



Streambank Protection and Design Short Course for the USDA Forest Service

WEST Consultants, Inc., taught a 3-day expanded streambank protection and design short course for the United States Department of Agriculture, Forest Service, from May 29, to June 1, 2001, in Vancouver, Washington, in association with Ms. Robbin B. Sotir of Robbin B. Sotir and Associates, Inc. Streambank erosion and failure causes millions of dollars of losses annually throughout the United States. The Forest Service in particular has a problem with eroding streambanks that threaten to destroy many miles of forest roads. This hands-on course was developed for the purpose of teaching engineers to recognize and interpret channel processes and the causes of streambank instability, to apply basic computational tools and methods to determine the hydrologic and hydraulic parameters, to understand the various types of bank protection methods and their design criteria, and to design bank protection with several methods through class workshops.

Day 1 of the short course covered the fundamentals of fluvial geomorphology, hydrology, and hydraulics. Day 1 also included a hands-on workshop on hydrology and hydraulics to acquaint the students with hydraulic calculations and the use of selected computer programs. Day 2 covered the mechanisms of streambank erosion and failure, the basic design approaches to streambank protection, and revetment toe protection design. Day 2 included a class workshop to identify various types of bank failure. Day 3 included an overview of regulations, a streambank protection workshop, and an introduction to soil bioengineering concepts. Day 3 also covered river training works, construction issues, a case-study presentation, and a brief field trip.

Class participants were exposed to a variety of streambank protection methods and received hand-on training in the use of various design approaches. Hard as well as soft approaches to streambank protection were treated. The class notebook contained lecture notes, design procedures and calculations, and valuable references.

Project Owner:

*U.S. Department of Agriculture
Forest Service
Pacific Northwest Region
PO Box 3623, Portland, Oregon 97208
Contact: Mr. Peter Bolander, P.E.
(503) 808-2503*

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***Forest road threatened by bank erosion along a bend of
the Pilchuck River in Washington***