Appendix C
How To Support Revisions When Backup Data Are Unavailable

Occasionally, FEMA will not have some of the backup data created during the performance of a detailed study/mapping project for a particular flooding source. In such cases, requesters should check with the community floodplain administrator or the staff in the Community Map Repository to see if they have data that can be used or if they have resources for generating the data. Another resource in some States is the State National Flood Insurance Program (NFIP) Coordinator; addresses for the State NFIP Coordinators are provided in Appendix E of this *Guide*.

If the data are not available from FEMA, the community, or the State NFIP Coordinator, the revision requester should review the FIS report to identify the private-sector contractor or Federal agency that generated the data used by FEMA to develop the Flood Insurance Rate Map (FIRM) or Digital Flood Insurance Rate Map (DFIRM).

If the backup data are not available from any source, requesters can use information contained in the Flood Insurance Study (FIS) report and on the FIRM or DFIRM to recreate the hydrologic and hydraulic models. FEMA typically requires that requesters recreate missing models to ensure a logical transition from unrevised to revised data. For more details on the information that can be obtained from the FIS report, revision requesters should consult the following resources:

- Appendix J of FEMA's *Guidelines and Specifications for Flood Hazard Mapping Partners*, which is accessible through a dedicated page on the FEMA Website located at http://www.fema.gov/plan/prevent/fhm/gs_main.shtm; or
- Online tutorial titled "How To Read a Flood Insurance Study," which is accessible through a dedicated page on the FEMA Website located at http://www.fema.gov/media/fhm/fis/ot_fis.htm.

Revision requesters should note that they should not change the methodology used unless an improved methodology is proposed and documentation is provided justifying why this change is an improvement.

Recreating Models

When requesters must recreate models to support map revision requests, they should input the data derived from the FIS report, supplemented as necessary, into the same hydrologic or hydraulic model used to create the effective FIRM or DFIRM. This model should then be calibrated to the Flood Profiles to obtain 1-percent-annual-chance water-surface elevations within a 0.1-foot tolerance. If the Flood Profile cannot be replicated, requesters should note any differences, document the procedures used in attempting to replicate the Flood Profile, and explain why the Flood Profile cannot be replicated.

Riverine Flooding Sources

For riverine flooding sources, requesters should check the main body of the FIS report, using the previously referenced Appendix J and the report Table of Contents, to identify the section that covers the hydrologic methodology used. This methodology is typically a hydrologic model, gage analysis, or regression equation. Using Appendix J and the Table of Contents in the FIS report, the revision requester will then want to identify the section in which the hydraulic methodology used is discussed. For further information on the data required to support a revision to the FIRM or DFIRM, readers should refer to Sections 5 and 9 of this *Guide*.

The FIS report also provides information regarding the starting water-surface elevations and Manning's "n" values, Flood Profiles, and Floodway Data Table. The Floodway Data Table lists the regulatory floodway width, regulatory floodway velocity, and unencroached and encroached 1-percent-annual-chance water-surface elevations. In addition to this information, the FIRM—or, in some cases, the Flood Boundary and Floodway Map—or DFIRM shows the locations and alignments of selected cross sections and the configuration of the regulatory floodway.

Coastal Flooding Sources

For coastal flooding sources, requesters should use Appendix J and the Table of Contents in the FIS report to identify the section in which the methodology used to determine stillwater elevations is summarized. This section of the FIS report provides a summary of the methodology used to determine wave heights and wave runup and also may specify fetch lengths.

The FIS report also includes a Transect Descriptions Table. The Transact Descriptions Table, in conjunction with the Transect Data Table and Transect Location Map, provide the approximate locations at which wave envelope elevations were computed and the resulting maximum 1-percent-annual-chance wave elevations and range of Base Flood Elevations.