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Current Obstacles in Biomass Utilization:  
A GAO Report on Problems Agencies Face  
In the utilization of Woody Biomass,  
And the extent to which they are addressing these problems

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I have been working with the USDA Forest Service for 35 years and have earned the reputation of being a problem solver. I have had a long and productive partnership with the Forest Service solving many of their problems. They came to me needing a vandalism-proof nut to stop road signs from being stolen. I created and patented Tuff Nuts™. They needed cattle guards to be made of metal rather than concrete bases and I created and patented the cattle guards for them. It was only natural that in 1994 the Forest Service asked me to help solve the problem of overcrowded forests. They recognized they had far too many trees that were small and unmerchantable and/or a low-value species. They approached me to investigate and develop markets for this biomass.

I started a partnership with the Forest Service's Forest Products Laboratory, in Madison Wisconsin. I have spent the last 11 years developing a revolutionary solution to their problem; the product is called Altree™. It is a plastic/wood fiber composite that can be made in sheets, blocks, or almost any shape. This product has a vast array of applications in many fields. For one, it has the distinct potential to revolutionize the plywood industry. Tests show Altree™ is better than plywood in that it is insect and waterproof. Another unique characteristic of the blended wood and plastic is that it can be molded into just about any shape, including plaques, logos, insignia, etc. We have made several agency signs with 3-D images that include the Forest Service and Natural Resource Conservation Shields.

Altree™ is a blend of waste plastics and dried shredded woody material. The Altree™ process can use small and unmerchantable trees because we reduce handling costs by using the entire tree, including needles, berries, branches and bark. This means there is more raw material available, less harvesting and processing costs, and little to no waste of biomass with our process.

Altree™ helps not only with the biomass problems, but it also utilizes plastic that is itself, recycled. My process solves many problems and demonstrates why the partnership with the Forest Service is fruitful. We use low value, small diameter timber. This is coupled with recycled plastic, reducing and reusing massive amounts of solid waste material destined for the landfills. The product we create is durable and long lasting even when exposed to the natural elements. Altree™ is strong and has a plethora of potential uses. Developing this product has created jobs and economic opportunity from waste products and land management problems.

Altree™ is fully developed, marketable, and desperately in need of a consistent and reliable supply of wood from the Forest Service and other land management agencies.

We have received a \$2.25 million contract to furnish a pallet manufacturing company with 15,000,000 Altree™ blocks per year. The blocks provide excellent durability and will add significant life to pallets. To deliver this one order of Altree™ blocks, we will require in excess of 2.5 million pounds of biomass monthly! This is just one contract and one application. We have had very serious discussions with a wide variety of other industries for a large assortment of uses.

Because we are now moving from product development to full production, negotiations are in the works to provide facilities and equipment to manufacture our product. P&M Plastics is seeking \$12,000,000 in investments to build the Altree™ facility in Mountainair, New Mexico, a community of 1,076.

Our entire operation hinges upon the Forest Service becoming the reliable supplier of material. They came to me with a problem; I have developed the solution, and now, together, we must live up to each others expectations. We must have at least 1,000 acres of forest restoration by-product per year to meet our commitment. Under the direction of the Healthy Forest Restoration Act, the National Fire Plan, the 10-Year Implementation Strategy, we are working with the Cibola National Forest of the Southwestern Region of the Forest Service, to secure a stewardship contract. This contract would allocate up to 1,000 acres per year, for ten years. The contract would be designed to thin the overgrown forest, thereby protecting the communities from the risk of wildfire, restoring forest productivity, improving wildlife habitat, and protecting

the watersheds and water supplies. The first area we are trying to restore is the Thunderbird area of the Mountainair Ranger District located in central New Mexico.

We have a need for the trees that are currently considered unmerchantable, undesirable, and too small for any value added use. Our process does not turn them into gold, but it does create a value for these trees. It takes a problem and makes it a marketable product. We are asking for a goods-for services contract -a Stewardship contract, that would allow us to provide employment to a rural, isolated, and economically depressed area of New Mexico. We are seeking this contract to build a world-class facility, with private investment funds, while restoring the health, vigor, and resilience of the National Forest. The Mountainair facility will employ between 65 and 100 people. Imagine the economic impact to an economically depressed community of just over a 1,000 people!

I am a problem solver. I have been presented with a variety of problems from the Forest Service over the years and have always delivered a creative, productive, and market-based solution. Finding a market for the small valueless trees has taken time, money, teamwork, and a lot of effort. We have accomplished our mission of finding a sustainable solution to a national problem. We now have a product that will emerge as a fast growing and innovative business. The Forest Service will benefit from us getting the stewardship contract. Once the contract is awarded - the last piece that my investors require to fully capitalize this project will be in place. I will build the plant and go into full production. The market and solution to the low value material in our immediate area will be solved. I will have added a key component to the future of our value added biomass utilization.

I want to thank you for the opportunity to provide you with this testimony. We have many more ideas for future development, but that will come at a different time. If I can be of further service, please do not hesitate to contact me.