

**The Center for BioEnergy Sustainability (CBES)  
At Oak Ridge National Laboratory (ORNL)**

**is pleased to announce that we are holding our next Forum on  
June 21st, 2012 in the Ocoee Room (Room 189) in Building 1505 at 3:30pm**

*The forum will be followed by a casual gathering at Virginia Dale's home where light refreshments will be enjoyed as the discussions continue.*

**This month's forum topic is:**

**“Examining the Effects of Short-rotation Pine for Bioenergy on Water Quality and Quantity Using a Watershed-scale Experiment”**

*Guest Speakers:*

*Natalie Griffith – ORNL Ecosystem Science*

*Natalie is a terrestrial biogeochemist with experience in the role of soil carbon and in developing landscape-based models of nutrients.*

*Matt Langholtz – ORNL Bioenergy Resource & Engineering Systems*

*Matt has expertise in accounting for non-market amenities in economic evaluations of dedicated feedstock supply systems, and evaluating the economic availability of biomass resources.*

***Abstract.***

In the southeastern U.S., intensively-managed forest plantations are projected to be a significant source of feedstocks for bioenergy. While empirical data exist on how traditional forestry and farming practices influence water quantity and quality, little work has yet been done to quantify how intensive silviculture practices (advanced genetics, weed control, and fertilization) might affect water quality and quantity at the watershed scale. Our study is using a watershed-scale experiment along with a distributed catchment modeling approach to evaluate the environmental sustainability (water quality and quantity) of intensive short-rotation pine practices for bioenergy in the southeastern U.S. Three forested watersheds (one reference and two treatments) are instrumented to measure hydrologic processes and sample for water chemistry before and after conversion to short-rotation pine. At the CBES Forum, we will present an overview of our project, summarize our work to date, and outline our future research plans and goals.

**Please mark your calendar for every third Thursday for 2012 so that you can join in the Collaboration and camaraderie that is being built by your participation in the CBES forums.**