, sufficient raw material, and ordinary downtime for maintenance. Also known as “timber-processing capacity”, it is a measure of mills’ timber input capacity and is expressed in thousand board feet (MBF) Scribner and hundred cubic feet (CCF) per year. Input capacity is a useful measure when attempting to express the capacity of multiple types of mills in a common unit of measure. It is estimated from production (output) capacity information provided by facilities.

Estimates in these tables include the capacity of active facilities as well as idle (inactive) facilities with equipment still in place. Facilities that are permanently closed are not included. This analysis focuses on facilities that exclusively use timber in round form; this includes sawmills, veneer mills, and facilities processing timber into house logs/log homes, posts, small poles, utility poles, cedar products (e.g., shakes and shingles), and log furniture. Facilities (e.g., pulp mills, wood pellet manufacturers, and biomass energy facilities) that use a mix of roundwood and non-roundwood inputs (i.e., mill residuals such as chips, sawdust, shavings, and bark) are not included in the capacity analysis because the combination of roundwood and non-roundwood inputs can vary widely from year to year, potentially over- or under-estimating capacity and use of roundwood by substantial margins.

“Capability” refers to the volume of trees of a certain size class (measured as diameter at breast height, or dbh) that existing timber processors can economically process annually. The three dbh classes are <7”, 7" to 9.9”, and ≥10”. Some facilities are designed to operate using only trees of a given size class (e.g., veneer/ plywood plants typically only use trees ≥10” dbh, and post manufacturers primarily use trees <10” dbh). The capability of these facilities is readily classified into just one size class. Many facilities can use timber from more than one size class.

“Use” refers to the volume of timber, both in total and by tree dbh class, that facilities are currently using.

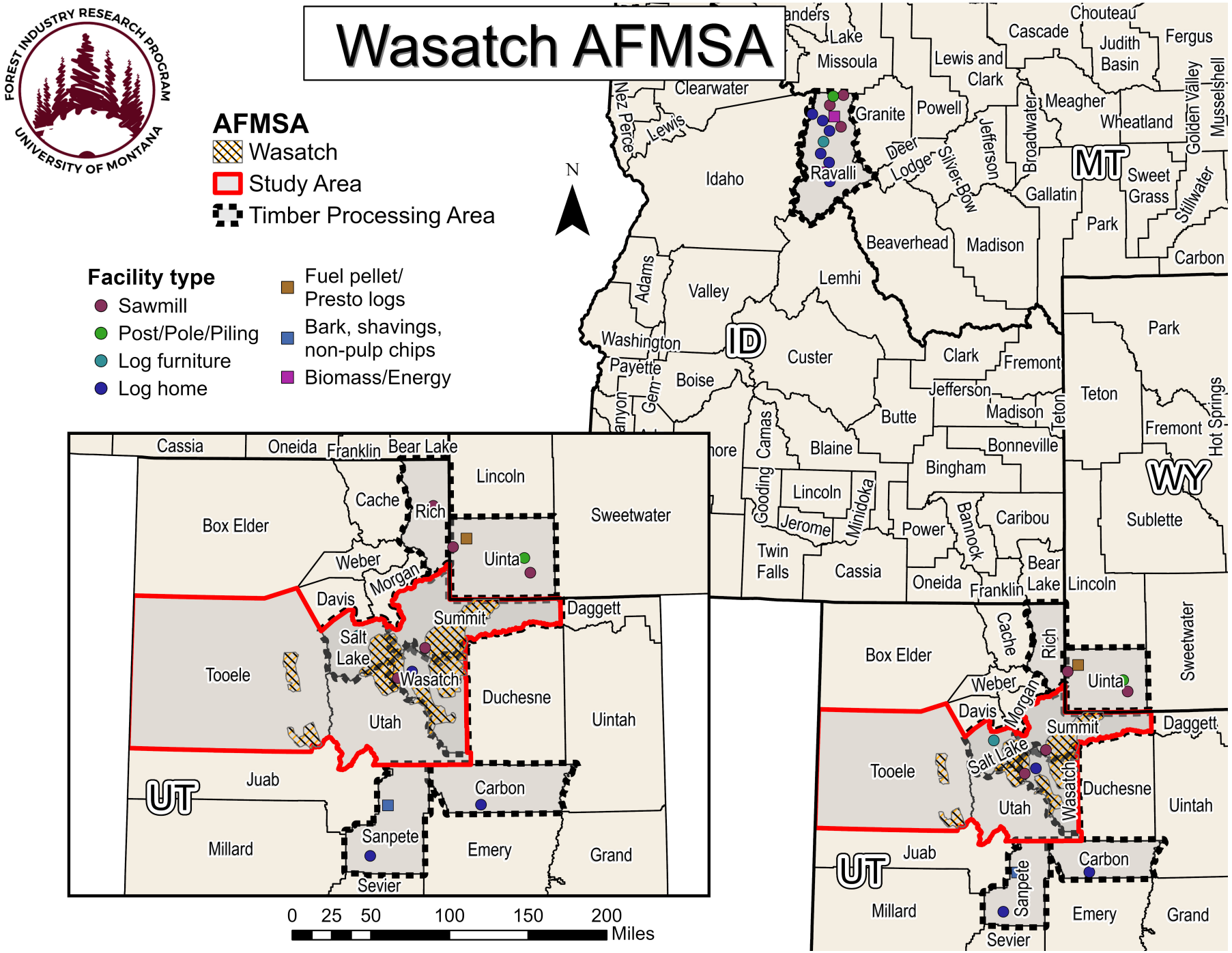

Figure 1. Wasatch AFMSA landscape, Study Area, TImber-Processing Area, and facility locations

WASATCH STUDY AREA COUNTIES

Table 1. Wasatch Study Area counties

County	State
Salt Lake	UT
Summit	UT
Toole	UT
Utah	UT
Wasatch	UT

WASATCH STUDY AREA HARVEST

Table 2. Timber harvest from Wasatch Study Area counties (all ownerships), by percentage distribution by species (2020-2023)

Species group	2020	2021	2022	2023
Engelmann spruce	33%	59%	43%	44%
Lodgepole pine	29%	23%	18%	47%
Subalpine fir	17%	2%	25%	6%
Douglas-fir	11%	13%	9%	0%
Ponderosa pine	7%	0%	0%	0%
Quaking aspen	3%	3%	5%	2%
All species	**100%**	**100%**	**100%**	**100%**

Table 3. Percentage of timber harvest from national forest lands within the Wasatch Study Area, by timber product type (2020-2023)

	----------Percentage from national forests----------			
Timber product type	**2020**	**2021**	**2022**	**2023**
Post/pole	100%	n/a	100%	100%
House log	89%	46%	78%	78%
Sawlog	61%	0%	36%	42%
Furniture log	0%	0%	0%	0%
Firewood	n/a	0%	n/a	100%
Study area total	**62%**	**11%**	**38%**	**52%**

Note: "n/a" indicates that no timber of this product type was harvested within the Study Area.

WASATCH TIMBER-PROCESSING AREA COUNTIES

Table 4. Wasatch Timber-Processing Area (TPA) counties

County	State
Ravalli	MT
Carbon	UT
Rich	UT
Salt Lake	UT
Sanpete	UT
Summit	UT
Wasatch	UT
Uinta	WY

WASATCH TIMBER-PROCESSING AREA FACILITIES LIST

Table 5. Timber-processing facilities within the Wasatch TPA (2025)

Facility name	Status	Facility type	State	County	Input size class	Included in capacity analysis
Bearly Making It	Active	log furniture	MT	Ravalli	<250 MCF	yes
Darby Public Schools	Active	biomass/energy	MT	Ravalli	<250 MCF	yes
Finlay Lumber	Active	sawmill	MT	Ravalli	<250 MCF	yes
Frontier Posts, LLC	Active	post/pole/piling	MT	Ravalli	250 TO 499 MCF	yes
Master Log Homes	Active	log home	MT	Ravalli	<250 MCF	yes
Montana Custom Log Homes Inc	Active	log home	MT	Ravalli	<250 MCF	yes
Montana Timber Structures	Active	log home	MT	Ravalli	<250 MCF	yes
R & S Milling	Active	sawmill	MT	Ravalli	250 TO 499 MCF	yes
Rocky Mountain Log Homes	Active	log home	MT	Ravalli	250 TO 499 MCF	yes
Rocky Mountain Log Homes - Victor	Active	log home	MT	Ravalli	<250 MCF	yes
Small Diameter Logs Company	Active	log home	MT	Ravalli	<250 MCF	yes
Valley Board & Beam	Active	sawmill	MT	Ravalli	<250 MCF	yes
Victor Public Schools	Inactive	biomass/energy	MT	Ravalli	No Roundwood	no
King Log and Beam, LLC	Active	log home	UT	Carbon	<250 MCF	yes
Thompson's Randolph Mill	Active	sawmill	UT	Rich	500 TO 999 MCF	yes
Utah Mountain Furniture	Active	log furniture	UT	Salt Lake	<250 MCF	yes
Sanpete Shavings	Active	bark, shavings, non-pulp chips	UT	Sanpete	<250 MCF	yes
Satterwhite Log Homes - Gunnison	Active	log home	UT	Sanpete	250 TO 499 MCF	yes
Blazzard Lumber Inc.	Active	sawmill	UT	Summit	<250 MCF	yes
Euclid Timber Frames	Active	sawmill	UT	Wasatch	250 TO 499 MCF	yes
Wasatch Timber Products	Active	log home	UT	Wasatch	<250 MCF	yes
Ayers Pole and Post	Active	post/pole/piling	WY	Uinta	<250 MCF	yes
Blacksfork Timber Products - Sawmill	Active	sawmill	WY	Uinta	<250 MCF	yes
South & Jones - Pellet Mill	Active	fuel pellet/presto logs	WY	Uinta	No Roundwood	no
South & Jones - Sawmill	Active	sawmill	WY	Uinta	1000 TO 4999 MCF	yes
Treasureland Post and Rail	Active	post/pole/piling	WY	Uinta	250 TO 499 MCF	yes

TIMBER RECEIVED BY TIMBER-PROCESSING FACILITIES IN THE WASATCH TIMBER-PROCESSING AREA

Table 6. Timber received by facilities in the Wasatch TPA, percentage distribution by species (2020-2023)

Species group	2020	2021	2022	2023
Engelmann spruce	39%	28%	31%	28%
Lodgepole pine	24%	43%	23%	45%
Subalpine fir	20%	18%	30%	19%
Douglas-fir	8%	8%	9%	6%
Ponderosa pine	3%	0%	1%	0%
Quaking aspen	3%	0%	3%	0%
Cedars	1%	1%	1%	1%
Western larch	1%	1%	1%	1%
All species	**100%**	**100%**	**100%**	**100%**

Table 7. Percentage of timber from national forests received by facilities in the Wasatch TPA, by timber product group (2020-2023)

	----------Percentage from national forests----------			
Timber product type	**2020**	**2021**	**2022**	**2023**
Pulpwood log	n/a	34%	n/a	n/a
Fiber log	100%	100%	100%	100%
Post/pole	73%	75%	58%	90%
House log	51%	50%	63%	57%
Sawlog	40%	86%	42%	84%
Furniture log	12%	2%	12%	0%
Firewood	0%	0%	14%	100%
Energywood log	0%	100%	100%	100%
Total	**44%**	**76%**	**47%**	**78%**

Note: "n/a" indicates that no timber of this product type was received by mills within the TPA.

TIMBER-PROCESSING CAPACITY AND CAPABILITY OF TIMBER-PROCESSING FACILITIES WITHIN THE WASATCH TIMBER-PROCESSING AREA

Table 8. Timber-processing capacity and capability by tree dbh class of facilities in the Wasatch TPA, by county or county group (2020, 2022)

	---------Thousand board feet, Scribner (MBF)---------			----------Hundred cubic feet (CCF)----------		
Timber Processing Area	<7 in. dbh	7 - 9.9 in. dbh	≥10 in. dbh	<7 in. dbh	7 - 9.9 in. dbh	≥10 in. dbh
Montana	**2,104**	**3,311**	**7,081**	**7,610**	**6,018**	**13,465**
Ravalli	2,104	3,311	7,081	7,610	6,018	13,465
Utah	**360**	**6,406**	**15,886**	**1,128**	**12,407**	**30,179**
Carbon, Sanpete & Wasatch	-	3,131	9,652	-	5,870	18,003
Rich, Salt Lake & Summit	360	3,275	6,234	1,128	6,538	12,175
Wyoming	**537**	**19,129**	**36,354**	**2,157**	**36,812**	**68,853**
Uinta	537	19,129	36,354	2,157	36,812	68,853
Total	**3,000**	**28,846**	**59,321**	**10,895**	**55,237**	**112,497**

Table 9. Timber-processing capacity and capability by tree dbh class of facilities in the Wasatch TPA, by timber product type (2020, 2022)

	---------Thousand board feet, Scribner (MBF)---------			----------Hundred cubic feet (CCF)----------		
Timber product type	<7 in. dbh	7 - 9.9 in. dbh	≥10 in. dbh	<7 in. dbh	7 - 9.9 in. dbh	≥10 in. dbh
Saw logs	135	23,319	46,449	263	44,549	89,336
Post or poles & furniture logs	2,858	312	-	10,605	1,241	-
House logs	-	5,151	12,872	-	9,204	23,160
Firewood	7	65	-	27	242	-
Total	**3,000**	**28,846**	**59,321**	**10,895**	**55,237**	**112,497**

Table 10. Total timber-processing capacity, timber consumption, and capacity utilization of facilities in the Wasatch TPA, by dbh class (2020, 2022)

	----Capacity to process timber-----		--------Timber consumption---------		
Tree dbh	Thousand board feet, Scribner (MBF)	Hundred cubic feet (CCF)	Thousand board feet, Scribner (MBF)	Hundred cubic feet (CCF)	**Capacity utilization**
<7 in.	3,000	10,895	2,118	7,795	71%
7 - 9.9 in.	28,846	55,237	3,376	7,858	12%
≥10 in.	59,321	112,497	22,618	43,250	38%
Total	**91,167**	**178,629**	**28,112**	**58,903**	**31%**

Table 11. Unused timber-processing capacity of facilities in the Wasatch TPA, by county or county group (2020, 2022)

Timber Processing Area	Thousand board feet, Scribner (MBF)	Hundred cubic feet (CCF)
Montana	**5,579**	**10,212**
Ravalli	5,579	10,212
Utah	**13,908**	**26,554**
Carbon, Sanpete & Wasatch	8,211	15,200
Rich, Salt Lake & Summit	5,697	11,354
Wyoming	**43,568**	**82,961**
Uinta	43,568	82,961
Total	**63,055**	**119,726**

Table 12. Unused timber-processing capacity of facilities in the Wasatch TPA, by timber product type (2020, 2022)

Timber product type	Thousand board feet, Scribner (MBF)	Hundred cubic feet (CCF)
Saw logs	50,623	96,614
Post or poles & furniture logs	332	1,314
House logs	12,100	21,798
Firewood	-	-
Total	**63,055**	**119,726**

RESIDUALS GENERATED BY TIMBER-PROCESSING FACILITIES IN THE WASATCH TIMBER-PROCESSING AREA

Table 13. Mill residuals generated by timber-processing facilities within the Wasatch TPA (2020, 2022)

	BDUs[a]	Percent of total volume
Utilized residuals volume	44,199	94.72%
Unutilized residuals volume	2,464	5.28%
Total volume generated	**46,663**	**100.00%**

[a] One bone dry unit (BDU)= 2,400 pounds of oven-dry wood or bark.

Table 14. Mill residuals generated by timber-processing facilities within the Wasatch TPA, by type of residual (2020, 2022)

Type of residual	BDUs[a]	Percent of total volume
Coarse[b]	22,143	47%
Fine[c]	11,666	25%
Bark	12,853	28%
Total, all residual types	**46,663**	**100%**

[a] One bone dry unit (BDU) = 2,400 pounds of oven-dry wood or bark.

[b] Includes slabs, edgings, and trimmings from lumber manufacturing; log ends; pieces of veneer not suitable for manufacturing plywood; and plywood peeler cores not sawn into lumber.

[c] Includes sawdust, peelings and shavings.

Table 15. Mill residuals generated by timber-processing facilities within the Wasatch TPA, by type of utilization (2020, 2022)

Type of utilization	BDUs[a]	Percent of total volume
Fuel[b]	15,834	34%
Sold as raw material for other products	11,148	24%
Animal bedding	8,707	19%
Mulch/soil addititves	4,759	10%
Decorative landscaping	3,632	8%
Fiber[c]	120	0%
Used on-site for other products	-	0%
Unused	2,464	5%
Total, all types of utilization	**46,663**	**100%**

[a] One bone dry unit (BDU) = 2,400 pounds of oven-dry wood or bark.

b Includes firewood, biomass, hogfuel, and pellets.

[c] Includes pulp, composite panels, and MDF.