

Enhanced Stream-Corridor Modeling Tools for Adaptive Management of Tahoe Basin Streams

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Annual Accomplishments Update (October 1, 2008-September 30, 2009)[†]:

A second year of continuous spatially distributed pore-water pressure and soil moisture data, water surface elevation, stream bank erosion, and snow pack was collected at four sites on the Upper Truckee River and four sites on Trout Creek. Data collection was completed in August and instrument installations were removed. The different collected data through June 2009 were processed and analyzed. New components for the Bank Stability and Toe Erosion Model (BSTEM) model were developed to quantify the effects of vegetation and riparian groundwater on streambank erosion. In-stream processes modules of Conservational Channel Evolution and Pollutant Transport System (CONCEPTS) were integrated with the riparian processes modules of Riparian Ecosystem Management Model (REMM). A new improved lateral subsurface flow component was developed for REMM. In collaboration with the University of Illinois the streambank erosion components of CONCEPTS were integrated with the river meander toolbox RVR Meander.

[†] This document is an intermediate progress report, not a final report; consequently, any results should be considered preliminary and should not be cited. Please contact the principal investigators or the Tahoe SNPLMA Science Program Coordinator if you have questions.