Map MODERNIZATION

Federal Emergency Management Agency

FEMA's Flood Hazard Mapping Program

Guidelines and Specifications *for* Flood Hazard Mapping Partners

Volume 2: Map Revisions and Amendments

FEDERAL EMERGENCY MANAGEMENT AGENCY

www.fema.gov/fhm/dl_cgs.shtm

April 2003

All policy and standards in this document have been superseded by the FEMA Policy for Flood Risk Analysis and Mapping. However, the document contains useful guidance to support implementation of the new standards.

Summary of Changes for Volume 2,

Map Revisions and Amendments

The Summary of Changes below details changes to Volume 2 that were made subsequent to the initial publication of these *Guidelines* in February 2002. These changes represent new or updated guidance for Flood Hazard Mapping Partners.

Date	Affected Section/Subsection	Description of Changes
April 2003	2.1.8	Added section on Report and Map Production for Physical Map Revisions (PMRs) consistent with requirements of Volume 1.
April 2003	2.1.9.1	Added section on Revised Preliminary processing for PMRs consistent with requirements of Volume 1.
April 2003	2.1.10	Clarified Appeal and Protest Processing for PMRs.
April 2003	2.1.11	Updated Summary of Map Actions (SOMA) Processing.
April 2003	2.1.12	Clarified Final Flood Elevation Determination processing for PMRs.
April 2003	2.1.13	Added description of floodplain management ordinance review procedures for PMRs consistent with requirements in Volume 1.
April 2003	2.1.14	Updated requirements for final report and map production for PMRs.
April 2003	2.1.15	Added procedures for Letter of Map Change (LOMC) validation for PMRs.
April 2003	2.2	Revised the discussion of Coastal Barrier Resources System revisions to eliminate overlaps and inconsistencies with Appendix K.
April 2003	2.4.2.3	Added wording regarding removal of structures from the Special Flood Hazard Area (SFHA) but not floodway, unless requested to do so by participating community. Clarified Restrictions

		for Letter of Map Amendments (LOMAs).
April 2003	2.4.4.3	Clarified Restrictions for Letter of Map Revisions based on Fill (LOMR-Fs).
April 2003	2.4.6.9	Added guidance concerning the preparation of Letter of Map Revision (LOMR) attachments.
April 2003	2.4.6.12	Clarified Appeal and Protest Processing for LOMRs.
April 2003	2.5.3	Updated Summary of Map Actions (SOMA) Procedures.
April 2003	2.9.3	Added a new subsection to include requirements for maintaining records in the Monitoring Information on Contracted Studies (MICS) system.

Volume 2

2.1 Physical Map Revisions [February 2002]

FEMA will typically initiate a Physical Map Revision (PMR) in response to a map revision request when one of the following will occur:

- Changes resulting from the requested revision will be extensive and will cover more than one panel of the effective Flood Insurance Rate Map (FIRM).
- Changes will result in significantly more mapped area being added to the Special Flood Hazard Areas (SFHAs).
- Changes will result in increases in the Base Flood Elevations (BFEs) shown on the effective FIRM.

FEMA also may prepare a revised Flood Insurance Study (FIS) report and, when appropriate, a revised Flood Boundary and Floodway Map (FBFM), depending on the nature of the revision. Under certain circumstances, FEMA may issue a Letter of Map Revision (LOMR) even if the above-mentioned conditions exist. FEMA and the Mapping Partner that is assigned by FEMA to process the revision request (hereinafter referred to as the processing Mapping Partner) shall use the Standard Map Revision Decision-Making Flowchart in Figure 2-1 in selecting a processing option.

At the direction of the FEMA Project Officer (PO) or his/her designee, the Mapping Partner shall prepare a revised FIRM and, as necessary, FIS report and FBFM in a standard publication format in accordance with the specifications outlined in Appendices J and K of these Guidelines. To accomplish this, the processing Mapping Partner shall:

- Acknowledge the revision request;
- Obtain all required data that are submitted by the revision requester with the first submittal;
- Update the base information on the affected FIRM and FBFM panels as necessary;
- Prepare manuscripts for use in drafting or digitizing the revised FIRM and FBFM panels;
- Prepare the revised FIS report materials and FIRM and FBFM panels; and
- Prepare and ensure accuracy and completeness of final reproduction materials, including a camera-ready copy of the FIS report and negatives of the FIRM and FBFM, or positive plots on mylar, or digital files;

- Deliver the final reproduction materials to the FEMA Map Service Center (MSC) for printing by the U.S. Government Printing Office (GPO).

- Communicate with the revision requester and community, as necessary, throughout the process.

- Coordinate activities with the FEMA Regional Office (RO) as directed by the FEMA PO or his/her designee.

- Communicate with other Mapping Partners, as needed.

Detailed information on the procedures for processing PMRs is provided in Subsections 2.1.1 through 2.1.17.

2.1.1 Receipt and Acknowledgment **[February 2002]**

Map revision requests and any accompanying data from community officials and other Mapping Partners may be transmitted to the processing Mapping Partner or to FEMA RO or Headquarters (HQ) staff. If such requests are submitted directly to the processing Mapping Partner that processes map revision requests for FEMA, the processing Mapping Partner shall inform the FEMA PO or his/her designee.

The processing Mapping Partner shall inventory the materials received and, within 5 working days of receipt, send an acknowledgment letter to the Chief Executive Officer (CEO) and floodplain administrator of the community. If the requester is anyone other than the CEO or floodplain administrator, the Mapping Partner shall send the requester a copy of the acknowledgment letter and, if necessary, telephone the requester to explain the review procedures.

In accordance with Section 65.4 of the NFIP regulations, all requests for changes to effective maps other than those initiated by FEMA must be made in writing by the CEO of the community. The processing Mapping Partner shall request community concurrence if this information was not submitted with the request. If applicable, the Mapping Partner also shall request State concurrence, if that concurrence was not submitted with the revision request.

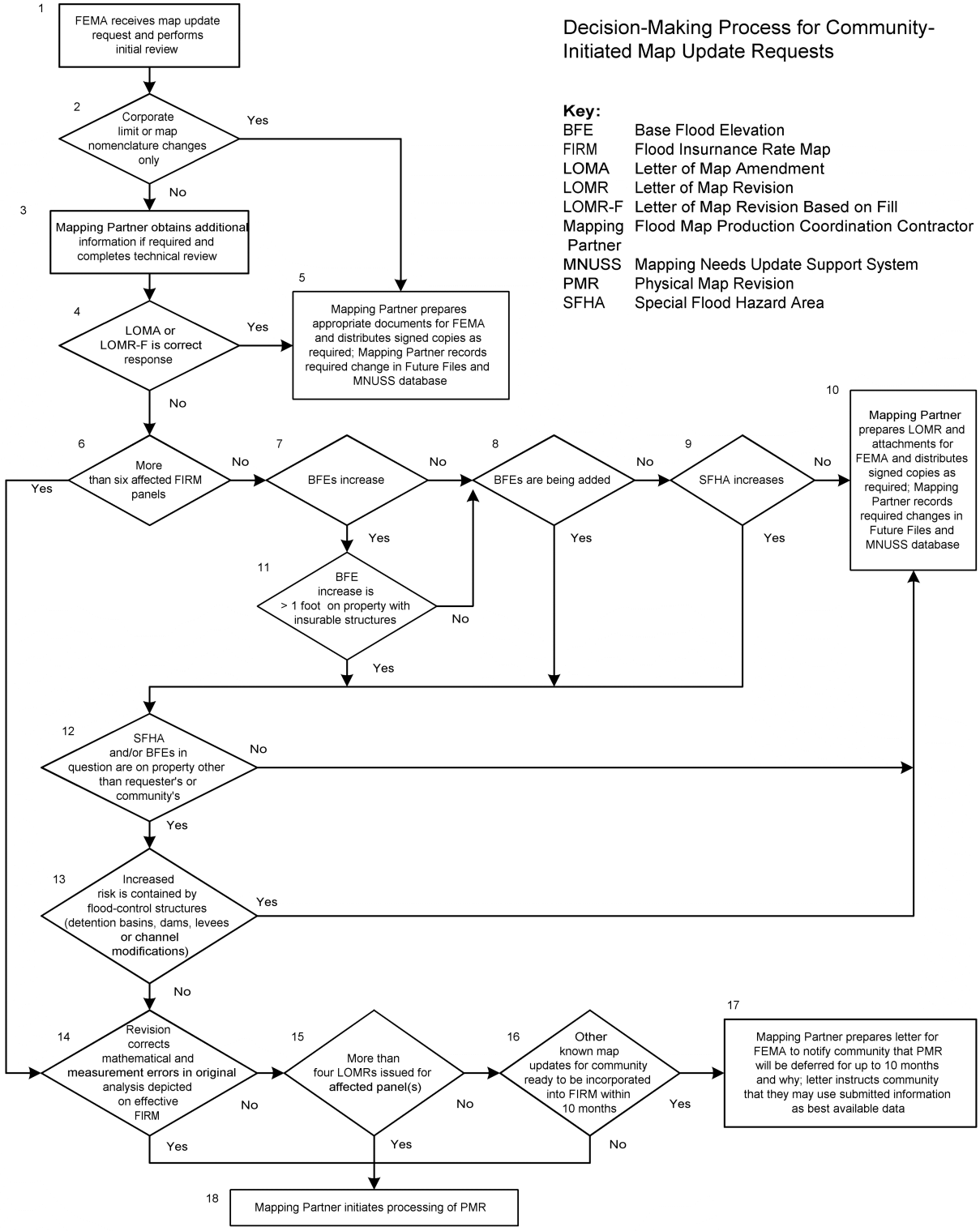


Figure 2-1. Standard Map Revision Decision-Making Flowchart

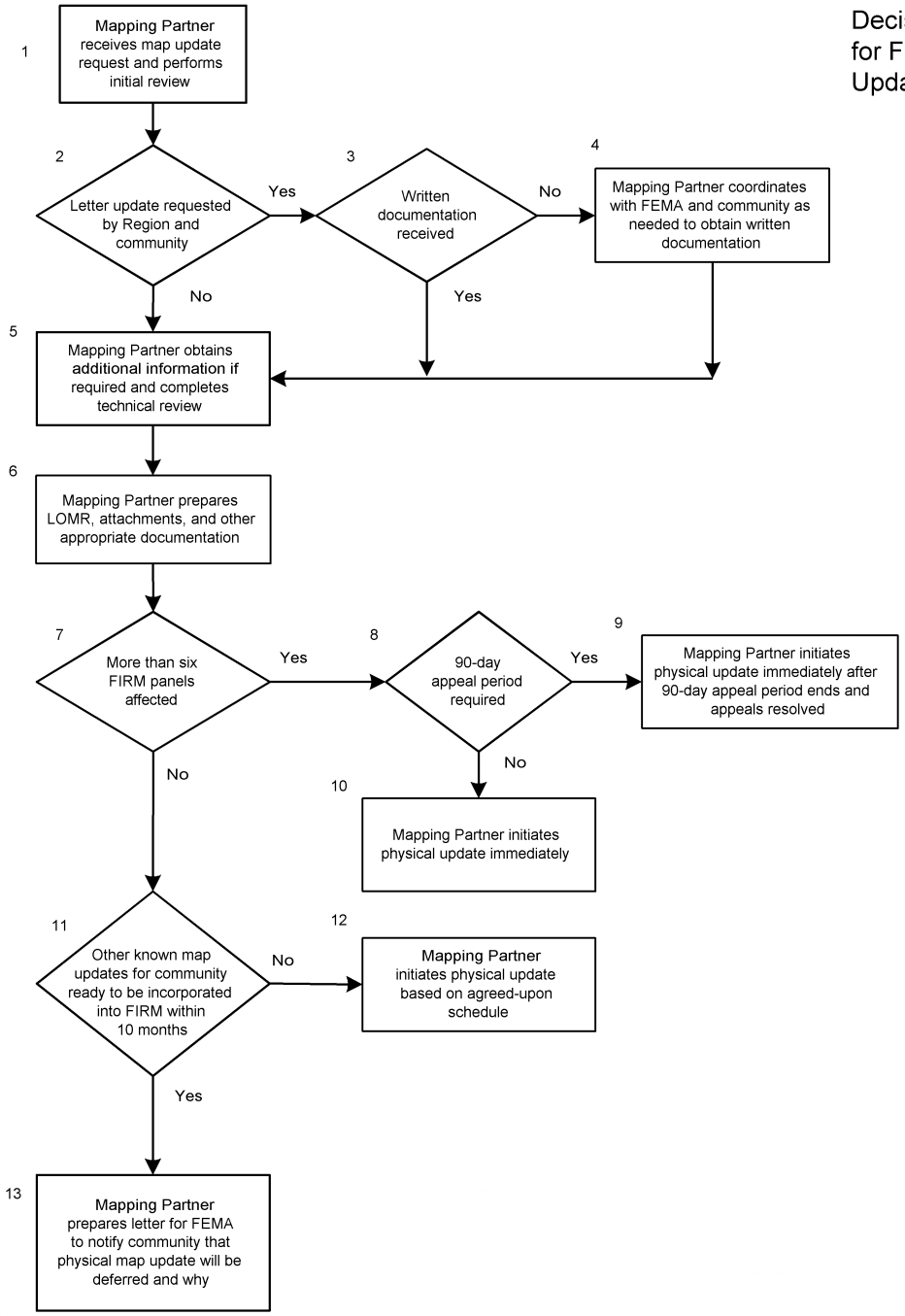


Figure 2-1. Standard Map Revision Decision-Making Flowchart (Cont'd)

2.1.2 Case Initiation **[February 2002]**

Upon receipt of the request, the processing Mapping Partner shall do the following:

- Make an initial determination as to the expected processing procedure (i.e., PMR, LOMR).
- Assign a case number in accordance with Subsection 2.3 of the FEMA *Document Control Procedures Manual* (FEMA, 2000).
- Create a revision case file, in accordance with Section 66.3 of the NFIP regulations and Appendix M of these Guidelines.
- Enter the revision request into an in-house Management Information System (MIS) and the Letter of Map Change (LOMC) module of FEMA's Community Information System (CIS) database.
- Record the date of receipt as the date from which all required processing dates are determined.
- Request, in writing, updated information from the community on other flooding sources, available hydraulic data, changes to corporate boundaries or jurisdictions, and other information pertinent to flood mapping.

2.1.3 Initial Reconnaissance **[February 2002]**

After the case has been properly recorded, the processing Mapping Partner shall begin a search of all available records to determine the status of the community in the NFIP and to identify all past actions by FEMA in the community that may affect the request.

The processing Mapping Partner shall determine whether all data required to address the request have been submitted, advise the FEMA PO or his/her designee of the results of this review, and make a recommendation concerning action to be taken.

2.1.4 Program Status and Map Actions **[February 2002]**

The processing Mapping Partner shall review various portions of FEMA's databases (i.e., CIS, Monitoring Information on Contracted Studies [MICS], Map Needs Update Support System [MNUSS]) to determine the status of the community in the NFIP and obtain information on complete, active, and future required restudies, map revisions, and map amendments.

The processing Mapping Partner also may use the *NFIP Community Status Book*, available in hardcopy form from the FEMA Map Service Center (MSC) or from the Mitigation Library on FEMA's Internet site (http://www.fema.gov/fema/csb.shtm), to determine whether the community is participating in the Emergency or Regular Phase of the NFIP.

The processing Mapping Partner shall review the following data sources to obtain more detailed information on the nature and extent of any past map actions in the community:

- **Future Revision Files**—The processing Mapping Partner shall review these files to determine if additional revisions to the FIS report, FIRM, or FBFM are warranted. These files exist because, from time to time, information is submitted by the community or identified during the course of processing a restudy or map revision that does not significantly affect the community's participation in the NFIP. Because of funding constraints, these revisions are deferred for future action and, at the request of the FEMA PO or his/her designee, placed in the future revision files. In particular, the processing Mapping Partner should review this information for changes affecting the underlying maps or models used in preparing the effective FIRM, FBFM, and FIS report.

- **Letter of Map Amendment (LOMA) and Letter of Map Revision Based on Fill (LOMR-F) Files**—The processing Mapping Partner shall review these files to determine if past LOMA and LOMR-F actions are mappable (i.e., of sufficient size and scope to warrant inclusion in the ongoing revision). In general, single-lot LOMAs and LOMR-Fs do not warrant inclusion because of map scale limitations. However, multiple-lot LOMAs and LOMR-Fs may warrant inclusion in a PMR. Additional information on LOMA and LOMR-F processing is provided in Section 2.4of these Guidelines and in Section 3 of the FEMA *Document Control Procedures Manual* (FEMA, 2000).

- **MNUSS**—As with the Future Revision Files, the processing Mapping Partner shall review the data in MNUSS and any supporting information to determine if additional revisions to the FIS report, FIRM, or FBFM may be warranted.

- **Other Items**—The processing Mapping Partner shall ascertain the relevance of Coastal Barrier Resources System (CBRS) and Otherwise Protected Area (OPA) designations to the project area, and shall determine if the community has a floodplain ordinance in compliance with the latest version of the NFIP regulations.

2.1.5 Required Data **[February 2002]**

Based on the reason for and extent of the revision request, the processing Mapping Partner shall determine whether sufficient data have been submitted by the community or other revision requester for additional data in accordance with the applicable portions of Sections 65.5, 65.6, 65.7, 65.10, 65.11, 65.12, and 65.13 of the NFIP regulations. In addition, the processing Mapping Partner shall ensure that the requester has completed and submitted the appropriate certification forms from the latest version of the MT-2 certification forms package, which may be downloaded from http://www.fema.gov/fhm/dl_mt-2.htm.

In accordance with Part 65 of the NFIP regulations, a Registered Professional Engineer or Licensed Land Surveyor must certify all data. Examples of standard data requirements for various modifications include, but are not limited to, the following:

All Revisions

1. Topographic work map that includes the entire area of the revision and delineates floodplain and/or floodway boundaries, BFEs, and cross-section locations, and all applicable items required in the MT-2 package

2. Floodplain and/or floodway boundary delineations on the effective map panels and the topographic work map

3. Notification to affected adjacent communities

4. Evidence that all revisions involving structures or fill placement meet the criteria of Sections 60.3, 65.5, and 65.6 of the NFIP regulations, which require that the community's NFIP permit official certify that proposed or existing structures to be removed from the SFHA be "reasonably safe from flooding"

5. Certified as-built construction or grading plans (if appropriate)

Revisions in Riverine Areas

1. Hydrologic analysis (if the discharges in the effective FIS report are not used)

2. Effective hydraulic model run duplicating original hydraulic model (multiple profile and floodway). See Appendix C, Subsection C.5.2.1 of these Guidelines for information on FEMA's policy for conversion to HEC-RAS.

3. Existing hydraulic model (multiple profile and floodway) if the calibration hydraulic model run does not reflect the floodplain conditions prior to the start of the project

4. Revised hydraulic model (multiple profile and floodway)

5. Floodplain and/or floodway boundary delineations on the effective map panels and the topographic work map

Channelizations

1. Transition structure design plans for as-built conditions

2. New hydrologic analyses or diversion channel designs

Levees (Dikes, Berms, and Embankments) (See Appendix H of these Guidelines)

1. Evidence of structural stability, certified by a Registered Professional Engineer
2. Evidence of operation and maintenance provisions
3. Interior drainage analyses and SFHA boundary delineations
4. Demonstration of compliance with Section 65.10 of the NFIP regulations
5. Additional design data as necessary

Dams (Detention Basins and Reservoirs)

1. Certification by a Registered Professional Engineer that impoundment structures will remain stable during the base flood
2. Evidence of operation and maintenance provisions
3. Hydrologic analyses for downstream reach, if the dam is designed to lower the base flood discharge

Flood-Control Structures Subject to Alluvial Fan Flooding (see Appendix G of these Guidelines)

1. Certification by a Registered Professional Engineer that the flood-control structures will be able to withstand the hazards associated with flooding, erosion, scour, and relocation of flow paths during the base flood discharge
2. Hydrologic analyses that quantify the discharges (if the discharges on which the effective FIRM is based are not used) and the volumes of water, debris, and sediment movement
3. Engineering analyses demonstrating the impact of flooding from sources other than the fan apex
4. Revised analysis of alluvial fan flooding (if the analysis on which the effective FIRM is based is not used), accompanied by a discussion of the effects of (1) the depth and velocity of flooding, and (2) the scour and sediment deposition on other areas of the fan
5. Evidence of operation and maintenance provisions
6. Revised floodplain boundary delineations on the affected panels of the effective FIRM

Evidence of maintenance provisions, where referenced above, are to be in the form of an ordinance that specifies the activities to be performed, the frequency of performance, and the community officials responsible for the performance. If maintenance is to be accomplished by an agency other than the community, a logical provision (e.g., ordinance) for community

monitoring and backup maintenance is required. The Mapping Partner shall ensure that maintenance agreements are submitted for levees and dams.

Certifications, where referenced above, are defined as follows:

- Certification of data is a statement that the data are accurate to the best of the certifier's knowledge.
- Certification of analyses is a statement that the analyses have been performed correctly and in accordance with sound engineering practices.
- Certification of structural works is a statement that the works are designed in accordance with sound engineering practices to provide protection from the base flood.
- Certification of as-built conditions is a statement that a structure has been built according to the plans being certified, is in place, and is fully functional.

The processing Mapping Partner shall ensure that certifications include the certifier's name, signature, registration number, and the registration date of the certifier.

2.1.6 Technical Review [February 2002]

The processing Mapping Partner shall review the technical, scientific, and other information submitted by the revision requester to ensure that the data are technically accurate, consistent with standard engineering practice and FEMA standards, and sufficient to warrant a revision. The extent of the technical review will, generally, be limited to a review of the information presented on the certification forms and the supporting documentation submitted with them.

For revisions involving the addition of detailed flood hazard information or changes to flooding sources originally studied by detailed methods, analyses and other supporting data for the 10-year (10-percent-annual-chance), 50-year (2-percent-annual-chance), 100-year (1-percent-annual-chance), and 500-year (0.2-percent-annual-chance) floods and regulatory floodway may be required. At a minimum, the analyses and other supporting data provided in support of a revision request must meet the original standards employed by FEMA for the preparation of the FIS report, FIRM, and FBFM.

2.1.6.1 Hydrologic Analyses [February 2002]

FEMA requires that the computations performed to support a request for a revisions to the effective FIS report, FIRM, and FBFM be based on the flood discharge values used for the effective FIS report, FIRM, and FBFM if those discharges are still applicable. However, revision requests also may be based on new hydrologic conditions or better estimates of the flood discharges if significant hydrologic changes have occurred.

The revision requester shall provide 5- and 95-percent confidence limits in support of new discharge values, when gage statistical analysis is performed in support of new hydrology. The

revision requester shall provide sufficient data to support the use of the new discharges for the 1-percent-annual-chance flood and, if necessary, the 10-, 2-, and 0.2-percent-annual-chance floods; the revision requester also shall determine all changes to the FIS report, FIRM, and FBFM that would result from the use of the new flood discharges. Therefore, the revision requester usually must submit hydraulic analyses and revised floodplain and floodway boundary delineations, in addition to hydrologic analyses.

The processing Mapping Partner shall review the information presented in the MT-2 certification forms package to determine if the flood discharges are reasonable and adhere to the requirements listed below. The processing Mapping Partner shall check the flood discharge values for consistency, within the limitations of the methodology employed, throughout the information submitted by the revision requester. In performing this check, the processing Mapping Partner shall verify that, for flooding sources studied by detailed methods, the revision requester has submitted adequate information for any of the four recurrences interval floods that may be affected by the new hydrologic analyses.

The following requirements apply to revision requests involving revised hydrology based on existing conditions:

- The revised flood discharge must be significantly different from the effective flood discharge. The revised flood discharge shall be adopted if the effective flood discharge does not fall within the 5- and 95-percent confidence limits of the revised estimates. These limits shall be determined using methods contained in Bulletin 17B, *Guidelines for Determining Flood Flow Frequency* (Interagency Committee on Water Data, 1982).

- In cases where the new flood discharge must be approved by the State, the processing Mapping Partner shall ensure that the proper approval from the State has been acquired and submitted by the revision requester.

- In cases where the new flood discharge must be approved by a regional/local flood-control agency, the processing Mapping Partner shall ensure that the proper approval from the regional/local flood-control agency has been acquired and submitted by the revision requester.

- An alternative methodology, if used by a revision requester, must meet the requirements of Paragraph 65.6(a)(6) of the NFIP regulations and must be on FEMA's list of accepted computer models.

- For the revised hydrologic analyses, the revision requester shall analyze the same recurrence interval floods as those analyzed for the effective analyses.

- The results from the revised hydrologic analyses must match those for contiguous communities.

- The data accumulated and analyses performed must be certified by a Registered Professional Engineer and submitted by the revision requester to FEMA for review.

If the community has elected to present flood hazard information based on future-conditions hydrology on the FIRM and in the FIS report, the guidance provided in Subsection 2.4.6.7 shall be followed.

2.1.6.2 Hydraulic Analyses [February 2002]

The revision requester shall perform hydraulic analyses to support a revision request based on new hydrologic conditions or physical changes in channel or overbank conditions, if those conditions affect the elevation and extent of the 1-percent-annual-chance flood. For revisions involving flooding sources originally studied by approximate methods and designated as Zone A on the effective FIRM, the analyses performed by the revision requester generally must be consistent with FEMA standards for approximate studies presented in Volume 1 and Appendix C of these Guidelines. Therefore, the analyses may be in the form of hand calculations for step-backwater, normal-depth, or stage-frequency relationships, or the analyses may be based on the use of step-backwater or coastal flooding computer programs.

If the effective hydraulic model is available, the revision requester shall use it to establish baseline conditions. For revisions involving flooding sources that were studied by detailed methods, analyses performed by the revision requester must be consistent with FEMA standards for detailed studies Therefore, the analysis usually shall consist of step-backwater computations for riverine flooding sources, stage-frequency analyses for lacustrine flooding, hand computations for sheetflow areas, and storm-surge and wave-height or wave-runup calculations for coastal flooding. The FEMA standards for detailed studies are presented in Volume 1 and Appendices C through G of these Guidelines.

The revision requester shall ensure that all submitted information and data are consistent. Therefore, the revision requester shall eliminate discontinuities between the flood hazard information shown for revised areas and the flood hazard information shown for non-revised areas in the FIS report and on the FIRM and FBFM before submitting the revision request to FEMA for review and processing.

In addition, for revisions based on the effects of levees or other flood-control structures that have been credited with providing base flood protection, the revision requester shall submit verification, in the form of technical analyses, that those structures meet the minimum criteria outlined in Section 65.l0 of the NFIP regulations. (Additional information on the criteria for crediting for disaccrediting levees or other flood-control structures is provided in Appendix H of these Guidelines.)

Similarly, for flood-control structures located in areas subject to alluvial fan flooding, the revision requester shall submit technical analyses to verify that the minimum criteria of Section 65.13 of the NFIP regulations are met. (Additional information on the criteria for flood-control structures on alluvial fans is provided in Appendix G of these Guidelines.)

The processing Mapping Partner shall verify that the effects of such structures are properly discussed in the FIS report and shown on the FIRM and FBFM.

The following requirements shall apply to requests involving revised hydraulic analyses:

- Revision requests shall be based on the effective hydraulic model. Where the input data representing the effective hydraulic model are unavailable, the revision requester shall develop an approximation. The revision requester shall establish a new model using the original cross-section topographic information, where possible, and the flood discharges on which the current FIS report and FIRM are based. The model must use the same effective-flow areas as established in the original effective analysis and must be calibrated to reproduce the original BFEs to within 0.5 foot. (See Appendix C, Subsection C.5.2.1 of these Guidelines for information on FEMA policy for conversion to HEC-RAS.)

- If the revision requester uses an alternative hydraulic methodology, that methodology must be on FEMA's list of acceptable computer models and meet the requirements of Paragraph 65.6(a)(6) of the NFIP regulations.

- To avoid discontinuities between the revised and non-revised flood data, the revision requester shall submit hydraulic analyses be that are extensive enough to ensure a logical transition can be shown between the revised flood elevations, floodplain boundaries, and floodway boundaries and those developed previously for areas not affected by the revision. The revised and non-revised water-surface elevations must match within 0.5 foot where such transitions occur; however, FEMA would prefer that the transitions match within 0.10 foot if possible. The FEMA PO or his/her designee must approve exceptions to this standard.

- In general, revision requests that result in increases in BFEs because of the physical actions of an individual property owner within the regulatory floodway are to be considered a potential violation of NFIP regulations unless evidence is provided to show that the criteria described in Section 65.12 of the NFIP regulations have been met. The processing Mapping Partner shall bring any violation or potential violation of the NFIP regulations to the attention of the FEMA PO or his/her designee. The FEMA PO or his/her designee shall then bring the matter to the attention of the FEMA RO for followup action with the community involved.

- The processing Mapping Partner shall consult with the FEMA PO or his/her designee to ensure that the provisions of the June 2001 revisions to Sections 65.5 and 65.6 of the NFIP regulations are met. If fill is placed in the community to raise the ground surface to or above the BFE, the community must meet the criteria of Sections 60.3, 65.5, and 65.6 of the NFIP regulations, which require that the community's NFIP permit official certify that proposed or existing structures to be removed from the SFHA be "reasonably safe from flooding." "Reasonably safe from flooding" means floodwaters from the 1-percent-annual-chance flood will not inundate the land or damage structures to be removed from the SFHA and that any subsurface waters related to the base flood will not damage existing or proposed buildings. Additional information on the June 2001 revisions to Sections 65.5 and 65.6 of the NFIP regulations is provided in FEMA Technical Bulletin 10-01*, Ensuring that Structures Built on Fill In or Near Special Flood Hazard Areas Are Reasonably Safe*

From Flooding, which may be downloaded directly from the FEMA Web site at http://www.fema.gov/pdf/fima/tb1001.pdf. (Additional Technical Bulletins may be downloaded from http://www.fema.gov/fima/techbul.shtm.)

- The processing Mapping Partner shall ensure that the map revision request conforms to all applicable NFIP regulations, and shall consult with the FEMA PO or his/her designee to determine how current FEMA policies may affect the revision.

2.1.6.3 Coastal Revisions [February 2002]

To compute the stillwater flood level (SWFL), the revision requester shall consider many factors, and the computation is performed through the use of computer models or statistical analysis of tide gage data of adequate continuous record. Any revision of the SWFL must be based on new information that either refutes or supplements the gage data. The revision requester shall submit significant data or produce verifiable information that refutes the information FEMA used to construct the applicable computer model.

In the case of tide gages, the revision requester shall perform a statistical analysis prepared with new data that supplements the existing tide gage records or provides evidence that the data used are incorrect. The processing Mapping Partner shall review the information presented on the MT-2 certification forms package to determine the appropriateness of incorporating the revised data on the FIRM.

For map revision requests in coastal areas based on more up-to-date, site-specific topographic information, the revision requester shall provide a transect and a wave-height analysis based on the profile. For this analysis, the revision requester also may be required to consider other coastal processes, such as erosion and wave runup. This analysis may be conducted based on the terms of the effective FIS report and FIRM, the community, or the FEMA PO or his/her designee.

Map revisions in coastal areas also may be based on existing, new, or improved shore-protection structures, such as bulkheads, seawalls, breakwaters, and dikes. When structures designed to diminish or absorb wave energy (e.g., breakwaters, bulkheads, seawalls) are involved, the revision requester shall submit evidence that the structure will survive the base flood and associated wave action. The items that the revision requester shall address for a map revision based on coastal structures are listed in *Criteria for Evaluating Coastal Flood Protection Structures* (U.S. Army Corps of Engineers, 1989)**.** **(**See Appendix D of these Guidelines for additional information.**)** Structures designed to provide flood protection (e.g., levees, dikes, floodwalls) must conform to Section 65.10 of the NFIP regulations and to the criteria outlined in Appendix H of these Guidelines.

The revision requester also shall provide assurance from the State or local agency with maintenance responsibility that the structures involved in the revision will be maintained and will not settle, and shall submit as-built drawings of all structures. Wave height analyses based on transacts through these types of structures are valid only when these conditions are met.

The processing Mapping Partner shall review the information presented in the MT-2 certification forms package to determine the items that require further review and the appropriateness of incorporating the revised data on the FIRM.

2.1.6.4 Other Data [February 2002]

Revision requesters also may request changes to flood risk zone designations, changes to floodplain boundaries based on new or more detailed topographic information, and changes to corporate limits.

For revisions to flood insurance risk zone designations, the processing Mapping Partner shall verify the accuracy of any calculations the revision requester submitted and determine whether a revision is warranted based on a review of the MT-2 certification forms package and the supporting documentation. Requests that Zone V or Zone A areas be revised to Zone A or Zone B, respectively, are to be supported by hydraulic computations in most cases.

For floodplain boundary revisions based on new or more detailed topographic information, the revision requester will not be required to submit revised hydraulic analyses unless the changes in ground contours have significantly affected the geometry of cross sections used for the effective FIS and FIRM or have altered effective-flow areas. For revisions involving only floodplain boundaries, the processing Mapping Partner shall review the information presented on the MT-2 certification forms package to determine whether the requested revisions may be made.

For changes to corporate limits, the revision requester and processing Mapping Partner shall refer to Section 2.6 for procedures and requirements.

2.1.7 Reporting and Project Officer Approval [February 2002]

Upon request, the processing Mapping Partner shall advise the revision requester, the FEMA RO, and/or the FEMA PO or his/her designee about the current status of a technical review. When the technical review is complete, the processing Mapping Partner shall discuss the results of the review, any additional data required to support the requested revision, and any problems encountered during the review with the FEMA PO or his/her designee.

If appropriate, the FEMA PO or his/her designee shall direct the processing Mapping Partner to finalize the technical review using one of the following options:

- Requesting, by telephone or letter, additional or revised data to complete the technical review; or
- Proceeding with PMR.

If the processing Mapping Partner is to proceed with the PMR, the processing Mapping Partner shall prepare a letter, referred to as a 316-PMR letter, to inform the community CEO and floodplain administrator that a PMR will be prepared and request that the community submit any information to be incorporated into the PMR. Additional information on the 316-PMR letter and other correspondence issued by FEMA and the processing Mapping Partner for a revision request is provided in the FEMA *Document Control Procedures Manual* (FEMA, 2000).

2.1.8 Report and Map Production [April 2003]

The following activities are accomplished during the Report and Map Production subphase of the Flood Map Project:

- Base map acquisition and preparation;
- FIRM compilation, which entails setting up the final FIRM format (scale, orientation, and panel scheme) and compiling existing flood hazard data (in manual or digital form) from the effective NFIP map and fitting it to the new or updated base map to meet current FIRM specifications;
- Merging of revised and effective flood hazard data into a seamless dataset;
- Research regarding LOMCs issued previously for affected FIRM panels;
- Preparation of required news releases, legal notices, and LOMC summaries;
- Preparation of new or revised FIS report, including Flood Profiles and supporting tables;
- Preparation of new or revised FIRM panel(s); and
- Development of DFIRM database for DFIRMs.

2.1.8.1 Base Map Acquisition and Preparation [April 2003]

If a Digital Flood Insurance Rate Map (DFIRM) will be produced for the PMR, a digital base map that reflects reference features (i.e., roads, streets, hydrographic features, political jurisdiction boundaries) needed by users to locate properties will be required. Early coordination with all communities affected by a PMR is important.

Therefore, the processing Mapping Partner or another assigned Mapping Partner shall send a letter to each affected community that:

- Describes the DFIRM product;
- Requests pertinent information (pertinent information that is requested includes base map data; a current corporate limits map; elevation data [either electronic or hardcopy] and any engineering information that needs to be updated or added to the DFIRM);
- Describes the minimum requirements for the submittal of data to be included in the new DFIRM product, and
- Identifies the base map source that will be used if community data are not available or suitable.

A sample version of this letter and other correspondence that may be generated during the processing of the PMR are presented in the FEMA *Document Control Procedures Manual* (FEMA, 2001).

2.1.8.2 Base Map Choice Priorities [April 2003]

Base map data to be used in producing a DFIRM are prioritized as follows:

1. Base map data that are supplied by communities or other non-Federal sources (e.g., State or regional agencies) and meet FEMA criteria are the first choice for DFIRM production. These files may be in either vector or raster format. If both are available, vector data are preferable due to the ease of their use, their file size, and their lower printing cost. However, community preferences are taken into account when making this choice.
2. U.S. Geological Survey (USGS) Digital Orthophoto Quadrangles (DOQs) are the second choice and the default base map if suitable community data are not available.

If neither suitable community base map data nor USGS DOQs are available for a county scheduled for DFIRM production, the FEMA Lead shall provide the community with information on base map sources, including information on partnering with USGS to initiate DOQ production for that county. DOQ production normally takes 12 to 14 months, so coordination with USGS must be initiated with that time frame and the DFIRM production schedule in mind.

DFIRM road and railroad names are derived from community-supplied files or hardcopy sources, effective FIRM panels, and/or U.S. Bureau of the Census Topologically Integrated Geographic Encoding and Reference System (TIGER) files. Road names are needed regardless of which base map source is chosen for DFIRM production.

2.1.8.3 Minimum Standards for Community-Supplied Data [April 2003]

For FEMA to use community-supplied base map data instead of USGS DOQs for new DFIRM production, minimum standards for resolution, horizontal accuracy, vertical accuracy, horizontal reference system, data sources, currency, coverage, availability, restrictions on use, required and optional contents, thematic separation of data, file format and transfer media, tiling, data structure, and metadata must be met. These minimum requirements are summarized below.

Resolution

The minimum resolution requirement for raster data files is 1-meter ground distance. Higher resolution data are also acceptable.

Horizontal Accuracy

The NSSDA is used to report the horizontal accuracy of the base map data used by FEMA to produce a DFIRM. The NSSDA uses radial accuracy ($Accuracy_r$) to report the radius of a circle of uncertainty, such that the true or theoretical location of a point falls within that circle 95 percent of the time. The minimum horizontal positional accuracy for new FIRM base map data is that of the default base map – the USGS DOQs, which have an NSSDA radial accuracy of 38 feet. Data that meet higher accuracy standards also are acceptable. $Accuracy_z$ of 38 feet is the same as radial root mean square error ($RMSE_r$) of 22 feet.

Vertical Accuracy

For hilly terrain, where 4-foot contours are considered acceptable for hydraulic modeling, digital elevation data must have vertical accuracy ($Accuracy_z$) of 2.4 feet (i.e., vertical root mean square error [$RMSE_z$] of 1.2 feet). In moderate to flat terrain, where 2-foot contours are required to accurately determine 1-percent-annual-chance flood elevations and floodplain boundaries, the digital elevation data must have $Accuracy_z$ of 1.2 feet (i.e., $RMSE_z$ of 0.6 foot).

According to the NSSDA, which replaced the National Map Accuracy Standards of 1947 for digital mapping products, $Accuracy_z$ defines vertical accuracy at the 95-percent confidence level. This means that the true or theoretical location of a point falls within ± of that linear uncertainty value 95 percent of the time. $Accuracy_z = RMSE_z \times 1.9600$, where $RMSE_z$ is the square root of the mean of the squared errors in elevations of check points used to evaluate the vertical accuracy of a digital dataset.

Horizontal Reference System

The files must be georeferenced to a known projection and datum and be accompanied by information that describes those parameters.

Data Sources

Community-supplied data may be in the form of digital orthophotos or vector data files. Locally produced digital orthophotos may be at larger scales and higher resolution than USGS DOQs, but they must meet USGS DOQ standards at a minimum. Aerial images that are not orthorectified are not acceptable. Vector files may be photogrammetrically compiled or digitized from orthophotos. Unacceptable vector file sources include TIGER files or other files compiled at scales smaller than 1:20,000.

Currency

The data must have been created or reviewed for update needs within the last 7 years.

Coverage

Complete and integrated data for an entire county are preferred. If only portions of a county are available, FEMA may choose to use the default base map source (USGS DOQs) for the county.

Availability

The data must be available at the time of the initial coordination contact and must be sent within 30 days of receipt of the FEMA request for the data.

Restrictions on Use

FEMA must be able to print and distribute an unlimited number of hardcopy maps using the data. FEMA must also be able to distribute the base map data and floodplain information freely to the public. Conversion of vector base map data to a raster format for distribution is an option if this satisfies community concerns about the release of proprietary data.

Required Contents

The files must contain all transportation features (e.g., roads, railroads, airports) in the community. If DOQs are supplied, these features must be clearly visible. If vector files are supplied, they also must contain transportation features. Roads are considered to be those travelways intended and maintained for use by motorized vehicles. In vector format, roads may be portrayed as road centerlines or edges of pavement.

The USGS DOQs or community-supplied transportation features shall be augmented with the following vector data if available:

- Hydrographic features, including streams, rivers, lakes, and shorelines;
- Current political boundaries, including those that define the county limits, corporate limits, extraterritorial jurisdictional areas, military lands, and Native American lands;

- Parks or forest lands, if applicable;
- Range, township, and section lines, if applicable; and
- Feature names for all of the above features that have names. These may be provided as annotation/text features or as attributes.

Optional Contents

The following features shall be included, if available:

- Bridges;
- Unimproved roads or trails (i.e., those travelways not intended for motorized vehicles or not usually used by motorized vehicles due to width or seasonal conditions);
- Flood-control structures (i.e., levees, dams, weirs, floodwalls, jetties);
- Elevation data in the form of contours and spot elevations, DEM or DTM data, a Triangulated Irregular Network, or mass points and break lines;
- Building footprints;
- Parcel outlines or parcel centroids; and
- Mass points and break lines and the resulting data that are derived from them, if available.

Thematic Separation of Data

Thematic data must be separated by level, layer, attribute, or file.

File Format and Transfer Media

The file format and transfer media requirements provided in Appendix L of these Guidelines must be met.

Tiling

One single file or a series of thematic files that cover the entire geographic area of the community are preferred to individual small tiles that cover limited geographic areas.

Data Structure

Vector data files must meet the data structure requirements provided in Appendix L of these Guidelines.

Metadata

The files must be accompanied by metadata that comply with the Federal Geographic Data Committee metadata standards.

2.1.8.4 Flood Insurance Rate Map Compilation [April 2003]

The processing Mapping Partner normally shall conduct the FIRM compilation process. This process normally shall occur concurrently with the preparation of new or revised flood hazard analyses.

The compilation process includes determining FIRM scale, layout and paneling scheme, digitizing effective floodplain and regulatory floodway information, and fitting the effective floodplain and regulatory floodway information to the new base map.

Map Scale Selection

Existing FIRM scales are to be reviewed and, where appropriate, either the same map scales or a compatible map scale is to be used for the draft work maps. Existing small-scale FIRM panels are often remapped at larger scales to accommodate detailed floodplain mapping with narrow floodplains and/or floodways.

To accomplish this at a reasonable cost, FEMA shall photo-enlarge the existing base map artwork to be used as-is for the revised FIRM or DFIRM. For example, one panel of an existing FIRM at a scale of 1" = 1,000' may need to be reformatted to create four panels at a larger scale due to the narrowness of the new floodplain delineations. If the existing FIRM is at the scale of 1" = 1,000', the Mapping Partner should prepare the work maps at 1" = 1,000' (or 1" = 5 00' if the floodplains are narrow). If a work map scale of 1" = 400' was used by the submitting Mapping Partner, FEMA would either photo-reduce the work maps to match the existing FIRM base materials or redraft the entire FIRM to match the work map scale. Older, manually produced FIRMs may have been prepared with different map scales (e.g., 1" = 200', 1" = 400'. 1" = 800'). Manual revisions of those panels may retain their existing scales.

Paneling/Tiling Scheme

The FIRM/DFIRM paneling scheme shall follow that used by the USGS for the 7.5-minute-series quadrangle, or subdivisions thereof depending on the scale of the FIRM/DFIRM. Map panels shown at 1" = 2,000' are to be tiled using the same neatlines as the corresponding USGS 7.5-minute-series quadrangles. Map panels shown at 1" = 1,000' are to be tiled using neatlines that correspond to USGS DOQs or 3.75-minute quarter-quadrangles. Map panels shown at 1" =

500' are to be tiled using neatlines that correspond to USGS 1.875-minute quarter-quarter-quadrangles.

The quadrangle tiles are to be generated using the horizontal datum of the base map. If the base map is referenced to the North American Datum of 1983 (NAD83), the quad grid is to be generated in NAD83 and projected to match the coordinate system of the base map.

Guidelines for Conversion to Quad Tiling for Small Communities

When small jurisdictions that were formerly shown on one or a few FIRM panels now fall on significantly more panels as a result of quad-based tiling, the paneling scheme can be modified. If conversion to a quad paneling layout would double the panel count, or if the FIRM was formerly shown as an Only Panel Printed and the quad layout necessitates creation of a FIRM Index, a modified paneling scheme may be used.

North Orientation

All FIRMs/DFIRMs must be oriented so that grid north points to the top of the map sheet. Older, manually produced FIRMs may have been prepared with a different north orientation. If the revised FIRM panels are produced manually, the processing Mapping Partner may retain the existing north orientation.

Rotation

The FIRM data do not need to be rotated to align exactly to the map border. The slight tilt inherent in the data as the panels move farther away from the central meridian is acceptable.

Coordinate System and Horizontal Datum

A standard coordinate system and horizontal datum for all FIRMs/DFIRMs is preferred so that they can be easily referenced to each other. Additionally, FEMA's goal is to maintain nationwide datasets in a central online repository, and maintenance of the FIRMs/DFIRMs in a common coordinate system and horizontal datum facilitates this as well.

The preferred coordinate system for DFIRMs is UTM referenced to NAD83. This coordinate system and horizontal datum are most commonly used by USGS for DOQs. DFIRMs may be prepared in other coordinate systems and horizontal datums if necessary. This situation primarily applies to map revisions for which a raster base map is supplied in a coordinate system other than UTM NAD83. Raster base map data are not to be reprojected if at all possible, because this operation is so time consuming. The DFIRM vectors are to be projected to fit the raster base map data.

Map Insets

All geographic areas shown on DFIRMs must be created and maintained in real-world coordinates. Map insets generally shall not be used in preparing DFIRMs because of this requirement. Narrow, extensive areas around the perimeter of a jurisdiction may be added to existing, adjacent map sheets as overedge areas, if space permits. Larger areas may require a separate map panel.

Panel Numbering

After the map scale(s) and layout for a community have been established, the map panels are numbered. FIRMs/DFIRMs are prepared using a panel numbering sequence that relates panel number to map scale. For panels prepared at a scale of 1" = 500', numbers divisible by 1 are used; for panels prepared at a scale of 1" = 1,000', numbers divisible by 5 (excluding those divisible by 25) are used; and for panels prepared at a scale of 1" = 2,000', numbers divisible by 25 are used. Table 2-1 further illustrates the numbering sequence corresponding to the various map scales.

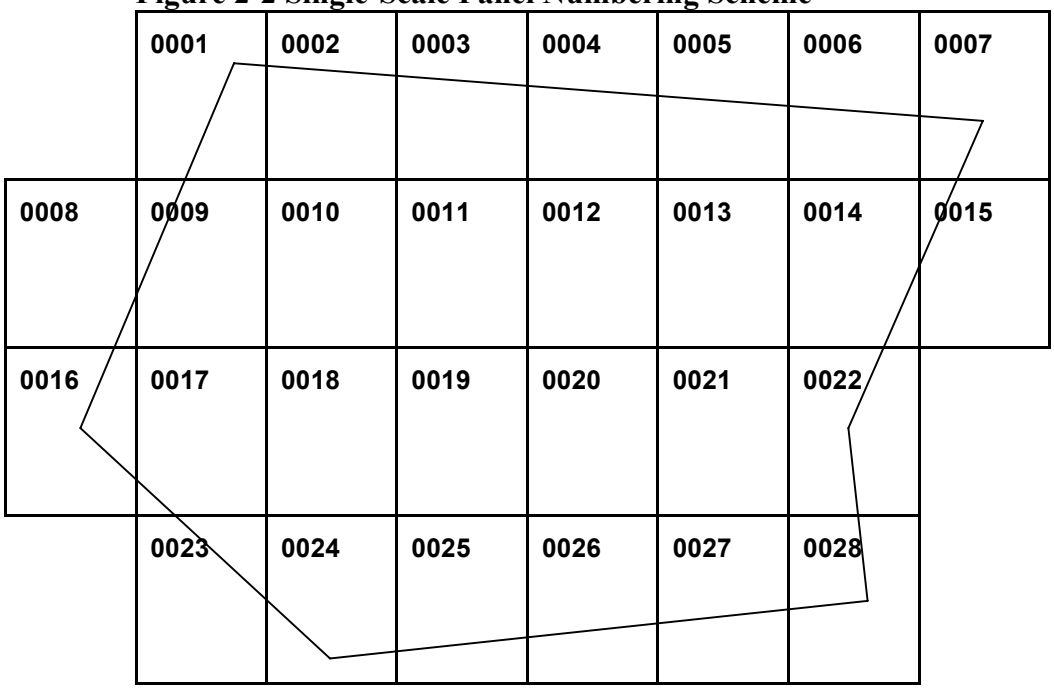
Table 2-1. Panel Numbering Sequence

Map Scale	Panel Numbers
1" = 500'	1, 2, 3, 4, 6, 7, 8, 9, 11, 12, 13, 14, 16, 17, 18, etc.
1" = 1,000'	5, 10, 15, 20, 30, 35, 40, 45, 55, 60, 65, 70, etc.
1" = 2,000'	25, 50, 75, 100, 125, 150, 175, 200, 225, 250, etc.

Single-Scale Flood Insurance Rate Maps

Single-scale FIRMs are those in which all panels within the community or county are printed at the same scale. The panel numbering follows sequentially from left to right and from top to bottom according to the scale. Figure 2-2 contains an example of a FIRM with all panels shown at a scale of 1" = 500'.

Figure 2-2 Single-Scale Panel Numbering Scheme

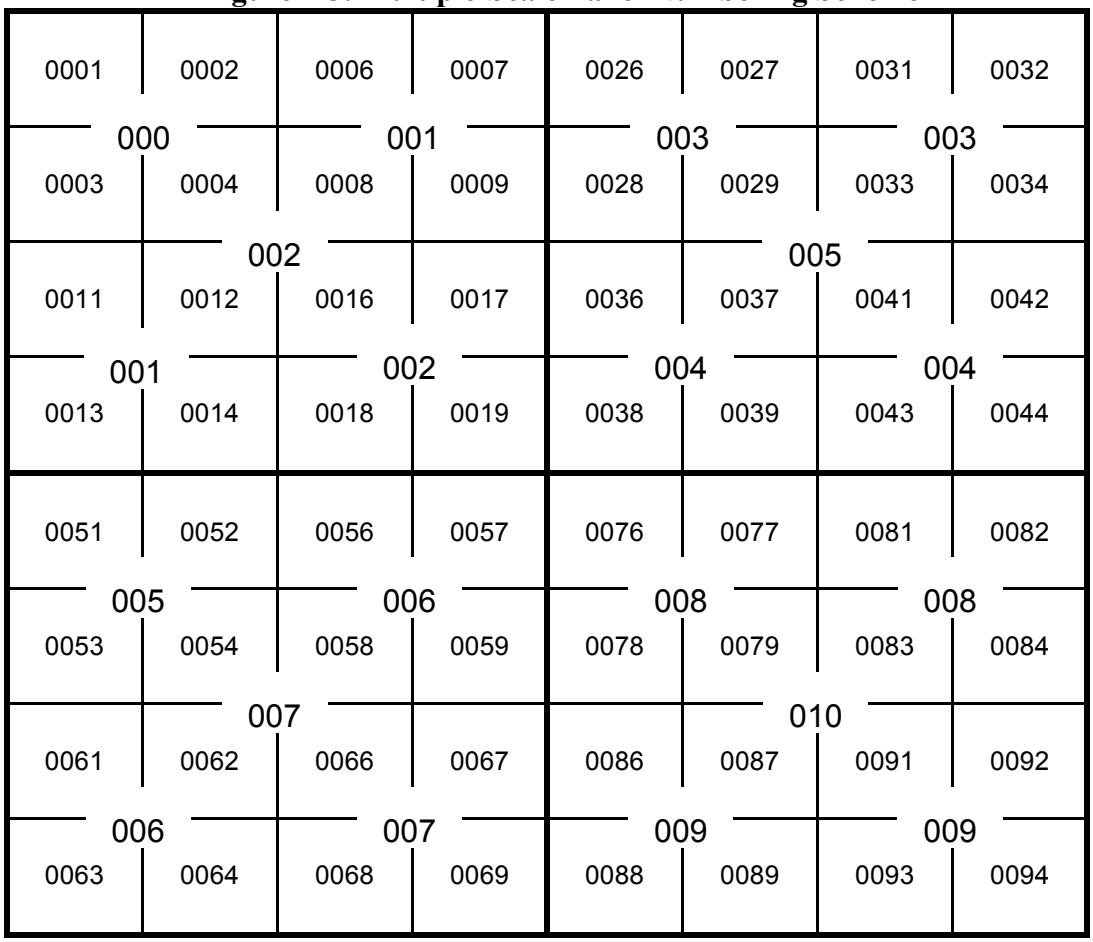


Multiple-Scale Flood Insurance Rate Maps

Multiple-scale FIRMs are to be numbered based on a logical breakdown of USGS 7.5-minute series quadrangle sheets. To accomplish this, the assigned Mapping Partner may envision a USGS quadrangle as having 16 possible subdivisions, with the smallest block being a 1" = 500' scale segment and the largest block being the entire quadrangle at a scale of 1" = 2,000'.

Beginning with the first small-scale map panel, the four large-scale map panels that lie within the grid layout of the larger "parent" panel are to be numbered sequentially from left to right and top to bottom. The associated small-scale map panel is to be numbered sequentially after the four large-scale panels for the area of which it duplicates (i.e., Panel 0025 covers the same geographical area as Panels 0005, 0010, 0015, and 0020 combined). This numbering system is to be continued in a similar manner to the numbering system for single-scale maps; that is, the next number series would be 0030, 0035, 0040, and 0045 for the larger-scale panels, followed by 0050 for the smaller-scale panel. Figure 2-3 illustrates this system. Figure 2-4 contains an example of a FIRM with panels shown at different scales.

Figure 2-3. Multiple-Scale Panel Numbering Scheme



(Heavy lines indicate USGS 7.5-minute quadrangle neatlines)

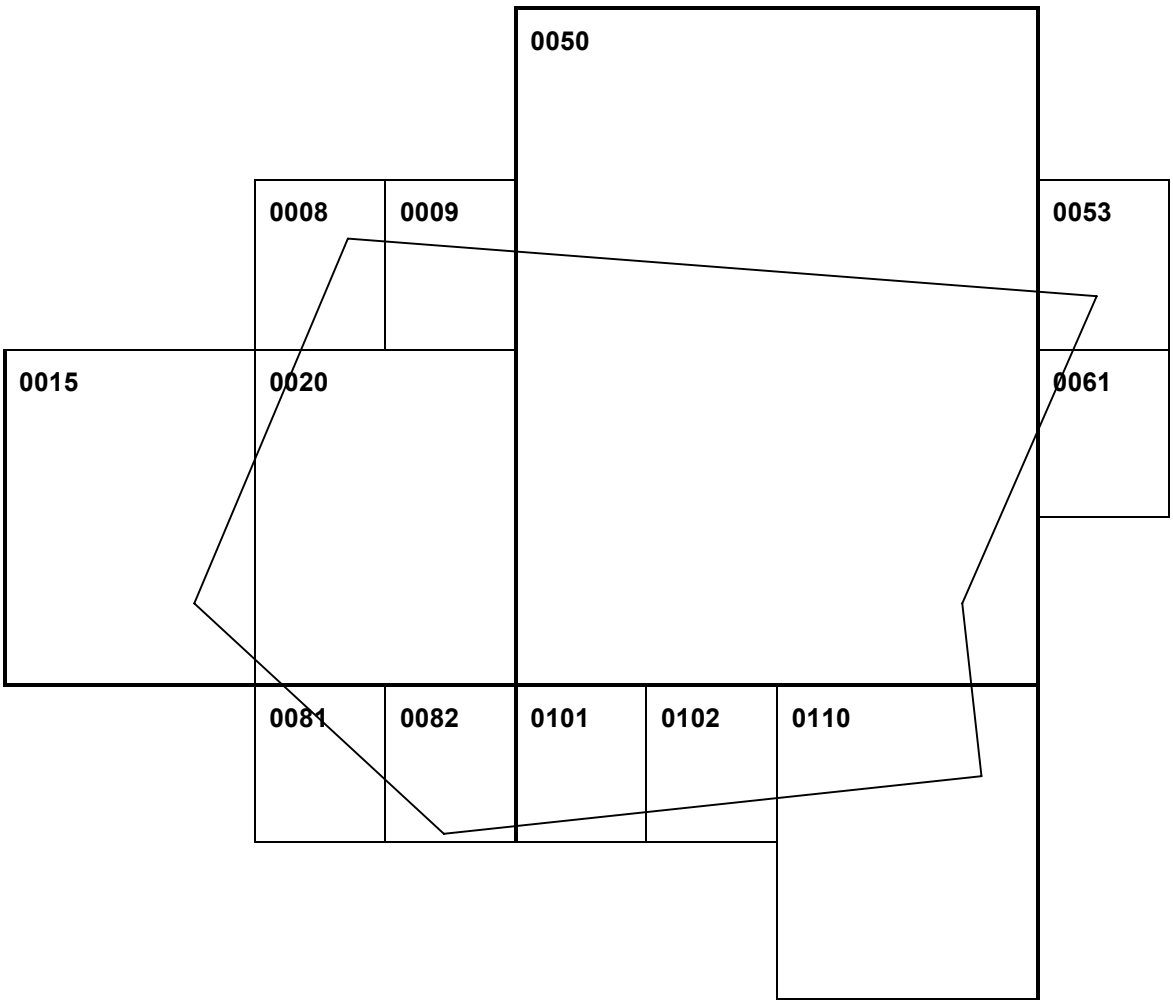


Figure 2-4. Multiple-Scale Panel Numbering Scheme

(Heavy lines indicate USGS 7.5-minute quadrangle neatlines)

Digitization and/or Enhancement of Effective Floodplain Boundaries

During this phase of the FIRM production process, the processing Mapping Partner focuses on digitizing and/or enhancing the effective, non-revised flood hazard information to meet FEMA mapping specifications. This stage in the development of the Preliminary version of the FIRM is often where non-revised flood hazard information is transferred from the effective FIRM (and, in some cases, FBFM) onto a newer and/or more up-to-date community base map. This process does not require new or updated flood hazard analyses or topographic information for the identified flooding sources on the effective FIRM. Appendix C, Subsection C.6.1 of these Guidelines provides details on the protocol for the transfer of effective flood hazard information onto a newer or more up-to-date base map source.

2.1.8.5 Merging Revised and Effective Flood Hazard Data [April 2003]

The focus of this stage of map production is to merge the revised flood hazard data together with the non-revised) flood hazard data to construct the Preliminary version of the FIRM. All supporting information in the effective FIS report also must be merged with the new/revised flood hazard data resulting from the PMR.

Seamless Data

The processing Mapping Partner shall ensure that the effective and revised flood hazard data are compiled into a seamless data with no discontinuities. All inconsistencies between new/revised flood hazard data and non-revised flood hazard data must be identified and resolved as appropriate in consultation with the FEMA Lead before work commences. The submitting Mapping Partner shall ensure that revised flood hazard data tie into the effective flood hazard data. Any problematic residual tie-in issues shall be brought to the attention of the FEMA RPO and/or PO for review and resolution.

Countywide Format Issues

If the PMR necessitates the creation of a countywide FIS report and FIRM, the processing Mapping Partner shall ensure that flood hazard data originating from formerly community-based FIS reports and FIRMs (and FBFMs, if appropriate) are properly merged. This will require the following:

- Flood Profiles for streams crossing corporate limits shall be combined into one seamless set. Any identified discontinuities shall be addressed and resolved. Accordingly, data tables in the FIS report shall reflect a continuous dataset for each detailed flooding source.

- Cross sections shall be re-lettered as appropriate to ensure continuity from the downstream beginning of the detailed study to the upstream limit of detailed study.

- Differences in stream names crossing through different communities shall be eliminated.

- Differences in flood hazard data across corporate limits of adjacent jurisdictions shall be identified and resolved.

- Gaps or overlaps in aerial coverage shall be eliminated.

Areas Not Included

The following is a brief summary of the protocol to follow when the processing Mapping Partner encounters an "Area Not Included" during the preparation of the Preliminary FIRM; additional guidance is provided in Appendix K of these Guidelines.

An Area Not Included is defined as an area excluded from the mapping of the subject community because (1) it is under the jurisdiction of another community and is mapped on the FIRM for that

community, or (2) access to the area is limited due to security reasons (e.g., military installations). The assigned Mapping Partner shall submit any available flood information within these areas. The FEMA Lead shall make the final decision regarding how the information is to be depicted on the FIRM.

Areas subject to Federal or State jurisdiction (e.g., parks, national forests, game reserves, certain military bases) shall normally be included on the FIRM. When the processing Mapping Partner encounters such areas, the processing Mapping Partner shall consult with the FEMA PO or his/her designee for guidance. The processing Mapping Partner may be requested to assess and delineate SFHAs in these areas using available source maps, such as USGS Floodprone Area maps. Where existing SFHA delineations on an effective FIRM are terminated at the boundary of an improperly excluded area, FEMA may request that the Mapping Partner responsible for the flood hazard analyses use detailed topographic mapping to extrapolate floodplain boundaries through the subject area.

2.1.8.6 Summary of Map Action Preparation [April 2003]

To assist communities in maintaining the NFIP maps, particularly the FIRM, the processing Mapping Partner shall prepare summaries of the LOMAs, LOMR-Fs, and LOMRs that will be superseded when the revised FIRM panels or new countywide FIRM panels become effective. FEMA provides these Summaries of Map Actions (SOMAs) to the communities at significant milestones during the processing of a PMR to make the affected communities aware of the effect the new or revised FIRM panels will have on previously issued LOMAs, LOMR-Fs, and LOMRs.

To ensure the modifications made by LOMAs, LOMR-Fs, and LOMRs are included in a PMR, the processing Mapping Partner shall perform searches for determinations at four stages: (1) before the Preliminary copies of the affected FIRM panel(s) are prepared and sent to the community for review and comment; (2) before Revised Preliminary copies of the affected FIRM panel(s) are prepared and sent to the community for review and comment; (3) before the Letter of Final Determination (LFD) letter is sent to the community; and (4) before the effective date of the new or revised FIRM panels.

At each stage, the processing Mapping Partner shall sort the LOMAs, LOMR-Fs, and LOMRs into the following categories:

- Category 1 includes those LOMAs, LOMR-Fs, and LOMRs for which the results have been shown on the new or revised FIRM panel(s).

- Category 2 includes those LOMAs and LOMR-Fs for which the results could not be mapped and shown on the new or revised FIRM panel(s) because of scale limitations or because the affected areas were determined to be outside the SFHA as shown on the effective FIRM. These LOMAs and LOMR-Fs are automatically revalidated after the new or revised FIRM panel(s) become(s) effective.

- Category 3 includes those LOMAs, LOMR-Fs, and LOMRs for which the results have not been, and will not be, reflected on the new or revised FIRM panel(s) because the flood hazard information on which the original determinations were based is being superseded by new flood hazard information.

- Category 4 includes those LOMAs, LOMR-Fs, and LOMRs for which new determinations must be made. LOMAs and LOMR-Fs that were previously issued for multiple lots or structures where the determination for one or more of the lots or structures has changed as a result of the re-mapping cannot be revalidated through the revalidation process. The processing Mapping Partner shall use the data submitted in support of the original LOMA or LOMR-F request to make a new determination after the new or revised FIRM becomes effective. FEMA will issue a single new determination letter for the subject properties.

During the preparation of the Preliminary copies of the FIRM (and FBFM, if required), the activities below shall be completed. Additional information on SOMA production procedures is provided in the FEMA *Document Control Procedures Manual* (FEMA, 2000).

- The processing Mapping Partner shall produce a Preliminary SOMA by generating a report of LOMAs, LOMR-Fs, and LOMRs completed or pending for the community.

- The processing Mapping Partner shall review the in-house LOMA, LOMR-F, and LOMR case files, other community-based files, hard copies of LOMAs and LOMR-Fs completed by the ROs, and case files for LOMAs, LOMR-Fs, and LOMRs completed by the processing Mapping Partner to ensure all affected LOMAs, LOMR-Fs, and LOMRs are identified and listed on the SOMA. The processing Mapping Partner shall not investigate LOMAs, LOMR-Fs, and LOMRs that have already been superseded by a previous map (i.e., its determination date is prior to the current effective FIRM date) for inclusion on the SOMA.

- The processing Mapping Partner shall review each identified LOMA, LOMR-F, and LOMR to determine whether it has been affected by new flood hazard information and if it can be incorporated into the new or revised FIRM. Those LOMAs, LOMR-Fs, and LOMRs that are unaffected by the new flood hazard information and can be reflected on

the FIRM are listed in Category 1 of the SOMA. Those LOMAs, LOMR-Fs, and LOMRs that cannot be reflected on the FIRM but are unaffected by the updated flood hazard information are listed in Category 2 of the SOMA.

- For the remaining LOMAs and LOMR-Fs, the processing Mapping Partner shall review the case files to determine whether the LOMA or LOMR-F can be revalidated. To determine this, the processing Mapping Partner shall perform the following activities:
    - Locate the LOMC site on the Preliminary copy of the FIRM;
    - Determine the proposed BFE for the site; and
    - Compare the Lowest Adjacent Grade (LAG), or the lowest ground elevation of undeveloped lot(s) to the proposed BFE at the site.
- If the LAG(s) or lowest ground elevation at the site is above the proposed BFE, the processing Mapping Partner shall include the LOMA or LOMR-F in Category 2 of the SOMA, because it may be eligible for revalidation once the proposed BFEs are finalized. LOMAs and LOMR-Fs issued for properties with a LAG(s), LFFE(s), or lowest ground elevations below the BFE may be superseded and therefore may be included in Category 3 of the SOMA.
- As noted above, a single letter, the LOMC-VALID letter, revalidates LOMCs; therefore, the processing Mapping Partner shall include the LOMAs and LOMR-Fs issued for multiple structures or lots where the determinations for the lots/structures are no longer as they were for the original determination in Category 4 of the SOMA.
- The processing Mapping Partner shall distribute the Preliminary SOMA with the transmittal letter that accompanies the Preliminary copies of the new or revised FIS report and FIRM.
- If no LOMAs, LOMR-Fs, and LOMRs have been issued since the affected FIRM panel(s) became effective, the processing Mapping Partner shall include an explanatory paragraph in the Preliminary transmittal (100 or 100-A) letter to acknowledge this fact.

2.1.8.7 Incorporation of Letters of Map Change [April 2003]

The processing Mapping Partner shall ensure that previously issued LOMAs, LOMR-Fs, and LOMRs are incorporated into the new FIS report and FIRM where new or revised flood hazard information do not supersede the determination made by the LOMC. The processing Mapping Partner shall include the outline of the areas covered by LOMCs with the submitted FIRM information. Guidance on the data formats and attributes for these features are provided in Appendix L of these Guidelines.

2.1.8.8 News Release Notice Preparation [April 2003]

During the processing of a new or revised FIRM, a News Release notice is required for each community for the purpose of proposing new or revised BFEs. The News Release is critical in the initiation of the statutory 90-day appeals process.

The processing Mapping Partner must, therefore, prepare a News Release notice for publication that lists all new or revised BFEs appearing on the FIRM. The publication of the News Release Notice shall be in accordance with the specifications noted in Subsection 2.1.??? and the regulations found at Section 67.3 of the NFIP Regulations.

The News Release Notice is intended to:

- Provide the community information on proposed BFEs;
- Direct citizens to review the Preliminary version of the FIS report and FIRM/DFIRM;
- Increase property owners' awareness of their proximity to detailed-study 1-percent-annual-chance floodplains;
- Inform citizens where they can view or obtain copies of the Preliminary and effective versions of FIS report and FIRM/DFIRM; and
- Provide a complete list of studied and/or revised flooding sources and the proposed BFEs (lowest and highest) for each flooding source.

The processing Mapping Partner shall use the guidelines below when preparing a News Release Notice for a PMR.

- List the extreme BFEs (lowest and highest, rounded to the nearest whole foot) for new or revised flooding sources.
- List only one elevation for a given location.
- List the lowest (downstream) elevation and description of the location first, then the highest (upstream) and its location.
- Provide the latitude and longitude (if possible) for each referenced elevation.
- Use the Flood Profile to determine the proposed BFE whenever possible.
- For flooding sources not be represented by Flood Profiles, determine the flood elevations from supporting data tables in the FIS report or from the FIRM. For a coastal flooding source, the lowest BFE will likely be determined from a Zone AE area and the highest from a Zone VE area.

- For Zone AO (an area of shallow flooding with depths between 1 and 3 feet), show the depth as "#1", "#2", or "#3" with an appropriate footnote to explain that the number represents a base flood depth rather than a BFE.

- For Zone AH, an area of shallow flooding with a BFE, show the BFE as "*(BFE number)" as with any other BFE.

- For proposed BFE revisions, the location and elevation listed for the proposed revised elevation shall be at the point where there is only a 1-foot (rounded to the nearest whole foot) difference between the effective and the revised elevations. Exceptions are when the revision limits are at the corporate limits, Limit of Detailed Study, or stream confluence, or for any coastal flooding sources. For proposed revisions to existing BFEs, when determining the lowest and highest revised BFE value, it is important to note that the difference between effective and revised elevations may be as little as 0.1 foot. For example, an effective elevation of 55.4 (which rounds to 55) is revised to an elevation of 55.5 (which rounds to 56). Conversely, an effective elevation of 55.5 and revised elevation of 56.4 both round to 56; therefore this is not considered a changed elevation.

- If the Flood Profile for a detailed study tributary of a revised flooding source has been revised solely to reflect the backwater effects from that flooding source, entries for lowest and highest elevation change entries may be necessary on the News Release. The following guidelines shall be followed when appropriate:

    - The tributary requires its own News Release entries if the effects of the backwater extend more than 500 feet upstream of the tributary confluence with the flooding source.

    - If the backwater effects extend for less than 500 feet, the entries for the flooding source will cover the backwater elevations on the tributary. No separate entries are necessary.

- Follow the guidance below for the listing of location reference points on a News Release Notice:

    - Points shall be reflected on the Flood Profile.

    - Avoid using arbitrary points or points with no definite name (i.e., Unnamed or Access Road).

    - "Limits of Detailed Study" may be used only if it is the nearest point on the Flood Profile for 2 or less miles and it can be referenced to a stable point such as the confluence with the main flooding source or a named structure.

    - Convert the measured distance to miles (rounded to the nearest 1/10 mile) when the measured distance exceeds 2,000 feet Avoid referencing points that are great distances (more than three miles) from the subject elevation.

- Describe distances as "approximately (measured distance) upstream/downstream of."

- Describe locations in close proximity (less than 50 feet) to a structure as "upstream side of" or "downstream side of."

- Reference Zone AO or AH shallow flooding areas by the surrounding streets. For example: "Between Jones Road and Main Street" and "300 feet north of Jones Road and 500 feet west of Main Street."

- Relate the coastal elevation reference points to a point on the shoreline. Flooding areas affected by a single elevation such as with a lake can be referenced as the entire shoreline.

The Sample Base Flood Elevations Worksheet in Figure 2-5 is provided as a guide for the Mapping Partner preparing the News Release.

Flooding Source(s)	**Location of Referenced Elevation**	**Latitude** (optional)	**Longitude** (optional)	**BFE (NGVD)**	
				Effective	**Proposed**

Figure 2-5. Base Flood Elevations Worksheet

2.1.8.9 Countywide News Release Notice [April 2003]

If the FIRM/DFIRM is to be prepared in the FEMA Countywide Format, the processing Mapping Partner shall prepare a single News Release for the mapped communities. This News Release will then be published in the appropriate local newspaper(s) to initiate the 90-day appeal period for each affected community. The countywide News Release will provide a listing for each stream that has proposed BFE changes at any location within the subject county, and will include a column to indicate the communities affected by the new or revised flood elevations.

Four distinct situations will necessitate a News Release entry for a flooding source included on FIRM/DFIRM prepared in the FEMA Countywide Format:

1. A detailed study has been performed for the subject flooding source.

2. The subject flooding source was studied by detail methods in adjacent communities within the county, but the former community-based FIRMs do not exhibit a seamless match of BFEs across community boundaries. In this situation, the processing Mapping Partner shall adjust one of the two mismatched datasets to agree with the one that is considered to be the most recent and accurate. The revised BFEs shall be listed on the countywide News Release and the affected jurisdictions will be noted appropriately.

3. The subject flooding source has been studied by detail methods in one community but has either not been studied or has been studied by approximate methods in an adjacent community. The former Zone A floodplain must be converted to a detailed Zone AE with BFEs, thereby necessitating a News Release entry.

4. The floodplain for a flooding sources studied by detailed methods has been extended into an adjacent community to achieve a seamless match across jurisdiction boundaries. This scenario may occur even if the subject stream does not physically lie in the affected jurisdiction, but its associated floodplain extends across jurisdiction boundaries.

5. The sample Countywide Base Flood Elevations Worksheet in Figure 2-6 is provided as a guide for the Mapping Partner preparing the countywide format News Release.

Flooding Source(s)	**Location of Referenced Elevation**	**Latitude** (optional)	**Longitude** (optional)	**BFE (NGVD)**		**Communities Affected by the Proposed BFEs**
				Effective	**New/ Revised**	

Figure 2-6. Countywide Base Flood Elevations Worksheet

2.1.9 Community Review and Comment [February 2002]

At the request of FEMA, the processing Mapping Partner shall transmit Preliminary copies of the new or revised map panels, FIS report materials, and DFIRM spatial database to the community CEO and floodplain administrator, revision requester (if other than the CEO or floodplain administrator), and others for review and comment. For all PMRs, the community shall receive at least a 30-day review period. FEMA may extend this review period when appropriate to ensure the affected communities have sufficient time to review and comment. When BFEs are added or modified, a statutory 90-day appeal period shall be required in accordance with Part 67 of the NFIP regulations. For most PMRs, the 90-day appeal period will be started after the community review and comment period has elapsed.

Review and Comment Period

FEMA generally will provide the community, revision requester (if other than a community), and all other interested parties with a 30-day review period. (For large-scale revisions or at the request of the community, FEMA may allow additional time to review the Preliminary copies.) During the review period, the community officials, revision requester (if other than a community), and other interested parties shall submit comments and suggested revisions to the Preliminary versions of the FIRM/DFIRM, FIS report, and DFIRM spatial database to FEMA.

Once the 30-day review period has elapsed, the processing Mapping Partner shall review any comments submitted to determine whether revisions to the Preliminary versions of the map, report, and database are required. The processing Mapping Partner shall discuss the comments received and any additional data required to support them with the FEMA PO, his/her designee, and FEMA RO staff. The FEMA PO or his/her designee, in conjunction with the FEMA RO when required, shall determine whether changes are warranted. If changes are warranted, FEMA may direct the processing Mapping Partner to prepare and distribute Revised Preliminary copies of the revised FIS report, FIRM (and/or FBFM), and database to the community CEO and floodplain administrator and other recipients of the Preliminary copies.

If no information is submitted during the review period or FEMA determines that the changes do not warrant issuing Revised Preliminary copies, FEMA shall direct the processing Mapping Partner to continue the production process. In such cases, the processing Mapping Partner shall incorporate any changes resulting from the review comments into the report and map materials and the database before the final reproduction materials are submitted to the MSC for publication by GPO (See Subsection 2.115.). FEMA shall notify the community in a subsequent letter that the requested changes shall be shown on the printed copies of the revised FIS report, FIRM, and/or FBFM.

If the PMR will result in new BFEs or modifications to the effective BFEs, the processing Mapping Partner shall initiate the 90-day appeal period as discussed in Subsection 2.1.11. If the PMR does not involve new BFEs or modifications to effective BFEs and no Revised Preliminary copies are to be sent, the processing Mapping Partner shall prepare an LFD in accordance with the requirements documented in Subsection 2.1.10..

90-Day Appeal Period

For PMRs that involve new or modified BFEs, the processing Mapping Partner shall initiate the statutory 90-day appeal period to provide community officials and residents of the affected communities an opportunity to appeal the new or modified BFEs. As in the processing of FEMA-contracted Flood Map Projects, the proposed or proposed modified BFEs must be published in a local newspaper with wide circulation and in the *Federal Register* to initiate the appeal period.

For PMRs, the appeal period is initiated either before the start of or concurrent with the printing process for the revised FIS report, FIRM, and/or FBFM. The appeal period will occur prior to printing for revisions involving new or higher BFEs and may be concurrent with the printing process for revisions resulting in lower BFEs. For both the prior and concurrent procedures, the appeal period must elapse and the BFEs must be finalized before the revised FIS report, FIRM, and/or FBFM may become effective.

2.1.9.1 Revised Preliminary Processing [April 2003]

During or subsequent to the review and comment period, the FEMA PO or his/her designee may decide that revisions to the FIS report, and/or FIRM/DFIRM, and/or FBFM, and/or database are warranted. In such cases, the processing Mapping Partner, at the direction of FEMA, shall prepare and distribute Revised Preliminary copies of the appropriate materials.

In most cases, the Revised Preliminary copies shall be sent to the community with the official notification of the start of the 90-day appeal period. However, at the request of FEMA in coordination with the community and other Project Team members, the processing Mapping Partner shall prepare and distribute Revised Preliminary copies for review before the statutory 90-day appeal period is initiated.

When Revised Preliminary copies are prepared and submitted to the community for review, the processing Mapping Partner shall generate a SOMA and conduct a review similar to that conducted before the Preliminary copies were issued. When required, the processing Mapping Partner shall revise the Preliminary SOMA and submit it to FEMA for review with a special transmittal letter to the community. The processing Mapping Partner shall mail the revised SOMA to the CEO, RO, and State NFIP Coordinator with the special transmittal letter.

2.1.10 Statutory Appeal Period Requirements [April 2003]

When FEMA proposes new or modified BFEs as the result of a PMR, FEMA must, in accordance with Section 110 of the Flood Disaster Protection Act of 1973 (Public Law 93-234), provide all affected communities with a 90-day appeal period. In accordance with Section 67.4 of the NFIP regulations, FEMA initiates the appeal period by publishing a proposed BFE determination notice in the *Federal Register*; by notifying the CEO of the community by

certified mail, return receipt requested; and by publishing the proposed BFE determinations twice in a prominent local newspaper during the 10-day period immediately following notification of the community CEO. The proposed BFE determination notice typically is published in the legal advertisements portion of the newspaper. Although it is not required, FEMA encourages community officials to provide an even wider distribution of the notice to ensure that residents, property owners, and other interested stakeholders are aware of the proposed BFE determinations.

When a 90-day appeal period is required for a PMR, the processing Mapping Partner shall prepare and process the correspondence for initiating the appeal period and proposing the new or modified BFEs. The processing Mapping Partner shall prepare the proposed BFE notices for publication in the *Federal Register* and a local newspaper with wide circulation and prepare all FEMA letters that will be sent to the CEO and floodplain administrator of the community, the State NFIP Coordinator, and others.

The processing Mapping Partner shall ensure that the notices are correct, that they include BFEs for all flooding sources for which revisions were made, and that they are published in the local newspaper on the correct date and in the *Federal Register*.

At the beginning of each month, the processing Mapping Partner shall compile the proposed BFE lists for all communities receiving proposed BFE determination letters and notices during the previous month and prepare the Proposed Rule for concurrence and signature and for publication in the *Federal Register*. The processing Mapping Partner shall then submit the Proposed Rule to the designated FEMA coordinator for routing, concurrence, and signature.

The FEMA coordinator shall coordinate with GPO to ensure timely publication of the Proposed Rule in the *Federal Register.* The FEMA coordinator and the processing Mapping Partner shall review the published Proposed Rule to ensure it is accurate, and shall coordinate correction of the Proposed Rule through publication in the *Federal Register* when appropriate.

2.1.10.1 Appeal and Protest Processing Requirements [April 2003]

An appeal is a challenge of a proposed BFE. The sole basis of an appeal, as indicated in Section 67.6 of the NFIP regulations, is the possession of knowledge or information indicating that the BFEs proposed by FEMA are scientifically or technically incorrect. The proposed BFEs are considered scientifically incorrect if the methodology or assumptions used in the determination of the BFEs is inappropriate or incorrect. The BFEs are considered technically incorrect if the BFEs were based on insufficient or poor quality data, analysis contains mathematical or measurement errors, or physical changes have occurred in floodplain.

Comments received by FEMA during the appeal period that do not challenge proposed BFEs are considered "protests." A protest is a challenge of information or data from a Preliminary FIS Report or FIRM other than BFEs. Types of protests include, but are not limited to, the following:

- Challenges of proposed floodplain boundary delineations based on more detailed or recent topographic data;
- Challenges of proposed regulatory floodway boundaries based on better modeling,
- Requests that changes effected by a previous Letter of Map Change be incorporated;
- Base map errors; and
- Errors of omission.

Appeals and protests must be supported by scientific or technical data, provide proof of error, and provide sufficient data to make revisions (bridge plans, cross-section data) and may require certification of data by a Registered Professional Engineer or Licensed Land Surveyor.

Additional information on the data required to support an appeal is presented in Chapter 3 of *Appeals, Revisions, and Amendments to National Flood Insurance Program Maps: A Guide for Community Officials* (FEMA, 1993). Additional information on the data required to support a protest is presented in Chapter 4 of *Guide for Community Officials*.

In accordance with Section 67.7 of the NFIP regulations, private persons shall submit appeals to the community CEO during the appeal period. The CEO, or a community official designated by the CEO, shall review and consolidate all appeals by private persons and prepare a written opinion stating whether or not the appeal is justifiable. The community CEO or other designated community official shall then submit the opinion and the appeal(s) to FEMA for review.

In accordance with Section 67.8 of the NFIP regulations, FEMA will "review and fully consider any technical or scientific data submitted by the community that tend to negate or contradict the information upon which the proposed determination is based." Although not specifically required by the regulations, FEMA also will consider all technical or scientific data submitted in support of a protest as well.

To assist FEMA, the processing Mapping Partner shall review and evaluate submitted data, request additional data when required, and recommend resolutions to FEMA for all appeals and protests submitted during the 90-day appeal period. An expanded discussion of these procedures also appears in the *Guide for Community Officials* (FEMA, 1993).

At the request of FEMA, the processing Mapping Partner shall perform the following tasks:

- Acknowledge receipt of an appeal or protest
- Evaluate any data submitted;
- Request, by telephone and/or in writing, any additional data required to support the appeal or protest;
- Perform technical analyses if requested by FEMA;
- Prepare and distribute Revised Preliminary copies of the affected FIS report, materials (usually, Flood Profiles and/or data tables), FIRM/DFIRM panels, and/or FBFM panels, if requested by FEMA; and
- Assist FEMA in preparing and distributing an appeal or protest resolution letter to be sent to the community CEO and floodplain administrator and all appellants.

For most appeals, FEMA shall provide a comment period (usually 30 days) following the date the appeal or protest resolution letter is issued before proceeding with the processing of the new or revised FIS report and FIRM by preparing and issuing an LFD. FEMA, with the support of the assigned Mapping Partner and other members of the Project Team for the Flood Map Project, shall address any comments received during this comment period before proceeding with the LFD.

Changes resulting from protests usually shall be incorporated at the time that the final reproduction materials are prepared. However, if the changes are significant, the FEMA PO or his/her designee may direct the processing Mapping Partner to prepare and distribute Revised Preliminary copies of the revised FIS report, FIRM/DFIRM, and/or FBFM. If a Revised Preliminary is not required, the FEMA PO or his/her designee shall direct the processing Mapping Partner to include the protest resolution in the LFD.

2.1.11 Final Summary of Map Action Preparation [April 2003]

Approximately 2 weeks before the LFD date, the processing Mapping Partner shall generate and review the Final SOMA. The Final SOMA shall include all LOMRs, LOMAs, and LOMR-Fs included in the Preliminary SOMA and all LOMRs, LOMAs, and LOMR-Fs issued since the Preliminary or Revised Preliminary copies of the FIS report and FIRM/DFIRM were distributed.

The processing Mapping Partner shall mail the Final SOMA to the CEO of the community, RO, and State Coordinator with the LFD. If no LOMRs, LOMAs, or LOMR-Fs have been issued for the affected map panel(s), the processing Mapping Partner shall include an explanatory paragraph in the LFD to acknowledge this fact, and no SOMA shall be sent to the CEO or any of the other recipients of the LFD.

2.1.12 Final Determinations [April 2003]

When the 90-day appeal period has elapsed and all appeals and protests have been resolved, or when the review and comment period has elapsed, all comments have been addressed, and no 90-day appeal period is required, the processing Mapping Partner shall prepare an LFD to notify the community CEO and floodplain administrator, appellants, and others designated by FEMA that FEMA's determination is final. If new or modified BFEs were proposed, the processing Mapping Partner also shall prepare a Final Rule for publication in the *Federal Register*. (No notice will be published in a local newspaper.) The final BFE notice shall establish the final new or modified BFEs. (See Subsection 1.11 of the *Document Control Procedures Manual* [FEMA, 2000] for additional information on LFD content.)

The processing Mapping Partner shall then include the affected community on a docket listing all LFDs scheduled for a particular date and submit the docket to the FEMA PO or his/her designee for review and approval. The FEMA PO or his/her designee shall notify the processing Mapping Partner by concurring on the docket that the letters can be mailed. If special circumstances with the PMR exist or the proposed BFEs were appealed, the FEMA PO or his/her designee may direct the processing Mapping Partner to submit an original hard copy of the LFD for review.

On the LFD date, the processing Mapping Partner shall mail the original LFD and enclosures (including the SOMA) to the community CEO and floodplain administrator; shall mail copies to the revision requester (if other than the community CEO and floodplain administrator) and appellants and protesters as necessary; and distribute external and in-house file copies in accordance with the requirements provided in Subsection 1.11 of the FEMA *Document Control Procedures Manual* (FEMA, 2000).

At the beginning of each month, the processing Mapping Partner shall compile the final BFE lists for all communities receiving LFDs during the previous month and prepare the Final Rule for concurrence and signature and for publication in the *Federal Register*. The processing Mapping Partner shall then submit the Final Rule to the FEMA coordinator for routing, concurrence, and signature. The FEMA coordinator shall coordinate with GPO to ensure timely publication of the Final Rule in the *Federal Register.* The FEMA coordinator and the processing

Mapping Partner shall review the published Final Rule to ensure it is accurate, and shall coordinate correction of the Final Rule when appropriate.

2.1.13 Floodplain Management Ordinance Updates [April 2003]

With the issuance of the LFD, FEMA provides affected communities with 6 months (or otherwise agreed-upon timeframe) to adopt floodplain management ordinances that comply with the new or updated flood hazard data presented on the FIRM as discussed in Section 60.2 of the NFIP regulations. The new or updated ordinances, which are sometimes referred to as "compliant" ordinances, must meet the requirements Section 60.3 of the NFIP regulations.

If a community has floodplain management ordinances in effect that require no amendment as a result of the new or updated flood hazard data, the compliance period may not be required. However, if the community did not have compliant ordinances when the LFD was issued, FEMA must give the community a 6-month compliance period and remind the community that it must submit updated floodplain management ordinances to the RO for review.

If the community fails to submit compliant ordinances to the RO within the first 90 days of the compliance period, the processing Mapping Partner shall, at FEMA's request, prepare a 90-day suspension reminder letter to the community. If the community has not submitted compliant ordinances to the RO within 30 days of the effective date, the processing Mapping Partner shall prepare a 30-day suspension reminder letter for the community. For these suspension reminder letters, the processing Mapping Partner shall follow the preparation and distribution requirements presented in Subsection 1.14 of the FEMA *Document Control Procedures Manual* (FEMA, 2000).

If the community does not adopt the floodplain management ordinances by the effective date, FEMA shall suspend the community from participation in the NFIP until the community adopts compliant floodplain management ordinances.

2.1.14 Preparation of Reports and Maps for Printing [April 2003]

For PMRs, the Mapping Partner shall prepare final reproduction materials and submit them to the MSC for printing by GPO following the procedures documented in Volume 1, Appendixes J and K of these Guidelines.

A standardized digital package shall be prepared by the processing Mapping Partner to archive all administrative and technical support data generated during the preparation and technical review of the FIS report and FIRM. The archival requirements, including the requirements for the Technical Support Data Notebook, are provided in Volume 3, Section 3.3 and Appendix M of these Guidelines.

2.1.15 Revalidation of Letters of Map Change [April 2003]

Approximately 1 month before the FIRM effective date, the processing Mapping Partner shall review and update the list of LOMCs included in the Final SOMA. The processing Mapping Partner shall use the list to produce the LOMC-VALID letter that is issued to the CEO of the community. (For further information on this process, see Section 2.5.)

2.1.16 Coordination and Documentation Activities [February 2002]

The processing Mapping Partner shall perform the required coordination and documentation activities necessary for processing each PMR. During the processing, the Mapping Partner shall:

- Communicate with the requester and community, as necessary.
- Coordinate activities with the FEMA RO as directed by the FEMA PO or his/her designee.
- Communicate with other Mapping Partners, as needed.
- Prepare letters and other correspondence for FEMA signature.
- Maintain legal documentation, records of correspondence, and technical data.
- Provide status reports and other information to FEMA as required by the FEMA PO or his/her designee.

2.2 Coastal Barrier Resources System Revisions
[February 2002]

2.2.1 Overview **[February 2002]**

The U. S. Congress passed the Coastal Barrier Resources Act (CBRA) in 1982 and the Coastal Barrier Improvement Act in 1990, defining and establishing a system of protected coastal areas (including the Great Lakes), known as the Coastal Barrier Resources System (CBRS). Areas within the CBRS are subject to wave, tidal, and wind energies and protect landward aquatic habitats from direct wave attack. The Acts further define CBRS areas as all associated aquatic habitats, including the adjacent wetlands, marshes, estuaries, inlets, and nearshore waters, but only if such features and associated habitats contain few manmade structures and if these structures, and man's activities on such features and within such habitats, do not significantly impede geomorphic and ecological processes.

The Acts provide protection to CBRS areas by prohibiting most expenditure of Federal funds within the CBRS. These prohibitions refer to "any form of loan, grant, guarantee, insurance, payment, rebate, subsidy or any other form of direct or indirect Federal assistance," with specific and limited exceptions.

In addition to the CBRS, the Coastal Barrier Improvement Act of 1990 established Otherwise Protected Areas (OPAs). OPAs are undeveloped coastal barriers within the boundaries of an area established under Federal, State, or local law, or held by a qualified organization, primarily for wildlife refuge, sanctuary, recreational, or natural resource conservation purposes.

The U.S. Congress designated the initial CBRS areas in 1982. Subsequent modifications of the CBRS are introduced as legislation to be acted on by the U.S. Congress, and originate from State and local requests as well as recommendations made by the U.S. Fish & Wildlife Service (USFWS). After Congress approves additions to the CBRS, the new areas are assigned a unique effective date, after which Federal assistance prohibitions apply.

In cooperation with the USFWS, FEMA transfers CBRS and OPA boundaries to FIRMs using congressionally adopted source maps. FEMA ensures that FIRMs clearly depict the different CBRS areas and OPAs and their prohibition dates with special map notes and symbologies. Specific information on the notes and symbologies is provided in Appendix K of these Guidelines. Although FEMA shows CBRS areas and OPAs on FIRMs, the U.S. Congress is the only entity that may authorize a revision of these boundaries.

These Guidelines use the terms “Coastal Barriers” and “Coastal Barrier Resources System units” (or “CBRS units”). These terms are intended to be inclusive of all classifications of Coastal Barriers within the CBRS, including areas designated as OPAs.

2.2.2 Coastal Barrier Unit Classifications [February 2002]

The two classifications of Coastal Barrier units are as follows:

1. **Coastal Barrier Resources System units** were originally established by the CBRA of 1982 (Public Law [P.L.] 97-348). The Act established 186 units within the CBRS. The Coastal Barrier Improvement Act of 1990 greatly expanded the identified land in the CBRS established by the CBRA of 1982 and modified existing barrier units. Subsequent to the 1990 Act, new legislation has been, and will likely continue to be, passed by Congress to revise the CBRS.

   FIRMs prepared after 1991 and prior to November 2000 may reflect CBRS units subdivided into two categories, to distinguish between 1982 CBRS units and 1990 or later CBRS units. (Because the original prohibition dates took effect in 1983, such units are hereinafter referred to as "1983 CBRS units.")

2. **Otherwise Protected Areas** are undeveloped coastal barriers within the boundaries of an area established under Federal, State, or local law, or held by a qualified organization, primarily for wildlife refuge, sanctuary, recreational, or natural resource conservation purposes. The Coastal Barrier Improvement Act of 1990 established flood insurance prohibitions in designated OPAs, and subsequent legislation has modified, and will likely continue to modify, OPA boundaries.

2.2.3 Flood Insurance Prohibitions [February 2002]

Federal flood insurance is available in a CBRS area if the subject building was constructed (or permitted and under construction) before the CBRS area's prohibition date. For CBRS areas designated by the 1982 Act, the sale of Federal flood insurance is prohibited for structures built or substantially improved after October 1, 1983. For subsequent additions to the CBRS, the insurance prohibition date is either the date of the legislation passed by the U.S. Congress or the date of the notice in the *Federal Register* for changes allowed under a previous law such as the 5-year CBRS update. For structures located in the OPAs, insurance may be obtained if written documentation is provided certifying that the structure is used in a manner consistent with the purpose for which the area is protected. All CBRS units shown on a FIRM shall be shown with their prohibition dates.

If an existing insured structure in the CBRS or OPA is substantially improved or damaged, any Federal flood insurance policy will not be renewed. If a Federal flood insurance policy is issued in error, it will be canceled and the premium refunded; no claim can be paid, even if the error is not found until a claim is made.

Each action (legislative or administrative) that results in a revision of CBRS boundaries is relevant to the mapping of the CBRS. New legislation that adds areas to the System creates new prohibition dates. When a particular piece of legislation only removes areas from the System, no

new prohibition dates are associated with the 1982 Act. A comprehensive list of significant historical dates relative to the CBRS is provided in Subsection 2.2.3.1.

2.2.3.1 Historical Dates [February 2002]

The following is a historical summary of significant dates in the history of the CBRS. Dates shown in italics represent CBRS Federal funding prohibition dates that are published on the FIRMs prepared by FEMA.

October 1, 1982 Passage of the Coastal Barrier Resources System Act (P.L. 97-348). The effect of this Act was to establish the CBRS and to provide a 1-year grace period during which communities could prepare for the Federal flood insurance funding prohibitions that would go into effect with publication of the FIRMs one year later on October 1, 1983.

October 1, 1983 All Coastal Barrier units established with the passage of the Coastal Barrier Resources System Act of 1982 were mapped and finalized on FIRMs dated October 1, 1983.

November 16, 1990 Passage of the Coastal Barrier Improvement Act (P.L. 101-591). The effect of this Act was to enlarge the CBRS significantly and to impose Federal insurance and funding prohibitions for new construction or substantial improvements within units added to the CBRS on and after November 16, 1990. This Act also established the addition of specific public lands designated as OPAs 1 year after passage of the Act; provided for minor and technical boundary modifications within 2 years from the date of enactment; and provided for a periodic (every 5 years) review of and adjustments to CBRS and OPA boundaries to account for subsequent physiographic changes.

June 6, 1991 *Federal Register* notice of availability of CBRS maps showing the changes made under P.L.101-591.

November 16, 1991 Date on which Federal flood insurance prohibitions were applied to public lands designated as OPAs. The only prohibition that applies in an OPA is Federal flood insurance for new construction or substantial improvements that occur after that date, with specific and limited exceptions.

October 23, 1992 Passage of the Wild Exotic Bird Conservation Act (P.L.102-440). Section 303 of P.L. 102-440 modified the boundaries of OPA unit NC-01P to include only lands owned by the Audubon Society and to change the designation of this unit from OPA unit NC-01P to CBRS unit NC-01; modified the boundaries of OPA unit NC-05P to include only lands owned by the State of North Carolina; modified the boundaries of the southern segment of OPA unit VA-60P; and redesignated part of OPA unit VA-60P as CBRS unit VA-60.

November 15, 1993 Publication of the *Federal Register* that provided notification of the changes made under Section 4(e) of P.L.101-591. This section of P.L.101-591 was established to allow for minor and technical boundary modifications subsequent to the passage of the Coastal Barrier Improvement Act. This *Federal Register* also provided notification of the availability of revised CBRS maps showing the changes made under Section 303 of P.L.102-440.

November 2, 1994 Passage of P.L. 103-461, effecting changes to several CBRS and OPA units. The changes under Section 1 of this law, which involved mostly minor exclusions from the System, removed properties that were developed prior to 1982 and were erroneously included in the CBRS. The units affected by these changes are as follows: NY-75, VA-62P, FL-05P, P11A, FL-15, FL-36P, P17, P17A, P18P, P19P, FL-72P, P31P, FL-95P, AL-01P, and MI-21.

February 23, 1995 Publication in the *Federal Register* of the availability of CBRS maps showing the changes made under Section 1 of P.L. 103-461. Although most changes under this act involved minor exclusions from the System, there were small areas added, thus the new prohibition dates.

May 24, 1996 Passage of P.L. 104-148, which resulted in a reduction of OPA unit NY-59P to remove privately held lands.

October 9, 1996 Passage of P.L. 104-265, effecting a reduction of CBRS unit SC-01 to remove developed properties.

November 12, 1996 Passage of P.L. 104-333, effecting changes to several Florida CBRS and OPA units. The units affected by these changes are as follows: P05, P05A, P10, P11, P11A, P18, P25, P32, and P32P.

February 24, 1997 Publication in the *Federal Register* of the notice that finalized CBRS changes resulting from a 5-year review/update of CBRS and OPA unit boundaries provided for in Section 4(c) of P.L. 101-591. The intent of these changes was to keep the CBRS current with the physiographic changes that occur in coastal areas. The following CBRS units were affected by these changes: ME-17, ME-18, MA-03, C01B, MA-20P, MA-24, C28, C31, D02B, NY-04P, NY-50, F10, NJ-09, MD-03, MD-37P, MD-38, VA-09, VA-23, VA-36, L07, L09, P16, P17, FL-89, FL-99, FL-101, Q01A, and VI-07.

April 18, 1997 Publication in the *Federal Register* of the availability of CBRS maps showing the changes made under Section 2 of P.L. 104-148 and Section 201 of P.L. 104-265.

May 28, 1997 Publication in the *Federal Register* of the availability of CBRS maps showing the changes made under Section 220 of P.L. 104-333.

March 5, 1998 Notification by the U.S. Federal District Court of the District of Columbia that the boundary changes made by P.L. 104-333 were invalidated subsequent to a successful challenge being brought before the Court.

October 21, 1998 Passage of P.L. 105-277, which reinstated the changes made by P.L. 104-333 that were invalidated on March 5, 1998. P.L. 105-277 also effected other minor changes to the CBRS in South Carolina and Florida. Section 335 of P.L. 105-277 reinstated the changes made by P.L. 104-333 for the following units: NY-75, VA-62P, FL-05P, P11A, FL-15, FL-36P, P17, P17A, P18P, P19P, FL-72P, P31P, FL-95P, AL-01P, and MI-21. Section 101(e) of this law revised CBRS units FL-35 and SC-03 and OPA unit FL-35P to remove developed properties from the System. Section 134 of P.L. 105-277 changed the southern and western boundary of CBRS unit M09 back to the boundary established in 1982.

August 2, 1999 Publication in the *Federal Register* of the availability of CBRS maps showing the changes made under P.L. 105-277.

November 29, 1999 Passage of P.L. 106-116, which replaced 7 maps relating to the System with 14 new maps. These changes affected CBRS unit L03 and OPA unit NC-03P. CBRS unit L03 was changed to meet the original intent of the U.S. Congress, and OPA unit NC-03P was changed to coincide with the boundary of the Cape Hatteras National Seashore.

December 6, 1999 Passage of P.L. 106-128, which revised OPA unit DE-03P to add State parkland to the OPA and remove privately owned land outside the park.

December 9, 1999 Passage of P.L. 106-167, which redesignated the CBRS as the "John H. Chafee Coastal Barrier Resources System."

April 4, 2000 Publication in the *Federal Register* of the availability of CBRS maps showing the changes made under Section 1(a) of P.L. 106-116 and Section 1(a) of P.L. 106-128.

October 19, 2000 Passage of P.L. 106-332, which clarified the boundaries of National Audubon Society lands that CBRS unit NC-01 was intended to mirror.

October 27, 2000 Passage of P.L. 106-360, which clarified the boundaries of Cayo Costa State Park and resulted in changes to CBRS unit P19 and OPA unit P19P.

November 13, 2000 Passage of P.L. 106-514, the Coastal Barrier Resources Reauthorization Act of 2000, which notably mandates a pilot project to convert a number of the CBRS maps to digital format.

February 16, 2001 Publication in the *Federal Register* of the availability of CBRS maps showing the changes made under Section 1 of P.L. 106-332 and Section 1 of P.L. 106-360.

2.2.4 Work to be Performed [February 2002]

The tasks to be performed by the Mapping Partner that is selected by FEMA to revise the affected FIRM panels (hereinafter referred to as the designated Mapping Partner) shall include, but are not limited to, the following:

- Obtaining paper or digital copies of effective FIRMs;
- Reviewing lists of active FEMA-contracted Flood Map Projects and map revisions to determine whether the necessary revisions to CBRS unit maps can be combined with current map actions;
- Preparing the map layout and performing all manual or digital cartographic work associated with showing new boundaries and screens of CBRS boundaries from the CBRS maps on the affected FIRM panels;
- Performing a detailed quality control review of all existing and revised CBRS boundaries on the FIRM panels being revised;
- Preparing correspondence to notify affected communities, and the Mapping Partner assigned to maintain the national CBRS database, of the revisions being made;
- Preparing final reproduction materials for the affected FIRM panels;
- Preparing transmittal letters and paperwork to accompany final reproduction materials;
- Submitting the final reproduction materials, correspondence, and paperwork to the FEMA MSC for publication by GPO; and
- Providing review copies of the revised FIRM panels to the USFWS.

2.2.5 Source Materials [February 2002]

Delineation of CBRS units on the FIRM shall be based on the congressionally adopted CBRS source maps, which will be supplied to the designated Mapping Partner by the FEMA PO or his/her designee. These maps, hereinafter referred to as "System maps," were produced by the USFWS from a set of maps adopted by the U.S. Congress pursuant to the Coastal Barrier Improvement Act of 1990 and amended as new legislation warrants.

CBRS units and OPAs are numbered, and these numbers may be found on the System maps. A single letter (e.g., C14) precedes the 1983 CBRS unit numbers. The 1990 or later CBRS units (not OPAs) are preceded by the two-letter State abbreviation and include a hyphen (e.g., TX-05

for a Texas unit). The 1991 or later OPAs are always followed by a "P" (e.g., C14P or TX-05P). These CBRS and OPA unit numbers shall not appear on the FIRM panels.

In addition, a set of maps prepared in 1988 by the Department of the Interior entitled "*Report to Congress: Coastal Barrier Resources System, Recommendations for Additions to or Deletions from the Coastal Barrier Resources System*" (U.S. Department of the Interior, 1988) will be available to the designated Mapping Partner for reference purposes only. These maps show what was provided to Congress when the 1990 Act was pending. Although these maps shall not be used by the Mapping Partner for the delineation of CBRS units, they are useful in determining the original extent of 1983 CBRS units and the recommended changes.

2.2.6 Types of Revisions [February 2002]

FEMA has three distinctly different mechanisms for revising FIRMs to reflect modified CBRS boundaries. One of these three mechanisms shall be initiated as soon as FEMA submits the congressionally adopted source maps to the designated Mapping Partner. Often, a draft set of these maps will be made available to the designated Mapping Partner either through FEMA or the USFWS. In the event that advanced copies are made available, the Mapping Partner shall scope out the revision and prepare to make the FIRM changes using the most efficient of the methods described below.

The designated Mapping Partner shall not revise the FIS report for revisions performed solely to add, remove, or revise Coastal Barriers. FIS reports that are being prepared to reflect other map updates shall not mention the action involving the CBRS changes.

When processing a revision of a FIRM with CBRS units, any deviation that the designated Mapping Partner discovers between a Coastal Barrier delineation on an effective FIRM panel compared to the System maps shall be corrected, and FEMA shall inform the USFWS of all such changes. The processing Mapping Partner shall direct all questions or problems concerning the delineation of CBRS boundaries to the FEMA PO or his/her designee.

2.2.6.1 Letter of Map Revision [February 2002]

The LOMR process entails changing CBRS boundaries by letter. Revising CBRS boundaries through the LOMR process provides for a quicker turnaround time than the PMR process. This option shall be chosen, with the approval of the PO or his/her designee, only when the revision is relatively small in scope.

When a CBRS revision is processed in this fashion, the MSC shall mail a copy of the LOMR to all parties that are on record as having a copy of the subject FIRM panel(s). This ensures a wider distribution than would normally occur for a LOMR. The Mapping Partner shall be responsible for providing the required number of copies to the MSC and for coordinating the distribution in advance. It is imperative that advanced coordination is accomplished to ensure that the LOMR is distributed by the MSC without delay.

Any CBRS boundary changes effected by LOMR shall be followed immediately by a PMR unless the LOMR can be incorporated into an ongoing map update as discussed in Subsection 2.2.6.2.

2.2.6.2 Ongoing Map Update [February 2002]

Whenever possible, designated Mapping Partner shall incorporate the CBRS boundary changes into an ongoing map update. If the ongoing map update is very early in its processing life or significant delays are expected (e.g., for a complicated appeal), the Mapping Partner shall consult with the FEMA PO or his/her designee to determine whether the LOMR or separate PMR methods are to be initiated to show the boundary changes so as not to delay excessively the incorporation of the CBRS boundary change into the affected FIRM panel(s). Such delays shall be acceptable, however, if the revision is solely to remove areas from the System.

2.2.6.3 Separate Physical Map Revision [February 2002]

When the area to be revised is too large to be accomplished by a LOMR and when there are no ongoing map updates for the affected FIRM panels, a separate PMR must be processed to reflect CBRS boundary changes.

When processing a PMR to reflect a CBRS change, the Mapping Partner shall incorporate all effective LOMRs into the revision, and a SOMA must be prepared for all communities that appear on the FIRM panel(s) being revised. The following standard FIRM revision note shall be used in the FIRM legend: "To incorporate previously issued Letters of Map Revision."

2.2.7 Mapping Specifications [April 2003]

The designated Mapping Partner shall ensure that the mapping specifications summarized in Appendix K of these Guidelines are applied to the revised FIRM panels. Table 2-2 summarizes where the different CBRS mapping specifications may be found in Appendix K.

2.2.7.1 Map Notes [April 2003]

The designated Mapping Partner shall ensure that the correct map notes appear on the revised FIRM panels. Specific map notes are provided in Appendix K in the subsections listed in Table 2-2. In addition, FIRM panels that present CBRS boundaries may contain a general map note in the body of the FIRM panel similar to the note that is now placed in the FIRM title block. If any such general map notes exist from a previous effective FIRM, the designated Mapping Partner shall remove them.

Table 2-2. Mapping Specification Citations in Appendix K

Topic	Appendix K Subsection
FIRM Index note	K.3.1.5 and K.3.4
FIRM revision notes	K.5.1.1
Map screens	K.4.4.2
Title block note	K.6 (Figures K-30 and K-31)
Coastal Barrier identification notes	K.4.4.3
Abbreviated Coastal Barrier identification notes	K.4.4.3
Location of Coastal Barrier notes	K.4.4.3
Coastal Barrier Resources System legend	K.5.1.2
Coastal Barrier coordinator note	K.4.4.3 and K.5.1.2
Regulatory floodway note	K.4.4.3

2.2.7.2 Coastal Barrier Resources System Boundaries and Delineations [February 2002]

The CBRS boundaries and delineations that are to be included on the revised FIRM panels are summarized below.

1983 Coastal Barrier Resources System Boundaries

1983 Coastal Barriers may appear more detailed on the FIRM than the Coastal Barrier delineation shown on the System maps. This does not mean that the existing Coastal Barrier has been redelineated. It is more likely that the difference between the System map and the FIRM is due to the difference in source maps used to delineate Coastal Barriers in 1983.

In addition, 1983 Coastal Barrier units may have inadvertently been omitted from some 1983 FIRMs because the Coastal Barrier screen was not extended past the shoreline to the full extent of the SFHA zone screen, or where the 1983 Coastal Barrier was missed when the Coastal Barriers were first mapped. When this occurs, the designated Mapping Partner shall show the addition as a 1983 Coastal Barrier, not a 1990 (or later) Coastal Barrier.

Coastal Barrier Resources System Unit Boundaries Versus Houses

The System maps show direct horizontal relationships between existing structures and the CBRS unit boundaries; the designated Mapping Partner must ensure that these relationships are maintained. Most often, the Coastal Barrier boundary has been delineated to keep existing structures out of the CBRS unit.

Coastal Barrier Resources System Unit Boundaries Versus Linework Features

The System maps use thick lines to represent CBRS unit boundaries. Although standard cartographic practice is to follow the center of a boundary, if the boundary has a direct relationship to a line work feature (such as being against the edge of a road), the designated Mapping Partner shall be careful to maintain that relationship, even if it means the edge of the boundary line shown on the System map is used.

Floodplain Boundaries

CBRS boundaries have no direct relationship to floodplain boundaries. The assigned Mapping Partner shall coordinate with the PO if any appearance as such occurs.

Boundary Lines Between Contiguous Coastal Barrier Resources System Units with Same Prohibition Date

CBRS units with different unit numbers may be contiguous to each other on the CBRS maps; the same holds true for OPAs with different numbers. The designated Mapping Partner shall ensure that the FIRM, however, does not show a boundary line between different CBRS units or different OPA if they carry the same prohibition date.

Boundary Lines Between Contiguous Coastal Barrier Resources System Units with Different Prohibition Dates

Boundary lines must be shown to differentiate between contiguous Coastal Barriers with different prohibition dates. This also means that same-screen Coastal Barriers must be shown as bisected by a boundary line if the Coastal Barriers on either side of the line have a different prohibition date.

Boundaries of Enlarged Coastal Barrier Resources System Units

If a CBRS unit is enlarged, System maps present the enlarged area as if it were a part of the same unit, and therefore do not show a boundary between, for example, 1991 and 1993 OPAs of the same unit number. However, these boundaries must be shown on the FIRM panels to differentiate between the different years of identification for each area (as a result of the different insurance prohibitions unique to each area).

2.2.8 Community Notification [February 2002]

The designated Mapping Partner shall prepare Proof Copies of revised FIRM panels and transmit them to the community CEO and floodplain administrator for revisions that are processed solely to add, delete, or modify Coastal Barriers. The Mapping Partner shall transmit the Proof Copies of the revised FIRM panels with a standard transmittal letter provided by FEMA HQ indicating that the subject FIRM will be revised in 6 months to show CBRS revisions that cannot be appealed. For these types of revisions, when the final reproduction materials are complete, the designated Mapping Partner shall replace the standard (179-series) transmittal letter to the CEO of the community with a special Coastal Barrier transmittal letter.

2.2.9 Database Control [February 2002]

A Mapping Partner selected by FEMA shall maintain the national CBRS database. The designated Mapping Partner shall update the database whenever a revision of a FIRM panel containing CBRS units or OPAs is processed. All such panel changes shall be reported to the Mapping Partner assigned to maintain the database. The assigned Mapping Partner shall forward the database to the NFIP Bureau and Statistical Agent on a monthly basis in a variety of data formats for uploading to the NFIP Web site, where it is available to the public. The protocol to be followed by the Mapping Partner assigned to this task is provided below.

Throughout the month, the Mapping Partner assigned to maintain the database shall update the data in the source file, which is an Excel spreadsheet. On the first business day of each month, the Mapping Partner shall send a WinZip file to a designated individual at the NFIP Bureau and Statistical Agent via e-mail. The WinZip file shall consist of the latest version of the CBRS database in Excel, Lotus 123, Quattro Pro, ASCII, Access, and dBase formats. The assigned Mapping Partner shall follow the procedures below when creating the file translations.

Quattro Pro and Lotus 123 Files

1. Open the Excel file entitled cbrsdata.xls.
2. Save the file as a WQ1 (Quattro Pro) with the same prefix, cbrsdata.
3. Save the file as a WK4 (Lotus 1-2-3) file with the same prefix, cbrsdata.

ASCII Files

1. Open the Excel cbrsdata.xls file.
2. From the File menu, select “Save As”.
3. From the “Save As” type: drop-down menu, choose Text (OS/2 or MS-DOS) (*.txt) and then click Save.

Access File

1. Open a new database file in Access by selecting “Blank Database” from the startup screen.
2. Name the new Access file with the prefix cbrsdata.

3. Click "New" and then click "OK" for the datasheet view option from the Tables tab on the new database screen.
4. From the File menu, choose "Get External Data" and then click "Import."
5. Choose "Microsoft Excel" from the Files type menu.
6. Locate the Excel cbrsdata.xls file and select it for import.
7. Select "Show Worksheets" and then click "Next."
8. Select "First Row Contains Column Headings" and then click "Next."
9. Select "In a New Table" and then click "Next."
10. Choose "No Primary Key" from the next screen and then click "Next."
11. Click "Finish."

dBase File

1. Open the newly created Access file.
2. From the File menu, click "Save As/Export"
3. Click "OK" on the next screen.
4. Select "dBase IV (*.dbf)" from the "Save as Type" drop-down menu on the next screen
5. Change the file name to cbrsdata.

2.2.10 Fish and Wildlife Service Review Comments [February 2002]

The USFWS shall have a 30-day review period to ensure that Coastal Barriers are properly mapped. The designated Mapping Partner shall provide Proof Copies of FIRM panels showing the CBRS revisions to the USFWS at the beginning of this period and coordinate with the USFWS at the end of the review period to ensure proper inclusion of any changes.

2.3 Notice-to-User Revisions [February 2002]

The intent of a Notice-To-User revision is to quickly and inexpensively address a non-technical problem with a published FIS report, FIRM, or FBFM. These types of revisions are intended solely to correct an incorrect or omitted component and cannot be used to establish new or revised flood hazard information.

2.3.1 Types of Incorrect or Omitted Components [February 2002]

The errors or omissions that can be corrected using the Notice-to-User revision process include, but are not limited to, the following:

- Typographic errors in BFEs shown on FIRM or DFIRM;
- Missing tables included in the FIS report;
- Incorrect entries in the tables included in the FIS report;
- Incorrect map scale shown on the FIRM, DFIRM, and/or FBFM panels;
- Incorrect flood insurance risk zone labels shown on the FIRM or DFIRM panels;
- Incorrect or missing flood insurance risk zone screens on the FIRM, DFIRM, and/or FBFM panels;
- Addition or correction of Corporate Limits shown on the FIRM, DFIRM, and/or FBFM panels;
- Addition or correction of Township, Range, and Section lines on the FIRM, DFIRM, and/or FBFM panels;
- Errors in Bench Marks or Elevation Reference Marks on the FIRM, DFIRM, and/or FBFM panels; and
- Missing Elevation Reference Mark descriptions on the FIRM, DFIRM, and/or FBFM panels.

When Notice-to-User revisions are completed, the affected FIS report, FIRM/DFIRM panels, and/or FBFM panels normally will receive a new effective date. However, FEMA may make exceptions on a case-by-case basis. For example, when a required correction is discovered shortly before or after the effective date of the item to be corrected, FEMA may decide to reissue the component without a revised date; the FEMA PO will make this decision.

2.3.2 Identification of Incorrect or Omitted Component [February 2002]

The incorrect component may be identified by FEMA or by one of FEMA's Mapping Partners. FEMA's decision regarding whether to use the Notice-To-User processes to address the error or omission shall be based on the answers to the following questions:

- What is the specific error or omission?
- How long has the component been in effect?
- How was the error or omission identified?
- Who is requesting the correction?
- How many copies of the component has FEMA printed and distributed?
- Are any revisions to the defective component ongoing or planned?

2.3.3 Options for Correction [February 2002]

When an error or omission is brought to the attention of FEMA, FEMA shall select the proper course of action to take based on the criteria listed in Subsection 2.3.1. The following correction options are to be considered:

- Correction via a PMR;
- Correction via LOMR;
- Correction via a Notice-to-User revision; or
- Deferral of the correction.

FEMA shall base its decision on which of these processes shall be used on the relative priority assessed during the identification process. The FEMA PO shall make the decision on the appropriate correction process. The PMR and LOMR processes are discussed in Subsections 2.1 and 2.4, respectively. The process to be followed when the Notice-to-User revision process is chosen is discussed in Subsection 2.3.4.

2.3.4 Processing Protocol for Notice-to-User Revisions [February 2002]

Once the Notice-to-User revision process has been chosen to address the identified error or omission, the Mapping Partner selected by FEMA to process the revision (hereinafter referred to as the processing Mapping Partner) shall proceed as follows:

2.3.4.1 Research and Coordination [February 2002]

During the research and coordination phase of the Notice-to User revision process, the processing Mapping Partner shall:

- Determine if any previously issued LOMRs, LOMAs, or LOMR-Fs are to be reissued or incorporated into the component revision.

- Obtain FEMA PO approval of the action taken and document the decision in writing in the format required by the PO.

- Inform the MSC of the action being taken and the timeframe for submission of the corrected component (accelerated nature of correction process requires advance coordination to ensure timely printing and delivery to FIS report, FIRM, and FBFM users).

- Contact the FEMA RO to determine if the community is already compliant or if the community requires a compliance period. If the community has model ordinances that specify that they will adopt all future revisions of the FIS report, FIRM, and FBFM, then the Notice-to-User revision may be accelerated. If the community requires a compliance period to adopt new ordinances, the processing Mapping Partner shall prepare, and FEMA shall send, a letter to the community CEO and floodplain administrator informing them of the need for the revision and the effective date for the new or revised component.

2.3.4.2 Product Revision [February 2002]

During the product revision phase of the Notice-to User revision process, the processing Mapping Partner shall:

- Make the necessary corrections to the FIS report, FIRM, and/or FBFM.

- Determine, after consultation with the FEMA PO, if the new corrected component will have a new effective date or will be issued with the same date as currently exists.

Because it is advantageous to have the FIS report carry the same date as the FIRM Index and individual FIRM panels, the FIS report may be reissued with the same effective date and a notation that it is being reissued on [date] with corrections. When this option is chosen, the processing Mapping Partner shall ensure that the Notice to Users page in the front of the FIS report contains a brief description of the reason for revision. A sample of this paragraph follows:

Notice To Users:

> This Flood Insurance Study report was reissued on June 11, 1999, to add the Floodway Data Table for the Allegheny River, which was inadvertently omitted from the FIS report printed on March 22, 1999.

The processing Mapping Partner also shall ensure that the FIS report cover is revised to include a note concerning the reprint. (See Figure 2-7.)

2.3.5 Preparation of the Notice-to-User Letter [February 2002]

Normally, FEMA shall send a Notice-to-User letter to all individuals on the MSC distribution list to explain why a revised component is being issued. The Notice-to-User letter, prepared for FEMA by the processing Mapping Partner, shall have the following components:

- Name of community;
- Community Identification Number;
- Date;
- Description of the corrected component; and
- FEMA signature.

2.3.6 Submittal to the Map Service Center

The processing Mapping Partner shall submit the corrected component(s) to the MSC. The MSC shall coordinate with GPO, which will then print and distribute the component(s) to all individuals that previously received a copy of the FIRM panel, FBFM panel, or FIS report component that contained the error or omission. In addition to the corrected component, the processing Mapping Partner also shall submit the following items to the MSC a minimum of 2 months before the new effective date:

- Notice-to-User letter, signed by FEMA, that takes the place of the standard transmittal letter sent to the community CEO;
- CMA list; and
- Appropriate GPO paperwork (See Subsection 2.1.10 for requirements).

The processing Mapping Partner shall contact the MSC to determine the requirement for providing copies of the signed letter or a digital copy for their reproduction purposes.

FLOOD INSURANCE STUDY

CHARTER TOWNSHIP OF DELTA, MICHIGAN

EATON COUNTY

REVISED:
JUNE 2, 1999
(Reprinted with corrections on November 22, 1999)

Federal Emergency Management Agency

COMMUNITY NUMBER – 260066

Figure 2-7. Sample FIS Report Cover

2.4 Letter of Map Change Processing [February 2002]

2.4.1 Conditional Letters of Map Amendment [February 2002]

The processing procedures presented in Subsection 2.4.2 of these Guidelines for LOMAs also shall apply to requests for Conditional Letters of Map Amendment (CLOMAs), with the following exceptions:

- Because CLOMAs are based on proposed construction, as-built information is not required.
- The CLOMA Comment Documents that are issued by FEMA do not amend the effective Flood Hazard Boundary Map (FHBM) or FIRM.
- A review and processing fee must be submitted for CLOMA requests, but not for LOMA requests.

CLOMA requesters shall submit CLOMA requests, including the required review and processing fee, to the appropriate processing Mapping Partner address for the FEMA region in which the property that is the subject of the request is located. The addresses are provided in the certification forms package, referred to as MT-1, that must be used in preparing a CLOMA request for submittal. The MT-1 certification forms package is available for viewing or download at http://www.fema.gov/fhm/dl_mt-1.htm. The processing Mapping Partner shall review requests for CLOMAs in accordance with Parts 70 and 72 of the NFIP regulations. Additional information regarding the processing of CLOMAs is provided in Section 3 and Appendix C of the FEMA *Document Control Procedures Manual* (FEMA, 2000) and in Chapter 8 of FIA-12, *Appeals, Revisions, and Amendments to National Flood Insurance Program Maps: A Guide for Community Officials* (FEMA 1993).

2.4.2 Letters of Map Amendment [February 2002]

Letter of Map Amendment (LOMA) requesters shall submit LOMA requests to the appropriate processing Mapping Partner address for the FEMA region in which the property that is the subject of the request is located. The addresses are provided in the MT-1 certification forms package, which must be used in preparing a LOMA request for multiple lots and/or multiple structures. The MT-1 certification forms package is available for viewing or download at http://www.fema.gov/fhm/dl_mt-1.htm. For single-lot/single-structure requests, LOMA requesters may use the MT-EZ form, which is available for viewing or download at http://www.fema.gov/fhm/dl_mt-ez.htm.

2.4.2.1 Receipt and Acknowledgment [February 2002]

The requester will direct most LOMA requests to the processing Mapping Partner selected by FEMA to process LOMA requests through the address that appears in the MT-1 forms package. When appropriate, FEMA staff shall forward LOMA requests and accompanying data submitted directly to the FEMA RO or HQ to the processing Mapping Partner. The processing Mapping Partner shall process requests for LOMAs in accordance with Part 70 of the NFIP regulations. Additional information regarding the processing of LOMAs is provided in Section 3 and Appendix C of the FEMA *Document Control Procedures Manual* (FEMA, 2000) and in Chapter 7 of FIA-12, *Appeals, Revisions, and Amendments to National Flood Insurance Program Maps: A Guide for Community Officials* (FEMA, 1993)

Upon receipt of a LOMA request and supporting data, the processing Mapping Partner shall:

- Record the requester's name, the community name, the property in question, the date of the request, and the date that the request was received in an in-house MIS or other database management system.

- Establish a case number for the request following the procedures documented in Subsection 3.2.1 of the FEMA *Document Control Procedures Manual* (FEMA, 2000).

- Establish case file for the request, which shall contain a summary sheet, a contact sheet, and records of all other contacts pertinent to the case, as well as a compilation of all case-related information. Eventually, this file shall include dated copies of any FEMA correspondence and all subsequent actions. Documentation in the case file shall be up-to-date and accurate, and the processing Mapping Partner shall maintain and store all LOMA files.

The processing Mapping Partner shall perform an initial review of the requester's submittal to determine if information and all certification forms necessary to make a determination have been provided. Within 3 days of receipt of the request, the Mapping Partner shall prepare and mail a letter to the requester acknowledging receipt of the request.

2.4.2.2 Required Supporting Information [February 2002]

The Mapping Partner shall review the information submitted by the requester to determine whether it is sufficient to make a determination. Requesters must supply information as explained in the MT-EZ form (for single-lot and single-structure LOMAs) or the MT-1 certification forms package. This information includes, but is not limited to, the following:

1. Property description documentation consisting of either a copy of the Plat Map or Deed (containing the recorder's stamp and recordation date) accompanied by a tax assessor's map or other suitable map showing the surveyed location of the property. The recordation data (e.g., Book, Volume, Page, Reel, Document Number, Date) must be evident on the copies of these documents so that FEMA may cite the legal description of the property in the Determination Document. In addition, FEMA must be able to identify

the property exactly. If the property is not recorded on a Plat Map, a copy of a tax assessor's map or other suitable map must be submitted to aid FEMA in locating the property.

2. A photocopy of the effective FHBM or FIRM (and FBFM, if applicable) panel, annotated to show where the property is located. The panel number and effective date of the FHBM, FIRM, or FBFM panel must appear on the copy submitted. The actual map or a photographic copy must be used. A reproduction from a photocopy is unacceptable due to possible distortion.

3. An Elevation Form (Form 2 of the MT-1 certification forms) package, or an Elevation Certificate (available on the FEMA Web site at http://www.fema.gov/nfip/elvinst.htm) must be included for all requests, **except** requests for determinations in which the FHBM or FIRM already shows the subject property to be CLEARLY located outside the SFHA.

The processing Mapping Partner shall request any additional information required by telephone and by letter, and shall notify the requester that all necessary information to process a request must be received within 90 days of the date of the letter requesting the required information. If all information is not received within the 90-day period, the Mapping Partner shall suspend processing of the case.

2.4.2.3 Technical and Programmatic Review [April 2003]

After receiving the necessary information, the processing Mapping Partner shall make a determination concerning the property (i.e., legally defined parcel(s) of land or structure(s)) by comparing ground and/or structure elevation data with the base flood depth or BFE at the site in question. The extent of the work required for the processing Mapping Partner to make the determination will normally depend on the number of structures or lots involved and whether an approximate or detailed analysis was performed for the SFHA in which the property is located.

Approximate Analysis

For a LOMA request involving an SFHA determined by approximate-study methods and designated as Zone A on the effective FHBM or FIRM, the requester may provide data to substantiate a BFE from an authoritative Federal source (e.g., U.S. Army Corps of Engineers [USACE], U.S. Geological Survey [USGS], Natural Resources Conservation Service [NRCS]) or an authoritative State/Commonwealth source (e.g., Department of Natural Resources [DNR], Department of Environmental Quality [DEQ], Department of Transportation [DOT]). Other sources for obtaining BFEs include local Planning and Zoning or Building Departments, or a Registered Professional Engineer. BFEs supplied by the other (non-Federal or non-State) sources must include supporting technical information (i.e., hydraulic and hydrologic data). Requests for property greater than 50 lots or 5 acres, whichever is lesser, must include a BFE in accordance with Paragraph 60.3(b)(3) of the NFIP regulations.

When a requester provides a BFE, the processing Mapping Partner shall review the supporting information in light of the data used to prepare the FHBM or FIRM to verify that the BFE provided by the requester is reasonable. Providing a BFE is the responsibility of the requester. When the requester does not have the technical resources and/or the ability to provide a BFE, the processing Mapping Partner shall contact the PO or his/her designee to determine whether the processing Mapping Partner may determine the BFE using the best available information.

Detailed Analysis

For a LOMA request involving an SFHA that was determined using detailed-study methods and shown on an effective FIRM as Zone A1-30, AE, AO, or AH, the processing Mapping Partner shall make a determination using the BFE or base flood depth shown in the Summary of Elevations Table or Flood Profiles from the FIS report or the BFE shown on the FIRM. Requests based on BFEs or base flood depths that differ from those shown on the effective FIRM may not be handled under the LOMA process. Such requests must be processed as a request for a LOMR or PMR under Part 65 of the NFIP regulations.

Restrictions

LOMAs may not be issued or based on preliminary data for a FEMA-contracted Flood Map Project or community-initiated map revision; however, BFE data may be used from these sources if those data are the best available. LOMAs may not be issued for properties or structures located in coastal high hazard areas (Zone V), in alluvial fan flood hazard areas [(Zone AO, (depth and velocity specified), or Zone A, AH, or AO (Active or Inactive Alluvial Fan Flooding)]. Requests of this nature shall be considered LOMR or PMR requests and evaluated appropriately. LOMAs also may not be issued for structures elevated on posts, piers, or pilings if any portion of the structures, including a post, pier, or piling, is below the BFE.

LOMAs issued for structures that are inadvertently located within the SFHA and the regulatory floodway shall only remove the structure from the SFHA. The structure shall remain within the regulatory floodway until such time that the participating community requests that the floodway designation be removed from the structure. Such requests shall be processed as requests for LOMRs based on better topographic data.

2.4.2.4 Document Preparation [February 2002]

The processing Mapping Partner shall prepare the LOMA determination document based on the results of the evaluation of the submitted data, usually, but not always, using automated software provided by FEMA and developed using Microsoft Access. In some cases a manual determination is necessary. Structures may be determined to be in or out of the SFHA; lots may be determined to be entirely in, partially in, or entirely out of the SFHA. The determination shall include the flood risk zone designation.

Procedures for the preparation and content of LOMAs are presented in Section 3 and Appendix C of the FEMA *Document Control Procedures Manual* (FEMA, 2000).

When directed by the PO or his/her designee, the processing Mapping Partner also shall prepare informational letters that provide FEMA's best estimate of the BFE in an SFHA. These documents also appear in the FEMA *Document Control Procedures Manual* (FEMA, 2000).

2.4.2.5 Other Coordination and Documentation Activities [February 2002]

The processing Mapping Partner shall perform the required coordination and documentation activities for processing each determination request. During the processing, the processing Mapping Partner shall communicate with the requester, as necessary; coordinate activities with FEMA; communicate with other Mapping Partners and Federal, State, and local agencies, as needed; prepare letters and other correspondence for FEMA signature; maintain legal documentation and records of correspondence and technical data; and provide inventory lists, status reports, and other information to the PO, or his/her designee, as required.

2.4.2.6 Deliverable Products [February 2002]

Following the preparation of the LOMA determination document, the processing Mapping Partner shall include the LOMA in the list of determinations that is to be sent to FEMA for official approval. Following approval, the processing Mapping Partner shall provide the requester with FEMA's final determination for all property covered by the request. The processing Mapping Partner also shall send a copy of the LOMA determination document to the community as verification of the amendment to the FIRM.

2.4.3 Conditional Letters of Map Revision Based on Fill [February 2002]

The processing procedures presented in Subsection 2.4.4 for LOMR-Fs also shall apply to requests for Conditional Letters of Map Revision Based on Fill (CLOMR-Fs); however, because CLOMR-Fs are based on proposed construction, as-built information is not required. CLOMR-Fs do not revise the effective FIRM.

The processing Mapping Partner shall process reviews of requests for CLOMR-Fs in accordance with Parts 65 and 72 of the NFIP regulations. Additional information regarding the processing of CLOMR-Fs is provided in Section 2 and Appendix B of the FEMA *Document Control Procedures Manual* (FEMA, 2000).

2.4.4 Letters of Map Revision Based on Fill [February 2002]

2.4.4.1 Receipt and Acknowledgment [February 2002]

Most LOMR-F requests will be submitted directly to the processing Mapping Partner by the requester. Requests for LOMR-Fs and any accompanying data received by FEMA RO and HQ staff shall be transmitted to the processing Mapping Partner.

Upon receipt of a request, the processing Mapping Partner shall:

- Record the requester's name, the community name, the property in question, the date of the request, and the date the request was received.

- Assign a case number following the procedures in Subsection 3.1.1 of the FEMA *Document Control Procedures Manual* (FEMA, 2000).

- Create a case file for the request. The case file shall contain a summary sheet, a contact sheet, and records of all other contacts pertinent to the case, as well as a compilation of all case-related information. Eventually, this file shall include dated copies of any FEMA correspondence and all subsequent actions. Documentation in the case file shall be kept up-to-date and accurate and the Mapping Partner shall maintain and store all LOMR-F files.

- Perform an initial review of the requester's submittal to determine if all information, review and processing fee, and certification forms necessary to make a determination have been provided.

- Within 3 days of receipt of the request, prepare and mail a letter acknowledging receipt of the request.

2.4.4.2 Required Supporting Information [February 2002]

The processing Mapping Partner shall review the information submitted by the requester to determine whether it is sufficient to make a determination. All requests for LOMR-Fs must be supported by sufficient information to demonstrate that structures or the entire area within the legal bounds of a parcel of land, having been elevated by fill, are at or above the BFE and are not subject to inundation by the 1-percent-annual-chance flood. This information, as explained in the MT-1 certification forms package, includes, but is not limited to the information summarized below.

1. Property description documentation consisting of either a copy of the Plat Map or Deed (containing the recorder's stamp and recordation date) accompanied by a tax assessor's map or other suitable map showing the surveyed location of the property. The recordation data (e.g., Book, Volume, Page, Reel, Document Number, Date) must be evident on the copies of these documents so that FEMA may cite the legal description of the property in the Determination Document. In addition, FEMA must be able to identify the property exactly. If the property is not recorded on a Plat Map, a copy of a tax assessor's map or other suitable map must be submitted to aid FEMA in locating the property.

2. A photocopy of the effective FHBM or FIRM and FBFM (if applicable) panel, annotated to show where the property is located. The panel number and effective date of the FIRM must appear on the copy submitted. The actual map or a photographic copy must be used. A reproduction from a photocopy is unacceptable due to possible distortion.

3. An Elevation Form (Form 2 of the MT-1 certification forms package) or Elevation Certificate (available on the FEMA Web site at http://www.fema.gov/nfip/elvinst.htm) must be included for all requests, except requests for determinations in which the FIRM already shows property to be CLEARLY outside the SFHA.

4. Community Acknowledgement (Form 3 of the MT-1 certification forms package), which must be submitted with all LOMR-F requests. This form provides the community certification that the request meets the criteria described in Paragraph 65.5(a)(4) of the NFIP regulations. These requirements include:

   a. Existing residential structures built in the SFHA have their lowest floor elevated to or above the BFE;

   b. The participating community has determined the land and any existing or proposed structures to be removed from the SFHA are "reasonably safe from flooding," and that they have on file, available upon request by FEMA, all supporting analyses and documentation used to make that determination;

   c. The participating community has issued permits for all existing and proposed construction or other development;

   d. All necessary permits have been received from those governmental agencies where approval is required by Federal, State, or local law; and

   e. Fill has not been placed in a regulatory floodway, which causes a rise in flood elevations associated with the base flood discharge.

5. Appropriate review and processing fee, in accordance with Part 72 of the NFIP regulations. (The current schedule for the review and processing fees is available on the FEMA Web site at http://www.fema.gov/fhm/frm_fees.shtm.)

The processing Mapping Partner shall request any additional information required by telephone and by letter, and shall notify the requester that all necessary information to process a request must be received from the requester within 90 days of the date of the letter requesting the required information. If all information is not received within the 90-day period and the requester does not request an extension, the processing Mapping Partner shall suspend processing of the case.

2.4.4.3 Technical and Programmatic Review [April 2003]

After receiving the necessary information, the processing Mapping Partner shall make a determination concerning the property or structure by comparing fill and/or structure elevation data with the 1-percent-annual-chance flood depth or elevation at the site in question. The extent of the work required for the processing Mapping Partner to make a determination will usually

depend on the number of structures or lots involved and whether the SFHA in which the structures are shown was determined based on an approximate or detailed analysis.

Approximate Analysis

For a LOMR-F request involving an approximate SFHA shown on an effective NFIP map (i.e., Zone A), the requester may provide data to substantiate a BFE from an authoritative Federal source (e.g., USACE, USGS, NRCS) or State source (e.g., DNR, DEQ, DOT). Other sources for obtaining BFEs include local Planning and Zoning or Building Departments, or a Registered Professional Engineer. BFEs supplied by the other (non-Federal or non-State) sources must include supporting technical information (i.e., hydraulic and hydrologic data). Requests for property greater than 50 lots or 5 acres, whichever is lesser, must include a BFE, in accordance with Paragraph 60.3(b)(3) of the NFIP regulations.

When a requester provides a BFE, the processing Mapping Partner shall review the supporting information in light of the data used to prepare the FHBM or FIRM to verify that the BFE provided by the requester is reasonable. Providing a BFE is the responsibility of the requester. When the requester does not have the technical resources and/or the ability to provide a BFE, the Mapping Partner shall contact the PO or his/her designee to determine whether the Mapping Partner should determine the BFE using the best available information.

Detailed Analysis

For a LOMR-F request involving a detailed SFHA shown on an effective FIRM, the processing Mapping Partner shall make a determination using the BFE or base flood depth shown in the Summary of Elevations Table or Flood Profiles from the FIS report or the BFE shown on the FIRM. Requests based on BFEs or base flood depths that differ from those shown on the effective FIRM may not be handled under the LOMR-F process; rather, they must be addressed under the LOMR or PMR processes discussed earlier in this Volume.

Restrictions

LOMR-Fs may not be issued or based on preliminary data for FEMA-contracted Flood Map Projects or community-initiated map revisions; however, BFE data may be used from these sources if those data are the best available. LOMR-Fs may not be issued for properties or structures located in coastal high hazard areas (Zone V), alluvial fan flood hazard areas [(Zone AO (depth and velocity specified), or Zone A, AH, or AO (active or inactive alluvial fan flooding)]. LOMR-Fs also may not be issued or structures elevated on posts, piers, or pilings, if any portion of the structure, including a post, pier, or piling, is still below the BFE.

2.4.4.4 Document Preparation [February 2002]

The processing Mapping Partner shall prepare the LOMR-F determination document based on the results of the evaluation of the submitted data, using usually, but not always, automated software provided by FEMA and developed using Microsoft Access. In some cases, a manual

determination is necessary. The notification letter shall be addressed to the CEO of the community, with copies transmitted to the requester (if different from the CEO), the community floodplain administrator, and the State NFIP Coordinator, as applicable. Structures may be conditionally (CLOMR-Fs) or finally (LOMR-Fs) determined to be in or out of the SFHA; lots may be conditionally or finally determined to be entirely in, partially in, or entirely out of the SFHA. The determination shall include the revised flood risk zone designation. Procedures for the preparation and content of CLOMR-Fs and LOMR-Fs are provided in Section 2 and Appendix B of the FEMA *Document Control Procedures Manual* (FEMA, 2000).

When directed by the PO or his/her designee, the Mapping Partner also shall prepare informational letters that provide FEMA's best estimate of the BFE in approximate and detailed SFHAs. These documents also appear in the FEMA *Document Control Procedures Manual* (FEMA, 2000).

2.4.4.5 Other Coordination and Documentation Activities [February 2002]

The processing Mapping Partner shall perform the required coordination and documentation activities for processing each LOMR-F or CLOMR-F request. During the processing, the processing Mapping Partner shall communicate with the requester, as necessary; coordinate activities with FEMA; communicate with other Mapping Partners and Federal, State, and local agencies, as needed; prepare letters and other correspondence for FEMA signature; maintain legal documentation and records of correspondence and technical data; and provide inventory lists, status reports, and other information to the PO or his/her designee, as required.

2.4.4.6 Deliverable Products [February 2002]

Following the preparation of the LOMR-F determination, the processing Mapping Partner shall prepare a list of LOMR-Fs to be sent to FEMA for approval. This list is referred to as a docket. The LOMR-F documents provide the requester with FEMA's final determination for each property covered by the request. The CLOMR-F documents provide the requester with a conditional determination for each property covered by the request. Following receipt of the approved docket from FEMA, the Mapping Partner shall send copies of the LOMR-F or CLOMR-F determination document to the community CEO and floodplain administrator and to the requester. Additional information on the distribution of LOMR-Fs and CLOMR-Fs is provided in Section 3 and Appendix C of the FEMA *Document Control Procedures Manual* (FEMA, 2000)

2.4.5 Conditional Letters of Map Revision (CLOMR) [February 2002]

The processing procedures presented in Subsection 2.4.6 for LOMRs also shall apply to requests for CLOMRs. Section 72.2 of the NFIP regulations states that a CLOMR is

> FEMA's comment on a proposed project that would, upon construction, affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the

modification of the existing regulatory floodway, the effective base flood elevations, or the Special Flood Hazard Area (SFHA).

A CLOMR **does not** revise the effective FIS report, FIRM, or FBFM; however, the CLOMR does describe changes to the effective FIS report, FIRM, or FBFM that will result from the project, if built as proposed. The CLOMR also describes any additional information (e.g., as-built plans, fill compaction certification) required to process the final determination as a PMR or LOMR.

For communities that propose floodplain modifications, requesting CLOMRs is not only prudent but, in some circumstances, required (Section 65.12 of the NFIP regulations). When a participating community proposes to permit an encroachment into its 1-percent-annual-chance floodplain where no floodway has been established, and the encroachment will cause an increase of more than 1.0 foot in the BFE, the community must first obtain FEMA's conditional approval of the proposed encroachment through submission of a CLOMR. Similarly, the community also must obtain conditional approval from FEMA before permitting an encroachment into a regulatory floodway that would result in any increases to flood levels.

The main difference between the types of supporting data required for LOMRs and CLOMRs is that any maps, plans drawings, measurements, or ground elevation data submitted in support of a request for a CLOMR will not reflect existing conditions and consequently cannot be certified "as-built." All data submitted in support of a request for a CLOMR must, however, reflect final design conditions.

The requester shall not interpret the lack of a requirement for certified as-built supporting data to mean that incomplete data and vague descriptions of proposed projects will provide FEMA with an adequate basis for a conditional determination. In addition, although an as-built certification does not apply to design plans and other supporting data for a CLOMR, all submitted work maps and plans must still be stamped and signed with the seal of a Registered Professional Engineer or Licensed Land Surveyor, as appropriate.

Standard submittal requirements for CLOMRs are as follows:

- Hydraulic modeling analysis of the floodplain and regulatory floodway (as appropriate) of all flood frequencies listed in the community's FIS report. Separate hydraulic analysis must be submitted duplicating the effective model and documenting proposed conditions though submission of a proposed conditions model. To document any physical changes within a community's floodplain since the effective model it may be necessary to also provide an existing conditions model to accurately show the effects of a proposed project on a community's flood levels.

- Certified, dated, topographic work map, depicting scale, model cross-sections, vertical datum reference, and contour interval (contour interval should be equivalent to or more detailed than that used to develop community's FIRM) delineating the 1- and 0.2-percent-annual-chance floodplain and regulatory floodway boundaries (as appropriate).

- A copy of the community's FIRM (panel number and effective date must be included in copy) annotated to reflect the proposed 1- and 0.2-percent-annual-chance floodplain and regulatory floodway boundaries (as appropriate).

- All appropriate completed certification forms including community concurrence of proposed revision.

- Appropriate review and processing fee, in accordance with Part 72 of the NFIP regulations. (The current schedule for the review and processing fees is available on the FEMA Web site at http://www.fema.gov/fhm/frm_fees.shtm.)

For request that incorporate revised hydrologic data, flows for all flood flow frequencies listed in the community's FIS must be submitted. Per Part 65.6 of the NFIP regulations, it must be demonstrated to FEMA that revised flows are "statistically significantly" different from the effective flows as measured by a confidence limits analysis of the new discharge estimates for effective flows to be revised. Certification form 3 (MT-2 Form 3) must be submitted in support of request including revised hydrologic analyses.

The processing Mapping Partner shall process reviews of requests for CLOMRs in accordance with the provisions of Parts 65 and 72 of the NFIP regulations and the procedures discussed below. Additional information regarding processing of CLOMRs is provided in Section 2 and Appendix B of the FEMA *Document Control Procedures Manual* (FEMA, 2000).

2.4.6 Letters of Map Revision Based on Conditions Other Than Fill [February 2002]

2.4.6.1 Receipt and Acknowledgment [February 2002]

All map revision requests and any accompanying data shall be transmitted to the processing Mapping Partner by the PO, his/her designee, or other FEMA HQ staff. The processing Mapping Partner shall

- Inform the PO or his/her designee of any requests for information submitted directly to the processing Mapping Partner.

- Inventory the materials received and, within 5 working days of receipt, send acknowledgment letters to the community CEO and floodplain administrator. If the requester is anyone other than the CEO or floodplain administrator, the processing Mapping Partner also shall send the requester a copy of the acknowledgment letter and, if necessary, telephone the requester to explain the review procedures.

In accordance with Section 65.4 of the NFIP regulations, all requests for changes to effective maps other than those initiated by FEMA must be made in writing by the CEO of the community. The processing Mapping Partner shall request community concurrence if the CEO has not submitted it.

2.4.6.2 Case Initiation [February 2002]

Upon receipt of the revision request, the processing Mapping Partner shall

- Assign a case number using the procedures document in Section 2.3 of the FEMA *Document Control Procedures Manual* (FEMA, 2000).
- Create a revision case file, in accordance with Section 66.3 of the NFIP regulations.
- Telephone the community to obtain general information (name and address of the CEO and community contact person, and location of Community Map Repository) and, for PMRs, to request an updated community corporate limit map.
- Enter the revision request into an in-house MIS and the LOMC module of the FEMA CIS database.
- Make an initial determination as to the expected processing procedure.
- Record the date of receipt as the date from which all required processing dates are determined.

2.4.6.3 Initial Reconnaissance [February 2002]

After the case has been properly recorded, the processing Mapping Partner shall begin a search of all available records to determine the status of the community in the NFIP and to determine any and all past actions by FEMA in the community that may affect the request. The processing Mapping Partner shall determine whether all data required to address the request have been submitted, advise the PO or his/her designee of the results of this review, and make a recommendation concerning follow-up. The PO or his/her designee shall make the final decision on how to proceed with the request.

2.4.6.4 Program Status and Map Actions [February 2002]

The processing Mapping Partner shall review various portions of FEMA's databases/systems (i.e., CIS, MICS, MNUSS) to determine the status of the community in the NFIP and obtain information on complete, active, and future required restudies, map revisions, and map amendments. The Mapping Partner also may use the *NFIP Community Status Book*, available in hardcopy form from the MSC or from the Mitigation Library on FEMA's Internet site, to determine whether the community is participating in the Emergency or Regular Phase of the NFIP. The processing Mapping Partner shall review the following data sources to obtain more detailed information on the nature and extent of any past map actions in the community:

- **Future Revision Files**—The Mapping Partner shall review these files to determine if additional revisions to the FIS report, FIRM, or FBFM are warranted. These files exist because, from time to time, information is submitted by the community or discovered during the course of processing a restudy or map revision that does not significantly

affect the community's participation in the NFIP. Because of funding constraints, these revisions are deferred for future action and, at the request of the PO or his/her designee, placed in the future revision files. These files also include LOMRs and LOMR-Fs for future PMRs.

- **LOMA and LOMR-F Files**—The Mapping Partner shall review these files to determine if past LOMA and LOMR-F actions are of sufficient scope to warrant inclusion in the ongoing revision. In general, single-lot LOMAs and LOMR-Fs do not warrant inclusion because of map scale limitations. However, multiple-lot LOMAs and LOMR-Fs may warrant inclusion in a PMR.

- **Five-Year Map Update Files**—As with the Future Revision Files, the Mapping Partner shall review these files to determine if additional revisions to the FIS report, FIRM, or FBFM are warranted.

2.4.6.5 Required Data [February 2002]

Based on the reason for the request, the processing Mapping Partner shall make a determination as to the need for additional data in accordance with the applicable portions of Sections 65.5, 65.6, 65.7, 65.10, 65.11, 65.12, and 65.13 of the NFIP regulations. As part of the revision package, the requester is required to complete the certification forms included in the MT-2 certification forms package. Examples of standard data requirements for various structural modifications include, but are not limited to, the following:

Channelizations

- Certified as-built construction or grading plans
- Hydrologic analysis (if the discharges in the effective model are not used)
- Calibration run duplicating original hydraulic model (multiple profile and floodway)
- Existing hydraulic model (multiple profile and floodway) if the calibration hydraulic model run does not reflect the floodplain conditions prior to the start of the project
- Revised hydraulic model (multiple profile and floodway)
- Floodplain and/or floodway boundary delineations on the effective map panels
- Transition structure design plans for as-built conditions
- New hydrologic analyses or diversion channels
- Evidence of adequate soil compaction and erosion protection (for placement of fill)

- Certified topographic data that include the entire area of the revision and delineate floodplain and/or floodway boundaries, BFEs, vertical datum reference, and cross-section locations

Culverts and Storm Systems

- Certified as-built construction plans
- Hydrologic analysis (if the discharges in the effective FIS report are not used)
- Calibration run duplicating the original hydraulic model (multiple profile and floodway)
- Existing hydraulic model (multiple profile and floodway) if the calibration hydraulic model run does not reflect the floodplain conditions prior to the start of the project
- Revised hydraulic model (multiple profile and floodway) and the determination of headwater and tailwater elevations
- Floodplain and/or floodway boundary delineations on the effective map panels
- Evidence of adequate soil compaction and erosion protection (for placement of fill)
- Certified topographic data that include the entire area of the revision and delineate floodplain and/or floodway boundaries, BFEs, vertical datum reference, and cross-section locations

Bridges

- Certified as-built construction plans
- Hydrologic analysis (if the discharges in the effective model are not used)
- Calibration run duplicating the original hydraulic model (multiple-profile and floodway)
- Existing hydraulic model (multiple profile and floodway) if the calibration hydraulic model run does not reflect the floodplain conditions prior to the start of the project
- Revised hydraulic model (multiple profile and floodway)
- Evidence of adequate soil compaction and erosion protection (for placement of fill)
- Certified topographic data that include the entire area of the revision and delineate floodplain and/or floodway boundaries, BFEs, vertical datum reference, and cross-section locations

Levees (Dikes, Berms, and Embankments)

- Certified as-built construction plans
- Hydrologic analysis (if the discharges in the effective model are not used)
- Hydraulic model with levee if compliant with Section 65.10 of the NFIP regulations
- Hydraulic models with and without levee if not compliant with Section 65.10 of the NFIP regulations
- Evidence of structural stability, certified by a Registered Professional Engineer,
- Evidence of operation and maintenance provisions
- Interior drainage analyses and SFHA boundary delineations
- Floodplain and/or floodway boundary delineations on the effective FIRM/FBFM panels
- Evidence of adequate soil compaction and erosion protection (for placement of fill)
- Certified topographic data that include the entire area of the revision and delineate floodplain and/or floodway boundaries, BFEs, vertical datum reference, and cross-section locations
- Additional design data as necessary

Dams (Detention Basins and Reservoirs)

- Certified as-built construction plans
- Hydrologic analysis (if the discharges in the effective FIS report are not used)
- Certification by a Registered Professional Engineer that impoundment structures will remain stable during the base flood
- Evidence of operation and maintenance provisions
- Hydraulic analysis
- Floodplain and/or floodway boundary delineations on the effective FIRM/FBFM panels
- Hydrologic analyses for downstream reach, if the dam is designed to lower the base flood discharge
- Evidence of adequate soil compaction and erosion protection (for placement of fill)
- Certified topographic data that include the entire area of the revision and delineate floodplain and/or floodway boundaries, BFEs, vertical datum reference, and cross-section locations

Flood-Control Structures Subject to Alluvial Fan Flooding

- Certified as-built construction plans
- Certification by a Registered Professional Engineer that the flood-control structures will be able to withstand the hazards associated with flooding, erosion, scour, and relocation of flow paths during the base flood discharge
- Hydrologic analyses that quantify the discharges (if the discharges on which the effective FIRM is based are not used) and the volumes of water, debris, and sediment movement
- Engineering analyses demonstrating the impact of flooding from sources other than the fan apex
- Revised analysis of alluvial fan flooding (if the analysis on which the effective FIRM is based is not used), in accordance with the analysis approach stated in Appendix G accompanied by a discussion of the effects of (1) the depth and velocity of flooding, and (2) the scour and sediment deposition on other areas of the fan
- Evidence of operation and maintenance provisions
- Revised floodplain boundary delineations on the affected panels of the effective FIRM

- Topographic data that include the entire area of the revision and delineation of the revised floodplain boundaries (certified, if the topographic data on which the effective FIRM is based are not used)

- Evidence of maintenance provisions, where referenced above, are to be in the form of an ordinance that specifies the activities to be performed, the frequency of performance, and the community officials responsible for the performance. If maintenance is to be accomplished by an agency other than the community, a logical provision (e.g., ordinance) for community monitoring and backup maintenance is required. The Mapping Partner shall ensure that maintenance agreements are submitted for levees and dams.

Certifications, where referenced above, are defined as follows:

- Certification of data is a statement that the data are accurate to the best of the certifier's knowledge.

- Certification of analyses is a statement that the analyses have been performed correctly and in accordance with sound engineering practices.

- Certification of structural works is a statement that the works are designed in accordance with sound engineering practices to provide protection from the base flood.

- Certification of as-built conditions is a statement that a structure has been built according to the plans being certified, is in place, and is fully functional.

The processing Mapping Partner shall ensure that certifications include the certifier's name, signature, registration number, and the registration expiration date of the certifier.

2.4.6.6 Technical Review [February 2002]

The processing Mapping Partner shall review the technical, scientific, and other information submitted by the revision requester to ensure that the data are technically accurate, consistent with standard engineering practice and FEMA standards, and sufficient to warrant a revision. The extent of the technical review will, generally, be limited to a review of the information presented on the certification forms and the supporting documentation submitted with them.

The processing Mapping Partner shall use the forms to identify inconsistencies and discrepancies and judge reasonableness. In certain cases, such as review of requests involving alluvial fan flooding, unique hydrologic or hydraulic analyses, or significant changes to the SFHAs shown on the effective FIRM, additional technical reviews beyond the reviews of the certification forms may be required, as directed by the PO or his/her designee.

For revisions involving the addition of detailed flood information or changes to flooding sources originally studied by detailed methods, analyses and other supporting data for the 10-, 2-, 1-, and 0.2-percent-annual-chance floods and regulatory floodway may be required. At a minimum, the analyses and other supporting data provided in support of a revision request must meet the

original standards employed by FEMA for the preparation of the FIS report, FIRM, and FBFM, which are documented in Volume 1 and related appendices in these Guidelines.

Hydrologic Analyses

FEMA requires that the computations performed to support requests for revisions to effective FIS reports, FIRMs, and FBFMs be based on the flood discharge values used for the effective FIS and FIRM; however, revision requests may also be based on new hydrologic conditions or better estimates of the flood discharges. The requester must provide 5- and 95-percent confidence limits in support of new discharge values, when applicable. The requester must not only provide sufficient data to support the use of the new discharges for the 1-percent-annual-chance flood and, if necessary, the 10-, 2-, and 0.2-percent-annual-chance floods, but must also determine all changes to the FIS report, FIRM, and FBFM that would result from the use of the new discharges. Therefore, the requester will usually be required to provide hydraulic analyses and revised floodplain and floodway boundary delineations, in addition to hydrologic analyses.

When new discharges are used, the processing Mapping Partner shall review the information presented on Form 2, entitled "Riverine Hydrology and Hydraulics Form," included in the MT-2 certification forms package to determine if the discharges are reasonable and adhere to the requirements listed below. The discharge values shall be checked for consistency, within the limitations of the methodology employed, throughout the information submitted by the requester. In performing this check, the processing Mapping Partner shall verify that, for flooding sources studied by detailed methods, adequate information has been provided for any of the four recurrence interval floods that may be affected by the new hydrologic analyses.

The following requirements apply when processing requests involving revised hydrology:

- The revised flood discharge must be significantly different from the effective flood discharge. The revised flood discharge shall be adopted if the effective flood discharge does not fall within the 5- and 95-percent confidence limits of the revised estimates. These limits shall be determined using methods contained in Bulletin 17B, *Guidelines for Determining Flood Flow Frequency* (Interagency Committee on Water Data, 1982).

- In cases where the new discharge must be approved by the State, the Mapping Partner shall ensure that the proper approval from the State has been acquired.

- In cases where the new discharge must be approved by a regional/local flood-control agency, the processing Mapping Partner shall ensure that the proper approval from the regional/local flood-control agency has been acquired.

- An alternative methodology, if used by a revision requester, must meet the requirements of Paragraph 65.6(a)(6) of the NFIP regulations and must be on FEMA's list of accepted computer models.

- The revised hydrologic analyses must analyze the same recurrence interval floods as those studied for the effective FIRM.

- The methodology used in the revised hydrologic analyses must match that used for contiguous communities.

- The data accumulated and analyses performed must be certified by a Registered Professional Engineer and submitted to the processing Mapping Partner for review.

- If the processing Mapping Partner believes future-conditions discharges have been used for any revision request and the processing Mapping Partner has not received any guidance from FEMA for the community(ies) affected, the processing Mapping Partner shall discuss the revision request with the PO or his/her designee to determine followup actions to be taken.

Hydraulic Analyses

The requester must perform hydraulic analyses to support a revision request based on new hydrologic conditions or physical changes in channel or overbank conditions, if those conditions affect the elevation and extent of the base flood. For revisions involving flooding originally studied by approximate methods and designated as Zone A on the effective FIRM, the analyses performed by the requester generally must be consistent with FEMA standards for approximate studies. Therefore, the analyses may be in the form of hand calculations for step-backwater, normal-depth, or stage-frequency relationships, or the analyses may be based on the use of step-backwater or coastal flooding computer programs.

For revisions involving flooding sources originally studied by detailed methods, analyses performed by the requester must be consistent with FEMA standards for detailed studies. Therefore, the analysis usually must consist of step-backwater computations for riverine flooding sources, stage-frequency analyses for lacustrine flooding, hand computations for sheetflow areas, and storm-surge and wave-height or wave-runup calculations for coastal flooding.

The processing Mapping Partner technical review shall generally be limited to the information presented on the certification forms. The Mapping Partner shall review the forms to ensure that the requirements listed below are met. All data submitted by the requester must be consistent, and there may be no discontinuities between the information shown for revised areas and that shown for unrevised areas in the FIS report and on the FIRM and FBFM.

The following requirements apply when processing requests involving revised hydraulic analyses:

- Revision requests must be based on the effective hydraulic computer model. Where the input data representing the effective hydraulic model are unavailable, an approximation should be developed. A new model should be established using the original cross-section topographic information, where possible, and the discharges on which the current FIS report and FIRM are based. The model must use the same effective-flow areas as established in the original analysis and must be calibrated to reproduce the original BFEs to within 0.5 foot. See Appendix C, Subsection C.5.2.1 of these Guidelines for information on FEMA's policy for conversion to HEC-RAS.

- If the revision requester uses an alternative hydraulic methodology, that methodology must be on FEMA's list of acceptable computer models and meet the requirements of Paragraph 65.6(a)(6) of the NFIP regulations.

- To avoid discontinuities between the revised and unrevised flood data, the revision requester must submit hydraulic analyses be that are extensive enough to ensure a logical transition can be shown between the revised flood elevations, floodplain boundaries, and floodway boundaries and those developed previously for areas not affected by the revision. The revised and unrevised water-surface elevations must match within 0.5 foot where such transitions occur; however, FEMA would prefer that the transitions match within 0.10 foot if possible. The FEMA PO or his/her designee must approve exceptions to this standard.

- In general, revision requests that result in increases in BFEs because of the physical actions of an individual property owner within the regulatory floodway will be considered a violation of NFIP regulations unless evidence is provided to show that the criteria described in Section 65.12 of the NFIP regulations have been met. Any violation or potential violation of the NFIP regulations must be brought to the attention of the PO or his/her designee.

- For revisions based on the effects of levees or other flood-control structures that provide base flood protection, the processing Mapping Partner shall obtain verification, in the form of technical analyses, that those structures meet the minimum criteria outlined in Section 65.l0 of the NFIP regulations. Similarly, for flood-control structures located in areas subject to alluvial fan flooding, the processing Mapping Partner shall obtain technical analyses to verify that the minimum criteria of Section 65.13 of the NFIP regulations are met. If a PMR is processed, the processing Mapping Partner shall verify that the effects of such structures are properly discussed in the FIS report and shown on the FIRM and FBFM.

Coastal Revisions

Computation of the SWEL considers many factors and is performed through the use of computer models or statistical analysis of tide gage data of adequate continuous record. Any revision of the SWEL should be based on new information that either refutes or supplements the database. The requester must submit significant data or produce verifiable information that refutes the information used by the SC to construct the applicable computer model.

In the case of tide gages, the requester must perform a statistical analysis prepared with new data that supplements the existing tide gage records or provides evidence that the data used are incorrect. The processing Mapping Partner shall review the information presented on Form 4, "Coastal Analysis Form," from the MT-2 certification forms package to determine the appropriateness of incorporating the revised data on the FIRM.

For map revision requests in coastal areas based on more up-to-date, site-specific topographic information, a transect and a wave-height analysis based on the profile must be provided. This analysis may also require consideration of other coastal processes, such as erosion and wave runup. This analysis may be conducted based on the terms of the effective FIS report and FIRM, the community, or the PO or his/her designee.

Map revisions in coastal areas may also be based on existing, new, or improved shore-protection structures, such as bulkheads, seawalls, breakwaters, and dikes. When structures designed to diminish or absorb wave energy (e.g., breakwaters, bulkheads, seawalls) are involved, the requester must submit evidence that the structure will survive the base flood and associated wave action. The items that the processing Mapping Partner shall address before issuing a map revision based on coastal structures are listed in *Criteria for Evaluating Coastal Flood Protection Structures* (USACE, 1989). See Appendix D of these Guidelines for additional information. Structures designed to provide flood protection (e.g., levees, dikes, floodwalls) must conform to Section 65.10 of the NFIP regulations and to the criteria outlined in Appendix H of these Guidelines.

The requester must also provide assurance from the State or local agency with maintenance responsibility that the structures involved in the revision will be maintained and will not settle. As-built drawings of all structures are required. Wave height analyses based on transacts through these types of structures are valid only when these conditions are met.

The processing Mapping Partner shall review the information presented on Form 4, "Coastal Analysis Form," and/or Form 5, "Coastal Structures Form," from the MT-2 certification forms package to determine the items that require further review and the appropriateness of incorporating the revised data on the FIRM.

Other Data

Revisions involving changes to flood risk zones, floodplain boundaries, and corporate limits may also be requested. For revisions to flood risk zones, the Mapping Partner shall verify the accuracy of any calculations the requester submitted and determine whether a revision is

warranted based on a review of Form 2, entitled "Riverine Hydrology and Hydraulics Form," from the MT-2 certification forms package and the supporting documentation. Requests that Zone V or Zone A areas be revised to Zone A or Zone B/Zone X (shaded), respectively, must be supported by hydraulic computations in most cases.

For floodplain boundary revisions based on new or more detailed topographic information, hydraulic analyses are usually not required unless the changes in ground contours have significantly affected the geometry of cross sections used for the effective FIS report and FIRM or have altered effective-flow areas. For revisions involving only floodplain boundaries, the processing Mapping Partner shall review the information described on Form 2, titled "Riverine Hydrology and Hydraulics Form," or Form 4, titled "Coastal Analysis Form," from the MT-2 certification forms package to determine whether the requested revisions are acceptable.

For changes to corporate limits, the revision requester and processing Mapping Partner shall reference Section 2.6 for procedures and requirements.

2.4.6.7 Requests Based on Future-Conditions Hydrology [February 2002]

Communities experiencing urban growth and other changes often use future-conditions hydrology in regulating watershed development. While some communities regulate based on future development, others are hesitant to enforce more restrictive standards without FEMA support. To assist community officials, FEMA will include future-conditions flood hazard data on FIRMs and in FIS reports for informational purposes on a community-by-community basis. This decision was documented in a Final Rule published in the *Federal Register* on November27, 2001. (The Final Rule may be downloaded from the FEMA Web site at http://www.fema.gov/fhm/frm_fchy.pdf.)

Because multiple options exist for presenting future-conditions floodplains and related data on the FIRM and in the FIS report, interested community officials should contact the appropriate RO to discuss the available options and agree on the approach to be taken. For information on these options, FEMA encourages interested community officials to review the November 27, 2001, Final Rule and the FEMA report entitled "Modernizing FEMA's Flood Hazard Mapping Program: Recommendations for Using Future-Conditions Hydrology for the National Flood Insurance Program" (FEMA, 2001). That report contains one possible scenario/example of depicting future-conditions flood hazard information on a FIRM and in an FIS report and may be downloaded from the FEMA Web site at http://www.fema.gov/fhm/ft_futur.shtm.

At the request of a community and with the approval of FEMA, FIRMs and FIS reports may include, for informational purposes, flood hazard areas based on projected- or future-conditions hydrologic and hydraulic analyses. If community officials request that FEMA show the future-conditions 1-percent-annual-chance floodplain on the FIRM, the future-conditions floodplains and flood insurance risk zone shall be shown on the FIRM and referenced in the accompanying FIS report. Although graphic specifications are flexible for the mapping of this flood insurance risk zone, the zone label will be "Zone X (Future Base Flood)."

The future-conditions flood hazard zone shall be defined in the FIRM legend and in the FIS report as follows:

> Zone X (Future Base Flood) is the flood insurance risk zone that corresponds to the 1-percent-annual-chance floodplains that are determined based on future-conditions hydrology. No BFEs or base flood depths are shown within this zone.

FEMA opted to use the Zone X (shaded) screen, in lieu of a new flood hazard zone designation, to depict the future-conditions 1-percent-annual-chance floodplain to minimize confusion by users of the FIRM that make determinations regarding Federal mandatory flood insurance purchase requirements. Those users now recognize that areas designated as Zone X (shaded) are floodprone, but that the mandatory flood insurance purchase requirement does not apply. Because the risk premium rates for buildings located in the future-conditions 1-percent-annual-chance floodplain will be the rate comparable to other areas outside the SFHA, FEMA believes designating these areas as "Zone X (Future Base Flood)" will be sufficient distinction.

FEMA may develop graphic specifications for the presentation of future-conditions flood hazard data on the FIRM and specifications and guidelines for the inclusion of support information in the accompanying FIS report. However, it is FEMA's intent, as indicated in the previously referenced Final Rule, to have flexibility in the implementation of this community-requested mapping option. Because multiple options for presenting future-conditions flood hazard data exist, FEMA intends to work closely with each community to develop the presentation format that best meets community and FEMA needs. For the time being, FEMA, in coordination with the affected community (-ies) and the Mapping Partner that is preparing the Preliminary FIRM and FIS report, shall establish the presentation specifications on a case-by-case basis.

Once future-conditions flood hazard data have been included on the FIRM and in the FIS report for a community, all revision submittals shall incorporate the future-conditions data developed by the community. The community is entirely responsible for developing and maintaining this data layer on a DFIRM.

2.4.6.8 Reporting and Project Officer Approval [February 2002]

Upon request, the processing Mapping Partner shall advise the PO or his/her designee about the current status of a technical review. When the technical review is complete, the processing Mapping Partner shall discuss the results of the review, any additional data required to support the requested revision, and any problems encountered during the review with the PO or his/her designee. The PO or his/her designee shall direct the processing Mapping Partner to finalize the technical review by one of the following options:

- Requesting, by telephone or letter, additional or revised data to complete the technical review; or
- Preparing a LOMR.

2.4.6.9 Preparation of Letters and Enclosures [April 2003]

When processing a LOMR, the processing Mapping Partner shall prepare the letter in accordance with the requirements provided in the FEMA Document Control Procedures Manual (FEMA, 2000).

Preparation of Enclosures

When processing a LOMR**,** the processing Mapping Partner shall prepare the map (FIRM and/or FBFM panels), Flood Profile, and data table (i.e., Floodway Data and Summary of Discharges) enclosures in accordance with the requirements in this Subsection.

Flood Insurance Rate Map Panel Enclosures

LOMRs usually involve a revision to the FIRM. The delineations shown in the revised portion of the FIRM will be based on data shown on the topographic work-map that has been certified by a Registered Professional Engineer or Licensed Land Surveyor in accordance with the NFIP regulations. Before a FIRM can be revised, the reviewing Mapping Partner must thoroughly review the topographic work-map provided by the revision requester and compare it to the results of the revised-conditions hydraulic model provided by the requester. Also, the processing Mapping Partner shall ensure that the BFEs plotted on the revised FIRM agree with the revised Flood Profile(s). Provided below are additional "quality checks" that must be made by the processing Mapping Partner during the preparation of the annotated FIRM panels. Following these "quality checks" is an example of an annotated FIRM (figure 1).

- Cross Sections – Sometimes the cross sections will remain in the same location on the revised FIRM as they were on the effective FIRM. If it is deemed more appropriate to change the location of one or more of these cross sections, they must be in the appropriate location relative to the distances shown on the revised Flood Profiles and Floodway Data Table.

- Stream Distances – All distances on the revised FIRM must match those depicted on the revised Flood Profiles. Distances between cross sections, roads, and confluences should all be measured on the FIRM and compared with the Flood Profiles for accuracy. An error greater than 5-percent of the FIRM scale is not acceptable and should be corrected before being submitted to FEMA for review.

- Stream Channel Boundaries and Centerlines – Stream channel boundaries or centerlines should be checked to ensure they are mapped within the identified 1-percent-annual-chance floodplain and, if a regulatory floodway is developed, the regulatory floodway boundaries.

- BFEs – Isopleths (squiggly lines) are used to identify BFEs along a flooding source. They must be plotted on the revised FIRM in agreement with what is shown on the revised Flood Profiles and Floodway Data Table. The general rule to be followed by

FEMA is that the BFEs plotted on the FIRM should duplicate the BFEs shown on the Flood Profiles within 0.5 foot at all locations.

- Regulatory Floodways – At each cross section, the width of the regulatory floodway must be measured and compared to the width indicated on the Floodway Data Table. An error greater than 5-percent of the FIRM scale is not acceptable and should be corrected before being submitted to FEMA for review.

- 1-Percent-Annual-Chance Floodplain – At each cross section, the width of the 1-percent-annual-chance floodplain should be measured and compared to the width indicated in the revised-conditions hydraulic model provided by the revision requester. An error greater than 5-percent of the FIRM scale is not acceptable and should be corrected before being submitted to FEMA for review.

- 0.2-Percent-Annual-Chance Floodplain – The 0.2-percent-annual-chance floodplain boundary delineations should be checked to ensure they are shown on the fringe of detailed-study 1-percent-annual-chance floodplains when appropriate.

- Structures – All structures (e.g., roads, culverts, footbridges) shown on the Flood Profile must also be shown on the FIRM.

- Flood Insurance Risk Zone Designations – All areas of flooding should be checked for labeling with the correct zone designations and leaders. This can be done by comparing the revised FIRM to the effective FIRM, unless a change has been made to zone designations as a result of the LOMR (e.g., changing from Zone A to Zone AE).

- Adjacent Panels – If the revision includes portions of adjacent panels, consistency between the adjacent panels must be verified.

- Revision Box – The revision box should be checked to ensure it includes the entire area of revision. The reach of the revision box must match the reach of the revision box shown on the revised Flood Profile(s). To do this, overlay the revised FIRM on the effective FIRM and ensure that there are no changes that occur in the area outside of the revision box.

- Culverts, Channels, Levees, and Basins – If flooding is contained in a culvert or channel or by a levee or basin, a note pertaining to this should be made on the revised FIRM. (See Appendix K, Subsection K.4.2 of these Guidelines for appropriate notes.)

- Rapid Expansions/Contractions – Ideally, overly rapid expansions or contractions of the regulatory floodway or the 1-percent-annual-chance floodplain will be identified at an early stage of the LOMR processing. It is a good idea, however, to do a final check during the production of the revised FIRM. If the regulatory floodway contracts or expands rapidly in a direction perpendicular to that of the stream-line, further investigation into the plausibility of such an occurrence must be undertaken. The same

can be said if this situation occurs with the 1-percent-annual-chance floodplain, except such occurrences can often be explained by the existence of ineffective flow.

- Corporate Limits – Corporate limits may be revised if changes have taken place. Most times, a FIRM revised by LOMR will not reflect corporate limit changes; instead these changes will be filed until such time that a more extensive revision to the FIRM is made. Such decisions are made to ensure no voids are created between the coverage on the FIRM for one community and the coverage on the FIRM for the adjacent community.

- Title Block – The title block must match the title block shown on the effective FIRM.

- Graphic Scale – The graphic scale should be checked to ensure that it matches that shown on the effective FIRM. Occasionally, the scale of the FIRM can be changed during a LOMR. In these instances, it should be checked against the scale of the topographic work map provided by the revision requester to ensure correctness.

- Spelling – Spelling throughout the revised FIRM should be checked.

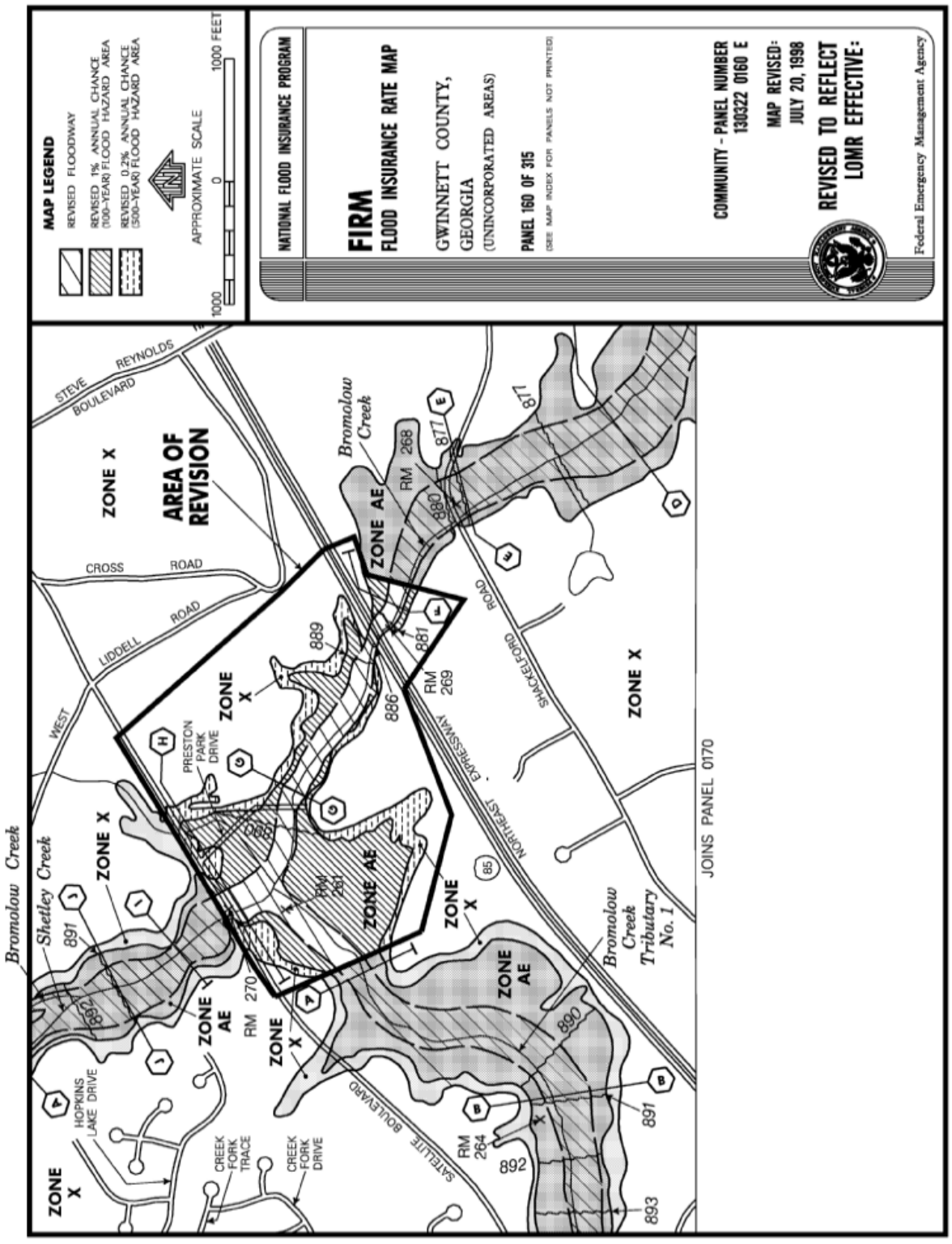


Figure 1 - Example of an annotated FIRM.

Flood Boundary and Floodway Map Panel Enclosures

When appropriate, FBFM panels may be revised as part of a LOMR request. With the exception of the standards for BFEs and flood insurance risk zone labels and leaders, the processing Mapping Partners shall apply the standards for FIRM panel enclosures cited above to FBFM panel enclosures,

Flood Profile Enclosures

LOMR applications for flooding sources with detailed flood hazard data where BFEs have been established usually involve flood elevation changes. When flood elevation changes have occurred, revisions to the Flood Profiles are necessary. Once the revised-conditions hydraulic model has been reviewed and deemed acceptable by the processing Mapping Partner shall review the Flood Profiles to ensure they meet FEMA accuracy and quality standards. Below are the "quality checks" that must be made by the processing Mapping Partner during the preparation of the annotated Flood Profiles. Following these "quality checks" is an example of a revised profile (figure 2).

- Stream Distances – The relationship between the revised-conditions hydraulic model's stationing and the stream's distance should be checked.

- Flood Elevations – The revised elevations must match the effective elevations within 0.5 foot at the upstream and downstream tie-in points for the revised reach.

- Cross Sections – The locations of the lettered cross sections, if they are being re-located, must match the locations in the revised-conditions model, in the Floodway Data Table, and on the FIRM. Also, BFEs at the locations of the cross sections must agree with what is indicated in the revised Floodway Data Table.

- Structure Locations – The names and locations of any new roads, bridges, culverts that are being shown on the revised FIRM must be shown on the Flood Profiles with the same name and location.

- Corporate Limits – The locations of corporate limits, if they have changed, must be the same as those shown on the revised FIRM.

- Title Block – The title block should be checked to ensure the community name, two-letter state abbreviation, county name, flooding source name, and Flood Profile panel number are correct.

- Legend – The legend should be checked to ensure only the floods for which a profile is shown are included and depicted with the same type of line (e.g., dashed, solid).

- Distances – Compare distances between roads and lettered FIS cross sections to ensure that they match those shown on the FIRM/FBFM.

- Elevation Losses – Any significant losses in elevation that occur in the Flood Profiles over a very short distance (near-vertical drops) should be checked and explained. These losses will usually be associated with a bridge. Ensure that a bridge is shown at this location on the Flood Profile.

- Bridges – An "I-bar" must be depicted to represent the bridge's elevation and dimensions relative to the flood and streambed profiles.

- Culverts – The culverts should be checked to ensure they are reasonably represented, if applicable. They are easily identifiable on a Flood Profile: they will look like a tunnel, through which some or all of the flood profiles will pass, and have ground-fill above them. Usually, a road crossing will be presented above a culvert, so a road label must appear above it.

- Streambed – The streambed should be checked to ensure it is depicted using the proper symbols.

- Profile Orientation – The orientation of the profile lines should be checked to ensure their position relative to one another is maintained.

- Drawdowns – The profile should be checked to ensure no drawdowns, or dips, are depicted at any location.

- Stream Confluences – The stream confluence should be checked to verify that they are labeled and shown in the correct location. Also, it is important to ensure that there is agreement between the revised Flood Profile and the effective or revised Flood Profile of the other flooding source at the location of the confluence.

- Backwater – The Flood Profile should be checked to verify that extents and source of backwater effects from another flooding source are depicted properly.

- Adjacent Profiles – When the revision area includes an area shown on more than one Flood Profile panel, the panels must be checked to ensure that they match at the location where the profile splits.

- Revision Box – A revision box should be included that shows what part of the profile has been revised.

- Area Outside the Revision Box – A check shall be made to ensure there are no differences between the revised Flood Profile and the effective Flood Profile in the reach of the flooding source outside the revision box. An overlay of the revised profile with the effective profile on a light table is an appropriate mode of ensuring that they are identical

outside the revision box. Ensure that the elevation scale and datum as well as distance scale are the same as the effective.

- Other – Dams/spillways, reservoirs, lakes, and similar features may be included on some Flood Profiles. The information on the Flood Profile for such features should match the information in the revised-conditions hydraulic model.

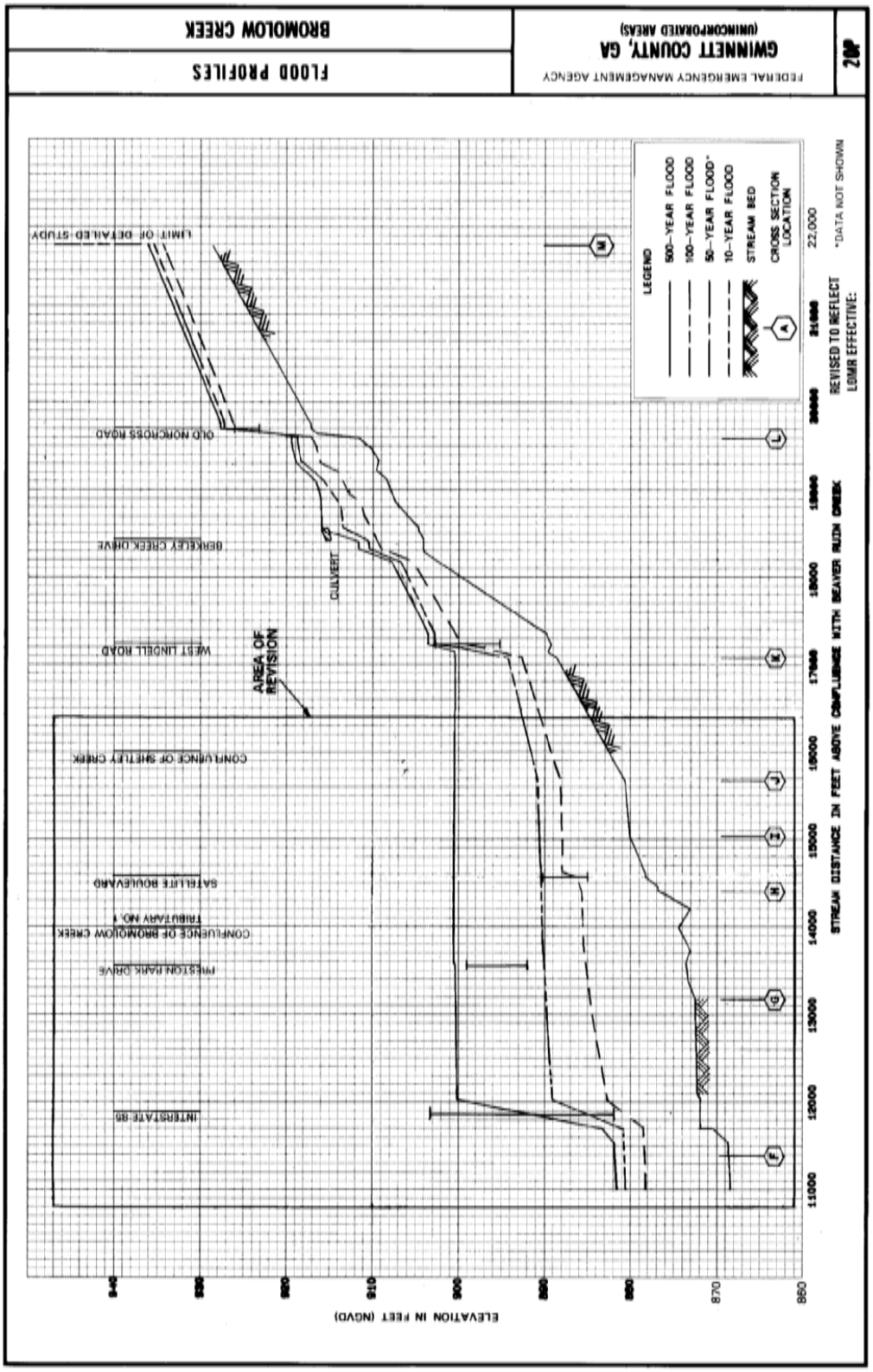


Figure 2 – Example of an annotated flood profile

Data Table Enclosures

For some LOMRs, the data tables included in the FIS report must be revised and enclosed. The requirements for these data table enclosures are provided in the remainder of this Subsection.

Floodway Data Table

If a LOMR will result in a revision to the regulatory floodway shown on the FIRM or FBFM, the Floodway Data Table for that flooding source likely may be required. If the revisions to the regulatory floodway will not result in changes to the information shown on the Floodway Data Table, the processing Mapping Partner shall not include the Floodway Data Table as an enclosure to a LOMR. If a revised Floodway Data Table is to be enclosed, the processing Mapping Partner shall check the data in the table to ensure that the criteria provided below are met. Following these criteria is an example of an annotated Floodway Data Table.

- Cross Section Column – These letters are assigned to select cross sections from the existing-conditions hydraulic model. Often they remain at the same cross sections as they were in the effective model. However, at times, it is more appropriate to select new cross sections. They should be spaced at reasonable lengths apart so that they provide a good general summary of the flooding source in general.

- Distance Column – The distance heading will have a footnote superscript indicating the reference point to which the distance is being taken. The distance values shown and the reference units (i.e., feet, miles, meters) should match those shown on the Flood Profiles.

- Floodway Width Column – The values in this column should be taken directly from the existing-conditions hydraulic model. It is recorded to the nearest whole number.

- Floodway Section Area Column – The values in this column should be taken directly from the existing-conditions hydraulic model. The correct value is labeled as "flow area" in the HEC-RAS and HEC-2 output tables. These values are recorded to the nearest whole number.

- Floodway Mean Velocity Column – The values in this column should be taken directly from the existing-conditions hydraulic model. These values are labeled as "Vel Chnl" in the HEC-RAS output table and "Mean Velocity" in the HEC-2 output tables. These values are recorded to one decimal place.

- 1-Percent-Annual-Chance Water-Surface Elevation (Regulatory) Column – The values in this column reflect the effects of backwater. These values are recorded to one decimal place.

- 1-Percent-Annual-Chance Water-Surface Elevation (Without Floodway) Column – The values in this column should be taken directly from the existing-conditions hydraulic model. These values are recorded to one decimal place.

- 1-Percent-Annual-Chance Water-Surface Elevation (With Floodway) Column – The values in this column reflect the regulatory floodway. Note that it can be neither less than the "Without Floodway" elevation or more than one foot greater than the elevation of the "Without Floodway" column. Some states have more stringent regulations than these, so be aware of what state the revision is taking place in. These values are recorded to one decimal place.

- 1-Percent-Annual-Chance Water-Surface Elevation (Increase) Column – The values in this column are the differences between values in the "With Floodway" and "Without Floodway" columns. This "increase" is sometimes referred to as the "surcharge." These values are recorded to one decimal place.

Once the required data have been input to the table, the following additional requirements also must be met:

- Revision Box – A revision box must be shown around the portion of the Floodway Data Table that has been revised and labeled as "Revised Area."

- Title Block – The title block must be filled in with the required information.

- Footnotes – Often there are one or more footnotes beneath the table, which require attention. If any of them are pertinent to the revised portion of the Floodway Data Table, the superscripts must be entered alongside the values to which they pertain. The processing Mapping Partners shall ensure that the elevation datum referenced matches that of the effective Floodway Data Table.

When the Floodway Data Table is completed, the cross sectional values in the table should be cross-referenced with those shown on the revised FIRM and profiles to ensure agreement.

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER-SURFACE ELEVATION (FEET NGVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Bromolow Creek								
A	1,825[1]	612	3,390	1.9	864.1	861.9[3]	862.9	1.0
B	5,506[1]	530	3,191	1.8	868.4	868.4	869.4	1.0
C	7,432[1]	597	3,808	1.5	870.6	870.6	871.6	1.0
D	8,923[1]	527	4,711	1.2	876.7	876.7	877.1	0.4
E	10,295[1]	362	2,785	2.1	877.4	877.4	878.0	0.6
F	**11,374[1]**	**167**	**1,545**	**3.5**	**880.8**	**880.8**	**881.8**	**1.0**
G	**13,173[1]**	**201**	**2,440**	**2.2**	**889.9**	**889.9**	**890.0**	**0.1**
H	**14,400[1]**	**319**	**2,766**	**0.9**	**890.3**	**890.3**	**890.5**	**0.2**
I	15,036[1]	164	1,362	1.8	890.7	890.7	891.7	1.0
J	15,672[1]	478	4,474	0.5	890.9	890.9	891.9	1.0
K	17,086[1]	158	471	3.0	894.1	894.1	894.5	0.4
L	19,606[1]	115	229	6.2	918.9	918.9	919.4	0.5
M	21,791[1]	113	209	5.1	935.5	935.5	935.5	0.0
Bromolow Tributary No. 1	**AREA OF REVISION**							
A	1,027[2]	252	1,258	3.1	890.3	886.4[4]	886.4	0.0
B	3,118[2]	384	2,343	1.7	890.8	890.8	891.2	0.4
C	4,822[2]	117	549	7.2	894.3	894.3	895.0	0.7
D	5,709[2]	438	2,543	1.6	898.5	898.5	898.5	0.0
E	6,801[2]	270	2,146	1.6	905.0	905.0	905.0	0.0
F	7,300[2]	81	443	7.6	905.2	905.2	905.2	0.0
G	8,776[2]	362	1,341	1.7	913.5	913.5	914.6	1.1
H	9,786[2]	57	270	8.4	918.5	918.5	918.9	0.4
I	11,883[2]	213	927	2.4	926.8	926.8	927.5	0.7
J	14,219[2]	228	772	2.9	937.6	937.6	938.4	0.8
K	15,506[2]	185	551	3.4	941.5	941.2	941.5	0.3
L	18,103[2]	113	314	4.6	959.0	959.0	959.6	0.6
M	19,685[2]	94	235	5.4	973.5	973.5	973.8	0.3

[1]Feet above confluence with Beaver Ruin Creek
[2]Feet above confluence with Bromolow Creek
[3]Elevation computed without consideration of overflow effects from Beaver Ruin Creek
[4]Elevation computed without consideration of backwater effects from Bromolow Creek

REVISED TO REFLECT LOMR EFFECTIVE:

TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

GWINNETT COUNTY, GA (UNINCORPORATED AREAS)

FLOODWAY DATA

BROMOLOW CREEK - BROMOLOW TRIBUTARY NO. 1

Figure 3 – Example of an annotated Floodway Data Table

Summary of Discharges

If a LOMR will result in a revision to the effective hydrology, the Summary of Discharges table for that flooding source likely may be required. If the LOMR uses the effective hydrology, the processing Mapping Partner shall not include the Summary of Discharges table as an enclosure to a LOMR. If a revised Summary of Discharges table is to be enclosed, the processing Mapping Partner shall check the data in the table as described below.

- Flooding Source and Location Column – These locations are areas that provide a point of reference to the user. The locations usually correspond to areas in the hydrologic modeling in which a change in flow rate occurs. In most instances multiple locations are reported per flooding source, however, if the corresponding flooding source uses the same flow rate for the entire reach, and then only one location will be reported on the

table. In addition, the locations that are reported should be referenced to a fixed location, i.e. road crossings, confluences, etc.

- Drainage Area Column – The drainage area heading will have a distance value shown, reported in square miles, and corresponds to the drainage area for the location reported in the Flooding Source and Location Column.

- Peak Discharges Column – The values in this column should be taken directly from the existing-conditions hydrologic model and must correspond to the reported location defined in the Flooding Source and Location Column. The Peak Discharges Column is broken into four sub-columns for each reported storm events (i.e., 10-, 50-, 100-, and 500-year events). The values are reported in cubic feet per second (cfs) and are rounded to the nearest whole number. In the event that there is no value associated with a particular event, an asterisk is placed in the corresponding sub-column, followed with a footnote stating "Data Not Available."

Once the required data have been input to the table, the following additional requirements also must be met:

- Revision Box – A revision box must be shown around the portion of the Summary of Discharges table that has been revised and labeled as "Revised Area."

- Footnotes – Often there are one or more footnotes beneath the table, which require attention. If any of them are pertinent to the revised portion of the Summary of Discharges table, the superscripts must be entered alongside the values to which they pertain.

- The processing Mapping Partners shall ensure that the revised Summary of Discharges table is incorporated to the corresponding page in the effective FIS. In the event that there is additional information reported on the effective FIS page, the processing Mapping Partners shall transfer all information from the FIS to ensuing attachment with the revised Summary of Discharges table.

When the Summary of Discharges table is completed, the location and peak discharge values in the table should be cross-referenced with those shown in the revised hydrologic and hydraulic modeling.

2.4.6.10 Community Review and Comment [February 2002]

Upon completing a LOMR, the processing Mapping Partner shall provide copies of the LOMR and enclosures to the revision requester and community officials for review and comment. The community shall receive a 30-day review period for all revisions. When BFEs are changed, a 90-day appeal period shall be required.

30-Day Review Period

Because a LOMR is an official revision of the FIS report, FIRM, and/or FBFM and may become effective immediately, additional changes may be made only through the initiation of another revision; therefore, the PO or his/her designee may determine that such a revision should be deferred. If the changes are significant, a second revision may be warranted.

90-Day Appeal Period

For LOMRs that involve new or modified BFEs, the processing Mapping Partner shall initiate the statutory 90-day appeal period to provide residents of the affected community an opportunity to appeal the new or modified BFEs. As in the processing of PMRs, the proposed or proposed modified BFEs must be published in a local newspaper with wide circulation and in the *Federal Register* to initiate the appeal period. The proposed or proposed modified BFEs must be published in local newspapers on two separate dates, usually 1 week apart. The appeal period begins on the day of the second publication of the proposed BFEs.

Because a revision made by a LOMR becomes effective immediately in cases where the SFHA width and BFEs are decreasing, the appeal period occurs after the effective date of the LOMR. In cases where the BFEs and SFHAs are increasing, however, the LOMR may not be effective until after the appeal period has elapsed unless notification and acceptance are received from all affected property owners.

2.4.6.11 Proposed and Final Flood Elevation Determinations [February 2002]

When a 90-day appeal period is required for a LOMR, the processing Mapping Partner shall prepare and process the correspondence for initiating the appeal period and finalizing the new or modified BFEs. The processing Mapping Partner shall prepare the proposed BFE notices for publication in the *Federal Register* and a local newspaper with wide circulation and the final BFE notice for publication in the *Federal Register*, and shall prepare and process the proposed and final BFE determination letters that will be sent to the CEO of the community, the State NFIP Coordinator, and all appellants.

For revisions involving BFEs, the LOMR and the proposed BFE determination letter sent to start the appeal period are the same. The proposed BFE notice shall be prepared using the BFEs shown in the effective FIS report and FIRM, as well as those presented in the revised FIS report and FIRM. The processing Mapping Partner shall ensure that the notices are correct, that they include BFEs for all flooding sources for which revisions were made, and that they are published in a local newspaper with wide circulation and in the *Federal Register*.

2.4.6.12 Appeals and Protests [April 2003]

An appeal is a challenge of a proposed or proposed modified BFE. The sole basis of an appeal, as indicated in Section 67.6 of the NFIP regulations, is the possession of knowledge or information indicating that the new or modified BFEs proposed by FEMA are scientifically or

technically incorrect. The proposed or proposed modified BFEs are considered scientifically incorrect if the methodology or assumptions used in the determination of the BFEs is inappropriate or incorrect. The proposed or proposed modified BFEs are considered technically incorrect if the BFEs were based on insufficient or poor quality data, analysis contains mathematical or measurement errors, or physical changes have occurred in floodplain.

Comments received by FEMA during the appeal period that do not challenge proposed or proposed modified BFEs are considered "protests." A protest is a challenge of information or data from a Preliminary FIS Report or FIRM other than BFEs. Types of protests include, but are not limited to, the following:

- Challenges of proposed floodplain boundary delineations based on more detailed or recent topographic data;
- Challenges of proposed regulatory floodway boundaries based on better modeling,
- Requests that changes effected by a previous Letter of Map Change be incorporated;
- Base map errors; and
- Errors of omission.

Like PMRs, appeals and protests of LOMRs must be supported by scientific or technical data, provide proof of error, and provide sufficient data to make revisions (bridge plans, cross-section data) and may require certification of data by a Registered Professional Engineer or Licensed Land Surveyor.

Additional information on the data required to support an appeal is presented in Chapter 3 of *Appeals, Revisions, and Amendments to National Flood Insurance Program Maps: A Guide for Community Officials* (FEMA, 1993). Additional information on the data required to support a protest is presented in Chapter 4 of *Guide for Community Officials*.

In accordance with Section 67.7 of the NFIP regulations, private persons shall submit appeals to the community CEO during the appeal period. The CEO, or a community official designated by the CEO, shall review and consolidate all appeals by private persons and prepare a written opinion stating whether or not the appeal is justifiable. The community CEO or other designated community official shall then submit the opinion and the appeal(s) to FEMA for review.

In accordance with Section 67.8 of the NFIP regulations, FEMA will "review and fully consider any technical or scientific data submitted by the community that tend to negate or contradict the information upon which the proposed determination is based." Although not specifically required by the regulations, FEMA also will consider all technical or scientific data submitted in support of a protest as well.

To assist FEMA, the processing Mapping Partner shall review and evaluate submitted data, request additional data when required, and recommend resolutions to FEMA for all appeals and

protests submitted during the 90-day appeal period. An expanded discussion of these procedures also appears in the *Guide for Community Officials* (FEMA, 1993).

At the request of FEMA, the processing Mapping Partner shall perform the following tasks:

- Acknowledge receipt of an appeal or protest
- Evaluate any data submitted;
- Request, by telephone and/or in writing, any additional data required to support the appeal or protest;
- Perform technical analyses if requested by FEMA;
- Prepare and distribute revised LOMR determination letters;
- Prepare and distribute revised copies of the affected portions of the FIS report, FIRM/DFIRM, and/or FBFM enclosures to the LOMR determination letter, if requested by FEMA; and
- Assist FEMA in preparing and distributing an appeal or protest resolution letter to be sent to the community CEO and floodplain administrator and all appellants.

For most denied appeals and protests, FEMA shall provide a comment period (usually 30 days) following the date the appeal or protest resolution letter is issued. FEMA, with the support of the assigned Mapping Partner and other members of the Project Team for the Flood Map Project, shall address any comments received during this comment period before proceeding with the LFD.

For most successful appeals and protests, FEMA shall issue a new LOMR determination letter accompanied by revised versions of the appropriate FIS report, FIRM/DFIRM, and/or FBFM enclosures. For some successful protests, however, the FEMA PO or his/her designee may direct the processing Mapping Partner to defer changes to the revised FIS report, FIRM/DFIRM, and/or FBFM until the affected materials are physically revised and reissued. FEMA will take this action when the requested change does not effect the flood hazard information shown in the FIS report or on the FIRM/DFIRM and/or FBFM (e.g., changes to road names or configurations).

2.4.6.13 Coordination and Documentation Activities [February 2002]

The processing Mapping Partner shall perform the required coordination and documentation activities necessary for processing each LOMR. During the processing, the Mapping Partner shall:

- Communicate with the requester and community, as necessary.
- Coordinate activities with the FEMA RO as directed by the PO or his/her designee.

- Communicate with other FEMA contractors and Federal, State, and local agencies, as needed.

- Prepare letters and other correspondence for FEMA signature.

- Maintain legal documentation, records of correspondence, and technical data.

In addition, the processing Mapping Partner shall organize, and may be required to submit to FEMA, records of the correspondence and supporting data associated with LOMRs. (Refer to Volume 3, Section 3.3 and Appendix M of these Guidelines for details.)

2.5 Revalidation Letters [February 2002]

When a revised FIRM panel becomes effective, all previous map actions for that panel are superseded. Therefore, each time a FIRM panel is physically revised and republished, the panel must be updated to include the changes in flood hazard information resulting from previously issued map actions, including LOMRs, LOMAs, and LOMR-Fs. Frequently, the results of a LOMC cannot be shown on a revised FIRM panel due to one or more of the following reasons:

- Map scale limitations;
- The LOMA or LOMR-F determined that the property was outside the SFHA as shown on the previously effective FIRM;
- Flood hazard data that were the basis for the LOMR, LOMA, or LOMR-F determination were superseded by new detailed flood hazard data; or
- The LOMR, LOMA, or LOMR-F was issued after the LFD date.

To assist communities in maintaining the FIRM and to reflect LOMRs, LOMAs, and LOMR-Fs previously issued by FEMA, FEMA developed a process for revalidating LOMRs, LOMAs, and LOMR-Fs automatically when a revised FIRM becomes effective. The result of this process is the issuance of a revalidation letter, termed a LOMC-VALID letter.

2.5.1 Technical and Programmatic Review [February 2002]

The procedures the Mapping Partner assigned by FEMA shall follow for automatically revalidating LOMCs are presented in Subsections 2.5.2, 2.5.3, and 2.5.4. Under these procedures, FEMA issues one letter for all affected LOMAs, LOMR-Fs, and LOMRs rather than an individual letter for each map change request. Individual property owners are no longer *required* to request that LOMRs, LOMAs, or LOMR-Fs be reissued. The result is a more effective tool for floodplain management and flood insurance purposes.

As discussed in Subsection 2.1.8.6, to assist communities in maintaining the NFIP maps, particularly the FIRM, FEMA directs the assigned Mapping Partner to prepare summaries of the LOMAs, LOMR-Fs, and LOMRs that will be superseded when revised FIRM panels become effective. FEMA provides the resulting SOMAs to the communities at significant milestones during the processing of revised FIRMs to make the communities aware of the effect revised the FIRM panels will have on previously issued LOMRs, LOMAs, and LOMR-Fs. .

2.5.2 Coordination and Documentation Activities [February 2002]

Because the changes made to the effective FIRM via the LOMR, LOMA, and LOMR-F processed become effective without the affected panel(s) being physically revised and republished, the assigned Mapping Partner must maintain records of these modifications so they may be incorporated into the next physical update of the affected panel(s).

Approximately 6 weeks before the effective date of the revised map, the assigned Mapping Partner shall generate a list of the LOMAs, LOMR-Fs, and LOMRs that must be revalidated. The list is generated from the Final SOMA. (See Subsection 2.1.10.)

The assigned Mapping Partner shall review the listed LOMAs, LOMR-Fs, and LOMRs to verify that all appropriate letter determinations are included. During the verification process, the assigned Mapping Partner shall assess the pending LOMAs, LOMR-Fs, or LOMRs for possible completion before the new effective date; pending letters that will be completed before the effective date may be revalidated. If necessary, the Mapping Partner shall obtain information from the case file to determine whether a LOMA, LOMR-F, or LOMR must be revalidated.

The intent of the LOMC-VALID letter is to indicate that the new FIRM panels did not affect the previous determination. Therefore, if one of the determinations in a multiple-determination LOMA or LOMR-F is a denial for a certain property, the assigned Mapping Partner will not be required to specify the property that was removed from the SFHA or indicate in any way that the request for a certain property was denied. If the property was subsequently removed from the SFHA, the LOMA, LOMR-F, or LOMR that included that determination also will be revalidated by the LOMC-VALID letter.

If a requester notifies FEMA about one or more LOMAs, LOMR-Fs, or LOMRs that he or she believes should have been revalidated but were not included in a LOMC-VALID letter, the assigned Mapping Partner shall review available information to determine the accuracy of the request. If the assigned Mapping Partner finds that one or more LOMAs, LOMR-Fs, or LOMRs should have been revalidated, the assigned Mapping Partner shall prepare a new LOMC-VALID letter or reissue the original LOMA, LOMR-F, or LOMR. If the assigned Mapping Partner could not locate the LOMA, LOMR-F, or LOMR in question on the FIRM, the Mapping Partner shall request appropriate information from the requester.

Following the FIRM effective date, the assigned Mapping Partner shall prepare and distribute new amending or revising LOMAs, LOMR-Fs, and LOMRs for those cases in Category 4 of the Final SOMA for which new determinations could be made based on available information.

2.5.3 Document Preparation [April 2003]

After reviewing the LOMAs, LOMR-Fs, and LOMRs in Category 2 of the SOMA as discussed in Subsection 2.1.14, the assigned Mapping Partner shall prepare the LOMC-VALID letter, which includes the following information for each LOMA, LOMR-F, or LOMR:

- Case number (when available);
- Date issued;
- Identifier; and
- Map panel number, including suffix.

Depending on the number of LOMAs, LOMR-Fs, and LOMRs to be revalidated, the assigned Mapping Partner shall include the information for each LOMA, LOMR-F, or LOMR in the LOMC-VALID letter itself or provide it as a separate attachment.

The assigned Mapping Partner shall submit the LOMC-VALID letter to FEMA for review and approval approximately 5 weeks before the new effective date and mail the LOMC-VALID letter to the community CEO and floodplain administrator approximately 2 to 4 weeks before the new FIRM effective date. In addition, the assigned Mapping Partner shall provide a copy of the LOMC-VALID letter to the LOMC Subscription Coordinator for inclusion in the LOMC Subscription Service CD-ROM. (See Volume 3, Subsection 3.2.6 of these Guidelines for additional information on this product.)

If, subsequent to the issuance of the LOMC-VALID letter, a community official or individual property owner requests that a LOMA, LOMR-F, or LOMR be reissued and the LOMA, LOMR-F, or LOMR is listed in the LOMC-VALID letter, the assigned Mapping Partner shall send the requester a copy of the LOMC-VALID letter and, if requested, a copy of the original LOMA, LOMR-F, or LOMR. Again, no fees shall be assessed for these requests. However, subsequent requests for copies from the requester or requests from someone other than a community official or individual property owner shall be subject to the fee schedule for technical and administrative support data published in the *Federal Register*. (See Volume 3, Subsection 3.3.3 of these Guidelines for additional information on external data requests.)

2.5.4 Deliverable Products **[February 2002]**

In preparing the LOMC-VALID letter, the Mapping Partner shall follow the general guidelines below in presenting case-specific information on revalidated LOMCs.

- A panel number must appear for each revalidated LOMA, LOMR-F, or LOMR included in the LOMC-VALID letter. If the FIRM has been reformatted since a LOMA, LOMR-F, or LOMR was issued and the Mapping Partner cannot readily identify the correct panel number, the Mapping Partner shall NOT include the LOMA, LOMR-F, or LOMR in the LOMC-VALID letter.

- If the revalidated letter is a LOMR, the Mapping Partner is not required to include a new flood insurance risk zone.

- If the revalidated letter is a multiple-determination LOMA or LOMR-F and multiple zones are cited in the letter, the word "MULTIPLE" may be included in place of the zone.

- If the new flood insurance risk zone for a revalidated LOMA or LOMR-F is a Zone X and the assigned Mapping Partner can readily determine whether it is Zone X (shaded) or Zone X (unshaded), the Mapping Partner shall include the complete flood insurance risk zone designation in the LOMC-VALID letter. If the Mapping Partner cannot make this determination readily, the term "Zone X" shall be included.

The LOMC-VALID letter is to become effective 1 day after the effective date of the newly effective FIRM panels. The LOMC-VALID letter is considered legally binding, in the same manner as the original LOMA, LOMR-F, or LOMR, provided that a copy of the original LOMA, LOMR-F, or LOMR accompanies the LOMC-VALID letter. If required by the requester, the assigned Mapping Partner shall forward a copy of the original LOMA, LOMR-F, or LOMR with the LOMC-VALID letter. No fee is to be assessed for such requests.

2.6 Corporate Limit Changes [February 2002]

Corporate limit changes may occur in a community as a result of annexation, incorporation, or other appropriate legal actions. Section 64.4 of the NFIP regulations requires communities to update their ordinance within 6 months of such an activity; however, some communities may not provide this information in a timelier manner. Occasionally, communities provide this information with other information they regularly provide to FEMA, such as the Biennial Report. Corporate limit change information is forwarded by FEMA to the Mapping Partner responsible for processing updates to the FIRM for that community. If the boundary change affects an SFHA, FEMA and the processing Mapping Partner shall provide appropriate guidance to the community, identifying the affected FIRM (and, in some cases, FBFM) panels and FIS report components for the affected area.

If there is an ongoing map update (i.e. FEMA-contracted Flood Map Project, LOMR, PMR) for the community that affects the panels on which the corporate limit changes appear when the corporate limit changes are submitted, the processing Mapping Partner shall incorporate the corporate limit change information into the ongoing, and no additional response is necessary. If the corporate limit change is for a community that is mapped on numerous panels and the panels for which the corporate limit changes are submitted are not panels that are being updated as part of an ongoing update, the processing Mapping Partner shall coordinate with the PO to determine the appropriate action to be taken. However, in the majority of the cases, no map update is ongoing when the change is received.

The procedures presented in Subsections 2.6.1 through 2.6.4 have been developed to provide guidance for the actions and response to such a corporate limit change submittal. A decision-making flowchart for corporate limit changes is graphically illustrated in Figure 2-8 at the end of this section.

It is unlikely that FEMA would receive change information from a non-participating community, and that issue is not addressed. However, it should be noted that if a non-participating community expands into an area that was previously in a participating community, the situation could result in a PMR and would warrant review by the affected jurisdictions on a case-by-case basis.

2.6.1 Technical and Programmatic Review [February 2002]

The technical review of the data submitted consists of reviewing the corporate limit change submittal for certain information. Two items are required: a complete copy of the corporate limit change ordinance, including the date the change became effective; and a map showing the location and area involved in the change. Usually, a letter from a community official is included; this is helpful contact information. If either the map or the ordinance is not submitted, the processing Mapping Partner shall telephone the community and request this information.

When the corporate limit change request is for a community FIRM that is not being updated, the processing Mapping Partner shall determine the location of the change on the effective FIRM. If

the area of change does not include a SFHA, the processing Mapping Partner shall prepare a Standard Response Letter for FEMA signature. The processing Mapping Partner also shall review the flood hazard information on the FIRM panels for adjacent land areas for consistency. If they are inconsistent, the processing Mapping Partner shall initiate a map update to address the problem. If they are consistent, a letter response is appropriate. The processing Mapping Partner shall use the Standard Response Letter be used in situations where the ordinance level is the same in both affected communities, or where the ordinance level of the community assuming jurisdiction is higher than that in the affected area.

To resolve inconsistencies, the processing Mapping Partner must first verify whether data are available, and whether those data are available internally or must be requested from the community. If insufficient data are available, the processing Mapping Partner shall prepare the Standard Response Letter to notify the affected communities that the change will be incorporated in the next revision of that FIRM panel. If sufficient data are available, the processing Mapping Partner shall determine the magnitude of the change and shall, in close coordination with FEMA, determine whether a LOMR or PMR is to be initiated. LOMRs are discussed in Section 2.4 and PMRs are discussed in Section 2.1.

In such cases, the processing Mapping Partner shall prepare a Restudy Response Letter to inform the community of the upcoming map action. The ordinance levels are detailed in Paragraphs 60.3(a) through (f) of the NFIP regulations. For the purpose of reviewing corporate limit change materials, a very general overview of the levels of ordinances as they apply to map information follows:

- Paragraph 60.3(a)—The community has no data and no FIRM;
- Paragraph 60.3(b)—The FIRM has only Zone A flood hazard information;
- Paragraph 60.3(c)—The FIRM shows some BFEs and detailed flood hazard information;
- Paragraph 60.3(d)—The FIRM or FBFM shows regulatory floodway information; and
- Paragraph 60.3(e)—The FIRM shows coastal high hazard information (V Zones).

If a community will be incorporating flood hazard information with the corporate limit change that will require a higher floodplain management ordinance level, the community must upgrade the ordinance. For example, if the changed area includes a regulatory floodway and the effective FIRM or FBFM for the community assuming jurisdiction also presents a regulatory floodway , the community likely will not be required to update its floodplain management ordinance and the Standard Response Letter is appropriate.

However, if the changed area has a regulatory floodway shown, and the FIRM or FBFM for the community assuming jurisdiction does not present a regulatory floodway, then the community must upgrade its floodplain management ordinance to incorporate the requirements of Paragraph 60.3(d) of the NFIP regulations. The community must be advised of the change required in their ordinance, and this can be accomplished using the Ordinance Upgrade Response Letter.

The content and distribution requirements for the Standard Response Letter, Restudy Response Letter, and Upgrade Response Letter may be found in next update to the FEMA *Document Control Procedures Manual.*

2.6.2 Document Preparation [February 2002]

The corporate limit change submittal usually shall include a copy of the ordinance, a map showing the location and area involved in the change, and a letter from a community official. Once the corporate limit change submittal arrives at the processing Mapping Partner, it shall be assigned for review and processing.

The processing Mapping Partner shall review the submittal for the required materials, specifically for the map and the ordinance, and shall obtain the FIRM for the changed area and the community assuming jurisdiction. The following information shall be noted:

- FIRM panel name and number for the community assuming jurisdiction;
- FIRM panel name and number for the changed area's previous community;
- The name and title/department of the official of the community assuming jurisdiction– this is the person who wrote the letter accompanying the corporate limit change submittal (if no letter, no name)'
- The name and address of the CEO of the community assuming jurisdiction;
- Date of letter that accompanied the change submittal (if no letter, date the mapping partner received the change submittal); and
- Date the change became effective (usually on the last page of the ordinance).

The processing Mapping Partner shall use this information to create the appropriate response letter to the community. The processing Mapping Partner shall review the FIRM panels as discussed in Subsection 2.6.1, shall prepare the appropriate response letter, shall submit the letter to FEMA, and shall mail the letter and distribute copies as appropriate.

2.6.3 Other Documentation Activities [February 2002]

FEMA uses the MNUSS database to assist when prioritizing funding for map updates, and a corporate limit change is considered a Map Maintenance Need. The processing Mapping Partners shall complete a MNUSS Worksheet (see Appendix I, Subsection I.) to document the change and shall enter the required information into the MNUSS data. The Worksheet and a copy of the response letter are attached to the corporate limit change submittal and filed in the Future Files maintained by the processing Mapping Partner.

The processing Mapping Partner shall enter the following information is entered into a Worksheet and the MNUSS database:

- CID, name, County, State of community assuming jurisdiction;
- CID, name, County, State of community losing jurisdiction;
- Number of changes;
- Ordinance received (Y/N or Date);
- Map received (Y/N or Date);
- Date most recent change became effective;
- Date received the change submittal;
- Date responded to the change submittal; and
- Method of response (which type of letter).

2.6.4 Deliverable Products **[February 2002]**

The processing Mapping Partner shall prepare and distribute the Standard Response Letter, the Ordinance Upgrade Response Letter, or the Restudy Response Letter as indicated in Subsection 2.6.1. FEMA shall provide the content for these letters to the processing Mapping Partner. The letters shall be included in a future update to the FEMA *Document Control Procedures Manual*.

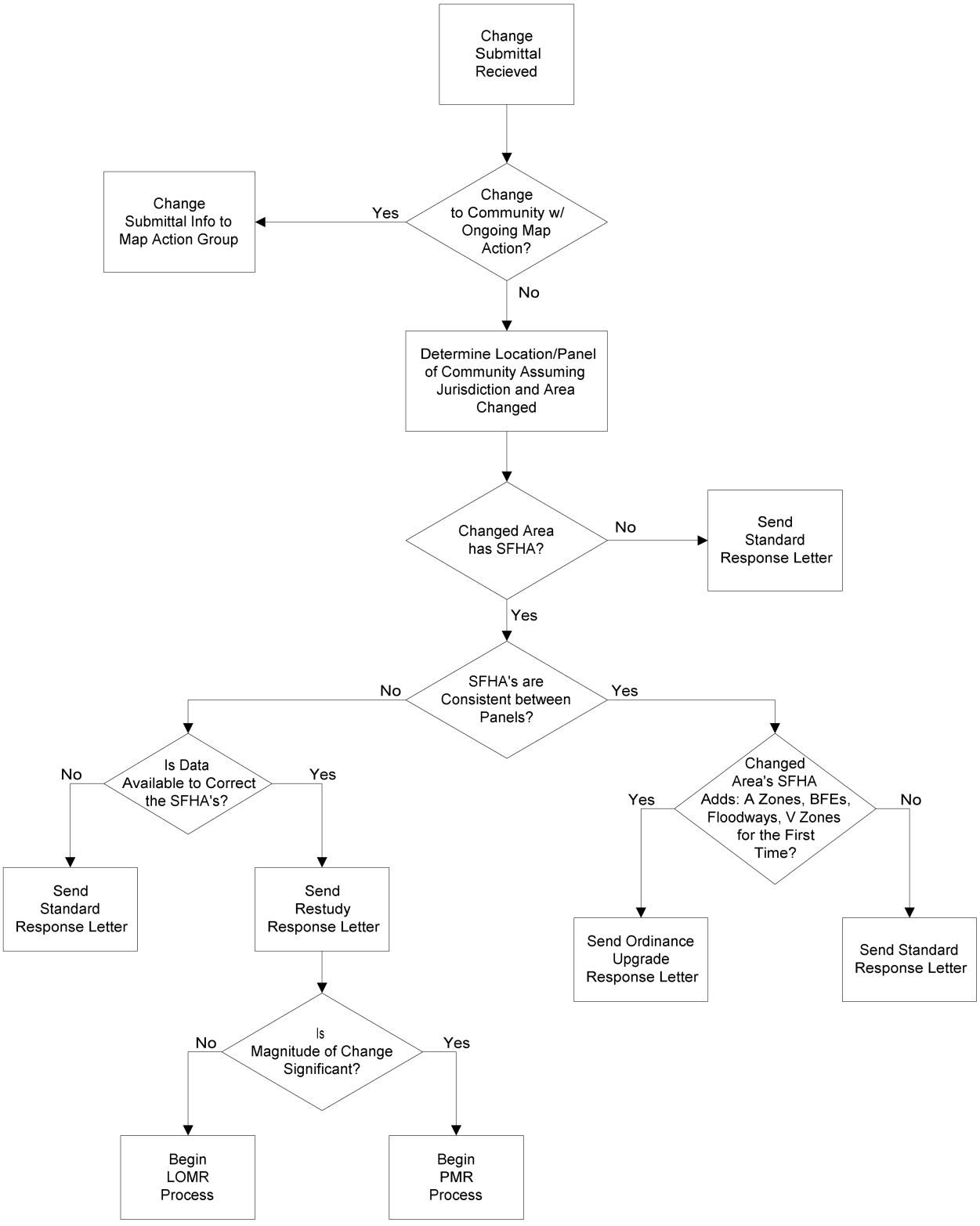


Figure 2-8. Map Revision Decision-Making Flowchart for Corporate Limit Changes

2.7 Program Implementation [February 2002]

2.7.1 Documentation Control Procedures [February 2002]

The assigned Mapping Partner shall perform the required procedures for preparing and distributing standard and nonstandard letters for conditional and final map revisions and map amendments as presented in Sections 2 and 3 and Appendices B and C of the FEMA *Document Control Procedures Manual* (FEMA, 2000). This includes mailing letters, with their appropriate enclosures, as specified in the U.S. Postal Service Domestic Mail Manual (U.S. Postal Service, 2001).

2.7.2 Standard Processing [February 2002]

In accordance with Section 65.9 of the NFIP regulations, when a revision of an NFIP map is requested, the CEO of the community must receive notification (in writing) of the status of the request. This notification must be provided within 90 days of the receipt of the request and will state one or more of the following:

- The effective map(s) shall not be modified.
- The BFEs on the effective FIRM shall be modified, and new BFEs shall be established.
- The changes requested are approved, and the map(s) are revised by a LOMR.
- The changes requested are approved. Revised FIRM (and FBFM) panels will be printed and distributed.
- The changes requested are not significant enough to warrant a reissuance or revision of the FIS report, FIRM, and/or FBFM and will be deferred until such time as a significant change occurs.
- The evaluation of the scientific or technical data submitted will require an additional 90 days to complete.
- The data submitted to support the revision request are not adequate. Additional data must be provided.
- The required fee has not been received, and no work may be done until it is received.

This notification is generally interpreted as a written response by the Administrator of the Federal Insurance and Mitigation Administration or his/her designee; therefore, the assigned Mapping Partner shall complete all reviews or determine that such completion is not possible to allow ample time for correspondence preparation, review, signature, and mailing within the timeframe. However, to ensure a timely review of and response to any revision requests

(including LOMR-Fs and LOMAs), the assigned Mapping Partner shall prepare a letter that either outlines the additional data needed to resolve the revision request or provides an explanation of what revisions will be undertaken within 30 days of receipt of a revision request.

Furthermore, because lengthy delays in resolving requests for map revisions may occur, the assigned Mapping Partner shall develop and institute procedures to ensure that periods of 90 days or more do not elapse without FEMA corresponding with the requester. The purpose of the correspondence is to advise the revision requester of the status of his or her revision request.

2.8 Fee-Collection System Responsibilities [February 2002]

2.8.1 Background [February 2002]

In January 1986, FEMA instituted a fee-collection system to recover costs incurred in reviewing proposed projects and issuing CLOMAs, CLOMR-Fs, and CLOMRs. In October 1992, FEMA expanded the system to provide for the recovery of costs incurred in reviewing completed projects and issuing LOMR-Fs, LOMRs, and PMRs. On October 1, 1996, FEMA established a flat fee schedule for processing most requests for conditional and final map amendments and revisions. The most recent revision of the fee schedule occurred on September 1, 2002. Up-to-date information on the fee schedule is available on the FEMA Flood Hazard Mapping Web site at http://www.fema.gov/fhm/frm_fees.shtm.

2.8.2 Coordination Responsibilities [February 2002]

Under the fee schedule, with one exception, requesters are required to submit payment to FEMA in advance of a review. The exception is requests for changes involving structural measures on alluvial fans.

For most requests, the assigned Mapping Partner will only be required to acknowledge receipt of the payment and coordinate with the Fee-Collection System Administrator (FCSA) to ensure all payments are deposited into the National Flood Insurance Fund. For requests involving structural measures on alluvial fans, requesters must submit an initial fee, and the Mapping Partner must document all billable hours (to nearest half hour) spent on these requests. The Mapping Partner must then notify FEMA and the requester if the initial fee will be exceeded and provide a revised estimate of the total review and processing costs (calculated as the total number of hours multiplied by an hourly rate).

Additional information on the required coordination and documentation is provided in Section 2 of the FEMA *Document Control Procedures Manual* (FEMA, 2000).

2.8.3 Fee Exemptions [February 2002]

In accordance with Section 72.5 of the NFIP regulations, no review and processing fee shall be collected by the Mapping Partner for the following exempted types of requests:

- Map change requests based on mapping or study analysis errors;
- Map change requests based on the effects of natural changes within SFHAs;
- LOMA requests;
- Map change requests based on federally sponsored flood-control projects where 50 percent or more of the project's costs are federally funded; and

- Map change requests based on detailed hydrologic and hydraulic studies conducted by Federal, State, or local agencies to replace approximate studies conducted by FEMA and shown on the effective FIRM.

- Map changes based on flood hazard information meant to improve upon that shown on the flood map or within the flood study. (NOTE: Improvements to flood maps or studies that partially or wholly incorporate manmade modifications within the SFHA will not be exempted from fees.)

2.9 Special Conversions [February 2002]

Under standard conversion procedures, a newly identified community or a community that previously participated in the Emergency Phase of the NFIP enters the Regular Phase of the NFIP based on the results of the detailed or approximate analyses performed as part of a FEMA-contracted Flood Map Project. However, through the Special Conversion process, FEMA may also convert a community to Regular Phase of the NFIP without performing a flood hazard study. For some communities, the Special Conversion process may be initiated at the recommendation of a Mapping Partner that has undertaken a FEMA-contracted Flood Map Project as discussed in Volume 1 of these Guidelines.. In such cases, that Mapping Partner may submit some form of analysis with a letter report recommending a Special Conversion.

Under this process, a community is converted, at the recommendation of the RO, through one of the following procedures:

- Non-floodprone conversion;
- Minimal conversion by map; or
- Minimal conversion by letter.

These procedures are described in more detail in Subsections 2.9.1 and 2.9.2.

The FEMA RO staff initiates the Special Conversion process by submitting a Special Conversion Recommendation Report (SCRR) and/or letter report discussed above and appropriate supporting data to the FEMA PO or his/her designee. The FEMA PO or his/her designee then forwards the SCRR and appropriate supporting data to the Mapping Partner assigned by FEMA to review and process the Special Conversion (hereinafter referred to as the processing Mapping Partner). For all Special Conversion procedures, the processing Mapping Partner shall perform the coordination and documentation activities required to convert the community to the Regular Phase of the NFIP, in accordance with the detailed procedures documented in Section 4 of the FEMA *Document Control Procedures Manual* (FEMA, 2000).

2.9.1 Non-Floodprone Conversions [February 2002]

Non-floodprone communities are those communities that are determined not to be subject to inundation by the 1-percent-annual-chance flood. The administrative guidelines for determining whether a community is designated as non-floodprone state that all of its SFHAs must be less than 200 feet wide and drain areas less than 1 square mile, or that physiographic features must exist that preclude floodplain development in the community. If the floodprone areas in a community do not fit at least one of these guidelines, the community is not, under any circumstances, to be designated as non-floodprone.

Non-floodprone communities are converted to the Regular Phase of the NFIP by letter only. No FIRM is issued, and any existing FHBM is rescinded. The entire community is designated as Zone X (unshaded).

Upon receipt of the SCRR and/or letter report from FEMA, the processing Mapping Partner shall ensure that at least one of the criteria for non-floodprone conversions is met. If at least one of these criteria is not met, the processing Mapping Partner shall inform the FEMA PO or his/her designee, who will request that the RO submit additional justification for its recommendation.

Once a community has been approved for a non-floodprone conversion, the processing Mapping Partner shall prepare the necessary correspondence to effect the conversion. Depending on the community's status in the NFIP, the processing Mapping Partner shall prepare one of three non-floodprone conversion letters. The processing Mapping Partner shall distribute copies of the letters and prepare a CMA list for each community. Distribution shall occur 2 weeks prior to the effective date determined by the processing Mapping Partner from a list provided by FEMA and noted on the CMA list.

The processing Mapping Partner shall prepare the required correspondence for non-floodprone conversions to notify the community CEO and floodplain administrator, State NFIP Coordinator, affected Federal agencies, and the RO of the conversion. The types of correspondence to be prepared by the assigned Mapping Partner are discussed in detail in Section 4 of *Document Control Procedures Manual* (FEMA, 2000).

2.9.2 Minimal Conversions **[February 2002]**

Minimally floodprone communities are those communities subject to inundation by the 1-percent-annual-chance flood, but for which existing conditions indicate that the area is unlikely to be developed in the foreseeable future. The criteria used by RO staff to evaluate a community's development potential are as follows:

- Floodplains are publicly owned and designed for open space or preservation.
- Zoning laws, sanitary codes, subdivision regulations, shore land regulations, or community regulations effectively prohibit floodplain development.
- Surrounding land use or topography effectively limits the development potential.
- Population is decreasing or stable, and there is no foreseeable pressure for floodplain development.
- Floodplains are remote and uninhabited, and future development is unlikely.

The FEMA RO may use other indicators in addition to these criteria to assess the development potential. One important indicator is the size of the undeveloped floodplain relative to the size of the entire community. The larger the proportion, the more the floodplain is likely to be subject to pressure for development.

Minimal conversions can be accomplished by map or by letter, depending on whether revisions to the existing FHBM are required. For communities for which no FHBM has been published (i.e., newly identified communities), an assigned Mapping Partner shall follow the procedures detailed in Volume 3, Subsection 3.21.2 of these Guidelines

The length of the entire minimal conversion process and the processing Mapping Partner processing times for minimal conversions are discussed in Subsections 2.9.2.1 and 2.9.2.2. The length of the entire minimal conversion process depends on the conversion method used (map or letter) and on whether the community to be converted is compliant with the NFIP requirements concerning community floodplain management ordinances set forth in Sections 60.2 through 60.6 of the NFIP regulations. In general, the conversion process for compliant communities is shorter, because noncompliant communities must be allowed 6 months to enact the required ordinances before the conversion can become effective.

2.9.2.1 Minimal Conversions by Map [February 2002]

If the SFHA shown on the existing FHBM for a community must be revised, the community is converted to the Regular Phase of the NFIP with a FIRM that is an updated version of the FHBM. The following categories of FIRMs may be printed, depending on the flooding situation in the community:

- The FIRM shows all SFHAs with a Zone A designation.

- The FIRM Index notes that all areas in the community are Zone D (used in cases where the FIRM is the community's initial map and all areas are considered remote and uninhabited).

- The FIRM (one or more panels printed) shows Zones A and C (or Zone X (unshaded)) for the community's most populated areas and notes on the Map Index that all unprinted panels are Zone D, under the remote and uninhabited criteria.

When a FIRM is to be prepared, the processing Mapping Partner shall obtain the most current data, including USGS topographic maps; USGS floodprone area maps; original FHBM artwork; FIS reports and FIRMs for contiguous communities; Floodplain Information Reports; watershed work plans; other reports available through USGS, NRCS, or USACE; and documentation for the effective FHBM. The processing Mapping Partner also shall incorporate changes made previously by LOMA, LOMR-F, or LOMR, as appropriate.

With the SCRR and/or letter report, the RO shall submit an annotated FHBM or community map with updated corporate limits, road names, and flooding information. The processing Mapping Partner shall compare this information to effective NFIP maps for contiguous communities to ensure the flood hazard information matches. If, during the review of contiguous communities, the processing Mapping Partner finds that floodplain boundaries do not match, or if other sources are found to provide detailed flooding information, the processing Mapping Partner shall consult with the PO or his/her designee to determine if a FIRM and FIS report similar to those resulting from FEMA-contracted Flood Map Projects is appropriate. If the PO or his/her designee, in

coordination with FEMA RO staff, determine that a FIRM and FIS report showing BFEs is appropriate, the processing Mapping Partner shall process the FIRM and FIS report in accordance with the requirements in Volume 1 of these Guidelines.

Unless the SCRR and/or letter report indicate an appropriate engineering review has already been completed, the processing Mapping Partner shall review the areas of flooding designated in the available information. The processing Mapping Partner shall investigate and, if needed, correct apparent errors or discrepancies . Although the processing Mapping Partner is not required to check the flood discharges, the evaluation performed by the processing Mapping Partner shall include, but not be limited to, an application of the criteria for non-floodprone communities.

All SFHAs shall be designated as Zone A. All areas outside SFHAs shall normally be identified as Zone X (unshaded), unless the RO has requested that some areas in the community (primarily remote and uninhabited areas in the community) be identified as Zone D. The processing Mapping Partner shall obtain concurrence from the PO or his/her designee before depicting Zone D areas on FIRMs.

If the technical review performed by processing Mapping Partner indicates that a minimal conversion for a particular community may be inappropriate, or that significant effort would be involved for such a conversion, the processing Mapping Partner shall consult with the PO or his/her designee on the action to be taken.

Because maps are to be converted to depict the most up-to-date FEMA procedures and flood hazard information, the assigned Mapping Partner shall use the most recent graphic guidelines, presented in Appendix K of these Guidelines. Extensive changes that may require conversion of an FHBM from an 11" x 17" format to a Z-fold format must be approved by the PO or his/her designee.

At the completion of the technical review, the processing Mapping Partner shall prepare the FHBM for the cartographic or digital mapping phase of the minimal conversion process. At this time, the processing Mapping Partner shall assign an effective date for the FIRM using a list provided by FEMA and prepare a schedule in order to track the conversion through in-house production and GPO processing. The entire minimal conversion process usually requires 7 months from the receipt of the SCRR and/or letter report and all necessary data by the processing Mapping Partner to the new FIRM effective date.

The processing Mapping Partner shall prepare the required correspondence for minimal conversions by map to notify the community CEO and floodplain administrator, State NFIP Coordinator, affected Federal agencies, and the RO of the conversion. The types of correspondence to be prepared by the assigned Mapping Partner and the responsibilities for monitoring community review of the FIRM are discussed in detail in Section 4 of the FEMA *Document Control Procedures Manual* (FEMA, 2000).

2.9.2.2 Minimal Conversions by Letter [February 2002]

If no changes are required to the SFHA shown on the existing FHBM, the community may be converted to the Regular Phase of the NFIP with a letter only. In such cases, the processing Mapping Partner shall verify that this procedure is correct by checking the accuracy of the corporate limits, floodplain boundary delineations, and other physical and cultural features.

If, during the review, the processing Mapping Partner locates sufficient data to prepare FIRM and FIS report reflecting BFEs for the community, the processing Mapping Partner shall consult with the PO or his/her designee. If the assigned Mapping Partner determines the FHBM is inaccurate, the processing Mapping Partner shall contact the RO to determine if a minimal conversion by map is warranted.

For those FHBMs that meet the criteria for conversion by letter, the assigned Mapping Partner shall prepare and distribute the required correspondence. The specific procedures to be followed are discussed in detail in Section 4 of *Document Control Procedures Manual* (FEMA, 2000).

2.9.3 Status Reporting [April 2003]

For all FEMA-funded mapping, including Special Conversions, an assigned Mapping Partner shall ensure that all appropriate fields in MICS system are completed. Detailed guidance on the use of the MICS system by Mapping Partners can be found at https://mics.fema.gov.

2.10 References [February 2002]

Federal Emergency Management Agency, *Document Control Procedures Manual*, July 2000.

Federal Emergency Management Agency, FIA-12*, Appeals, Revisions, and Amendments to National Flood Insurance Program Maps: A Guide for Community Officials*, December 1993.

Federal Emergency Management Agency, "Modernizing FEMA's Flood Hazard Mapping Program: Recommendations for Using Future-Conditions Hydrology for the National Flood Insurance Program," November 2001.

U.S. Postal Service, *Domestic Mail Manual,* 2001.

U.S. Department of the Interior, Coastal Barriers Study Group, *Report to Congress: Coastal Barrier Resources System, Recommendations for Additions to or Deletions from the Coastal Barrier Resources System*, 1988.

Interagency Advisory Committee on Water Data, Office of Water Data Coordination, Hydrology Subcommittee, Bulletin 17B*, Guidelines for Determining Flood Flow Frequency*, 1982.