ENV Report 40 – Upper Mississippi River and Illinois Waterway Cumulative Effects Study
Volume 1: Geomorphic Assessment by WEST Consultants

ABSTRACT

The methods and results of a detailed evaluation of the cumulative physical effects of the 9-foot Channel Project are presented. The evaluation includes a review of pertinent prior studies, identification of controlling geomorphic characteristics, description of significant human influences and characterization of historic changes along the UMR system. A wide range of existing literature and data are analyzed including historic discharge and sediment measurement records, existing 2-dimensional hydraulic models and information on river regulating structures and dredging activities. Historic changes are determined by identification, delineation, measurement and analysis of approximately 25,000 plan form features and 2,000 channel cross sections. Results of the analyses are used to predict future physical conditions along the UMR. An assessment of cumulative ecological effects is presented in Volume 2 of this report.