APPENDIX W – TIMBER DEMAND STUDY

Introduction and Area of Analysis

Timber markets have changed dramatically in recent years, and especially since the Forest Plan was first approved. This is true at all scales -- international, national, regional, and local. This report provides an overview of timber industry in the SJNF area. This report also provides a brief summary of timber supplies used by these firms, including timber provided by the SJNF.

Timber markets in Colorado have been studied and documented by a variety of sources and authors. One particularly helpful report is The Four Corners Timber Harvest and Forest Products Industry, 2002, prepared by Morgan Dillon, Keegan, Chase, and Thompson (review draft, May 20, 2005). Another source of information is a database of forest products firms in Colorado prepared by the Office of Community Services, Fort Lewis College in Durango, CO. Conversations with timber industry representatives, local mill owners, and Forest Service personnel also provided valuable insights into timber supply and demand for the SJNF area.

The SJNF area for economic and social analysis purposes is defined as the following counties: Montezuma, La Plata, Archuleta, Dolores and San Juan Counties.

Condition and Trends

Timber Industry

In decades past, each national forest typically had timber purchasers that were locally situated. Timber was rarely sold to purchasers located more than two hours drive from the forest. These mills were relatively large, very limited in the kinds of products they produced, and very dependent upon sawlogs coming from one or two national forests. As a result, large lumber mills could be found in many communities on the West Slope. These mills often had a large workforce that handled every aspect of harvest and processing. Wages and benefits were the best in town. It was not unusual for entire communities to be economically dependent upon a single mill. Today the timber industry in Colorado bears little resemblance to its predecessor of not so many years ago.

Since 1982, total timber harvested and processed in Colorado has dropped 40 percent. Since 1992, two oriented strand board (OSB) mills – one in Olathe and the other in Kremmling – have closed. A large sawmill in Walden also closed in 1994. Mills owned by large corporations, such as Louisiana Pacific, no longer exist in Colorado. A large independently-owned mill at South Fork ceased operation in 2001 after 50 years of operation. Nine other medium-sized mills have closed their doors since 1982. Most firms supporting these mills, such as independent loggers and truckers, have ceased operations as well. The timber industry in Colorado today is a composed of two large independent timber processors and dozens of very small mills.

Western Excelsior Corporation is one of two large processors of timber in Colorado, located in the SJNF area Town of Mancos in Montezuma County. The mill produces a wide array of products from aspen products supplemented by wheat straw and coconut fiber including: erosion control blankets, evaporative cooler pad media, erosion control logs and wattles, packaging materials, and decorative excelsior for the crafts and floral industry. These products are sold throughout the continental United States, Alaska, and Mexico. Western directly employs 130 persons and processes 1.8 million cubic feet of aspen annually. Western subcontracts its logging and hauling to three firms employing another 24 persons. They also purchase a significant quantity of their aspen as gatewood from other mills and loggers.

Intermountain Resources Inc. (Intermountain), located in Montrose, operates the last large sawmill in Colorado. Originally purchased from Blue Mesa Lumber in 1996, it has been updated and now has the capacity to process 100 million board feet annually when running two 8-hour shifts. Intermountain currently employs 100 workers that process about 40 million board feet annually. In addition to its own workforce, Intermountain utilizes over a 100 subcontractors for logging, hauling, and acquiring timber supply. Although the Montrose mill is significantly larger than any other in Colorado, it is relatively small by national standards, ranking in the lower fifth of all lumber mills in the US. In 2002, Intermountain processed about half of all timber milled in Colorado creating a variety of construction products from green and dead conifer logs. Some of these products are sold to Colorado firms, mostly serving the high population centers along the Front Range. While Intermountain is outside of the area of economic analysis, it does purchase conifer sales on the SJNF. Between 2000 and 2005 Intermountain harvested 2,138 MCF on the SJNF, with larger volumes under contract, some of which have been deferred in favor of emergency harvests in burned areas elsewhere in Colorado.

As the large mills closed down across Colorado, many workers with only timber industry experience became unemployed. Some of the displaced workers chose to stay in Colorado, acquire small-scale equipment, and launch small mills. A few of these new firms have made it, while others have not. Some of the existing small firms—especially those that were well established--have modified their operations, products, and marketing in tenacious attempts to survive. In many cases, families with a history in the timber business adapted and continued their natural resource heritage. In the absence of many large mills, small operations have become either more diversified, producing a greater variety of products from a small facility, or more specialized, producing unique products for small, niche markets. Products include dimension lumber, paneling, rough cut beams, mine and landscaping timbers, house logs, log furniture, and posts/poles. The typical small mill employs 5 workers and operates at less than 50% of equipment capacity.

Another structural change in the forest products industry has been the degree of interdependence among firms. In contrast to the large “stand alone” mills of past decades, all of Colorado’s mills – large and small -- rely upon each other today. Driven by increased specialization and scarce timber supplies, logs of all types and sizes crisscross the state as mills seek to maintain financial viability. In addition, there is a well-developed market for chips and other mill residues across the state. These conditions have prompted the Colorado timber industry, including firms in the SJNF area, to become connected with industry in neighboring areas of northern New Mexico, northern Arizona, and southeastern Utah.

Data from the Four Corners study are shown below, and offer a reasonable picture of small forest products firms in the southern Rockies.

Table W1. Attributes of a typical forest products firm processing less than 1.5 MMCF in the Four Corner states by type of facility, 2002

Attribute	Saw Mills	House Logs	Saw Mill/ House Logs	Log Furniture	Posts-Poles
Annual Capacity (MCF)	311	99	316	37	201
Annual Capacity (MBF)	1,834	616	1,894	55	301
% of Total Industry Capacity	68%	17%	12%	1%	1%
Annual Input (MCF)	131	61	126	26	95
Annual Input (MBF)	773	379	757	39	142
% Capacity Utilized	42%	62%	40%	71%	47%

% Sales in Home State	59%	57%	86%	44%	49%
Employees	5	6	4	5	14
% of Total Industry Employment	37%	34%	5%	6%	2%

Some implications of these industry characteristics are notable. First, the average sawmill, sawmill with houselog capability, and post-pole operation are running at less than half of their facility design. This indicates that firms are probably not able to cover all operating (fixed and variable) costs, and therefore cannot be profitable in the long run. Further shrinkage of the industry can be expected if current supply and other market conditions persist. When a single firm closes operations, others are at risk as well. Given the high inter-dependence among timber processors in Colorado, the loss of even a single small firm is likely to be magnified within the industry and threaten the viability of others. Second, 85 percent of the forest products industry workforce is employed by small firms with about 5 employees each. Employee specialization, high wages, and significant benefits are unlikely for these workers, while seasonality is highly likely.

Timber processing is no longer simply cutting logs into boards, but includes a variety of new products. Colorado has become the third leading producer of log homes in the U.S. behind Montana and Idaho.

Two sources of information are available to profile of forest products businesses in Southwest Colorado. One source is the list of forest product businesses located in Montezuma, Dolores and Archuleta Counties surveyed in the University of Montana 2002 survey. The other source is additional forest product businesses picked up in an industry data base during the same timeframe as the survey. Figure T1 and Table T2 depict the number of businesses by category.

Figure W1. Number of small forest products firms in Southwest Colorado in 2002 by category, including businesses in the University of Montana Survey and additional business identified in the data base

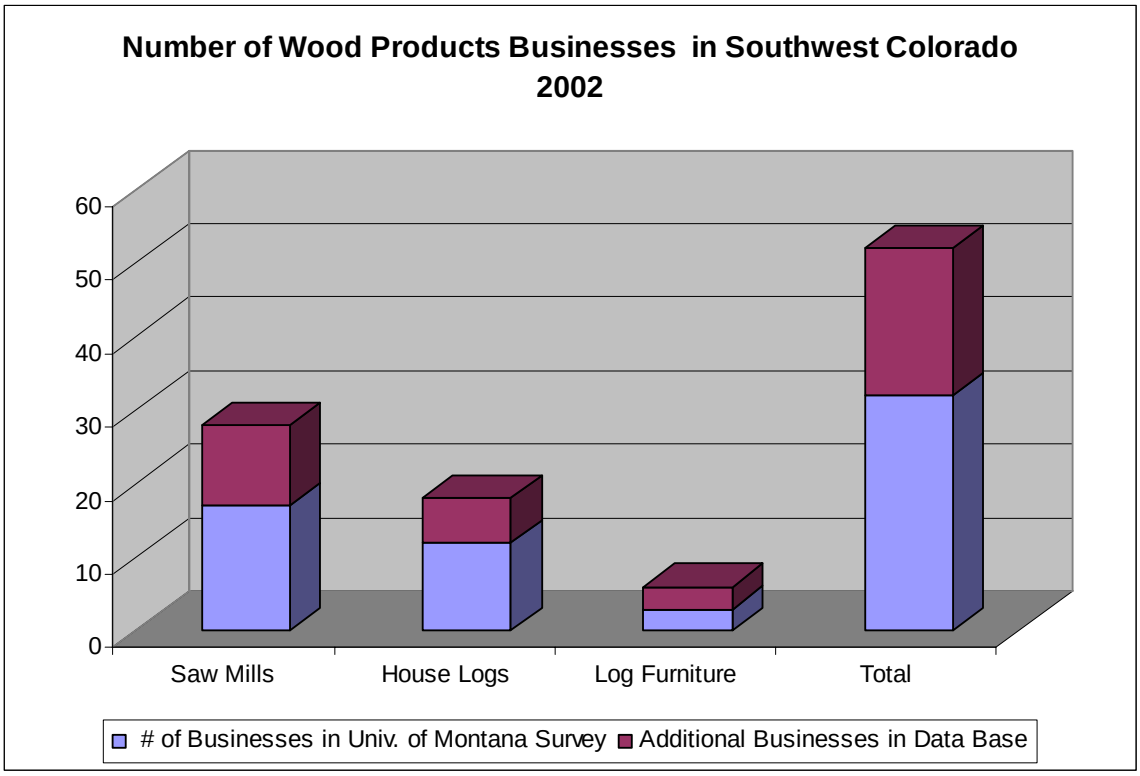


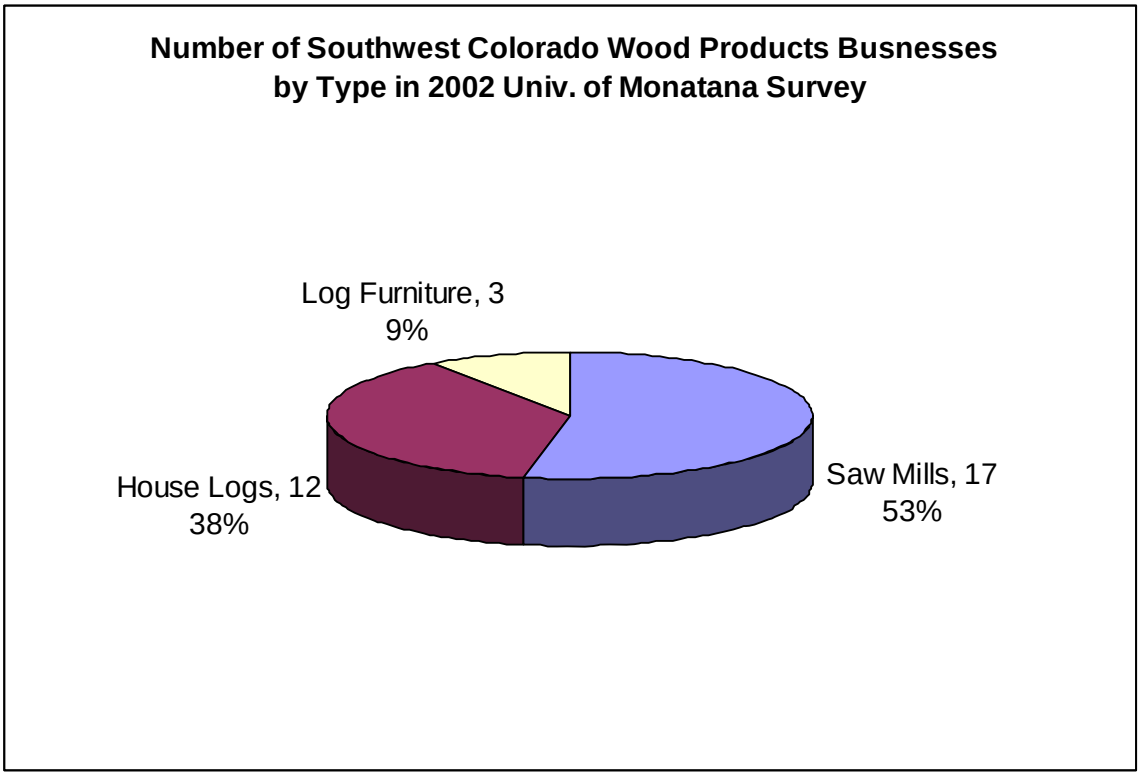
Table W2. Wood Products Businesses located in Southwest Colorado (Montezuma, La Plata and Archuleta Counties) INCLUDED in University of Montana survey by type of facility, 2002 added to number of businesses in the Data Base but not included in the Survey.

Attribute	Saw Mills	House Logs	Log Furniture	Total
Number of Businesses in Southwest Colo. in 2002 Univ. Montana Survey	17	12	3	32
# Southwest Colorado Businesses in Data Base but Not Surveyed	11	6	3	20
Total # Southwest Colo. (Montezuma, La Plata and Archuleta Counties) adding data base to surveyed businesses	28	18	6	52

The University of Montana Survey encompassed all of the business that show up on the San Juan National Forest purchasers list for 2002 with the exception of two outside of area business which harvested at total of 100 MCF off of the San Juan Forest. The survey also provides detail on timber processing volumes by species, by land ownership and by geographic source. Consequently the wood products industry profile that follows is based upon businesses included in the University of Montana 2002 survey. A list has been compiled of specific businesses in the data base, but not in the survey, offering the opportunity to add businesses into the profile that are potential users of San Juan National forest timber as the need arises.

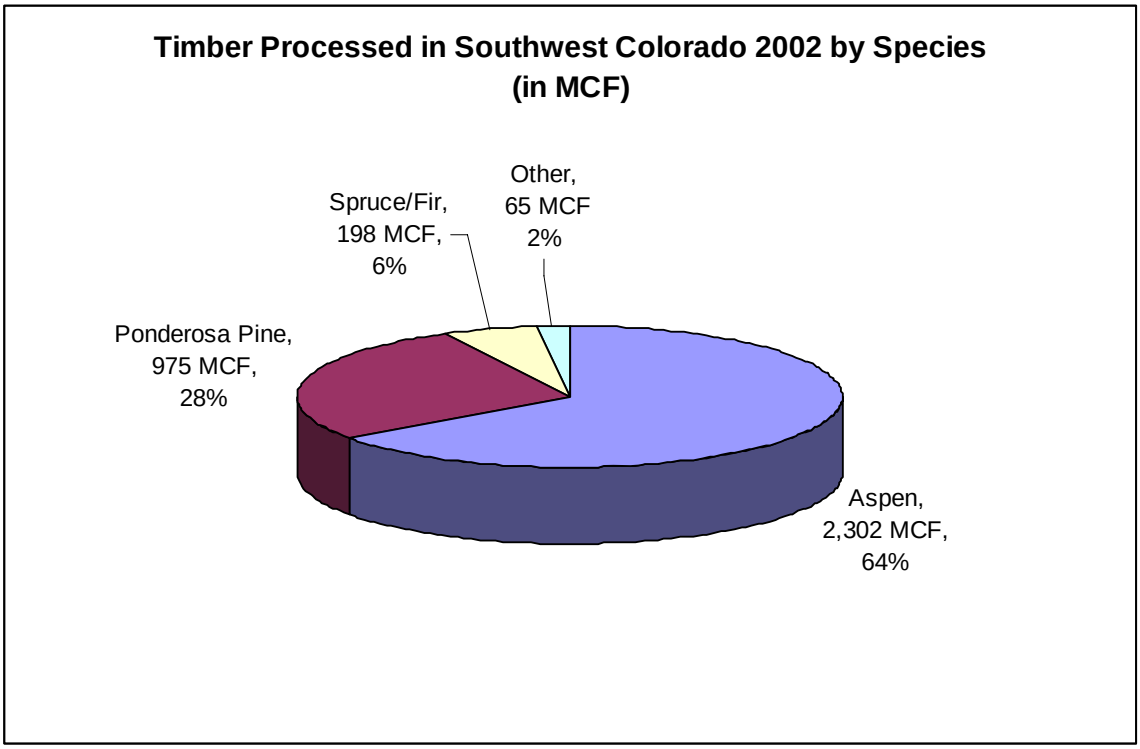
As Figure W2 illustrates 53% of businesses surveyed in Southwest Colorado were saw mills. The smaller mills produce a combination of products, primarily utilizing conifer to produce rough cut beams, mine and landscaping timbers and posts. The larger volume mills in the survey process aspen into excelsior and paneling. Some of the house log businesses use locally harvested conifers, but much of the material for log home kits is imported pre-processed from as far away as Canada, or purchased as standing dead timber from forests with substantial volumes of bug killed trees. A limited number of log furniture businesses build furniture from both aspen and conifer.

Figure W2. Forest products businesses by type in Southwest Colorado 2002 University of Montana Survey



As figure W3 illustrates, aspen is the dominant species representing 63% of the material processed by the surveyed businesses, followed by ponderosa pine which made up 28% of the material processed, with a minor component (8%) made up of spruce/fir harvests. In 2002, the year of the survey, an additional 100 MCF of conifer was harvested by businesses located outside of Southwest Colorado. This was down from the 300-500 MCF harvested by out of area mills prior to the closure of U.S Forest industries and Louisiana Pacific.

Figure W3 Volume of Wood Processed by Species (MCF) in Southwest Colorado University of Montana Survey 2002



The relatively high level of aspen processed (64%) reflects the commercial viability of the paneling and excelsior products produced from aspen in Southwest Colorado. Figure W4 depicts the steep decline in SJNF aspen sold and harvested between 2000 and 2004.

Figure W4 also shows the amount of aspen sold in 2005 tipping back up after being close to zero in 2002-2004. During this period of virtually no aspen harvests from the SJNF, local mills supplied their annual demand of over approximately 2,500 MCF by harvesting almost exclusively from private and state land often at long haul distances.

Figure W4. San Juan Forest 2000-2005: Total Aspen Sold and Harvested

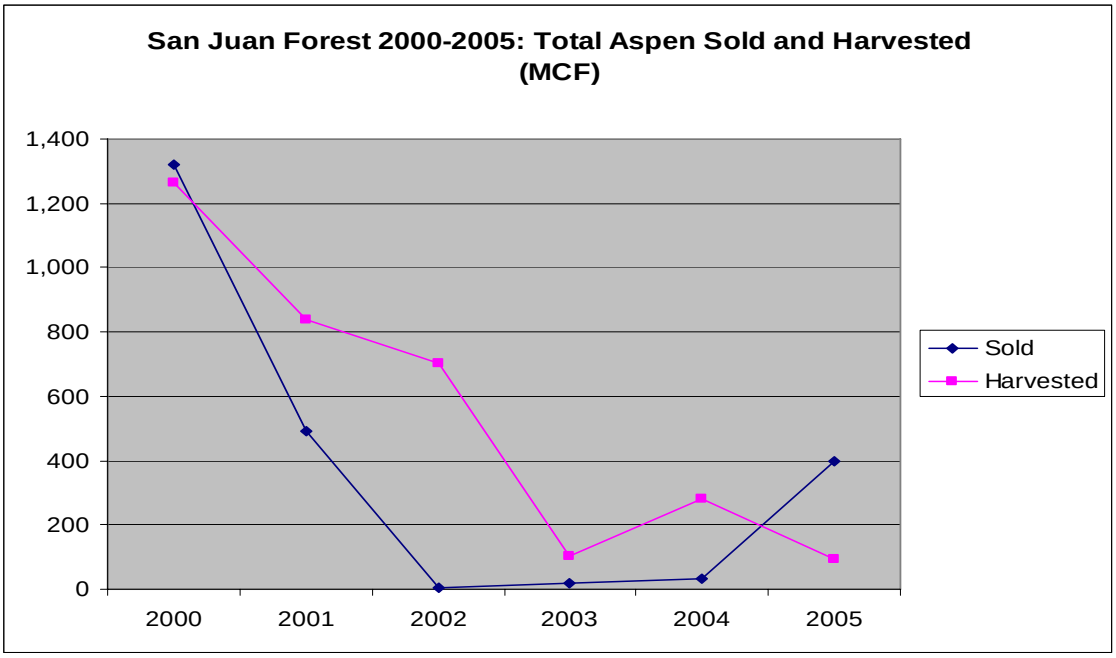


Figure W5 illustrates, a decline in conifer sold and harvested, but in contrast to aspen, volumes sold generally exceeded volumes harvested, reflecting a growing amount of conifer under contract as Intermountain Resources was granted extensions to prioritize emergency harvests in burned areas throughout Colorado.

Figure W5. San Juan Forest 2000-2005 Total Conifer Sold and Harvested

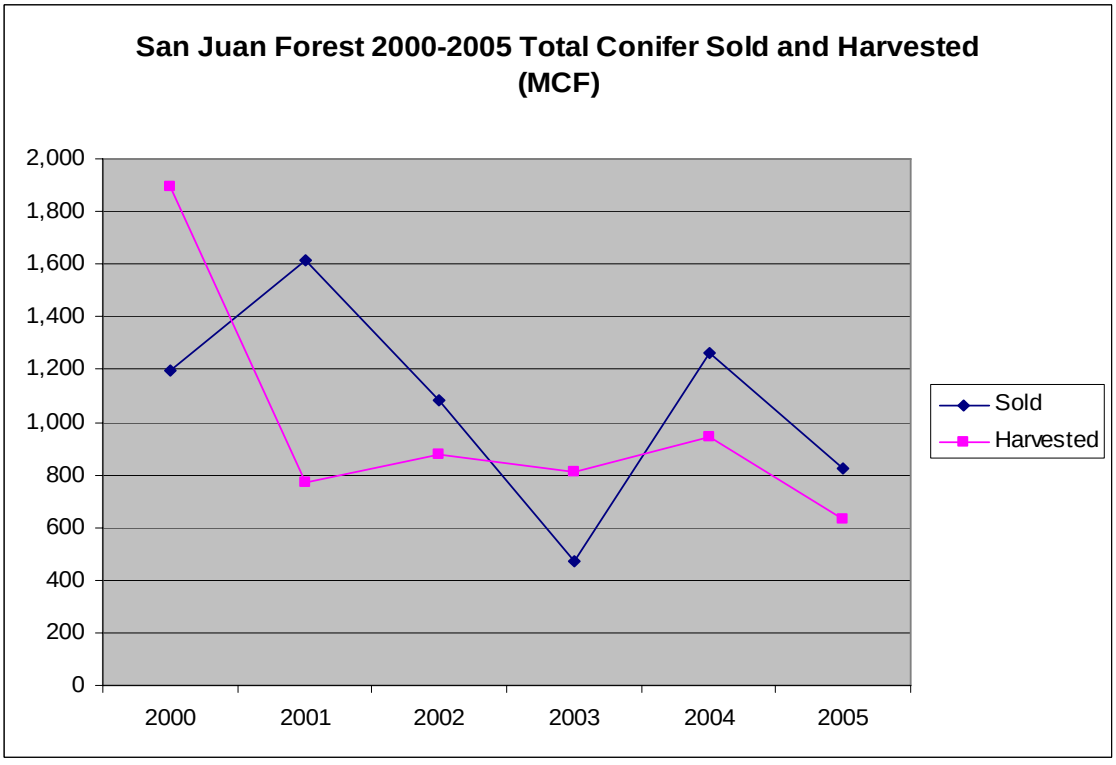
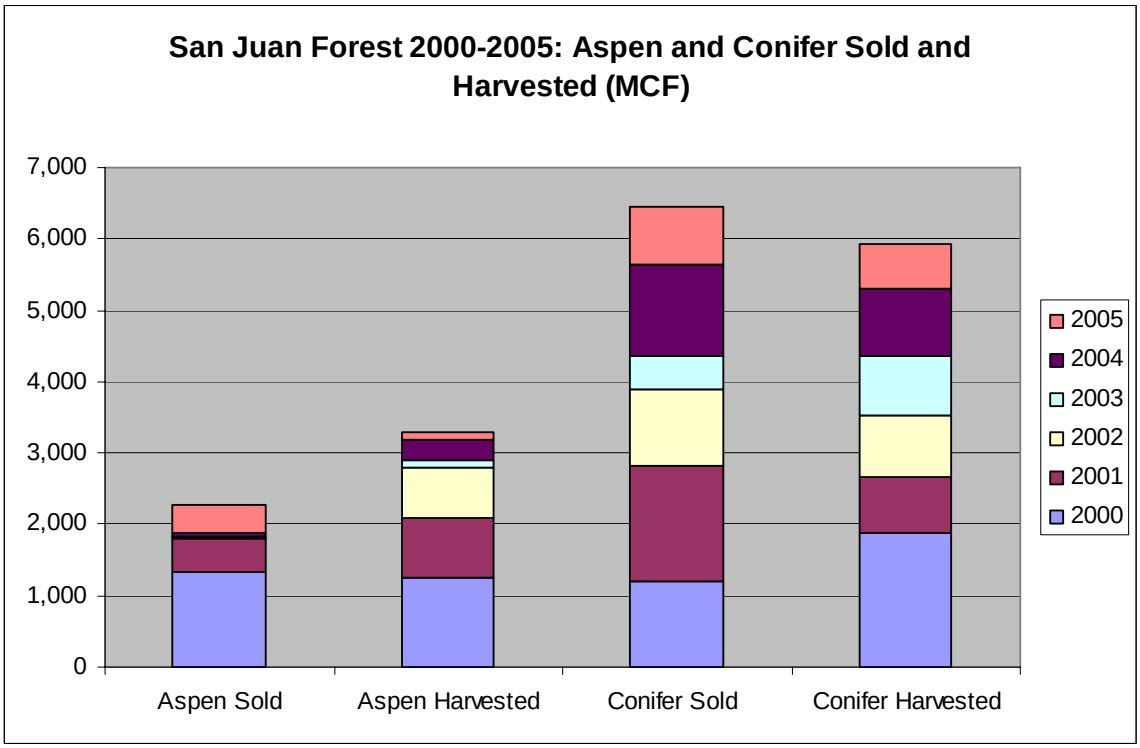


Figure W6 suggests the contrast between aspen and conifer supply and demand on the San Juan Forest over the six year period between 2000 and 2005. Aspen harvested from the San Juan exceeded aspen sold by about 1,000 MCF as volume under contract was harvested with no sales to provide additional SJNF timber. By contrast, more conifer was sold during this period than was harvested as the volume under contract increased.

Figure W6. San Juan Forest 2000-2005: Aspen and Conifer Sold and Harvested



To relate local demand to SJNF timber supplies during the period from 2000-2005, Table W3 compares the 2002 input volumes of the Southwest Colorado mills surveyed by the University of Montana, with average three year harvest volumes on the SJNF for 2000-2002 and 2003-2005.

Table W3. Input Volumes (MCF) 2002 Survey Compared to Average SJNF Harvest 2000-2002 Compared to 2003-2005

	Volume Aspen MCF	Volume Conifer MCF	Total Volume MCF
Input to Mills in 2002 Montana Survey	2,302	1,238	3,540
Average Harvested SJNF 2000-2002	1,180	935	2,115
% SJNF Average Annual Harvest 2000-2002 of Total Surveyed Input in 2002	51%	76%	60%
Average Harvested SJNF 2003-2005	161	794	955
% SJNF Average Annual Harvest 2000-2002 of Total Surveyed Input in 2002	7%	64%	27%

Figure W7 presents these comparisons in a graphic format.

Figure W7. Input Volumes (MCF) 2002 University of Montana Survey Compared to Average SJNF Harvest 2000-02 and 2003-05

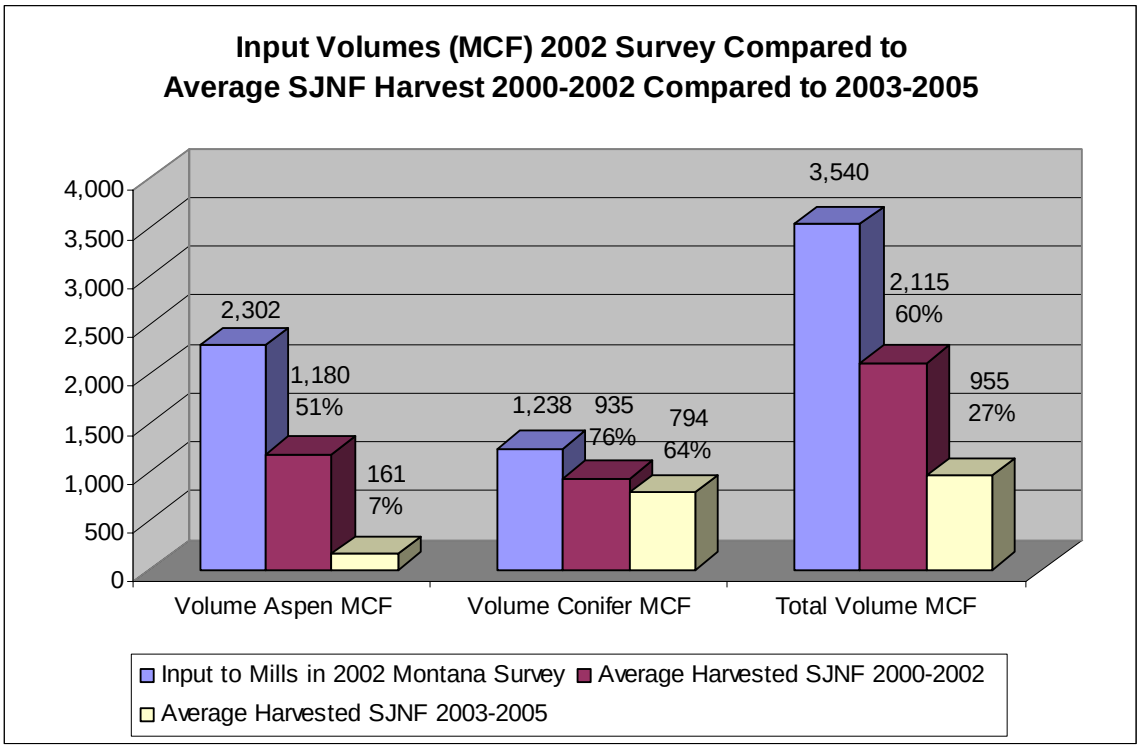


Figure W7 shows the drop in the SJNF aspen harvest relative to demand in the 2002 University of Montana survey. On average in the three years between 2000 and 2002, the SJNF met 51% of Southwest Colorado aspen demand. In the three years between 2003 and 2005 the average SJNF harvest met only 7% of demand.

By contrast, with the conifer species (primarily ponderosa pine), the volume harvested on SJNF as a percentage of local 2002 demand fluctuated from 76% to 64% when comparing 2000-2002 with 2003-2005. It should be noted, however, that during this period, a significant portion of the SJNF conifer harvest was by outside of area firms other than the local businesses reported above in the University of Montana survey.

The sections that follow will relate the demand for SJNF timber to the sustainability of Southwest Colorado wood products businesses.

Aspen Demand and Local Industry Sustainability

As Figure W3 illustrates, in the 2002 University of Montana survey, aspen made up 64% of the volume of timber processed in Southwest Colorado. Aspen demand relative to other species is strong. At the same time, Figure W4 shows aspen sold from the San Juan National Forest near zero between 2002 and 2004. During this period, the aspen mills continued to produce in response to high demand for their products, but the lack of SJNF sales meant that aspen had to be harvested exclusively from private and state land. As Figure W7 illustrates, the volume of aspen harvested from the SJNF relative to demand declined from 51% based on average SJNF

harvests from 2000-2002 to only 7% of demand based on average SJNF harvests from 2003-2005.

The volume of SJNF aspen harvested relative to demand for 2003-2005 is unsustainable for local mills. The private land base where aspen can be harvested is finite, and was hit very hard during this period of no SJNF availability. In addition to diminishing locally available private timber, operators had to resort to very long haul state land purchases from Utah and New Mexico. As the falling volume in SJNF aspen sales, and the potential impact on the sustainability of local mills became apparent beginning in 2001, two meetings were convened by Montezuma County involving SJNF, GMUGNF and industry representatives to explore solutions to this problem.

The meetings convened by Montezuma County resulted in critical strategic insights with regard to the sustainability of aspen businesses and ecological issues related to aspen management on the SJNF. Industry made it clear that they did not expect the SJNF to supply all of their needs. What is critical to industry for long term sustainability is to have a stable and reliable component of SJNF aspen that can be supplemented by harvests from state and private land. SJNF foresters, made it clear that there are resource limitations driven by the extent of the suitable roaded aspen base, that has already been harvested beginning in the 1950s, and will not be ready for re-entry for 10-15 years. Limitations on new entries also include steep slopes and impact and costs related to building new roads.

These strategic insights resulted in two lines of activity. SJNF foresters began to focus on getting SJNF aspen sales back into the supply pipeline. Figure T4 shows the volume of aspen sold beginning to tip back up beginning in 2005. In order to address the ecological resource management issues, Montezuma County took the lead in organizing a dialogue that resulted in an aspen management workshop in December of 2004. In October of 2004 a Pre-Workshop Focus Discussion involving Montezuma County, aspen industry representatives, San Juan Citizens Alliance, Colorado Wild, and SJNF framed the background information and issues needed to plan the Workshop.

Background information prepared for the workshop was organized under four major questions: What is known about aspen economics?; What is known about aspen ecology?; The social dimensions of aspen; and Aspen management issues and challenges.

The Workshop question about aspen economics provided some key information relevant to demand. The two primary aspen businesses in Southwest Colorado use about 13MMBF per year. This figure is very consistent with the 2002 University of Montana survey which reported the volume of aspen processed in Southwest Colorado at 12.114, MMBF which has been converted in the body of this report to 2,302 MCF. This level of demand, which provides jobs for about 175 people, requires harvesting about 1,300 acres of aspen per year. If half of this supply came from the SJNF it would require harvesting about 650 acres per year.

The Workshop entitled “Aspen Management in Southwestern Colorado:
Ecological, Economic, and Aesthetic Considerations, A Community Workshop”
held Thursday, December 2, 2004 filled the Diamond Circle Theater at the Strater Hotel in Durango to capacity. Sponsors included: San Juan National Forest, Montezuma County Federal Lands Program, San Juan Citizens Alliance, Mountain Studies Institute, Colorado Timber Industry Association, Rocky Mountain Experiment Station, and Colorado State Forest Service.
The Workshop Agenda was moderated by SJNJF Forest Supervisor Mark Stiles and included presentations on: Aspen Ecology, Dr. Bill Romme, CSU; History and Implications of Aspen Management in Southwest Colorado, Dave Dallison SJNF Forester; Overview of Aspen Research, Dr. Wayne Shepard, Rocky Mountain Experiment Station; Sustaining Aspen

Businesses and Jobs, Norm Bircher, Western Excelsior & Dewayne Findley, Aspen Wall Wood; Interdependency Between Aspen and Wildlife, Patt Dorsey, CDOW; and Aspen Aesthetics, Mark Pearson, San Juan Citizens Alliance, followed by an in-depth Speaker Panel Q&A session.

That afternoon was devoted to facilitated and recorded break-out discussions centered on three key questions:

1) What are the most promising management options for aspen? Consider The following: economic, ecological, and social values.
2) What are the things land managers should consider when identifying areas to manage aspen? For example, "Are the needs of local industry being met?" "What are the impacts to big game?" etc.
3) Suggested criteria and standards for aspen harvests.

These discussions yielded a number of suggested aspen management parameters including:

- Manage this prolific and resilient species so as to integrate ecological, economic and social values including 175 jobs and the resulting economic spin-offs.
- Mimic natural disturbance patterns by harvesting larger areas that follow contours and clonal structure, require less road building, and offer increased resilience to game browsing.
- Harvest areas accessible by existing roads including near term harvest of leave strips until previously harvested areas are mature enough for re-entry. Avoid disturbance of steep and unroaded areas.
- Continue to build understanding of the role of fire in generating pre-harvest aspen configurations, and how mechanical harvest and fire can be used as complementary tools to support aspen regeneration. Study the response of aspen strands to the Missionary Ridge fire.
- Collaboratively monitor ecological responses to management actions and adapt management accordingly.

The management challenge that emerged out of the information and dialogue coming out of the community workshop is clear: Can 50% of the annual aspen demand of about 2,500 MCF be sold off of the SJNF, while operating within the consensus reflected by the above parameters?

Conifer Demand and Local Industry Sustainability:

As Table W3 illustrates ponderosa pine accounted for 28% of the volume of timber processed in Southwest Colorado in the 2002 University of Montana survey. Spruce/fir and other conifer only accounted for another 8% of wood processed by surveyed businesses. Figure W7 shows that volume harvested on the SJNF as a percentage of local 2002 demand fluctuated from 76% to 64% when comparing 2000-2002 with 2003-2005. It should be noted, however, that during this period, a significant portion of the SJNF conifer harvest was by outside of area firms other than the local businesses aggregated above in the University of Montana survey.

Spruce/fir harvests have become increasingly constrained by costs and controversy related to harvesting and road building in wet high altitude areas where they grow. For a brief period in the late 1990s, and early 2000s small amounts of white fir were harvested in conjunction with

aspen as part of an experiment in mixed conifer restoration. Once the mill that had been taking most of the white fir closed in South Fork, demand for mixed conifer diminished.

Ponderosa pine has continued to be available for sale on the SJNF as a result of the Ponderosa Pine Forest Partnership (PPFP), which beginning with demonstration harvests in 1995, piloted a ponderosa pine restoration prescription designed to save the large tree component in a clumped pattern with openings that resemble pre-settlement reference conditions. The prescription requires that loggers take out stems down to 5" DBH. The restoration effort progressed from the demonstration plots to a number of years in which an average of 1,000 acres a year were sold involving a combination of the restoration prescription and commercial thinning. The restoration prescription has enjoyed a broad base of support from the environmental and scientific community. The treatment improves forest health, reduces wildfire hazards and involves harvesting in lower altitude areas that are already roaded.

An ecological assessment conducted in 2001 validated the benefits of the restoration treatments and recommended that the scale of treatments be increased to extend the benefits to an ecosystem scale. The one difficulty restoration efforts encountered in conjunction with the early restoration harvests was getting the prescribed fire component of the prescription implemented in a timely fashion. This problem was solved with the inception of the National Fire Plan beginning in 2000. Restoration areas in need of burning were incorporated into annual NFP burn targets.

The commercial side of ponderosa pine restoration has proved to be more problematic. In the early restoration harvests, the LP Mill in Olathe provided a break even outlet for non-merchantable small diameter stems. When LP closed small operators tried to adapt by producing chips and mulch out of the small diameter stems. As local operators struggled with the economics of restoration timber sales, Intermountain Resources bought Blue Mesa Lumber in Montrose and, in 2002, began to bid on ponderosa pine restoration sales. Intermountain has the advantage of having the facilities to process and market chips from non-merchantable material and the financial resources to maintain an inventory of timber under contract.

Smaller local businesses responded by increasing the amount of timber harvested on private land, with less regulation, lower costs, fewer delays, and the option of disposing of non-merchantable material by burning it on site. The small scale of private timber sales, coupled with local knowledge gave small businesses a supply niche that didn't require them to compete with Intermountain Resources.

The other change that gradually began to interact with timber demand was the implementation of the National Fire Plan. The SJNF was well positioned to implement NFP directives in the ponderosa pine zone, by building off of the established restoration prescription, and ramping up an active prescribed fire and prescribed natural fire program. In the initial years of the NFP, the emphasis was on prescribed fire in the pine zone and hydro-axing in non-merchantable cover types such as pinyon-juniper, sage and oak brush.

The implementation of the NFP was coincident with a severe drought which resulted in large scale wildfires, heightened concern about fire hazards at the wildland urban interface (WUI), and severe forest health problems, including a substantial die off of pinyon pine tree component on public and private land resulting from a catastrophic ipps beetle infestation.

This combination of large scale wildfires, insect infestations, and a substantial increase in budget allocations for forest health treatments impacted the timber demand and supply dynamic in a number of ways.

1. The resulting awareness on the part of private landowners of the importance of forest management opened up opportunities for small local mills to harvest ponderosa pine

and other conifer species as a bi-product of forest health treatments on larger parcels of private land. This reinforced the increasing movement of these mills from SJNF to private land for timber supplies.

2. A new industry emerged to provide services to private landowners to deal with wildfire hazards on rural residential property in the WUI. These services met the needs of smaller parcel owners with non-merchantable cover types such as pinyon (increasingly dead), and juniper. Some of these businesses also began to bid on SJNF service contracts to do non-commercial thinning on public land. A related addition was businesses investing in hydro-axe machinery which was used primarily on public land, but also on larger tracts of private land.
3. Intermountain Resources of Montrose, the last remaining large mill in Colorado, developed an increasing backlog of SJNF ponderosa pine restoration sales under contract, as they received waivers to respond to time sensitive harvests on burned areas throughout Colorado, that had resulted from the drought.
4. The shift of SJNF budgetary resources into NFP directives, diverted attention away from timber sale preparation which contributed to the drying up of the aspen supply pipeline described in the previous section.
5. Once the "ready to burn" areas had been treated, there was a need to move NFP treatments into ponderosa pine landscapes which require substantial thinning prior to the use of prescribed fire.

The trends outlined above raise issues both in terms of local industry sustainability, and in terms of the long term sustainability of a viable forest health and restoration program on the SJNF. It is questionable whether local conifer businesses can continue to operate by relying predominately on finite private land timber resources. It is also questionable whether substantial progress can continue on reducing wildfire hazards on SJNF lands as budgetary commitments to NFP fuel hazard reduction continue to decline.

Issues involving sustainable of local mills, sustainable forest restoration efforts and a sustainable fire hazard mitigation program were brought into focus and discussed at a San Juan Timber Program Strategy Meeting in April of 2006, specifically:

1. Fire hazard mitigation projects need to move into areas that require thinning, but service contract costs were running $600-$700 per acre, which is beyond the capability of wildfire mitigation budgets.
2. At the same time service contractors were having trouble remaining viable even at these high rates.
3. Ponderosa pine and mixed conifer restoration sales are starting to go no bid.

A number of ideas surfaced to resolve these disconnects:

1. A local mill has purchased a dowel machine that can produce 2,000-3,000 poles per day with ponderosa pine stems up to 10"DBH and tops down to 4"-6". This makes small diameter material a primary product, rather than a bi-product. The challenges, to date, involve labor shortages, and uncertainty about profitability in the market place.
2. The strategy session was attended by operators of a mill in Del Norte who process 2-3 mmbf of white fir and spruce, primarily from private land, but could establish demand relative to SJNF mixed conifer restoration and fire hazard reduction sales.
3. Intermountain Resources has a continued interest in purchasing restoration sales.

4. Fire mitigation managers are interested financing, or at least subsidizing mitigation with commercial activity.
5. There may be ways to address barriers to potential small purchasers of SJNF timber sales, i.e. contract length, deposit requirements, biological mitigation requirements, product mix, quality and price.
6. There is a need for approaches that make it feasible for small niche producers within the timber industry to divide a mix of products without running into anti-trust problems.
7. There are early stage efforts to establish bio-mass processing business ventures, encouraged by success in Arizona. This could provide an outlet for non-merchantable material.
8. There is an interest in re-visiting a simplified approach to longer term stewardship contracting that would link industry stewardship capacities and material needs with forest health needs.
9. The potential needs to be explored for looking at available NF timber products relative to industry needs and prioritizing the preparation of new NF offerings to match up with unmet demand.

Summary:

The demand for aspen remains strong at about 13MMBF or 2,500MCF per year. The SJNF could meet 50% of this demand with the harvest of about 650 acres per year. The Community Workshop on Aspen Management in Southwest Colorado in December, 2004 laid out a set of ecological and aesthetic parameters for harvesting and regenerating aspen. A sustainable strategy for the Forest Plan Revision would be to meet this level of demand in a manner that addresses these ecological and aesthetic parameters.

By contrast the demand for SJNF conifer, particularly ponderosa pine is below what is needed to support forest health, restoration and fire hazard reduction goals. A sustainable strategy for the Forest Plan Revision would be to maximize remaining industry capacity by a planning framework that allows for the reduction of barriers which limit the feasibility of purchasing SJNF timber sales while conforming to appropriate rules and regulations. The planning framework also could allow for the evolution of new industry components, such as dowel production and commercial processing of bio-mass; as well as strategic management approaches, such as long term stewardship contracting.

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