



Federal Emergency Management Agency

Washington, D.C. 20472

June 18, 1999

MEMORANDUM FOR: Doug Bellomo, P.E., Acting Project Officer
Eastern Studies Team

Michael Grimm, P.E., Project Officer
Western Studies Team

[Original Signed]

FROM: Mathew B. Miller, Chief
Hazards Study Branch

SUBJECT: Procedure Memorandum No. 5 - Acceptable use of interpolated
cross sections in HEC-RAS hydraulic models for NFIP map
products

Background: The Guidelines and Specifications for Study Contractors, dated January 1995, states in Chapter 3, Section D, Subsection 2, "In general, the use of interpolated cross sections is not permitted unless approved by the Regional PO. Where Regional PO approval has been obtained, floodway delineations should be based on actual cross sections." This guideline was intended to limit use of interpolated cross sections in hydraulic models where the user was not provided with adequate control of the interpolation of cross sections. Often, the interpolation of cross sections for a multi-run model was not consistent between runs. However, with the release of HEC-RAS, which provides cross section location and GR point interpolation control to the user, this guideline was reviewed.

Issue: The HEC-RAS routine for interpolating cross sections does not have the same limitations as the previous models regarding the application of interpolated cross sections within the NFIP.

Final Procedure: For NFIP purposes, the interpolation option in HEC-RAS models can be used. To ensure consistency and appropriate use, I would ask that all efforts to use interpolated cross sections with HEC-RAS be first coordinated with our Regional Offices. Also, for guidance on how this routine functions, and how it should be utilized, I have attached a technical paper, "Interpolated Cross Sections in HEC-2 and HEC-RAS."

cc: See attached distribution list

FEMA Technical Services Division (electronic distribution only)

- Mike Buckley
- Matthew B. Miller
- Frederick H. Sharrocks Jr.
- Mary Jean Pajak
- Bud Andress
- Doug Bellomo
- Mike Grimm
- Phil Myers
- Bill Blanton
- John Magnotti
- Mark Crowell
- Sally Magee
- Max Yuan
-
- Alan Johnson
- Gene Zeizel
- John Gambel
- Rita Henry
- Helen Cohn
- Cynthia Croxdale
- Agnes De Coca
- Anne Flowers
- Martina Lanier
- Cecilia Lynch
- Kathy Miller
- Jay Scruggs

Federal Insurance Administration

- Charles Plaxico

Program Assessment and Outreach Division

- Margaret Lawless

Program Support Division

- Bob Shea

FEMA Regional Offices

- Kevin Merli, Region I
- Michael Dabney, Region II
- Thomas Majusiak, Region III
- A. Todd Davison, Region IV
- Stuart Rifkind, Region V
- Frank Pagano, Region VI
- James Gilliam, Region VII
- Steve Olsen, Region VIII
- Dorothy Lacey, Region IX
- David de Courcy, Region X

Mapping Assistance and Coordination Contractors

- Zekrollah Momeni (Dewberry & Davis)
- Albert Romano (Baker Engineers)

bcc:

Buckely file MT-TS

Office Chron MT-TS-HS

TEC D&D:srk

MT-TS-HS:Miller

MT-TS-HS

Blanton