

## **Identifying Suitable Sites for Wood-based Biofuels Facilities in Western Oregon and Washington.**

**Tammi Laninga**

Assistant Professor

Director, Bioregional Planning & Community Design Program

University of Idaho

NARA is examining the economic, environmental and social viability of converting woody biomass (e.g., forest residual and construction and demolition waste (C&D) waste) to an advanced aviation biofuel. Supply chain management for the conversion of woody biomass to biofuels involves the following activities: harvesting feedstock, transporting it by one or several modes, mechanical refinement, pretreatment, chemical conversion, bio-refining and delivery to markets (e.g., commercial and military airports). To convert woody biomass to liquid biojet fuel, three types of facilities have been identified where different operations in the supply chain may occur: integrated bio-refineries (IBRs), liquids depots and solids depots. IBRs are high-capacity plants that take biomass from raw slash or other woody residuals to the final biojet fuel product. Liquids Depots receive raw and mechanically processed woody residuals directly from nearby forests, or chips or pellets from a solids depot. Sugar-rich syrup from a liquids depot would go to an IBR for further refining into biojet fuel or other chemical conversion facilities. Solids Depot receive raw slash, forest thinnings, and/or C&D waste biomass. Mechanically processed materials would be shipped by rail or highway truck to a receiving liquids depot, IBR or other potential end user. This presentation will provide an overview of the methodology used to identify potential sites for the three facility types identified.