

SEDIMENT DYNAMICS POST DAM REMOVAL: STATE OF THE SCIENCE AND PRACTICE

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Abstract: In July 2005 the EWRI/ASCE Task Committee on Sediment Dynamics Post Dam Removal brought together the majority of the national experts, both in research and practice, on the specific topic of sediment dynamics post dam removal. 25 papers were presented regarding the state-of-the-science and state-of-the-practice in considering sediment remobilization and channel dynamics once a dam has been removed. Additional papers reflecting current approaches on this topic were then added to the initial 25 and compiled into a monograph. Authors included representation from federal agencies, universities, consulting firms, environmental non-profit organizations, federal and academic research laboratories, as well as state agencies, and included engineers, geomorphologists, academic researchers, hydraulic/hydrologic modelers, model developers, ecologists, and fish biologists. The papers compiled reflect the large regional and project specific variety relating to this topic. Subjects covered span from physical models, to numerical simulations, to specific case studies, to decision making processes, to individual dam scale issues, to geomorphic changes, to channel bed evolution, to downstream sediment transport, to ecological implications, to lessons learned, and to sediment quality, and encompass the wide variety in sediment composition, hydrologic region, and project scale. The monograph therefore represents the best compilation to date of data on this topic. Our paper will summarize the findings in the monograph papers, and therefore the many national ongoing efforts and the state-of-the-science/practice in the field of sedimentation as it relates to river dynamics post dam removal.