



**FOREST INDUSTRY  
RESEARCH PROGRAM**  
UNIVERSITY OF MONTANA

# **Timber Processing Capacity and Capability: Rio Chama Collaborative Forest Landscape Restoration Project**

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## Introduction

The Rio Chama Collaborative Forest Landscape Restoration Project (CFLRP) covers approximately 3.8 million acres of public and private lands in the Rocky Mountains of southern Colorado and northern New Mexico. The privately held portion includes non-industrial lands and Tribal lands. The project spans sections of the San Juan, Rio Grande, Carson and Santa Fe national forests, and includes the headwaters of the Chama, Rio Grande and San Juan rivers. According to the Rio Chama CFLRP proposal (2020), the primary area of concern is to protect the water supply of communities both within and adjacent to the landscape footprint, as well as to continue to provide communities with building materials and firewood, which have been obtained from the area for centuries. As such, the 3-2-3 Partnership has the “collective vision of reestablishing natural fire regimes and reducing wildfire risk” as a means of protecting the water supply (3-2-3 Partnership 2022). Another part of the multi-pronged strategy for this project is mechanical fuel reduction, providing a “sustained yield of timber” in part to offset the cost of the project, which exceeds the CFLRP grant and to secure a timber supply for locally sourced wood products. However, the loss of milling infrastructure throughout the West (Keegan 2006) brings into question whether there is sufficient unused capacity at timber processing facilities in surrounding areas to process removals from the Rio Chama landscape. In particular, is there capacity to process trees of a smaller diameter class ( $\leq 7$  inches dbh)?

The data used to develop the information presented in this report were collected and processed by the University of Montana’s Forest Industry Research Program within the Bureau of Business and Economic Research (BBER). Additional information is available upon request; however, mill- or company-level data are confidential and will not be released.

## Timber harvest and processing trends related to the Rio Chama CFLRP

The Rio Chama CFLRP contains portions of Archuleta, Conejos and Rio Grande counties in Colorado, and Los Alamos, Rio Arriba, Sandoval and Taos counties in New Mexico (figure 1). Together, the total area of these seven counties covers almost a billion acres, and they constitute the “Study Area” in this report.

Analysis of area timber flow indicates that timber harvested in the Rio Chama Study Area is processed by facilities located both inside and outside the Study Area. All counties that contain one or more facilities that process timber harvested in the Study Area constitute the “Timber Processing Area” or TPA. The TPA for Rio Chama includes the seven counties within the Study Area, as well as Alamosa, Costilla, La Plata, Larimer, Montezuma, Montrose, Park and Saguache counties in Colorado and Colfax, San Miguel and Santa Fe counties in New Mexico.

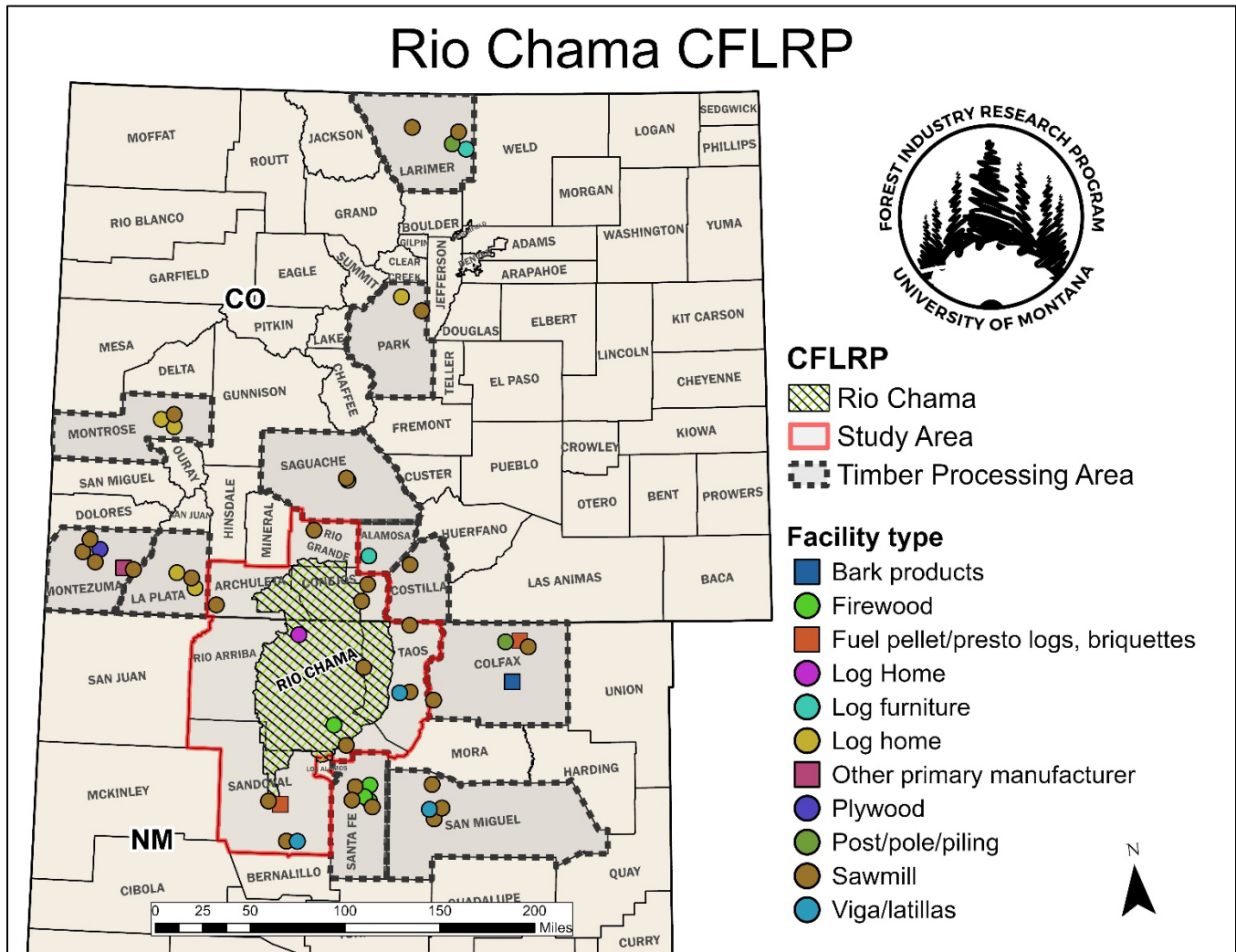
The facilities within the Rio Chama TPA are listed in table 1 and include 33 sawmills, 7 log home facilities, 5 firewood producers, 3 facilities producing vigas/latillas exclusively, 2 post/pole/pilings facilities, 2 fuel pellet producers, 2 log furniture producers, 1 plywood plant, 1 bark product facility and 1 producer of miscellaneous products. Twelve of these were previously unknown to the analysts and thus not included in the capacity and capability analysis. Facilities in table 1 that use a mix of roundwood and non-roundwood inputs (chips, dust, and shavings) are also not included in the capacity and capability analysis because the ratio of roundwood to non-roundwood inputs can vary substantially from year to year.

**Table 1. Rio Chama CFLRP timber processing facilities<sup>a</sup>.**

Facility name	Facility type	State	County	Current Facility Status	Included in log-processing capacity analysis
Rustic Log Furniture	Log furniture	CO	Alamosa	Active	Yes
Forest Health Timber Products	Sawmill	CO	Archuleta	Active	No
Loblolly Lumber - Pagosa	Sawmill	CO	Archuleta	Active	Yes
Loblolly Logging and Lumber - Arboles	Sawmill	CO	Archuleta	Active	Yes
Staseline Firewood & Logging	Sawmill	CO	Archuleta	Active	No
Quality Timber & Wood Products	Sawmill	CO	Conejos	Active	No
Allpine Lumber Co.	Sawmill	CO	Conejos	Active	Yes
Blanca Forestry Products	Sawmill	CO	Costilla	Active	Yes
San Juan Structures	Log home	CO	La Plata	Active	Yes
Mule Skinner Log Works	Log home	CO	La Plata	Active	Yes
Eric Husted	Sawmill	CO	La Plata	Active	Yes
Wildcat Services	Sawmill	CO	La Plata	Active	No
Timber Age Systems	Sawmill & CLT	CO	La Plata	Active	No
Blue Ridge Log Works	Log furniture	CO	Larimer	Active	Yes
Morgan Timber Products - Post and Pole	Post/pole/piling	CO	Larimer	Active	Yes
Morgan Timber Products	Sawmill	CO	Larimer	Active	Yes
Elkhorn Lumber Company	Sawmill	CO	Larimer	Active	Yes
Aspen Wood Products	Other primary manufacturer	CO	Montezuma	Active	Yes
Ironwood Group LLC	Plywood	CO	Montezuma	Active	Yes
West Fork Lumber	Sawmill	CO	Montezuma	Inactive	Yes
Ott's Mill	Sawmill	CO	Montezuma	Active	Yes
Aspen Wall Wood	Sawmill	CO	Montezuma	Active	Yes
Stonertop Lumber	Sawmill	CO	Montezuma	Active	Yes
Custom Log Crafting	Log home	CO	Montrose	Inactive	Yes
Frontier Log Homes	Log home	CO	Montrose	Active	Yes
Montrose Forest Products, LLC.	Sawmill	CO	Montrose	Active	Yes
TJ's Wood Products	Log home	CO	Park	Active	Yes
Alan Eos Mountain Lumber	Sawmill	CO	Park	Active	Yes
Rocky Mountain Timber Products	Sawmill	CO	Rio Grande	Active	Yes
Mountain Valley Lumber - House logs	Log home	CO	Saguache	Active	Yes
Mountain Valley Lumber - Sawmill	Sawmill	CO	Saguache	Active	Yes
Silver Dollar Wood Products LLC	Bark products	NM	Colfax	Active	No
Western Wood Products (pellets)	Fuel pellets	NM	Colfax	Active	No
Western Wood Products (posts)	Post/pole/piling	NM	Colfax	Active	Yes
Western Wood Products	Sawmill	NM	Colfax	Active	Yes
Mammoth Mill & Construction	Sawmill	NM	Colfax	Active	Yes
Satterwhite Log Homes	Log Home	NM	Rio Arriba	Active	Yes
Padilla Logging Restoration	Firewood	NM	Rio Arriba	Active	No
W. H. Moore Cash Lumber	Sawmill	NM	Rio Arriba	Active	Yes
Barela Timber Mgmt Co. - sawmill	Sawmill	NM	San Miguel	Active	Yes
TMR Custom Sawmill	Sawmill	NM	San Miguel	Active	No
Old Wood	Sawmill	NM	San Miguel	Active	Yes
Barela Timber Mgmt Co., Inc.	Viga/latillas	NM	San Miguel	Active	Yes
Walatowa Timber (Pellets)	Fuel pellets	NM	Sandoval	Active	No
Walatowa Timber Industries	Sawmill	NM	Sandoval	Active	Yes
Wholesale Timber and Vigas - Sawmill	Sawmill	NM	Sandoval	Active	Yes
Wholesale Timber and Vigas - Vigas/latillas	Viga/latillas	NM	Sandoval	Active	Yes
Firewood Company of Santa Fe	Firewood	NM	Santa Fe	Active	Yes
Hansen Lumber Co	Sawmill	NM	Santa Fe	Active	Yes
Spotted Owl Timber Inc.	Sawmill/vigas/latillas	NM	Santa Fe	Active	Yes
All Trees Firewood	Firewood	NM	Santa Fe	Active	No
Diamante Lumber	Sawmill	NM	Santa Fe	Active	No
Santa Fe EcoWood	Firewood	NM	Santa Fe	Active	No
Olguin Sawmill and Firewood	Sawmill	NM	Taos	Active	Yes
Olguin Sawmill - Vigas	Viga/latillas	NM	Taos	Active	Yes
Kuykendall & Sons Sawmill	Sawmill	NM	Taos	Active	No
Rio Costilla Cooperative Livestock Association	Sawmill	NM	Taos	Active	No

<sup>a</sup>Highlighted facilities are new to BBER and without data for capacity calculations.

Figure 1. The Rio Chama CFLRP, Study Area, Timber Processing Area, and facilities.



The total volume of timber harvested from the Study Area and processed into commercial products was estimated at 47,735 hundred cubic feet (CCF) or 19,608 thousand board feet (MBF), Scribner in 2020/2021 (table 2). Of this volume, 59 percent was harvested in Colorado and 41 percent in New Mexico. Rio Grande County, CO, Rio Arriba County, NM and Conejos County, CO had the largest timber harvests among counties within the Study Area.

**Table 2. Timber harvest by county in the Rio Chama Study Area in thousand board feet, Scribner (MBF) and hundred cubic feet (CCF), 2012, 2016, and 2020 (CO) and 2021 (NM).**

Study Area	2012			2016			CO 2020 / NM 2021		
	MBF	CCF	Percent	MBF	CCF	Percent	MBF	CCF	Percent
<b>Colorado</b>	<b>7,653</b>	<b>17,343</b>	<b>48%</b>	<b>16,484</b>	<b>35,149</b>	<b>64%</b>	<b>10,989</b>	<b>28,188</b>	<b>59%</b>
Archuleta County, CO	890	1,912	5%	3,548	8,096	15%	344	1,012	2%
Conejos County, CO	2,450	5,563	15%	7,518	15,663	29%	3,323	10,344	22%
Rio Grande County, CO	4,313	9,868	27%	5,418	11,390	21%	7,322	16,832	35%
<b>New Mexico</b>	<b>7,826</b>	<b>18,663</b>	<b>52%</b>	<b>8,342</b>	<b>19,680</b>	<b>36%</b>	<b>8,619</b>	<b>19,547</b>	<b>41%</b>
Los Alamos County, NM	-	-	0%	250	438	1%	583	1,100	2%
Rio Arriba County, NM	4,472	12,139	34%	4,605	12,049	22%	4,294	10,782	23%
Sandoval County, NM	1,849	3,577	10%	2,692	5,547	10%	2,092	4,185	9%
Taos County, NM	1,506	2,947	8%	795	1,647	3%	1,650	3,479	7%
<b>Total</b>	<b>15,479</b>	<b>36,006</b>	<b>100%</b>	<b>24,826</b>	<b>54,829</b>	<b>100%</b>	<b>19,608</b>	<b>47,735</b>	<b>100%</b>

Sawlogs constituted the majority of timber products harvested in the Rio Chama Study Area, at 56 percent of total harvest volume in 2020/2021 (table 3). Viga/latilla logs made up a distant second at 12 percent, while firewood logs, furniture logs, energy logs, house logs and post/pole logs combined made up 30 percent. In 2012 and 2016 fiber logs constituted the second-highest proportion of the harvest after sawlogs. Of the years listed here, harvest of furniture logs and energy logs occurred only in 2020/2021.

**Table 3. Timber harvest by product in the Rio Chama Study Area in thousand board feet, Scribner (MBF) and hundred cubic feet (CCF), 2012, 2016, and 2020 (CO) and 2021 (NM).**

Product	2012			2016			CO 2020 / NM 2021		
	MBF	CCF	Percent	MBF	CCF	Percent	MBF	CCF	Percent
Sawlog	10,347	22,667	63%	19,940	40,077	73%	13,198	26,866	56%
Post or pole	18	85	0%	90	891	2%	157	633	1%
House log	1,625	3,385	9%	881	1,941	4%	1,036	2,136	4%
Fiber log	2,000	6,667	19%	1,960	7,000	13%	-	-	0%
Firewood log	451	902	3%	906	2,610	5%	1,320	4,950	10%
Furniture log	-	-	0%	-	-	0%	390	3,679	8%
Energywood log	-	-	0%	-	-	0%	1,205	3,523	7%
Viga or latilla log	1,022	2,270	6%	1,049	2,311	4%	2,301	5,947	12%
Piling or utility pole log	17	30	0%	-	-	0%	-	-	0%
<b>Total</b>	<b>15,479</b>	<b>36,006</b>	<b>100%</b>	<b>24,826</b>	<b>54,829</b>	<b>100%</b>	<b>19,608</b>	<b>47,735</b>	<b>100%</b>

The dominant species harvested within the Rio Chama Study Area was Engelmann spruce, which constituted 42 percent of the harvest volume in 2020/2021 (table 4). Ponderosa pine made up 35 percent of the 2020/2021 harvest. Harvest of quaking aspen has declined, totaling only 11 percent in 2020/2021, down from 24 percent in 2012. Douglas-fir, lodgepole pine, subalpine fir, white fir and two-needle pinyon pine together made up the remaining 12 percent.

**Table 4. Timber harvest by species in the Rio Chama Study Area in thousand board feet, Scribner (MBF) and hundred cubic feet (CCF), 2012, 2016, and 2020 (CO) and 2021 (NM).**

Species	2012			2016			2020 CO / 2021 NM		
	MBF	CCF	Percent	MBF	CCF	Percent	MBF	CCF	Percent
White fir	257	490	1%	787	1,772	3%	477	1,117	2%
Subalpine fir	164	380	1%	276	576	1%	152	324	1%
Englemann spruce	5,324	11,907	33%	7,259	15,115	28%	8,818	20,123	42%
Twoneedle pinyon	-	-	0%	61	107	0%	141	265	1%
Lodgepole pine	1,767	4,086	11%	6,320	13,881	25%	635	1,640	3%
Ponderosa pine	2,821	5,750	16%	4,638	9,022	16%	7,416	16,871	35%
Douglas-fir	2,230	4,634	13%	1,794	3,755	7%	938	2,156	5%
Quaking aspen	2,917	8,760	24%	3,689	10,601	19%	1,032	5,238	11%
<b>Total</b>	<b>15,479</b>	<b>36,006</b>	<b>100%</b>	<b>24,826</b>	<b>54,829</b>	<b>100%</b>	<b>19,608</b>	<b>47,735</b>	<b>100%</b>

In 2020/2021, harvested timber in the Rio Chama Study Area came primarily from Forest Service lands (table 5). Sixty-eight percent came from national forests in the Study Area with the remainder coming from private and Tribal timberlands. National forest timberlands have yielded an increasing portion of the total harvest, while the share of private and Tribal harvest has waned. State lands harvest has only constituted a small portion over recent years.

**Table 5. Timber harvest by ownership in the Rio Chama Study Area in thousand board feet, Scribner (MBF) and hundred cubic feet (CCF), 2012, 2016, and 2020 (CO) and 2021 (NM).**

Ownership	2012			2016			2020 (CO) / 2021 (NM)		
	MBF	CCF	Percent	MBF	CCF	Percent	MBF	CCF	Percent
Private and Tribal timberland	6,972	17,184	48%	12,158	27,309	50%	5,691	15,174	32%
National forest	8,507	18,822	52%	10,868	23,769	43%	13,917	32,561	68%
State	-	-	0%	1,800	3,750	7%	-	-	0%
<b>Total</b>	<b>15,479</b>	<b>36,006</b>	<b>100%</b>	<b>24,826</b>	<b>54,829</b>	<b>100%</b>	<b>19,608</b>	<b>47,735</b>	<b>100%</b>

The Rio Chama Study Area harvest has seen varying portions of live trees among its harvested volume, going from 68 percent live in 2012 to 56 percent in 2016 and 61 percent in 2020/2021 (table 6). The proportion of live sawlogs harvested has declined, from 64 percent in 2012 to 50 percent in 2020/2021. Sixty-one percent of house logs were live at the time of harvest in 2012, but in 2020/2021, the proportion of live house logs harvested had declined to 16 percent. Similarly, 97 percent of firewood logs harvested in 2012 were live and in 2020/2021 37 percent of the firewood logs harvested were live.

**Table 6. Live and dead harvest percentages by log type from the Rio Chama CFLRP Study Area, 2012, 2016 and 2020.**

Study Area	2012		2016		2020 (CO) / 2021 (NM)	
	Live percent	Dead percent	Live percent	Dead percent	Live percent	Dead percent
Sawlogs	64%	36%	52%	48%	50%	50%
Post or pole	0%	0%	80%	20%	80%	20%
House log	61%	39%	20%	80%	16%	84%
Fiber log	70%	30%	70%	30%	0%	0%
Firewood log	97%	3%	74%	26%	37%	63%
Furniture log	0%	0%	0%	0%	100%	0%
Energywood log	0%	0%	0%	0%	100%	0%
Viga log	97%	3%	95%	5%	99%	1%
Utility pole log	100%	0%	0%	0%	0%	0%
<b>Volume-weighted average</b>	<b>68%</b>	<b>32%</b>	<b>56%</b>	<b>44%</b>	<b>61%</b>	<b>39%</b>

### Timber-processing within the Rio Chama CFLRP Timber Processing Area

Of the 47,735 CCF (19,608 MBF) of timber harvested in the Study Area, 38 percent was processed within the county of harvest, while 19 percent was processed in a different county within the Study Area (table 7). The remaining 43 percent was processed outside the Rio Chama Study Area, but within the larger area of the TPA. This is in keeping with the definition of the TPA, which is intended to capture all counties where the Study Area's timber is processed. Rio Grande County, CO produced the largest timber volume within the Study Area and processed 29 percent of its harvest within the county, 12 percent elsewhere in the Study Area, and 59 percent elsewhere within the TPA. By contrast Rio Arriba, with the second highest harvest volume, processed 15 percent within the county, 50 percent elsewhere in the Study Area, and 35 percent elsewhere in the TPA. Taos County, NM processed the largest portion of its harvest in-county, at 81 percent. Of Los Alamos County's harvest, 100 percent was processed outside the Study Area but within the TPA. These flow patterns are a function of the location of the harvest and the proximity and accessibility of processing facilities.

**Table 7. Timber flow from the Rio Chama CFLRP Study Area to the location of processing, an average of 2020 to 2021 harvests.**

Study Area harvest	Processed within the county of harvest	Processed elsewhere within the Study Area	Processed outside Study
			Area and inside Timber Processing Area
Archuleta County, CO	1%	1%	98%
Conejos County, CO	73%	19%	8%
Rio Grande County, CO	29%	12%	59%
Los Alamos County, NM	0%	0%	100%
Rio Arriba County, NM	15%	50%	35%
Sandoval County, NM	76%	0%	24%
Taos County, NM	81%	19%	0%
<b>Study Area harvest total</b>	<b>38%</b>	<b>19%</b>	<b>43%</b>

Timber processors in the Rio Chama TPA sourced their logs from within and outside the Study Area and the TPA (table 8). Fifty-eight percent of timber received by facilities in the TPA originated within the Rio Chama TPA (24 percent from within the Study Area and 34 percent from outside the Study Area but inside the TPA), with the remaining 42 percent being sourced primarily from other Colorado counties.

**Table 8. Origin of timber processed by mills in the Rio Chama Timber Processing Area, 2020 (CO) and 2021 (NM) harvests.**

Origin of timber	Volume (MBF)	Volume (CCF)	Proportion of the total timber received
From Study Area	24,521	67,825	24%
From TPA outside Study Area	43,189	96,866	34%
From other Colorado counties	53,361	121,092	42%
From other New Mexico counties	196	384	<1%
From other states	423	89	<1%
<b>Total</b>	<b>121,690</b>	<b>286,257</b>	<b>100%</b>

### Timber processing capacity and capability

The purpose of this report is to provide the 3-2-3 Partnership and its stakeholders with information on 1) The current use of timber by primary wood-processing facilities in the vicinity of Rio Chama CFLRP, and 2) The maximum amount of timber these facilities could economically use in their current configuration. This information is intended to help stakeholders understand the available capacity to process timber removed from the Study Area.

We are using the term “capacity” to refer to the maximum total volume of timber (excluding pulpwood and fuelwood) that timber processors within the TPA could use 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 facilities’ timber *input* capacity and is expressed in MBF Scribner and 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 to BBER by facilities. Estimates in this report 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 capacity analysis focuses on facilities that exclusively use timber in round form, which includes sawmills and facilities processing timber into house logs/log homes, posts, small poles, utility poles, vigas, latillas, and log furniture. Facilities that use a mix of roundwood and non-roundwood inputs, such as chips, sawdust, shavings, and bark (e.g., pulp mills, wood pellet manufacturers, and biomass energy facilities) are not included in this 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. Likewise, log export yards/facilities are not included because they do not convert timber into a primary product and western public lands (i.e., state and federal) timber cannot, by law, be exported.

The term “capability” refers to the volume of trees of a certain size class (measured as dbh) that existing timber processors can economically process annually. This report uses three dbh classes: <7”, 7 to 9.9”, and ≥10”. Some facilities are designed to operate using only trees of a given size class. Capability at these facilities is readily classified in just one of the size classes (e.g., veneer/plywood plants typically only use trees ≥10 inches dbh, and



post manufacturers primarily use trees <10 inches dbh). Many facilities can and do use timber from a variety of size classes, especially sawmills, which often process trees that are larger than the smallest tree size they are capable of processing for greater profitability. However, some mills that process larger trees are not capable of processing smaller-diameter timber due to the configuration of their equipment.

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

*Annual processing capacity and capability*

The estimated annual timber-processing capacity of facilities in the Rio Chama TPA was 502,934 CCF (223,951 MBF) (table 9). Of this volume, 73 percent (364,944 CCF or 172,120 MBF) fell within the ≥10” dbh size class, 23 percent (113,323 CCF or 45,228 MBF) fell into the 7-9.9” dbh size class, and the remaining 5 percent (24,666 CCF or 6,604 MBF) fell into the <7” dbh size class. As such, Rio Chama TPA facilities are largely able to process only larger logs and may not be able to process smaller ones, either due to their equipment or because such processing would have a profit-margin too small to be economical.

**Table 9. Annual timber-processing capacity and capability of facilities in the Rio Chama CFLRP Timber Processing Area, by dbh size class.**

<b>Tree dbh</b>	<b>Thousand board feet, Scribner (MBF)</b>	<b>Hundred cubic feet (CCF)</b>	<b>Percent</b>
<7 in.	6,604	24,666	5%
7 - 9.9 in.	45,228	113,323	23%
≥10 in.	172,120	364,944	73%
<b>Total capacity</b>	<b>223,952</b>	<b>502,934</b>	<b>100%</b>

*Processing capacity and capacity utilization*

As a group, the timber processors in the Rio Chama TPA are, for a variety of reasons, not operating at full capacity (table 10). While the total estimated capacity is 502,934 CCF (223,951 MBF), only 49 percent (255,516 CCF or 108,867 MBF) was being used. Utilization rates vary from a low of 34 percent in San Miguel and Santa Fe counties, NM to a high of 81 percent in Montezuma County, CO. The prevailing reason for facilities to be operating below capacity is a lack of a steady log supply and limited availability of size-specific logs, especially in the larger size classes.

**Table 10. Timber processing capacity and consumption within the Rio Chama CFLRP Timber Processing Area.**

<b>Timber Processing Area</b>	<b>-----Capacity to process timber-----</b>		<b>-----Timber consumption-----</b>		<b>Most recent utilization</b>
	<i>Thousand board feet, Scribner (MBF)</i>	<i>Hundred cubic feet (CCF)</i>	<i>Thousand board feet, Scribner (MBF)</i>	<i>Hundred cubic feet (CCF)</i>	
Alamosa, Park, Rio Grande, Saguache counties, CO	17,312	43,384	7,687	23,094	53%
Archuleta, Conejos, Costilla counties, CO	16,909	37,390	10,624	24,058	64%
La Plata County, CO	253	527	158	327	62%
Larimer County, CO	6,382	17,699	4,531	12,695	72%
Montezuma County, CO	30,217	75,411	25,520	61,259	81%
Montrose County, CO	112,342	238,844	42,887	91,329	38%
Colfax, Taos counties, NM	10,856	29,452	5,630	17,082	58%
San Miguel, Santa Fe counties, NM	17,677	36,999	5,189	12,607	34%
Rio Arriba, Sandoval counties, NM	12,005	23,229	6,641	13,066	56%
<b>Rio Chama TPA total</b>	<b>223,951</b>	<b>502,934</b>	<b>108,867</b>	<b>255,516</b>	<b>49%</b>

Source: BBER mill censuses for Colorado 2020 and New Mexico 2021.

### Unused processing capacity and capability

The distribution of unused capability for each size class mirrored the total capability proportions, with 47 percent of the capability to process timber in the <7" dbh size class going unused and 49 percent of the 7-9.9" dbh and ≥10" dbh size classes going unused (table 11).

**Table 11. Timber-processing capability and unused capability by size class for the Rio Chama CFLRP Timber Processing Area.**

Timber Processing Area	Capability to process timber by dbh size class (CCF)			Unused capability to process timber by dbh size class (CCF)		
	<7" dbh	7-9.9" dbh	≥10" dbh	<7" dbh	7-9.9" dbh	≥10" dbh
Alamosa, Park, Rio Grande, Saguache counties, CO	4,481	8,889	30,014	1,792	881	17,617
Archuleta, Conejos, Costilla counties, CO	16	6,418	30,955	16	1,834	11,482
La Plata County, CO	-	181	346	-	69	131
Larimer County, CO	4,245	6,805	6,649	1,064	1,767	2,174
Montezuma County, CO	5,593	17,241	52,576	3,580	3,937	6,635
Montrose County, CO	4,663	48,217	185,965	3,767	38,871	104,876
Colfax, Taos counties, NM	3,788	11,545	14,118	1,061	2,679	8,629
San Miguel, Santa Fe counties, NM	1,664	8,439	26,896	835	3,918	19,640
Rio Arriba, Sandoval counties, NM	216	5,588	17,425	133	1,121	8,909
<b>Rio Chama TPA total</b>	<b>24,666</b>	<b>113,323</b>	<b>364,944</b>	<b>12,248</b>	<b>55,077</b>	<b>180,093</b>

Source: BBER mill censuses for Colorado 2020 and New Mexico 2021.

## Discussion

As noted above, the four national forests within the Rio Chama Study Area (San Juan, Rio Grande, Carson and Santa Fe) are the largest source of timber processed in the TPA. Due to recent wildfire events in the vicinity of the Study Area and the uncertainty inherent in prescribed burning, treatment focus has shifted towards mechanized fuel reduction. As such, the Rio Chama CFLRP work plan calls for providing a sustained yield of timber using traditional Forest Service timber sales, stewardship sales, and service contracts. In the process of providing a sustained yield, the Rio Chama CFLRP work plan calls for "support[ing] and grow[ing] industry opportunities that facilitate treatments that improve forest and watershed resilience." Such sales and agreements are intended to offset the cost of treatments elsewhere in the Study Area.

The capacity utilization levels presented in this report indicate that the Rio Chama TPA forest products industry has capacity available to process an increased yield of timber resulting from mechanized fuels reduction (table 11). However, the size and quality of timber available, as well as prevailing market prices and the availability of qualified labor also affect the level of capacity at which primary processors are operating and in what size class(es) this capacity utilization is concentrated. Fuels reduction treatments frequently involve the harvesting of smaller-diameter timber, the profitability of which diminishes as tree diameter decreases (Stewart et al. 2004). Harvesting salvage (standing dead) timber can become similarly unprofitable, especially if logs are less than 10" dbh, due to the lower grade recovery for these (Fahey et al. 1986).

While some operators have machinery capable of accommodating the switch from one size class to another, not all processors are able to do so. Making such a shift, with smaller logs yielding lower recovery, would lower profit margins, possibly to the point of a mill becoming unprofitable, especially in a weak lumber market.

## Sources

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