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Considerations for Starting a Scrap Tire Company

A Blueprint for Planning a Business Strategy

BLUEPRINT FOR TIRE RECYCLING

The Things to Consider When Planning on Starting a Scrap Tire Business

In certain geographic areas, there are not sufficient markets or processing capacity to handle all the scrap tires generated. In these situations, an entrepreneur may consider the possibility of entering into the scrap tire business. Depending upon the situation, the business opportunities could exist for the entrepreneur to collect, transport and/or process tires. While opportunities may exist, it must also be noted that this is not a business without risk, especially for those entrepreneurs who are not properly prepared for the challenges that will be encountered.

When starting a scrap tire company there is a series of business decisions that must be given extensive research. These decisions will be based on a series of factors, all of which must be fully explored before each decision can be made. Often, later decisions will be a function of decisions made early in the planning process.

The information provided in this document was developed as a tool, designed for a "newcomer" to environmental related businesses. This tool is not designed for established businesses in the environmental arena; but rather a tool for beginning a small to medium size scrap tire business. This tool can also assist local governments in evaluating concepts for scrap tire businesses. The "considerations" contained herein provide general guidance to the entrepreneur in the decision making process. The specifics of any given situation may vary; in all cases sound business practices should be applied.

The information provided also includes some industry "rules of thumb"; general business practices that have been proven to be useful, but not scientifically proven. Once again, these "rules" are provided for guidance purposes.

As a starting point, it must be recognized that the scrap tire business is just that: a business. While providing a service for scrap tires may be good for the environment and/or may be gratifying for other reasons, it must still be considered as a business.

QUICK U.S. SCRAP TIRE FACTS

Number of scrap tires generated annually (2004): 289 million
Scrap tires as a percentage of total solid waste generated: (2000): 1.8%
Number of scrap tires in stockpiles (2004): 240 million
Number of scrap tires going to a end use market (2004): 246 million
Number of scrap tire processing facilities (2004): 498
Number of scrap tires used as tire-derived fuel (2004): 125 million
Number of facilities using tire-derived fuel (2004): 85

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This document was prepared by the Rubber Manufacturers Association (RMA) and does not necessarily reflect the policies of the EPA, TCEQ or the University of Texas at El Paso. RMA is the national trade association representing U.S. interests of tire manufacturers.

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Section 1: Initial Considerations

As with any business venture initial research will be required. The level of effort in conducting research will depend on current knowledge regarding environmental related businesses. First start with developing an understanding of the local scrap tire market. Let's begin the process with a quick discussion of research items needed to begin the initial considerations.

Research

How much do you know about current scrap tire recycling/processing in your region? Who (what business/company) handles tire recycling in the local community? Do you propose to handle all aspects of the scrap tire business to include collection, transportation and processing of scrap tires? How will the scrap tires be obtained? It is very likely that an existing business is currently responsible for processing scrap tires. Will the proposed business compete against established businesses? How much do you know about the "competition"? For example:

- What are they charging their "suppliers" (tire generators)?
- What services do they provide?
- Do they provide collection/transportation and processing?
- What are their strengths? What are their weaknesses?
- What service are they not providing? Can you do it better? Do you propose to provide the same services, but only at a lower cost?
- Do your proposed fees cover costs incurred? Do you know what your costs are?

"Raw" Material

Obviously a scrap tire business will require scrap tires as feedstock. Where will the scrap tires come from? How much raw material (how many tires) is needed to be efficient? How many tires are needed to be profitable? How large of an area will have to be served to obtain the needed number of tires? Will the proposed business process all types of tires (passenger, truck, tractor, industrial)? If not, how will the flow of tires be segregated? What will happen to the tires that are not processed? Is there any other type of "competition" in the target market area? In other words, can tires be landfilled locally? What are the regulations/markets like in bordering states (countries)?

Tire Composition

Here is a quick summary of the major classes of materials used in the tire manufacturing process by the percentage of the total weight of the finished tire that each material class represents in a passenger tire: natural rubber 14 percent, synthetic rubber 27 percent, carbon black 28 percent, steel 15 percent, miscellaneous (fabric, fillers, accelerators, antiozonants) 17 percent: In a truck tire the breakdown is: natural rubber 27%, synthetic rubber 14%, carbon black 28 percent, steel 15 percent, miscellaneous (fabric, fillers, accelerators, antiozonants)16 percent.

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Market Analysis

Tire Derived Fuel

Scrap tires (whole and shredded) have been used as a fuel source by industries in many countries around the world including the U.S. This fuel is commonly referred to as tire-derived fuel (TDF). Are any of the following industries located near the potential target market area?

- Cement kilns
- Pulp & paper mill boilers
- Industrial boilers
- Utility boilers

Homework!!

Be sure to consult local regulations regarding materials accepted in landfill operations. Conduct the required research or homework regarding landfill applications utilizing scrap tires in order to develop an understanding of how a landfill works and related operational concepts such as: daily cover, leachate collection systems, gas venting backfill, closure material and operational liners. In addition, you may want to consider researching other civil engineering applications such as septic field drainage medium, road embankment fill (light weight backfill) and tire bales (i.e. agricultural uses and slope restoration).

Asphalt Rubber

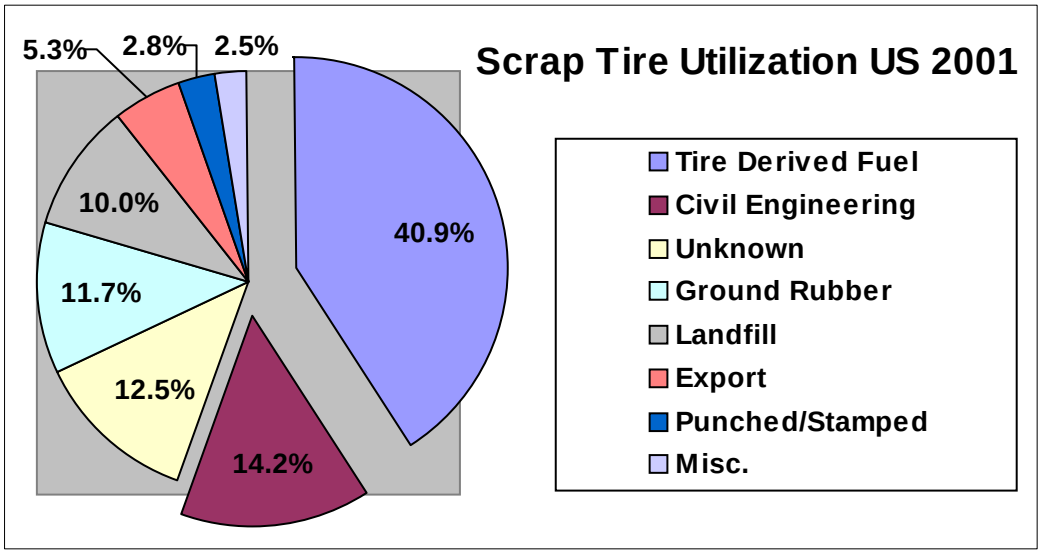
Scrap tires can be processed into ground rubber to modify asphalt thereby creating rubberized asphalt and rubber asphalt concrete. What pavement types are currently utilized in the local target market area? What are the anticipated future pavement trends (asphalt vs. concrete)? Are there opportunities in the unpaved road market? There may be opportunities for introducing alternative pavements to the local/regional transportation agencies.

Civil Engineering Applications

There are numerous civil engineering applications for scrap tires. Depending on the application, scrap tires could be shredded, chipped, cut or modified for specific uses. Scrap tires can be used as drainage media and/or daily waste covers replacing gravel or used in lieu of soil.

Scrap Tire Utilization

This graphic summarizes scrap tire utilization in the Unites States in 2001. The pie chart reveals that tire derived fuel is the dominant use for scrap tires in the U.S. followed by civil engineering.



Section 2: Physical Considerations

Once the initial research of the local scrap tire market is complete the next step is to look at physical considerations related to the proposed location for a scrap tire business. A key consideration will be the exact location of the facility. Will it be located within proximity to the source(s) of scrap tires or closer to the end-users (market)?

Transportation

Transportation is a key element in establishing a scrap tire business. Developing transportation options is key to planning a business strategy. Some transportation options to consider will include:

- Back hauls: taking advantage of carriers (trucks) that may be traveling empty after having dropped off the initial payload.
- Less-than-full-load carriers: can trailer "space" be purchased on an "as needed" basis to transport tires?
- Is it possible to contract or subcontract for transportation related services?
- Buy/rent: Will you buy or rent your own trailers?

Land Use Planning

Land use planning issues are also critical. For example, the following issues will need to be examined:

- How much property will be required to establish the facility?
- What are the local zoning ordinances?
- What about ease of truck access? A traffic analysis plan may be required.
- Are there any noise restrictions in the area?
- How will tires be stored on site?
- How long will the inventory remain on site?
- How long will the finished product remain on site?
- Will adequate protection from mosquito infestation be provided?
- What are your fire prevention/firefighting procedures?

Some of the issues identified above are a combination of land use and local/state health, safety and environmental codes. The point is that land use considerations are critical in planning any business strategy.

QUICK U.S. SCRAP TIRE FACTS

Percentage of scrap tires that are from passenger cars: 84
Percentage of scrap tires that are from light and heavy trucks: 15
Percentage of heavy equipment, aircraft and off-road tires: 1
Range of weight of truck tires: 40 pounds to 10,000 pounds

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Section 3: Processing Issues

Equipment

The type of tire processing "system" or equipment that you will need to obtain (purchase/lease) will be a function of the scrap tire product you will be marketing. Will you purchase the necessary processing equipment in phases or purchase the entire processing system all at once. How often will the equipment require servicing? Will the proposed business utilize used or new equipment? If used equipment, will it meet your needs? What will be the replacement costs or repair costs associated with the used equipment? A determination will need to be made on the reliability of the processing system. Who will design the system? Do they have experience with scrap tire processing?

Quality Control

In order to ensure the reliability and delivery of a quality product to the end user market, the processed material will require careful monitoring to maintain quality control. For example, if the client requests "two-inch wire-free tire shreds" and receives mixed size tire shreds that are not completely wire-free, this becomes a quality control issue and could jeopardize the business arrangement for delivery of a specific product.

Supply

It is critical to estimate the available supply of feedstock (scrap tires). How many tires are generated within a 150-mile radius of the proposed facility? If there are no existing scrap tire businesses in the local community consider using a maximum capture rate of 80 percent for planning purposes. Is there a constant availability of tires in the target market area or is the availability of tires seasonal? If so, how will this impact the processing/production schedule?

Processing Cost Factors

- What will be the tipping fee (fee to "receive" tires)?
- How much tire waste will be produced as part of processing?
- What will be the disposal costs for those tires not processed?
- Is there sufficient local environmental agency enforcement of illegal dumping activities? If not, then illegal dumping of scrap tires becomes an alternative form of waste tire "disposal".
- How long will it take to turn a positive cash flow (e.g., three years)?
- Maintenance costs are generally high, what can be done to lower the costs?
- Price: Does it cover your costs? Is it profitable?
- How much will be factored into pricing for replacement parts?

Other Processing Factors

- How will you ensure cleanliness of the processing operation to promote safety?
- How do you control/limit the threat of fire? Will you develop a fire plan?
- What dust control measures will be in place?
- How will you keep records?

Processing efficiency will come only with time and experience. For planning purposes, one cannot assume that an operation will be operating at 100 percent capacity in the first six months, or even in the first year. Projections, costs and income should be adjusted accordingly. Specific processing costs are discussed in Section 7.

Why a 150-mile radius limit?

A rule of thumb for the maximum distance for a tire collection route is 150 miles. Why a 150-mile radius limit? One of the largest single costs in the scrap tire industry is the cost of transporting tires. An industry rule of thumb for trucking costs is $1 per mile. This cost will be incurred whether there are 100 or 1000 tires loaded on a truck. Also keep in mind that this cost is applied to the entire trip. If one were to travel 150 miles and collect 1200 tires at $0.75 per tire the revenue stream would be:

150 miles x 2 (1 roundtrip) = 300 x $1 per mile = $ 300 transportation costs (-)
1200 tires x $0.75 per tire collection fee = $ 900 collection revenue (+)

If those tires are processed upon return to the facility and an industry average cost of $0.50 per tire for handling/processing is applied, this would result in a "break-even" situation for the 1200 tires collected/processed (1200 tires x $.50 per tire processing cost = $600 processing cost [-]). If the travel distance increases to 200 miles, then the cash flow would be negative for that load of tires. In this scenario, the revenue becomes positive when the scrap tire-derived product is sold into the marketplace.

In order to be profitable in this aspect of the scrap tire business, either of the cost factors (transportation or processing) must be lowered or the revenue (tip fee) must be increased. Consequently, the 150-mile radius becomes the break-even point for planning purposes.

Steel Tire Wire

There are approximately 2.5 pounds of steel belt and bead wire in a passenger car tire. This material is made from high carbon steel with a nominal tensile strength of 2,750 MN/m2. The typical composition for steel belts and bead wire includes: carbon, manganese, silicon, phosphorus, sulfur and traces of copper, chromium and nickel. Wire coating is typically a mix of copper and zinc or a mix of brass and tin.

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Section 4: Permitting Issues

A scrap tire business will come under the purview of environmental regulation and, depending on the market area, could include a series of regulations from local, state and/or federal agencies.

How many permits will be required? In some cases a formal permit will be required in other cases only a registration may be necessary, for example, in Texas a scrap tire recycling facility requires a permit while a scrap tire transporter only requires a registration. Depending on the market, permits and/or registrations may be required for the following:

- Solid waste (recycling)
- Tire transporter
- Scrap tire storage
- Scrap water discharge
- Air quality
- Public health
- Fire department

The permit application must include a clear description of how the scrap tires will be collected and recycled. In general, a permit will not be issued unless the applicant can provide sufficient documentation that demonstrates that at least 75 percent of the tires collected or received can be processed through the proposed scrap tire operation. A permit for a processing facility may require a plan certified by an engineer. There are other permit-related issues to consider such as the length of time to get permits as well as the possibility of obtaining several permits simultaneously (multi-tracking).

Bonding/Financial Assurance Requirements

Many states require registered scrap tire facilities to post financial assurance if the facility plans to transport, process and/or store scrap tires. The California Integrated Waste Management Board for example requires a $10,000 surety bond as part of the state registration to engage in transportation of waste tires. The Texas Commission on Environmental Quality requires, as part of state registration for a scrap tire facility, the preparation of a closure cost estimate, certified by a professional engineer, detailing the cost of hiring a third party to close the facility. This certified closure cost estimate includes transportation and disposal costs of scrap tires based on the maximum site capacity of the registered facility's site layout plan. In addition, the estimate includes a minimum of $3,000 for site clean up costs. The reason for the financial assurance is to provide the state regulatory agencies the financial resources for tire disposal and related clean up of tires at a scrap tire facility in the event the scrap tire company goes out of business.

Events that trigger "red flags" (warning signs) to regulators:

- Having an increasing amount of tires on your site.
- Exceeding the permitted number of scrap tires.
- Having a series of small tire fires.
- Having a high rate of employee turnover.
- Any type of financial irregularities.
- Loss of any major end use market/outlet for scrap tires.
- Violations of the permit conditions (i.e., failure to store tires in a prescribed manner for fire protection).
- Changes in ownership.

Tire Fire Findings

At a recent Tire Derived Fuel workshop, EPA Region 6 presented a list of similarities in tire fire investigations:

- Operations change from recycling to scrap tire storage
- Facility operations do not comply with codes
- Business ownership changes
- Owner files for bankruptcy
- Court action pursued by property owner or government
- Arson or act of nature (lighting strike)

EPA Region Waste Tire Workgroup

Tire Fires

Tire fires are difficult to extinguish and can burn for days and even months. A tire fire is classified as a hazardous materials incident. Public health and environmental issues related to tire fires include air pollution, soil and water contamination, and heavy metal releases. It is important to coordinate with local, state and federal agencies in developing a fire plan. Recommended tire fire response tactics include:

- Use proper protective fire fighting gear
- Separate burning tires from non burning tires first
- Smothering a tire fire with dirt or sand is usually the best option for extinguishing the fire. Typically the dirt or sand is moved with heavy equipment to cover the burning tires
- Water is best used to keep adjacent, unburned tires from igniting

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Section 5: Immediate Business Planning Issues

Now that the initial research and market analysis is complete, it is time to consider issues related to business planning. Here are some business planning issues for consideration:

- Be realistic; competition will not roll over and go away.
- Be prepared for a price war: in a price war all scrap tire processors lose.
- Just because you believe scrap tires are a problem/opportunity, not everyone else will share your belief.
- Developing a 10 to 20 year business plan would appear unrealistic: Focus on the first three to four years, since most scrap tire companies do not make it past that point.
- Calculate research/development of products/sales into your profit/loss projected statements.
- Market development must be considered part of your anticipated expenses. New technologies take longer to prove/obtain financing for than tried/true technology.

Employees

A key component to the success or failure of a business is your approach to your team of employees, including training, employee retention and experience. Who will serve as the key (most critical) employees? Will there be an on-site maintenance crew? Finally, background (criminal) investigations will be critical as you develop the team of employees.

Suggested Business Approach:

You may want to consider starting out by providing basic services, then adding on additional services. You may also want to consider developing simpler, easier markets in the initial stages of your company. Tire derived fuel (TDF) and civil engineering applications are typically easier to get up and running than ground rubber operations. Rule of thumb for start up cost is $2 of capital expense for each tire to be processed; i.e., for a facility that can process 2 million scrap tires a year expect to spend $4 million. Furthermore, the equipment used for handling/shredding tires into TDF and civil engineering application material will be the same equipment that can prepare the tire to be processed into ground rubber.

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Section 6: Consideration of Market Obstacles

What are the most viable markets in the local geographic area? Which markets can be developed quickly? (Typically, it is tire-derived fuel and civil engineering). Does the local/state/federal government have a grant program for market development? A critical element in examining potential markets is determining the obstacles to these markets? Below is a quick view of possible obstacles (by market) for consideration.

Obstacles to Tire Derived Fuel

Fuel Types/Supply
What other supplemental fuels are currently used in the target market? What type of fuels is the target industry currently using? If pulverized coal is the dominant fuel then TDF may not be a good fit. How many tires are available in the local market area? For example in the case of TDF, the target client may require one to three million scrap tires per year. Will the proposed business be capable of providing this amount of tires to the target client?

Acceptance of TDF
Who will be the sole responsible party for convincing management (end user) to begin using TDF? If so, how much is the target client paying for their main fuel supply? TDF will always have to be lower. Is the facility being paid to take any materials for fuel? If so, TDF typically cannot compete. Will the target client have to make substantial modifications to their existing operations to incorporate TDF? If so, who will pay for this modification (industry, government subsidy)? The acceptance of TDF can be a function of the feeding/monitoring system required. Most facilities do not have capital expenses calculated into their budget. Waiting for this expense to be budgeted can take two years. How long will it take for you and the target industry to obtain permits?

Opposition to TDF
Will opposition come from public concerns or competition? Is the facility in a non-attainment area for any regulated air pollutants? If so, what are the main emission criteria considerations? Compare those to the benefits of TDF, which has been found to lower nitrogen oxides.

Obstacles to Rubber Modified Asphalt

Is there a mix of roadway pavements in target market area (construction material, road surface material/style)? Have you determined the receptivity of the local department of transportation, public works departments and contractors for utilizing alternative pavements? The history of alternative pavements in the target market, the region and state will be a critical issue. The time lag between the initial contact with a potential user and sale of a pavement product could be as long as three to four years.

What about the supply of quality ground rubber? Can you provide this material? What other types of modifiers are the local roadway contractors using? What about the cost competitiveness of ground rubber versus other modifiers? Remember, quality and consistency of the ground rubber will be of paramount importance.

Obstacles to Civil Engineering Applications

Check with local regulations to determine the classification of a processed tire. Is it considered a solid waste or a beneficial use commodity? Do the present rules make it conducive for a smooth entry into the market? Have you determined the receptivity of the local departments of solid waste, water quality and health to the proposed civil engineering applications? What about state agencies? Have these applications been tested in the local target market area? If used previously, what were the results?

Standard Practice for the Use of Scrap Tires in Civil Engineering Applications:

This American Society for Testing and Materials (ASTM) publication provides guidance for testing the physical properties and data for assessment of the leachate generation potential of processed or whole scrap tires in lieu of conventional civil engineering materials, such as stone, gravel, soil, sand or other fill materials. In addition, typical construction practices are outlined. This ASTM document (D-6270-98) is available from the Rubber Manufacturers Association please see www.rma.org

Section 7: Cost Factors

Listed below are several cost factors unique to the scrap tire industry.

Tire Handling/Collection Costs

On average, it costs $0.05 every time a tire is handled. The $0.05 is an industry standard and may vary, but can be used as a guideline. The factors that make up this cost include, but are not limited to: labor, energy (fuel for the equipment) and time. Table 1 shows estimates for cost factors related to "collection" costs that include handling (labor), transportation, disposal, processing and profit. Please note that these costs vary greatly; nonetheless the numbers provided herein are conservative and could be helpful in developing projected costs.

Table 1
Potential Tire Collection Costs

Description	Cost Per Tire	Cost Per Ton
Labor to Load/Unload	$.10	$10
Transportation	$0.25 to $0.35	$25 to $35
Whole Tire Disposal *	$0.10 to $0.30	$ 10 to $30
Profit for Collector	$0.25 to $0.55	$25 to $55
TOTAL COLLECTION COST	$1.00	$100

**Cost to collector to dispose of whole tires*

Utilizing the costs in Table 1 provides a guide in estimating costs for scrap tire collection and thus a general rule for these costs is $1.00 per tire. Keep in mind that the scrap tires must still be processed. Another rule of thumb in the tire industry is converting tires to tons. The tire industry recognizes a scrap tire unit with an average weight of 20 pounds. Thus 100 tires multiplied by 20 pounds are equivalent to 1 ton of tires.

Processing Cost

Processing costs are typically calculated on a per-tire basis. A general rule of thumb is the greater number of tires processed on a time-unit basis (hourly), the lower the unit cost. Another general rule of thumb is that the lower per-unit costs are obtained when processing two million tires a year. Table 2 includes general costs associated with processing the scrap tire to create selected scrap tire "products."

Tire Processing Equipment, Tools and Nomenclature

Initial Reduction Technology: shredders and hammer mills
Secondary Reduction Technology: shredders, hammer mills, granulators, cracker mills
Ground Rubber Reduction Systems: cryogenics, granulators, cracker mills
Fiber Separation Systems: shaker tables; pneumatic systems

Table 2
Potential Tire Processing / Shredding Costs

Size	Description	Application	Cost Per Ton *	Process Rate (Tons/ Hour)
2"	Clean cut. Ply & bead steel remains	Cement Kilns, Civil Engineering	$10	10-12
2" minus	Minimal wire, cut beads removed by magnets	Industrial, utility, pulp paper mill boilers	$25	7
1" nominal	Same as 2" minus with extra shredded pass	Power utility boilers (cyclone type)	$ 10-$30	4-5
½" minus	Truly wire free, requires additional shredding equipment	Feed stock for crumb rubber, playground and sport field surfaces	$25-$55	2-3

** Cost Per Ton includes power, labor, equipment and maintenance costs. No overhead, profit or transportation included*

Tire Shred Characteristics

Specific gravity of tires: 1.02–1.27
Water absorption rate of tire shreds: 2–4 percent
Density/loosely dumped shreds: 21–31 lbs/cubic foot
Density of compacted shreds: 38– 43 lbs/cubic foot
Hydraulic Conductivity: 0.6–24 cm/s

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Budget

Traditional costs will also need to be included in the proposed budget. Consider the following itemized cost factors in development of a budget.

- Administration
  manager, operations manager, clerical, sales & service, office expenses, travel

- Contracting Services
  consultants/professional services (for permitting and legal issues)

- Marketing
  advertising, promotional activities
- Financial
  insurance, taxes, interest, depreciation, bonding requirements

- Processing costs
  energy, labor, maintenance, spare parts, capital costs (equipment)

Section 8: Intangibles

Previous and failed attempts of entering the scrap tire business by other companies can make the proposed business endeavor more difficult. Be aware of the history of the scrap tire industry. This information can be used to develop the proposed business strategy and assist in formulating broad based support. Here are a few considerations:

- Has the proposed business strategy been tried before in your local area? Anywhere else? What were the outcomes?
- Background of the proposed business owner will predispose public sentiment.
- Having a well-defined presentation regarding your proposal/plans, the situation and the impacts on the local area are beneficial.
- Briefing key elected and public officials is an important part of the initial process.
- Transparency of the process is important.

Public Concerns

Local residents will have concerns about any industrial business locating in the community. Some key concerns include:

- Aesthetics: Will the facility look like a giant tire pile or a "clean" operation
- Noise issues: Will the tire processing activity generate a high level of noise?
- Air borne dust issues: Local citizens will question the potential impacts.
- Traffic patterns: What about traffic flow design (trucks ingress/egress)?
- Prevention of fires: Will the design include optimal fire prevention techniques?
- Mosquito infestation: How will the facility operations ensure optimal vector control?

Mosquito Control

Mosquitoes can breed in a wide range of habitats; everything from cemetery urns to beer bottles to wheelbarrows to tree holes. Hardy mosquitoes can withstand freezing temperatures and prefer stockpiled tires as a favorite breeding habitat. Mosquitoes tend to concentrate in the upper portions and in the outer fringes of tire piles, since this is typically where the most recent rainwater has collected. Mosquitoes do not typically like bright, sunny environments and will typically hover at ground level, seeking shaded areas. The most effective way to control mosquitoes is to find and eliminate their breeding sites. Defense strategies against mosquito infestation include:

- Prevent stockpiling of tires
- Remove standing water
- Reduce all sources of shade around a tire pile to reduce mosquito breeding
- Contact the local health department for other mosquito control measures

RMA/American Mosquito Control Association

Section 9: Financing Sources

The source of funds to finance start up costs will dictate the level of pre-planning necessary to begin the scrap tire business. Regardless of the funding source, development of a business plan is recommended.

"Guaranteed" funds

Whether the source of funds is from personal wealth, a "loan" from family/friends or even private investors (angels), it is recommended that you develop a sound business plan to serve as a guide.

Bank loans/small business loans

The process for obtaining a formal bank loan will require the development of a detailed business plan. The business plan should demonstrate the business viability/feasibility and ensure that the project is "bankable." However, the difference from traditional businesses and a scrap tire business is significant, the clients from the supply and the demand side are unique. Keep in mind that there is a finite number of tires and a smaller number end users.

What You – The Buyer – Needs to Know!

This is what you need to know about the business you want to buy. Don't be shy. Ask questions about such things as:

- Asking price, including inventory.
- Annual gross sales.
- Net income before taxes.
- Adjusted net income.
- Interest rate and terms of new and assumed encumbrances.
- Estimated value of furniture, fixtures and equipment.
- Value of real estate.
- Seller's discretionary earnings (net profit before taxes) and any compensation to owner, plus amortization, depreciation, interest, other non-cash expenses and non-business related expense.
- Titleholder of company assets.
- Is there any potential or ongoing litigation?
- Have there been any worker's compensation claims or unemployment claims?
- Are there any commercial leases and major contracts that can/must be assigned to the new owner?
- Has the company consistently paid its taxes? Are there any potential tax liabilities?
- Has the company given any warranties and guarantees to its customers?
- Does the company own any trade secrets and how does it protect them?
- Is the business in compliance with local zoning laws?
- Are there any toxic scrap or environmental problems?
- If the business is a franchise, what will it take to get the necessary franchiser approval?

Provided by Tire Review

Economic development/commercial development programs

This type of funding could include tax abatements, industrial development bonds, economic development grants and environmental start up grants to assist in funding a portion of the financing needs for the proposed business. This type of funding program will also require the development of a sound business plan.

Preparation of a Business Plan:

The basic purpose of a business plan is to demonstrate to potential investors and regulatory agencies the fundamental idea, approach and management scenario that will be incorporated into a business strategy. Many of the factors to consider in the planning process should be included in the business plan.

Suggested items to discuss in the business plan:

- What you will be doing and why it is necessary. What niche will you fill?
- How you will attract sufficient tire flow.
- Where/how will the product be sold?
- How does the current situation suggest that your business plan's goals will succeed?
- How you will achieve your goals?
- How will you develop a realistic time line of events? Hint: keep it relatively short (six months, one year, two years).
- A description of key employees' background/experience.
- A realistic description of the business/regulatory environment.
- A realistic description of the competition and/or obstacles that will have to be addressed.

A Business Plan

Developing a business plan will force you to think through some important issues that you may not otherwise consider. Your plan will become a valuable tool as you set out to raise money for your business, and it will provide milestones to gauge your success.

According to the U.S. Small Business Administration a business plan precisely defines your business, identifies your goals, and serves as your firm's resume. Basic components include:

- current and pro forma balance sheet
- income statement
- cash flow analysis

The business plan helps you allocate resources properly, handle unforeseen complications, and make good business decisions. Because it provides specific and organized information about your company and how you will repay borrowed money, a good business plan is a crucial part of any loan application. The business plan additionally informs sales personnel, suppliers, and others about your operations and goals. The importance of a comprehensive, thoughtful business plan cannot be overemphasized.

U.S. Small Business Administration

Suggested items to leave out of the business plan:

- Projected income/revenue for a 10-year period.
- Vague statements about supply, demand, competition or the nature of the industry.

Investors and regulatory agencies will check your statements, allegations, and assumptions. If you overstate any portion of the situation or describe an overly optimistic business situation you risk losing credibility.

Section 10: Marketing Considerations

Other Market Opportunities

Punched/stamped rubber products: Examples: door mats, bucket protectors, wheel shocks, lobster boxes, floor mating. Machines are available to cut tires into strips. These strips can then be fastened together to make the above referenced products. These machines cost about $15,000 - $18,000 each. The systems are relatively labor intensive. This application lends itself to an area of abundant, relatively low-cost labor.

De-beading tires: The removal of a tire's sidewall portion can generate tire "rings" that can be used as an anchoring device for traffic cones or traffic barrels. Truck tire sidewalls are appropriately sized for traffic barrels while passenger car and light truck sidewalls can be appropriately sized for traffic cones. Typically passenger and light truck tire sidewalls are doubled up, which gives the amount of weight that can adequately hold the cone in place. Tire de-beading is typically a slow and labor-intensive process.

Other Market Considerations

While state regulatory officials may consider scrap tires an environmental issue, no one is likely to pay a premium for products that are derived from scrap tires. In fact, there is an unfortunate disbelief that anything that contains a recycled content is inferior to a product made from all virgin materials. There are approximately 100 new products that contain recycled tire rubber. The fastest growing new markets include playground covers, soil amendments and floor mats.

While premiums are unlikely, the vendor of scrap tire derived material must be aware of their costs and sell their products at a fair-market value. This is often easier said than done, for there are many new entrants into the scrap tire industry that have taken a marketing strategy of market penetration (sales) at a reduced price from the (current) market price. The result of under-pricing scrap tire material can be devastating for all involved: the new entrant finds that selling below fair market value results in a negative cash flow that often results in the demise of that company (within 6 months, perhaps). While the new entrant may be out of business, all other companies will feel the long-term impacts of under-pricing in the business. At present, the demand for scrap tire products is inelastic: this means that the demand for these materials will not generally go up when the price is reduced, and the demand will likely decrease if prices are forced upward.

Best ways to reduce the generation rate of scrap tires:

Purchase longer-tread life tires (60,000 - 80,000 mile tires)
Rotate and balance tires every 4,000 miles
Check for/inflate tires to recommended air pressure levels (biweekly)
Make sure front end of the vehicle is aligned properly
Make sure the suspension system functions properly (shocks/struts)
Be aware of driving techniques (avoid quick starts and hard breaking)

RMA

Section 11: Reference Web Sites

Where can I learn more about scrap tires?

www.rma.org/scraptires
www.scraptirenews.com
www.epa.gov/epaoswer/non-hw/muncpl/tires/index.htm
www.ciwmb.ca.gov/tires
www.rubberpavements.org (for information on asphalt rubber)
www.mosquito.org