## **forestconcepts**...

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Innovative Forest Products and Natural Resource Services

## Forest Concepts Receives \$1 Million DOE SBIR Grant for Biomass Phase II Study

For immediate release

Auburn, WA – August 10, 2010 – Forest Concepts, LLC announces their receipt of the formal notice of award from Walter M. Polansky, DOE SBIR/STTR Program Director, for Grant #10605905 supported by the Department of Energy Small Business Innovation Research (SBIR) program and commencing in August 2010 for "Optimization and Low Energy Production of Woody Biomass Particles" (Phase II).

Forest Concepts is combining its deep understanding of structural biology and natural modes of failure in cellulosic materials with disciplined engineering to create fundamentally new equipment systems for comminution and new feedstock particles that are optimized for preprocessing and conversion to second-generation biofuels. An object of this project is to build upon our existing technical base to develop the engineering data and design specifications for large scale, low energy biomass size reduction equipment appropriate for use with wood waste, switchgrass, willow, and corn stover. Early experimental data suggest that we may be able to reduce the comminution energy by half compared to grinders, hammer mills, and knife mills while dramatically narrowing the particle size range.



Photo: Handful of Crumbles™ precision wood particles (Forest Concepts)

According to Jim Dooley, founder of Forest Concepts and Chief Technology Officer, "This new class of biomass feedstock particles are flowable, have good uncompressed bulk density and high surface area to volume ratio. The equipment system that we are developing to produce these particles is not like anything being used on biomass feedstocks today, and therefore, will represent a paradigm shift when it is commercialized rather than an improvement on existing equipment. Thus, the principles will be difficult for the many existing manufacturers of grinders, shredders, and hammer mills to implement without access to our intellectual properties."

## About Forest Concepts, L.L.C.:

Forest Concepts LLC is a forest products and wood-based raw materials research and development company that was formed in 1998 by experienced industry professionals. The eight-person professional staff of Forest Concepts includes experienced foresters, design and development engineers, sales professionals, production operations specialists, and patent counsel. The company maintains a wide network of collegial connections with specialists at universities, federal labs, and across the forest products industry. The Company manufactures one wood product, WoodStraw<sup>®</sup> ECM, a wood-strand erosion control material that was developed in partnership with the USDA Forest Service and with significant support from USDA SBIR and the USDA Forest Service. In 2007, the Company completed development, under another USDA SBIR contract, of engineering and science for biomass balers to reduce the cost of collection, transport and storage of wood biomass. Several patent applications are pending. At the present time, the Company is working under contracts from USDA SBIR and DOE SBIR to develop technologies that reduce the cost, improve the net energy balance, and improve the quality of cellulosic biomass feedstocks.

Forward Looking Statements:

This press release contains forward-looking statements, including, without limitation, statements related to Forest Concept's products and its other research and development programs. These forward-looking statements are based upon Forest Concept's current expectations. Forward-looking statements involve risks and uncertainties. Forest Concept's actual results and the timing of events could differ materially from those anticipated in such forward-looking statements as a result of these risks and uncertainties. You should not place undue reliance on these forward looking statements, which apply only as of the date of the press release. Forest Concepts expressly disclaims any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements contained herein to reflect any change in its expectations with regard thereto or any change in events, conditions or circumstances on which any such statements are based.

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