



SIERRA-ELKO FRONTS ACTIVE FOREST MANAGEMENT STRATEGY AREA

Introduction:

This document provides information about the Sierra-Elko Fronts 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 Sierra-Elko Fronts 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.

SIERRA-ELKO FRONTS STUDY AREA COUNTIES

Table 1. Sierra-Elko Fronts Study Area counties

County	State
Alpine	CA
Mono	CA
Nevada	CA
Sierra	CA
Carson City	NV
Douglas	NV
Elko	NV
Lyon	NV
Mineral	NV
Storey	NV
Washoe	NV
White Pine	NV

SIERRA-ELKO FRONTS STUDY AREA HARVEST

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

Species group	2020	2021	2022	2023
White fir	35%	47%	50%	47%
Ponderosa pine	27%	22%	24%	22%
Douglas-fir	24%	12%	14%	13%
Cedar	8%	7%	1%	8%
Other pines	5%	10%	10%	9%
Lodgepole pine	0%	1%	1%	1%
All species	100%	100%	100%	100%

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

	-----Percentage from national forests-----			
Timber product type	2020	2021	2022	2023
Sawlogs	23%	17%	18%	16%
Pilings/utility poles	0%	n/a	n/a	n/a
Study area total	23%	17%	18%	16%

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

SIERRA-ELKO FRONTS TIMBER-PROCESSING AREA COUNTIES

Table 4. Sierra-Elko Fronts Timber-processing Area (TPA) counties

County	State
Butte	CA
Nevada	CA
Placer	CA
Plumas	CA
Shasta	CA
Sutter	CA
Tuolumne	CA
Carson City	NV
Elko	NV

SIERRA-ELKO FRONTS TIMBER-PROCESSING AREA FACILITIES LIST

Table 5. Timber-processing facilities within the Sierra-Elko Fronts TPA (2025)

Facility name	Status	Facility type	State	County	Input size class	Included in capacity analysis
Apex Lumber Co	Active	sawmill	California	Butte	<250 MCF	yes
Hot Wood - California	Active	firewood (fuelwood)	California	Butte	1000 to 4999 MCF	yes
Sierra Log Homes	Active	log home	California	Butte	<250 MCF	yes
SPI - Oroville Sawmill	Active	sawmill	California	Butte	5000 MCF or more	yes
Kubich Lumber Company	Active	sawmill	California	Nevada	<250 MCF	yes
Mallard Creek - Animal Bedding	Active	bark, shavings, non-pulp chips	California	Placer	No Roundwood	no
Mallard Creek - Bark	Active	bark, shavings, non-pulp chips	California	Placer	No Roundwood	no
Mallard Creek - Pellets	Active	fuel pellet/presto logs	California	Placer	No Roundwood	no
Rio Bravo Rocklin	Active	biomass/energy	California	Placer	No Roundwood	no
SPI - Lincoln Cogen	Active	biomass/energy	California	Placer	No Roundwood	no
SPI - Lincoln Sawmill	Active	sawmill	California	Placer	5000 MCF or more	yes
Collins Pine CoGen	Active	biomass/energy	California	Plumas	No Roundwood	no
Collins Pine Sawmill	Active	sawmill	California	Plumas	5000 MCF or more	yes
Indian Valley Wood Utilization Campus	New	sawmill	California	Plumas	No Roundwood	no
SPI - Quincy Cogen	Active	biomass/energy	California	Plumas	No Roundwood	no
SPI - Quincy Sawmill	Active	sawmill	California	Plumas	5000 MCF or more	yes
Burney Forest Products	Active	biomass/energy	California	Shasta	No Roundwood	no
Hat Creek Lumber	New	sawmill	California	Shasta	No Roundwood	no
Rath Industries, Inc	New	sawmill	California	Shasta	No Roundwood	no
Shasta Green Inc.	Active	sawmill	California	Shasta	5000 MCF or more	yes
Shasta-Sustainable Resource Management, Inc.	Active	biomass/energy	California	Shasta	1000 to 4999 MCF	yes
SPI - Anderson Cogen	Active	biomass/energy	California	Shasta	No Roundwood	no
SPI - Anderson Sawmill	Active	sawmill	California	Shasta	5000 MCF or more	yes
SPI - Burney Cogen	Active	biomass/energy	California	Shasta	No Roundwood	no
SPI - Burney Sawmill	Active	sawmill	California	Shasta	5000 MCF or more	yes
SPI - Shasta Lake Sawmill	Active	sawmill	California	Shasta	5000 MCF or more	yes
West Biofuels - Hat Creek Bioenergy, LLC	New	roundwood pulp-chip conversion	California	Shasta	No Roundwood	no
Unity Forest Products	Active	sawmill	California	Sutter	250 to 499 MCF	yes

Table 5. Timber-processing facilities within the Sierra-Elko Fronts TPA (2025), continued

Facility name	Status	Facility type	State	County	Input size class	Included in capacity analysis
American Wood Fibers - California Wood Shavings	Active	bark, shavings, non-pulp chips	California	Tuolumne	1000 to 4999 MCF	yes
Deutschman Lumber Co.	Inactive	sawmill	California	Tuolumne	<250 MCF	yes
Garber Lumber and Moulding	Active	sawmill	California	Tuolumne	<250 MCF	yes
Pacific Ultrapower Chinese Station	Active	biomass/energy	California	Tuolumne	No Roundwood	no
SPI - Bark Operations	Active	bark, shavings, non-pulp chips	California	Tuolumne	No Roundwood	no
SPI - Chinese Camp Sawmill	Active	sawmill	California	Tuolumne	5000 MCF or more	yes
SPI - Sonora Cogen	Active	biomass/energy	California	Tuolumne	No Roundwood	no
SPI - Sonora Sawmill	Active	sawmill	California	Tuolumne	5000 MCF or more	yes
Tuolumne Biomass	New	biomass/energy	California	Tuolumne	No Roundwood	no
Tahoe Forest Products	Inactive	sawmill	Nevada	Carson City	1000 to 4999 MCF	yes
Hughes Lumber	Active	sawmill	Nevada	Elko	<250 MCF	yes

TIMBER RECEIVED BY TIMBER-PROCESSING FACILITIES IN THE SIERRA-ELKO FRONTS TIMBER-PROCESSING AREA

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

Species group	2020	2021	2022	2023
True firs	38%	32%	33%	34%
Ponderosa pine	23%	34%	36%	34%
Douglas-fir	19%	17%	19%	18%
Other pines	8%	10%	9%	8%
Lodgepole pine	6%	1%	1%	1%
Cedars	4%	6%	2%	5%
Hardwoods ^a	2%	0%	1%	1%
All species	100%	100%	100%	100%

^a Hardwoods include cypress, walnut, oak and other hardwoods.

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

Timber product type	-----Percentage from national forests-----			
	2020	2021	2022	2023
House logs	100%	40%	100%	100%
Firewood	100%	0%	0%	0%
Sawlogs	18%	13%	14%	11%
Fiber logs/Energy logs	16%	98%	80%	70%
Pilings/Utility poles	0%	0%	0%	n/a
Veneer logs	n/a	n/a	n/a	n/a
Study area total	17%	13%	14%	12%

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

**TIMBER-PROCESSING CAPACITY AND CAPABILITY OF TIMBER-PROCESSING FACILITIES WITHIN THE SIERRA-ELKO FRONTS
TIMBER-PROCESSING AREA**

Table 8. Timber-processing capacity and capability by tree dbh class of facilities in the Sierra-Elko Fronts TPA by county or county group (2021)

Timber Processing Area	-----Thousand board feet, Scribner (MBF)-----			-----Hundred cubic feet (CCF)-----		
	<7 in. dbh	7 - 9.9 in. dbh	≥10 in. dbh	<7 in. dbh	7 - 9.9 in. dbh	≥10 in. dbh
Butte	254	6,022	33,411	724	13,927	66,162
Nevada, Placer, Sutter, Tuolumne	2,996	25,757	333,360	5,931	50,998	660,114
Plumas, Shasta	6,846	65,621	558,180	13,557	129,943	1,105,306
Total	10,096	97,437	925,284	20,212	194,941	1,832,241

Table 9. Timber-processing capacity and capability by tree dbh class of facilities in the Sierra-Elko Fronts TPA, by timber product type (2021)

Timber product type	----Thousand board feet, Scribner (MBF)----			-----Hundred cubic feet (CCF)-----		
	<7 in. dbh	7 - 9.9 in. dbh	≥10 in. dbh	<7 in. dbh	7 - 9.9 in. dbh	≥10 in. dbh
Saw logs	9,842	95,067	925,122	19,488	188,246	1,831,917
Firewood logs	254	2,282	-	724	6,520	-
House logs	-	88	163	-	174	324
Total	10,096	97,437	925,284	20,212	194,941	1,832,241

Table 10. Total timber-processing capacity, timber consumption, and capacity utilization of facilities in the Sierra-Elko Fronts TPA, by dbh class (2021)

Tree dbh	----Capacity to process timber----		-----Timber consumption-----		Capacity utilization
	Thousand board feet, Scribner (MBF)	Hundred cubic feet (CCF)	Thousand board feet, Scribner (MBF)	Hundred cubic feet (CCF)	
<7 in.	10,096	20,212	1,231	2,437	12%
7 - 9.9 in.	97,437	194,941	26,584	54,456	28%
≥10 in.	925,284	1,832,241	855,564	1,694,223	92%
Total	1,032,817	2,047,394	883,379	1,751,116	86%

Table 11. Unused timber-processing capacity of facilities in the Sierra-Elko Fronts TPA, by county or county group (2021)

Timber Processing Area	Thousand board feet, Scribner (MBF)	Hundred cubic feet (CCF)
Butte	11,971	24,076
Nevada, Placer, Sutter, Tuolumne	50,083	99,164
Plumas, Shasta	87,384	173,038
Total	149,438	296,279

Table 12. Unused timber-processing capacity of facilities in the Sierra-Elko Fronts TPA (2021)

Timber product	Thousand board feet, Scribner (MBF)	Hundred cubic feet (CCF)
Saw logs	149,016	295,071
Firewood logs	423	1,207
House logs	-	-
Total	149,438	296,279

RESIDUALS GENERATED BY TIMBER-PROCESSING FACILITIES IN THE SIERRA-ELKO FRONTS TIMBER-PROCESSING AREA

Table 13. Mill residuals generated by timber-processing facilities within the Sierra-Elko Fronts TPA (2021)

	BDUs ^a	Percent of total volume
Utilized residuals volume	1,331,039	100.00%
Unutilized residuals volume	25	0.00%
Total volume generated	1,331,064	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 Sierra-Elko Fronts TPA, by type of residual (2021)

Type of residual	BDUs ^a	Percent of total volume
Coarse ^b	528,828	40%
Fine ^c	487,800	37%
Bark	314,435	24%
Total, all residual types	1,331,064	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 Sierra-Elko Fronts TPA, by type of utilization (2021)

Type of utilization	BDUs ^a	Percent of total volume
Fuel ^b	815,729	61%
Mulch/soil additives	155,592	12%
Fiber ^c	138,550	10%
Animal bedding	128,719	10%
Sold as raw material for other products	51,028	4%
Decorative landscaping	41,421	3%
Used on-site for other products	-	0%
Unused	25	0%
Total, all types of utilization	1,331,064	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.