



SAN CARLOS APACHE ACTIVE FOREST MANAGEMENT STRATEGY AREA

Introduction:

This document provides information about the San Carlos Apache 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 San Carlos Apache 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.

San Carlos Apache Tribal Forest Protection AFMSA

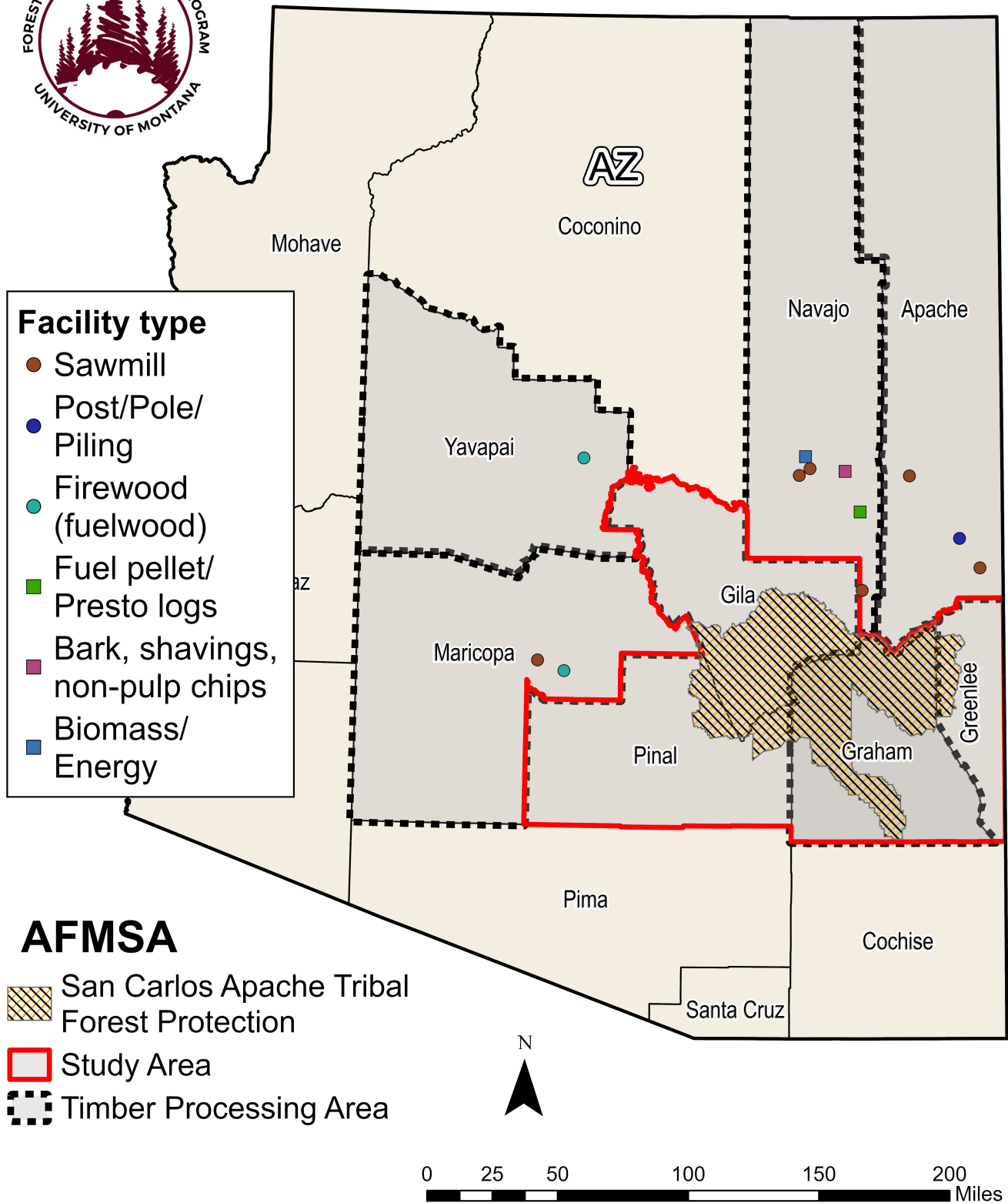


Figure 1. San Carlos Apache landscape, Study Area, Timber-Processing Area, and facility locations

SAN CARLOS APACHE STUDY AREA COUNTIES

Table 1. San Carlos Apache Study Area counties

County	State
Gila	AZ
Graham	AZ
Greenlee	AZ
Pinal	AZ

SAN CARLOS APACHE STUDY AREA HARVEST

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

Species group	2020	2021	2022	2023
Ponderosa pine	90%	93%	95%	91%
Pinyon pine	1%	1%	0%	1%
Juniper	1%	1%	0%	1%
Douglas-fir	7%	5%	5%	7%
Mesquite	1%	1%	0%	1%
All species	100%	100%	100%	100%

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

	-----Percentage from national forests-----			
Timber product type	2020	2021	2022	2023
Sawlog	100%	100%	100%	100%
Firewood	100%	100%	100%	100%
Energywood chipped in the woods	100%	n/a	n/a	n/a
Pilings/utility poles	n/a	100%	100%	n/a
Study Area total	100%	100%	100%	100%

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

SAN CARLOS APACHE TIMBER-PROCESSING AREA COUNTIES

Table 4. San Carlos Apache Timber-Processing Area (TPA) counties

County	State
Apache	AZ
Maricopa	AZ
Navajo	AZ
Yavapai	AZ

SAN CARLOS APACHE TIMBER-PROCESSING AREA FACILITIES LIST

Table 5. Timber-processing facilities within the San Carlos Apache TPA (2025)

Facility name	Status	Facility type	State	County	Input size class	Included in capacity analysis
APC Lumber	Active	sawmill	AZ	Apache	250 TO 499 MCF	yes
Arizona Log & Timberworks	Active	post/pole/piling	AZ	Apache	1000 TO 4999 MCF	yes
Reidhead Bros Lumber Mill	Active	sawmill	AZ	Apache	500 TO 999 MCF	yes
Paul Bunyan's Firewood	Active	firewood (fuelwood)	AZ	Maricopa	250 TO 499 MCF	yes
Southwest Forest Products	Active	sawmill	AZ	Maricopa	1000 TO 4999 MCF	yes
Forest Energy Corporation	Active	fuel pellet/presto logs	AZ	Navajo	1000 TO 4999 MCF	no
Novo Biopower, LLC	Active	biomass/energy	AZ	Navajo	No Roundwood	no
Novo Star Wood Products	Active	sawmill	AZ	Navajo	1000 TO 4999 MCF	yes
White Mountain Apache Timber Company	Active	sawmill	AZ	Navajo	1000 TO 4999 MCF	yes
Winner's Circle Soil Products	Active	bark, shavings, non-pulp chips	AZ	Navajo	<250 MCF	no
Canyon Wood	Active	firewood (fuelwood)	AZ	Yavapai	1000 TO 4999 MCF	yes

TIMBER RECEIVED BY TIMBER-PROCESSING FACILITIES IN THE SAN CARLOS APACHE TIMBER-PROCESSING AREA

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

Species group	2020	2021	2022	2023
Ponderosa pine	88%	94%	94%	93%
Douglas-fir	7%	4%	6%	5%
Juniper	2%	0%	0%	1%
Pinyon pine	1%	0%	0%	1%
Quaking aspen	1%	0%	0%	0%
Mesquite	1%	0%	0%	1%
Engelmann spruce	1%	0%	0%	0%
All species	100%	100%	100%	100%

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

Timber product type	-----Percentage from national forests-----			
	2020	2021	2022	2023
Sawlog	100%	74%	73%	69%
Firewood	100%	100%	100%	100%
Piling/utility pole	100%	100%	100%	100%
Energywood chipped in woods	70%	n/a	n/a	n/a
Post/pole	n/a	n/a	n/a	100%
Fiber log	n/a	100%	100%	100%
Energywood log	n/a	90%	90%	90%
Total	98%	78%	78%	77%

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 SAN CARLOS APACHE
TIMBER-PROCESSING AREA**

Table 8. Timber-processing capacity and capability by tree dbh class of facilities in the San Carlos Apache 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
Apache	195	4,478	14,349	735	11,481	32,037
Maricopa & Yavapai	677	7,477	9,938	2,321	23,532	19,003
Navajo	346	4,555	44,114	662	8,710	84,348
Total	1,218	16,511	68,401	3,717	43,724	135,388

Table 9. Timber-processing capacity and capability by tree dbh class of facilities in the San Carlos Apache 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 & utility pole log	472	9,798	68,401	902	18,390	135,388
Firewood	746	6,714	-	2,815	25,334	-
Total	1,218	16,511	68,401	3,717	43,724	135,388

Table 10. Total timber-processing capacity, timber consumption, and capacity utilization of facilities in the San Carlos Apache 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.	1,218	3,717	376	718	19%
7 - 9.9 in.	16,511	43,724	10,217	31,065	71%
≥10 in.	68,401	135,388	54,017	103,232	76%
Total	86,130	182,829	64,609	135,015	74%

Table 11. Unused timber-processing capacity of facilities in the San Carlos Apache TPA, by county or county group (2021)

Timber Processing Area	Thousand board feet, Scribner (MBF)	Hundred cubic feet (CCF)
Apache	8,429	22,026
Maricopa & Yavapai	3,429	7,310
Navajo	9,664	18,477
Total	21,521	47,814

Table 12. Unused timber-processing capacity of facilities in the San Carlos Apache TPA, by timber product type (2021)

Timber product type	Thousand board feet, Scribner (MBF)	Hundred cubic feet (CCF)
Saw & utility pole log	20,454	43,788
Firewood	1,067	4,025
Total	21,521	47,814

RESIDUALS GENERATED BY TIMBER-PROCESSING FACILITIES IN THE SAN CARLOS APACHE TIMBER-PROCESSING AREA

Table 13. Mill residuals generated by timber-processing facilities within the San Carlos Apache TPA (2021)

	BDUs ^a	Percent of total volume
Utilized residuals volume	88,966	100.00%
Unutilized residuals volume	-	0.00%
Total volume generated	88,966	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 San Carlos Apache TPA, by type of residual (2021)

Type of residual	BDUs ^a	Percent of total volume
Coarse ^b	53,807	60%
Fine ^c	19,024	21%
Bark	16,135	18%
Total, all residual types	88,966	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 San Carlos Apache TPA, by type of utilization (2021)

Type of utilization	BDUs ^a	Percent of total volume
Fuel ^c	45,799	51%
Sold as raw material for other products	18,598	21%
Mulch/soil additives	17,642	20%
Animal bedding	4,204	5%
Decorative landscaping	2,724	3%
Used on-site for other products	-	0%
Fiber ^b	-	0%
Unused	-	0%
Total, all types of utilization	88,966	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.