



US Army Corps
of Engineers®

Flood & Coastal Storm Damage Reduction R&D Program

River Analysis Tool

Description	The River Analysis Tool will provide river engineers with a tool to assess river training structure performance, channel response, and resulting ecological benefits or impacts at the reach and subreach level. The tool will allow long-term simulations (which can be multiple years with up to 50 years possible) with a two-dimensional (2-D) grid to assist in the evaluation and design of river training structures such as dikes, revetments, and weirs. The model takes short-term 2-D model results and extrapolates the results over an extended time period. Ecological impacts due to the predicted channel response will be evaluated. It is anticipated that this tool will bridge a gap between qualitative assessment techniques and full 2-D hydrodynamic and sediment models.
Benefits	Benefits of the tool will be ease of use with capability to generate reasonable results in a short period of time and at a modest cost. It will be capable of running simulations across a wide range of spatial and temporal scales, and capable of capturing the hydraulic and long-term general sedimentation and morphologic response to these structures. The tool will produce results at a level sufficient for the evaluation of potential ecological impacts due to the structures.
Status	A preliminary, proof-of-concept model has been developed and initial testing completed. A working version of the model that functions with multiple numerical model formats is under development with completion estimated in 2010.
Distribution Source(s)	Distribution sources are to be determined.
Available Documentation	Documentation is not available at this time. A technical note on the preliminary model is scheduled to be completed in 2010.
Available Training	Training requirements will be determined at a later date.
Available Support	Support requirements will be determined at a later date.
Application	Preliminary screening of river training structures or river engineering applications from a geomorphology standpoint as well as an ecological impact standpoint.
Point of Contact	Charlie Little, Coastal and Hydraulics Laboratory, U.S. Army Engineer Research and Development Center, Vicksburg, MS, (601) 634-3070, Email: Charles.D.Little@usace.army.mil
Partners	N/A.