

### ***Introduction***

Eagar is located near the New Mexico border in central Arizona. It abuts the Apache-Sitgreaves National Forest to the south. With a population of 4,033, Eagar is a small town. According to the 2000 Census, the median annual household income is \$37,378 and the median home value is \$89,400. 9.2% of the population is made up of seasonal residents. For many years the economic backbone of Eagar was agriculture and trading. In more recent years, the town has placed a focus on timber-related industries including two power plants and a sawmill. Tourism and recreation are also increasing draws for the 100,000 people that visit the National Forest each year (Arizona Department of Commerce n.d.).

Primary vegetation is a mixture of ponderosa pine, pinon-juniper and chaparral with quick burning fuels, like grass, a bigger threat closer to town. On the southwestern side of town some residential areas abut the Apache-Sitgreaves National Forest. The real wildfire risk is not necessarily to Eagar itself, but the surrounding communities, like Greer, Nutrioso, Alpine and Hideaway (Anderson 2003). These small communities are interspersed among approximately 8,000-10,000 acres of USFS ponderosa pine forests the primary area for wildfire risk (Carlson 2003).

Eagar has been most successful in developing and promoting a small diameter timber (SDT) products industry. For the people living in Eagar and surrounding communities, the focus on SDT is just common sense. In the 1960s there were 31 sawmills in Arizona, as of 2004 only one large mill and four smaller ones are in business (Hall 2003). According to Eagar City Manger Bill Greenwood, "This community grew up on timber and cattle. As late as the early 1980s, there were 500-700 jobs tied directly to the logging and lumber industry, and now they're gone... We still have some people in the area that have some background in logging. So let's change the technology, let's change the approach a little bit. We can improve the forest health and create a few jobs at the same time". Ironically, finding a steady supply of projects and SDT is the biggest challenge facing the region. SDT producers and utilizers need a dependable pipeline of work and materials on which to build their emerging businesses. Providing this supply has proven difficult due to contracting issues, EIS problems, fires and other obstacles.

### ***Improve Wildfire Prevention and Suppression—Firefighting Readiness & Prevention Through Education***

The Eagar Fire Department has 29 volunteers and one paid employee, the chief, and operates on a \$140,000 annual budget (Carlson 2003). The surrounding communities have even fewer volunteers. Alpine has 10 and Nutrioso has none. Finding volunteers for these small communities can be difficult due to the part time residents. In Eagar there is lack of a sound economic base and many volunteers work outside the town, which can make it difficult to find volunteers that can respond during the work week. 21 out of 29 volunteers in Eagar have 131-190 training and are red carded (Carlson 2003). Eagar Fire Department participates in a mutual aid agreement with the local volunteer fire departments the Forest Service, Arizona State Department of Land, Bureau of Indian Affairs, and National Park Service (Carlson 2003).

In recent years Eagar has been able to improve its fire equipment. In the 1980s, the town owned a 1946 Seagraves engine and parked it in half of an old Quonset hut. Today, the Fire Department

has a modern look. In 2003, they purchased a Type 1 engine with city funds for \$173,000 (Carlson 2003). In 2003, they also purchased a mini-pumper with FEMA monies for \$138,000 (Carlson 2003) and completed an addition to the fire station. All labor for the addition was in-house including public works and fire department personnel (Eagar FD 2004)

In 2001, the Eagar Fire Department received a \$6,300 State Fire Assistance grant to create an urban interface fire plan for the community and properties outside city limits (Western WUI Grant 2001). Eagar Fire Chief, Howard Carlson estimates the fire plan to be completed in August 2004 (Carlson 2003; Carlson 2004). The plan will provide a foundation for emergency responders to coordinate suppression in a major fire situation by establishing protocols and radio frequencies. It will also protect citizens by having actions pre-planned in an emergency situation. The plan includes maps of the community, water source locations, evacuation procedures and evacuee locations, high risk areas, recommendation on fuel treatment, information on known hazardous material storage, proposed line construction locations and restrictions, flight hazards and loss potential to structures (Carlson, 2003). The fire plan will be made available to all cooperating agencies with additional copies available to resources that respond to a fire from outside the local area.

Education and outreach has been limited to a fire prevention week in local schools, which occurs in October each year (Carlson 2003). The Eagar Fire Department targets all the with National Fire Safety materials. Outreach also occurs through one-on-one contact, but not in any systematic manner.

The USFS also schedules an Annual Coordination meeting each spring. All organizations that deal with a wildfire emergency attend, the local fire departments, utility companies, Red Cross, Police, etc. They review processes and procedures for each entity in the event of a wildfire (Carlson 2004).

Local fire departments have formed an organization called the Northeastern Arizona Fire Chiefs Association and they meet on a monthly basis to work on mutual aid between departments.

***Hazardous Fuel Reduction—Prioritize hazardous fuels reduction where negative impacts are greatest***

**Town of Eagar**

***Mechanical Thinning***

In 2002, the Eagar Fire Department received \$18,800 from an AZ State Land Department State Fire Assistance grant to thin eight miles of pinon pine, juniper and ponderosa pine along the National Forest in the southwest portion of town (Western WUI Grant Program 2001a 2001b.). The money was intended to purchase a wood chipper and assist residents in Eagar, Alpine and Greer with thinning, pruning and chipping on private property to reduce fire risk. Having a chipper available to the three communities was to give the citizens a method to dispose of material that is removed from their properties. It also would provide an avenue for the local fire departments to be proactive with the citizens to provide the emphasis for fire safe communities in the WUI (Western WUI Grant Program 2002a). The goal was to accomplish at least 10 acres of thinning/pruning and chipping for demonstration projects within each community within the

first year for at total of 30 acres (Western WUI Grant Program 2002a). By the end of 2003, these projects had not happened (Carlson 2003). While Eagar, Alpine and Greer were awarded the SFA grant in 2002 for a chipper, Alpine and Greer were unable to come up with their portion of the matching funds (Carlson 2004). Chief Carlson could not justify Eagar paying the entire match since he did not feel the town would use the chipper enough to warrant the cost. The grant reverted to the State.

Every April or May starting in 1996, Eagar has had a town cleanup period that lasts about two weeks. As part of this effort, the town comes by and takes slash with dump trucks and front end loaders. The Fire Department burns large piles of slash as well. They burn 50-75 piles a year in this fashion to reduce fuels (Carlson 2003).

### *Prescribed Burning*

In 2001, Eagar Fire Department received a \$10,900 State Fire Assistance (SFA) grant from the AZ State Land Department program to prescribe burn 400 acres on the west and south side of town to reduce the risk of large fires burning into the community. Fine fuel loading is high in locations within the town limits and adjacent to the community's boundaries. The goal is to reduce fuel loading and break up the continuity of fuel to reduce the wildfire risk. The community is bordered on the south side by eight miles of Apache National Forest and three miles of AZ state land on the west.

The community is classified as high risk due to the wildland urban interface and proximity to forested land (Western WUI Grant Program 2002b). Burning was to take place on private and AZ State Lands and would be conducted in conjunction with Eagar VFD and the USFS (Western WUI Grant Program 2001b). By the end of 2003, they had treated 350 acres of private land with prescribed burning through this grant (Carlson 2003). Burning is conducted at a landowner's request. If a private landowner wants a field or property burned they contact the fire department. The fire department will perform the burn at no cost to the land owner. There is no coordination with State Land Department or USFS when the town schedules these burns.

In 2002, the Eagar Fire Department received an additional \$12,500 from a AZ State Land Department SFA grant to prescribe burn 300 acres of fine fuels to reduce the risk of wildland fires threatening the lives and destroying property (Western WUI Grant Program 2002b). The 2002 grant was also intended for landowner requested prescribed burning. By the end of 2003, these projects has not happened. According to Chief Carlson, manpower and time are the holdup (Carlson 2003). Since Carlson is the only paid, full-time fireman, he is spread thin and finds it difficult to keep up with the administrative processes that go along with the SFA grants, as well as finding the manpower from an all volunteer fire fighting force to do the work. If the grant is not use it within a two year period, the money will be returned to the AZ State (Boness 2003).

### **US Forest Service**

The Forest Service has not aggressively pursued fuel reduction projects on their lands that abut private property in Eagar (Carlson 2003). In 2001, 2002 and 2003 the USFS has not thinned or prescribe burned acreage near Eagar. However, the Eagar South project is currently an Environmental Impact Analysis. The analysis area is in the most at-risk area south of Eagar, where the vegetation transitions from grass to pinon-juniper. Treatment is likely to begin in

2006 for this project (Ripley 2004). According to the local USFS and Arizona State Land Department, Eagar is not at significant high risk of wildfire. The real risk is in the surrounding communities located in ponderosa pine forests, such as Greer, Alpine, Pinetop-Lakeside and Show Low (Boness 2003; Ripley 2004).

#### *White Mountain Stewardship Project*

In 2004 Apache-Sitgreaves National Forest put out to bid the White Mountains Stewardship Project—a ten-year, 150,000 acre project that will offer from 5,000 acres to 20,000 acres of forest lands to contractors each year, making this project the largest restoration project in the nation (USFS 2004; Anderson 2003). Many believe the White Mountain project will be the key to successfully developing the SDT industry in the area. Stewardship contracts are the key to the White Mountain project. A stewardship contract allows for the costs of removal of small diameter residue and slash to be exchanged for the value of the excess forest products that are removed. One goal is to find uses for all the wood fiber thereby reducing the amount of wood burned in the forest. One of the features of a stewardship contract is the capability to have a 10-year term, which will encourage businesses to invest in the future of forest restoration activities. The contract will be a “performance based service contract” with evaluation factors which not only encourages contractors to propose a variety of methods to efficiently produce quality end results in the forest but requires use of local labor and industry to produce and market wood products. Apache-Sitgreaves National Forest Supervisor Elaine Zieroth said that “In the past, separate contracts have been awarded for multi-product timber harvest with associated slash treatments. This was usually followed by another entry for the thinning of some small diameter trees with treatment of that slash. This is inefficient and therefore more costly to the taxpayer. The stewardship contract allows us to combine these multiple entries into one operation which should result in a cost savings to the taxpayer and produce a healthier forest in a shorter time” (USFS 2004).

According to Zieroth, “The forest lands we’re needing to work on in this contract are in the wildland/urban interface which currently have anywhere from 300 to 3,000 trees per acre on them. We hope to reduce those numbers closer to what grew there historically which was about 20 to 60 trees per acre. We’ve got to reduce the number of trees across the Forests on a large scale so that the threat of catastrophic fire will be minimized and enabling the remaining trees to better resist drought and insects” (USFS 2004).

Three site visits will be offered to potential contractors to demonstrate the level of effort that will be required of them. Award of the contract will be based upon the proposal that provides the best value to the government with consideration given to past performance, local economic development and employment, and methods proposed to accomplish the work. (USFS 2004).

The first project is a 15,000 acre parcel near the town of Mineral. Walker Brothers, a thinning contractor, thinned 200 acres in this area in 2003 in preparation for the larger project (Anderson 2003). The USFS paid \$375 an acre for treatment. Walker Brothers used Northern Arizona University’s restoration prescription of mosaics and 40-50 basal area. There were two appeals on the 15,000 acre Mineral project by the Center for Biological Diversity and White Mountain Conservation League. The USFS settled them by altering the prescription to take out trees over 16 inches in diameter. This had the consequence of impacting the economic value of the sale.

The changes were valuable because they allowed the USFA to develop a working relationship with the Center for Biological Diversity (Anderson 2003). The Mineral project was NEPA complete in August of 2002. NEPA work took nearly three years because of larger the project size, 15,000 acres (Anderson 2003).

### ***Restore Fire Adapted Ecosystems—Rehabilitation, Restoration, Using Science and Information, Monitoring***

#### **Blue Ridge Demonstration Project**

There have been no restoration efforts in Eagar. The most impressive example of restoration in the area is 40 miles west of Eagar in Pinetop-Lakeside. The Blue Ridge Demonstration Project brought together the Natural Resource Working Group, comprised of local, state, federal and private representatives. The group wanted to find a more collaborative way to restore the forests and develop economic opportunities in northern Arizona. The USFS had a 17,000 acre section NEPA ready area called Blue Ridge Ecosystem Analysis. The Environmental Assessment for the area was approved in 1997. The Natural Resources Working Group was looking for a restoration project and thought this area would be a good demonstration project. The Blue Ridge Demonstration Project (BRDP) was born. The project area borders the community of Pinetop-Lakeside, AZ on two sides and private land on two sides. In April 1997, the decision was made on the prescriptions and in September 1997 sections marked for thinning. 1000 acres were marked and prepared. The Morgan timber sale consisted of 650 acres and was the first section treated in 1997. The Morgan timber sale proceeded smoothly because the pulp mill in Snowflake, AZ was still paying for and utilizing SDT. In 1997 the pulp mill quit taking wood material and converted to a paper recycle mill. This presented a problem for the project because no one would bid on the remaining sections; there was no place to take SDT and the contracts stipulated removal of slash and SDT. The USFS contacted Walkers Brothers, local loggers working in New Mexico, and told them about the number of community assistance grants available in hope of getting them back in the area. Walkers returned and successfully bid on three contracts for the project (Collins 2004).

Three treatments and a control area were planned. The USFS used a goshawk prescription, which is designed to protect yellow pine by retaining them by removing competing younger trees a distance of ½ to one crown diameter, and creating foraging areas average 60-80 basal area (Technical Advisory Committee 2000). Northern Arizona University (NAU) used a “Presettlement Restoration” prescription based on NAU’s restorative guidelines. They are designed to protect all trees older than pre-settlement age, to thin from below, to reduce competition from smaller trees and to begin to restore character and structure of pre-settlement forests. The final prescription was to be a Natural Process Restoration prescription developed from guidelines proposed by environmental community representatives. Natural Process restoration was to be designed to go slower than other treatments, to be more cautious and conservative in thinning from below, and to retain a higher percentage of younger and smaller trees (Technical Advisory Committee 2000). However, local environmental groups did not have knowledge or experience in developing a prescription, so they solicited the assistance of the Southwest Forest Alliance. The Southwest Alliance did not have the time to work on their section (marking) and had difficulties coming up with the prescription (Collins 2004)

In 2002, 393 acres were treated. In 2003, 341 acres were treated. In 1998-1999 the project received \$250,000 in special funding. In 2000, the project received \$1,000,000 in special funding. Since 2000, the project has used regular program dollars out of the districts annual budget. There is not a reoccurring fire regime in NEPA for this project. They want to get the ground in a state to allow natural fire on the land (Collins 2004).

### ***Promote Community Assistance—Increase Local Capacity, Incentives, Biomass Utilization***

The real story in Eagar and the surrounding communities is the development of a critical mass of small diameter timber (SDT) providers and utilizers. Eagar is positioning itself to be a major beneficiary when small-diameter timber starts being processed with greater regularity. SDT providers include WB Contractors (Eagar), G. Reidhead Contracts (Alpine), Ft. Apache Sawmill (BIA Land), T. Reidhead Sawmill (Nutrioso) and White Mountain Forestry (Show Low). SDT Utilizers include Forest Energy Corporation (Show Low), Mountain Top Wood Products (Show Low), Western Renewable Energy (Eagar), Cheyenne Logs (Eagar) and Imperial Laminators (Eagar).

### **Arizona Power Service**

Utilizers creating power from biomass have benefited from Arizona Power Service (APS) desire to find renewable energy sources. In February 2001, the Arizona Corporation Commission (ACC) adopted the Environmental Portfolio Standard (EPS) which established goals that all utility companies that sell retail electricity in Arizona generate a percentage of their electricity from renewable resources. The EPS requires 1.1% of retail energy to be derived from renewables by 2007. The EPS added a surcharge to customer's bills which allows APS to pay premium price for renewable energy. The Portfolio Standard is in effect until 2012. APS has a budget to pay premium price for renewable energy. 60% must come from solar and the other 40% can come from other renewable resources (Johnston 2003).

### **Arizona Sustainable Forestry Partnership**

The Arizona Sustainable Forestry Partnership (ASFP) was organized by the Little Colorado River Plateau Resource Conservation and Development in 1996. The mission of the ASFP is to "Establish an environmentally and economically sustainable forestry industry in Arizona utilizing small-diameter Ponderosa Pine and other under-utilized wood species requiring thinning and restoration" (Little Colorado n.d.). The organization's purpose is to "Unite the public in addressing issues facing southwestern forest and communities for a common purpose – promoting ecological-based forest initiatives enhancing sustainable forests and employment opportunities" (Little Colorado n.d.). Eagar has been actively involved in forming and promoting the Arizona State Forest Partnership to advance a SDT products industry in the region (Greenwood 2003). The group meets monthly and brings together operators and manufacturers to investigate SDT opportunities. "Our focus is the networking and just trying to keep everybody up to speed" (Greenwood 2003). Some of the accomplishments of ASFP include documenting the magnitude of thinning and restoration needs on the Ponderosa Pine forests in Arizona, conducting workshops oriented toward industry transition and new product commercialization, sponsoring grant writing workshops designed for small business owners and submitting testimony to the Arizona House of Natural Resource Committee (Little Colorado n.d.). ASFP brought in people to conduct seminars, explain the contracting process, how to

create business plans, use working capital and in general create a small business (Greenwood 2003). They also passed on information about various grant cycles and conferences to take advantage of additional opportunities. Herb Hopper is the Project Director of Little Colorado River Plateau Resource Conservation & Development, the organization that sponsors ASFP. The Action Team Leader is Bill Greenwood, Eagar City Manager. He and Hopper coordinate and organize the meetings and Greenwood leads the group through the agenda each month. Meetings rotate and have taken place in various field settings to investigate the Blue Ridge Demonstration Project and the Mineral Springs project. In this way the various participants can see the different prescriptions and how the SDT will be made available.

The Little Colorado River Plateau Resource Conservation & Development (RC&D) has been assisting SDT utilizers to build successful businesses for three years (Hopper 2003). They have 120 active members. The RC&D hired Herb Hopper to coordinate activities (Hopper 2003). Hopper also works as the Arizona State Coordinator for the Four Corners Partnership, which funds his salary. The Four-Corners funding ends in December 2004, but their efforts will continue. The USFS Region 3 Forester provided a grant for the Southwest Sustainable Forest Partnership (SWSFP) in Arizona and New Mexico. SWSFP is a transition program from Four Corners Sustainable Forest Partnership and comes on line in June 2004. The grant is in the amount of \$690,000 and runs until the end of 2006 (Hopper 2004). Since Hopper's organization, Little Colorado River Plateau RC&D, was supported by Four Corners dollars, this new organization will also support them and the grant will keep their efforts in support of utilizers going. SWSFP intends to hire a SDT Utilization Specialist to help the small utilizers in Arizona and New Mexico in product development and marketing. The money will also provide \$400,000 towards a new grant program. Hopper's office will be the fiscal agent for the SWSFP grant program.

### **Western Renewable Energy**

Within and near Eagar, in particular, are several efforts to provide and utilize SDT. Steve Hall grew up in Show Low, AZ where seven generations of his family have resided. At one time, Hall's family owned five sawmills in the area. Hall purchased Stone Forest sawmill property in September 2000 and began retrofitting it in 2001 to become a bio-generation plant. The property is 128 acres and he intends to create an entire industrial complex around forest by-product industries (Hall 2003). He will offer free rent to companies that have waste wood as a by-product so that he can use as fuel. A micro mill was to be added in December 2003 but this has not happened yet because of the low availability of wood. He hopes that the White Mountain Stewardship Project will bring in enough SDT to make it worth the money required to start up the micomill. The wood from the Rodeo-Chediski fire is no longer an option to use in the sawmill after sitting for so long due to litigation (Hall, 2004). Also, the transportation issue makes this wood an expensive choice. It is outside of the optimum 40-50 mile radius for Hall's utilization purposes. The wood may be an option for the bio-generation plant but the quality of the wood, the amount of btu's it provides, is low because it has sat for so long (Hall, 2004).

Hall's company, Western Renewable Energy, began plant operations in February 2004. Hall intends to fuel his co-generation plant with woody biomass from thinning projects. The co-generation plant is three megawatts and will supply enough electricity for the Eagar-Springerville area. Arizona Power Service (APS) provided the financial loans for the plant,

\$4,600,000 (Hall 2003). The plant must produce 210 million KW to repay the loan. If the plant runs 80% of the time, it will produce 1,700,00 KW per month (Hall 2003). Hall estimates it will take 10 years to repay the loan. The plant will utilize 100 tons of woody material a day. Material will be obtained from a 40-50 mile radius around Eagar. It takes 3,000 acres of fuel reduction to power a three MW bio-generation plant (Johnston 2003). In December 2003, prior to production, he had three months of woody material on site. Several people have suggested that Hall increase the size of his plant from 3MW to 30MW. But if he expanded beyond the 3MW he would need to move beyond the 40-50 radius in search of biomass, which increases his transportation costs. He prefers to keep the company small (Hall 2003). He currently employs 14 people in the plant and 15 people to gather woody material for fuel. Hall's original plan was to use White Mt. Forestry, a contracting company he is part owner (15%), to obtain a majority of his woody material. However, White Mt Forestry has not had the access to the woody material he had hoped for. He has had to find other sources. There are three main sources: 1) Grow Fast, a company Hall started 20 years ago, collects unwanted woody material from surrounding communities (Eagar, Pinetop-Lakeside, Show Low). He was using the material for composting, but now it is used at the biomass plant. About 50% of the material he uses in the biomass plant comes from Grow Fast. 2) Ft. Apache Timber charges \$1.50 per ton for scrap wood from the sawmill. This is mostly wood chips, sawdust, sticks, bark, etc. Hall must pay \$7.50 a ton for transportation for the 65 mile one way trip from Ft Apache to the plant. His original plan was to obtain woody material from a 40-50 mile radius of the plant and the transportation cost pushes him to his limit for cost. \$9.00 a ton is the break even point for woody material, without giving up something, such as wages or benefits for his employees. 3) Material from private landowner's thinning or creating defensible space has also supplied some woody material. Hall has received no wood from the USFS since he started.

The USFS assisted Hall in writing \$407,000 in grants from the Economic Action Program to get his plant up and running (Anderson 2003; Hall 2003). \$286,000 was used for turbine electrical equipment. \$105,000 paid for an engineer consultant who rated the boiler and completed a turbine search across the US to find a turbine that would work with the existing boiler. \$106,000 was used for the processing center. It costs 7-8 cents per KW from Hall's plant and the same KW will sell for 2-6 cents, depending on the market. The difference is paid by Arizona Power Service (APS) as a green premium (Johnston 2003). The green premium is paid for by the surcharge added to APS customer bills for the Environmental Portfolio Standard.

### **Forest Energy**

Rob Davis is President of Forest Energy Corporation. Forest Energy has been in operation for 12 years and produces densified logs, pellets and animal bedding. The pellets are an alternative fuel source for propane (Davis 2003). The green chips net energy value starts at 2.1 megawatts/ton, but after processing into pellets the net energy value is 4.95 MW/ton. Davis takes 10-12 semi tractor loads of wood chips per day (~80,000 pounds of biomass) and uses 70,000 tons of woody material a year. 50% of his material comes from forest restoration projects. Forest Energy employs 30 people and their main supplier is Walker Brothers, a logging contractor out of Eagar (Casebier 2003). Forest Energy prefers the material supplied by Walker Brothers because the quality is consistently reliable as is the supply. Quality is vital because "clean chips" are needed. Forest Energy has developed a "commercial wood chip" made from dirty material that utilizes the entire tree, including the bark and needles, but these pellets must

be used in specific commercial grade finances. Davis's biggest challenge is finding a steady supply of woody material (Davis 2003).

The amount Forest Energy pays depends on the moisture content of the wood material. Less than 10% moisture content is needed for their product. The pellets average 7% moisture content after they are produced (Casebier 2003). They produce about 35,000-40,000 dry tons per year of products and take in about twice that amount of material. Forest Energy will take in 53,000 bone dry tons of woody material in 2004 (this is different from wet tons above). About 25,000 bone dry tons will be forest material. They will produce about 45,000 dry tons of product. Forest Energy has the capacity to produce 80,000 dry tons of product but there is not enough of a market. About 8-9,000 bone dry tons is used a year for fuel to run the factory (Davis 2004). Forest Energy supplies wood pellets to Home Depot, Ace Hardware, Lowes and other stores. These pellets are used in stoves and are sold in 40 pound bags for about \$3 (Casebier 2003).

Forest Energy is trying to develop a market for boilers/furnaces that are fueled by wood pellets. These furnaces are used in Europe, but have not caught on in the US. The town of Eagar would like to buy one of these commercial furnaces and is remodeling Town Hall to accommodate one. They will apply to the Department of Energy for a grant to finance it (Casebier 2003).

### **Imperial Laminators**

Imperial Laminators, managed by Stephen Nicoll, employs 28 people and manufactures laminated logs for log homes (Nicoll S. 2003). Nicoll started the company 1979. Traditionally they have used southern yellow pine. If there were more ponderosa pine available, Nicoll would change his current product to use it. He can use the SDT ponderosa pine, but has no reliable source of the milled product. 20 more jobs could be added to his payroll, if he could find a supply for the pine. Imperial Laminators uses most of the scrap wood from their products. They heat their factory with a large wood furnace and sell scraps to Forest Energy for pellets (Nicoll S. 2003). Imperial Laminators also produces posts that anchor guardrails (Anonymous, 2002). It took five years to get contracts with the Departments of Transportation in AZ, CA, UT and WA for guardrail posts. They sold 4,000 to AZ DOT in 2002 to replace a large section of guardrail burned during the Rodeo-Chediski fire (Anonymous 2002).

### **WB Contracting**

Dwayne Walker is a local thinner or selective land thinner that helps supply SDT to the many utilizers in and around Eagar. He owns and operates WB Contracting with his two brothers. They are fourth generation loggers and have been in business for 16 years. They currently employ two, six people crews. They may hire a third crew soon (Walker 2003). Working with the town of Eagar and the USFS, the Walkers used Four Corners grant money (\$130,000) and Economic Action grants (\$100,000) to purchase a chain flail debarker and a chipper to get their contracting business up and running (Walker 2003). In 2003 Walker received a Four Corners grant for \$30,000 to rebuild and upgrade the hydraulics system of the chain flail chipper. Recently they were awarded a Forest Products grant from the USFS Forest Products Lab out of Madison Wisconsin. The Forest Products Lab has USFS dollars to inspire people to develop and create new wood products. Walker is developing a countertop made with SDT. The grant paid

for equipment to help produce a countertop designed by WB Contracting constructed from SDT in larger numbers (Walker 2003; Hopper 2004).

The Walkers work mostly on White Mountain Apache Reservation land because they complete more thinning projects than the USFS. They preferred to be paid by the ton of material removed. Walker is charging \$20 per ton for thinning and removal of debris on 900 acres on his current Bureau of Indian Affairs project (Walker 2003). Forest Energy pays him \$6 per ton to transport chips to their plant. In 2003, Walker was let a USFS contract to thin 480 acres around Pinetop Country Club. He charged \$22.86 per ton for that project. Walker also thinned the Blue Ridge Demo Area for the USFS in 2001. It was 400 acres and he was paid \$365 an acre. The USFS burned the piles left. WB Contracting intends to bid on the White Mountain Stewardship Contract. Walker can thin 2,000 to 3,000 acres a year (Anderson 2003). Walker's biggest challenge is negotiating government bureaucracy and changing market conditions (Walker 2003).

### **Cheyenne Log Homes**

Randy Nicoll is the owner of Cheyenne Log Homes, which is a family business that has been building log homes since 1990. In January 2003 the company started using ponderosa pine SDT and hired 5 people to produce the products (Nicoll R. 2003). The SDT is used not for the outside logs but for products to accompany the homes such as railings, vigas, and decorative posts. Walker Brothers and Gerald Reidhead are his main suppliers. The biggest challenge for Nicoll is getting material at a reasonable price (Nicoll R. 2003).

### **Mountain Top Wood Products**

Neil Brewer is the owner of Mountain Top Wood Products in Show Low, AZ and he is a third generation logger. His company makes posts, poles, peeled poles and specialty requests. The company was started in 2001 when he received a Four Corners and Economic Action grants of \$49,000 and \$85,000, respectively (Brewer 2003). He used that money to purchase a debarker and shaver machine to develop a product using SDT for a new fence panel design. The town of Pinetop-Lakeside provided the match by supplying the workforce to make the panels. Brewer supplied the material for the panels. In 2003 he received a Rural Community Development grant for \$40,000 for new product demonstration, log sort yard and a market development study to for a new utility shed in the form of log cabin kits that are readily assembled. Brewer also received a \$253,000 grant from Southern Navaho County (Brewer 2003).

Brewer currently employs three people. In 2003 the post and pole market went down hill due mostly to the influx of cheap lumber from Canada. Prior to this he employed seven people and processed 1,400 logs per week. Now orders are down and he produces posts, poles and peeled poles as they come in as special orders. (Brewer 2003).

### **Future Challenges for the Utilization Industry**

The biggest constraint for Eagar utilizers and providers continues to be a reliable supply of SDT. In 2002 the USFS had 100,000 acres NEPA ready for contracting, but the Rodeo Chediski Fire burned 80,000 of it. According to Bill Ripley, Forester at Springerville RD, there have been no contracts around Eagar. Ripley feels the reason is litigation created by environmental groups

(Ripley 2004). In addition to having acres ready for treatment, finding contractors continues to be a challenge as well. The 150,000 acre Stewardship contract promises to release lots of material. The deadline for bids is June 3, 2004. The USFS hopes to make a decision in July 2004 and the contract in force by September (Hopper 2004).

Longer term goals for Eagar include establishing a woods products association for local craftsmen and a nonprofit association to create a branding of White Mountain wood product (Greenwood 2003). “Whether someone is making something here or in Show Low, if it has that, we hope to establish some type of recognition” (Greenwood 2003). Oriented Strand Board (OSB) is another option for the Eagar area. Louisiana Pacific is currently looking at opening a plant in Snowflake, Arizona, about 45 miles northwest of Eagar. Louisiana Pacific has 30% of the OSB market. There is no agreement yet with the company and it would take a \$100,000,000 investment (Hendrickson 2003). If the Louisiana Pacific negotiations do not work out, the state will look for another OSB company.

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