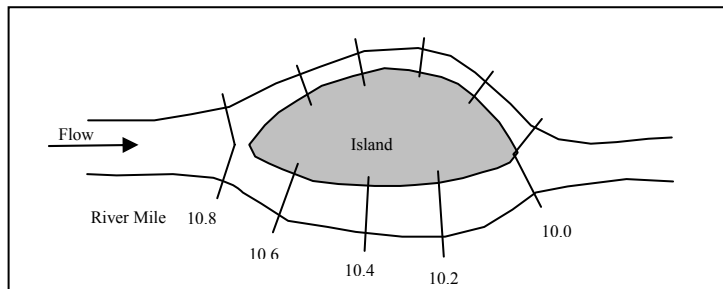




Arizona State Standard on Floodplain Modeling

WEST Consultants, Inc. (WEST) worked with the Arizona Department of Water Resources' State Standards Work Group (SSWG) to develop a State Standard for floodplain modeling. The Standard provides guidance on mathematical modeling of hydraulic processes in watercourses and floodplains. Preparation of the Standard was carried out in four phases.

The first phase of the project consisted of a literature search to identify publications related to standards, submittal requirements, modeling guidelines, procedures, and techniques for computing water surface profiles using one dimensional models. Topics of interest included split



flows, floodway encroachments, ineffective flow areas, breakout/overflow zones, alluvial fans, levees, confluences, channel roughness characteristics, etc. A report documenting the findings of the literature search was prepared.

The study included an evaluation of several one-dimensional hydraulic models. Requirements and/or input parameters such as data collection, photogrammetric mapping, survey controls, use of Manning's "n" values, cross section locations, alignments, and stationing, floodways, floodway encroachments, effective/ineffective flow areas, tributaries, and encroachment methods were evaluated. Four of the hydraulic models were applied in the review and evaluation of four case studies.

The final phase of the study was the development of a State Standard for Floodplain Modeling. The Standard provides guidelines and criteria for floodplain modeling and procedures for the preparation of submittals for floodplain hydraulic modeling as well as for the review and approval of models by local agencies. The State Standard provides a section on good modeling practice which includes a quality control checklist. The appendices to the Standard include a listing of hydraulic models accepted by FEMA and a checklist to assist agencies in the review of HEC-RAS submittals.

Project Owner:

Arizona Department of Water Resources
300 North Third Street
Phoenix, Arizona 85004
Contact: Mr. William C. Jenkins, P.E.
(602) 417-2445

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