



## Ecostructural Design in Ecological Restoration Projects: Including Soils Restoration (EHSER #230) with John W. Munro

**September 19 – September 25, 2010**  
(classroom and field days Sept. 20-24)

This seminar is designed to bring a combination of new techniques, traditional concepts, and new ideas and materials together for the serious ER site planner. Biostructural design, (replacing the misnomer, bioengineering) being the use of biological materials (plants, fibers, wood, and propagules) in ways that utilize their engineering properties (strength in aquatic locations, structure, longevity, ability to hold soil in place) to stabilize the soil and water interface. The seminar will focus on design concepts that use selected plants native to the local area, use a spectrum of techniques (light to heavy duty), fit the design to the local ecology and conditions, and include both manufactured materials as well as materials available locally. Branch layering, wattles, light and heavy fascines, brush boxes, live cribbing, packing, cutting specifications, seasonal timing, and use of volunteer labor will be included. The limitations to bioengineering will be presented as well as the need for repair-oriented protocols for monitoring completed work. A soils restoration component has been added to this seminar for the first time. Soil compaction, topsoil issues, organic amendments, and hostile soils will be presented. Earthwork, machines and equipment, will be discussed as well as some information regarding permitting requirements. The classroom activities will include modeling work including the use of an active stream table, concept design, and introduction to the tools and materials suited to bioengineering. The fieldwork will consist of hands-on installation technique mockups and a tour of local degraded sites where the class will propose bioengineering resolutions and restored sites where such methods have been used. Participants are encouraged to bring biostructural site problems and design queries to the class for potential resolution.



Information is available on . . .

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