Community Assistantship Program

Certified Firewood Marketing Plan
For Certified Wood from Central Minnesota

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Prepared in partnership with
MN DNR - Department of Forestry

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University of Minnesota
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For Certified Wood from Central Minnesota

January 5, 2001
First Draft

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1.0 Executive Summary

Certified firewood justifies further investigation. It appears that a large operation could potentially sell FSC certified firewood within at least a 900-mile radius of Aitkin, and perhaps nationwide. If handled properly, sales could top $25 million within five years, with an annual output of over 40,000 full cords. We expect most sales to come from premium bulk sales, with premium, boxed firewood, campfire wood, and separately branded low-price bulk firewood making up the rest. This will offer a product to all major segments: pleasure burners, wood heaters, and campers.

The message for the premium products will be "deep green" environmental and social enhancement from a consistently super-premium, high service product. A firewood kiln should be used to dry the wood in a couple days instead of the 1-2 years it normally takes, thereby vastly improving cash flow and market response. To increase quality, increase worker wages, and minimize startup risks, contracted partners rather than employees should do most of the work. Under such a plan, the local community would also benefit greatly. Most workers could earn effective employee wages of $15 to $20 per hour, with most employed all year.

Although a large operation appears to have great potential, small one to three person firewood companies would be much less lucrative. Under ideal conditions, working with the best machinery, and selling the entire output of 800 cords per year, the owner of such a company would make the equivalent employee wage of only $11 per hour, with seasonal employees paid $8 to $9 per hour. If 25% of the output was not sold until the second year, the owner's effective pay would drop to about $6 per hour.

For the large operation, however, this report justifies moving to the next step: Complete market research to survey consumers, design the product, test prototypes and conduct a pre-test market. Then, the Minneapolis-St. Paul area can be treated as a test market in year 1, prior to full launch in year 2.

2.0 Situation Analysis

We recommend focusing on the environmentally concerned pleasure burners. This will maximize sales of premium quality and premium priced bulk firewood. They are most likely to pay the prices and appreciate the high quality and strong environmental message. Gaining their trust is key, but this is an experience-based attribute. Therefore, they must try the product and be given incentive to make the first order. Free boxes should induce trial, and a significant donation to their choice of environmental organizations should generate the first order.

There are no large competitors -- the largest appear to have less than 1% of the market. No company has ever marketed environmentally certified firewood although most claim to use environmentally correct timber. The ease of entry has traditionally made this a low profit market although Duraflame and others who entered it with a unique product have found large-scale success.

For most cities within $50/cord trucking distance of Aitkin, prices average $216 to $271 per oak cord after subtracting trucking costs. Standard oak firewood prices appear to average $380 per cord in the San Francisco area, yielding a net after-trucking profit of $40 per cord more than sales in Minneapolis-St. Paul. Other producers in the Boston-New York area charge over $500/cord for "gourmet" or "super premium" firewood although standard local market prices of $320/cord appear to approximately the same as Minneapolis-St. Paul after accounting for trucking costs. In addition, we do not know how extensive the potential market is at the higher prices or if there are other hidden costs that account for this discrepancy. Still, it does demonstrate that there is a potential to sell firewood at much higher prices if a strong brand image is created.

2.1 Market Summary

There are three main target markets: pleasure burners, campers, and "other" wood heaters. We recommend four products to target each group, but the key will be the pleasure burner.

The environmentally concerned people who burn wood for pleasure, not heat, are most likely to buy premium bulk firewood. This will account for the lion's share of profits and sales. It should be marketed under a strategy to induce initial trial through free samples, certification, and environmental group tie-ins, then offer rebates as donations to environmental charities if a bulk order is made. Intense efforts should be made to build customer relationships after the sale in order to spur reorders -- at full premium prices.

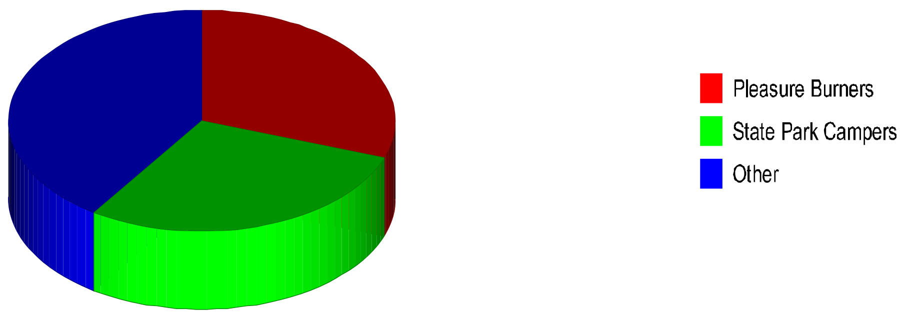
Packaged firewood should be sold in boxes to impart an image of uniqueness and higher quality. It will be marketed as a premium, high priced product. This will have both pleasure burner and campfire wood versions. Lastly, commodity bulk firewood will be sold under a completely separate brand to the "other" people who burn wood for heat or buy mostly on price. It will be sold as low price, satisfaction guaranteed.

Target Market Forecast

Potential Customers	Growth	2001	2002	2003	2004	2005	CAGR
Pleasure Burners	3%	63,000	520,000	535,600	551,668	568,218	73.30%
State Park Campers	2%	60,000	61,200	62,424	63,672	64,945	2.00%
Other	5%	84,000	473,000	496,650	521,483	547,557	59.79%
Total	54.54%	207,000	1,054,200	1,094,674	1,136,823	1,180,720	54.54%

Target Markets by Number of Households Buying Firewood

Year 1



Minneapolis-St. Paul Market Only

2.1.1 Market Demographics

Marketing should be focused on three types of target customers:

1. Environmentally concerned pleasure burners: We define these as households who are concerned about environmental issues and who burn firewood for pleasure, not heat. They comprise the most important target, accounting for over 2/3 of anticipated first year sales. There are about 130,000 pleasure burner households in the Minneapolis/St. Paul Area although about 30,000 of these get most of their wood for free. The remaining 85,000 buy nearly all of their firewood, and we estimate 63,000 of these to be in this target market. They consume an average of 0.5 cords per year. Of this, 77% is burned in a regular masonry fireplace, with the remainder evenly split between stoves and modified fireplaces. We assume that the other potential metropolitan markets have a total of 520,000 such pleasure burners, based on US census figures.

2. State Park campers: This needs an entirely direct approach, more based on politics. The objective is to have the State set a standard requiring third-party certified firewood for all State Parks. Objections could come from the forest products industry, which uses non-verified SFI certification, and current suppliers, who will not want to change to certified supply sources. The Parks will be concerned that the prices will not increase too much and that a FSC certified supply will be available throughout the State. State Parks also need to acquire all their firewood through bids, but the typical lot is over 100 packages, so low bidding will easily cover the variable costs. The same high-quality firewood should be provided and used as an inroad to new pleasure burners. We do not anticipate selling a significant amount of campfire wood outside State parks, due to very low demand in other camp areas. However, it may be possible to contract with other public parks outside Minnesota, although this has not been examined.

Private campgrounds were examined. Although they will buy some product, they do not appear to justify targeted marketing efforts at this time. Nearly all firewood purchased by campers is bought at campgrounds, so any sales to this market will need to be targeted at the campground retailer. Our market research estimates only 1000 cords of campfire wood is purchased outside State Parks annually. In addition, the private campgrounds that buy wood usually pay a very low price for low quality material that does not fit the other products. However, we estimate 5% of campgrounds would buy our boxed wood for re-sale. This will only account for about 100 cords of annual sales. They will be handled the same as other boxed wood retailers.

3. Other firewood buyers: These are people who buy firewood mainly based on price although they are also concerned about the quality. In the metropolitan area, they are mainly pleasure burners and supplemental heat burners. The 20,000 pleasure burners not in the above target group are in this category, and we assume they consume somewhat more wood, probably averaging about 0.7 cord per year. The supplemental heat burners consume an average of just under 1 cord per year, with the rate tied mainly to natural gas and fuel oil prices. There are about 53,000 wood heating households in the Minneapolis-St. Paul area that buy their firewood. Major firewood heaters consume an average of 7 cords per year, and there are about 1000 in the metro area who buy their firewood. There are also about 110,000 mostly supplemental and major wood heat burners outside the metropolitan area, in the remainder of Minnesota. These rural areas have nearly all people burning wood for heat, just the opposite of the metropolitan area. However, prices are generally much lower in the rural areas, so they do not justify marketing efforts. For all these groups, their consumption is closely tied to natural gas and fuel oil prices. They mostly use stoves although some use regular masonry fireplaces or wood furnaces.

2.1.2 Market Needs

Certified firewood must <u>consistently</u> provide the pleasure burner with a relaxing experience that makes them feel good inside. When they get the wood, store it, bring it into their living room, burn it, and learn more about it, it must help them unwind or create a romantic mood, never adding stress to their lives. They like the idea of doing small things that clearly help the environment while benefiting underprivileged communities and people. They also want firewood stacked in their living room that they can be proud of, both because of the way it looks and because of what it stands for. They know that other firewood dealers often provide unseasoned wood, cheat on the volume, or sell poor species. They want to work with someone they know will treat them more fairly. They are also willing to pay more for all this.

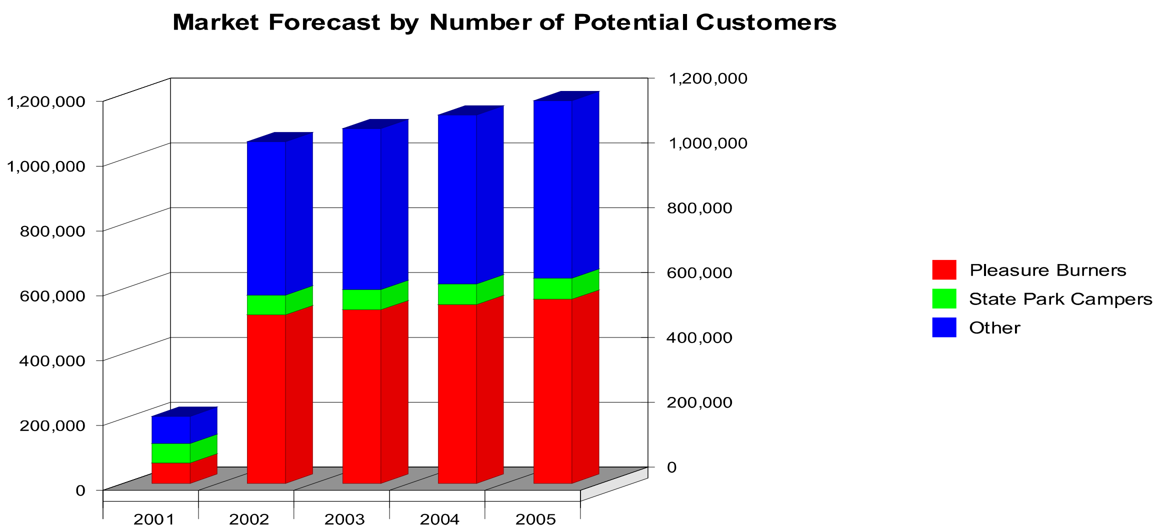
The consistently high quality fire is produced by carefully controlled moisture content in the wood from the kiln drying. Quality control will also require suppliers to provide dirt-free wood with unmarred bark, and inspectors must remove any imperfect pieces prior to packaging. Those pieces that fail inspection will go into the "other" bulk firewood. A close relationship with the land managers will ensure sound environmental management, along with an environmental and community audit system that is totally transparent to the pleasure burners. The pleasure burners should always be provided a means to learn as much as they want about the Eco-social mission, even encouraging on-site visits and participation in activities such as tree planting so they can feel that they are giving back to the land.

2.1.3 Market Trends

Third party forest certification through the Forest Stewardship Council (FSC) is definitely hot. Home Depot, Lowe's, and a variety of retailers have recently begun favoring certified wood. Also, there is a strong trend in most consumer products toward "green" alternatives. In addition, environmentally correct raw materials are becoming more and more important to pleasure burners in the firewood industry. California Hotwood, North America's largest natural firewood manufacturer, emphasizes the "environmental responsibility" of its product more than any other factor. Duraflame, the leading artificial log manufacturer, also talks extensively about the environmental correctness of its sawdust and wax log. Paul's Firewood, one of the largest suppliers in the Minneapolis-St. Paul Market, tells potential customers that they have an environmentally correct source for their material. However, all of these companies only say that they source from government-run timber sales. They offer no proof, let alone certification. They certainly do not emphasize the environment as part of the total fire experience, even though they seem to recognize that their customers want this.

We recommend meeting this market need by establishing a "deep green", Eco-centered, socially responsible organization providing super-premium firewood. Such an approach is similar to "Ben and Jerry's" ice cream or "Body Works" cosmetics. Both companies sold products that few customers previously thought of as environmental, yet they enjoyed phenomenal initial growth. In contrast, a high percentage of pleasure burners recognize the potential environmental impacts of firewood, so they should be even more receptive to the "green" labeling. Based on Ben and Jerry's and Body Works, if this message is tied to a wide variety of exotic yet effective products, then the market should be even more receptive.

Another trend worth noting is the volatile, currently upward, direction of the overall firewood market. This is due to the major firewood consumers who rely on wood to heat their home. Saving money primarily motivates them so as oil and gas fuel prices increase, they buy more wood. There is little profit potential here and the buyers are unlikely to give significant importance to FSC certification. However, this does provide an outlet for lower quality firewood. The "other" bulk product allows access to this large, although marginal, market.



2.1.4 Market Growth

In Minnesota, about 11,000 new pleasure burning fireplaces were installed in 1999, and this rate is increasing by about 2% per year. The average consumption rate per pleasure burner varies by about 25% annually, depending on the weather. But in general, it hovers at about 2/3 cord per pleasure burner and it is not changing. Firewood prices are also increasing at about 6% per year due to raw material supply competition and limitations. This is a total annual sales increase of 8% per year for the pleasure burner market, but annual sales typically fluctuate by up to 25% based on weather and alternative fuel prices.

In Minneapolis-St Paul, the current strictly pleasure burner firewood market is about $11 million. When including other cities, we estimate the minimum potential strictly pleasure burner market at $97 million, and we assume that this entire market is growing at 8% annually the same as Minnesota. This minimum potential market includes the metropolitan areas of Chicago, Detroit, Grand Rapids, Michigan, Indianapolis, Kansas City, Milwaukee, and St. Louis, since all these cities are within $50/cord trucking distance of Aitkin, Minnesota. An Aitkin County based producer can meet the current local premium prices in these markets without compromising profitability. The total volume purchases from all segments is about 600,000 cords, and this is growing at about 2% annually.

2.2 SWOT Analysis

We appear to be on the brink of a major niche market opportunity. Increasing concern, firewood prices, and the proposed design all favor this opportunity at this time. However, the large degree of uncertainty in this unproven market, combined with the potential for further price fluctuations and competition, present great risks.

2.2.1 Strengths

- Increasing firewood prices and increasing environmental concern
- Strong business management skills
- Large supply of low-priced FSC certified raw material and close relationship with suppliers
- Abundant labor
- First to market with FCS certified firewood
- Large potential sales volume in a niche market
- Limited up-front risks due to contracted activities
- Kiln drying and contracted production allow fast adaptation to market fluctuations with minimal up-front investment

2.2.2 Weaknesses

- Uncertain market acceptance of FCS certified firewood and premium product
- Uncertainty about effectiveness and economy of kiln-dried firewood
- Difficulty in managing a cooperative of like-minded producers
- Shifting risks to contractors limits company profitability

2.2.3 Opportunities

- New product category from FCS certified firewood
- Internet-based sales and after-sale customer development
- Specific niche: Environmentally concerned, high-income pleasure burners
- Strong social and environmental mission improve customer and worker retention

2.2.4 Threats

- Oil and natural gas price declines will result in sharp reductions in firewood costs and sales.
- Competition could become easily established, including competition from the contracted producers.
- Existing synthetic log or larger firewood companies could target the same certified firewood niche.
- Existing premium firewood suppliers can lower prices or mimic tactics.
- FSC certification could come under attack for unrelated problems and discredit the entire organization in the process.
- Competition for raw material could increase wood prices too much.

- As additional land becomes FSC certified, the uniqueness of the product could decline.
- Unknown weather-related market fluctuations could occur.

2.3 Competition

There are no dominant competitors in the Minnesota firewood market. This is due to the current lack of scale economies, ease of entry, and low-value commodity status of firewood. The Twin Cities yellow pages lists 39 firewood producers and 20 regularly run classified ads in the Star-Tribune. They are generally very small family-owned or single-person operations supplying less than 500 cords annually, or less than 1% market share, and their quality varies greatly.

Additionally, hundreds of loggers and other vendors sell firewood directly to the same customers year after year. These suppliers do not usually advertise at all, and they also have less than 1% market share each. They rely on their reputation and word-of-mouth and their quality also varies widely between suppliers.

The largest competitors appear to be Minnesota Firewood, which sells to a multi-state market, and Paul's firewood, a Little Falls company. Both organizations sell higher-grade firewood for premium prices to the pleasure burner market, and they have more consistent quality. They sell 1/3 cord of premium mixed hardwoods for $125 and $148 respectively, compared with the general market rate of $80-$90.

2.4 Product Offering

The best market position is high quality, socially and environmentally responsible firewood as part of a pleasant fire experience. The key to success is consumer trial and consistent supply of easy-starting, nice-looking firewood from well-managed forests that benefit local communities. As a socially responsible organization, adherence to the highest standards of honesty and responsibility are very important so the trust of the customers is not broken. Each package or delivery of firewood should contain information about the source and web links to more detailed facts or follow-up.

1. Boxed firewood is for high income, environmentally concerned pleasure burners who burn smaller volumes annually. It comes in several species including pretty paper birch; better flame, mixed hardwoods, easy-burning basswood, and long-burning oak. If sources can be identified, there is also a good market for low-grade but fragrant species, such as hackberry, black locust, or cherry, and perhaps super-long-burning ironwood. Each package should contain enough wood for a 3-4 hour fire, fire-starters, and kindling. Perhaps most importantly, the package must also include information about the source of the wood, other forest and fire making facts, community enhancements, and the benefits of FSC certification.

2. Premium bulk firewood is the most important product. It should be sold on 1/3 cord, or 43 cubic foot, pallets. This is a face cord and it is the standard measurement unit for the industry. The target market for this product should be the environmentally concerned pleasure burner described previously. This must be the same quality as the boxed wood, but it will be delivered and it will not be boxed. The pallet will allow for efficient transportation and unloading, storage off the ground, and definite volume determination. The pallets will have mixtures of wood customized per buyer requests, with a wood identification guide. These deliveries will also include a packet of the same information included with the boxed wood and an appropriate amount of kindling and fire starters.

3. We expect the smallest sales volume to come from campfire wood, most of which will be provided to State Parks under contract. Since these are bid jobs, much of this could be provided directly by the producers or by other non-affiliated producers, but they would still draw from the certified source. This assumes that the State will require the procurement of third party certified firewood -- they currently do not require this. But, they have said they will, if sources can be guaranteed. Any wood we provide directly will include the same information packet that the other types receive.

4. Other bulk firewood is designed for the other segment. It is completely separate from the other brands so it appears to come from a different company. It is sold as low price, fully guaranteed, and certified. It is made up of firewood that did not pass the inspection for the premium brand due to appearance.

Further supporting the competitive edge will be the kiln drying of the firewood. Although unconventional for firewood, kiln drying is very important to an efficient operation. Its main benefits are:

1. Relatively simple and inexpensive compared to lumber since splitting is not an issue in firewood.

2. Cost-effective since it will speed up cash flow by 1 to 2 years.

3. Allow for fast response if market demand increases unexpectedly.

4. Assure consistently low moisture for quick-starting and easy burning fires with plenty of flame action.

5. Kill any insects in the wood.

6. Produces a cleaner-looking, un-weathered product.

In addition to kiln drying, the products will be further differentiated through:

1. Forest Stewardship Council (FSC) labeling, which is the highest level of environmental and socially responsible certification for forest products.

2. Eventual Underwriters Laboratory (UL) and American Chimney Safety Institute (ACSI) safety certification. No natural-firewood product currently has such certification, but Duraflame, a synthetic log, does. The consistent moisture content provided by the kiln drying should allow for such a certification to assure customers of safety. However, laboratory tests will be needed to confirm this.

3. Eventual ISO 9000 certification to assure consistent quality.

4. Strict internal quality controls and testing to assure easy starting, clean burning, good looking, bug-free firewood.

5. After-sale relationship building through newsletters, promotional items, free "give back to the land" tree planting parties, and other activities to build a strong Eco-social image.

2.5 Keys to Success

The key to success in the premium bulk pleasure-burning market is consumer trial. The market is filled with volume fraud, and the quality is highly variable. Yet due to their lack of knowledge, most consumers cannot determine quality prior to purchase. Because of these factors, the target group will only purchase this product from a supplier they trust. This trust is built by experience, but experience cannot be gained unless the customer tries the product. In addition, we expect the majority of sales and 75% of operating profits to come from premium bulk firewood, and this is a lost-for-good market. That is, because of the necessarily high level of trust, customers will stay with us for good. But, if we lose them, they are gone for good.

Both the lure of getting permanent customers and the need to build trust combine to create a large incentive for extreme efforts to induce initial consumer trial. This should involve dropping off free boxed samples at homes in affluent neighborhoods that appear to have fireplaces, and offering large initial purchase "rebates" in the form of charitable donations. The samples would be delivered by the contract sales partners who will have semi-exclusive territories, and they will receive a significant commission from any sales that result. The same sales person will supply the area retail outlets. The company will only need to pay the cost of the sample box. This should include a variety of firewood "flavors", the normal environmental information, location map for area retail stores, and order forms with charitable rebate certificates. Fireplace dealers and masons should also supply samples. They can give them to people getting new fireplaces.

In addition to the samples, environmental charities should be contracted directly as partners to make sales to their members. They would receive the standard sales commission for the first bulk premium order, plus the charitable rebate if the purchaser chooses to send it in for them. Most importantly, the charity should be allowed to chose the type of management used to produce the firewood for its members. For example, the Audubon Society might chose a project where trees are cut to improve neo-tropical migrant habitat, while the Ruffed Grouse Society can chose grouse management harvests. The group's members should also be encouraged to visit the sites in the summer for a party where they can seed openings, plant shrubs, and give back to the land. The company's after-sale relationship department would organize such events.

Once trial is induced, the company will receive the customers trust if they <u>consistently</u> produce firewood that is:

- easy-starting
- clean-burning
- nice-looking
- plenty of flames
- customer feels good about using

The consistently high quality produced by wood control and kiln drying allows the product to meet the first four points. Most importantly, though, the FSC and other certifications address the last point before sale, and literature and other after-sale support moves more customers to increase their loyalty after the sale.

2.6 Critical Issues

The critical issues from the SWOT analysis include:

<u>A critical need to induce trial:</u> As discussed previously, initial consumer trial is the key to success in the premium bulk firewood market. If trial cannot be induced, sales cannot possibly be achieved. If high levels of trial are attained, sales will quickly follow.

<u>A requirement for better understanding of the target market.</u> Understanding the environmentally concerned pleasure burners is critical. Additional market research <u>must</u> be done to answer basic questions about their acceptance, ideal attributes, preferred channels, and many other features. This will address the market threats more than anything else.

<u>Additional research about the feasibility of kiln drying firewood</u> The cash flow, product quality, ability to fill re-orders, and uniqueness rely heavily on this unproven technique. It must be capable of quickly producing a perfectly consistent product.

<u>Carefully set up and nurture the producer and sales partnerships</u> The producers, sales people, and partnered environmental organizations must feel as though they are part of the entire organization. They must be involved early on, respected, and made a true partner in the success.

3.0 Marketing Strategy

3.1 Mission

Produce a high-quality pleasure burning experience through the sale of premium-quality FSC certified firewood. This shall provide a market for low-grade FSC certified timber and solid employment opportunities in Central Minnesota

3.2 Marketing Objectives

We recommend positioning the premium bulk and boxed products as the absolute highest-quality, most Eco-friendly firewood. Our marketing strategy assumes that we will attain at least an 8% market share in the strictly pleasure-burning market in the Minneapolis-St. Paul Metro Area in the first year of operation, and a 5% share of the total purchased firewood market. This will be accomplished through extensive public relations, targeted advertising, rebates, tie-ins with environmental organizations and new stove dealers, marketing through environmentally-conscious retailers and gas stations, and web links to provide additional environmental and product-use information.

We also assume that Minnesota State Parks will require the use of certified firewood, and that the company will produce 80% of this market. We expect to achieve a 5% share of the remaining campfire wood market.

The other bulk firewood is in a commodity market where consumers will switch suppliers based mostly on price. Trust also plays a role, but much less than in the premium market. This product should be sold under a completely separate brand with no reference to the rest of the company. It should be positioned as the low price firewood with satisfaction guaranteed. It will have no sales force, only telephone and Internet orders, with only product-related customer service. Advertising will probably be limited to small display ads in newspaper classifieds and the yellow pages. FSC certification should be noted but not stressed.

Local economic improved is also critical, and this organization could provide that. Contracting with socially minded not-for-profit job shops would be especially beneficial. Minnesota Diversified Industries and the Occupation Development Center have both expressed interest. Both organizations work exclusively with disabled people to develop job skills.

3.3 Financial Objectives

1. Achieve year 1 sales of more than $2 million and become profitable by year 3.
2. Reduce sales and marketing to less than 16% of sales by year 3.
3. Increase the contribution margin to over 30% of sales by year 3.

3.4 Target Markets

We will initially target the environmentally concerned pleasure burner most intensively. These are people who burn wood mostly in traditional brick fireplaces a few times each week. They are not looking for heat, but rather a relaxing, romantic, or social experience. The fire helps to establish the atmosphere, or mood, that they seek. They are generally concerned about the environment, and they view environmental and social responsibility as part of a high-quality image. Firewood is especially important environmentally since it appears very natural and close to the source. They are also net-savvy, high-income, and generally moderate in their social views. Helping less privileged people also appeals to them.

In the Minneapolis-St. Paul area there are 98,000 pleasure burners who buy wood strictly for pleasure, not heat, and another 31,000 who buy wood mostly for pleasure but also use it for heat. Our target only includes the strict pleasure burners although it will also appeal to many of the pleasure and heat burners. Based on other State surveys, 75% of the population is concerned about the environment and will try to consider its impacts when buying products. If this same percentage holds for pleasure burners, approximately 85,000 of the strictly pleasure burners will be significantly impacted by environmental marketing. The pleasure burner segment is consistently growing at about 3% annually based on new fireplace sales. Meanwhile, the major and supplemental wood heat segments have been in decline but just started to grow sharply in the 1999-2000 heating season. Also, the highest value product group, packaged firewood, only appeals to the pleasure burner segment. Pleasure burners also make 2/3 of the firewood purchases in the Minneapolis-St. Paul Area and a higher percentage of them are high-income. In the other metropolitan areas within $50/cord trucking cost of Aitkin, this target makes up 520,000 households with an annual consumption of 260,000 full cords.

The "other" segment primarily burns wood for heat to save money. Some are also pleasure burners who are less willing to pay for quality or who burn wood for heat and pleasure. They generally buy low priced, high BTU firewood from a reputable dealer at market prices. Most will choose an FSC certified product if all else is equal, but they will not assign significant value to the certification or an environmental message. This market is currently growing rapidly due to the increase in natural gas and fuel oil prices, but they will also fall rapidly as these alternate fuel prices decline. The Minneapolis-St. Paul estimate of 84,000 is based on the 1996 survey, 1999 US Census housing surveys, and market growth. Other metropolitan areas are based on adjusted consumption rates from Minneapolis and US census surveys. We estimate 480,000 such households in metropolitan areas within $50/cord trucking cost of Aitkin, with a consumption of 343,000 cords. State Park campers are based on information provided by the State Park system.

3.5 Positioning

For the premium bulk and boxed products, the competitive edge will be consistently unparalleled highest-quality firewood that links with the land and community it came from. The boxed product is particularly important since it will initiate most consumer trials. Unlike competitors with plastic-wrapped logs, certified firewood will be sold in an attractive, unique, Eco-designed box with partially removed side and top to allow for viewing the product. The box will also allow them to keep their car and living room clean when they bring the wood home. Interactive displays will provide a variety of exotic "flavors" produced by different tree species, labeled so pleasure burners can clearly understand the attributes and learn more about the wood and where it came from. The boxed wood is mainly a vehicle to move up to a bulk firewood order. However, firewood will be only a part of an entire social-Eco experience. Unlike any competitor, the information and after sale relationship we offer will help our customer feel warm inside in more ways than one.

Of course, this design may change once the target market needs are more fully defined. Unlike competitors, certified firewood will be completely driven by a keen understanding of the target market. The premium certified wood experience would never be a commodity.

"Other" bulk wood, however, is basically a commodity in a price-driven market. This product is positioned as the low price, satisfaction guaranteed, reliable quality firewood. The guarantee is important to reduce trial risk and create the image of a reputable dealer. Proper stacking should also be emphasized since many lower priced dealers cheat on volume by stacking crisscrossed pieces. This product must be completely separate from the premium product, with a totally different brand and no reference to the rest of the company. It will be identified as certified only to increase the reputable image and preempt certified competition that might otherwise emerge from this large segment. However, environmental certification will not be a key part of the image.

3.6 Strategies

The market strategy differs for each product group. However, in all cases, contract partners will do everything that can be measured and paid based on performance. This will improve system efficiency, reduce start-up risks and costs, and result in higher quality with higher profits due to a more motivated workforce. Employees will coordinate some jobs that cannot be easily measured, such as after-sale relationship building.

Boxed firewood is mostly an always-a-share market. That is, these customers will hopefully prefer our product, but they will also buy other brands of firewood throughout the year. Once they decide we are acceptable, we will always have a share of their purchases, but we will almost never be their exclusive suppliers.

Premium bulk firewood, in contrast, is a lost-for-good market. Once these buyers decide to use us, they will generally buy one year's supply at a time and they will stick with us from year to year. If we lose them, they are generally gone for good. However, if we get them, they will stay with us alone for at least one year, and generally much longer. It is also the high-profit product line that all potential customers should be driven toward. Trial and trust-building are the keys here. Free samples, larger first-purchase rebates to environmental charities, FSC certification, tie-ins with environmental groups, after sale relationship building, and other potential safety certifications are all critical here.

Unfortunately, campfire wood is almost entirely a strict commodity always-a-share market. Almost all will be sold to State Parks on a low-bid basis. However, it might be possible to use this to introduce people to the premium brand, with the hope that they will add it to their portfolio for at-home burning and eventually make a premium bulk purchase. Market research should test this theory.

The first key is to lobby for changing the State requirements to mandate certified firewood; then be the low bidder. Campfire wood has the main advantage of allowing sales and operations in the summer for better cash flow, so it could be sold for much lower prices since only the variable costs need to be covered. It should be the same as the premium bulk product to build the brand in induce bulk orders at home or packaged purchases, and the message to the campers should be the same as the premium message.

"Other" bulk firewood is a commodity always-a-share market. The customers will switch sources if they find a significantly less expensive reputable supply. Low price and consistency are the keys. It will be sold as always-low price, satisfaction guaranteed, fully seasoned hardwood. Sales should be almost entirely oak although any other wood that does not make grade for the premium product will also be sold here as "mixed hardwoods".

3.7 Marketing Mix

Certified firewood is best positioned as a high-quality, high-price product. The marketing tools for packaged wood must correspond to this message, as defined by the target market. Promotion will be mainly though public relations to build trust, but high-quality advertising should include testimonials to mimic word-of-mouth and further reinforce trust. First-time bulk purchasers should be given significant discounts or other incentives to draw them in, assuming that market research verifies that bulk purchasers remain loyal to their suppliers. Service must also be unparalleled, with same or next-day bulk deliveries, free dry storage assistance for bulk buyers, a helping web site, and a toll-free pleasure fire help line. The social and environmental message will only go so far -- sound and extensive marketing is needed to achieve and maintain segment leadership.

The high-quality Eco-social message must be constant throughout all premium products and markets. Therefore, the "other" commodity firewood must be offered under a totally different brand. It will rely mostly on display-classified ads, yellow pages, and possibly some direct mail. Sales will mostly grow by word of mouth. Because of this, it should start with a very small market share that grows over time. Initial prices will need to be at the lowest end of the market in order to induce people to make their first order. Later prices can be slightly higher but still at the lower end of the market.

3.8 Marketing Research

Research is critically needed to fully understand the high-income, environmentally concerned pleasure burners that will be targeted. This will begin with phenomenological focus groups, then move to attribute surveys to design the product and service to maximize customer satisfaction. After this, prototypes will be tested, and then a pre-test-market should be done. The year-1 Minnesota sales should be treated as a test market. Throughout this, ongoing focus groups and attribute surveys will be needed, especially in new markets. Retailers must also be surveyed to aid in the design and marketing of boxed products.

Boxed-wood customers should also be encouraged to send in a reply card to receive a firewood newsletter and other offers, and they will also be added to a database. Bulk wood customers will automatically be added to the database and newsletter when they order wood. This database will provide a source for more careful examination of customers and their changes.

The US Census also conducts research on heating sources, including firewood, and they list the exact number of households using wood heat both as a main source and as supplementary heat. Unfortunately, the full results of the survey on housing from the 2000 Census will not become available until 2003. Most of the other cities have been surveyed in the past 5 years.

Additional general surveys should also be conducted to estimate changing market size and competitor sales.

4.0 Financials

Sales are expected to be $2.3 million in year 1 during the Minneapolis-St. Paul test market. In year 2, sales should grow to over $17 million as other metropolitan markets are entered. For the next three years, sales should grow by an average of about 10% annually as the brand builds, the target market grows, and market prices increase.

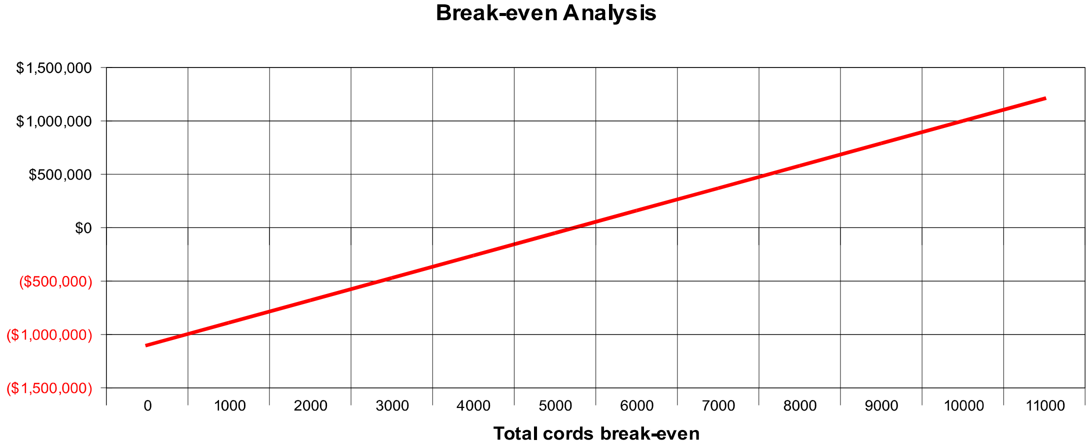
Year 1 operating profits should be close to breakeven, with a large in year 2 due to launch expenses. After this, the costs will reduce sharply as market entry expenses decline. Year 3 should have an operating profit of $6.9 million, with growth of over 10% for the next two years. Sales and marketing expenses should be about 40% of sales for the first two years, dropping to around 15% of sales thereafter, with further smaller reductions as the brand builds.

4.1 Break-even Analysis

The break-even analysis is based on the "burn-rate" needed to keep the business running as planned through the end of the first full fiscal year, not just the fixed costs. About one-quarter of the roughly $600,000 startup cost involves the beginning of the test market campaign in Minneapolis-St. Paul, with recruitment, market research, kiln construction and other startup expenses making up the remainder. The rest of the fixed costs related to the initial test market campaign and other expenses total about $500,000, for a total fixed and startup cost of about $1.1 million. The costs of harvesting, processing, and packaging are not directly at risk since they are covered by contracted partners, and most retail sales expenses are covered by a contracted sales force. Bulk order customers are also expected to pre-pay with a credit card, so delivery expenses and accounts receivable should not be an issue there. Retail sales and campfire wood sales will be carried as receivables for 30 days and are therefore included for this period.

Unit sales are based on prior research conducted by the State of Minnesota, but estimated share rates must be verified with additional consumer research.

Assumptions:	
Average Per-Cord Revenue	$390.00
Average Per-Cord Variable Cost	$180.00
Estimated Fixed costs	$1,100,000
Total Cords to Break-even	5,238
Total Sales Break-even	$2,042,857



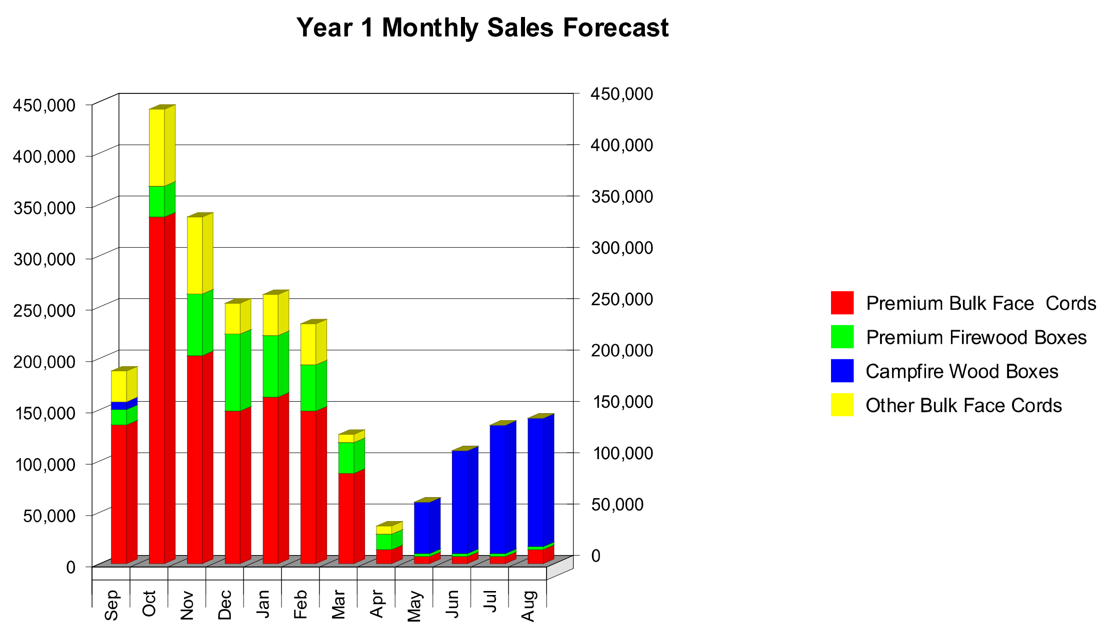
Units break-even point = where line intersects with $0

4.2 Sales Forecast

The forecasted year 1 sales of $2.3 million come mostly from the target market of high-income, environmentally concerned pleasure burners, and year 2 sales of $27.2 million come almost entirely from this group.   Based on average market entries for non-durable consumer goods, we estimate that the company should provide 9% of their total firewood purchases in the first year of entry into each market. Combined with a 3% share in the "others" market, this results in a 5% share of the entire local firewood market from the full product line. The estimates also include a 0.5% share of "others" in the greater Minnesota firewood market.

We estimate production and sale of 6,600 full cords in year one, rising to 45,000 cords in year 2 and 50,000 full cords in year 3, with about an 8% increase for the next several years thereafter. Actual purchased volumes should be slightly higher than this since the wood "loses" volume when split and stacked.

Additional market research is needed to verify these rough assumptions. Also, the fiscal year begins on September 1 to coincide with the beginning of the firewood season.



4.3 Expense Forecast

Trial is the initial key to success in the premium bulk market. These customers must make a 6-month to one-year commitment when they buy.   Volume fraud, unseasoned wood, and poor species are rampant in the industry, so the high-income customers we seek are reluctant to switch once they find a good supplier. However, if we provide a vastly supplier product, they will switch once they trust the quality and consistency. Inducing trial is the goal of the marketing, especially through the following:

Free Trial: The most effective way to induce trial is to deliver free boxed samples to every high-income pleasure burner available. This can be done door-to-door in higher income neighborhoods and through fireplace dealers and masons.   In both cases, delivery should be done through contracted sales force, but boxes will need to be provided at about $1.50 each.

Rebates to Environmental Charities: Discounts are usually the best way to induce an initial order. However, we do not advise direct discounts since this will encourage purchase by price-driven households, but we seek pleasure burners who are not price sensitive. Instead, we advise a rebate payable to the environmental charity of choice. This will reinforce the environmental message and attract those who are likely to meet the environmental target. The rebate will be for $40 per face cord, but we estimate an actual cost of $10 per premium face cord since many will not return the rebate cord. We advise trying to get charities to sell to their members directly, earning the same commission as the rest of the contracted sales force plus the rebate. They could also determine the management for the timber sales where the firewood is harvested to coincide with their group's objectives. This charity tie-in will also add legitimacy and greatly improve trust.

Advertising: We recommend highly targeted advertising as determined by research with the pleasure burner target market. Testimonials would mimic word-of-mouth and likely build trust along with emphasis of certifications and environmental group tie-ins. Advertising should end after the launch since it is a very expensive way to build share compared with public relations.

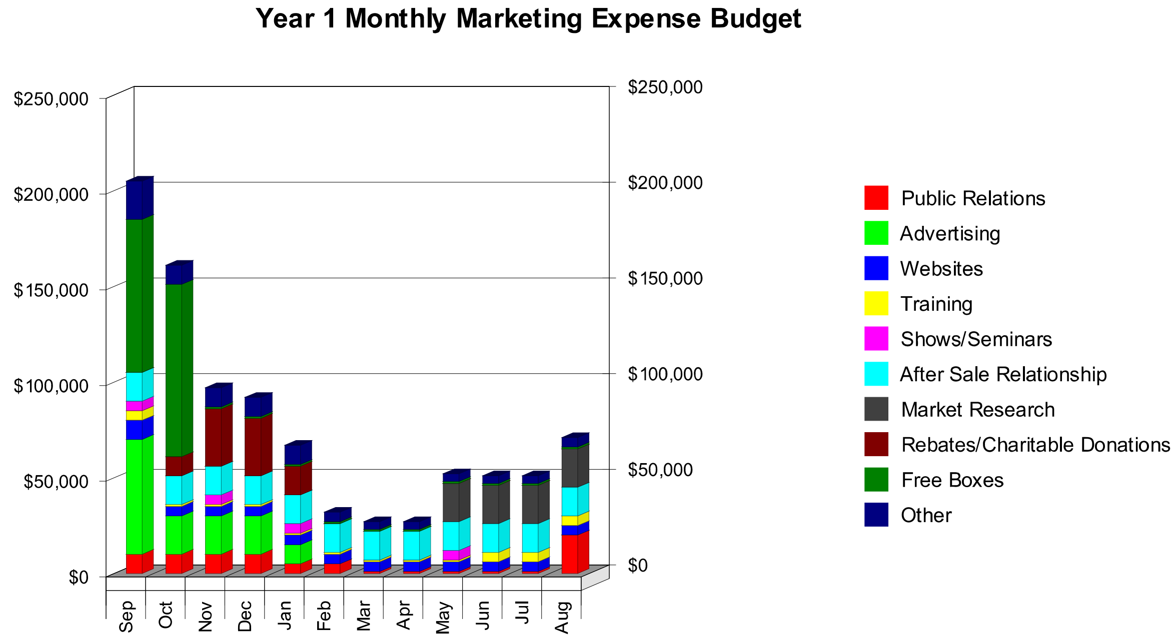
Public Relations: We recommend relying on public relations the most since it is very effective at building trust and also quite cost effective. The public interest nature of the company and unique approach should make this option quite feasible.

Web sites: This will allow order processing and save the new client commission, so the cost is well justified. In addition, the web sites are key to building and maintaining the after sale relationships with the tech-savvy premium customers.

After Sale Relationship: A small permanent employed staff should prepare newsletters, promotional items, and customer events tied to the land. This could include tree planting parties, trail seeding, cavity creation or a variety of other activities so the customers can feel that they are giving back to the land that their firewood came from. This is important to maintaining trust and a sense of uniqueness that fuels reorders.

Market research: This must begin as the test market winds down. It is needed to prepare for the launch to the full potential market in September 2002.

Training, Shows and Seminars, Other: Training is for the contracted sales force, Shows and Seminars include home shows and the like, and "other" is a 10% allowance for anything else.



5.0 Controls

5.1 Implementation

The consumer product market research, product testing, and pre-test market are critical to determine the viability of this project. They must be done first, before any additional investments are made. Their cost could be greatly reduced or eliminated if they are completed under the same program that this plan was prepared through.

Recruitment of employed managers and investors should be done through a recruitment agency.

The contracted partners in production, sales, distribution, and environmental organizations are critical to the success. They must feel that this is their company, even though they are not employed. By involving them early in the process, they are most likely to fell they are part of it.

FSC chain of custody certification can sometimes take a while to process, so it should be initiated as soon as the project receives a "go".

Certified stumpage will also be needed, but the sales are often purchased years in advance of cutting. Therefore, these contracts should be lined up well ahead of time. Sales with a minor hardwood component can have just the hardwood contracted from another timber sale purchaser, but sales dominated by desired species could be purchased directly. The company should also begin working with land managers to design sales that meet the environmental objectives of involved organizations and coincide with overall land management objectives.

The kiln is a critical, yet specific, asset. It would not make sense for a contractor to own this since it probably cannot be used for anything except drying the company's firewood. Therefore, the company must own it, though it should then be leased back to a contracted operator. This will allow the operator to more effectively manage the kiln and potentially figure out ways to utilize the operating staff in the off season. It might even be possible for the operating contractor to use excess kiln capacity to "pre-dry" sawn lumber prior to putting it in a traditional kiln if they decide to build such a traditional facility nearby. However, this would have nothing to do with the company's mission, and the risk of not getting this additional work is probably too high for a contractor to justify the initial investment.

The kiln's design and construction must begin as soon as possible since it is an unproven technique and problems will arise. We assume it will be just an insulated metal building with a high-output, wood fired furnace and a conveyor system to move the wood through as it dries. A normal kiln is not needed since cracking is not an issue. It should be built with enough excess capacity to handle anticipated sales for at least the first several years.

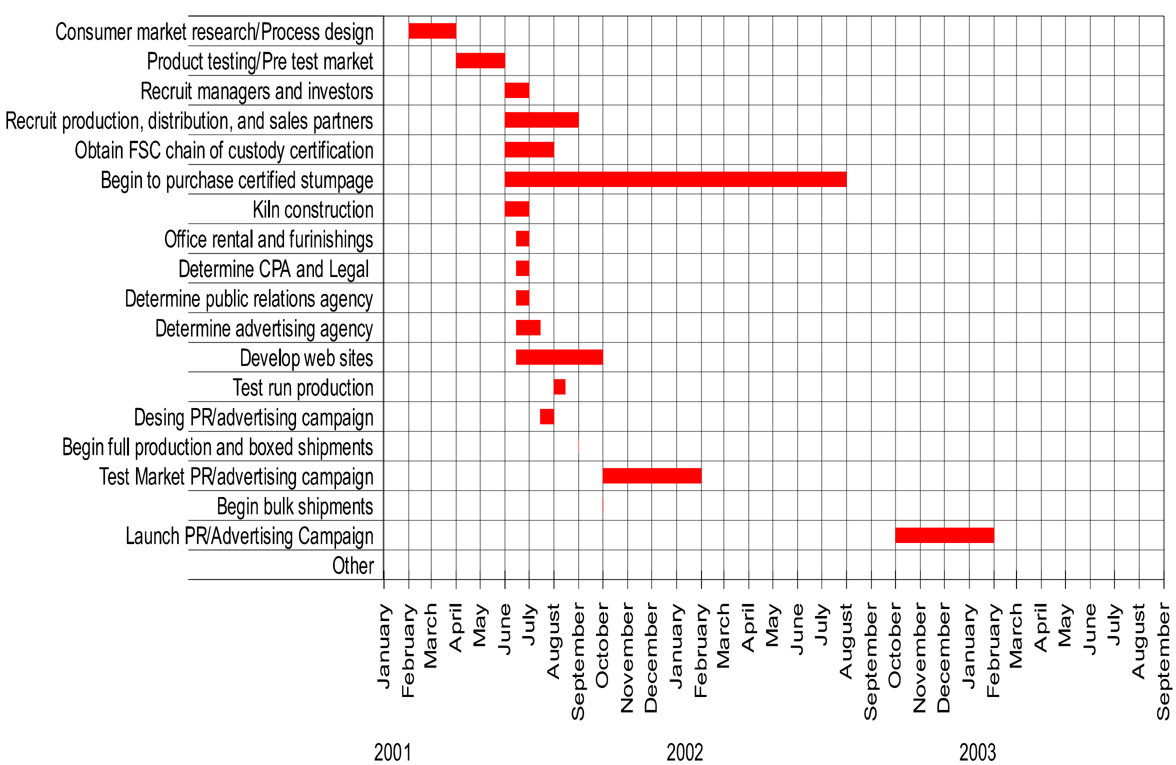
The first job of the new managers should be to determine the public relations and advertising agencies that will handle the test market. They will then design the public relations and advertising campaign.

An Internet consulting firm will develop the Internet sites under contract. They are critical to our net-savvy target market. We anticipate that most of the after-sale relationship will be maintained though email and Internet communications. In addition, orders placed through the web site would not incur the sales commission unless they are done under referral from a salesperson.

Full production and boxed shipments to retailers should begin about September 1. Bulk shipment would need to begin by October 1, which would coincide with the start of the Minneapolis-St Paul test market campaign. Assuming everything goes well, the full market campaign would begin one year later.

Milestone	Start Date	End Date	Budget
Consumer market research/Process design	2/1/01	4/1/01	$50,000
Product testing/Pre test market	4/1/01	6/1/01	$75,000
Recruit managers and investors	6/1/01	7/1/01	$200,000
Recruit production, distribution, and sales partners	6/1/01	9/1/01	$50,000
Obtain FSC chain of custody certification	6/1/01	8/1/01	$1,000
Begin to purchase certified stumpage	6/1/01	8/1/02	$100,000
Kiln construction	6/1/01	7/1/01	$200,000
Office rental and furnishings	6/15/01	7/1/01	$20,000
Determine CPA and Legal	6/15/01	7/1/01	
Determine public relations agency	6/15/01	7/1/01	
Determine advertising agency	6/15/01	7/15/01	
Develop web sites	6/15/01	10/1/01	$50,000
Test run production	8/1/01	8/15/01	$10,000
Design PR/advertising campaign	7/15/01	8/1/01	$20,000
Begin full production and boxed shipments	9/1/01	9/1/01	
Test Market PR/advertising campaign	10/1/01	2/1/02	$450,000
Begin bulk shipments	10/1/01	10/1/01	
Launch PR/Advertising Campaign	10/1/02	2/1/03	$3,100,000
Other			$0
Totals			$4,326,000

Milestones



5.2 Marketing Organization

The employed staff should include a president, operations manager, purchasing manager, marketing manager, chief financial officer, and the after-sale relationship staff. The entire employed staff should be around 10 people when the full program begins, mostly in the after-sale relationship department. It will be very difficult to measure the extent to which customer relationships are built after and between sales, so this cannot be contracted. A staff of 2 to 5 people will coordinate newsletters, promotions, and "give back to the land" parties.

In the rest of the company, contracted partners should do all work other than the previously mentioned top-level management, with over 100 jobs directly resulting from the company. When results can be measured and incentives established without large specific investments, contracting is more efficient than employment or ownership. In the end, the work will be done at a higher level of quality, for less money, and with a much smaller risk to the company. Contracting was not previously efficient because of the high cost of information exchange, but with electronic information it becomes much more viable. It would also allow not-for-profit companies such as Minnesota Diversified Industries (MDI) to accomplish their social mission of employing disabled people, and the improved efficiency would allow better wages to be paid.

Public relations and advertising will be contracted with agencies, as well as market research. The web site will be developed and maintained by a contracted Internet developer. Research and development will also be contracted to Universities and other research organizations. An accounting firm will do accounting and finance. In production, stumpage is purchased through a contracted forestry consultant; the harvesting is done by contracted loggers, and the splitting and hauling to the kiln by a contracted firewood producer. The kiln drying and packaging will be done through a contracted job producer who shares the social mission, such as MDI, even though the company will own the kiln itself. Transportation to market is contracted with a trucker, and distribution and sales is contracted through salespeople in the market. All the people or organizations are paid based on their results, not their hours. Results are measured and transmitted at almost no cost through the Internet and other communications.

The key to the organization will be to make all the contractors feel as though they are partners in the company success. As they spend a higher percentage of their time on company activities, they must be involved more and more as partners must. Sales people, wood splitters, and the kiln and packaging workers are the most critical in this regard. They must be recruited and involved in planning from the beginning to reduce coordination problems and increase their feeling on inclusion. They must also earn high wages. The contracted splitters, for example, should earn $20 to $30 per hour as a contractor, for an effective employed rate of $15 to $20 per hour. If they sold their firewood directly they would only earn an effective employed rate of about $10 per hour. The difference is due to increased efficiency when they concentrate on just one thing -- splitting firewood. The appendix shows a more detailed analysis of self employed firewood operators who sell their own wood.

5.3 Contingency Planning

The next step is consumer market research as previously described. This will probably result in extensive modifications to this plan and projections. The largest risk is that the market share has been improperly estimated, but the consumer research should find any glaring errors. Unexpected competition or, more likely, a reduction in fuel oil or natural gas prices could reduce revenues and still make the operation a failure at any time.

If the additional research shows the project to be unfeasible, a much smaller version could be developed. The appendix shows a financial analysis for a small 1 to 2 person operation working with a firewood splitter and selling direct to consumers. This does not have a very large potential but it could be done with much less investment, though the effective hourly wage is fairly low. The certification will have some value to improve trust, but it will not be very important unless it is tied to a premium product. This will take years to develop through word-of-mouth since a large launch campaign is not feasible. Lastly, the need to air dry will require another source of income for summer as the wood seasons. Use of the recommended Chomper 16 PDA splitter is critical since it uses a shear that allows the wood to dry in roughly half the time, and the production is 2-3 cords per hour with one worker. Without this the wood would probably not be able to season fully in one summer.