

<b>Presenter</b>	Bruce A Bayne URS Corporation
<b>Type</b>	oral presentation
<b>Category</b>	<b>Cost/Benefit Assessments</b>
<b>Title</b>	<i>Benefits of an Innovative LWD Bank Stabilization Technique on a Tidal River: Findings to Date</i>
<b>Abstract</b>	<p>Historical channelization has straightened extensive lengths of tidal rivers and streams in the Atlantic Coastal Plain Region. This has altered associated hydrology and erosion dynamics that affect adjacent lands including open marsh habitat. Such actions often expose the less cohesive substrates of formerly interior marsh areas to erosive forces, such as tidal and storm event flows and boat wakes, that can lead to bank instability, channel migration, and the gradual degradation of marsh and bank conditions. An innovative bank stabilization project using large woody debris (LWD) was conducted in late winter 2008 to address such conditions along an approximately 2,200 feet reach of eroding bank in the upper portions of a tidal river. The cost/benefit assessment used as part of the restoration approach selection process and the documented findings and benefits based on two years of post-restoration monitoring are presented. Monitoring elements include restoration stability, biological conditions of vegetation and fish habitat, hydrology, and quantitative ecological function assessment comparing pre-restoration and post-implementation conditions.</p>