

Appeals, Revisions, and Amendments to National Flood Insurance Program Maps

A Guide for Community Officials

December 2009



FEMA

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Preface

The Federal Emergency Management Agency (FEMA) is the agency within the Department of Homeland Security (DHS) that is responsible for administration of the National Flood Insurance Program (NFIP). In this capacity, FEMA identifies flood hazards, assesses flood risks, and provides appropriate flood hazard and risk information to communities nationwide. To identify hazards and assess risks, engineering studies/mapping projects are performed, in accordance with FEMA guidelines and standards, by the following:

- Private engineering firms who work under contract to FEMA;
- Other Federal agencies who work under Interagency Agreements with FEMA (i.e., U.S. Army Corps of Engineers, Natural Resources Conservation Service, U.S. Geological Survey, National Oceanic and Atmospheric Administration, and Tennessee Valley Authority);
- State agency, regional entity, local community, and Indian Tribal entity participants in the FEMA Cooperating Technical Partners Program, who work under Cooperative Agreements with FEMA and are referred to collectively as “CTPs”;
- Subcontractors to CTPs, which include both private engineering firms and other Federal agencies (e.g., U.S. Army Corps of Engineers, Natural Resources Conservation Service, U.S. Geological Survey); and

- Communities and other entities that submit map revision requests.

Those studies/mapping projects are based on standard engineering practices and yield the flood hazard and risk information that is reflected on the NFIP maps, including Base (1-percent-annual-chance, or 100-year) Flood Elevations, base flood depths, flood insurance risk zones, 1-percent-annual-chance and 0.2-percent-annual-chance (500-year) flood zone boundary delineations, regulatory floodway boundary delineations, and flood insurance risk zone designations.

Over 20,000 communities now participate voluntarily in the NFIP. Using the flood hazard and risk information presented on NFIP maps, these participating communities design and adopt floodplain management measures aimed at reducing future flood losses. In exchange, FEMA makes actuarially based flood insurance available to the millions of property owners in those communities.

NFIP maps require changes from time to time as a result of anticipated development in previously unstudied areas, floodplain and watershed changes, flood control or mitigation efforts, or improvements in the techniques used for identifying flood hazards and assessing flood risk. Because they are most informed about local physical conditions and development practices, community officials and interested citizens play an important role in keeping NFIP maps technically sound and up to date as conditions change in their communities.

The participation of community officials has become even more critical since FEMA undertook an unprecedented multiyear effort to update the flood hazard and risk information for floodprone communities across the United States, to modernize the NFIP flood maps and associated documents and other information, and to improve the processes and procedures used to create and maintain them.

Through the map modernization effort, FEMA has: (1) increased the quality, reliability, and availability of flood hazard maps and data using digital technology and refined standards; (2) streamlined the study and map production process; (3) delivered flood maps in Geographic Information System format, making it easier to view and analyze the flood hazard and risk information provided; and (4) improved stakeholder access to flood hazard and risk data through the Internet, both during the study as data become available and after map adoption as required to determine insurance rates.

Building on the successes of the map modernization effort, FEMA has embarked on an effort to reduce losses of life and property through effective local mitigation activities that are enabled by quality flood hazard data, risk assessments, and mitigation planning. The Risk Mapping, Assessment, and Planning, or “Risk MAP,” effort will provide the structure for an integrated national assessment of risks through collaboration between and among FEMA, State agencies, regional entities, local communities, and Indian Tribal entities. To learn more about the

Risk MAP goals, objectives, and strategies, interested parties are invited to read the multi-year plan, approved by the U.S. Congress on March 16, 2009, and other documents available on the FEMA Website at http://www.fema.gov/plan/prevent/fhm/rm_main.shtm.

This *Guide* provides information about the technical standards to be applied, and the procedures to be followed, by local officials, citizens, and others who request changes to NFIP maps. This *Guide* is intended not only to discuss those standards and procedures, but to help community officials and other interested stakeholders understand how they can be most effective in maintaining the accuracy of the flood hazard and risk information provided on flood maps.

The *Guide* is designed for readers who do not require refined technical or legal explanations, but do need a basic understanding of the processes by which NFIP maps may be changed. Therefore, we have minimized the use of technical terms in this *Guide*, and the information presented is not intended to serve as legal definitions. Where appropriate, the *Guide* refers readers to sections of the guidance documents—primarily, the *FEMA Guidelines and Specifications for Flood Hazard Mapping Partners*, the application forms packages for conditional and final map changes, and the NFIP regulations—for the more technical explanations and legal definitions.

A significant amount of the technical information that some readers may need is found in Volumes 1 and 2 and

assorted appendices of the FEMA *Guidelines and Specifications for Flood Hazard Mapping Partners*, which is accessible through the following page: http://www.fema.gov/plan/prevent/fhm/g_s_main.shtml

The application forms packages are described in Chapters 5 through 9 and listed in Appendix B of this *Guide*. These forms also are accessible through the following page: http://www.fema.gov/plan/prevent/fhm/fm_form.shtml

For information about legal requirements, readers should refer to the NFIP regulations, which are found in the Code of Federal Regulations (CFR) at Title 44, Chapter I, Parts 59-77. Parts 61, 65, 67, 68, 70, and 72 of these NFIP regulations apply specifically to the map change processes described in this *Guide*.

In the event of any conflict between the information presented in this *Guide* and the requirements set forth in the NFIP regulations, the NFIP regulations take precedence. The NFIP regulations also are available for viewing or download through either through the U.S. Government Printing Office Website or through the Flood Hazard Mapping portion of the FEMA Website.

The information presented in the *Guide* has proven effective in enabling those who wish to change NFIP maps to identify the appropriate process; collect and submit the necessary supporting data and/or documentation; and, ultimately, to help FEMA respond efficiently to the needs of NFIP map users.

By increasing the efficiency of the various map change processes in this way, the *Guide* has proved to be as useful as it is popular.

With increasing land-development pressure, the growth of community awareness of flood hazards and risks and the need for adequate flood-mitigation measures, the advent of new techniques for assessing flood risks, and the emergence of Geographic Information Systems and similar digital technologies, concomitant changes in NFIP procedures have occurred, particularly in those related to the appeal, map revision, and map amendment processes. Therefore, to remain a useful tool, this *Guide* has been updated to provide the latest information about those processes. By so doing, we are continuing our efforts to work cooperatively with local officials for the benefit of community officials and citizens nationwide.

We welcome comments from users of this *Guide* and suggestions for improving this and the variety of other products that are available on the Flood Hazard Mapping portion of the FEMA Website. For your convenience, the addresses and telephone numbers of our Regional and Headquarters Offices are provided in Appendix E at the end of this *Guide*.

Let us know how we are doing...we are here to assist you.

Chapter 1

Introduction

The Federal Emergency Management Agency, or “FEMA,” has designed this *Guide* to provide community officials, planners, engineers, and other interested parties with information about how to request changes to the flood hazard and risk information presented on National Flood Insurance Program, or “NFIP”, maps and associated products. FEMA is the agency within the Department of Homeland Security, or “DHS,” that is responsible for administration of the NFIP. In this capacity, FEMA identifies flood hazards, assesses flood risks, and provides appropriate flood hazard and risk information to communities nationwide.

Before entering the Emergency and Regular Phases of the NFIP, a community must, if it has not already done so, adopt and enforce floodplain management regulations that are aimed at reducing future flood losses. These floodplain management regulations are to meet or exceed the minimum standards of the NFIP as documented in the NFIP regulations.

This *Guide* is one of many new or updated guidance documents issued by FEMA as part of its ongoing massive and unprecedented effort to modernize NFIP flood maps nationwide. The goal of this *Guide* is to provide general information about the following:

- An approach to be followed in determining the type of map change needed;

- The various processes available for submitting map change requests; and
- The types of supporting data that must be submitted to FEMA for review and evaluation before a change may be made.

To enhance readers’ understanding of how the NFIP maps were created, background information about the NFIP, including the regulations and procedures under which requests for changes are handled by FEMA, also has been provided in this *Guide*.

1.1 Background on National Flood Insurance Program

In the face of mounting flood losses and escalating costs to the general taxpayer, the U.S. Congress established the NFIP on August 1, 1968, with the passage of the National Flood Insurance Act of 1968 (Public Law 90-448). The U.S. Congress broadened and modified the NFIP with the passage of the Flood Disaster Protection Act of 1973 (Public Law 93-234), and other legislative measures. It was further modified and reformed by the National Flood Insurance Reform Act of 1994 (Public Law 103-325) and the Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004 (Public Law 108-264).

The NFIP is a Federal program enabling property owners in participating communities to purchase insurance protection against losses from flooding. The program is designed to provide an insurance alternative to disaster

assistance to meet the escalating costs of repairing damage to buildings and their contents caused by floods.

Participation in the NFIP is based on an agreement between local communities and the Federal Government. This agreement states that if a community will adopt and enforce a floodplain management ordinance to reduce future flood risks to new construction in high-risk areas known as Special Flood Hazard Areas, or “SFHAs,” the Federal Government will make flood insurance available within the community as a financial protection against flood losses.

The NFIP was designed to benefit both individual property owners and communities. It enables property owners to purchase flood insurance at reasonable rates, and it assists communities by requiring that they adopt and administer local floodplain management measures aimed at protecting lives and new construction from future flooding. Any community that has the authority to adopt, administer, and enforce floodplain management regulations can participate in the NFIP. “Community” is defined in Section 59.1 of the NFIP regulations as “...any State or area or political subdivision thereof, or any Indian tribe or authorized tribal organization, or Alaska Native village or authorized native organization....”

Communities that participate in the NFIP do so in two phases, referred to as “the Emergency Phase” and “the Regular Phase.” In communities participating in the initial phase of the NFIP, the Emergency Phase, limited amounts of flood insurance are available

to local property owners. In communities participating in the Regular Phase, full flood insurance coverage is available. More information on each participation phase is provided below.

The NFIP regulations, which define responsibilities and requirements for FEMA, State NFIP Coordinators, other mapping partners, and participating communities, are set forth in the Code of Federal Regulations (CFR) at Title 44, Chapter I, Parts 59-77. The regulations are available for viewing or download through the following page on the U.S. Government Printing Office (GPO) Website:

http://www.access.gpo.gov/nara/cfr/waisidx_08/44cfrv1_08.html

The regulations are also accessible through the “Guidance Documents and Other Published Resources” page on the FEMA Website, which is located at http://www.fema.gov/plan/prevent/fhm/fm_docs.shtm. This *Guide* and many other useful FEMA guidance documents also are accessible through the “Guidance Documents and Other Published Resources” page and other pages within the Flood Hazard Mapping, or “FHM”, portion of the FEMA Website.

Additional information on the Emergency and Regular Phases is provided below. Individuals who are interested in learning more about the history of the NFIP should read *Answers to Questions About the NFIP* (MitDiv-2), the document titled “National Flood Insurance Program Description,” and other resources accessible through the Flood Insurance

portion of the FEMA Website. The Flood Insurance home page is located at <http://www.fema.gov/business/nfip/index.shtm>.

1.2 Emergency Phase

Under the Emergency Phase of the NFIP—also often referred to as “the Emergency Program”—FEMA issued Flood Hazard Boundary Maps, or “FHBMs”, for more than 19,000 floodprone communities nationwide. The FHBMs provided approximate delineations of the SFHAs, which are the areas subject to inundation by the “base flood.” The base flood is the flood that has a 1-percent chance of being equaled or exceeded in any given year and has been adopted as a regulatory standard by Federal agencies, and most States, for use in the administration of floodplain management programs. The base flood also has been referred to as the “1-percent-annual-chance flood” or “100-year flood.”

The boundaries of the SFHAs shown on FHBMs were based on one or more of the following:

- Information about past floods;
- Regional flood depth/drainage area relationships;
- Flood maps published by other Federal agencies, and
- Simplified hydrologic and hydraulic calculations.

Generally speaking, FEMA did not perform detailed engineering analyses or field surveys when preparing the FHBMs. As a result, the flood zone boundaries shown are considered

“approximate,” and the flood insurance risk zone designation for these SFHAs is Zone A.

Less than 1 percent of the 20,000+ communities participating in the NFIP participate in the Emergency Phase of the NFIP. As flood hazard information and mapping are updated and the NFIP maps are modernized, FEMA works with communities that are Emergency Phase participants to help them become Regular Phase participants.

The milestones that a community and FEMA had to meet for a community to become a participant in the Emergency Phase of the NFIP are summarized in Figure 1-1. FEMA no longer produces FHBMs. FEMA will bring newly identified communities into the Regular Phase of the NFIP using one of the conversion processes discussed below.

1.3 Regular Phase

At some point after an FHBM was produced, printed, distributed, and became effective for a community, FEMA worked with community officials to convert the community to the Regular Phase of the NFIP, thereby increasing the amount of flood insurance available to property owners. For most communities, FEMA applied its “regular conversion process.” For other communities, FEMA applied its “special conversion” process.” For still other communities, FEMA used hazard and risk data that were produced for purposes other than the NFIP to create the NFIP map(s) and FIS report for a community (e.g., U.S. Army Corps of Engineers, or “USACE”, Floodplain Information reports, Natural Resources Conservation Service, or “NRCS”, Flood Hazard Analyses reports).

Information on each of these processes information found on NFIP flood maps and accompanying FIS reports, and

flood map formats are summarized below.

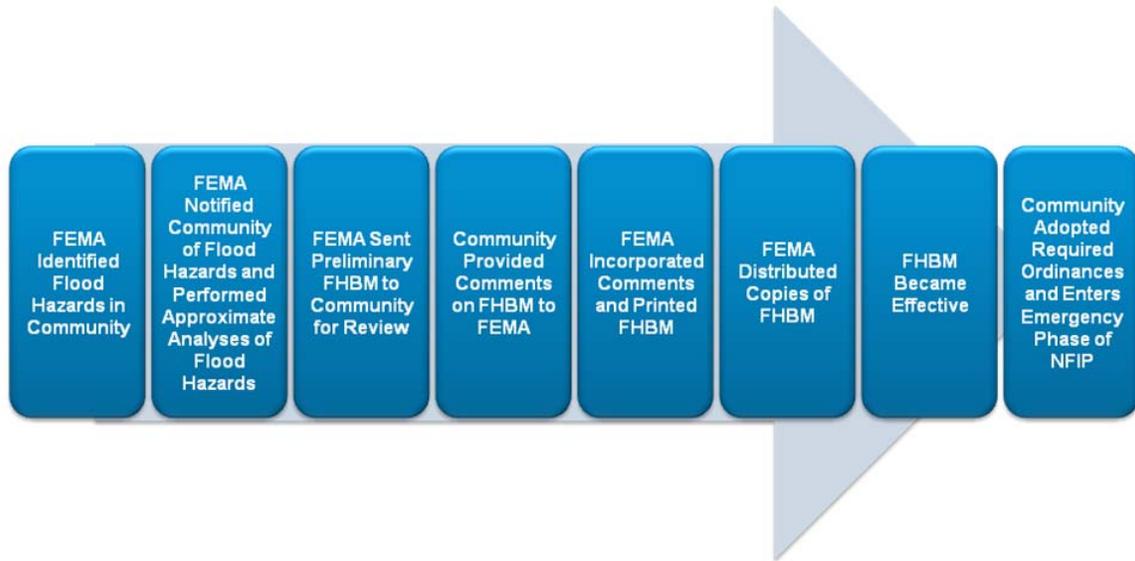


Figure 1-1. Milestones for Participation in Emergency Phase of NFIP

1.3.1 Regular Conversion Process

For communities converted to the Regular Phase of the NFIP using the regular conversion process, FEMA conducted engineering studies to determine the flood hazards and risks in that community. These engineering studies have been referred to as “Flood Insurance Studies”, or “FISs”, or as “studies/mapping projects.”

FEMA usually used some combination of detailed and approximate methods in performing these studies/mapping projects. As a result of these studies/mapping projects, FEMA refined the approximate SFHA boundaries shown on the FHBM and/or developed new flood hazard and risk information.

FEMA usually provided the following to a community as a result of a detailed study/ mapping project:

- Base (1-percent-annual-chance) Flood Elevations (BFEs), which may be presented as either water-surface elevations referenced to the National Geodetic Vertical Datum of 1929 (NGVD29) or the North American Vertical Datum of 1988 (NAVD88) or average depths of flow in feet above the ground surface;
- 10-percent-annual-chance (10-year), 2-percent-annual-chance (50-year), and 0.2-percent-annual-chance (500-year) flood water-surface elevations;

- Boundaries of the regulatory floodway, which is defined as the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the entire base (1-percent-annual-chance) flood discharge can be conveyed with no greater than a 1.0-foot increase in the BFE;
- 1-percent-annual-chance (100-year) and 0.2-percent-annual-chance (500-year) flood zone boundaries; and
- Flood insurance risk zones with appropriate zone designations.

FEMA presented the results of the study/mapping project on a Flood Insurance Rate Map, or “FIRM”, and, usually, in an accompanying FIS report. In some cases, FEMA also presented the results of a study/mapping project on a separate map, called a Flood Boundary and Floodway Map, or “FBFM.”

The FIRM depicted 1- and 0.2-percent-annual-chance flood zone boundaries; flood insurance risk zones; BFEs and/or base flood depths; and, where appropriate, regulatory floodway boundaries and other information related to the regulatory floodway. In those cases where an FBFM was produced, it depicted only the 1- and 0.2-percent-annual-chance flood zone boundaries; the regulatory floodway boundaries, and other information related to the regulatory floodway.

The FIS report provided background information about the community or communities that were the focus of the study/mapping project; described the

flooding sources and the engineering analyses performed as part of the study/mapping project; and provided tables and figures (photographs, charts) that presented the study/mapping project results. Sample FIS report materials are provided in Appendix J of the previously referenced *Guidelines and Specifications for Flood Hazard Mapping Partners*. A FEMA-produced online tutorial on how to read an FIS report is accessible through the following page on the FEMA Website:

http://www.fema.gov/plan/prevent/fhm/ot_fisr.shtm

As mentioned earlier, the information presented on the FIRM and in the FIS report frequently was the result of detailed engineering analyses performed as part of a study/mapping project. Those analyses included hydrologic analyses that yield flood discharge-frequency relationships and hydraulic analyses that yield computed flood elevations and depths.

The hydrologic analyses usually involved the use of statistical analyses of recorded stream gage data, regional discharge-drainage area relationships, or rainfall-runoff models. FEMA considered the following factors when determining whether a previously performed hydrologic analysis could be used for a new study/mapping project:

- Changes in land use in the watershed;
- Publication of new regional regression equations by the U.S. Geological Survey;
- Changes in design storm data by the National Weather Service;

- Increase in length of stream record;
- Construction of flood-control structures by Federal agencies such as the USACE, Natural Resources Conservation Service (NRCS), or U.S. Bureau of Reclamation; and
- Construction of flood-control structures by local organizations (e.g., water management districts, irrigation districts).

For riverine flooding sources, the hydraulic analyses usually involved backwater computations or other hydraulic computations that were based on the computed flood discharges and the results of field surveys. Special techniques were used for the analysis of coastal flooding, alluvial fan flooding, ice-jam flooding, and shallow flooding. The following factors that affect hydraulic conditions are considered:

- New bridges and culverts;
- Changes in stream morphology through natural processes (e.g., stream migration, erosion, deposition) or through manmade changes (e.g., channelization, stream widening, stream straightening, dredging); and
- Construction of flood-control structures (e.g., levee systems, diversion channels).

Interested readers will find additional information on the engineering studies that are performed in Volume 1 and the appendixes in the previously referenced *Guidelines and Specifications for Flood Hazard Mapping Partners*. The quick guide in Table 1-1 will help readers

locate the appropriate appendix from this document.

For some communities, the 1- and 0.2-percent-annual-chance flood zone boundaries and the regulatory floodway boundaries also were shown on a separate FBFM, which was published as an exhibit in the FIS report. However, for most FEMA studies/mapping projects initiated since January 1, 1985, FEMA has not prepared FBFMs, and the flood hazard and risk information, including the regulatory floodway, has been shown on the FIRM.

As part of the ongoing modernization effort, FEMA—with the support of FEMA contractors, CTPs, and other mapping partners—has been producing modernized flood maps, which are referred to as Digital Flood Insurance Rate Maps (DFIRMs.) A flood map is considered “modernized” when the old paper version of the effective NFIP map(s)—that is, the FHBM, FIRM, or FBFM—is replaced by the new digital map product, the DFIRM. The DFIRMs are created, stored, and ultimately distributed in an electronic environment.

The process of modernizing a map requires transferring and/or replacing all of the data that is found on the paper maps (FIRM, FBFM, and FHBM) into a digital database that is used to produce the DFIRM. The digital data used to create a DFIRM includes topographic data that show the ground elevations;

Table 1-1. Quick Guide to Guidelines and Specifications Appendices

Type of Flood Hazard	Relevant Appendix
Riverine Flooding	Appendix C – Guidance for Riverine Flooding Analyses and Mapping
Coastal Flooding	Appendix D – Guidance for Coastal Flooding Analyses and Mapping
Shallow Flooding	Appendix E – Guidance for Shallow Flooding Analyses and Mapping
Ice Jam Flooding	Appendix F – Guidance for Ice-Jam Analyses and Mapping
Alluvial Fan Flooding	Appendix G - Guidance for Alluvial Fan Flooding Analyses and Mapping
Flooding in Areas Impacted by Levee Systems	Appendix H – Guidance for Mapping of Areas Protected by Levee Systems

base map data that include street locations, community boundaries, and other map information; and hydrologic and hydraulic data (engineering analyses) that depict stream shape and size and are used to determine the flood zone boundaries.

To view sample FIRM panels and to learn more about the features of these products, interested parties should view the FEMA-produced online tutorial on how to read a FIRM, which is accessible through the following page on the FEMA Website:
http://www.fema.gov/plan/prevent/fhm/ot_firmr.shtm.

To learn more about the components of the FIS report, interested parties are encouraged to view the online tutorial accessible through the following page on the FEMA Website:

http://www.fema.gov/plan/prevent/fhm/ot_fi_sr.shtm.

To learn more about the DFIRM and DFIRM Database and to view samples of these products, interested parties are encouraged to visit the “Digital Products” page on the FEMA Website
http://www.fema.gov/plan/prevent/fhm/dfm_dfhm.shtm or view one of the three tutorials provided on
http://www.fema.gov/plan/prevent/fhm/ot_main.shtm.

The milestones that the community and FEMA had to meet to allow the community to participate in the Regular Phase of the NFIP when a detailed study had been performed are summarized in Figure 1-2.

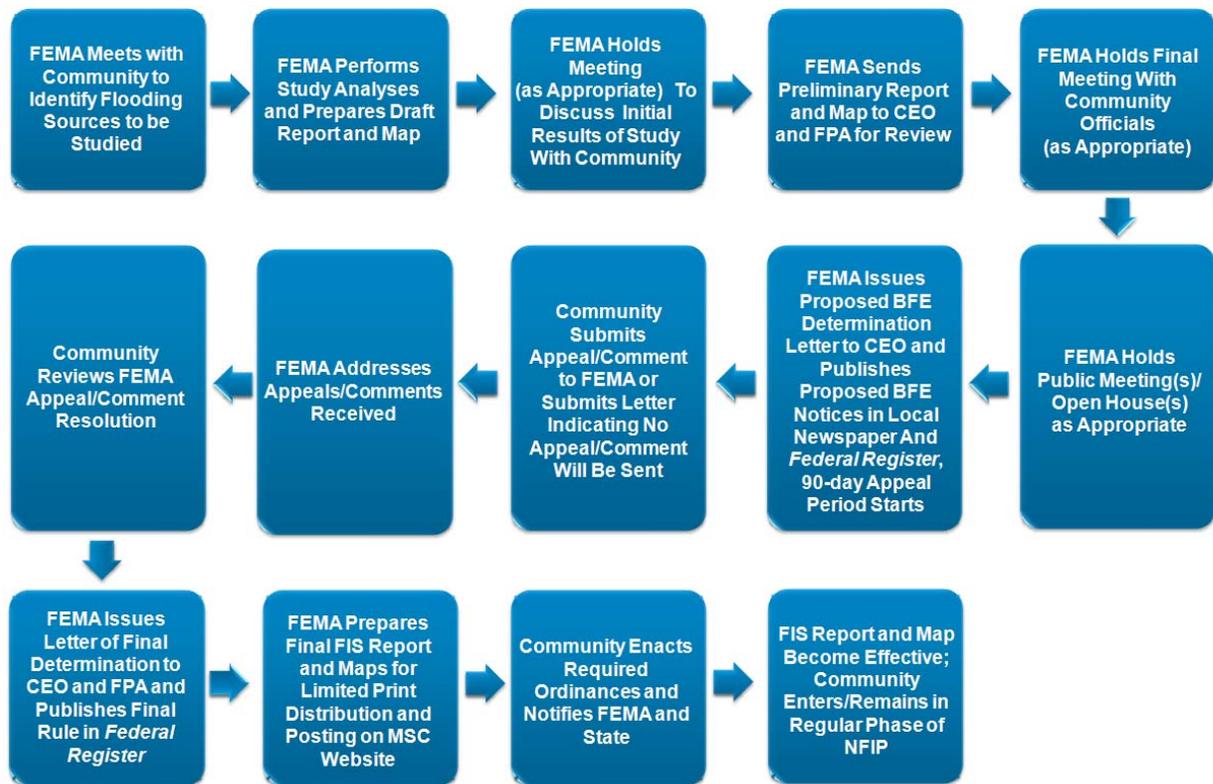


Figure 1-2. Milestones for Participation in Regular Phase of NFIP

1.3.2 Special Conversion Process

For some communities, FEMA created an entire FIRM directly from an FHBM. In such cases, FEMA did not perform detailed engineering analyses. Such FIRMs do not present the detailed flood hazard and risk information usually shown on FIRMs, but they do provide SFHAs without BFEs and enable the mapped community to participate in the Regular Phase of the NFIP.

For some communities, FEMA did not create a FIRM. In such cases, involving communities with minimal or no flood hazard and low potential for future development, FEMA converted the communities to the Regular Phase of the

NFIP by issuing a letter. In the letter, FEMA notified the community that (1) the FHBM has been converted to a FIRM, and information shown on the previously published FHBM should be used, or (2) the community is not subject to inundation by the base (1-percent-annual-chance) flood and no SFHAs have been shown.

In other cases, FEMA determined that, while the flood hazards in the community are minimal, conditions within the community had changed since the FHBM was published and distributed and the areas designated as SFHAs had changed. In such cases, FEMA provided the community with a FIRM showing the new or revised SFHAs.

The procedures used by FEMA to convert communities to the Regular Phases of the NFIP without performing a detailed engineering study are referred to as “special conversion procedures.” Interested readers can obtain additional information on special conversion procedures from Volume 2, Section 2.9 of *Guidelines and Specifications for Flood Hazard Mapping Partners* and in Section 4 of FEMA’s *Document Control Procedures Manual*, both of which are accessible through the following page on the FEMA Website:

<http://www.fema.gov/plan/prevent/fhm/gsmain.shtm>.

1.3.3 Existing Data Studies

In still other cases, FEMA used hazard and risk data that were produced for purposes other than the NFIP to create the FIRM, FBFM (if an FBFM was warranted), and FIS report for a community (e.g., USACE Floodplain Information reports, NRCS Flood Hazard Analyses reports). For these “existing data studies”, the maps and report are processed in the same manner as FEMA-contracted studies/mapping projects.

1.4 Flood Hazard and Risk Information Shown on Flood Maps

The high-risk SFHAs that are identified and mapped through the use of detailed engineering analyses are assigned “detailed” flood insurance risk zone designations. For most communities, the

flood insurance risk zone designations used on the FIRM or DFIRM were Zone AO, Zone AH, Zones A1-A30 (for older FIRMs), or Zone AE.

For coastal communities in which coastal high hazard areas have been identified, the additional flood insurance risk zone designations used on the FIRM or DFIRM were Zones V1-V30 (for older FIRMs) or Zone VE. Coastal high hazard areas are defined as areas of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high-velocity wave actions from storms or seismic sources. A primary frontal dune is defined as a continuous or nearly continuous mound or ridge of sand with relatively steep seaward and landward slopes immediately landward and adjacent to the beach and subject to erosion and overtopping from high tides and waves during major coastal storms.

For a much smaller group of communities, still other flood insurance risk zone designations were used on the FIRM or DFIRM because a flood protection system—usually, a levee system—was being constructed or restored to reduce the flood risk associated with a 1-percent-annual-chance flood. These flood insurance risk zone designations were Zone A99, Zone AR/AE, Zone AR/AH, Zone AR/A0, and Zone AR/A1-30 (for older FIRMs). For all of these SFHAs, the mandatory flood insurance purchase requirements of the NFIP apply.

To learn more about the flood insurance requirements of the NFIP, interested readers should visit the previously referenced Flood Insurance home page, which is located at <http://www.fema.gov/business/nfip/index.shtm>.

The FIRM or DFIRM may also depict approximate SFHAs, which may have been taken directly from an effective FHBM, an existing data study performed for purposes other than the NFIP, or developed as part of the study/mapping project performed by or for FEMA. Detailed hydraulic analyses were not performed for these areas; therefore, no BFEs or base flood depths are shown on the FIRM or DFIRM.

The mandatory flood insurance purchase requirements of the NFIP also apply to these areas, which have been designated as Zone A or Zone A/AR on the FIRM or DFIRM.

1.5 Flood Map Formats

The format of the NFIP flood maps for different communities also may be different. Some of the older FIRMs were prepared in an 11-inch by 17-inch format; however, most FIRMs were prepared in a larger, accordion-fold, or Z-fold, format. Likewise, most of the older FIRMs were produced in a “community-based” format where only one community or jurisdiction was shown.

Since the mid-1990s, more and more FIRMs have been produced in the FEMA Countywide Format, in which all incorporated and unincorporated areas of an entire county, parish, or division are

shown. The FEMA countywide format is the format used for the vast majority of the DFIRMs.

1.6 Additional Flood Map Information

Additional information about the various types of NFIP flood maps—FHBMs, FIRMs, FBFMs, and DFIRMs—that are now in effect is provided in the previously referenced *Guidelines and Specifications for Flood Hazard Mapping Partners* and *Guide to Flood Maps* (FEMA 258). To assist users in reading and using the FIRM, DFIRM, FIS report, and related products, FEMA also has developed online tutorials and made them available through the following page on the FEMA Website:

http://www.fema.gov/plan/prevent/fhm/ot_main.shtm

Information about how to obtain copies of *Guidelines and Specifications for Flood Hazard Mapping Partners*, FEMA 258, other FEMA publications, and the online tutorials is provided in Appendix B of this *Guide*.

1.7 Why Supporting Data and Documentation Are Needed

The flood hazard and risk information presented on the NFIP flood maps and in the FIS reports that accompany them forms the technical basis for the administration of the NFIP. As discussed earlier in this *Guide*, FEMA uses the information to establish actuarial rates for flood insurance policies.

Communities that participate in the

NFIP use the information to develop the floodplain management ordinances required for participation in the NFIP.

Individuals who are interested in learning more about the floodplain management requirements of the NFIP should consult the previously referenced “National Flood Insurance Program Description” document and the resources that are accessible through the “Floodplain Management” portion of the FEMA Website. The Floodplain Management home page is located at <http://www.fema.gov/plan/prevent/floodplain/index.shtm>.

One recent estimate indicates that the flood maps are referred to approximately 30 million times each year, including during each mortgage-related transaction and every time a community issues a building permit. Although originally developed to support the flood insurance and floodplain management activities associated with the NFIP, the maps are currently used by no fewer than nine distinct stakeholder and user groups for a variety of applications, including disaster preparedness, response, and recovery; risk assessment; and diverse mitigation activities. These groups are listed below.

1. **State and local floodplain administrators, planners, and other officials** use the maps to establish and enforce minimum land-use and construction ordinances that comply with minimum NFIP standards.
2. **Engineers** consider the flood hazard information on the maps when designing flood mitigation projects, such as structure elevations and relocations, buyouts, and culvert replacements.
3. **Insurance companies and agents** use the maps to determine actuarial rates for flood insurance policies.
4. **Lenders** use the maps to determine the flood hazard status of mortgaged properties at loan origination and throughout the life of the mortgages.
5. **Real estate professionals and property owners** use the maps to determine the flood hazard status of properties.
6. **Flood zone determination firms** use the maps to specify the location of properties relative to the SFHA as well as provide other interpretive services for lenders.
7. **Land development industry** use maps to aid in designing developments that will be safe from flood hazards.
8. **Surveyors** use the maps to prepare Elevation Certificates for structures; to apply for Letters of Map Change, or “LOMCs;” and to collect the field data on which flood hazard studies are based.
9. **Federal, State, and local disaster and emergency response officials** use the maps to prepare for flooding disasters and issue warnings to those in danger of flooding and, after a flood has occurred, to implement

emergency response activities and to aid in the rebuilding and reconstruction process.

Because of the importance of that information, FEMA exercises great care to ensure that (1) the analytical methods employed in performing the engineering studies or restudies are scientifically and technically correct; (2) the engineering procedures followed meet professional standards; and (3) the results of the studies/mapping projects are accurately depicted on the flood map(s) and in the FIS report.

Although the NFIP flood maps and FIS reports are prepared according to rigorous technical standards, FEMA recognizes that changes to the maps and reports may be necessary. Some reasons for changes are improvements in the techniques used in assessing flood hazards, changes in physical conditions in floodplains or watersheds, and the availability of new scientific or technical data. In addition, the limitations imposed by the scales at which the NFIP maps are prepared may result in individual properties being inadvertently included in SFHAs.

Therefore, the NFIP regulations allow FEMA to revise and amend NFIP maps and FIS reports, as warranted, at its discretion or after it receives requests from community officials and/or individual property owners. Indeed, to help FEMA ensure that the maps and reports present information that accurately reflects existing flood hazards, the NFIP regulations (as cited at Section 65.3) require that each NFIP participating community inform FEMA of any physical changes that affect BFEs

in the community and, within 6 months of the date that such data are available, submit those data that show the effects of those changes.

In making revisions and amendments, FEMA must adhere to the same engineering standards applied in the preparation of the preliminary or final effective versions of the flood maps and reports. Therefore, when requesting changes to the flood maps and reports, community officials, property owners, and other requesters working through community officials are required to submit adequate supporting data and documentation.

The supporting data and documentation, which are described in the following chapters and in the NFIP regulations, enable FEMA to review and evaluate the map change requests and to carry out its responsibility of ensuring that the flood hazard and risk information presented is scientifically and technically correct. Over the years, the majority of community requests for such changes have been found to be warranted, but FEMA cannot and will not make changes without adequate supporting data and documentation.

1.8 Map Change Processes

The following terms describe NFIP map change processes discussed in this *Guide*:

- **Appeal**—An appeal is a formal objection to proposed or proposed modified BFEs or base flood depths, submitted by a community official or an owner

or lessee of real property within the community through the community officials during the statutory 90-day appeal period. An appeal must be based on data that show the proposed or proposed modified BFEs are scientifically or technically incorrect.

- **Comment**—A comment (formerly referred to as a protest) is an objection to or comment on any information, other than proposed BFEs or base flood depths, shown on an NFIP map that is submitted by community officials or interested citizens through the community officials during the 90-day appeal period.
- **Map Revision**—A map revision is a change to an effective NFIP map that is accomplished by a Physical Map Revision, or “PMR”, or by a Letter of Map Revision, or “LOMR.” The effective NFIP map for a community is the latest map issued by FEMA for that community. NFIP maps, including the BFEs, base flood depths, regulatory floodways, and other flood hazard information that they may contain, become effective after they are published and distributed. The effective date is shown in the title block of each panel of the map and may be labeled as "Effective Date," "Revised," or "Map Revised."

When a map revision is warranted, FEMA will either

revise and republish the affected map panels (and, if necessary, the FIS report) to show the appropriate changes—this is a PMR—or will issue LOMR determination documents, which describe the changes and officially revise the effective NFIP map. A LOMR can be issued to change BFEs, base flood depths, flood zone and regulatory floodway boundary delineations, and coastal high hazard areas.

If a map revision request is based solely on the placement of earthen fill, the FEMA response is a Letter of Map Revision Based on Fill, or “LOMR-F.” LOMR and LOMR-F determination documents officially revise the effective NFIP map and, if appropriate, FIS report materials.

- **Conditional Map Revision**—A conditional map revision is a response to a request that FEMA determine whether a **proposed** project, such as installation of a hydraulic structure, would warrant a revision to an effective NFIP map after the project is completed. A proposed structural modification could consist of a proposed floodplain modification project or simply the proposed placement of fill for the elevation of one or more structures or parcels of land. The FEMA comments on such requests are referred to as "conditional determinations."

When such conditional determinations are warranted, they are issued in the form of Conditional Letters of Map Revision, or “CLOMRs”, or Conditional Letters of Map Revision Based on Fill, or “CLOMR-Fs.” The CLOMR and CLOMR-F determination documents describe the effect(s) that the proposed structural modification project or proposed fill would have on the effective NFIP map. CLOMR and CLOMR-F determination documents **do not** officially revise the effective NFIP map panels.

- **Map Amendment**—A map amendment is a change to an effective NFIP map that results in the removal of the SFHA designation from an individual structure or legally defined parcel of land that has been inadvertently included in the SFHA; that is, no alterations of topography have occurred since the date of the first NFIP map that showed the structure or parcel to be within the SFHA. When FEMA determines that one or more structure(s) or parcel(s) of land have been inadvertently included in the SFHA, FEMA issues a Letter of Map Amendment, or “LOMA.” The LOMA determination documents officially amend the effective NFIP map panel(s) for the area in which the structure(s) and/or

legally defined parcel(s) are located.

- **Conditional Map Amendment**—A conditional map amendment is a response to a request that FEMA determine whether a proposed structure, if built as planned on a legally defined parcel of land that is on natural ground or fill placed prior to the first NFIP map showing that area to be in an SFHA, would be excluded from the SFHA as shown on the effective NFIP map. When FEMA makes such a determination, it issues Conditional Letter of Map Amendment, or “CLOMA”, determination documents. The CLOMA determination documents do not officially amend the effective NFIP map panel(s).

- **Letter of Determination Review**—In accordance with a mandate issued by the U.S. Congress in the National Flood Insurance Reform Act of 1994 (42 U.S.C. 4012a(e)(3)), FEMA accepts and processes requests for its review of determinations of whether buildings or manufactured homes are located in identified SFHAs.

The result of this review, referred to as a Letter of Determination Review, or “LODR”, provides borrowers and lenders with information to resolve disputes regarding in/out determinations made by the lenders. LODRs **do not** officially amend or revise the

effective NFIP map panel(s) used to make the determination.

The terms defined above refer not only to types of changes to NFIP maps and reports, but also to the processes under which FEMA will address requests for such changes. Chapter 2 of this *Guide* should help requesters determine which process or processes to apply to particular map change requests. The remaining chapters discuss the scientific and technical data and other documentation that must be submitted to support the various types of map change requests and describe the procedures by which such map changes are made.

1.9 Application Forms and Processing Fees

On October 1, 1992, FEMA implemented the use of detailed application forms and instructions for requesting revisions or amendments to NFIP maps. These forms and instructions were implemented for two reasons.

1. The forms and instructions provide a step-by-step process for requesters to follow and are comprehensive; therefore, requesters are assured of providing all of the necessary information to support their requests without having to go through an iterative process of providing additional information in a piecemeal fashion. Experience has shown this to be a time-consuming and cost-intensive process.

2. The forms and instructions help to assure that requesters' submittals are complete and more logically structured; therefore, FEMA can complete its review of the requests in a shorter timeframe and at a lesser cost to the NFIP.

While completion of the forms may appear to be burdensome, FEMA believes it is prudent to do so because of the advantages that result for the requester. Details on the application forms and instructions to be used are provided in Chapters 4 through 7 of this *Guide*. Information on how to obtain copies of the forms is provided in each chapter and in Appendix B of this *Guide*.

On October 1, 1992, FEMA also implemented changes to Part 72 of the NFIP regulations to allow FEMA to establish and implement review and processing fees for most types of conditional and final map amendment and map revision requests. FEMA implemented the fee-charge system to reduce the expenses to the NFIP by more fully recovering the costs associated with processing conditional and final map change requests.

Additional information on the fee-charge system, including information on the current fee schedule, is provided in Appendix D and in Chapters 4 through 7 of this *Guide*.

Chapter 2

How To Use This Guide

As indicated by the descriptions in Chapter 1, the appropriate process for changing a specific National Flood Insurance Program, or “NFIP”, map is determined by the type of map to be changed, the status of the map (e.g., effective, in preliminary form during a statutorily required 90-day appeal period), and the types of changes to be made.

For example, for changes to proposed Base (1-percent-annual-chance) Flood Elevations, or “BFEs,” or base flood depths during a statutory 90-day appeal period, the appeal process would be appropriate; for changes to BFEs shown on an effective NFIP map, the map revision process would be appropriate.

Therefore, to determine which process is applicable, the reader should follow two steps, discussed in this chapter. In Step 1, the reader answers the following questions:

- What type of NFIP map is to be changed?
- What is the status of that map?
- What types of changes are to be made?

The information needed to answer those questions is provided in the subsections that follow.

In Step 2, the answers from Step 1 are used to choose the appropriate process. The detailed information provided in Step 2 concerning the conditions under which each process is applicable will

enable the reader to make that determination.

Once the appropriate process has been identified, the reader can refer to the chapter in which that process is discussed for additional information concerning supporting data and processing procedures.

2.1 Step 1-Determining Map To Be Changed and Changes Needed

2.1.1 Identify Type of Map To Be Changed

Changes can be made to any of the following maps:

- Flood Hazard Boundary Maps, or “FHBMs”;
- Flood Insurance Rate Maps, or “FIRMs”;
- Digital Flood Insurance Rate Maps, or “DFIRMs”; and
- Flood Boundary and Floodway Maps, or “FBFMs.”

However, because the regulations, required supporting data and documentation, and processing procedures vary according to the type of map to be changed, it is important that the reader identify the type of map in question and understand how the information presented on the map was developed.

The descriptions of the NFIP maps presented in Chapter 1 and the sample map title blocks shown in Figure 2-1 will help in this identification.

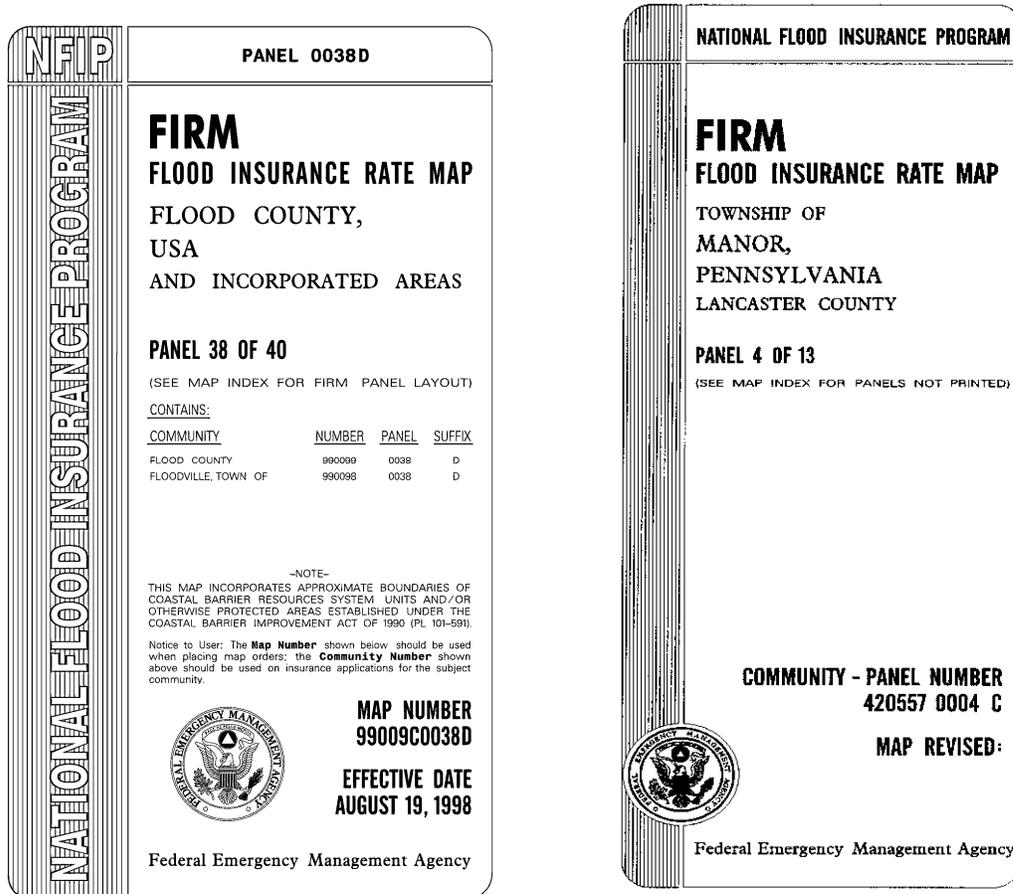


Figure 2-1. Sample NFIP Map Title Blocks

2.1.2 Determine Status of Map

As shown in Figures 1-1 and 1-2, when an initial or revised NFIP map is prepared for a community, it is reviewed in preliminary form by that community before being published and becoming effective. The status of the map is the stage in the review and publication process that the map has reached.

An FHBM presented less information than a FIRM, DFIRM, and FBFM, and the information that was presented was generally the result of analyses that were less rigorous than those employed in the preparation of the FIRM, DFIRM, and

FBFM. Therefore, the NFIP regulations that apply to a community for which only an FHBM had been issued are less comprehensive, and the ordinances that were adopted by the community to participate in the Regular Phase of the NFIP were less complex, than those required after a FIRM, DFIRM, or FIRM and FBFM had been issued.

Consequently, the review periods and processing procedures varied according to map type.

As shown in Figure 1-2, a lengthier and complex procedure was followed for the community review of a FIRM or a FIRM accompanied by an FBFM. A lengthy, complex procedure continues to be

followed for the production and adoption of DFIRMs. (See Figure 1-1 in the *FEMA Document Control Procedures Manual*.) Preliminary copies of the DFIRM and the accompanying Flood Insurance Study, or “FIS,” report are sent to the community Chief Executive Officer, or “CEO,” and floodplain administrator, or “FPA,” for an initial review.

For most DFIRMs that are based on FEMA-contracted studies/mapping projects, the initial community review is followed by a formal community coordination meeting—sometimes referred to as a Consultation Coordination Officer, or “CCO”, meeting; a final community coordination meeting; or a Preliminary DFIRM Community Coordination, or “PDCC”, meeting—during which community officials meet with FEMA representatives.

The formal meetings with community officials may be followed by public meetings. During these meetings, sometimes referred to as Flood Risk Open Houses, community residents and others receive considerable information about, and may comment on, the Preliminary versions of the DFIRM and FIS report.

After any significant problems identified by community officials or residents (at the meetings or otherwise) are addressed appropriately, FEMA prepares the following:

- Listings of proposed BFEs and/or base flood depths shown on the Preliminary version of the DFIRM, which are accessible through the

“Base Flood Elevation (BFE) Notices for Preliminary Flood Insurance Studies and Letters of Map Revision (LOMRs)” page on the FEMA Website;

- A legal notice, called a “Proposed Rule”, which is published in the FEDERAL REGISTER;
- A public notice announcing the start of the appeal period and the posting of the BFE and/or base flood depth listings, which is published in a local newspaper with wide circulation; and
- A letter notifying the community CEO and FPA of the new or modified BFEs and/or base flood depths shown on the DFIRM.

Individuals are able to locate the notice for their community through the above-cited Web page, located at (https://www.floodmaps.fema.gov/fhm/Scripts/bfe_main.asp), by clicking on the appropriate State on the interactive map provided and selecting the appropriate name from the dropdown list provided; by entering the appropriate case number; or by select the appropriate community name from a dropdown list.

After the activities above are completed, the BFEs or base flood depths are considered "proposed."

As discussed in more detail in Chapter 3 of this *Guide*, the enabling legislation for the NFIP and the NFIP regulations require that when new or modified BFEs and/or base flood depths are proposed for a community, the community must be given a 90-day appeal period. During this period, community officials or citizens may appeal the proposed BFEs

and/or base flood depths based on scientific or technical data.

Community officials or citizens also may submit requests for changes to other information shown on the DFIRM—flood zone boundaries, regulatory floodway boundaries, road names and configurations—during the appeal period. FEMA refers to these change requests, formerly referred to as protests, as “comments.” The support data and documentation requirements and processing procedures for comments submitted during the 90-day appeal period are provided in Chapter 4 of this *Guide*.

After the appeal period has ended and all appeals and comments have been addressed, FEMA makes the proposed BFEs and/or base flood depths final by publishing a legal notice, called a Final Rule, in the FEDERAL REGISTER and issuing a Letter of Final Determination, or “LFD”, to the CEOs and FPAs of the affected community/communities. Copies of the LFD also are sent to anyone other than community officials that submitted appeals or comments during the appeal period.

The LFD announces that the map and report information is final; provides the effective date for the map and report; and notifies the community that they have 6 months to review, update (if necessary), and submit their new or updated floodplain management ordinance to the appropriate FEMA Regional Office and the State NFIP Coordinator. The 6-month period that starts with issuance of the LFD is referred to as the adoption/compliance period. At the end of the

adoption/compliance, the DFIRM and FIS report become effective.

As with most other correspondence between FEMA and the community for a study/mapping project, the LFDs will be addressed to the community CEOs, and copies will be sent to the community FPAs and any other community officials designated by the CEOs of the affected communities, if appropriate, and to individual appellants that are not affiliated with the affected community or communities, if it is practical to do so.

During the 6-month adoption/compliance period, FEMA finalizes the map panel(s) and FIS report materials and has paper copies distributed to the affected communities, the State NFIP Coordinator, and others by the FEMA Map Service Center, or “MSC.” The MSC also provides community officials with CDs or DVDs containing the electronic versions of the map and FIS report materials and associated spatial database. The MSC staff also posts the electronic versions of the map and FIS report materials and associated spatial database on the MSC Website (<http://www.msc.fema.gov>), where they may be downloaded by the public for a nominal fee.

If an effective NFIP map is revised and republished as a result of a community-initiated map revision request (i.e., a Physical Map Revision, or “PMR”), the community is given review periods similar to those described previously and presented in Figure 1-2, with the following exceptions. When a revision to an effective NFIP map does not include new or modified BFEs and/or base flood depths, no 90-day appeal period is

required. The affected community is usually given only a review period, after which the adoption/compliance is initiated and the map(s) and report are finalized, printed, and distributed.

If an effective NFIP map is revised through the LOMR process, FEMA will not revise and republish the affected map panel(s) or FIS report component(s). However, when it is necessary to clearly depict changes to the NFIP maps, annotated copies of the revised panel(s) and FIS report component(s) will accompany the LOMR documents. The LOMR documents officially revise the map panel(s) and FIS report component(s) and the revision usually becomes effective on the date the LOMR is issued. When BFEs are revised by a LOMR, a 90-day appeal period is provided to the community after the LOMR documents are issued.

FEMA notifies community officials by letter as specific milestones in the previously described processes are reached. Any questions concerning the status of the NFIP map that cannot be answered from the information provided routinely by FEMA can be answered by staff members of the appropriate FEMA Regional Office. (See Appendix E of this *Guide* for a complete listing of Regional Office addresses.)

Individuals who want to view copies of the effective NFIP map(s) for a community, to verify that the map they may already have is the effective map, or obtain their own paper copies of the map may obtain the needed information by visiting the Community Map Repository, or “CMR.” The CMR is the community

office responsible for floodplain management activities in a community.

Interested parties who are having difficulty locating the CMR may contact a Map Specialist in the FEMA Map Assistance Center, or “FMAC”, toll free, at 1-877-FEMA MAP (1-877-336-2627). Other services provided by the Map Specialists in the FMAC and the FMAC hours of operation can be found on the FMAC page on the FEMA Website:

http://www.fema.gov/plan/prevent/fhm/fmc_main.shtm

Individuals who would like to obtain digital versions of the effective map panels, FIS report materials, and related products may do so by contacting the MSC or visiting the MSC Website. (Note: Effective October 1, 2009, the MSC no longer fills requests for paper copies of maps and mapping-related materials.) Additional information on how to obtain copies of effective NFIP maps, FIS reports, and related products from the MSC is provided in Appendix B of this *Guide*.

2.1.3 Identify Types of Changes Being Requested

As mentioned earlier in this *Guide*, NFIP maps present various types of flooding information: flood zone boundaries, regulatory floodways, flood insurance risk zones, BFEs, and base flood depths. The maps also depict planimetric features, such as streams and lakes; roads; railroads; major buildings; and boundaries of incorporated communities, counties, and Federal and State lands.

Requests for changes to NFIP maps may involve one or more type of flooding information and may also involve planimetric features shown on the map. Often, because much of the information presented on the map is interrelated, a change to one type of information will necessitate changes to others.

Each of the processes for changing NFIP maps is applicable only to a specific type of change. Therefore, the map change requester should not only consider the type of change being requested, but also determine whether changes to related map information will be necessary and what those changes are.

In making that determination, the map change requester should consider the basis for the requested change. For example, a request for a change to a 1-percent-annual-chance flood zone boundary delineation may be based on the effects of a channelization project. However, such a project is also likely to affect the BFEs or base flood depths, regulatory floodway boundaries, and stream configuration shown on the map panel(s).

It may not always be possible to identify all changes that may be necessary. However, by attempting to do so, the map change requester will help to ensure that the necessary data and documentation are compiled and submitted so that the request may be processed by FEMA as quickly and efficiently as possible.

2.2 Step 2-Selecting a Map Change Process

By completing Step 1, the map change requester has identified the map type and FIS report component to be changed, the status of the map, and the type(s) of change(s) to be made. In Step 2, the map change requester will determine which process is applicable to the particular request. General descriptions of the conditions under which each process is to be applied are provided in the following section of this chapter. Table 2-1 summarizes the information provided in Steps 1 and 2 and may be used as a guide for choosing the appropriate map change process.

Detailed information about each map change process, including the types and amounts of data and documentation that must be submitted, are provided in Chapters 3 through 7. This *Guide* is applicable only to changes that may be made under the appeal, comment, map revision, conditional map revision, map amendment, and conditional map amendment processes.

If the conditions under which a change is to be made are not the same as those specified for one of the map change processes described in this section, the map change requester should discuss the requested change with a representative of the appropriate FEMA Regional Office or the State NFIP Coordinator. Contact information for the FEMA Regional Offices and the State NFIP Coordinators is provided in Appendix E of this *Guide*.

Table 2-1 Description of Map Change Types and Processes

Type of Map Affected	Status of Map	Type of Request	Process (Authority)	Method of Change	Location in <i>Guide</i>
DFIRM (Preliminary)	In 90-Day Appeal Period	Change to Proposed BFE(s) or Base Flood Depth(s)	Appeal (44 CFR Part 67)	Revisions to Map Panels and Report Before Publication	Chapter 3
DFIRM (Preliminary)	In 90-Day Appeal Period	Changes to Any Information Other Than Proposed BFEs or Base Flood Depth(s)	Comment (44 CFR Part 67)	Revisions to Map Panels and Report Before Publication	Chapter 3
FHBM FIRM FBFM DFIRM	Effective	Changes to Any Flood Hazard Information	Map Revision (44 CFR Part 65)	Publication of Revised Map or Issuance of LOMR	Chapters 4 and 7
FHBM FIRM FBFM DFIRM	Effective	Exclusion from SFHA of Structure(s) or Legally Defined Parcel(s) of Land Elevated by Fill Placed After the Effective Date of the First NFIP Map That Showed the Structure(s) or Parcel(s) To Be Within SFHA	Map Revision (44 CFR Part 65)	Issuance of LOMR-F	Chapter 4
FHBM FIRM DFIRM	Effective	Exclusion from SFHA of Structure(s) and/or Legally Defined Parcel(s) of Land Where Topographic Alterations Have Not Occurred Since Date of First NFIP Map That Showed Structure(s) or Parcel(s) in SFHA	Map Amendment (44 CFR Part 70)	Issuance of LOMA	Chapter 5

Table 2-1 Description of Map Change Types and Processes (Cont'd)

Type of Map Affected	Status of Map	Type of Request	Process (Authority)	Method of Change	Location in <i>Guide</i>
FHBM FIRM FBFM DFIRM	Effective	Conditional Determination Regarding Proposed Project in SFHA or Regulatory Floodway	Conditional Map Revision (44 CFR Part 65)	Issuance of CLOMR	Chapter 6
FHBM FIRM FBFM DFIRM	Effective	Conditional Determination Regarding Proposed Elevation of Structure(s) or Legally Defined Parcel(s) of Land by Fill	Conditional Map Revision (44 CFR Part 65)	Issuance of CLOMR-F	Chapter 6
FHBM FIRM DFIRM	Effective	Conditional Determination Regarding Exclusion from SFHA of Proposed Structure(s) or Legally Defined Parcel(s) of Land	Conditional Map Amendment (44 CFR Part 70)	Issuance of CLOMA	Chapter 6
FIRM DFIRM	Effective	"Adequate Progress" Determination for Levee System	Map Revision (44 CFR 61.12)	Publication of Revised Map	Chapter 8
FIRM DFIRM	Effective	"Flood Protection Restoration" Determination for Levee System	Map Revision (44 CFR 65.14)	Publication of Revised Map	Chapter 9
FHBM FIRM DFIRM	Effective	Resolution of Dispute Between Lender and Borrower Concerning Inside SFHA/Outside SFHA Determination for Borrower's Structure(s)	Determination Review (42 U.S.C. 4012a(e)(3))	Issuance of LODR	Chapter 10

2.2.1 Appeals

Appeals are defined as requests for changes to proposed BFEs and/or base flood depths. To qualify as appeals, such requests must be submitted to FEMA during the statutory 90-day appeal period for those BFEs and/or base flood depths and must be supported by data and documentation that show that the proposed BFEs and/or base flood depths are either scientifically or technically incorrect.

The formal, statutory 90-day appeal period is provided to a community only when new or revised BFEs and/or base flood depths are being proposed for the community and may, therefore, be required in only three situations:

1. When a community is being converted to the Regular Phase of the NFIP with a FIRM/DFIRM that presents new BFEs and/or base flood depths;
2. When the BFEs and/or base flood depths shown on an effective FIRM/DFIRM for a community are being revised through the PMR or LOMR process; or
3. When a FEMA-contracted study/mapping project or community-initiated map revision presents detailed flood information, including BFEs and/or base flood depths, for a flooding source that was not studied previously or was studied using approximate methods.

Because BFEs are not shown on FHBMs or FBFMs, the appeal process applies only to FIRMs/DFIRMs.

2.2.2 Comments

Although changes to map information other than proposed BFEs and/or base flood depths (e.g., flood zone boundaries, regulatory floodway boundaries, flood insurance risk zone designations) may be necessary as part of the resolution of an appeal, requesters' comments that do not involve proposed BFEs and/or base flood depths do not qualify as appeals. Requests of this type, when submitted during the 90-day appeal period, are called "comments." These comments (formerly referred to as "protests") also must be supported by appropriate data and documentation.

2.2.3 Map Revisions

Under Part 65 of the NFIP regulations, changes may be made to the information depicted on effective flood maps and in accompanying FIS reports. Changes to flood zone boundaries, regulatory floodway boundaries, flood insurance risk zones, BFEs, base flood depths, and other information shown on the maps and in the accompanying FIS reports may be requested under this process.

Such changes must be based only on existing conditions unless the community has provided appropriate information to FEMA to show future-conditions information on the map and in the FIS report. Additional information on the requirements for future-conditions flood mapping is provided in Appendix

C, Section C.8 of the previously referenced *Guidelines and Specifications for Flood Hazard Mapping Partners*.

When the community initiates a request in accordance with Part 65 requirements and FEMA determines that a map revision is appropriate, FEMA will follow either the PMR process or the LOMR process to address the request.

Occasionally, because of the limitations of the available data, the NFIP map(s) cannot accurately reflect the existence of individual structures or small parcels of land within the Special Flood Hazard Area, or “SFHA”, boundaries that are above the BFE. This situation can occur when earthen fill has been placed to elevate the structure or parcel or when the structure or parcel is on unaltered high ground.

Although such structures and parcels of land can be removed from the SFHA, the process by which they are removed depends on whether fill was placed and when. If the structure or parcel of land is elevated by fill placed after the effective date of the first NFIP map that showed the property to be within the SFHA, the request is processed as a request for a map revision under the provisions of Section 65.5 of the NFIP regulations. The FEMA response to such a request is a Letter of Map Revision Based on Fill, or “LOMR-F.”

Where earthen fill has not been placed, or where earthen fill was placed before the effective date of the first NFIP map, the structure or parcel is considered to have been inadvertently included in the SFHA and the request is processed as a request for a map amendment and

processed in accordance with Part 70 of the NFIP regulations. The FEMA response to such a request is a Letter of Map Amendment, or “LOMA.”

Requests for the removal of structures or parcels of land inadvertently included in both the SFHA and regulatory floodway are processed as requests for map revisions to assure that community officials are included in the notification process.

2.2.4 Conditional Map Revisions

In accordance with Parts 65 and 72 of the NFIP regulations, FEMA may issue a conditional determination regarding the effects of proposed projects, such as modifications of stream channels and floodplains, and the proposed elevation of individual structures and parcels of land.

Under the conditional map revision process, scientific or technical data and other documentation may be submitted for a proposed action and a request may be made that FEMA review the data and issue a formal response.

FEMA responds to such requests by issuing Conditional Letters of Map Revision, or “CLOMRs”, or Conditional Letters of Map Revision Based on Fill, or “CLOMR-Fs.”

CLOMRs and CLOMR-Fs describe the revisions that could be made to the NFIP map in the future, after the proposed modification is in place and functioning; states whether the completed project would be in compliance with the minimum floodplain management

requirements of the NFIP; and notifies the community about the supporting data and documentation that will be required to revise the affected map panel(s) and, if appropriate, FIS report component(s).

2.2.5 Map Amendments

In accordance with Part 70 of the NFIP regulations, FEMA may amend an effective NFIP map, by issuing a LOMA, to remove the SFHA designation from an individual structure or legally described parcel of land. Occasionally, individual structures or parcels of land may be inadvertently included in the SFHA on an NFIP map, or it may be difficult for a property owner to determine from the map whether a structure or parcel of land is in the SFHA.

A property owner who believes that a specific structure or parcel of land has been incorrectly shown in the SFHA or who cannot determine whether the structure or parcel of land is in the SFHA can request that FEMA make an official determination.

The map amendment process is not applicable to requests that involve changes to the flooding information shown on an NFIP map or requests based on alterations of topography that were made after the date of the first NFIP map that showed the structure or parcel of land to be within the SFHA. Therefore, requests for map amendments cannot be based on new topographic, hydrologic, or hydraulic conditions.

FEMA would handle requests that are based on new topographic, hydrologic, or hydraulic conditions as map revision

requests in accordance with Part 65 of the NFIP regulations.

2.2.6 Conditional Map Amendments

In accordance with Part 72 of the NFIP regulations, FEMA may issue a conditional determination indicating that a proposed structure, if built on a legally defined parcel of land that is on natural ground or fill placed prior to the effective date of the first NFIP map showing that area to be in an SFHA, would be excluded from the SFHA as shown on the effective NFIP map. FEMA issues this determination in the form of a Conditional Letter of Map Amendment, or “CLOMA.”

The CLOMA process does not apply to situations involving proposed changes to stream channels or floodplains. The CLOM process also does not apply to the proposed elevation of individual structures or parcels of land.

2.2.7 Revalidations

When a revised FIRM/DFIRM panel becomes effective, all previous map changes for that panel are superseded. Therefore, each time a panel is physically revised and republished, the panel must be updated to include the changes in the flood hazard information made via a LOMR, LOMR-F, or LOMA.

When the changes in the flood hazard information are too small to show on printed panels, FEMA will issue a revalidation, or “LOMC-VALID,” letter.

The LOMC-VALID letter typically becomes effective 1 day after the effective date of the newly effective FIRM/DFIRM panels. The LOMC-VALID letter is considered legally binding, in the same manner as an original LOMR, LOMR-F, or LOMA, provided that a copy of the original LOMR, LOMR-F, or LOMA accompanies the LOMC-VALID letter.

If requested, FEMA will provide a copy of the original LOMR, LOMR-F, or LOMA determination documents and enclosures, if any, along with the LOMC-VALID letter. No review and processing fee is assessed for such requests.

Chapter 3 Appeals

The Base (1-percent-annual-chance) Flood Elevations (BFEs) and base (1-percent-annual-chance) flood depths shown on Flood Insurance Rate Maps (FIRMs) and Digital Flood Insurance Rate Maps (DFIRMs) and on the Flood Profiles in the accompanying Flood Insurance Study (FIS) reports are the basis for the detailed flood zone boundaries, flood insurance risk zones, and regulatory floodway boundaries shown on the FIRMs; DFIRMs; and, in some cases, Flood Boundary and Floodway Maps (FBFMs). That information, including the BFEs and base flood depths, is used for floodplain management and insurance purposes by Federal, State, and local agencies.

Because of the significance of the BFEs and base flood depths, FEMA is careful to ensure their accuracy. In addition to applying rigorous standards in developing and updating flood hazard information, FEMA provides communities with an opportunity to review new or revised BFEs and base flood depths before they become final, and to appeal them if the community believes the BFEs and/or base flood depths are scientifically or technically incorrect.

The regulatory requirements related to appeals are found in Part 67 of the National Flood Insurance Program (NFIP) regulations. Additional FEMA procedural details are provided in Volume 1 of FEMA's *Guidelines and Specifications for Flood Hazard*

Mapping Partners for appeals of studies/mapping projects and in Volume 2 of the *Guidelines and Specifications* for appeals of Physical Map Revisions (PMRs) and Letters of Map Revision (LOMRs). Part 67 and the *Guidelines and Specifications* are both accessible through the "Guidance Documents and Other Published Resources" page in the Flood Hazard Mapping section of the FEMA Website located at:
http://www.fema.gov/plan/prevent/fhm/fm_docs.shtm.

3.1 Background

In performing new or updated studies/mapping projects, processing PMR and LOMR requests, and preparing new or revised FIS reports, FIRMs, FBFMs, and DFIRMs, FEMA may determine new BFEs or base flood depths for flooding sources for which it has not previously determined BFEs or base flood depths or may revise previously determined BFEs and/or base flood depths shown on effective FIRMs or DFIRMs. When it determines new or revised BFEs and/or base flood depths for a community, FEMA must, by statute, provide the community or communities affected by the new or modified BFEs and/or base flood depths with a 90-day appeal period.

3.1.1 Activities Leading Up To Appeal Period

New and modified BFEs and/or base flood depths that result from a new or updated study/mapping project are presented in a Preliminary version of an

FIS report and on a Preliminary version of a DFIRM. FEMA sends the Preliminary versions of the FIS report and DFIRM to the Chief Executive Officers (CEOs) and Floodplain Administrators (FPAs) of the affected communities for review before the start of the appeal period.

FEMA also recommends that community officials circulate the Preliminary versions of the FIS report and DFIRM as widely as possible. In some cases, communities or other mapping partners may post the FIS report and DFIRM on a Website so that the materials may be viewed by many people simultaneously.

For studies/mapping projects, FEMA also will schedule one or more meetings with the CEOs, FPAs, and other community officials to discuss the results of the study/mapping project and solicit community officials' feedback on the information provided. These formal meetings—which may be referred to as Consultation Coordination Officer (CCO) meetings, final community coordination meetings, or Preliminary DFIRM Community Coordination (PDCC) meetings in various FEMA Regions—may be followed by public meetings, which are sometimes referred to as Flood Risk Open Houses.

During these meetings, community officials, residents, and others may comment on the Preliminary versions of the DFIRM(s) and FIS reports.

New and/or modified BFEs and/or base flood depths that result from a community-initiated PMR also are presented in a Preliminary version of the

revised FIS report materials for the affected communities and on a Preliminary version of the revised FIRM or DFIRM panel(s) for the affected communities. FEMA also sends these Preliminary versions of the FIS report and DFIRM to the community CEOs and FPAs before the start of the appeal period.

For most community-initiated map revisions, FEMA does not schedule formal meetings with the CEOs, FPAs, and other community officials to discuss the results, nor do they sponsor or participate in public meetings. Rather, the letters that FEMA sends with the Preliminary versions of the report and map materials specify a certain length of time for the community review and request that the communities submit their comments by the end of that period so that they may be considered before the appeal period is started (if new/modified BFEs and/or base flood depths are to be proposed).

3.1.2 How Appeal Period Is Administered

As discussed in Chapter 2 of this *Guide*, after any significant problems identified by community officials or residents (at formal meetings or otherwise) are addressed appropriately, FEMA prepares the following when new/modified BFEs and/or base flood depths are to be proposed:

- For studies/mapping projects and PMRs, a legal notice, called a “Proposed Rule”, which is published in the FEDERAL REGISTER;

- FOR LOMRS, a different legal notice, called an “Interim Final Rule”, which also is published in the FEDERAL REGISTER;
- Listings of proposed BFEs and/or base flood depths shown on the Preliminary version of the DFIRM and in the FIS report, which are posted on the FEMA Website at https://www.floodmaps.fema.gov/fhm/Scripts/bfe_main.asp;
- A public notice announcing the start of the appeal period and the posting of the BFE and/or base flood depth listings, which is published in one or more local newspapers with wide circulation; and
- Letters notifying the mapped communities of the new or modified BFEs and/or base flood depths shown on the DFIRM, which are mailed to the CEOs and FPAs for the mapped communities. These letters are referred to as “proposed flood elevation determination letters.”

Once the actions above have been taken, the BFEs and/or base flood depths are officially considered "proposed."

In the proposed flood elevation determination letters for studies/mapping projects and PMRs and in the LOMR determination documents, FEMA encourages the CEOs, FPAs, and other community officials to provide an even wider distribution to ensure that residents and other key stakeholders are aware of the proposed BFEs and/or base flood depths.

The newspaper notice referenced above is published twice; the second publication usually takes place 1 week after the first. On the date of the second publication, the 90-day appeal period officially begins.

During the appeal period, community officials and individual property owners may appeal the proposed BFEs and/or proposed base flood depths by submitting data and documentation to show that the proposed BFEs and/or base flood depths are scientifically or technically incorrect. The requirements for the data to be submitted are provided later in this chapter.

After the 90-day appeal period has elapsed and any appeals or other formal comments submitted during the appeal period (see Chapter 4) have been addressed, FEMA makes the proposed BFEs and/or base flood depths final by publishing a legal notice, called a Final Rule, in the FEDERAL REGISTER and issuing a Letter of Final Determination (LFD) to the community CEO and FPA. FEMA also sends copies of the LFD to anyone other than community officials that have submitted appeals or other comments during the 90-day appeal period.

The LFD informs the CEO and FPA that the community is being given a period of time to enact the new or modified floodplain management ordinances required to gain or continue participation in the Regular Phase of the National Flood Insurance Program (NFIP). At the end of the 6-month period referred to as the “adoption/compliance period”, the DFIRM and FIS report become effective.

Additional information regarding the LFD and the adoption/compliance period is provided in the subsection titled “Appeal Processing Procedures.”

If the community has not adopted a new or modified floodplain management ordinance and obtained State and FEMA Regional Office approval for the ordinance, certain sanctions may apply.

- Flood insurance will not be available. No resident will be able to purchase an NFIP flood insurance policy.
- Existing NFIP flood insurance policies will not be renewed in communities that withdraw or are suspended from participation in the NFIP.
- No Federal grants or loans for development may be made in identified Special Flood Hazard Areas (SFHAs) under programs administered by Federal agencies such as the U.S. Department of Housing and Urban Development, U.S. Environmental Protection Agency, and Small Business Administration.
- No Federal disaster assistance may be provided to repair insurable buildings located in identified SFHAs for damage caused by a flood.
- No Federal mortgage insurance or loan guarantees may be provided in identified SFHAs. This includes policies written by the Federal Housing Administration, the U.S.

Department of Veterans Affairs, and others.

- Federally insured or regulated lending institutions, such as banks and credit unions, must notify applicants seeking loans for insurable buildings in identified SFHAs that (1) a flood hazard exists and (2) the property is not eligible for Federal disaster relief.

Sanctioned communities are subject to limitations on Federal financial assistance. The Flood Disaster Protection Act of 1973 prohibits Federal officers or agencies from approving any form of loan, grant, guaranty, insurance, payment, rebate, subsidy, disaster assistance loan or grant, for acquisition or construction purposes within SFHAs. In the case of disaster assistance under the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988, as amended, this prohibition only applies to assistance in connection with a flood.

Similar processes and procedures are followed for administering the appeal period for community-initiated map revisions. However, if a report and map are revised using the LOMR process, the community officials do not receive printed DFIRM panels and FIS reports.

If the community or someone through the community submits an appeal of a LOMR, and FEMA determines that the appeal is valid, FEMA may issue a new LOMR with newly revised FIS report and map attachments.

3.2 North American Vertical Datum of 1988

Since the National Geodetic Survey determined that the national vertical control network needed to be readjusted, FEMA has been gradually converting NFIP maps from the National Geodetic Vertical Datum of 1929 (NGVD29) to the North American Vertical Datum of 1988 (NAVD88) in the contiguous United States. Therefore, when submitting an appeal, appellants should use the reference datum shown on the applicable, effective FIRM/DFIRM panel(s).

For more information on the conversion from NGVD29 to NAVD88, requesters should refer to FIA-20, *Converting the National Flood Insurance Program to the North American Vertical Datum of 1988, Guidelines for Community Officials, Engineers, and Surveyors*, and to Appendix B, “Guidance for Converting to the North American Vertical Datum of 1988,” of FEMA’s *Guidelines and Specifications for Flood Hazard Mapping Partners*.

These guidance documents are available from the FEMA Library (<http://www.fema.gov/library/index.jsp>). Information on how to obtain copies of these and other useful guidance documents is provided in Appendix B of this *Guide*.

3.3 How To Submit an Appeal

Because the CEO is responsible for ensuring that the community meets its obligations as a participant in the NFIP, FEMA consults and confers with the CEO, or with a local official designated by the CEO—usually, the FPA, city planner, or city engineer—to resolve appeals. Therefore, any individual property owner who wishes to appeal the proposed BFEs and/or base flood depths must submit the appeal to the CEO or to the FPA or other designated local official so that the community can comply with the requirements of Part 67 of the NFIP regulations.

The CEO or designated community official should then review each appeal and, when forwarding the appeal to the FEMA office that serves the community (see Appendix E), should state whether the community supports the appeal. The CEO or designee may also appeal on behalf of the community.

Appeals must be submitted during the 90-day appeal period. However, when the CEO or designee receives or expects to receive numerous appeals, they should be collected and forwarded to the appropriate FEMA office together, before the end of the appeal period.

It is in the interest of the community for the CEO or designee to notify FEMA of any appeals before the end of the appeal period; otherwise, FEMA might be unaware of the appeals and might proceed with issuing the LFD without considering the submittal.

Likewise, it is in the interest of the community for the CEO or designee to submit appeals and appropriate supporting data and documentation to FEMA during the appeal period. If appeals and appropriate supporting data and documentation are submitted during the appeal period, FEMA may complete its review and proceed with addressing the appeal in a timely manner.

The community CEO or his/her designee shall submit all appeals, with the required supporting data and documentation discussed in the following subsection, to the FEMA Regional Office that serves the community, shown in Appendix E.

3.4 Supporting Data and Documentation Required for Appeals

An appeal must be based on data that show the proposed BFEs and/or base flood depths to be scientifically or technically incorrect. The distinction between "scientifically incorrect" and "technically incorrect" is important because of the differences in the types and amounts of data that an appellant must submit to demonstrate one versus the other.

Definitions of those terms are provided later in this chapter. First, however, it is appropriate to discuss the meaning of the word "correct" as it applies to the BFEs and/or base flood depths.

The BFEs and/or base flood depths presented in FIS reports and on FIRMs or DFIRMs are the result of engineering methodologies that are used by FEMA

contractors, FEMA mapping partners, and others whose data and documentation FEMA approves and uses. Mapping partners include communities, regional entities, and State agencies participating in the FEMA Cooperating Technical Partners (CTP) Program.

Because numerous methodologies have been developed for estimating flood discharges and flood elevations under a variety of conditions, FEMA contractors, mapping partners, and others use their professional judgment in selecting methodologies that are appropriate for the conditions along a particular segment of a particular flooding source. For FEMA-contracted studies/mapping projects, the approach to be used will usually be discussed with community officials during the scoping phase of the study/mapping project.

In general, because the methodologies are the result of attempts to reduce complex physical processes to mathematical models, the methodologies include simplifying assumptions. Usually, the methodologies are used with data developed specifically for the study/mapping project. Therefore, the results of the methodologies are affected by the amount of data collected and the precision of any measurements made.

Because of the judgments and assumptions that must be made and the limits imposed by cost considerations, the "correctness" of the BFEs and/or base flood depths is often a matter of degree, rather than absolute. For that reason, appellants who contend that the BFEs and/or base flood depths are incorrect because better methodologies

could have been used, better assumptions could have been made, or better data could have been used must provide alternative analyses that incorporate such methodologies, assumptions, or data and that quantify their effect on the BFEs and/or base flood depths. FEMA will review the alternative analyses and determine whether they are superior to those used for the study/mapping project.

The data and documentation that must be submitted in support of the various types of appeals are discussed in the subsections that follow.

3.4.1 Scientifically Incorrect Flood Elevations or Depths

The proposed BFEs and/or base flood depths are said to be **scientifically incorrect** if the methodology used in the determination of the BFEs and/or base flood depths is inappropriate or incorrect, or if the assumptions made as part of the methodology are inappropriate or incorrect. An appeal that is based on the proposed BFEs and/or base flood depths being scientifically incorrect would, therefore, contend that the use of a different methodology or different assumptions would produce more accurate results (i.e., BFEs and/or base flood depths that are more correct).

To show that an inappropriate or incorrect hydraulic methodology has been used, an appellant must submit the following data:

- New hydraulic analysis based on alternative methodology and original flood discharge values;
- Explanation for superiority of alternative methodology;
- Revised Flood Profiles; and
- Revised flood zone boundary and regulatory floodway boundary delineations.

3.4.2 Technically Incorrect Flood Elevations or Depths

The proposed BFEs and/or base flood depths are said to be **technically incorrect** if at least one of the following is true:

- The methodology was not applied correctly.
- The methodology was based on insufficient or poor-quality data.
- The application of the methodology included indisputable mathematical or measurement errors.
- The methodology did not account for the effects of physical changes that have occurred in the floodplain.

Appeals Based on Contention That Methodology Has Not Been Applied Correctly

To show that a hydrologic methodology was not applied correctly, an appellant must submit the following:

- New hydrologic analysis in which original methodology has been applied differently
- Explanation for superiority of new application;
- New hydraulic analysis based on flood discharge values from new hydrologic analysis;
- Revised Flood Profiles; and
- Revised flood zone boundary and regulatory floodway boundary delineations.

To show that a hydraulic methodology was not applied correctly, an appellant must submit the following:

- New hydraulic analysis, based on original flood discharge values, in which original methodology has been applied differently;
- Revised Flood Profiles; and
- Revised flood zone boundary and regulatory floodway boundary delineations.

Appeals Based on Contention That Insufficient or Poor-Quality Data Were Used

To show that insufficient or poor-quality hydrologic data were used, an appellant must submit the following:

- Data believed to be better than those used in original hydrologic analysis;

- Documentation for source of data;
- Explanation for improvement resulting from use of new data;
- New hydrologic analysis based on better data;
- New hydraulic analysis based on flood discharge values resulting from new hydrologic analysis;
- Revised Flood Profiles; and
- Revised flood zone boundary and regulatory floodway boundary delineations.

To show that insufficient or poor-quality hydraulic data were used, an appellant must submit the following:

- Data believed to be better than those used in original hydraulic analysis;
- Documentation for source of new data;
- Explanation for improvement resulting from use of new data;
- New hydraulic analysis based on better data and original flood discharge values; and
- Revised flood zone boundary and regulatory floodway boundary delineations.

Appeals Based on Contention That Analysis Contains Indisputable Errors

To show that a mathematical error was made, an appellant must identify the error. FEMA will perform any required calculations and make the necessary

changes to the FIS report, FIRM, FBFM, and/or DFIRM.

To show that a measurement error (e.g., an incorrect surveyed elevation used in the study/mapping project) was made, appellants must identify the error and provide the correct measurement. Any new survey data provided must be certified by a Registered Professional Engineer or Licensed Land Surveyor. FEMA will perform any required calculations and make the necessary changes to the FIS report, FIRM, FBFM, and/or DFIRM if warranted.

Appeals Based on Effects of Physical Changes in Floodplain

For appeals based on the effects of physical changes that have occurred in the 1-percent-annual-chance floodplain, appellants must identify the changes that have occurred and provide the data FEMA needs to perform a revised analysis. The data may include topographic maps, grading plans, new stream channel and floodplain cross sections, and dimensions of structures.

Among the types of physical changes on which an appeal may be based is the construction or restoration of earthen levee systems and similar structures. The established minimum requirements for structural stability, maintenance, and operation that a levee system must meet before it can be accredited on a FIRM or DFIRM—thereby, reducing the mapped flood hazard zone in the impacted areas landward of the levee system—are provided in Section 65.10 of the NFIP regulations.

The data and documentation that appellants must provide in support of an appeal based on the effects of a levee system are described in the "Technical Guidance" section of this *Guide*. In general, appeals based on the effects of flood-control structures must demonstrate that the structures are complete and functional. The exception is for systems that involve Federal funds, where the construction or restoration of the system meets the requirement for "adequate progress" as defined in Section 61.12 of the NFIP regulations. The specific data that appellants must provide in support of an appeal based on the ultimate effects of such a system are also described in the "Technical Guidance" section of this *Guide*.

FEMA has developed a variety of guidance documents to explain the data and documentation requirements for levee systems. These documents, including a "how-to" checklist titled "Meeting the Criteria for Accrediting Levees on NFIP Flood Maps: How-To Guide for Floodplain Managers and Engineers", are accessible through the following page on the FEMA Website: http://www.fema.gov/plan/prevent/fhm/lv_fm.shtm.

3.5 Technical Guidance

When developing technical support data, appellants should consider the information provided in the subsections below.

3.5.1 General Technical Guidance

- Unless appeals are based on indisputable mathematical or measurement errors or the effects of physical changes that have occurred in the floodplain, they must be accompanied by all data that FEMA needs to revise the Preliminary version of the FIS report and map(s). Therefore, appellants should be prepared to perform hydrologic and hydraulic analyses, to plot new and/or revised Flood Profiles, and to delineate revised flood zone and regulatory floodway boundaries as necessary.
- New flooding information cannot be added to an NFIP map in such a way as to create mismatches with the flooding information shown for unrevised areas. Therefore, in performing new analyses and developing revised flooding information, appellants must tie the new flood elevations, flood zone boundaries, and regulatory floodway boundaries into those shown on the maps for areas not affected by the appeal.
- For appeals involving new flood discharge values, extensive changes in hydraulic conditions, or complex situations in which changes made to the flooding information developed for one flooding source will affect that developed for others, appellants may be required to provide new information for a large portion of the map.
- All analyses and data submitted by appellants, including those that show mathematical or measurement errors, must be certified by a Registered Professional Engineer or Licensed Land Surveyor, as appropriate.
- Most appeals cannot be based on the effects of proposed projects or future conditions. Exceptions are made for (1) those appeals that are based on the effects of flood protection systems under construction that meet the previously cited adequate progress requirements of Section 61.12 of the NFIP regulations, and (2) those appeals that affect areas where future-conditions flood zones and BFEs have been established and mapped at the request of the community. Therefore, any maps, plans, drawings, measurements, or ground elevation data submitted by appellants must be certified as representing existing, or "as-built," conditions.
- Generally, when appellants are required to submit hydrologic or hydraulic analyses, those analyses must be performed for the same recurrence interval floods as those performed for the study/mapping project. For riverine, lacustrine, and coastal flooding sources studied by detailed methods, FEMA-contracted studies/mapping

projects include analyses of the 1-percent-annual-chance flood and, usually, the 10-percent-annual-chance (10-year), 2-percent-annual-chance (50-year), and 0.2-percent-annual-chance (500-year) floods. Often, a hydraulic analysis of the regulatory floodway is performed for riverine flooding sources.

On the other hand, in areas subject to shallow flooding, only 1-percent-annual-chance flood depths are analyzed. However, in areas subject to alluvial fan flooding (a type of shallow flooding), analyzing the 1-percent-annual-chance flood depths may require developing the entire flood discharge-frequency relationship (not just the 1-percent-annual-chance flood discharge). Therefore, the extent of the hydrologic and hydraulic analyses that appellants may be required to submit is determined not only by the basis of the appeal, but also by the type of flooding source and the scope of the study/mapping project.

- Unless appeals are based on the use of alternative models or methodologies, the hydrologic and hydraulic analyses that appellants submit must be performed with the models used for the study/mapping project. For most FEMA-contracted studies/mapping projects, hydrologic analyses for riverine flooding sources are performed with standard engineering

methodologies, such as flood-frequency analyses of stream gage data, or with computer models that are in the public domain, such as the U.S. Army Corps of Engineers (USACE) HEC-1 or HEC-HMS models, the Natural Resources and Conservation Service (NRCS) TR-20 Win or Win TR-55 models, or the U.S. Environmental Protection Agency (EPA) SWMM5 model. For FEMA-contracted studies/mapping projects, hydraulic analyses for riverine flooding sources are usually performed with the HEC-RAS model or a similar and widely accepted model, such as the NRCS WSP-2 model or the USGS WSPRO model.

- For the analysis of alluvial fan flood hazards and the hazards associated with coastal storm surge and wave action, including wave height and wave runup, FEMA has established or adopted special methodologies and computer models. For analyses of lacustrine and sheet flow flood hazards, FEMA uses a variety of standard engineering models and methodologies. These models and methodologies are discussed in Appendix E of *Guidelines and Specifications for Flood Hazard Mapping Partners*.
- Appellants may request from FEMA copies of the input and output data from the model(s) used for a specific study/mapping

- project or copies of other calculations or analyses performed for the study/mapping project. (See Appendix B for details.)
- Lists of the models that have been accepted because they meet the minimum requirements of the NFIP are provided on the FEMA Website at http://www.fema.gov/plan/prevent/fhm/en_modl.shtm. A list of the models that are no longer accepted for NFIP usage because they do not meet requirements also is provided on the FEMA Website, at http://www.fema.gov/plan/prevent/fhm/en_nacpt.shtm.
 - As required by Paragraph 65.6(a)(6) of the NFIP regulations, when appeals are based on the use of an alternative hydrologic or hydraulic model, appellants must show that several conditions have been met: (1) the model used must have been reviewed and accepted for general use by a Federal agency responsible for floodplain identification or regulation or by a notable scientific body; (2) the model has been well documented (with a user's manual that includes source codes); and (3) the model must be available to all present and future parties affected by flood insurance mapping developed or amended through the use of the model.
 - Although requests for revisions to regulatory floodways do not qualify as appeals—they would be considered comments—the data on which successful appeals are based often include new regulatory floodway analyses and mapping. Information concerning additional data that must be submitted in support of appeals that involve changes to regulatory floodways is provided in Chapter 7.
 - Generally, when appellants are required to submit delineations of flood zone boundaries, both the 1- and 0.2-percent-annual-chance flood zone boundaries must be submitted. However, if the study/mapping project includes analyses of only the 1-percent-annual-chance flood for the flooding source that is the subject of the appeal, only the 1-percent-annual-chance flood zone boundaries must be submitted. The boundaries are to be shown on a topographic map (preferably, a digital topographic map) whose scale and contour interval are sufficient to provide reasonable accuracy.

3.5.2 Technical Guidance for Appeals Based on Levees/Levee Systems or Similar Structures/Systems

FEMA has developed a checklist to assist community officials and other appellants with submitting the data and

documentation required to show compliance with the criteria for accreditation of levee systems in Section 65.10 of the NFIP regulations. Interested parties may access this checklist and a number of other useful levee-related resources from the “Floodplain Managers, Engineers, Surveyors, and Architects” page on the FEMA Website, which can be found at http://www.fema.gov/plan/prevent/fhm/v_fpm.shtm.

Interested parties also may request a paper copy of the checklist by calling a Map Specialist in the FEMA Map Assistance Center (FMAC), toll free, at 1-877-FEMA MAP (1-877-336-2627).

To support appeals based on the effects of levees/levee systems or similar structures/ systems, appellants must submit the data and documentation below to show that the structural stability, operation, and maintenance requirements of Section 65.10 of the NFIP regulations have been met.

1. Freeboard, Riverine Levee System—Evidence that the levee system provides a minimum of 3 feet of freeboard above the BFE and that within 100 feet of wherever the flow is constricted (e.g., a bridge), an additional 1 foot of freeboard is added to that minimum, totaling a minimum of 4 feet of freeboard must be submitted; moreover, evidence that the upstream end of the levee system provides an additional 0.5 foot of freeboard added to the minimum, totaling a minimum of 3.5 feet of freeboard must be submitted.
2. Freeboard, Coastal Levee System—Evidence that the levee system provides a minimum of 1 foot of freeboard above the height of the 1-percent wave or the maximum wave runup (whichever is greater) associated with the 1-percent-annual-chance stillwater surge elevation, but in no case less than 2 feet of freeboard above the 1-percent-annual-chance stillwater surge elevation, must be submitted.
3. Closures—Evidence to show that all drainage structures or other closures that penetrate the levee system are fitted with closure devices that are structural parts of the levee system during operation and designed according to sound engineering practice must be submitted.
4. Embankment Protection—An engineering analysis that demonstrates that no appreciable erosion of the levee embankment can be expected during the 1-percent-annual-chance flood as a result of either currents or waves, and that anticipated erosion will not result in failure of the levee embankment or foundation directly or indirectly through reduction of the seepage path and subsequent instability, must be submitted.
5. Stability—Engineering analyses that evaluate the stability of the levee embankment and foundation must be submitted.
6. Settlement—Engineering analyses that assess the potential for, and magnitude of, losses of freeboard that may result from

- levee settlement and that demonstrate that the minimum required freeboard will be maintained must be submitted.
7. **Operation Plans and Criteria**— A copy of the officially adopted levee system operation plan must be provided to FEMA by the system operator when levee system recognition is being sought or when the manual for a previously recognized system is revised in any manner and all other operational criteria of Paragraph 65.10(c) must be met.
 8. **Maintenance Plans and Criteria**—An officially adopted levee system maintenance plan must be provided to FEMA by the system operator when levee system recognition is being sought or when the manual for a previously recognized system is revised in any manner and all other maintenance criteria of Paragraph 65.10(d) must be met.

Exceptions to the minimum freeboard requirements cited in Item Nos. 1 and 2 above for riverine and coastal levee systems may be approved under certain conditions. Any request for an exception must be supported by appropriate engineering analyses that show that, even with the lesser freeboard, a high level of certainty for 1-percent-annual-chance flood protection exists.

For riverine levee systems, the supporting analyses must evaluate the uncertainty in the estimated BFE and must assess, at a minimum, the statistical confidence limits of the 1-percent-annual-chance peak flood discharge; stage-discharge relationships for floods

with magnitudes greater than the 1-percent-annual-chance flood; and the sources, potential, and magnitude of debris, sediment, and ice accumulation that may affect those relationships. The analyses must also show that the levee system will remain structurally stable during the base flood, when such additional loading conditions are imposed. Freeboards of less than 2 feet will not be accepted.

For coastal levee systems, the supporting analyses must evaluate the uncertainty in the estimated base flood loading conditions. Particular emphasis must be placed on the effects of wave attack and overtopping on the stability of the levee system. Freeboards of less than 2 feet above the computed stillwater surge elevation will not be accepted.

In lieu of the data described in Item Nos. 1 through 6 above, appellants may submit certifications by a Federal agency with responsibility for levee system design that the levee has been adequately designed and constructed to the 1-percent-annual-chance flood level.

To support an appeal based on the effects of a flood protection system that involves Federal funds and is under construction at the time of the appeal, appellants must submit the data and documentation below to show that the requirements for an “adequate progress” determination by FEMA, in accordance with of Section 61.12 of the NFIP regulations, have been met.

1. Evidence that adequate progress has been made on construction (i.e., evidence to show that 100 percent of the total cost of the

- complete system has been authorized, at least 60 percent of the total cost has been appropriated, at least 50 percent of the total cost has been expended, all critical features are under construction and each is 50 percent completed as measured by the expenditure of budget funds, and the community has not been responsible for any delay in the completion of the system) must be submitted.
2. A complete statement of all relevant facts concerning the flood protection system, including, but not limited to, supporting technical data, cost schedules, budget appropriation data, and extent of Federal funding of construction of system, must be submitted.
 3. True copies of all contracts, agreements, leases, instruments, and other documents related to system must be submitted.
 4. An analysis that shows how the statement of facts (Item No. 2) and the documents (Item No. 3) bear on the evidence of adequate progress must be submitted.
 5. A statement of whether the flood protection system is the subject of litigation before any Federal, State, or local court or administrative agency and, if so, the purpose of that litigation must be submitted.
 6. A statement of whether the community previously requested a determination concerning the

same subject and, if so, the disposition of request, must be submitted..

The statement of relevant facts in Item No. 2 above must include information that identifies all persons affected by the system or by the appeal; a full and precise statement of the purpose of the system; and a detailed description of the system, including construction completion target dates.

The procedure described above does not apply when the flood protection system under construction is being financed without Federal funds. Additional information on the processing requirements and procedures for FEMA adequate progress determinations is provided in Chapter 8 of this *Guide*.

3.6 Appeal Processing Procedures

The procedures that are to be followed by FEMA, community officials, and appellants that are not affiliated with the affected communities in handling an appeal are summarized below and are provided graphically in the flowcharts in Figure 3-1 (for a FEMA-contracted study/mapping project or a PMR) and Figure 3-2 (for LOMRs), which appear at the end of this chapter.

FEMA will acknowledge receipt of all appeals submitted in writing in letter(s) to the CEO(s) of the affected communities. FEMA will send copies of the acknowledgment letter(s) to the FPA(s), other CEO designees, and to the appellant(s) that are not affiliated with the affected communities unless the

number of appellants is so great that to do so would not be practical. In such cases, the CEO(s), FPA(s), or designees will be responsible for informing appellants that FEMA has received the appeals.

FEMA will review all appeals and the supporting data and documentation submitted with them. If any questions or problems arise, FEMA will work with the CEO(s), FPA(s), other community official(s) designated by the CEOs, or the appellant(s) that are not affiliated with the communities to address those questions or problems.

If additional supporting data and/or documentation are required, FEMA may contact the appellant(s) by telephone to discuss the data and/or documentation needed, if appropriate. FEMA also will request the additional data and/or documentation by letter. FEMA will send the letter to the CEO(s) of the affected communities. FEMA also will send copies of the letter to the community FPAs and any other community officials designated by the CEOs of the affected communities, if appropriate, and to the non-community individual appellants, if it is practical to do so.

To avoid delaying the resolution of appeals, FEMA will generally allow only 30 days for the CEO(s) or their designees to provide requested data and/or documentation. If the data and/or documentation are not provided within the allotted time, FEMA will resolve the appeals using the data and documentation originally submitted. If the requested data and/or documentation are provided within the 30-day period,

FEMA will consider the additional data and/or documentation before resolving the appeals.

It should be noted here that, although the appeal period is the appropriate time to submit scientific or technical data and documentation concerning the proposed BFEs and/or base flood depths, if a community is unable to obtain and submit such data at that time, the community (or an individual through the community) may pursue a map revision under the provisions of Part 65 of the NFIP regulations after the new or revised FIRM or DFIRM has become effective. (See Chapter 4 of this *Guide* for additional information on community-initiated map revisions.)

If appeals are not supported by the data and documentation that have been submitted, FEMA will inform the CEO of each affected community by letter that the appeals are denied. If appeals are adequately supported, FEMA will revise the BFEs, base flood depths, and any other information affected by the appeals. If the appeals involved the proposed BFEs and/or base flood depths shown on a new or revised FIRM or DFIRM, FEMA will revise the FIRM or DFIRM and, if necessary, the accompanying FIS report materials.

FEMA will prepare and send a letter that explains the resolution of the appeal(s) to the CEOs of the affected communities. FEMA will send copies of the letter to the community FPAs and any other community officials designated by the CEOs of the affected communities, if appropriate, and to the

non-community individual appellants, if it is practical to do so.

FEMA may send Revised Preliminary versions of revised FIS report materials and revised FIRM or DFIRM panels with the appeal resolution letter when it is appropriate to communicate the changes that will be made, if any, in response to the appeal(s). The community will have 30 days to review and comment on the resolution, including any attachments.

Following the review period, after all comments on the appeal resolution have been addressed appropriately, FEMA will issue Letters of Final Determination (LFDs) for the affected communities and finalize the BFEs and/or base flood depths for each community by publication of a notice, called a “Final Rule”, in the FEDERAL REGISTER.

The LFD announces that the map and report information is final; provides the effective date for the map and report; and notifies the community that they have 6 months to review, update (if necessary), and submit their new or updated floodplain management ordinance to the appropriate FEMA Regional Office and the State NFIP Coordinator. The 6-month period that starts with issuance of the LFD is referred to as the adoption/compliance period.

As with most other correspondence between FEMA and the community for a study/mapping project, the LFDs will be addressed to the community CEOs, and copies will be sent to the community FPAs and any other community officials designated by the CEOs of the affected

communities, if appropriate, and to individual appellants that are not affiliated with the affected community or communities, if it is practical to do so.

During the 6-month adoption/compliance period, FEMA finalizes the map panel(s) and FIS report materials and has paper copies distributed to the affected communities, the State NFIP Coordinator, and others by the FEMA Map Service Center, or “MSC.” The MSC also provides community officials with CDs or DVDs containing the electronic versions of the map and FIS report materials and associated spatial database. The MSC staff also posts the electronic versions of the map and FIS report materials and associated spatial database on the MSC Website (<http://www.msc.fema.gov>), where they may be obtained by the public for a nominal fee.

During the processing of a study/mapping project, Preliminary (and Revised Preliminary, if appropriate) copies of the affected map panel(s) and FIS report materials are kept on file in the Community Map Repository of each affected community. The Community Map Repository is the community office responsible for floodplain management activities in the community. Interested citizens who are having trouble locating the Community Map Repository may call a FEMA Map Specialist in the previously referenced FMAC, toll free, at 1-877-FEMA MAP (1-877-336-2627).

If the appeals involve BFEs and/or base flood depths that were proposed in a LOMR, FEMA will issue a new LOMR, if appropriate, with the revised FIS report and map materials, or will explain

the resolution of the appeals in letters to the CEOs of the affected communities. Community officials and other appellants will have 30 days to review and comment on the resolution, after which FEMA will finalize the BFEs by publishing a Final Rule in the FEDERAL REGISTER and will send final BFE notification letters to the affected communities.

As with done other correspondence for LOMRs, FEMA will address the final BFE notification letters to the community CEO(s). FEMA will send copies to the community FPA(s) and any other community officials designated by the CEOs of the affected communities, if appropriate. FEMA will also send copies to individual appellants that are not affiliated with the affected community or communities, if it is practical to do so.

3.7 Administrative Hearings

If a community appeals the proposed BFE determination issued by FEMA in accordance with Section 67.8 of the NFIP regulations and FEMA determines that the appeal cannot be resolved by consultation with community officials or by submitting the conflicting data to an independent scientific body or appropriate Federal agency for advice, FEMA may hold an administrative hearing to resolve the appeal. The requirements for such administrative hearings are documented in Part 68 of the NFIP regulations.

3.8 Appeals to District Court

In accordance with Section 67.12 of the NFIP regulations, an appellant who is aggrieved by the final determination may, within 60 days of receipt of the LFD, appeal the determination to the U.S. District Court. While the appeal is being reviewed by the U.S. District Court, the final determination by FEMA will be effective, unless it is stayed by the Court for good cause shown.

3.9 Other Comments Received During Appeal Period

During the formal 90-day appeal period, a community official or an individual property owner may wish to object to, or provide additional comments on, information shown on the new or revised FIRM, DFIRM, FBFM, or FIS report. If the objection or comment does not involve the BFEs and/or base flood depths shown on the map panels and in the FIS report materials, it does not constitute an appeal, according to Part 67 of the NFIP regulations,. Such objections are referred to simply as “comments.”

Like appeals, the comments should not be submitted directly to FEMA by individual property owners or other appellants. These comments, along with appropriate supporting data and/or documentation, should be submitted to the CEO of the affected community or to a community official designated by the CEO, such as the FPA. The CEO or designated community official must

review the comments and, when forwarding them to the appropriate FEMA office, state whether the community supports the comments. The addresses for the FEMA offices are provided in Appendix E of this *Guide*.

These comments can generally be placed in one of the following three categories:

1. Changes to flood zone boundary delineations;
2. Changes to corporate limits; or
3. Changes to road names and configurations.

The three categories of comments and the data and/or documentation that must be submitted to support them are discussed in the sections that follow.

3.9.1 Changes to Flood Zone Boundary Delineations

The supporting data required for changes to 1- and 0.2-percent-annual-chance flood zone boundaries will vary, depending on whether the boundaries are for flooding sources studied by detailed methods or flooding sources studied by approximate methods, as discussed below.

Flooding Sources Studied by Detailed Methods

Usually, detailed 1- and 0.2-percent-annual-chance flood zone boundaries are delineated using topographic maps and the BFEs and/or base flood depths resulting from the hydraulic analysis performed for the study/mapping project or LOMR. If topographic maps or other ground elevation data are submitted that

are more detailed than those used by FEMA or that show more recent topographic conditions, FEMA will use them to revise the flood zone boundaries shown on the affected map panels.

All maps and other supporting data submitted must be certified by a Registered Professional Engineer or a Licensed Land Surveyor and must reflect existing conditions. Maps prepared by an authoritative source, such as the U.S. Army Corps of Engineers, U.S. Geological Survey (USGS), U.S. Bureau of Reclamation, or a State department of highways and transportation, are acceptable without certification as long as the sources and dates of the maps are identified.

Flooding Sources Studied by Approximate Methods

Usually, where BFEs are not available, flood zone boundaries are delineated with the best available data, including flood maps published by other Federal agencies, information on past floods, and simplified hydrologic and hydraulic analyses. If more detailed data or analyses are submitted, FEMA will use them to revise the flood zone boundaries shown on the affected map panels. Such data and analyses would include the following:

- Published flood maps that are more recent or more detailed than those used by FEMA.
- Analyses that are more detailed than those performed by FEMA or that are based on better data than those used by FEMA

All submitted data and analyses must be certified by a Registered Professional Engineer or a Licensed Land Surveyor.

3.9.2 Changes to Corporate Limits

The corporate limits shown on older versions of FIRMs and FBFMs were taken from community maps or other authoritative source materials obtained by FEMA contractors and/or mapping partners during the course of processing a study/mapping project or LOMR.

The corporate limit information shown on newer versions of FIRMs and all DFIRMs are part of the base map data that are supplied by communities or other non-Federal sources (e.g., State agencies, regional entities), which must meet FEMA criteria, or the USGS Digital Orthophoto Quadrangles (DOQs). The USGS DOQs are used when community base map data are not submitted or the submitted data do not meet FEMA criteria.

When changes to the corporate limits shown on the older versions of FIRMs and FBFMs are requested, the community must submit an up-to-date community map. FEMA may use the community map to revise the corporate limits shown on the affected map panels, or will send letters to the CEOs of the affected communities explaining why no changes were made. FEMA also will send copies of these letters to the community FPAs and other officials designated by the CEOs.

When changes to the corporate limits shown on DFIRMs are requested, the community must submit appropriate

updates to the previously provided base map data or must provide a geospatially accurate map that can be considered for revising the digital base map.

3.9.3 Changes to Road Names and Configurations

In general, FEMA shows on its maps all roads that are within or immediately adjacent to the mapped 1- and 0.2-percent-annual-chance flood zone boundaries. If the community submits appropriately registered maps or updates to the community-supplied base map data to show new or revised information concerning the names and locations of such roads, FEMA will revise the affected map panels or map panel attachments to LOMRs as appropriate.

3.10 Comment Processing Procedures

The steps that are followed in processing non-appeal comments submitted during the 90-day appeal period for a study/mapping project or LOMR are shown in Figure 3-3, which appears at the end of this chapter.

FEMA will acknowledge receipt of all formal comments submitted in writing in letters to the CEOs of the affected communities. FEMA will send copies of the acknowledgment letter to the community FPAs, to other community officials designated by the CEOs, and to all non-community commenters unless the number of commenters is so great that to do so would not be practical. In such cases, FEMA will inform the

communities that they are responsible for informing the non-community commenters that FEMA acknowledged receipt of the comments.

FEMA will review all formal comments submitted during the appeal period and the supporting data and documentation submitted with them. If any questions or problems arise, FEMA will work with the CEOs, FPAs, other community officials designated by the CEOs, or the non-community commenters to resolve them.

If additional supporting data and documentation are required, FEMA will request the additional data and documentation by letter. The letter will be sent to the CEO of each of the affected communities. Copies of the letter will be sent to the community FPAs and any other community officials designated by the CEOs of the affected communities, if appropriate, and to the individual non-community commenters, if it is practical to do so.

To avoid delaying the resolution of comments, FEMA will generally allow only 30 days for the CEO(s), their designees, or the non-community commenters through the community to provide requested data and/or documentation. If the data and/or documentation are not provided within the allotted time, FEMA will address the comments using the data and documentation originally submitted.

If the requested data and documentation are provided within the 30-day period, FEMA will consider them when addressing the comments.

It should be noted here that, although the appeal period is the appropriate time to submit data and documentation to support changes to map and report information other than proposed BFEs and/or base flood depths, if a community is unable to obtain and submit such data and documentation at that time, it may pursue a map revision under the provisions of Part 65 of the NFIP regulations after the new or revised FIRM or DFIRM has become effective. (See Chapter 4 for additional details on the map revision process and requirements.)

Changes that must be made to the affected map panels and FIS report materials as a result of comments submitted regarding studies/mapping projects are usually incorporated into the final version of the affected map panel(s) and FIS report(s) before they are submitted to the MSC. As discussed below, the changes to LOMR attachments are handled differently.

When necessary to clearly explain the changes that have been made in response to the submitted comments, FEMA may issue a separate resolution letter and/or provide the CEO(s) and FPA(s) of the affected communities with revised copies of the affected map panels and FIS report materials for review and comment. Generally, FEMA will explain the resolution of the comments submitted in the LFD.

As with other correspondence related to studies/mapping projects, FEMA will address the LFD(s) to the community CEO(s) and will send copies to the community FPA(s); any other community official(s) designated by the

CEO(s), if appropriate; and to commenters that are not affiliated with the affected community/communities, if it is practical to do so.

When one or more separate letters are required, FEMA will send the letter(s) to the CEO(s) of the affected communities and will distribute copies of the letter(s) to the community FPAs; other community officials designated by the CEOs, if appropriate; and to individual commenters that are not affiliated with the affected communities, if it is practical to do so.

As mentioned earlier in this chapter, during the 6-month adoption/compliance period, FEMA finalizes the map panel(s) and FIS report materials and has paper copies distributed to the affected communities, the State NFIP Coordinator, and others by the MSC. The MSC also provides community officials with CDs or DVDs containing the electronic versions of the map and FIS report materials and associated spatial database. The MSC staff also posts the electronic versions of the map and FIS report materials and associated spatial database on the MSC Website (<http://www.msc.fema.gov>), where they may be obtained by the public for a nominal fee.

During the processing of a study/mapping project, Preliminary (and Revised Preliminary, if appropriate) copies of the affected map panel(s) and FIS report materials are kept on file in the Community Map Repository of each affected community. The Community Map Repository is the community office responsible for floodplain management activities in the community.

Interested citizens who are having trouble locating the Community Map Repository may call a FEMA Map Specialist in the previously referenced FMAC, toll free, at 1-877-FEMA MAP (1-877-336-2627).

If the comment submitted is a request to change the map enclosure(s) that accompanied a FEMA determination made by LOMR, FEMA will follow procedures similar to those used for processing appeals of LOMRs. These procedures are discussed in Chapter 3 and presented graphically in Figure 3-2.

FEMA will issue the new LOMR determination document(s), if appropriate, and revised FIS report material and map attachments, or will explain the resolution in separate letters to the CEO(s) of the affected community/communities. FEMA will send the resolution letter(s) to the affected community CEO(s) and will distribute copies to the community FPA(s); other community official(s) designated by the CEO(s), if appropriate; and to individual commenters that are not affiliated with the affected community/communities, if it is practical to do so.

The affected community officials and the commenters that are not affiliated with the affected communities will have 30 days to review and comment on the resolution. Any comments from commenters other than community officials are to be submitted through the community CEO(s), FPA(s), or other designees. Any additional correspondence between FEMA and the communities will be distributed the same way as the resolution letter.

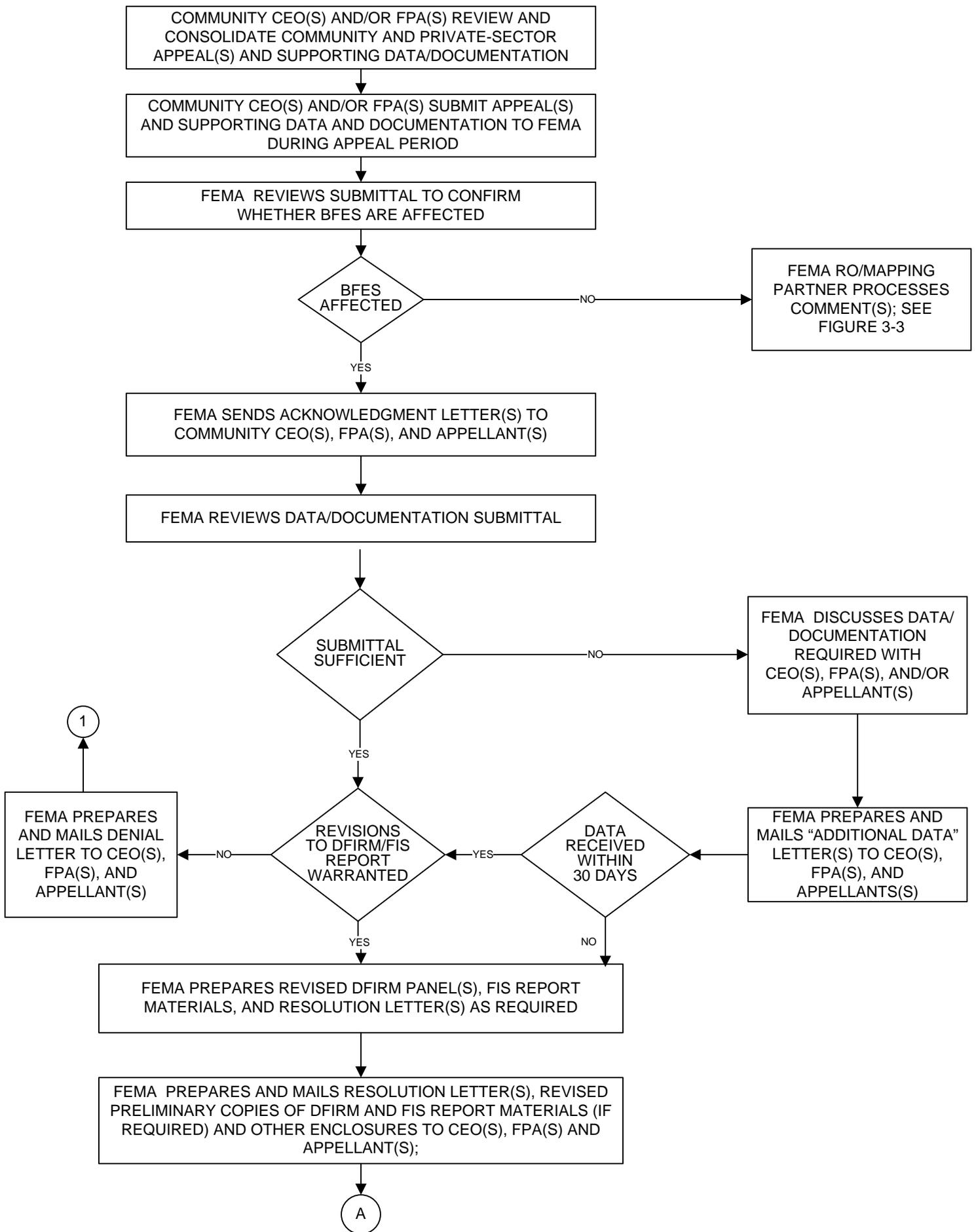


Figure 3-1. Processing Procedures for Appeals

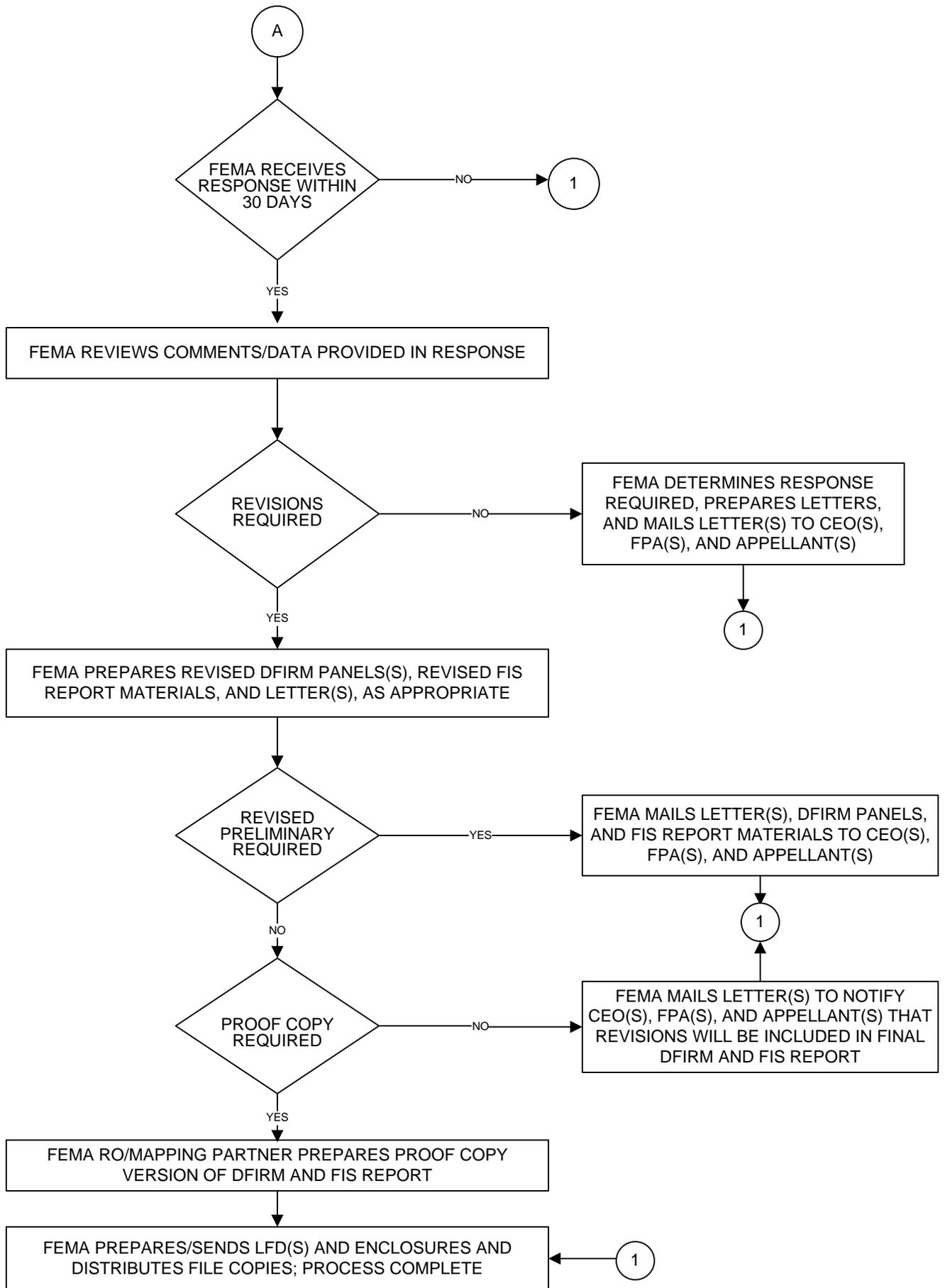


Figure 3-1. Processing Procedures for Appeals (Cont'd)

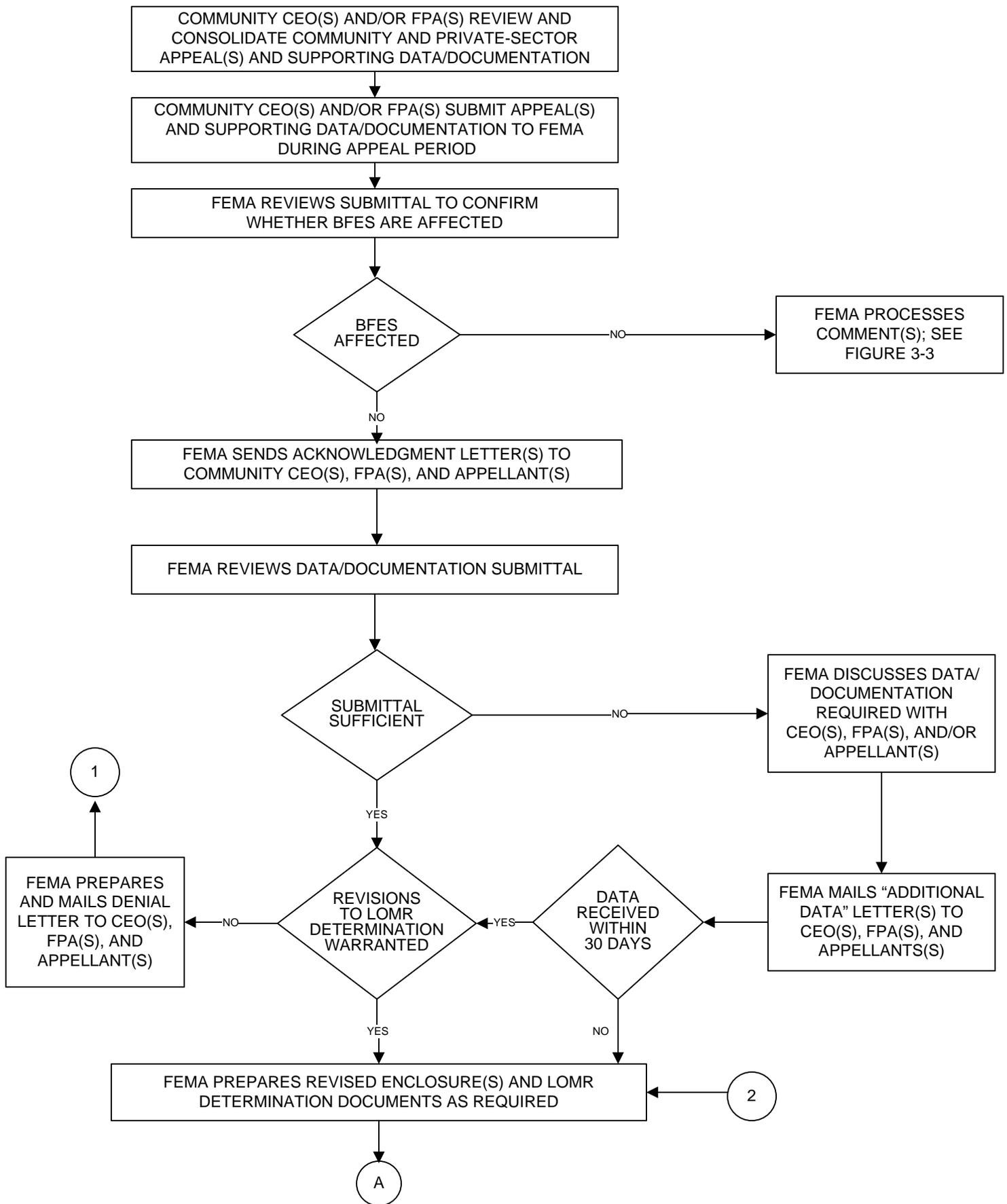


Figure 3-2. Processing Procedures for Appeals of LOMR Determinations

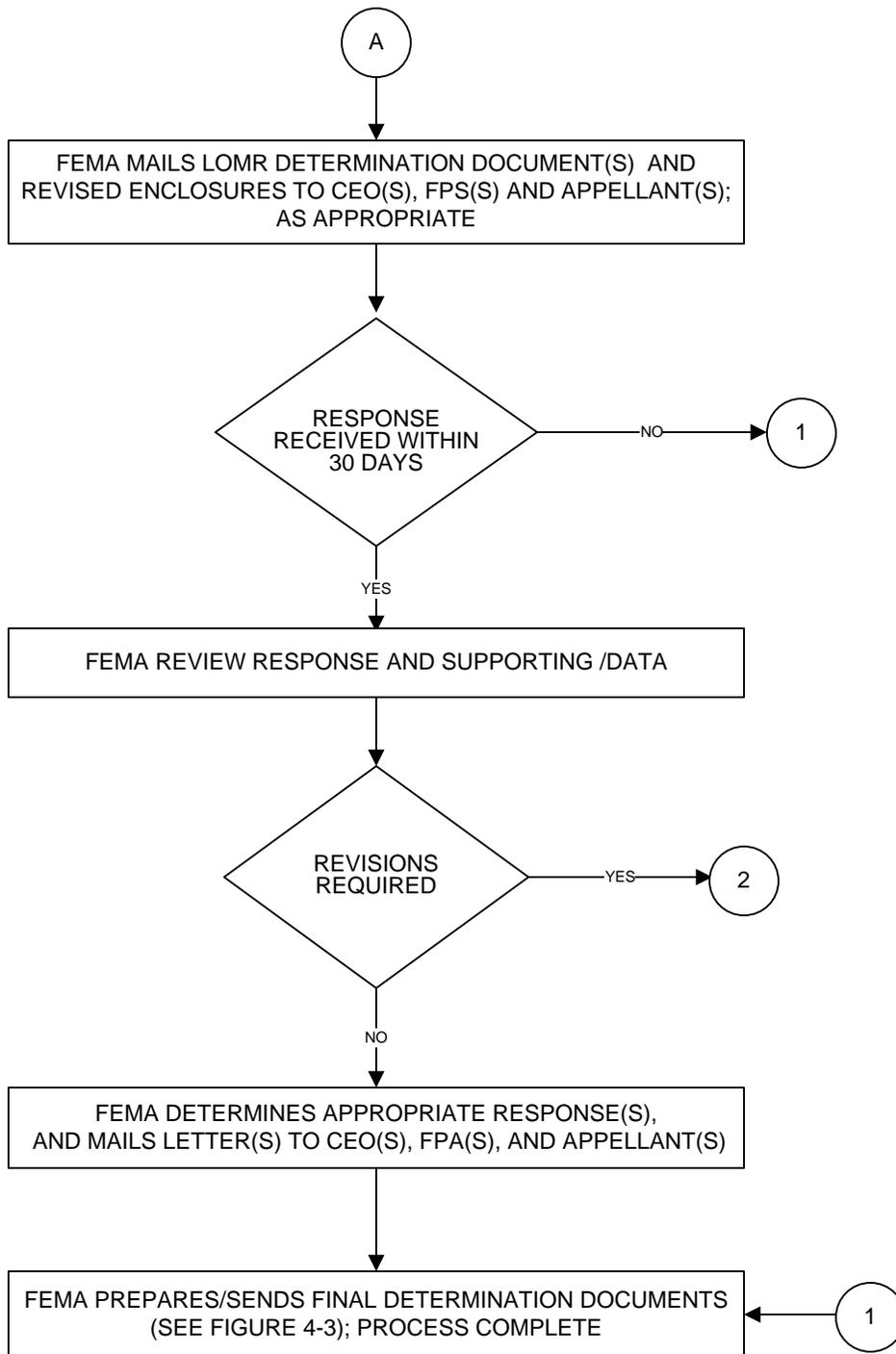


Figure 3-2. Processing Procedures for Appeals of LOMR Determinations (Cont'd)

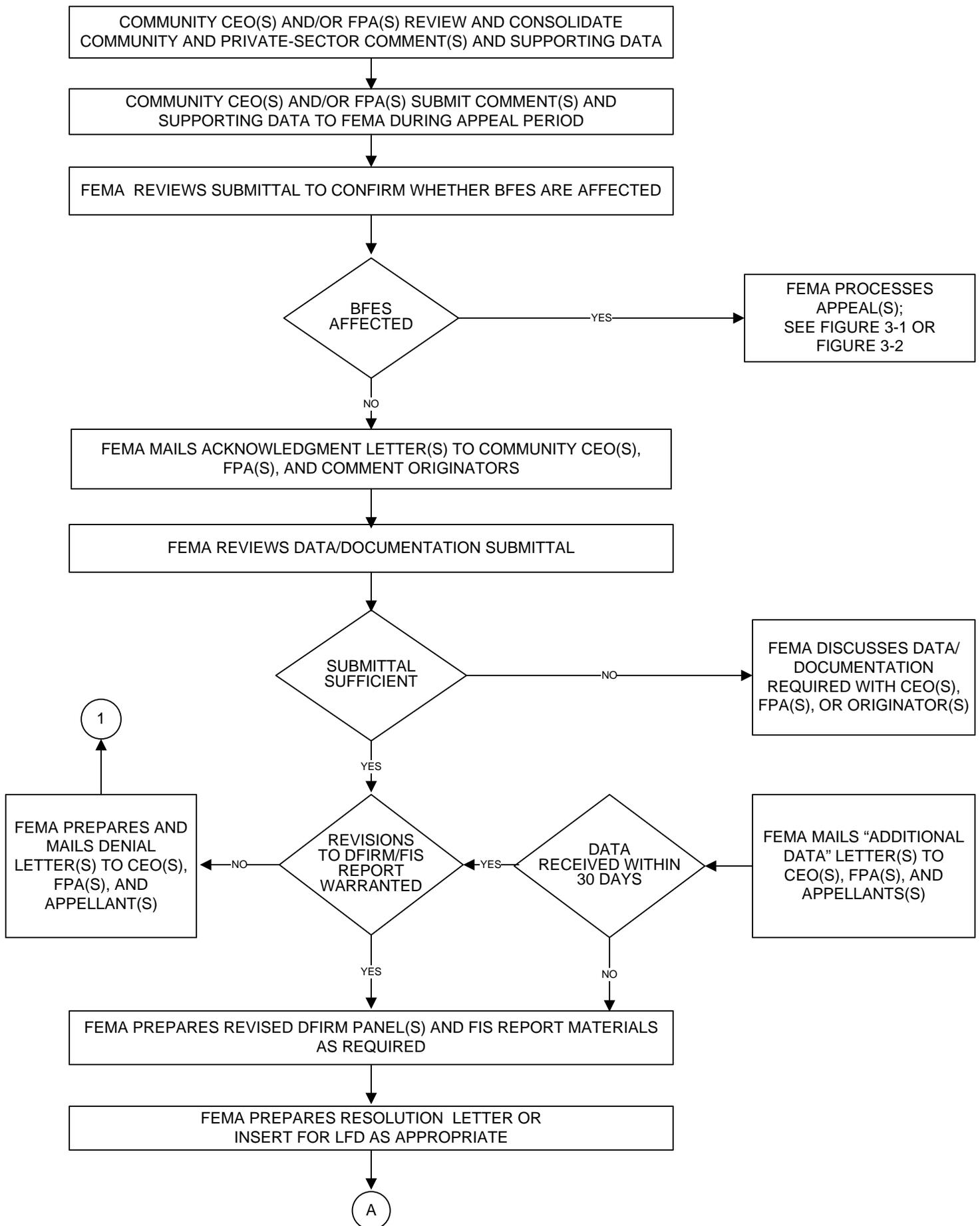


Figure 3-3. Processing Procedures for Comments Received During Appeal Period

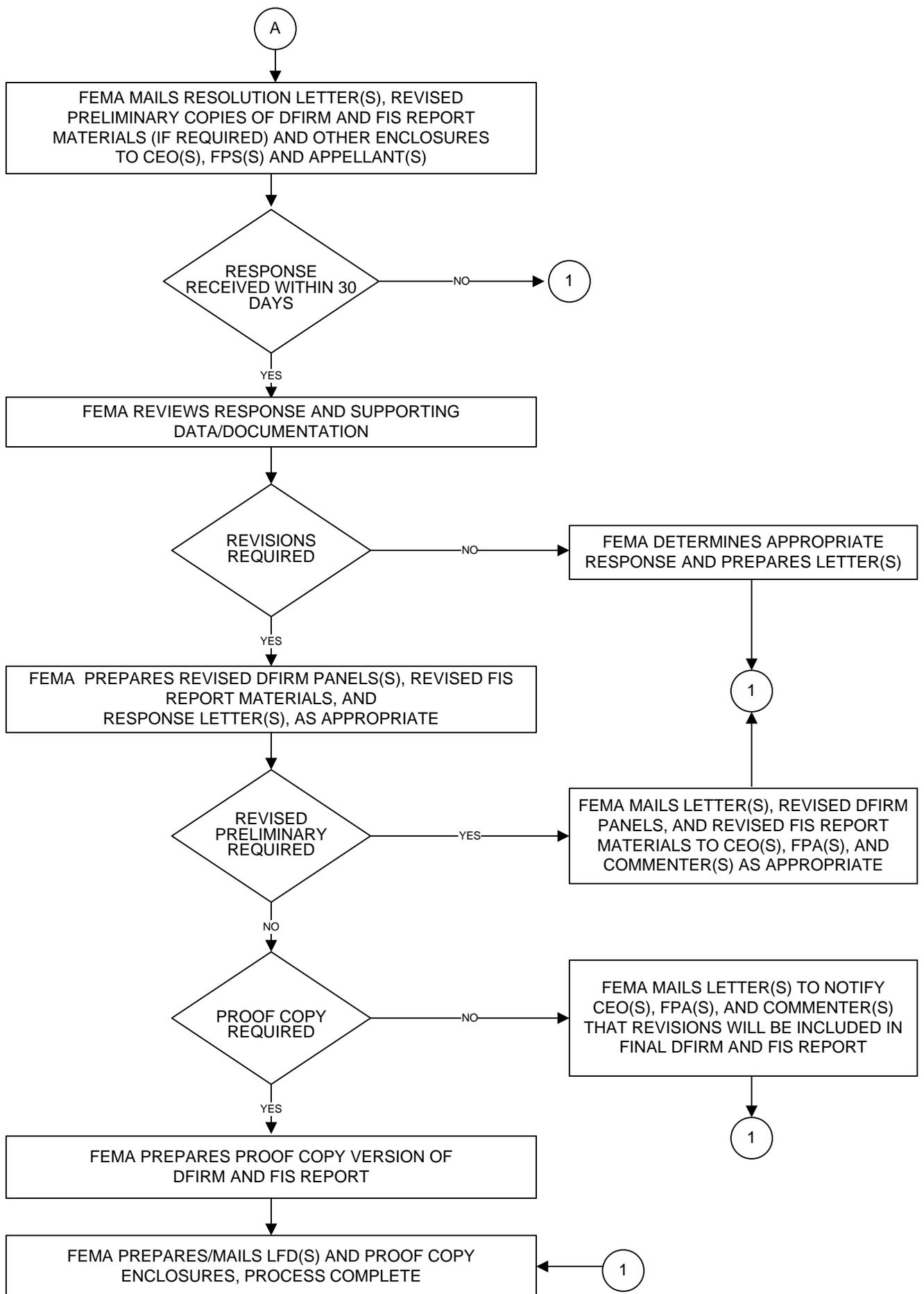


Figure 3-3. Processing Procedures for Comments Received During Appeal Period (Cont'd)

Chapter 4 Map Revisions

4.1 Background

To provide a sound basis for floodplain management and insurance rating, National Flood Insurance Program (NFIP) maps must present flood hazard and risk information that is correct and up to date. Because the information on the maps is subject to change, FEMA has developed the map revision processes discussed in this chapter. Through these map revision processes, community officials may request that effective NFIP maps be revised to incorporate new or corrected flooding information. Regulatory requirements for map revisions are documented in Part 65 of the NFIP regulations. Procedural requirements for map revisions are documented in Volume 2 of FEMA's *Guidelines and Specifications for Flood Hazard Mapping Partners* and in Sections 2 and 3 of FEMA's *Document Control Procedures Manual*. These documents may be accessed through the "Guidance Documents and Other Published Resources" page on the FEMA Website:
http://www.fema.gov/plan/prevent/fhm/fm_docs.shtm.

The information depicted on effective NFIP maps may be revised by a Physical Map Revision (PMR), by a Letter of Map Revision (LOMR), or by a Letter of Map Revision Based on Fill (LOMR-F). A PMR involves revising and republishing the portions of the map affected by the requested changes. When NFIP maps are revised by a LOMR, the

changes made to the affected map(s) are described in determination documents, which are accompanied by digitally produced versions of annotated map panels and/or Flood Insurance Study (FIS) report materials.

When NFIP maps are revised by a LOMR-F, changes made to the affected map panel(s) also are described in determination documents. LOMR-Fs are not accompanied by annotated map panels or FIS report materials because of their limited scope. Additional background information on LOMR-Fs is provided in Section 4.

Because of the costs involved in printing new map panels, FEMA has generally physically revised and re-published maps only when it is necessary to show changes involving a large area of land or increased flood hazards. Changes that involve increased flood hazards include:

- Adding new Special Flood Hazard Areas (SFHAs), the areas that would be inundated by the base (1-percent-annual-chance flood);
- Adding new regulatory floodways;
- Enlarging existing SFHAs and/or regulatory floodways
- Shifting existing SFHAs and/or regulatory floodways to areas not previously within the SFHAs and/or regulatory floodways, and
- Increasing Base (1-percent-annual-chance) Flood Elevations (BFEs).

To make other types of map changes, FEMA has usually issued LOMRs.

LOMRs may be used for map revisions that decrease the size of SFHAs/regulatory floodways, but usually are not used for map revisions that shift existing SFHAs and regulatory floodways to areas not previously within the SFHAs/regulatory floodways, even when the size of the SFHA and regulatory floodway is generally being decreased. LOMRs are especially well suited to changes that involve small areas within a community.

Although changes may be made to any of the information shown on an effective NFIP map, FEMA generally will not revise an effective map unless the changes involve modifications to the 1-percent-annual-chance flood information. Requests for changes that involve other information (e.g., roads, road names, and corporate limits) will usually be filed for future use. If a physical revision becomes necessary as a result of a FEMA-contracted study/mapping project or a request for changes to flooding information, all requests on file will be reviewed and addressed appropriately at that time.

The procedures for the handling of map revision requests involving only changes to corporate limits, including a process flowchart, can be found in Volume 2, Section 2.6, of FEMA's *Guidelines and Specifications for Flood Hazard Mapping Partners*. The *Guidelines and Specifications* are available from the FEMA Library (<http://www.fema.gov/library/index.jsp>) and can be accessed through a dedicated page on the FEMA Website: http://www.fema.gov/plan/prevent/fhm/g_s_main.shtm.

Often, developers and property owners place fill to elevate one or more structures or parcels of land. In accordance with Part 65 of the NFIP regulations, the developers or property owners may submit certain data and documentation, discussed in detail below, and ask that FEMA make an official determination regarding whether the effective NFIP map for the impacted area should be revised. The procedural requirements for such requests are documented in Volume 2, Section 2.4 of FEMA's *Guidelines and Specifications for Flood Hazard Mapping Partners* and in Section 3 of FEMA's *Document Control Procedures Manual*. These documents also are available from the FEMA Library or may be accessed through the "Guidance Documents and Other Published Resources" page on the FEMA Website:

http://www.fema.gov/plan/prevent/fhm/fm_docs.shtm.

"Fill" is defined as material from any source placed to raise the ground (natural grade) to or above the BFE. The common construction practice of removing unsuitable existing material (topsoil) and backfilling with select structural material is not considered the placement of fill if the practice does not alter the existing (natural grade) elevation. Fill placed before the date of the first NFIP map showing the area in an SFHA is considered natural grade.

Depending on where the soil is placed, fill may change the flow of water or increase flood elevations. Fill may be used to elevate a building to meet NFIP requirements. Sometimes fill is combined with other methods of

elevation such as pilings or foundation walls. The placement of fill requires a local permit from the community.

If fill has been placed, the FEMA determination regarding the request will be based on a comparison of the BFE with the elevation of the lowest adjacent grade to the structure (lowest ground touching the structure) including any attached deck(s) or garage and a completed version of Form 3, “Community Acknowledgment Form” from the MT-1 application forms package. The MT-1 forms and instructions are discussed below and later in this chapter.

For FEMA to remove the SFHA designation from a legally defined property or portion of property that does not have a structure on it, the elevation of the lowest ground on the property must be at or above the BFE. If FEMA determines that the SFHA designation does not apply to the particular structure(s) or parcel(s) of land, FEMA issues a LOMR-F determination document that removes the SFHA designation from the subject property/properties and/or structure(s). If FEMA determines that the SFHA designation does apply to the particular structure(s) or parcel(s) of land, FEMA issues a LOMR-F determination document that does not remove the SFHA designation from the property and/or structure.

FEMA does not issue LOMR-Fs in alluvial fan flood hazard areas (areas labeled as Zone AO, with both base flood depths and velocities shown in feet per second on the effective NFIP map) or in coastal high hazard areas (areas labeled as Zones V, VE, or V1-30 on the

effective NFIP map). Additional information on FEMA procedures for requests involving structures or parcels in alluvial fan flood hazard areas or coastal high hazard areas is provided in Section 4. later in this chapter.

4.2 Application Forms

In 1992, FEMA developed the MT-1 and MT-2 application forms and instructions packages for map revisions to facilitate map revision processing. The MT-1 forms can be accessed from the following page on the FEMA Website: http://www.fema.gov/plan/prevent/fhm/d1_mt-1.shtm. The MT-2 forms can be accessed from the following page: http://www.fema.gov/plan/prevent/fhm/d1_mt-2.shtm.

The MT-1 and MT-2 forms packages provide step-by-step instructions for requesters to follow and is comprehensive, ensuring that the requesters’ submissions are complete and more logically structured. This allows FEMA staff to complete their review quicker and at lower cost to the NFIP. While completing the forms may seem burdensome, experience has shown that the advantages to the requesters outweigh any inconvenience. The forms and instructions are discussed in more detail later in this chapter.

4.3 Fee-Charge System

To reduce the expenses to the NFIP by more fully recovering the costs associated with processing conditional and final map change requests, FEMA implemented a procedure to recover costs associated with reviewing and

processing such requests. The fee schedule for map change requests is provided in Table D-1 in Appendix D of this *Guide*.

FEMA reviews its fee-charge procedures periodically (usually, once every 2 years) and may revise the review and processing fees for map change requests. Therefore, interested parties should visit the following page on the FEMA Website for the most up-to-date information:

http://www.fema.gov/plan/prevent/fhm/firm_fees.shtm.

Certain map change requests may qualify for exemptions in accordance with Section 72.5 of the NFIP regulations, as summarized on the above-referenced Web page and in Appendix D, and include changes that correct mapping errors, natural changes, and better quality data that do not partially or wholly incorporate manmade modifications within the SFHA.

4.4 North American Vertical Datum of 1988

Since the National Geodetic Survey determined that the national vertical control network needs to be readjusted, FEMA has been gradually converting NFIP maps from the National Geodetic Vertical Datum of 1929 (NGVD29) to the North American Vertical Datum of 1988 (NAVD88) in the contiguous United States. Therefore, when submitting map revision requests, requesters should use the reference datum on the applicable, effective FIRM or DFIRM panel.

For more information on the conversion from NGVD29 to NAVD88, requesters should refer to FIA-20, *Converting the National Flood Insurance Program to the North American Vertical Datum of 1988, Guidelines for Community Officials, Engineers, and Surveyors*, and to Appendix B, “Guidance for Converting to the North American Vertical Datum of 1988,” of FEMA’s *Guidelines and Specifications for Flood Hazard Mapping Partners*. These guidance documents are available from the FEMA Library (<http://www.fema.gov/library/index.jsp>). Information on how to obtain copies of these and other useful guidance documents is provided in Appendix B of this *Guide*.

4.5 How To Request a Map Revision Based on Conditions Other Than Fill

A community or private party may request that an effective NFIP map be revised at any time. When the request does not involve the proposed BFEs, the map revision procedures of Part 65 of the NFIP regulations are to be followed. As noted in Chapter 1 of this *Guide*, Section 65.3 of the NFIP regulations requires that each participating community inform FEMA of any physical changes that affect BFEs in the community and submit data that show the effects of those changes within 6 months of the date that the data are available.

To request a map revision based on conditions other than fill, the requester

must complete the appropriate parts of the MT-2 application forms and instructions package. These forms were prepared to address most types of revision requests received. For other types of requests, such as requests involving coastal or alluvial fan flooding, only the applicable parts of these forms should be submitted.

Requesters may obtain paper copies of these forms and instructions from the Map Specialists in the FEMA Map Assistance Center (FMAC). Requesters may contact the FMAC by telephone, toll free, at 1-877-FEMA MAP (1-877-336-2627), or send an e-mail message to FEMAMapSpecialist@riskmapcds.com. For hours of operation and to learn more about FMAC services, interested parties should visit the FMAC page on the FEMA Website: http://www.fema.gov/plan/prevent/fhm/mc_main.shtm.

Requesters also may download Word, PDF, and TXT versions of the MT-2 application forms and instructions from the FEMA Library (<http://www.fema.gov/library/index.jsp>); the forms and instructions are accessible through the following page on the FEMA Website: http://www.fema.gov/plan/prevent/fhm/dl_mt-2.shtm.

Completed application forms, supporting data and documentation, and review and processing fees for map revision requests are to be submitted to:

LOMC Clearinghouse
6730 Santa Barbara Court
Elkridge, MD 21075

Payment of the review and processing fee may be made by credit card, check, or money order. Checks and money orders are to be made payable in U.S. funds to the National Flood Insurance Program. If a revision requester chooses to use a credit card, the credit card information is to be provided on the “Payment Information Form” (Figure 4-1) that is included in the MT-2 forms package.

An assigned FEMA Fee-Charge System Administrator (FCSA) will review the check, money order, and payment information and, if appropriate, deposit the payment in the National Flood Insurance Fund (NFIF). If the FCSA identifies any irregularities with the payment, the FCSA will not deposit the payment in the NFIF. In such instances, FEMA will send a letter to the requester explaining any additional actions the requester must take to allow FEMA to process the request.

FEDERAL EMERGENCY MANAGEMENT AGENCY
PAYMENT INFORMATION FORM

Community Name: _____
Project Number: _____

THIS FORM MUST BE MAILED, ALONG WITH THE APPROPRIATE FEE, TO THE ADDRESS BELOW OR FAXED TO THE FAX NUMBER BELOW.

Type of Request:

MT-1 application } FEMA Fee Charge System Administrator
 MT-2 application } 6730 Santa Barbara Court
Elkridge, MD 21075

EDR application } FEMA Project Library
6730 Santa Barbara Court
Elkridge, MD 21075
FAX (410) 312-4300

Payment To: _____ (if from) Amount: _____

INITIAL FEE FINAL FEE FEE BALANCE MASTER CARD VISA CHECK MONEY ORDER

Note: Check only for EDR. Allow for request on appropriate fee.
Check only for EDR and request fee for an approved project.

COMPLETE THIS SECTION ONLY IF PAYING BY CREDIT CARD

CARD NUMBER: [][][][] - [][][][] - [][][][][] - [][][][][]
EXP. DATE: [][] - [][]

Date: _____ Signature: _____

NAME (AS IT APPEARS ON CARD): _____
ADDRESS: _____
CITY: _____
STATE/ZIP: _____
DAYTIME PHONE: _____

FEMA Form 01-487 Payment Information Form

Figure 4-1. Payment Information Form

Because the Chief Executive Officer (CEO) of the community is responsible for ensuring that the community meets its obligations as a participant in the NFIP, either the CEO or a community official designated by the CEO—such as a floodplain administrator (FPA), planner, or engineer—must be aware of all map revision requests. Therefore, any individual property owner, developer, or other person who wishes to request a map revision based on conditions other than fill must have the community CEO, FPA or other designated community official acknowledge this requested change by completing the appropriate sections of Form 1, "Overview and Concurrence Form," from the MT-2 application forms package.

If FEMA receives a map revision request directly from a private party, without community concurrence, FEMA will ask the requester to provide evidence that the request was first submitted to the CEO, FPA, or other designated official.

Revisions to effective NFIP maps are usually requested because of changes that have taken place in the floodplain. Such changes include, but are not limited to, the construction of new bridges, culverts, levee systems, and channel modifications. Occasionally, map revisions are requested because the analyses used by FEMA to develop the data shown on the effective NFIP map are found to contain errors or because a requester believes that the use of alternative methodologies or better data will provide superior results.

4.6 Supporting Data and Documentation Required for Map Revisions

To support requests based on the effects of physical changes that have occurred in the floodplain or on the use of alternative methodologies or better data, the requester must provide new analyses, in which the alternative methodologies or better data are used, and all other data FEMA would need to revise the effective map and FIS report. FEMA will not perform any analyses to determine either the nature or extent of the changes that might be necessitated by those types of requests.

Based on the reason for the request, the requester will need to 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.

The data and documentation that must be submitted in support of map revision requests that are summarized in Tables 4-1 through 4-4 as follows: for revisions based effects of physical changes in the floodplain (Table 4-1); for revisions based on the use of better data (Table 4-2); for revisions based on the use of an alternative methodology (Table 4-3); and for revisions based on structural modifications within the floodplain (Table 4-4). Structural modifications include channelizations, culverts and storms systems, bridges, levees, and dams.

Table 4-1. Supporting Data and Documentation for Map Revisions Based on Effects of Physical Changes in Floodplain

Supporting Data Type	Changes Affecting Hydrologic Conditions	Changes Affecting Hydraulic Conditions	Changes Affecting Topographic Conditions
General description of changes	X	X	X
Certified as-built plans	X	X	
New hydrologic analysis	X		
New hydraulic analysis based on original discharge values		X	
New hydraulic analysis based on new discharge values	X	X	
Revised flood zone boundary delineations on topographic map	X	X	X
Revised regulatory floodway boundary delineations on topographic map	X	X	
Annotated copies of FHBM, FIRM/DFIRM, FBFM, Flood Profiles, and FIS report tables, as appropriate, showing requested revisions	X	X	X
New topographic information (e.g., spot elevations, grading plans, and contour maps)			X

Note: Because the required data and documentation will vary with each individual map revision request, requesters should refer to the MT-2 application forms and instructions for details. FEMA may request data and documentation other than those listed in Table 4-1 to process a particular map revision request.

Table 4-2. Supporting Data and Documentation for Map Revisions Based on Use of Better Data

Supporting Data Type	Better Hydrologic Data	Better Hydraulic Data	Better Topographic Data
Better data	X	X	X
Source of data	X	X	X
Explanation of improvement	X	X	
New hydrologic analysis	X		
New hydraulic analysis based on original discharge values		X	
New hydraulic analysis based on new discharge values	X	X	
Revised flood zone boundary delineations on topographic map	X	X	X
Revised regulatory floodway boundary delineations on topographic map	X	X	X
Annotated copies of FHBM, FIRM/DFIRM, FBFM, Flood Profiles, and FIS report tables, as appropriate, showing requested revisions	X	X	X

Note: Because the required data will vary with each individual map revision request, requesters should refer to the MT-2 application forms and instructions for details. FEMA may request data other than those listed in Table 4-2 to process a particular map revision request.

Table 4-3. Supporting Data and Documentation Required for Map Revisions Based on Use of Alternative Methodology

Supporting Data Type	Alternative Hydrologic Methodology	Alternative Hydraulic Methodology
New hydrologic analysis based on alternative methodology	X	
New hydraulic analysis based on new hydrologic analysis	X	
New hydraulic analysis based on alternative methodology and original discharge values		X
Explanation for superiority of alternative methodology	X	X
Revised flood zone boundary and/or regulatory floodway boundary delineations on topographic map	X	X
Annotated copies of FHBM, FIRM/DFIRM, FBFM, Flood Profiles, and FIS report tables, as appropriate, showing requested revisions	X	X

Notes:

Because the required data will vary with each individual map revision request, requesters should refer to the MT-2 application forms and instructions for details. FEMA may request data other than those listed in Table 4-3 to process a particular map revision request.

When an alternative hydrologic methodology is used, the methodology should be applied to the entire flooding source/waterway.

To support requests based on the contention that mathematical or measurement errors have been made, the requester needs only to identify the errors and provide the new data that FEMA will use to perform new analyses and correct the affected map panel(s) and, if appropriate, affected Flood Profile(s) and data table(s) in the effective FIS report(s).

Table 4-4. Supporting Data and Documentation for Map Revisions Based on Structural Modifications

Data/Documentation Type	Channelizations	Culverts/ Storm Systems	Bridges	Levee Systems	Dams
Certified as-built construction or grading plans	X	X	X	X	X
Hydrologic analysis (if discharges in effective model not used)	X	X	X	X	X
Calibration run duplicating original hydraulic model (multiple profile and regulatory floodway)	X	X	X		
Existing hydraulic model (multiple profile and regulatory floodway) if calibration hydraulic model run does not reflect conditions prior to start of project	X	X	X		
Revised hydraulic model (multiple profile and regulatory floodway)	X		X		
Revised hydraulic model (multiple profile and regulatory floodway) and determination of headwater and tailwater elevations		X			
Flood zone and/or regulatory floodway boundary delineations on the effective map panels	X	X		X	X
Transition structure design plans for as-built conditions	X				
New hydrologic analyses or diversion channels	X				
Evidence of adequate soil compaction and erosion protection (for placement of fill)	X	X	X	X	X
Certified topographic data that include entire area of revision and delineate flood zone and/or regulatory floodway boundaries, BFEs, vertical datum reference, and cross-section locations	X	X	X	X	X

Table 4-4. Supporting Data and Documentation for Map Revisions Based on Structural Modifications (Cont'd)

Data/Documentation Type	Channelizations	Culverts/ Storm Systems	Bridges	Levee Systems	Dams
Hydraulic model with levee if compliant with Section 65.10 of the NFIP regulations				X	
Hydraulic models with and without levee if not compliant with Section 65.10 of the NFIP regulations				X	
Evidence of structural stability, certified by a Registered Professional Engineer				X	
Evidence of operation and maintenance provisions				X	X
Interior drainage analyses and SFHA boundary delineations				X	
Additional design data as necessary				X	
Certification by Registered Professional Engineer that impoundment structures will remain stable during the base flood					X
Hydraulic analysis					X
Hydrologic analyses for downstream reach, if dam is designed and operated to lower base flood discharge					X

Individuals or community officials that are considering whether to submit a map revision request based on conditions other than fill also should refer to the MT-2 instructions and the following forms, where appropriate, to determine what supporting data and documentation are required:

- “Elevation Form” (Form 1);
- “Riverine Hydrology & Hydraulics Form” (Form 2);
- “Riverine Structures Form” (Form 3);
- “Coastal Analysis Form” (Form 4);
- “Coastal Structures Form” (Form 5); and
- “Alluvial Fan Flooding Form” (Form 6).

Certifications, where referenced in the requirements for supporting data and documentation, 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 map revision requester should ensure that certifications include the certifier’s name, signature, registration number, and the registration date of the certifier.

4.7 Processing Procedures for Map Revisions Based on Conditions Other Than Fill

The procedures that are followed in processing requests for PMRs and LOMRs are summarized in Figures 4-2, 4-3, and 4-4, which appear at the end of this chapter. For additional details regarding these procedures, interested parties should refer to Volume 2 of *Guidelines and Specifications for Flood Hazard Mapping Partners* (http://www.fema.gov/plan/prevent/fhm/gs_main.shtm) or Section 2 of the *Document Control Procedures Manual* (http://www.fema.gov/plan/prevent/fhm/gs_dcpm.shtm).

In their review of a map revision request, FEMA will acknowledge receipt of the request by letter and, if necessary, by telephone to the person who submitted the request. If that person is a private party, copies of all letters to that person from FEMA will be sent to the community CEO and FPA.

After a map revision request has been received from the community CEO, another community official designated by the CEO, or a private party, FEMA will perform a preliminary review to

determine whether the requester has completed the appropriate forms; to determine whether the required supporting data and documentation and the required review and processing fee have been provided; and, if a private party submitted the request to FEMA, to verify that the community is aware of the request.

If the required supporting data, forms, and/or fees have not been provided, FEMA will send a letter to the requester. This letter will identify the supporting data, forms, or review and processing fee that the requester must submit before FEMA can complete its review of the request. In this “additional data” letter, FEMA will also provide a timeframe (usually 90 days) for submitting the required data, forms, and/or review and processing fee.

FEMA will generally send the additional data letters within 30 days. Until the requested data, forms, and/or fees are submitted, FEMA will not take any further action concerning the request.

If FEMA determines from its preliminary review that the required forms and review and processing fees have been provided along with sufficient supporting data and documentation to complete its review, FEMA will then inform the requester of the amount of time that will be needed to complete its detailed review of the request (usually 30 to 90 days).

After completing its detailed review, FEMA will inform the requester by letter of any additional supporting data and/or documentation that must be submitted. Such letters will be issued within the 90-

day period stipulated in the NFIP regulations, and generally are sent within 30 days. Again, no further action will be taken on the request until the required supporting data and/or documentation are received.

Once all required data and/or documentation have been received, FEMA will complete its detailed review and determine whether changes are warranted. If the data and documentation submitted do not warrant any changes to the information shown on the effective NFIP map panel(s) or the accompanying effective FIS report(s), FEMA will inform the requester by letter. If changes are warranted, FEMA will notify the community and non-community requester by letter whether the request will be processed as a PMR or LOMR.

4.7.1 Physical Map Revision Processing Procedures

For PMRs, FEMA will revise the effective map panel(s), Flood Profile(s), and/or data tables affected by the changes. FEMA will send a Preliminary version of the revised materials to the community for review, generally for a period of 30 days.

When PMRs involve new or modified BFEs and/or base flood depths, the 30-day period is followed by a formal 90-day appeal period, during which community officials or private citizens through community officials may submit appeals of the proposed BFEs and/or base flood depths.

FEMA prepares the following when new or modified BFEs and/or base flood depths are to be proposed for a PMR:

- A legal notice, called a “Proposed Rule”, which is published in the FEDERAL REGISTER;
- Listings of proposed BFEs and/or base flood depths shown on the Preliminary version of the affected map panel(s) and in affected portion(s) of the FIS report(s), which are posted at https://www.floodmaps.fema.gov/fhm/Scripts/bfe_main.asp;
- A public notice announcing the start of the appeal period and the posting of the BFE and/or base flood depth listings, which is published in one or more local newspapers with wide circulation; and
- Letters notifying the affected communities of the new or modified BFEs and/or base flood depths shown on the Preliminary version of the DFIRM, which are mailed to the CEOs and FPAs for the mapped communities. These letters are referred to as “proposed flood elevation determination letters.”

Once the actions above have been taken, the BFEs and/or base flood depths are officially considered "proposed."

In the proposed flood elevation determination letters for PMRs, FEMA encourages the CEOs, FPAs, and other community officials to provide an even wider distribution to ensure that residents and other key stakeholders are aware of the proposed BFEs and/or base flood depths.

The newspaper notice referenced above is published twice; the second publication usually takes place 1 week

after the first. On the date of the second publication, the 90-day appeal period officially begins.

During the appeal period, community officials and individual property owners may appeal the proposed BFEs and/or base flood depths by submitting data and documentation to show that the BFEs and/or base flood depths are scientifically or technically incorrect. For detailed information on how the appeal period is administered and how appeals are processed, interested parties should review Chapter 3 of this *Guide*.

During the 90-day appeal period, community officials and/or private citizens through community officials also may submit comments on the other information presented on the Preliminary versions of the revised map panel(s), Flood Profile(s), and/or data table(s) in the FIS report. Detailed information on how these comments are processed can also be found in Chapter 3 of this *Guide*.

Once all appeals and other comments have been addressed, FEMA will finalize the processing of the revised map panel(s) and FIS report materials by issuing a Letter of Final Determination (LFD) for each community affected by the PMR.

When PMRs do not involve new or changed BFEs, no appeal period is necessary. Therefore, once the community review and comment period has ended and any comments submitted by the community have been addressed, FEMA issues an LFD for each community affected by the PMR.

The LFD announces that the revised map and report information is final; provides

the effective date for the map and report; and notifies the community that they have a period of time (usually, 6 months) to review, update (if necessary), and submit their new or updated floodplain management ordinance. As with most other correspondence related to PMRs, the LFD is addressed to the community CEO and copies are sent to the community FPA; any other community official designated by the CEO, if appropriate; and to individual non-community appellants and commenters, if it is practical to do so.

During the 6-month adoption/compliance period, FEMA finalizes the map panel(s) and FIS report materials and has paper copies distributed to the affected communities, the State NFIP Coordinator, and others by the FEMA Map Service Center (MSC). The MSC also provides community officials with CDs or DVDs containing the electronic versions of the map and FIS report materials and associated spatial database. The MSC staff also posts the electronic versions of the map and FIS report materials and associated spatial database on the MSC Website (<http://www.msc.fema.gov>), where they may be downloaded by the public for a nominal fee.

During the processing of the PMR, Preliminary (and Revised Preliminary, if appropriate) copies of the affected map panel(s) and FIS report materials are kept on file in the Community Map Repository of each affected community. The Community Map Repository is the community office responsible for floodplain management activities in the community. Interested citizens who are

having trouble locating the Community Map Repository may call a FEMA Map Specialist in the previously referenced FMAC, toll free, at 1-877-FEMA MAP (1-877-336-2627).

4.7.2 Letter of Map Revision Processing Procedures

For LOMRs, FEMA sends determination documents to the community CEO, the community FPA, and non-community revision requester(s). The LOMR determination documents describe the changes that have been made and officially revise the effective NFIP map panel(s) and, where appropriate, FIS report materials. Map panel, Flood Profile, and tabular enclosures illustrating the changes to the map and FIS report materials are enclosed with the LOMR determination documents. As with the PMRs, the LOMR determination documents and enclosures also are kept in the Community Map Repository of each affected community as an official revision to the affected map panel(s), Flood Profile(s), and data tables.

Individuals interested in learning more about the product requirements for the map, Flood Profile, and data table enclosures to LOMRs should read Volume 2, Section 2.4 of FEMA's *Guidelines and Specifications for Flood Hazard Mapping Partners*, which can be accessed through: http://www.fema.gov/plan/prevent/fhm/g_s_main.shtm.

When LOMRs involve new or modified BFEs and/or base flood depths, the LOMR determination documents also

notify community officials and other recipients that a formal 90-day appeal period is required. No appeal period is necessary for LOMRs that do not involve new or modified BFEs and/or base flood depths.

FEMA prepares the following when new/modified BFEs and/or base flood depths are to be proposed for a LOMR:

- A legal notice, called an “Interim Final Rule”, which is published in the FEDERAL REGISTER;
- Listings of proposed BFEs and/or base flood depths shown on the affected map panel(s) and in affected portion(s) of the FIS report(s), which are posted at https://www.floodmaps.fema.gov/fhm/Scripts/bfe_main.asp; and
- A public notice announcing the start of the appeal period and the posting of the BFE and/or base flood depth listings, which is published in one or more local newspapers with wide circulation.

Once the actions above have been taken, the BFEs and/or base flood depths are officially considered "proposed."

In the LOMR determination documents, FEMA encourages the CEOs, FPAs, and other community officials to provide an even wider distribution to ensure that residents and other key stakeholders are aware of the proposed BFEs and/or base flood depths.

The newspaper notice referenced above is published twice; the second publication usually takes place 1 week after the first. On the date of the second

publication, the 90-day appeal period officially begins.

During the appeal period, community officials and individual property owners may appeal the proposed BFEs and/or base flood depths by submitting data and documentation to show that the BFEs and/or base flood depths are scientifically or technically incorrect. For detailed information on how the appeal period is administered for LOMRs and how appeals are processed, interested parties should review Chapter 3 of this *Guide*.

During the 90-day appeal period, community officials or private citizens through community officials also may submit comments on the other information presented on the map panel, Flood Profile, and/or data table enclosures. For detailed information on how these comments are processed, interested parties should review Chapter 3 of this *Guide*.

For most LOMRs, the revisions documented in the determination documents and enclosures are effective on the date FEMA issues the LOMR. However, the effective date may vary depending on the special circumstances involved in a LOMR case. The current requirements for setting effective dates for LOMR are summarized in Table 4-5.

Table 4-5 Guidelines for Establishing Effective Dates for LOMRs

Revision Type	Affected Property Owners Notified	Affected Property Owners Accept Change	Status of Community Ordinances	Effective Date
SFHAs Decrease	No	No	Compliant	Effective on Date LOMR Sent
SFHAs Increase	Yes	No	Non-Compliant	Effective 6 Months After Date LOMR Sent
SFHAs Increase	Yes	No	Compliant	Effective After 30-Day Comment Period for SFHA Changes Elapses
SFHAs Increase	Yes	Yes	Compliant	Effective on Date LOMR Sent
SFHAs Increase and BFEs Increase, OR SFHAs Increase and BFEs Decrease, OR SFHAs Decrease and BFEs Increase	Yes	Yes	Compliant	Effective on Date LOMR Sent; 90-Day Appeal Period Follows Effective Date
SFHAs Increase and BFEs Increase, OR SFHAs Decrease and BFEs Increase	Yes	No	Compliant	Effective 30 Days After 90-Day Appeal Period Ends
SFHAs Increase and BFEs Decrease	Yes	No	Compliant	Effective After 30-Day Comment Period for SFHA Changes Elapses. 90-Day Appeal Period Begins at Same Time as Comment Period.
SFHAs Decrease and BFEs Decrease	No	No	Compliant	Effective on Date LOMR Sent; 90-Day Appeal Period Follows Effective Date
SFHAs Increase and BFEs Increase, OR SFHAs Increase and BFEs Decrease, OR SFHAs Decrease and BFEs Increase	Yes	Yes	Non-Compliant	Effective 6 Months After Date LOMR Sent

Samples of the LOMR determination documents are provided in Appendix B of FEMA's *Document Control Procedures Manual*, which is available in the FEMA Library (<http://www.fema.gov/library/index.jsp>) and can be accessed from the following dedicated page on the FEMA Website: http://www.fema.gov/plan/prevent/fhm/g_s_dcpm.shtm.

Once a LOMR becomes effective, copies of the determination documents and enclosures are provided to the MSC staff. The MSC staff posts the electronic versions of the LOMR determination documents and enclosures on the MSC Website (<http://www.msc.gov>), where they may be downloaded by the public free of charge.

As can be seen from the discussion above and by comparing the flowcharts in Figures 4-2 and 4-3, an advantage of revising an effective NFIP map panel and associated FIS report through the LOMR process is that the revision can become effective on the date that the LOMR is issued. By comparison, a revision made through the PMR process will not become effective until the revised map has been issued in preliminary form, passed through the appropriate review periods, printed, and distributed. Samples of the LOMR determination documents are provided in Appendix B of FEMA's *Document Control Procedures Manual*, which is available in the FEMA Library (<http://www.fema.gov/library/index.jsp>) and can be accessed from the following dedicated page on the FEMA Website: http://www.fema.gov/plan/prevent/fhm/g_s_dcpm.shtm.

Once a LOMR becomes effective, copies of the determination documents and enclosures are provided to the MSC staff. The MSC staff posts the electronic versions of the LOMR determination documents and enclosures on the MSC Website (<http://www.msc.gov>), where they may be downloaded by the public free of charge.

As can be seen from the discussion above and by comparing the flowcharts in Figures 4-2 and 4-3, an advantage of revising an effective NFIP map panel and FIS report materials using LOMR process is that the revision can become effective on the date that the LOMR is issued. By comparison, a revision made through the PMR process will not become effective until the revised map has been issued in preliminary form, passed through the appropriate review periods, printed, and distributed

4.7.3 Processing Procedures for Map Revision Requests Involving Structural Measures on Alluvial Fans

Before issuing a determination, FEMA will determine if all review and processing fees have been received for map revision requests involving structural measures on alluvial fans. Unlike other types of map revision requests, requests involving structural measures on alluvial fans are not processed using a flat review and processing fee. If additional fees are required, FEMA will send an invoice letter to the requester. In the invoice letter, FEMA will notify the community

officials and non-community revision requester that they will not issue the Preliminary version of the revised map and report materials for a PMR or the LOMR determination documents and enclosures until the required review and processing fees have been received by the FEMA Fee-Charge System Administrator and deposited in the NFIF.

4.8 How To Request a Map Revision Based on Fill

Any owner or lessee of property may request that FEMA make a determination concerning a structure or parcel of land where fill has been placed after the date of the first effective NFIP map and that, if appropriate, FEMA issue a LOMR-F reflecting the removal of the SFHA designation from the subject structure(s) or parcel(s) of land. Under the LOMR-F process, FEMA will make determinations for single or multiple structures on one or more lots and for one or more legally described parcels of land. In making such determinations, FEMA will use the best available data (usually the effective NFIP map) and information provided by the requester concerning the locations and elevations of structures and/or legally described parcels of land.

To request a LOMR-F, the requester must complete the MT-1 application forms and submit them along with the required supporting data, documentation, and the appropriate review and processing fee. Requesters may obtain paper copies of these forms and the step-by-step instructions from the Map

Specialists in the FMAC. Requesters may contact the FMAC by telephone, toll free, at 1-877-FEMA MAP (1-877-336-2627), or send an e-mail message to FEMAMapSpecialist@riskmapcds.com. For hours of operation and to learn more about FMAC services, interested parties should visit the FMAC page on the FEMA Website: http://www.fema.gov/plan/prevent/fhm/mc_main.shtm.

Requesters also may download Word, PDF, and TXT versions of the MT-1 application forms and instructions from the FEMA Library (<http://www.fema.gov/library/index.jsp>). As mentioned earlier in this chapter, the forms and instructions are accessible through the following page on the FEMA Website: http://www.fema.gov/plan/prevent/fhm/dl_mt-1.shtm.

Completed application forms, supporting data and documentation, and review and processing fees for LOMR-F requests are to be submitted to:

LOMC Clearinghouse
6730 Santa Barbara Court
Elkridge, MD 21075

Payment of the review and processing fee may be made by credit card, check, or money order. Checks and money orders are to be made payable in U.S. funds to the National Flood Insurance Program. If a LOMR-F requester chooses to use a credit card, the credit card information is to be provided on the "Payment Information Form" that is included in the MT-1 forms package.

An assigned FCSA will review the check, money order, and payment

information. If appropriate, the FCSA will deposit the payment in the NFIF.

If the FCSA identifies any irregularities with the payment, the FCSA will not deposit the payment in the NFIF. In such instances, FEMA will send a letter to the requester explaining any additional actions the requester must take to allow FEMA to process the request.

As part of the request submittal process, the requester will be responsible for submitting a completed Form 3 from the MT-1 package. Form 3, "Community Acknowledgment Form," certifies that the community CEO, or a community official designated by the CEO, has found that the placement of fill has met the community's applicable floodplain management regulations, including the requirement that no fill has been placed in an adopted regulatory floodway.

4.9 Supporting Data and Documentation Required for Map Revisions Based on Fill

The supporting data and documentation summarized below are to be submitted in support of a LOMR-F request.

- Property description documentation must be enclosed for every request and can consist of either 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. Note: The

recordation data (e.g., Book, Volume, Page, Reel, Document Number, Date) must appear on all documents submitted so that FEMA may use the legal description of the property in making its determination, and FEMA must be able to identify the property exactly.

- If the property is not recorded on a Plat Map, a copy of the tax assessor's map must be submitted to help FEMA locate the property.
- A photocopy of the effective FIRM/DFIRM panel, annotated to show where the property is located, must be submitted for every request. If FEMA has produced a separate FBFM for the area in which the structure(s) or parcel(s) of land may be located, a photocopy of the FBFM panel also should be included. The panel number and effective date of the FIRM/DFIRM and FBFM must appear on the copy submitted. The original paper copy of the map panel(s) or a photocopy of the map panels must be used. A reproduction from a photocopy is unacceptable due to possible distortion.
- Elevation data must be submitted for all requests, except requests for determinations in which the effective FIRM/DFIRM already shows the property to be clearly outside the SFHA. As discussed below, the type and source of the elevation data will vary.

- a. For riverine flood hazard areas, the BFE can be established by interpolation along the Flood Profile for the flooding source that appears in the FIS report. If, for some reason, no Flood Profile exists, the BFE should be taken from the effective FIRM/DFIRM.
- b. For lacustrine flood hazard areas, the BFE can be taken from the Summary of Stillwater Elevations in the FIS report. If the flooding source is not included in the table, the BFE should be taken from the effective FIRM/DFIRM.
- c. For coastal flood hazard areas, the BFE should be taken from the effective FIRM/DFIRM and then compared with the elevation in the Summary of Stillwater Elevations table. If the stillwater elevation listed in the table is less than or equal to the whole-foot BFE shown on the map minus 0.5 foot, a wave height, wave runup, and/or wave setup component exists; therefore, the whole-foot BFE shown on the map should be used. If the stillwater elevation listed in the table is greater than the whole-foot BFE shown on the map minus 0.4 foot, the stillwater elevation shown in the table should be used as the BFE.
- d. For flood hazard areas designated Zone A on the map, FEMA has not determined BFEs. If a BFE for the area has not been developed by a Federal, State, or local government agency, the requester should refer to FEMA-265, *Managing Floodplain Development in Approximate Zone A Areas: A Guide for Obtaining and Developing Base (100-Year) Flood Elevations*, which is accessible through the FEMA Website:
http://www.fema.gov/plan/prevent/fhm/frm_docs.shtm.
- e. For shallow flooding areas designated Zone AH on the map, the BFE shown on the effective FIRM/DFIRM (rounded to a whole foot) should be used unless a more precise elevation is provided in the FIS report.
- f. For shallow/sheet flooding areas (designated Zone AO on the map), the characteristics of the area will determine the appropriate methodology, and the requester should refer to the guidance in the MT-EZ and MT-1 instructions.
- g. In addition to the BFE, the elevation data required for a structure is the Lowest Adjacent Grade (LAG) to the structure (i.e., the elevation of the lowest ground touching

the structure, including attached decks or garage).

- h. The elevation data required for a legally defined parcel of land, or portion thereof, is the elevation of the lowest ground on the parcel or within the portion of land that is to be removed from the SFHA
- Unless an NFIP Elevation Certificate has been completed for the structure(s) in the request, the “Elevation Form” (Form 2) from the MT-1 package must be completed and certified by a Licensed Land Surveyor or Registered Professional Engineer for all requests except requests for determinations in which the effective FIRM/DFIRM already shows the property to be clearly outside the SFHA.
- If an NFIP Elevation Certificate (EC) has been completed, it may be submitted in lieu of Form 2. The EC also must be certified by a Licensed Land Surveyor or Registered Professional Engineer. The EC form is available through the FEMA Library and is accessible through the FEMA Website at http://www.fema.gov/plan/prevent/fhm/frm_form.shtm. Paper copies of the EC form also may be acquired by contacting the Map Specialists in the FMAC.
- The “Community Acknowledgment Form” (Form 3) must be included for all LOMR-F requests in which the

property has been inadvertently included within the regulatory floodway shown on the NFIP map; however, only Section A of Form 3 needs to be completed.

For LOMR-F requests involving property located in an area designated Zone A on the FIRM/DFIRM, with no BFEs determined, the requester should refer to FEMA-265, *Managing Floodplain Development in Approximate Zone A Areas: A Guide for Obtaining and Developing Base (100-Year) Flood Elevations*. This manual provides engineering guidelines for determining BFEs in Zone A areas and is accessible through the FEMA Website: http://www.fema.gov/plan/prevent/fhm/frm_docs.shtm.

Printed paper copies of the effective FIRM, DFIRM, and/or FBFM panel(s) and Flood Insurance Study (FIS) report materials are kept on file in the Community Map Repository of each affected community. (Digital versions may also be available in some Community Map Repositories.) The Community Map Repository is the community office responsible for floodplain management activities in the community. Interested citizens who are having trouble locating the Community Map Repository may call a Map Specialist in the FMAC, toll free, at 1-877-FEMA MAP (1-877-336-2627), or send an e-mail message to FEMAMapSpecialist@riskmapcde.com.

To obtain their own digital copy of the complete effective NFIP map(s) or selected panel(s) and the FIS report, LOMR-F requesters should contact the MSC. The effective NFIP maps may be

viewed online through the MSC Website: <http://www.msc.fema.gov/>. Effective NFIP maps, FIS reports, and related products also may be downloaded from the MSC Website. (Note: Effective October 1, 2009, the MSC distributes only digital versions of the flood maps and FIS reports.) A screen shot of the MSC Web page is provided in Appendix B of this *Guide*.

Individuals who do not have Internet access or who require additional assistance also may contact the MSC staff by telephone, toll free, at 1-800-358-9616; or by facsimile transmission, toll free, at 1-800-358-9620.

For many LOMR-F requests, requesters may also choose to create another product available from the MSC Website. This product is called a FIRMette. A FIRMette is a full-scale portion of a particular map panel that a user creates by selecting a desired area from the online image of that map panel. In addition to the area of interest, the FIRMette includes the map title block, north arrow, and scale bar.

The LOMR-F requester will not be assessed a fee for producing a FIRMette. To assist first-time users, the MSC has developed a FIRMette tutorial, which also is available on the MSC Website.

Certifications, where referenced in the requirements for supporting data and documentation, 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 LOMR-F requester should ensure that certifications include the certifier's name, signature, registration number, and the registration date of the certifier.

4.10 Map Revision Based on Fill Processing Procedures

The procedures that are followed in processing requests for LOMR-Fs are shown in Figure 4-5 at the end of this chapter and are summarized below.

After the LOMR-F request has been received at the LOMC Clearinghouse mentioned earlier in this chapter, FEMA will review the submittal package for completeness and acknowledge receipt of the request by letter to the requester, usually within 10 days, but not later than 60 days. This letter will identify any required supporting data, application forms, and/or fees that the requester did not submit and inform the requester to

submit the required data, forms, and/or fees within 90 days of the date of the letter. If the required supporting data and/or documentation are not provided within 90 days, FEMA will suspend the processing of the request.

If all required supporting data, forms, and fees have been provided with the request, FEMA staff will acknowledge the request by letter and proceed with performing a technical review. If any questions or problems arise during this review, FEMA will work with the requester to resolve them.

Once all required data, forms and other documentation, and fees are received, FEMA staff will complete their review. Upon completion of the review, FEMA will issue one of the following determinations, as appropriate:

- Out of the SFHA because the structure or parcel of land has been elevated above the BFE. FEMA will issue a LOMR-F to notify the requester and the community that the SFHA designation no longer applies to the existing structure or parcel of land.
- In the SFHA because the structure or parcel of land is below the BFE. FEMA will issue a LOMR-F to notify the requester and the community that the SFHA designation still applies to structure or parcel of land.
- A LOMR-F for the structure only. For this determination, FEMA will issue a determination informing the requester and the

community that the structure is above the BFE and, therefore, the SFHA designation does not apply to the structure; however, the SFHA designation does still apply to the rest of the parcel of land.

Samples of the LOMR-F determination documents are provided in Appendix B of FEMA's *Document Control Procedures Manual*, which is available in the FEMA Library

(<http://www.fema.gov/library/index.jsp>).

The Manual also can be accessed from the following page on the FEMA Website:

http://www.fema.gov/plan/prevent/fhm/g_s_dcpm.shtm.

As provided for in the NFIP regulations, FEMA must complete the processing of LOMR-F requests within 60 days of the date that all required supporting data and documentation are received. However, FEMA generally issues determinations for LOMR-Fs within 4 weeks of the date that all required supporting data and documentation are received.

When an effective NFIP map is revised by a LOMR-F, the revision is effective as of the date of the LOMR-F.

4.11 Summary of Map Actions Processing

When a revised FIRM or DFIRM panel becomes effective, all previous map changes for that panel are superseded. Therefore, each time a panel is physically revised and republished, the panel must be updated to include the changes in the flood hazard information made via a LOMR, LOMR-F, LOMA, or Letter of Map Change Revalidation

(LOMC-VALID) Letter. (See next Section 4.11.)

The changes made to the effective FIRM or DFIRM via the LOMR, LOMR-F, LOMA, or LOMC-VALID processes become effective without the affected panels being republished and distributed. Therefore, FEMA maintains records of these changes so that these changes may be incorporated as appropriate into the next physical update of the affected map panels.

Frequently, the results of a LOMR-F or LOMA cannot be shown on the revised FIRM/DFIRM panel for the following reasons:

- Limitations in the accuracy of map data;
- Results indicated a particular property or structure was outside the SFHA as shown on the effective FIRM/DFIRM;
- Flood hazard and risk information on which the determination in the LOMC was based has been superseded by new flood hazard information.

To assist a community in maintaining the FIRM/DFIRM, FEMA prepares a Summary of Map Actions (SOMA), which is a summary of the LOMCs that will be superseded when the revised FIRM/DFIRM panels become effective.

As shown in the process flowchart in Figure 4-2 at the end of this chapter, FEMA provides the SOMAs to the affected communities at significant stages during the processing of PMRs. The SOMAs are provided to inform the affected communities about the effect

that the revised FIRM/DFIRM panels resulting from the PMR will have on previously issued LOMCs.

So that modifications made by LOMC are included in a physical map update, FEMA or an assigned FEMA Contractor/Mapping Partner supporting FEMA performs searches for all determinations at the following four processing stages:

1. Before the Preliminary versions of the affected FIRM/DFIRM panels are prepared and sent to the community for review and comment;
2. Before Revised Preliminary versions of the affected FIRM/DFIRM panels, if required, are prepared and sent to the community for review and comment;
3. Before the LFD is sent to the community; and
4. Before the effective date of the revised FIRM/DFIRM panels.

At each of the four processing stages, the LOMCs are sorted into the following categories:

- **Category 1** includes those LOMCs for which results have been shown on the revised FIRM/DFIRM panel(s).
- **Category 2** includes those LOMAs and LOMR-Fs for which results could not be mapped and shown on the revised FIRM/DFIRM panel(s) because of map data limitations or because the affected areas was determined to be outside the

SFHA as shown on the effective FIRM/DFIRM. (These LOMCs are revalidated after the revised FIRM/DFIRM panels become effective. LOMRs cannot be revalidated, and must be reissued if they are inadvertently not incorporated into the new FIRM/DFIRM panels.)

- **Category 3** includes those LOMCs for which results have not been, and will not be, reflected on the revised FIRM/DFIRM panels because the flood hazard and risk data on which the determinations were based are being superseded by new detailed flood hazard data.
- **Category 4** includes those LOMCs which were previously issued for multiple lots or structures where the determination for one or more of the lots or structures has changed and cannot be revalidated through the administrative process used for Category 2 LOMCs.

For the Category 4 LOMCs, FEMA reviews the data submitted in support of the original LOMC request and provides a new determination for the subject properties after the revised FIRM/DFIRM panels become effective.

As shown in the sample Preliminary transmittal letters and LFDs presented in Appendix A of the *FEMA Document Control Procedures Manual*, FEMA provides an explanation of the Preliminary or Final SOMA, respectively, that is enclosed with the

letter or explains that no LOMCs have been issued since the affected map panel(s) became effective.

To learn more about the detailed procedures followed in preparing the SOMAs, interested parties should refer to Subsections 1.5 and 1.11 of the *FEMA Document Control Procedures Manual*

(http://www.fema.gov/plan/prevent/fhm/gs_dcpm.shtm).

4.12 Revalidation Letter Processing

As discussed in the previous section on SOMAs, LOMCs affecting particular map panels are superseded when revised versions of those map panels become effective. Therefore, approximately 4 weeks before the effective date of the FIRM/DFIRM panel(s) affected by a PMR, FEMA prepares and distributes a LOMC-VALID letter for the LOMCs that would be superseded. FEMA mails the LOMC-VALID letter(s) to the community CEO(s), community FPA(s), and other community official(s) identified by the CEO.

During the processing of a revised FIRM/DFIRM and FIS report, FEMA may issue LOMC determination documents to amend or revise the effective FIRM/DFIRM and FIS report. In these determination documents, FEMA includes a notification to the community or individual property owner that the affected map panel is scheduled to be republished and the determination made in the LOMC will be superseded on the date the new panel became effective.

As shown in the sample determination documents and enclosures in Appendices B and C of the FEMA *Document Control Procedures Manual*, FEMA also notifies the community and individual property owner if the LOMC will be revalidated after the effective date of the revised map panel(s).

The LOMC-VALID letter typically becomes effective 1 day after the effective date of the newly effective FIRM/DFIRM panels. The LOMC-VALID letter is considered legally binding, in the same manner as an original LOMR-F or LOMA, provided a copy of the original LOMR-F or LOMA accompanies the LOMC-VALID letter.

If requested, FEMA will provide a copy of the original LOMR-F or LOMA determination documents and enclosures, if any, with the LOMC-VALID letter. FEMA does not charge the requester a review and processing fee for such requests.

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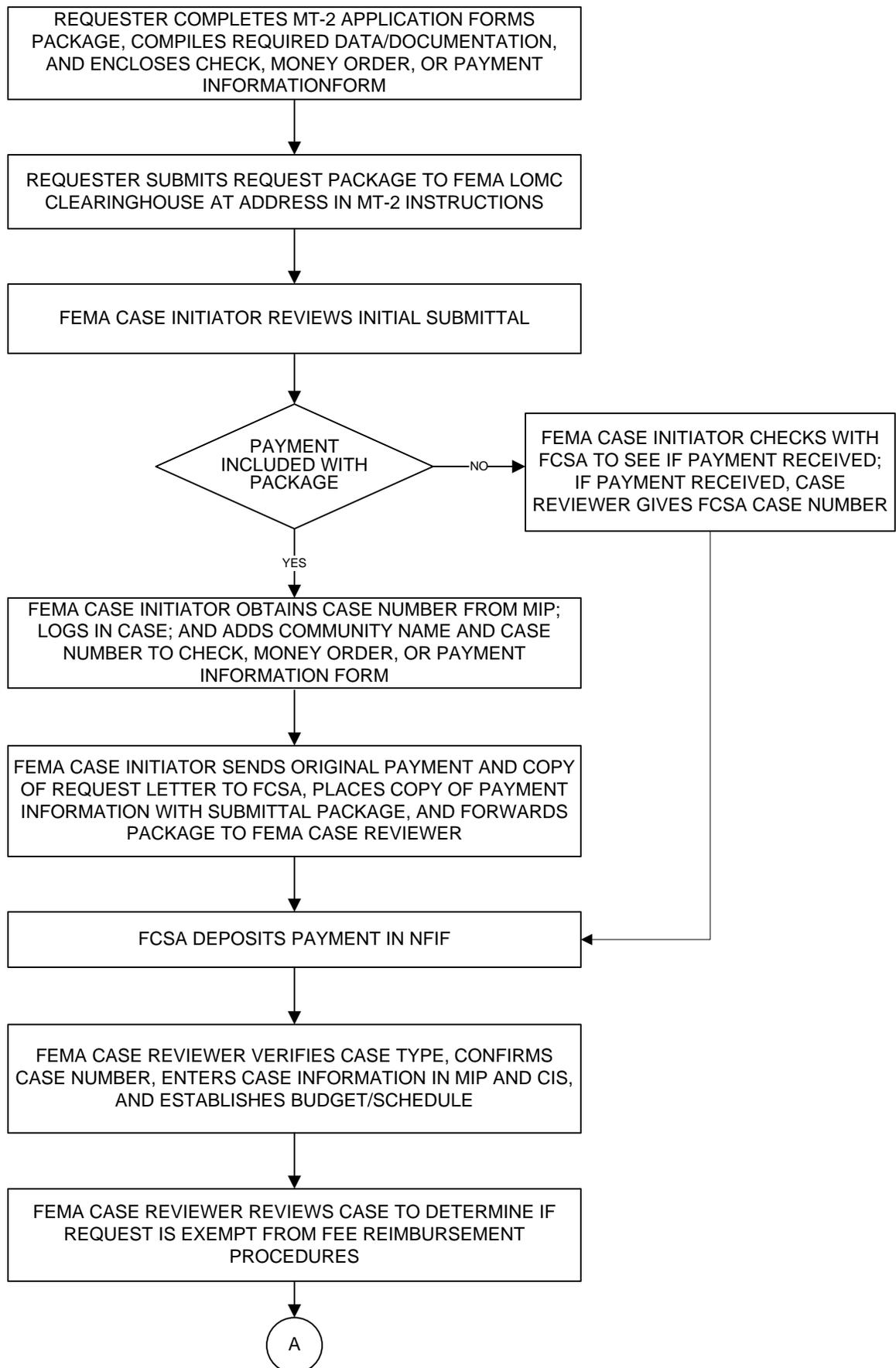


Figure 4-2. Initial Processing Procedures for Map Revisions

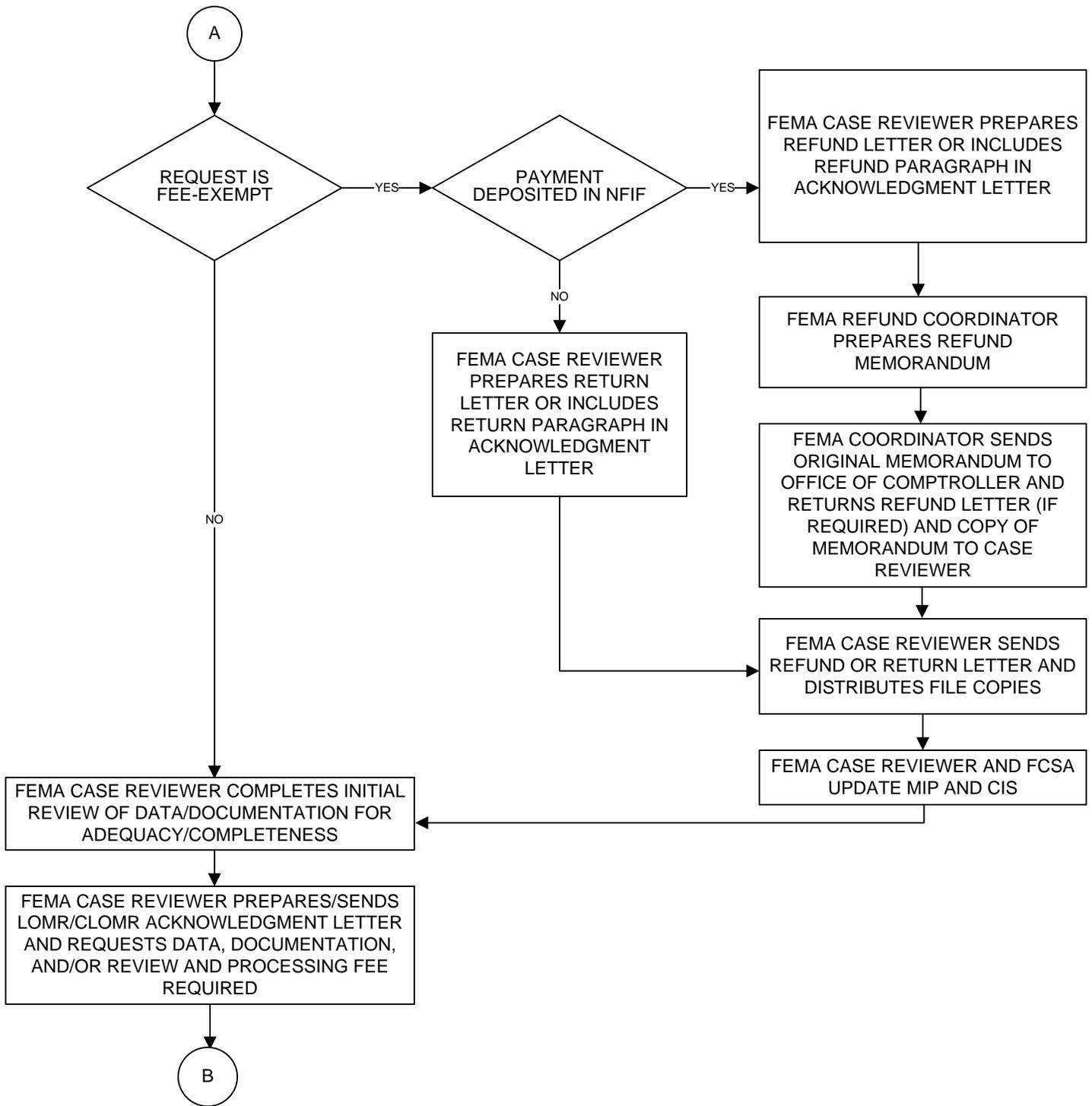


Figure 4-2. Initial Processing Procedures for Map Revisions (Cont'd)

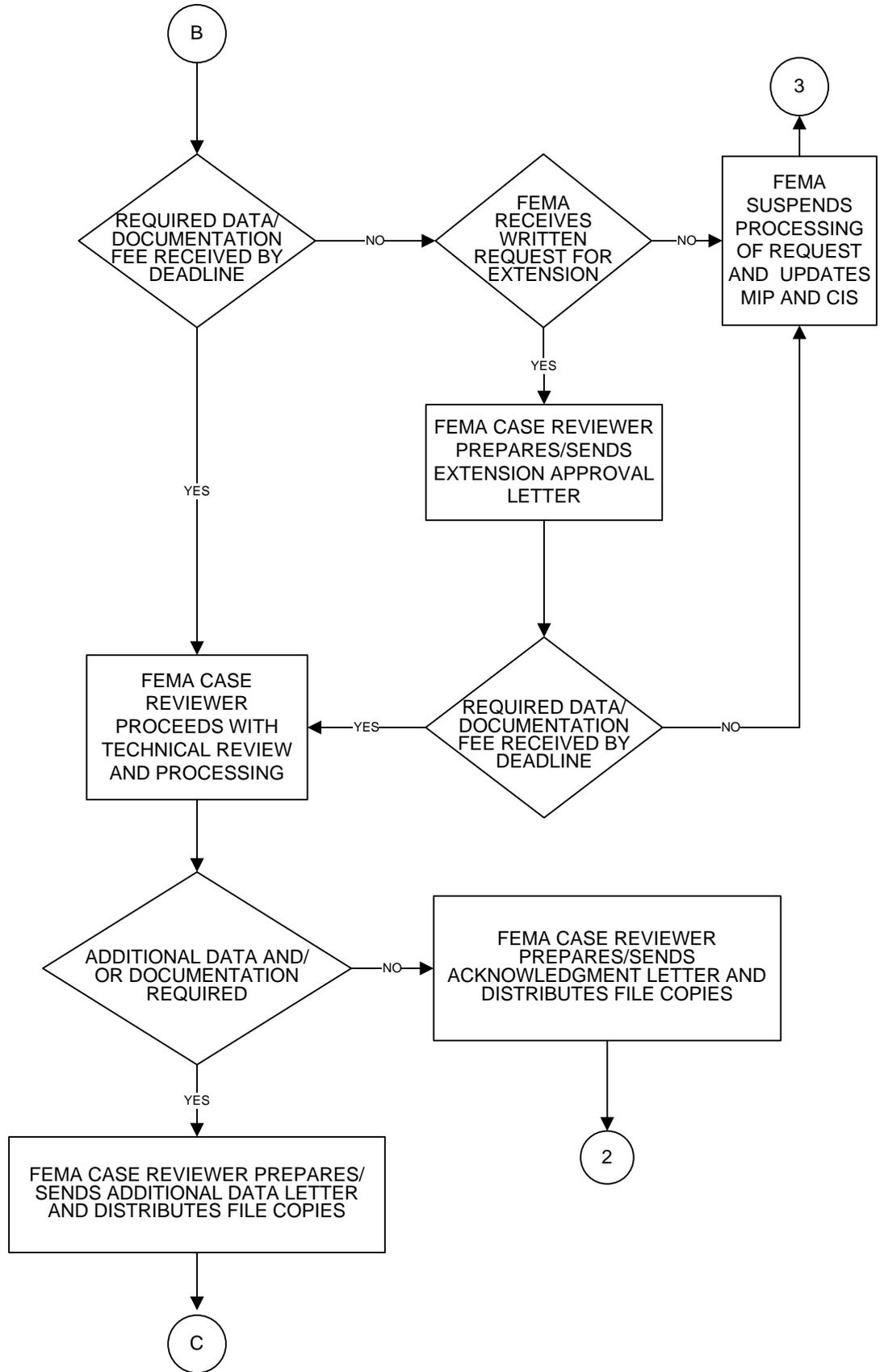


Figure 4-2. Initial Processing Procedures for Map Revisions (Cont'd)

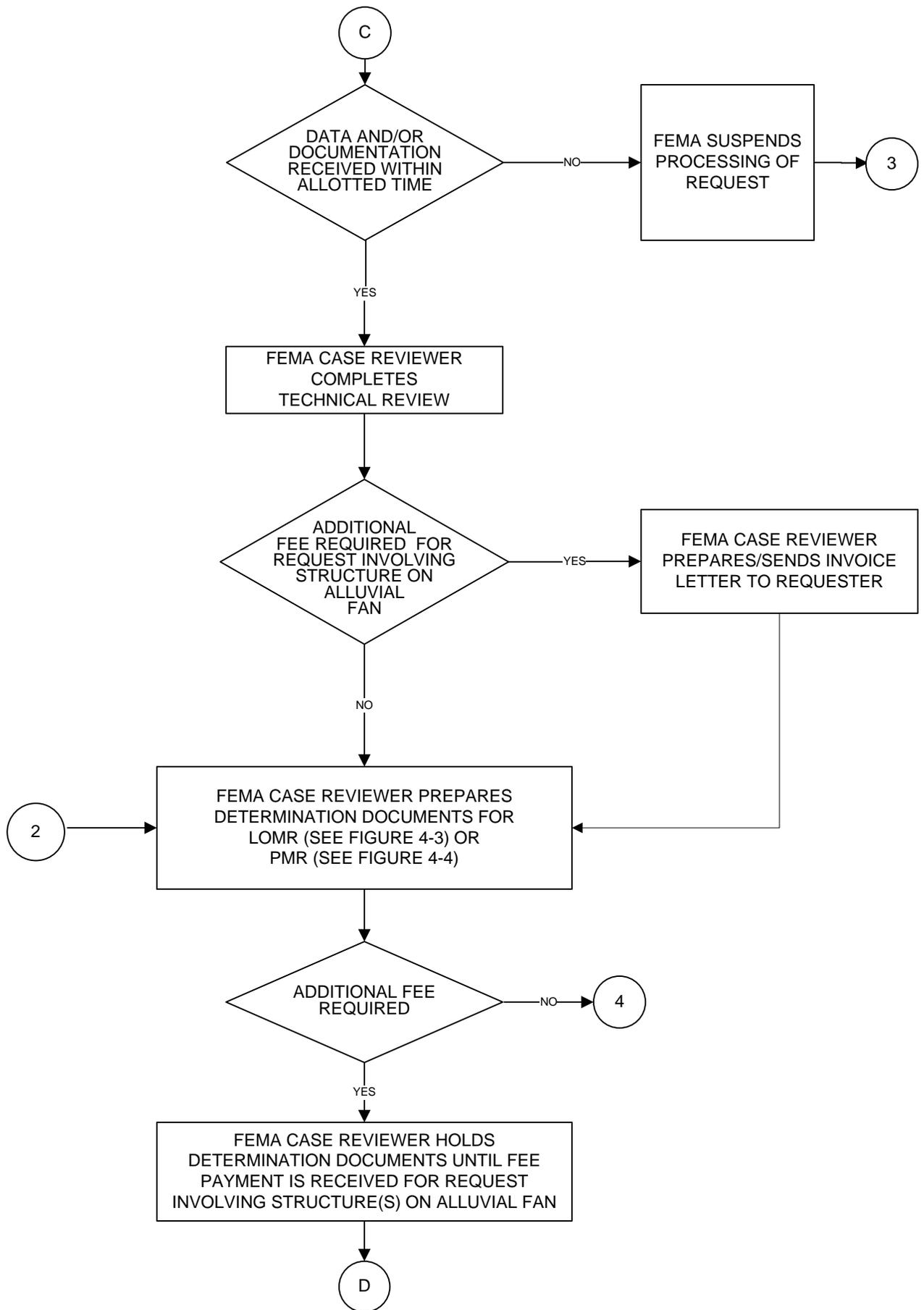


Figure 4-2. Initial Processing Procedures for Map Revisions (Cont'd)

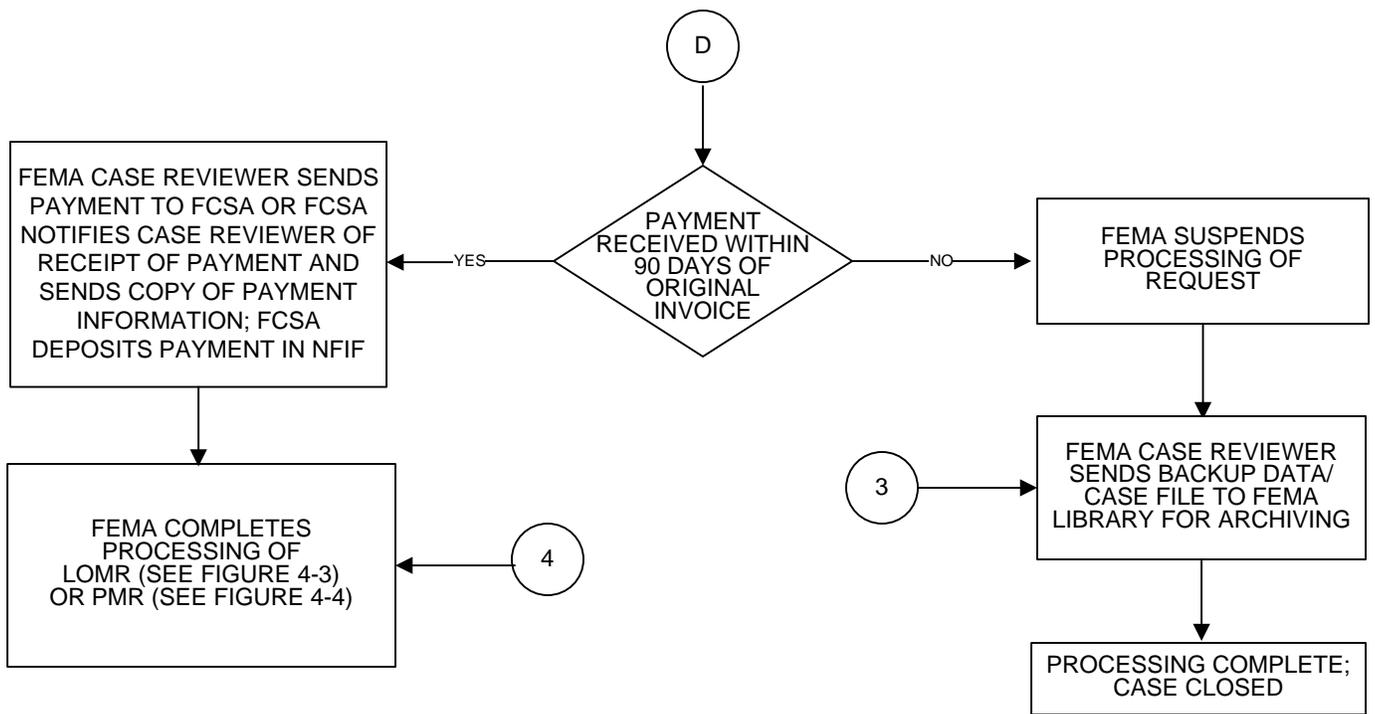


Figure 4-2. Initial Processing Procedures for Map Revisions (Cont'd)

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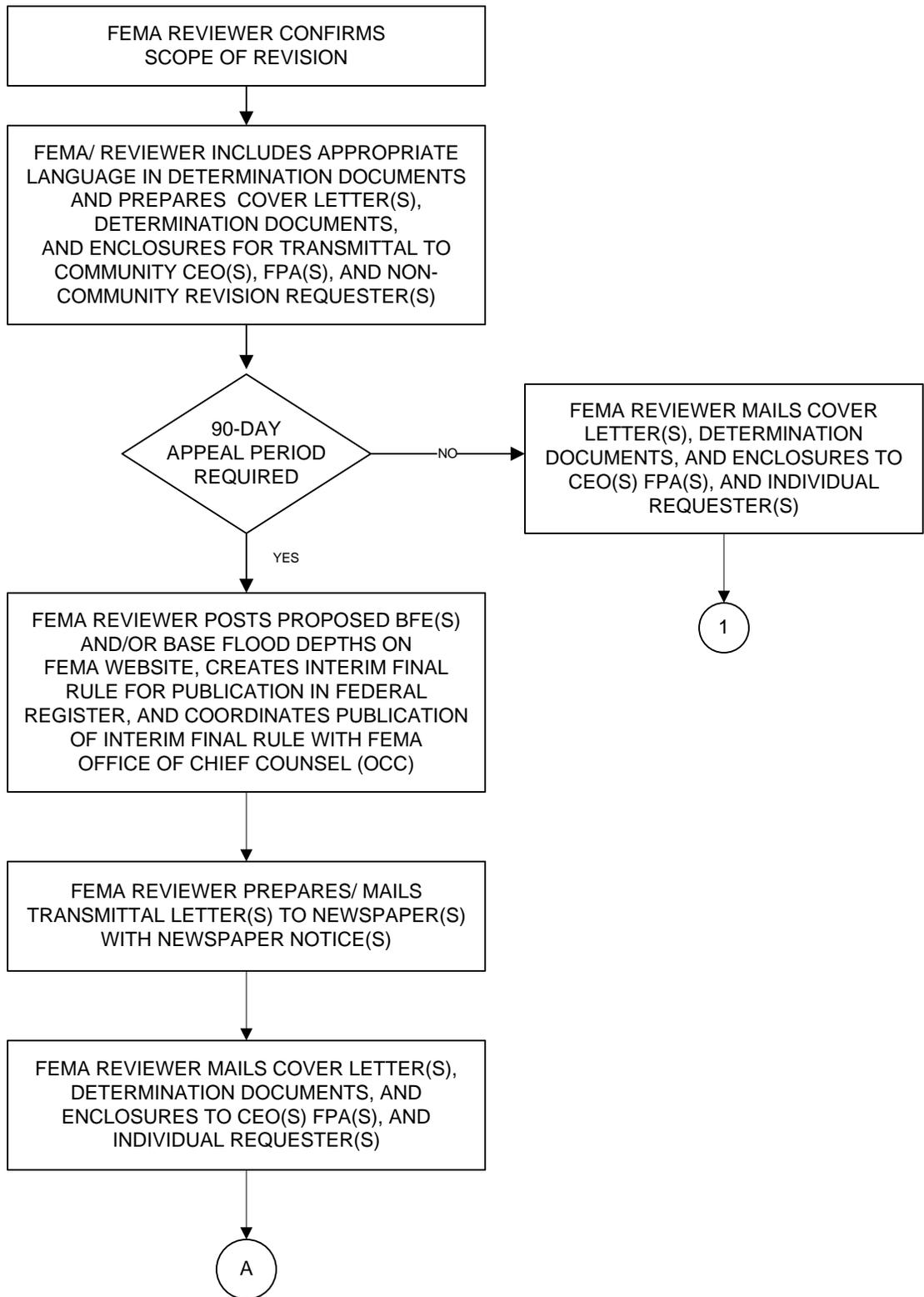


Figure 4-3. Final Processing Procedures for LOMRs

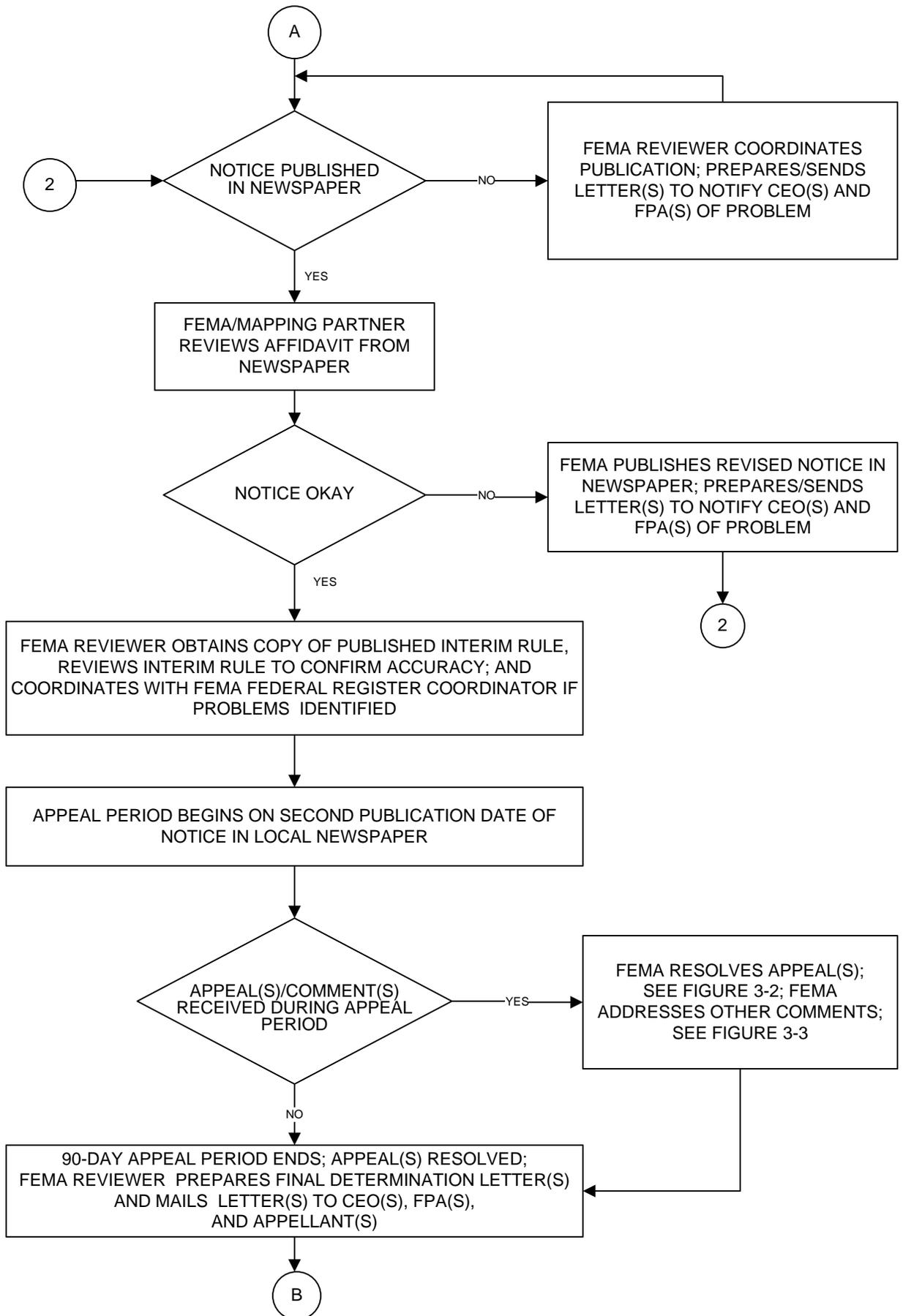


Figure 4-3. Final Processing Procedures for LOMRs (Cont'd)

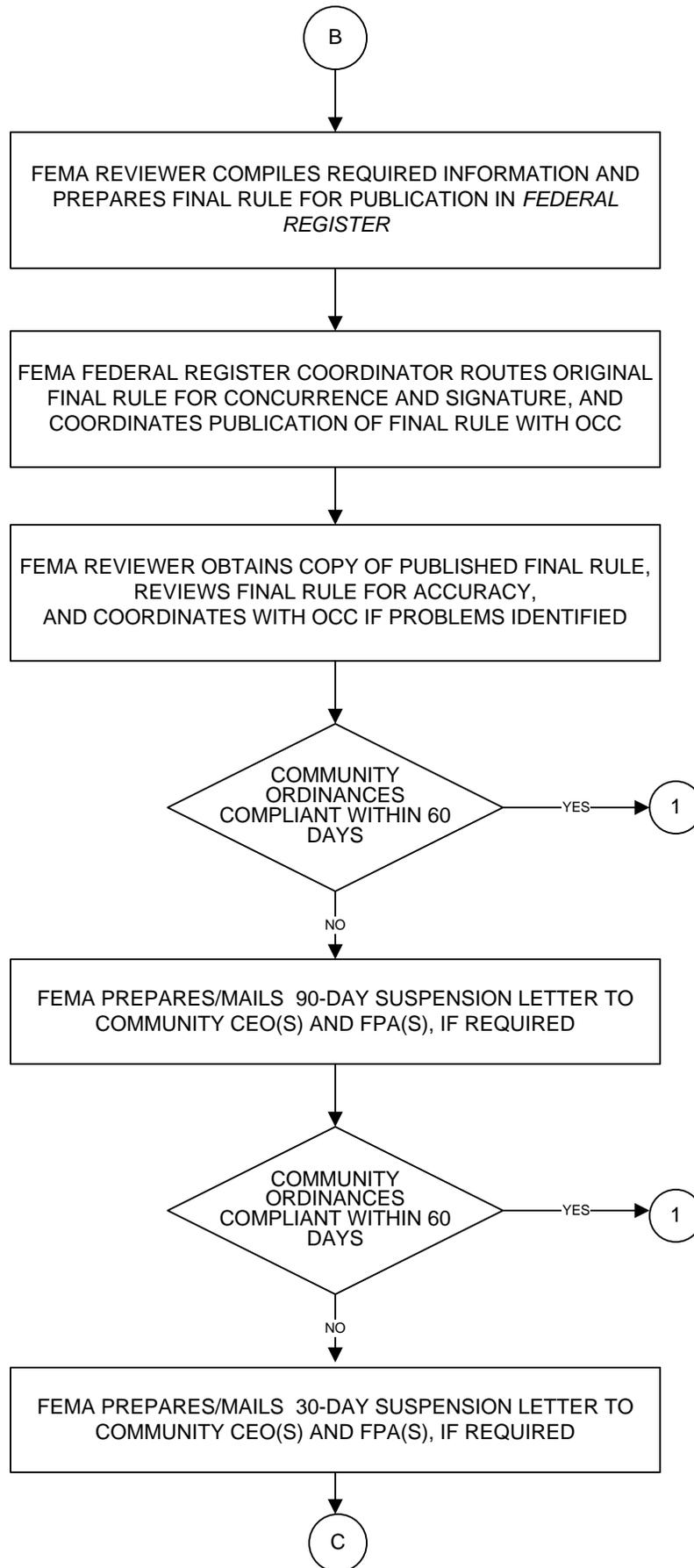


Figure 4-3. Final Processing Procedures for LOMRs (Cont'd)

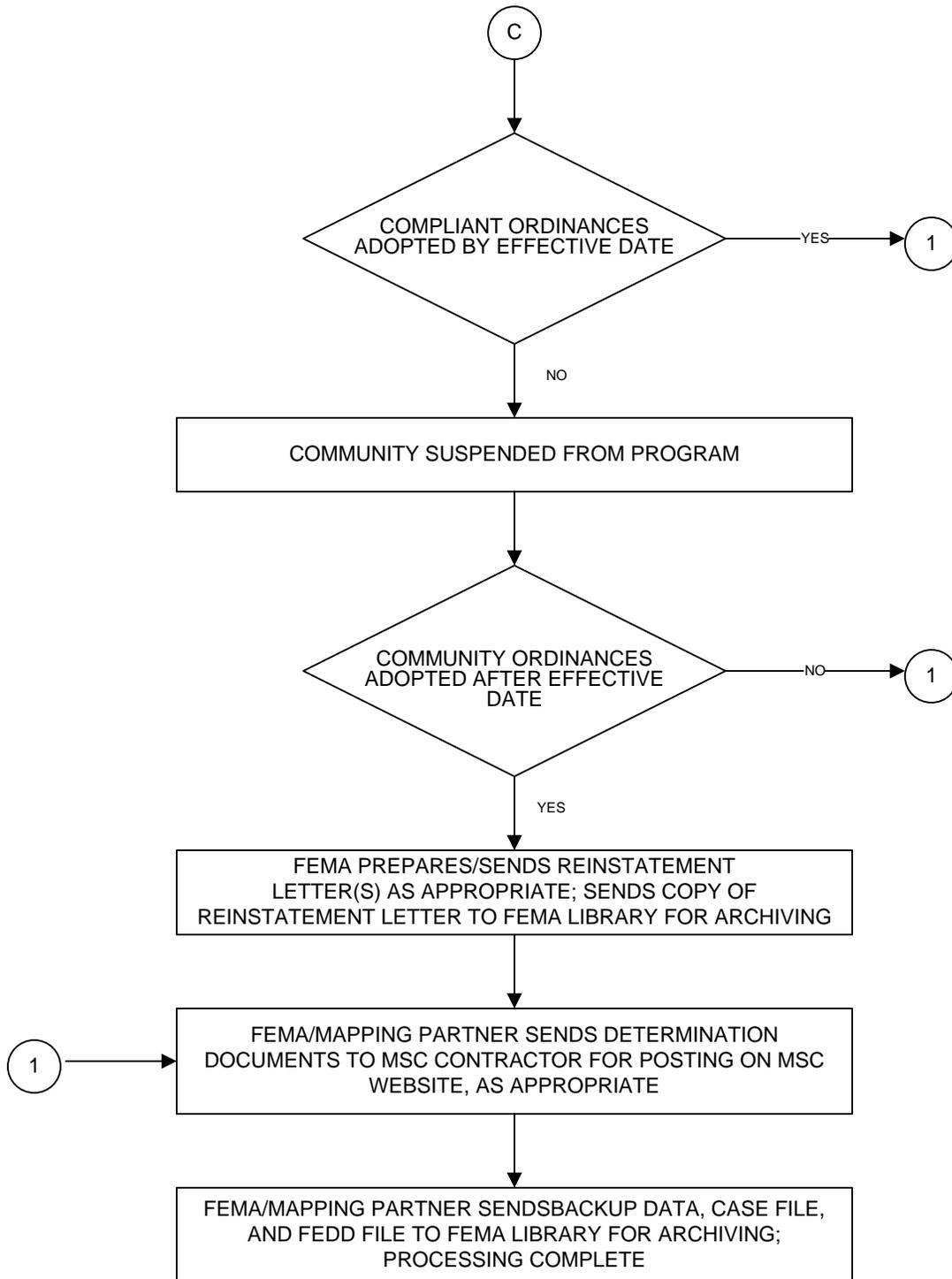


Figure 4-3. Final Processing Procedures for LOMRs (Cont'd)

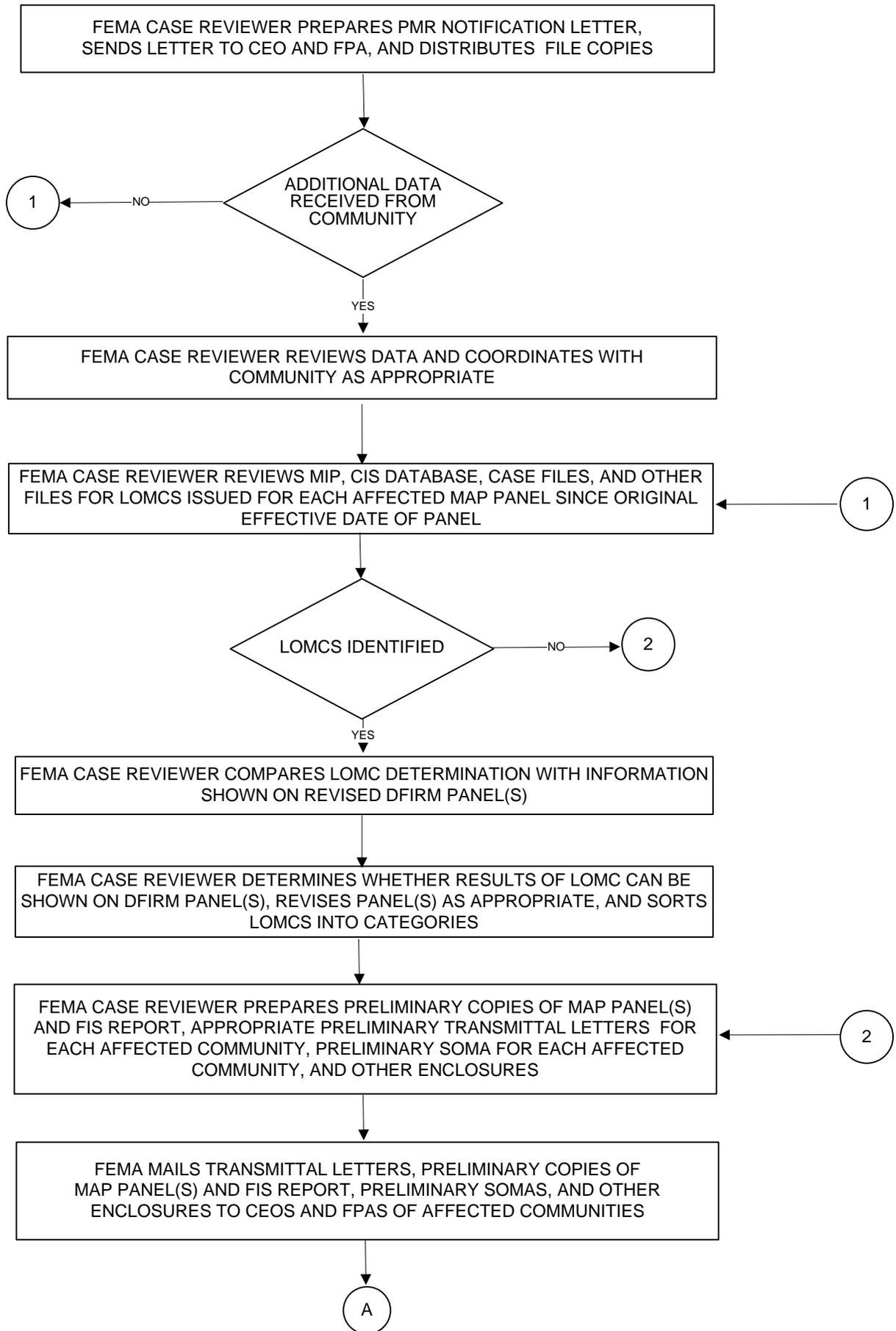


Figure 4-4. Final Processing Procedures for PMRs

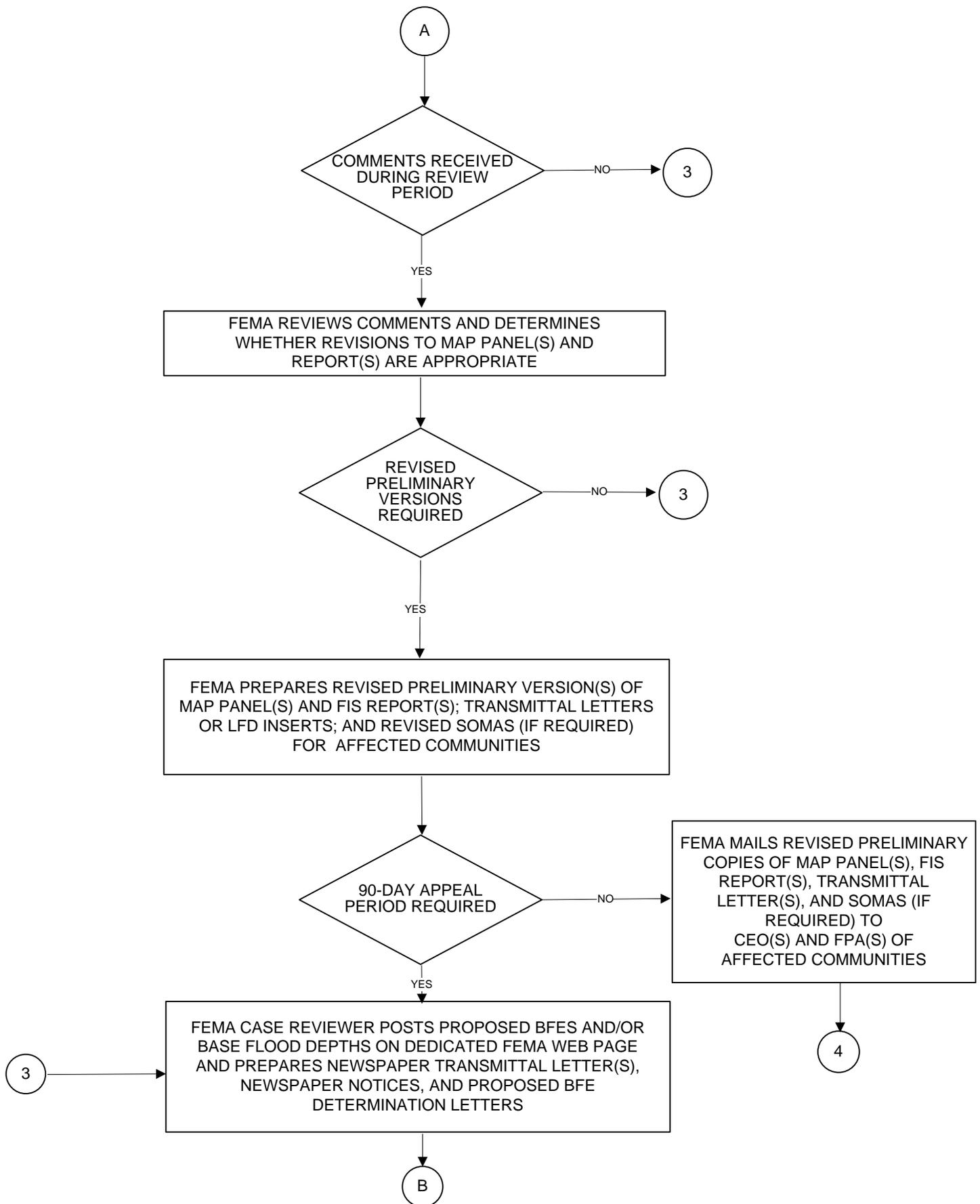


Figure 4-4. Final Processing Procedures for PMRs (Cont'd)

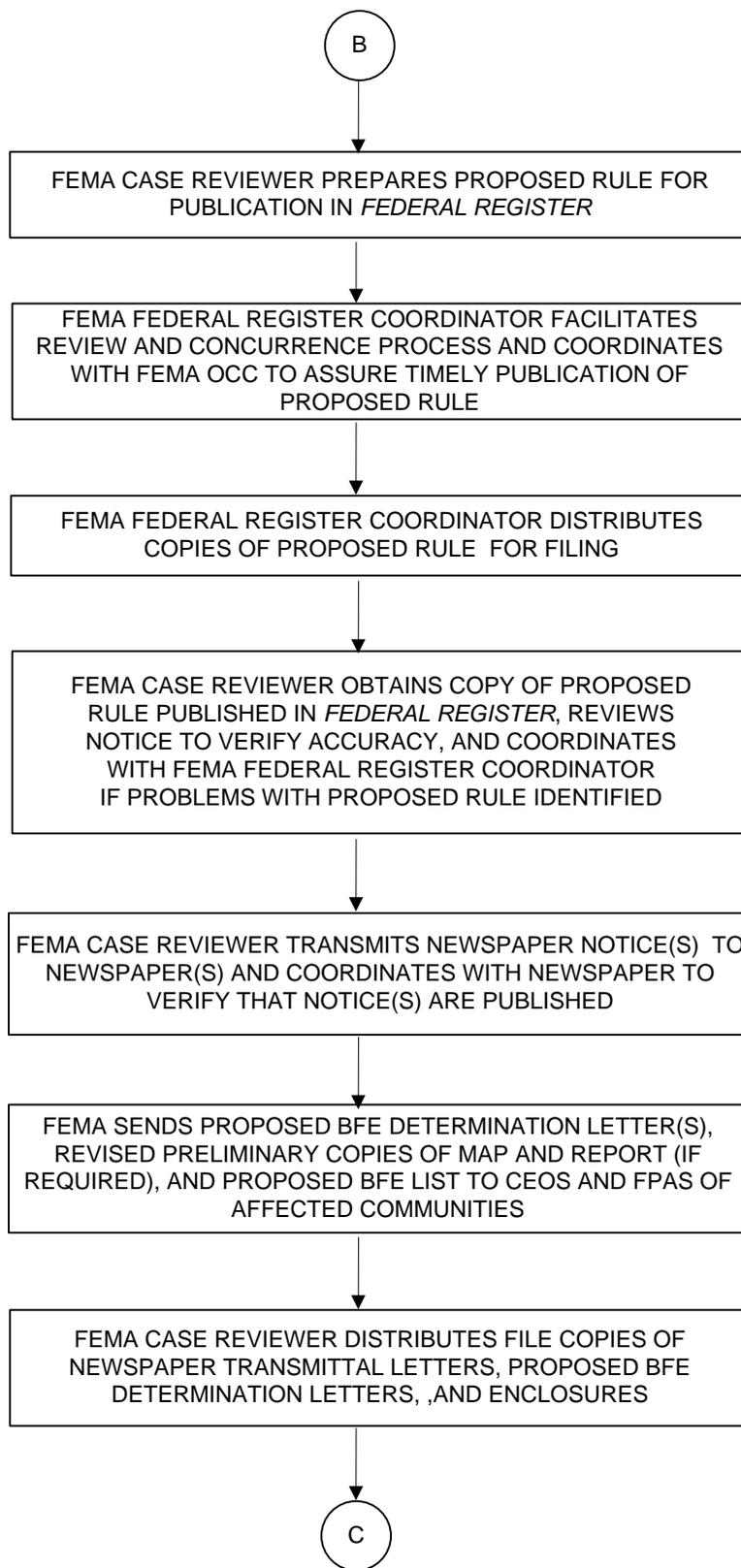


Figure 4-4. Final Processing Procedures for PMRs (Cont'd)

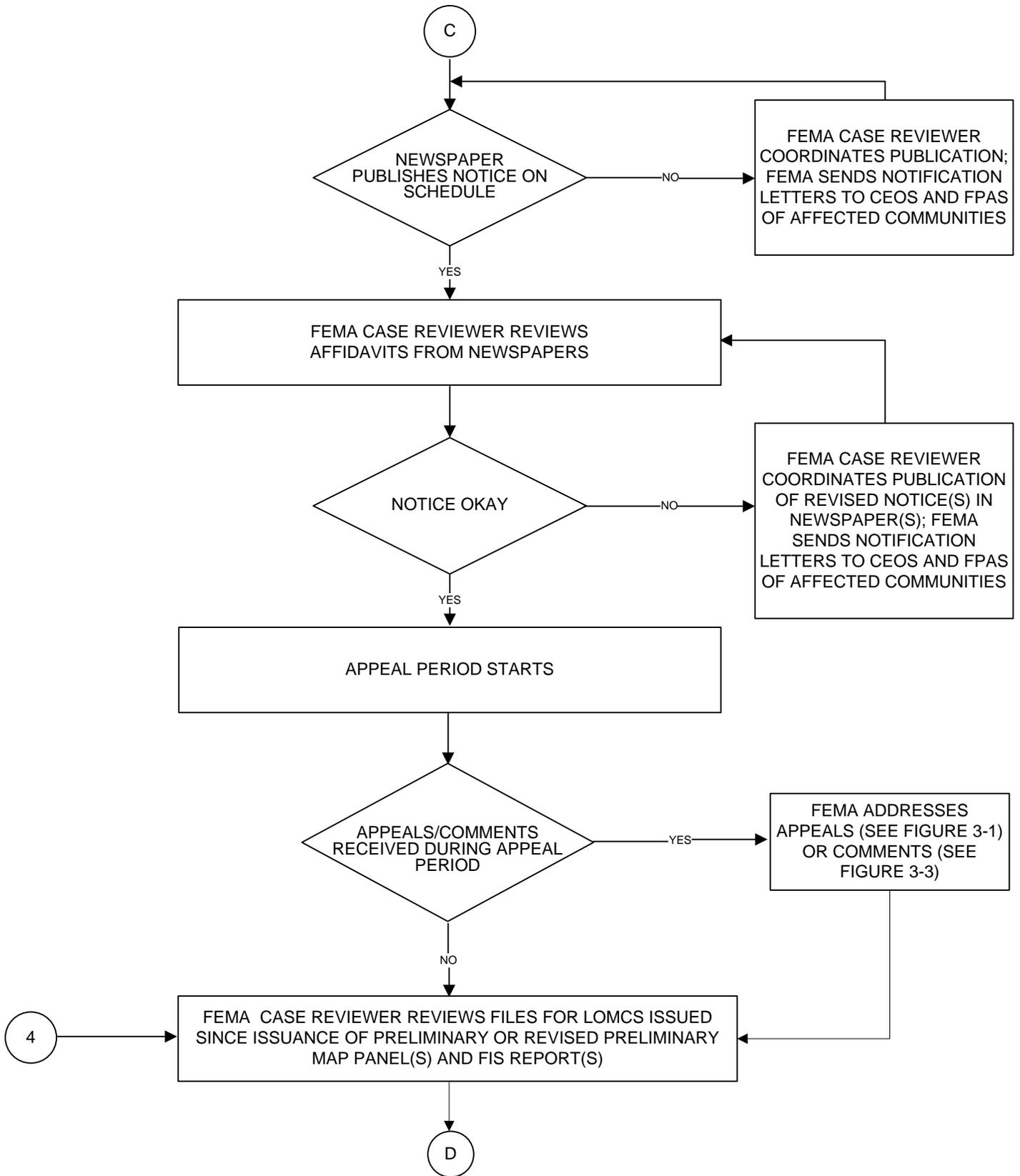


Figure 4-4. Final Processing Procedures for PMRs (Cont'd)

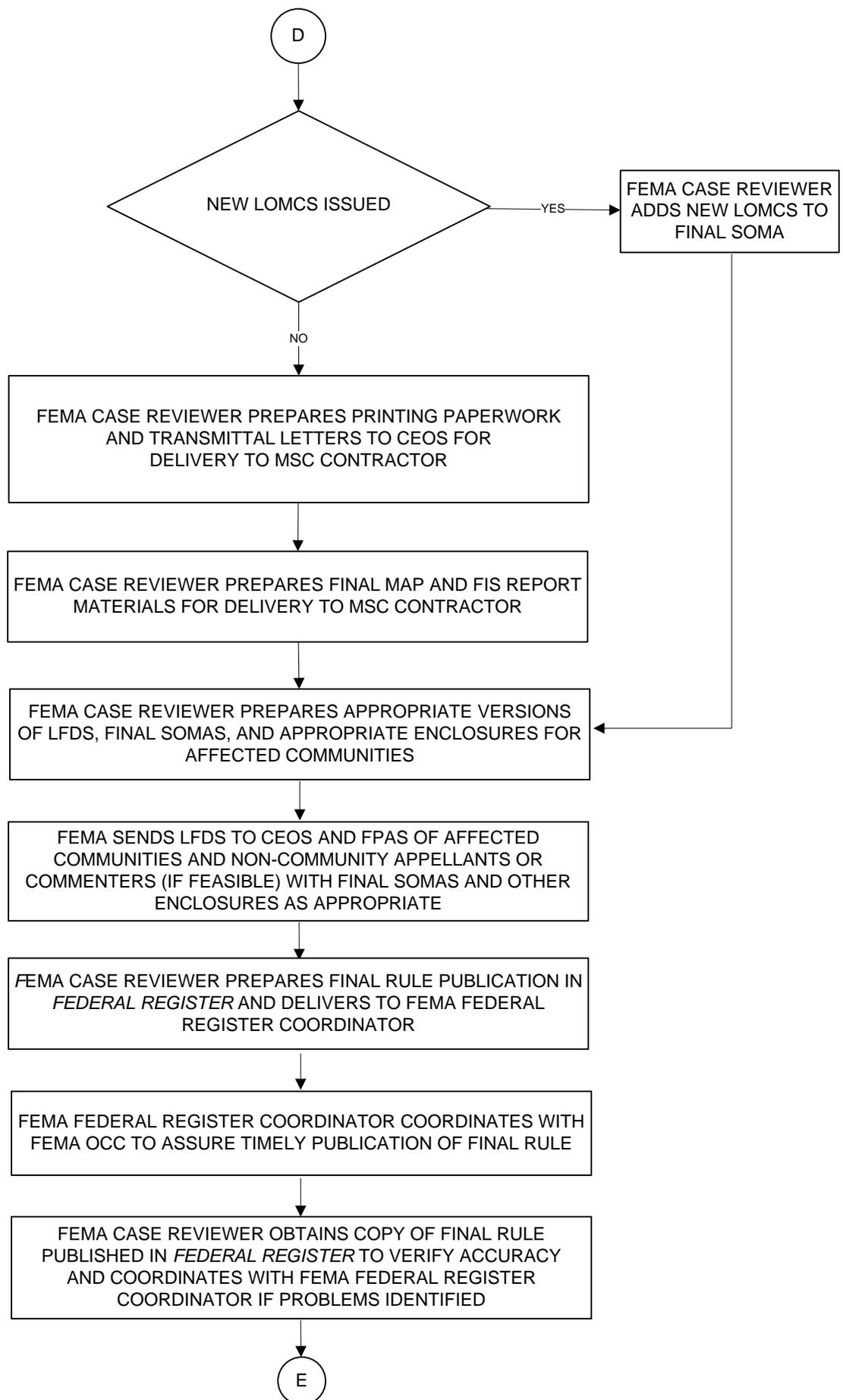


Figure 4-4. Final Processing Procedures for PMRs (Cont'd)

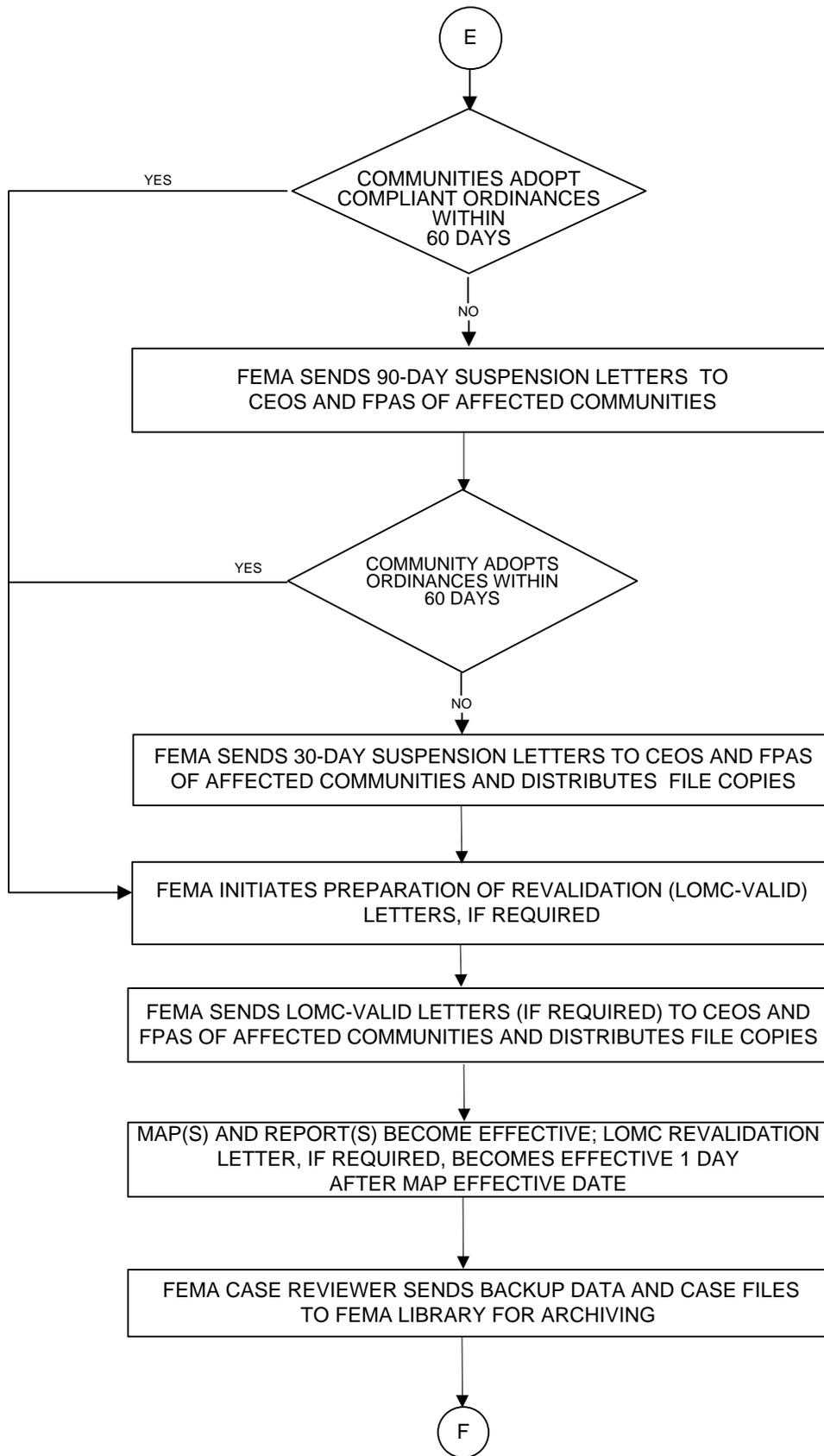


Figure 4-4. Final Processing Procedures for PMRs (Cont'd)

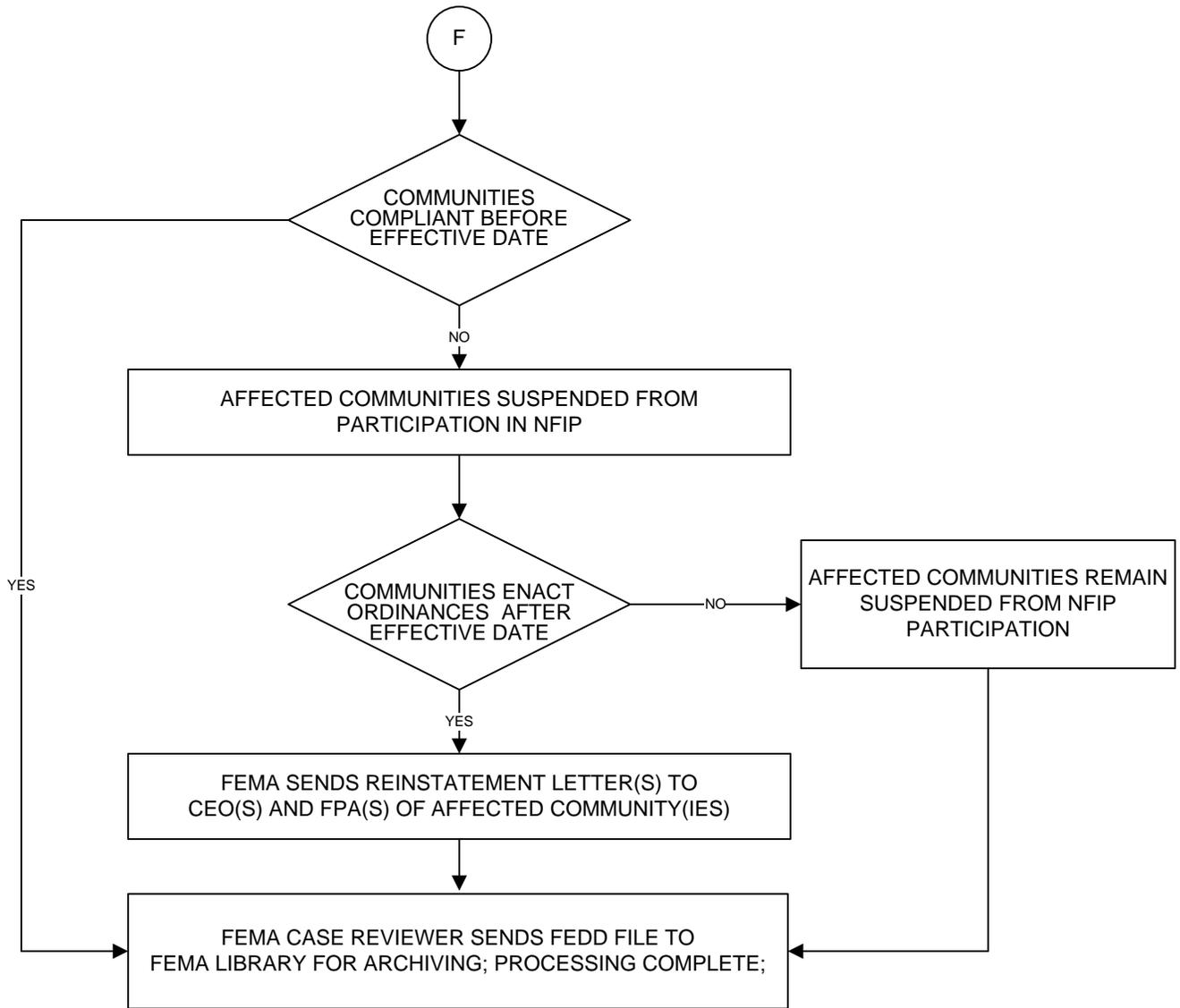


Figure 4-4. Final Processing Procedures for PMRs (Cont'd)

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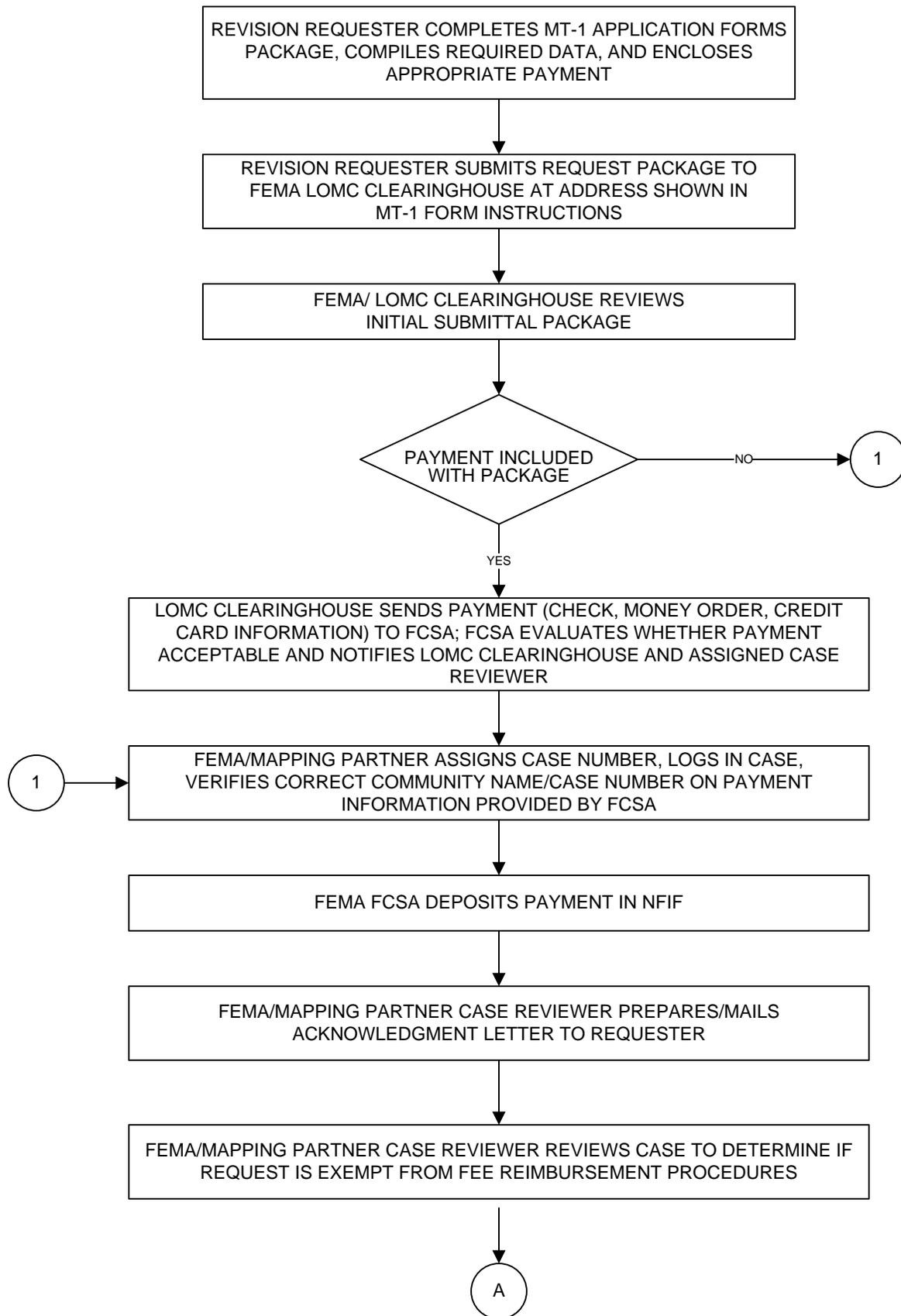


Figure 4-5. Processing Procedures for LOMR-Fs

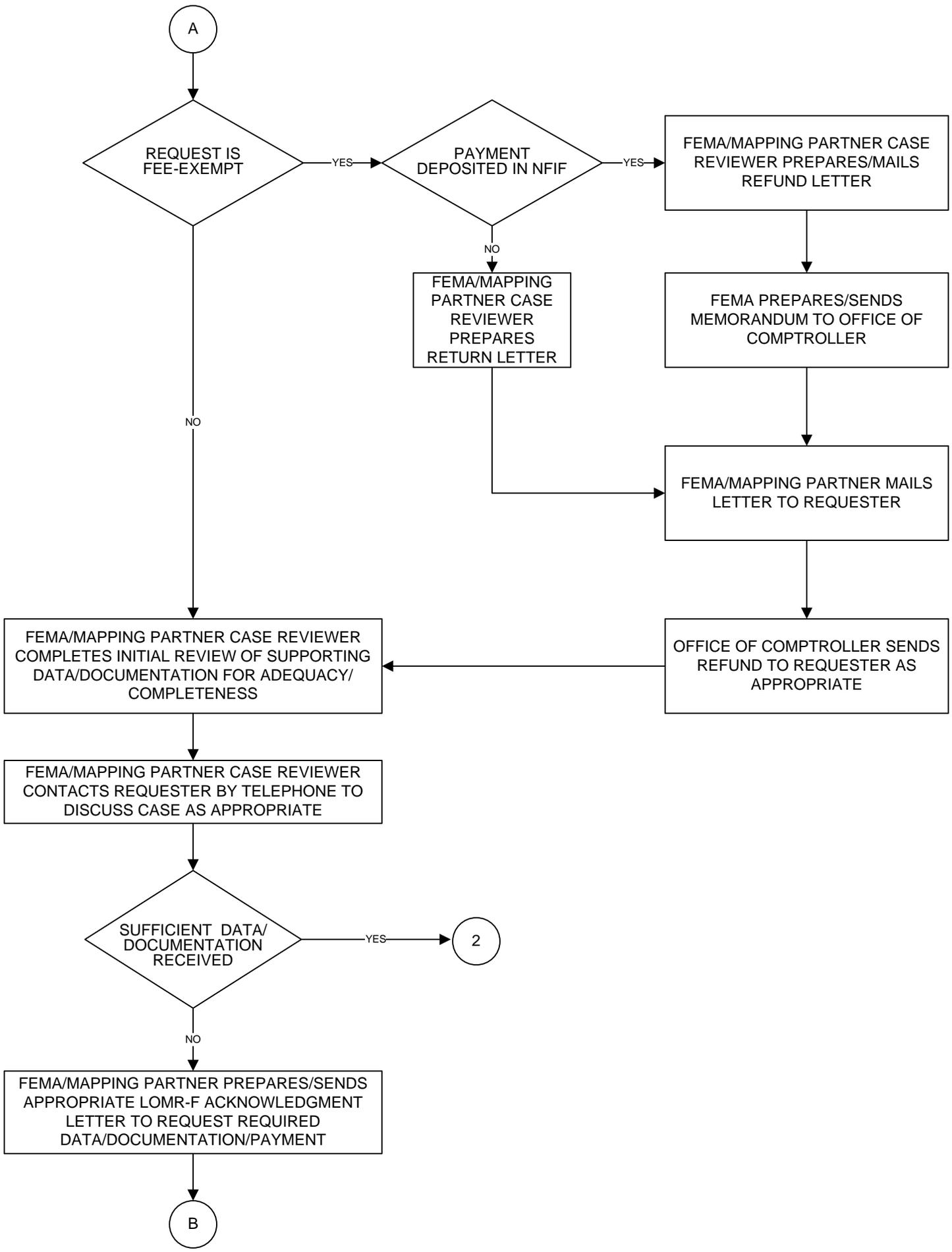


Figure 4-5. Processing Procedures for LOMR-Fs (Cont'd)

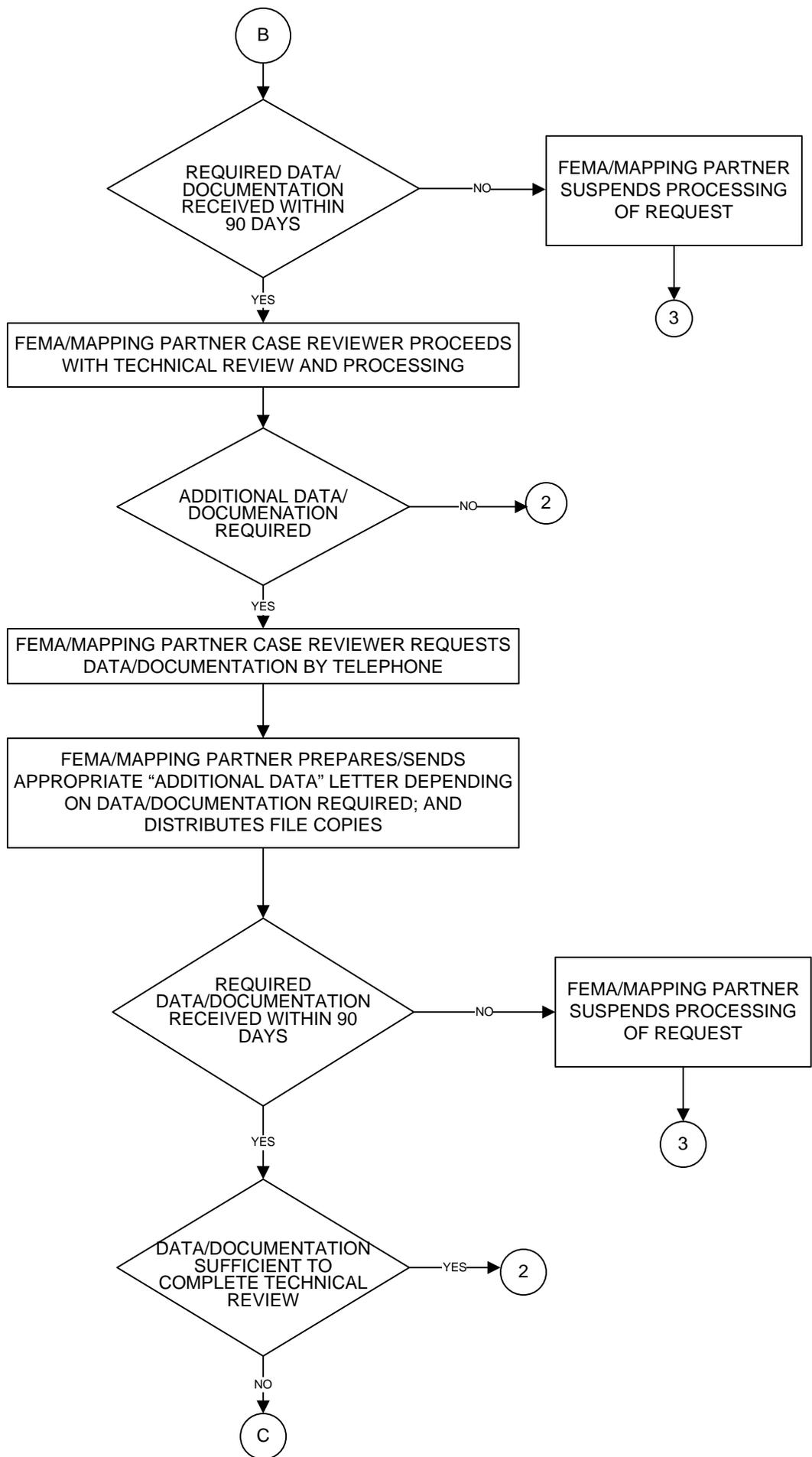


Figure 4-5. Processing Procedures for LOMR-Fs (Cont'd)

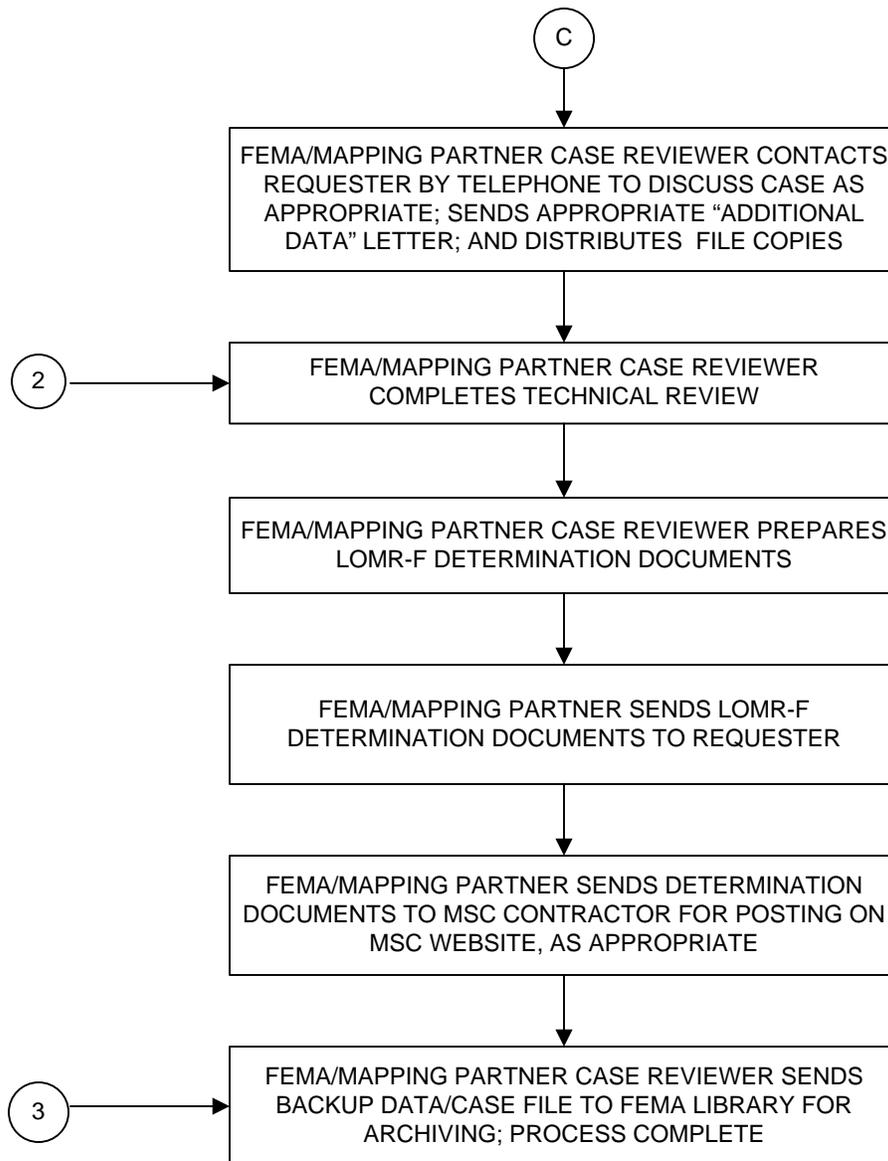


Figure 4-5. Processing Procedures for LOMR-Fs (Cont'd)

Chapter 5 Map Amendments

5.1 Background

The accuracy of the flood zone boundary delineations shown on the National Flood Insurance Program (NFIP) maps depends, in part, on the scales at which the maps are prepared and by the accuracy of available topographic data. Map users may find it difficult to determine whether a specific structure or parcel of land is within the Special Flood Hazard Area (SFHA). Also, small areas of high ground may be included in the SFHA because they are too small to be shown as elevated on the best available topographic data. When this happens, structures or parcels of land may be inadvertently included in the SFHA when the NFIP map is prepared. The SFHA is the area delineated on an NFIP map—Flood Hazard Boundary Map (FHBM), Flood Insurance Rate Map (FIRM), or Digital Flood Insurance Rate Map (DFIRM)—as being subject to inundation by the base (1-percent-annual-chance) flood.

Because the requirement for the purchase of flood insurance and the Federal and local regulations governing construction in the SFHA are important to persons who own or plan to build structures, FEMA has developed the map amendment process. Under this process, property owners may request that FEMA determine whether specific structures or legally described parcels of land are in the SFHA and, if appropriate, issue a Letter of Map Amendment (LOMA) determination in

accordance with Part 70 of the NFIP regulations.

The standard process for LOMAs has been in place for more than 30 years. More recently, however, FEMA created a Web-based application within the FEMA Mapping Information Platform (MIP) that can be used by Licensed Professionals to submit simple LOMA requests to FEMA. Information on this application is provided in the section titled “Electronic Letters of Map Amendment,” which appears at the end of this chapter.

FEMA does not issue LOMAs for structures/lots in alluvial fan flood hazard areas (areas labeled as Zone AO, with both base flood depths and velocities shown in feet per second on the effective NFIP map). FEMA also does not issue LOMAs for structures/lots in coastal high hazard areas (areas labeled as Zones V, VE, or V1-30 on the effective NFIP map) that are located seaward of the landward toe of the primary frontal dune.

Additional information regarding the processing of standard and electronic LOMAs is provided in Volume 2 of FEMA’s *Guidelines and Specifications for Flood Hazard Mapping Partners* and in Section 3 of FEMA’s *Document Control Procedures Manual*. Both documents are posted in the FEMA Library (<http://www.fema.gov/library/index.jsp>) and are accessible through the “Guidance Documents and Other Published Resources” page on the FEMA Website (http://www.fema.gov/plan/prevent/fhm/frm_docs.shtm).

5.2 Application Forms for Standard Letters of Map Amendment

FEMA developed the MT-EZ and MT-1 application forms and instructions for the submittal of standard LOMA requests. These forms and instructions, accessible through the links below, are discussed in more detail later in this chapter.

- MT-EZ
http://www.fema.gov/plan/prevent/fhm/dl_mt-ez.shtm
- MT-1
http://www.fema.gov/plan/prevent/fhm/dl_mt-1.shtm

The MT-EZ and MT-1 forms provide step-by-step instructions for requesters to follow and are comprehensive, ensuring that the requesters' submissions are complete and more logically structured. This allows FEMA staff to complete their review quicker and at lower cost to the NFIP. While completing the forms may seem burdensome, experience has shown that the advantages to the requesters outweigh any inconvenience.

The MT-EZ form is not to be used for LOMA requests submitted by developers, for requests involving multiple structures or lots, for structures or lots in alluvial fan areas or coastal high hazard areas, for requests involving the placement of fill, or for requests for conditional determinations (i.e., Conditional Letters of Map Amendment [CLOMAs], Conditional Letters of Map Revision Based on Fill [CLOMR-Fs]). Thus, only individual property owners are to use the MT-EZ form, and then only for a standard LOMA

request involving a single structure or single lot.

The MT-1 forms are to be used for multiple-structure/multiple-lot LOMA requests, as discussed later in this chapter; requests involving the placement of fill (see Chapter 4 of this *Guide*); and CLOMA and CLOMR-F requests (see Chapter 6 of this *Guide*).

For additional assistance in completing the MT-EZ and MT-1 forms, LOMA requesters should consult the LOMA tutorial, which is accessible through the following page on the FEMA Website: http://www.fema.gov/plan/prevent/fhm/ot_lmreq.shtm.

5.3 North American Vertical Datum of 1988

Since the National Geodetic Survey determined that the national vertical control network needed to be readjusted, FEMA has been gradually converting NFIP maps from the National Geodetic Vertical Datum of 1929 (NGVD29) to the North American Vertical Datum of 1988 (NAVD88) in the contiguous United States. Therefore, when submitting a LOMA request, requesters should use the reference datum shown on the applicable, effective FIRM/DFIRM panel.

For more information on the conversion from NGVD29 to NAVD88, requesters should refer to FIA-20, *Converting the National Flood Insurance Program to the North American Vertical Datum of 1988, Guidelines for Community Officials, Engineers, and Surveyors*, and to Appendix B, "Guidance for Converting to the North American Vertical Datum of

1988,” of FEMA’s *Guidelines and Specifications for Flood Hazard Mapping Partners*. These guidance documents are available from the FEMA Library (<http://www.fema.gov/library/index.jsp>). Information on how to obtain copies of these and other useful guidance documents is provided in Appendix B of this *Guide*.

5.4 How To Request a Standard Letter of Map Amendment

Any owner or lessee of property may request that FEMA make a determination concerning a structure or parcel of land and that, if appropriate, FEMA issue LOMA determination documents. Because such requests concern structures and parcels of land that were inadvertently included in the SFHA and do not involve recent alterations of topography or result in significant changes to the flooding information depicted on the NFIP map, they may be submitted directly to FEMA and are not subject to community review.

However, if the structure or land was also included in a regulatory floodway, removal of the structure or land from the regulatory floodway must be with community concurrence and is accomplished in accordance with the map revision procedures discussed in Chapters 4 and 7 of this *Guide*.

To request a LOMA for a single structure or legally recorded parcel of land or portion thereof, an individual property owner can complete the MT-EZ application form.

To request a LOMA for multiple structures or multiple lots, the requester should use

the MT-1 application forms package. The MT-1 forms may also be used for single-structure and single-lot requests. The MT-EZ and MT-1 packages provide detailed instructions for filling out the forms. No fees are charged by FEMA for evaluating LOMA requests.

Requesters may obtain paper copies of these forms and the step-by-step instructions from the Map Specialists in the FEMA Map Assistance Center (FMAC). Requesters may contact the FMAC by telephone, toll free, at 1-877-FEMA MAP (1-877-336-2627), or send an e-mail message to a Map Specialist at FEMAMapSpecialist@riskmapcds.com. For hours of operation and to learn more about FMAC services, interested parties should visit the FMAC page on the FEMA Website:

http://www.fema.gov/plan/prevent/fhm/fmc_main.shtm.

Requesters also may download Word, PDF, and TXT versions of the MT-EZ and MT-1 application forms and instructions from the FEMA Library (<http://www.fema.gov/library/index.jsp>). As indicated in the section titled “Application Forms for Standard Map Amendments,” the forms and instructions also are accessible through the FEMA Website.

Completed application forms and supporting data and documentation for standard LOMA requests are to be submitted to:

LOMC Clearinghouse
6730 Santa Barbara Court
Elkridge, MD 21075

In accordance with Section 72.5 of the NFIP regulations, no review and

processing fee is required for single-lot, single-structure, multiple-lot, or multiple-structure LOMA requests.

5.5 Supporting Data and Documentation Required for Standard Letters of Map Amendment

Under the map amendment process, FEMA will make determinations for single or multiple structures on one or more lots and for parcels of land that can be legally described. The supporting data and documentation summarized below are to be submitted in support of a LOMA request.

- Property description documentation must be enclosed for every request and can consist of either 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. Note: The recordation data (e.g., Book, Volume, Page, Reel, Document Number, Date) must appear on all documents submitted so that FEMA may use the legal description of the property in making its determination, and FEMA must be able to identify the property exactly.
- If the property is not recorded on a Plat Map, a copy of the tax assessor's map must be submitted to help FEMA locate the property.
- A copy of the effective FIRM/DFIRM panel, annotated to show where the property is located, must be submitted for every request. If FEMA has produced a separate Flood Boundary and Floodway Map (FBFM) for the area in which the structure(s) or parcel(s) of land may be located, a photocopy of the FBFM panel also should be included. The panel number and effective date of the FIRM/DFIRM and FBFM must appear on the copy submitted. The original paper copy of the map panel(s) or a photocopy of the map panels must be used. A reproduction from a photocopy is unacceptable due to possible distortion.
- Elevation data must be submitted for all requests, except requests for determinations in which the effective FIRM/DFIRM already shows the property to be clearly outside the SFHA. As discussed below, the type and source of the elevation data will vary.
 - a. For riverine flood hazard areas, the BFE can be established by interpolation along the Flood Profile for the flooding source that appears in the FIS report. If, for some reason, no Flood Profile exists, the BFE should be taken from the effective FIRM/DFIRM.
 - b. For lacustrine flood hazard areas, the BFE can be taken from the Summary of Stillwater Elevations in the FIS report. If the flooding source is not

- included in the table, the BFE should be taken from the effective FIRM/DFIRM.
- c. For coastal flood hazard areas, the BFE should be taken from the effective FIRM/DFIRM and then compared with the elevation in the Summary of Stillwater Elevations table. If the stillwater elevation listed in the table is less than or equal to the whole-foot BFE shown on the map minus 0.5 foot, a wave height, wave runup, and/or wave setup component exists; therefore, the whole-foot BFE shown on the map should be used. If the stillwater elevation listed in the table is greater than the whole-foot BFE shown on the map minus 0.4 foot, the stillwater elevation shown in the table should be used as the BFE.
 - d. For approximate flood hazard areas (designated Zone A on the map), FEMA has not determined BFEs. If a BFE for the area has not been developed by a Federal, State, or local government agency, the requester should refer to FEMA-265, *Managing Floodplain Development in Approximate Zone A Areas: A Guide for Obtaining and Developing Base (100-Year) Flood Elevations*, accessible through the FEMA Website (http://www.fema.gov/plan/prevent/fhm/frm_docs.shtm).
 - e. For shallow flooding areas designated Zone AH on the map, the BFE shown on the effective FIRM/DFIRM (rounded to a whole-foot elevation) should be used unless a more precise elevation is available in the FIS report.
 - f. For shallow/sheet flooding areas designated Zone AO on the map, the characteristics of the area will determine the appropriate methodology, and the requester should refer to the guidance in the MT-EZ and MT-1 instructions.
 - g. In addition to the BFE, the elevation data required for a structure is the Lowest Adjacent Grade (LAG) to the structure (i.e., the elevation of the lowest ground touching the structure, including attached decks or garage).
 - h. The elevation data required for a legally defined parcel of land, or portion thereof, is the elevation of the lowest ground on the parcel or within the portion of land that is to be removed from the SFHA.
- For single-lot/single-structure requests, the elevation data may be provided in Section 5 of the MT-EZ form. For all other requests except requests for determinations in which the effective FIRM/DFIRM already shows the property to be clearly outside the SFHA, the “Elevation Form” (Form 2) from the MT-1 package must be included unless an NFIP

Elevation Certificate has been completed. The elevation data must be certified by a Licensed Land Surveyor or Registered Professional Engineer.

- If an NFIP Elevation Certificate has been completed for a structure, it may be submitted in lieu of Form 2. The Elevation Certificate also must be certified by a Licensed Land Surveyor or Registered Professional Engineer. The Elevation Certificate is available through the FEMA Library and can be accessed through http://www.fema.gov/plan/prevent/fhm/frm_form.shtm. Paper copies of the Elevation Certificate also may be acquired by contacting the Map Specialists in the FMAC.

Printed paper copies of the effective FIRM, DFIRM, and/or FBFM panel(s) and Flood Insurance Study (FIS) report materials are kept on file in the Community Map Repository of each affected community. (Digital versions may also be available in some communities.) The Community Map Repository is the community office responsible for floodplain management activities in the community. Interested citizens who are having trouble locating the Community Map Repository may call a Map Specialist in the previously referenced FMAC, toll free, at 1-877-FEMA MAP (1-877-336-2627), or send an e-mail to FEMAMapSpecialist@riskmapcds.com.

To obtain their own copy of the effective NFIP map(s) or selected panel(s) and the FIS report, LOMA requesters should contact the FEMA Map Service Center

(MSC). The effective NFIP maps may be viewed online through the MSC Website: <http://www.msc.fema.gov/>. Effective NFIP maps, FIS reports, and related products also may be downloaded from the MSC Website. (Note: Effective October 1, 2009, the MSC distributes only digital versions of the Flood Maps and FIS reports.) A screen shot of the MSC Home Page is provided in Appendix B of this *Guide*.

Individuals who do not have Internet access or who require additional assistance also may contact the MSC staff by calling them, toll free, at 1-800-358-9616; by facsimile transmission, toll free, at 1-800-358-9620.

For many LOMA requests, map amendment requesters may also choose to create another product available from the MSC Website. This product is called a FIRMette. A FIRMette is a full-sized section of particular map panel that a user creates by selecting a desired area from the online image of that map panel. In addition to the area of interest, the FIRMette includes the map title block, north arrow, and scale bar. There is no cost for producing a FIRMette. A FIRMette tutorial is available on the MSC Website to assist first-time users.

Certifications, where referenced in the requirements for supporting data and documentation, 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 LOMA requester should ensure that certifications include the certifier's name, signature, registration number, and the registration date of the certifier.

5.6 Standard Letter of Map Amendment Processing Procedures

After the request has been received, FEMA will acknowledge receipt of the request by letter to the requester, usually within 10 days, but not later than 60 days. This letter will identify any basic data that the requester may have neglected to submit. If sufficient data have been provided with the request, FEMA will review the request and the supporting data. If any questions or problems arise during this review, FEMA will work with the requester to resolve them. If these required data are not provided within 90 days, FEMA will generally suspend the processing of the request

As provided for in the NFIP regulations, FEMA must complete the processing of LOMA requests within 60 days of the date that all required supporting data and documentation are received. However,

FEMA generally issues determinations for LOMAs within 4 weeks of the date that all required supporting data and documentation are received. Once all necessary data and documentation, including application forms, are provided, FEMA will complete its review and issue the appropriate determination:

- Out of the SFHA as shown on the effective FEMA map. No amendment to the map is necessary.
- Out of the SFHA because the structure or parcel of land is above the BFE (inadvertent inclusion). FEMA will issue a LOMA to exclude the existing structure or the parcel of land from the SFHA.
- In the SFHA because the structure or parcel of land is below the BFE. If necessary, FEMA will issue a LOMA to include the structure in the SFHA.
- A LOMA for the structure only. This determination means that the structure has been found to be above the BFE and therefore out of the SFHA. However, the rest of the parcel of land is subject to flooding and is still in the SFHA.

Samples of the LOMA determination documents are provided in Appendix C of FEMA's *Document Control Procedures Manual*. The Manual is available for review/ download from the FEMA Library (<http://www.fema.gov/library/index.jsp>) and can be accessed from the following page on the FEMA Website: http://www.fema.gov/plan/prevent/fhm/gs_dcpm.shtm.

When an effective NFIP map is amended by a LOMA, the amendment is usually effective as of the date of the LOMA. Copies of LOMAs that amend an effective map are sent to the individual requester, Community Map Repository, State coordinating agency, and appropriate FEMA Regional Office.

It should be noted that, should FEMA republish the affected map panel using the results of a contracted restudy or information from the community, the LOMA will no longer be valid. If the amendment is of sufficient size to be shown on the revised map, it will be included.

However, if the map scale does not allow the amendment to be shown, the requester must request that FEMA re-issue the LOMA. The procedures that are followed in processing requests for LOMAs are presented in Figure 7-1.

5.7 Requirements for Electronic Letters of Map Amendment

Electronic Letter of Map Amendment (eLOMA) is a Web-based application within the FEMA MIP that provides Licensed Professionals, or “LPs”, with a system to submit simple LOMA requests to FEMA. LPs are Licensed Land Surveyors and Registered Professional Engineers. This tool is designed to make a determination based on the information submitted by the Licensed LPs and allow them to generate a determination from FEMA in minutes.

The current release of eLOMA enables LPs to make requests for existing single

residential structures or entire legally recorded parcels of land, provided that no earthen fill has been placed to raise the elevations of the subject structure or property. Almost one-half of the LOMAs processed annually meet the requirements for the use of eLOMA. Through the use of eLOMA, LPs can receive a determination in the time that it takes to enter the required information online, as opposed to the 30-60 day processing time for a standard LOMA submitted to FEMA, as discussed earlier in this section.

An eLOMA document serves the same functions as a standard LOMA. The only difference between the two is that the online determination is made automatically with standard checks instead of the lengthier manual review used in standard LOMA processing. After registering on the MIP, LPs will be able to enter property-specific information that they have certified as accurate, as well as data taken from the FIRMs, DFIRMs, and FIS reports, in order to receive an eLOMA.

For quality purposes, the eLOMA tool ensures that all required information is entered by the LP and it also selects some eLOMA applications to be audited by FEMA. When an eLOMA is selected to be audited, the LP receives instructions for submitting their application materials to FEMA. If the audit is approved, the LP receives notification that they can login and print their final determination. If the application is rejected, a LOMA is completed by FEMA using the standard MT-1 process and the LP will be audited again upon their next submittal. After a successful audit, the LP is able to generate eLOMA determinations online, but they are still subject to random audits.

Approximately 10 percent of eLOMA submittals will be selected by the MIP for audit, and all new LPs will be audited on their very first eLOMA submittal. Audit frequency will be determined by LP performance on previously audited submittals. Access can be denied to individual LPs after five consecutive audit rejections that result for any reason. The audit process is as follows:

- If an eLOMA project is selected for audit, the LP will receive a notification screen in the MIP and an automated notification e-mail from the MIP. The notification will provide instructions for submitting the supporting data to FEMA.
- When FEMA receives the supporting data and/or documentation for the eLOMA audit from the LP, FEMA will create a case file and write the Tracking Number on the label. The FEMA reviewer will add the case number and community information to the label when the final letter is added to the case file. The FEMA reviewer then places the draft eLOMA determination letter, with the Tracking Number written on it, in the case file.
- The FEMA reviewer will process the audit in the MIP within 5 business days of receiving all required supporting data and/or documentation.
- If the LP does not submit all required data and/or documentation, the FEMA reviewer will request the necessary

data and/or documentation from the LP via e-mail. The FEMA reviewer will blind carbon copy the FMAC on the e-mail to the LP.

- Supporting data submitted by LPs will be kept on file by FEMA in accordance with the current archival procedures for MT-1 requests. The case file for each eLOMA audited will include all submitted supporting data and/or documentation and the final eLOMA determination letter and cover letter.
- If the audit is approved, the LP will receive an automated e-mail from the MIP stating that the audit was approved and is available for distribution.
- If the audit is rejected, the FEMA reviewer will e-mail the LP and explain the reasons why the audit had to be rejected. The LP will also receive an automated e-mail from the MIP stating that the audit was rejected.
- For rejected audits the FEMA reviewer will create a new LOMA to replace the rejected eLOMA.

Samples of the eLOMA determination documents are provided in Appendix C of FEMA's *Document Control Procedures Manual*. As mentioned earlier in this chapter, the Manual is available for review/download from the FEMA Library and accessible from the FEMA Website.

5.8 Summary of Map Actions Processing

When a revised FIRM/DFIRM panel becomes effective, all previous LOMAs for the area covered by that panel are superseded. Therefore, each time a panel is physically revised and republished, the panel must be updated to include the changes in the flood hazard information made via the issuance of a LOMA.

Frequently, the results of a LOMA cannot be shown on the revised FIRM/DFIRM panel for the following reasons:

- Map data limitations;
- Results indicated a particular property or structure was outside the SFHA as shown on the effective FIRM/DFIRM;
- Information on which the determination in the LOMA was based has been superseded by new information.

To assist a community in maintaining the FIRM/DFIRM, FEMA prepares a document called a Summary of Map Actions (SOMA), which is a summary of the LOMAs and other LOMCs that will be incorporated, revalidated, or superseded when the revised FIRM/DFIRM panels become effective. FEMA provides the SOMA to the communities at four significant stages during the processing of a study/mapping project or PMR. The SOMA informs the communities about the effect that the revised FIRM/DFIRM panels will have on previously issued LOMR-Fs.

At each of the four processing stages, the LOMR-Fs are sorted into the following categories:

- **Category 1** includes those LOMAs for which results have been shown on the revised FIRM/DFIRM panel(s).
- **Category 2** includes those LOMAs for which results could not be mapped and shown on the revised FIRM/DFIRM panel(s) because of map data limitations or because the affected areas was determined to be outside the SFHA as shown on the effective FIRM/DFIRM. These LOMAs are revalidated by a single letter after the revised FIRM/DFIRM panels become effective.
- **Category 3** includes those LOMAs for which results have not been, and will not be, reflected on the revised FIRM/DFIRM panels because the data on which the determinations in the LOMA documents were based are being superseded by new detailed data.
- **Category 4** includes those LOMAs which were previously issued for multiple lots or structures where the determination for one or more of the lots or structures has changed and cannot be revalidated through the administrative process used for Category 2 LOMAs.

For the Category 4 LOMAs, FEMA reviews the data submitted in support of the original LOMA request and issues a new determination for the subject properties after the revised FIRM/DFIRM panel becomes effective.

To learn more about the detailed procedures followed in preparing the SOMA, interested parties should refer to Subsections 1.5 and 1.11 of the FEMA *Document Control Procedures Manual* (http://www.fema.gov/plan/prevent/fhm/gs_dcpm.shtml).

5.9 Revalidation Letter Processing

As discussed in the previous section on SOMAs, LOMAs affecting particular map panels are superseded when revised versions of those map panels become effective. Therefore, approximately 4 weeks before the effective date of new FIRM/DFIRM panel(s), FEMA prepares and distributes a revalidation, or “LOMC-VALID,” letter for the LOMAs and other LOMCs that would be superseded. FEMA mails the LOMC-VALID letter(s) to the community CEO(s), community FPA(s), and other community official(s) identified by the CEO.

During the processing of a revised FIS report and FIRM/DFIRM, FEMA may issue LOMA determination documents to revise the effective FIRM/DFIRM. In these determination documents, FEMA includes a notification that the affected map panel is scheduled to be republished and the determination made in the LOMA determination documents will be superseded on the date the new panel became effective.

FEMA also notifies the community and individual property owner if the LOMA will be revalidated after the effective date of the revised map panel(s).

The LOMC-VALID letter typically becomes effective 1 day after the effective date of the newly effective FIRM/DFIRM panels. The LOMC-VALID letter is considered legally binding, in the same manner as an original LOMA or other LOMC, provided a copy of the original LOMA or other LOMC accompanies the LOMC-VALID letter.

If requested, FEMA will provide a copy of the original LOMC determination documents and enclosures, if any, with the LOMC-VALID letter. FEMA will assess a review and processing fee for such requests.

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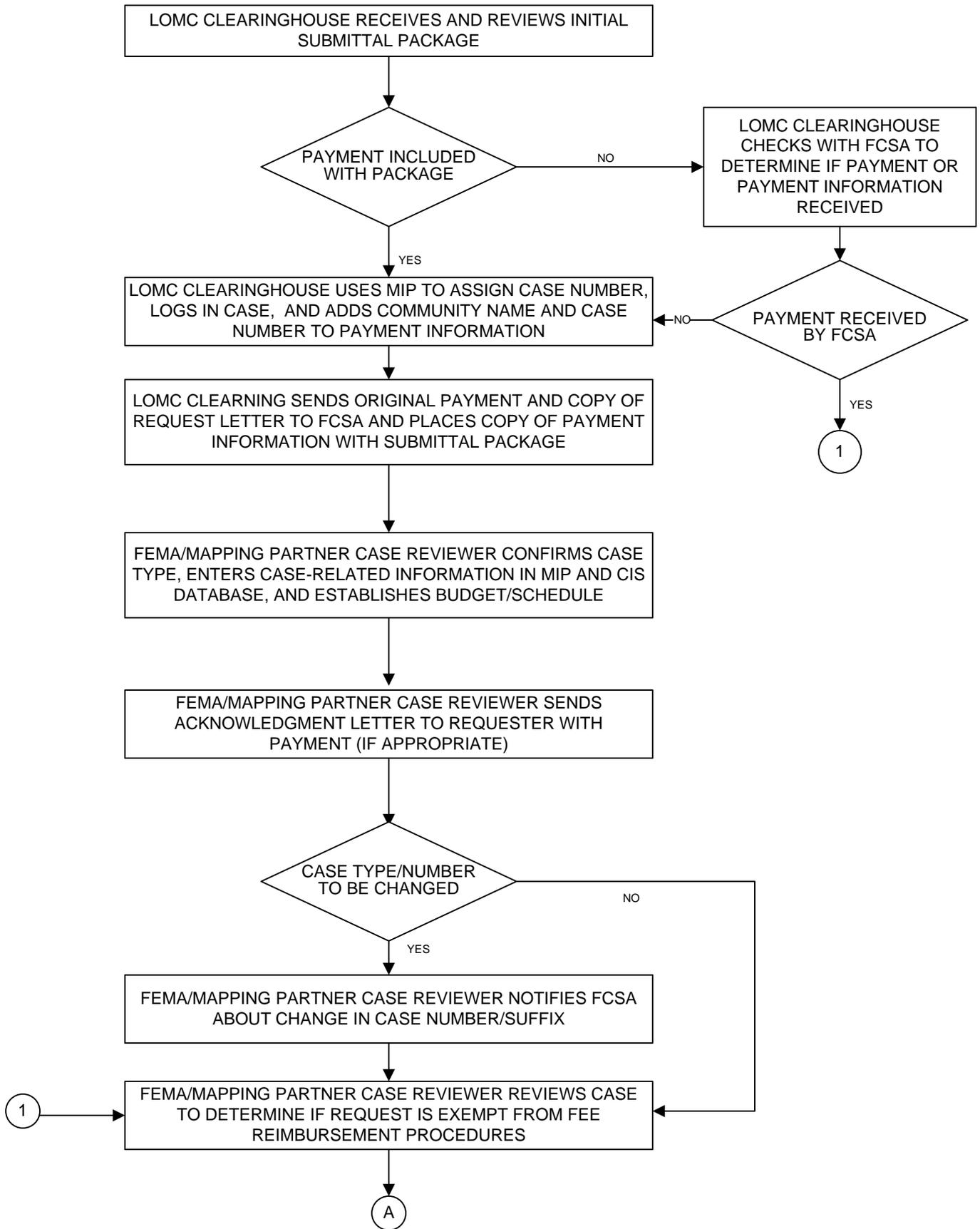


Figure 5-1. Processing Procedures for LOMAs

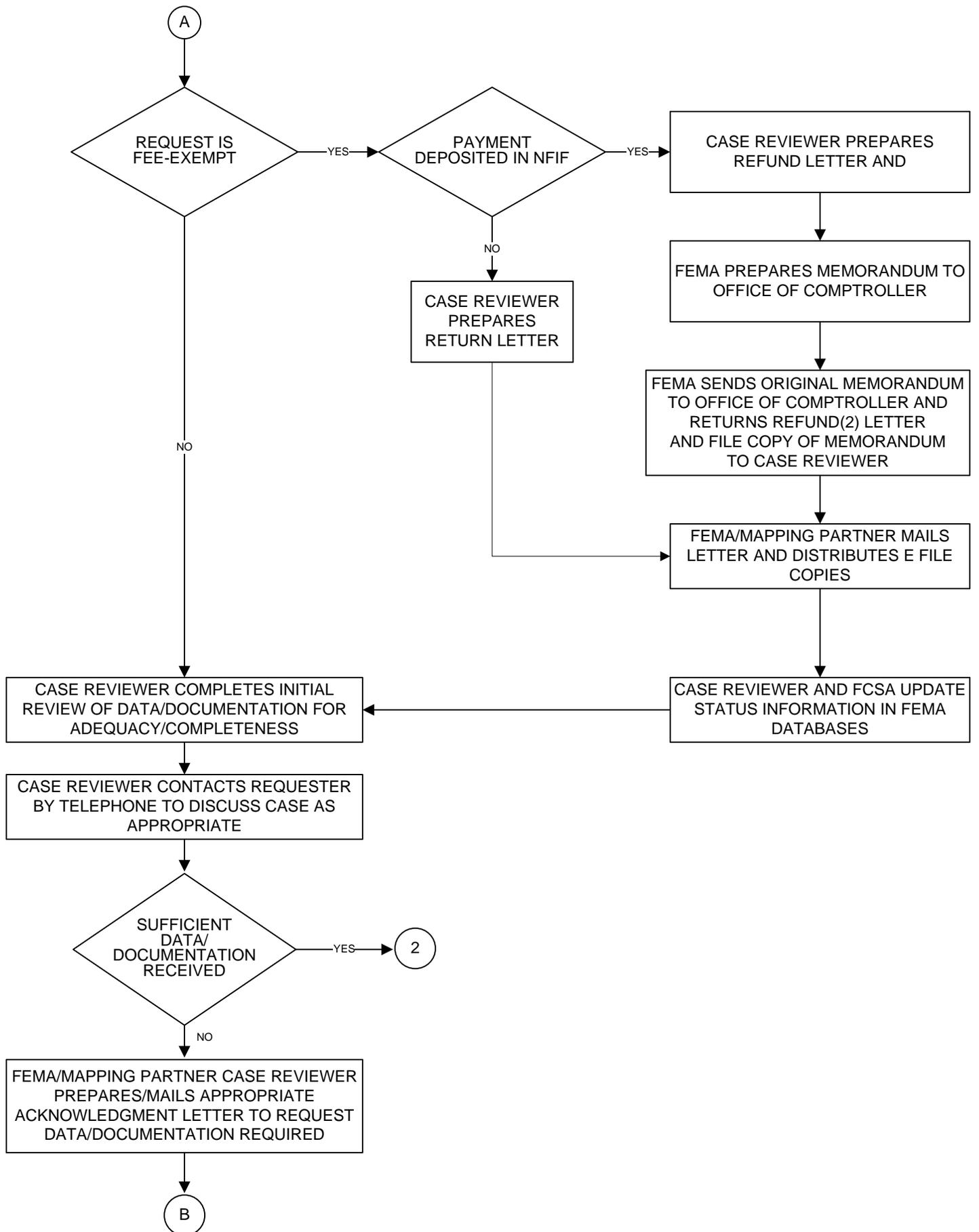


Figure 5-1. Processing Procedures for LOMAs (Cont'd)

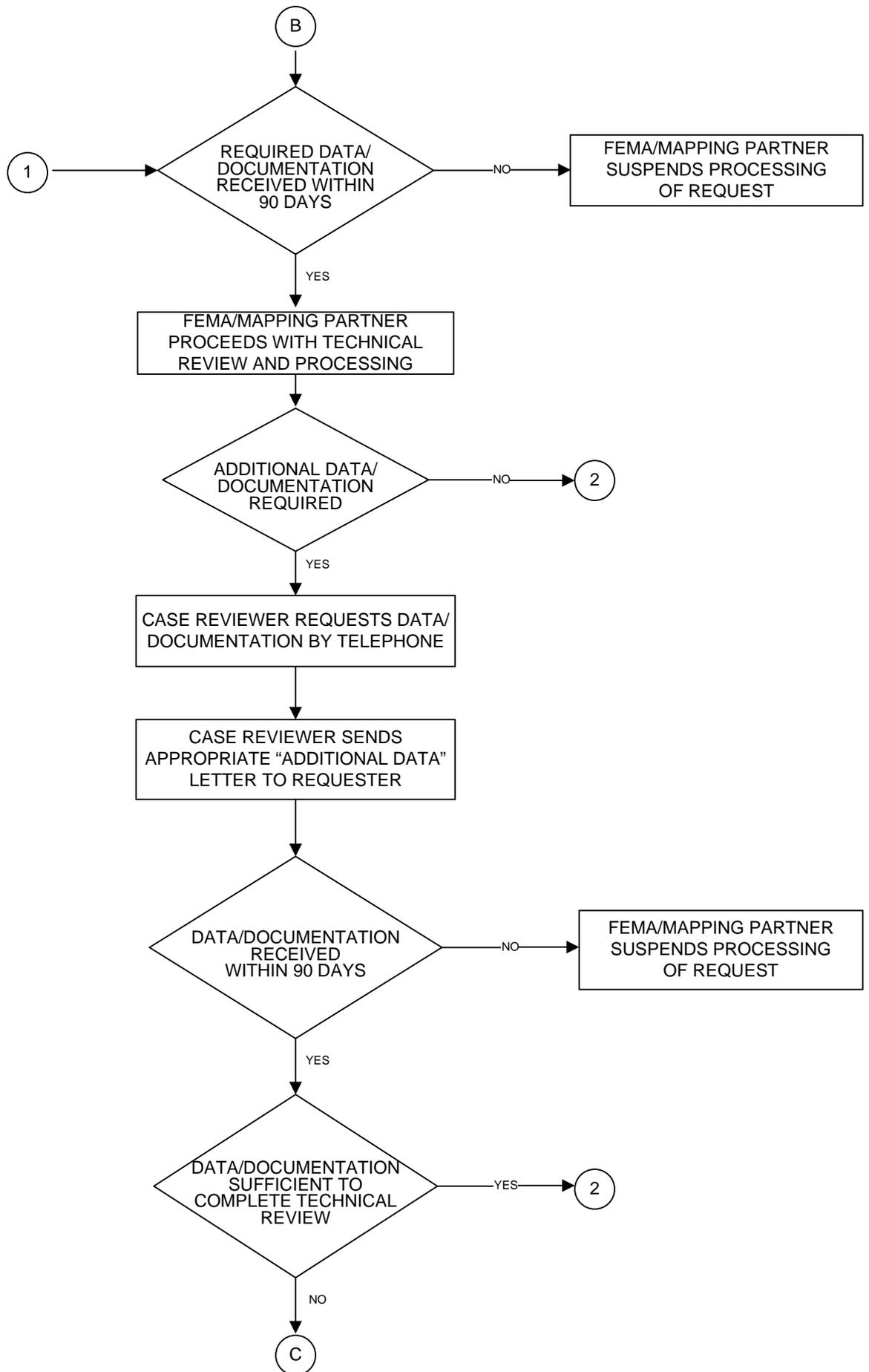


Figure 5-1. Processing Procedures for LOMAs (Cont'd)

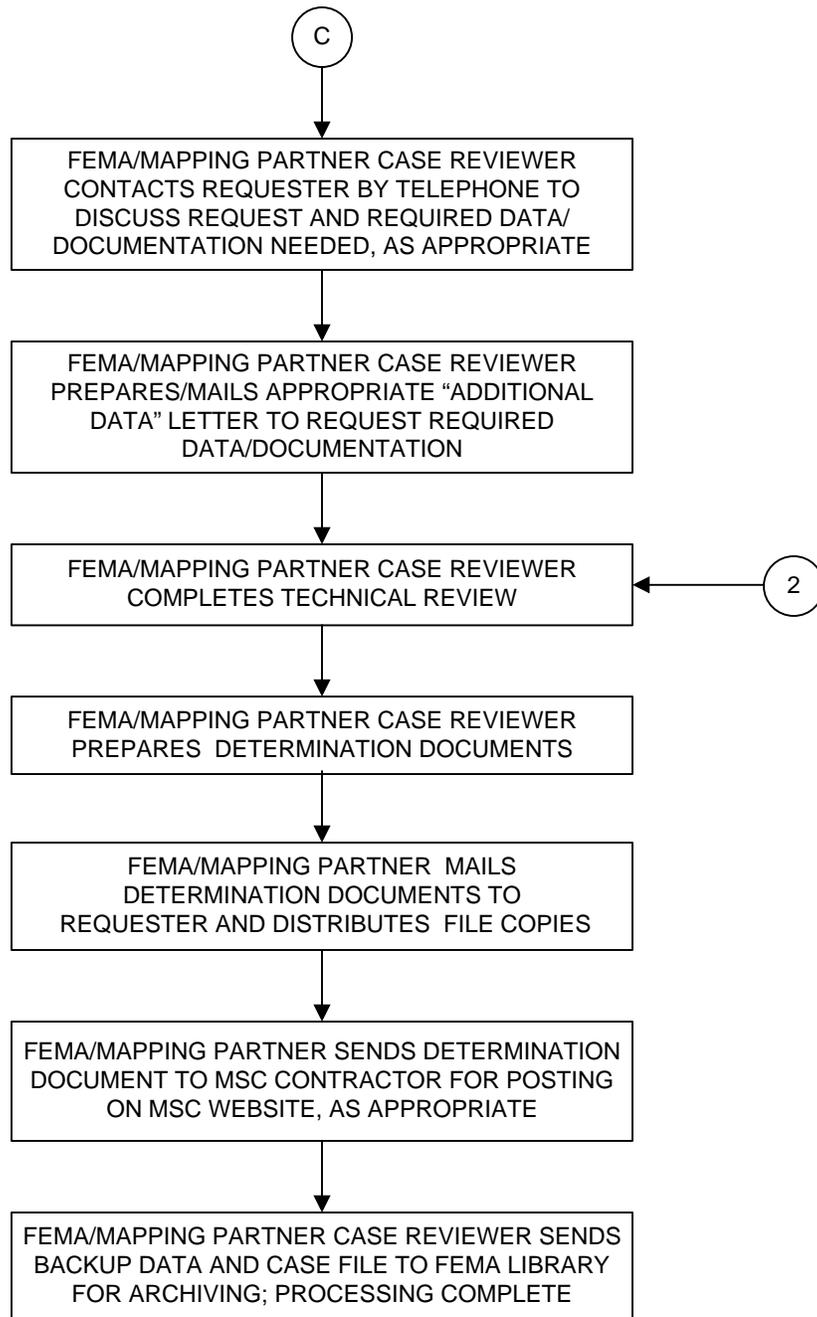


Figure 5-1. Processing Procedures for LOMAs (Cont'd)

Chapter 6 Conditional Revisions and Amendments

6.1 Background

Communities, regional agencies, developers, and individual property owners often undertake floodplain modifications intended to reduce the flood risk in specific areas. Such modifications can range in scope from the simple placement of fill to large-scale flood protection projects to infrastructure improvements, such as bridge and road construction. Before proceeding with such modifications, those who propose them often wish to receive some assurance from FEMA that the modifications may eventually be credited with providing 1-percent-annual-chance flood protection under the National Flood Insurance Program (NFIP).

In carrying out their responsibilities under the NFIP, community officials may wish to have FEMA verify that such modifications will not aggravate existing flood hazards. In addition, developers and property owners who intend to construct buildings in or near a Special Flood Hazard Area (SFHA) shown on an effective NFIP flood map usually must prove to lending institutions and local officials that the placement of fill or other modifications will ensure that, after the buildings are constructed, they will not be within the SFHA shown on the map. The SFHA is the area that would be inundated by the base (1-percent-annual-chance) flood.

It is common practice for persons who are planning to undertake floodplain modifications to submit design plans and

other engineering data to FEMA and request that FEMA review them. FEMA responses to such requests are to provide comments concerning changes that may eventually be made to the effective NFIP map. These comments are issued in the form of letters called Conditional Letters of Map Revision, or “CLOMRs.”

Another common practice is for persons who are planning to place fill on single or multiple lots to request that FEMA determine whether the placement of fill will elevate their structure(s) above the Base (1-percent-annual-chance) Flood Elevation (BFE) determined by FEMA so that the structure(s) can, therefore, be considered as being outside the SFHA. FEMA responds to such requests with letters called Conditional Letters of Map Revision Based on Fill, or “CLOMR-Fs.”

A less common practice is for persons who intend to build on single or multiple lots to request that FEMA determine whether the structure or structures, which will not be placed on fill, will be excluded from the SFHA as shown on the effective NFIP map. FEMA responds to such requests with letters called Conditional Letter of Map Amendments, or “CLOMAs.”

With the exception of the federally funded flood protection systems that have met the requirements for “adequate progress” (Zone A99) discussed in Chapter 8 of this *Guide* and the flood protection systems that are being restored and meet the requirements for Zone AR discussed in Chapter 9 of this *Guide*, floodplain modifications that have not yet been completed do not warrant revisions to effective NFIP maps. Therefore, unlike Letters of Map Revision (LOMRs), Letters of Map Revision Based on Fill

(LOMR-Fs), and Letters of Map Amendment (LOMAs), CLOMRs, CLOMR-Fs, and CLOMAs do not actually revise an effective NFIP map. Once a project is completed, it is the requester or community's responsibility to ensure that "as-built" information is submitted to FEMA for a LOMR, LOMR-F, or LOMA to be issued.

The procedures that are followed in processing CLOMRs, CLOMR-Fs, and CLOMAs are presented in Figures 6-1, 6-2, and 6-3, respectively, at the end of this chapter.

6.2 Application Forms

For communities that propose floodplain modifications, requesting CLOMRs is not only prudent but, in some circumstances, required by the NFIP regulations. (See Section 65.12 of the NFIP regulations.) When a participating community proposes to permit an encroachment into a 1-percent-annual-chance floodplain where no regulatory floodway has been established, and the encroachment will cause an increase of more than 1.0 foot in the BFE (or less, if the State or community has a more restrictive standard for the allowable increase), the community must first obtain FEMA's conditional approval of the proposed encroachment under the conditional map revision process; Similarly, the community must also obtain conditional approval from FEMA before permitting an encroachment into a regulatory floodway that could cause any increase in flood elevation.

In 1992, FEMA developed the MT-1 and MT-2 application forms to make the CLOMR, CLOMR-F, and CLOMA

process quicker and more efficient. The MT-1 and MT-2 forms provide step-by-step instructions for requesters to follow and are comprehensive, ensuring that the requesters' submissions are complete and more logically structured. This allows FEMA staff to complete their review quicker and at lower cost to the NFIP. While completing the forms may seem burdensome, experience has shown that the advantages to the requesters outweigh any inconvenience. These forms are discussed in more detail later in this chapter.

6.3 Fee-Charge System

To reduce the expenses to the NFIP by more fully recovering the costs associated with processing conditional and final map change requests, FEMA implemented a procedure to recover costs associated with reviewing and processing such requests. The fee schedule for CLOMR, CLOMR-F, and CLOMA requests and other map change requests is provided in Table D-1 in Appendix D of this *Guide*.

FEMA reviews its fee-charge procedures periodically (usually, once every 2 years) and may revise the review and processing fees for map change requests. Therefore, interested parties should visit the following page on the FEMA Website for the most up-to-date information:
http://www.fema.gov/plan/prevent/fhm/fm_fees.shtm.

Certain map change requests may qualify for exemptions in accordance with Section 72.5 of the NFIP regulations, as summarized on the above-referenced Web page and in Appendix D, and include changes that correct mapping errors, natural changes, and better quality data

that do not partially or wholly incorporate manmade modifications within the SFHA.

6.4 North American Vertical Datum of 1988

Since the National Geodetic Survey determined that the national vertical control network needed to be readjusted, FEMA has been gradually converting NFIP maps from the National Geodetic Vertical Datum of 1929 (NGVD29) to the North American Vertical Datum of 1988 (NAVD88) in the contiguous United States. Therefore, when submitting a CLOMR, CLOMR-F, or CLOMA request, requesters should use the reference datum shown on the applicable, effective FIRM/DFIRM panel(s).

For more information on the conversion from NGVD29 to NAVD88, requesters should refer to FIA-20, *Converting the National Flood Insurance Program to the North American Vertical Datum of 1988, Guidelines for Community Officials, Engineers, and Surveyors*, and to Appendix B, “Guidance for Converting to the North American Vertical Datum of 1988,” of FEMA’s *Guidelines and Specifications for Flood Hazard Mapping Partners*. These guidance documents are available from the FEMA Library (<http://www.fema.gov/library/index.jsp>). Information on how to obtain copies of these and other useful guidance documents is provided in Appendix B of this *Guide*.

6.5 Endangered Species Act

For conditional map change requests involving proposed projects that have the

potential to impact an endangered species, the requester must submit documentation to show compliance with Sections 9 and 10 of the Endangered Species Act. Section 9 prohibits anyone from “taking” or harming an endangered species. If an action might harm an endangered species, a permit is required from U.S. Fish and Wildlife Service or National Marine Fisheries Service under Section 10 of the Endangered Species Act.

In accordance with Subparagraph 60.3(a)(2) of the NFIP regulations, FEMA will “review proposed development to assure that all necessary permits have been received from those governmental agencies from which approval is required by Federal or State law....” FEMA will work with the requester to ensure compliance with Endangered Species Act requirements for all conditional map change requests.

6.6 How To Request a Conditional Letter of Map Revision

A CLOMR may be requested at any time, either by a community or a private party. To request a CLOMR, the MT-2 application forms package must be used.

Requesters may obtain paper copies of these forms and instructions from the Map Specialists in the FEMA Map Assistance Center (FMAC). Requesters may contact the FMAC by telephone, toll free, at 1-877-FEMA MAP (1-877-336-2627), or send an e-mail message to a FEMA Map Specialist at FEMAMapSpecialist@riskmapcds.com.

Requesters also may download Word, PDF, and TXT versions of the MT-2

application forms and instructions from the FEMA Library

(<http://www.fema.gov/library/index.jsp>).

The forms and instructions are accessible through the following page on the FEMA Website:

<http://www.fema.gov/plan/prevent/fhm/dlmt-2.shtm>.

Completed application forms, supporting data and documentation, and review and processing fees are to be submitted to the following address.

LOMC Clearinghouse
6730 Santa Barbara Court
Elkridge, MD 21075

Payment of the review and processing fee may be made by credit card, check, or money order. Checks and money orders are to be made payable in U.S. funds to the National Flood Insurance Program. If a revision requester chooses to use a credit card, the credit card information is to be provided on the “Payment Information Form” that is included in the MT-1 forms package.

An assigned FEMA Fee-Charge System Administrator (FCSA) will review the check, money order, and payment information and, if appropriate, deposit the payment in the National Flood Insurance Fund (NFIF). If the FCSA identifies any irregularities with the payment, the FCSA will not deposit the payment in the NFIF. In such instances, FEMA will send a letter to the requester explaining any additional actions the requester must take to allow FEMA to process the request.

Because the Chief Executive Officer (CEO) of the community is responsible for ensuring that the community meets its obligations as a participant in the NFIP,

either the CEO or another community officially designated by the CEO (e.g., floodplain administrator [FPA], city planner, or city engineer) should be aware of proposed floodplain modifications that could eventually affect flooding conditions within the community. Therefore, any individual property owner, developer, or other private party who wishes to request a CLOMR should submit the request to the CEO or the designated community official.

Upon completion of the community review, the CEO, FPA, or other designated official will forward the request to the office indicated in the application form instructions.

6.7 Supporting Data and Documentation Required for Conditional Letters of Map Revision

The main difference between the types of supporting data and documentation required for map revisions—Letters of Map Revision (LOMRs) and Physical Map Revisions (PMRs)—and those required for 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."

In addition, the operations and maintenance plans that are to be formally adopted by a community, which are part of the required supporting information for a map revision request based on the effects of a completed levee system or other flood protection system, are not required when a

request is made for a CLOMR. (See Tables 4-1 through 4-4 in Chapter 4 of this *Guide* for summaries of the required data and documentation for a CLOMR.)

As with LOMR and PMR requests, individuals or community officials that are considering whether to submit a CLOMR request also should refer to the MT-2 instructions and the following forms, where appropriate, to clarify the supporting data and documentation required:

- “Elevation Form” (Form 1);
- “Riverine Hydrology & Hydraulics Form” (Form 2);
- “Riverine Structures Form” (Form 3);
- “Coastal Analysis Form” (Form 4);
- “Coastal Structures Form” (Form 5); and
- “Alluvial Fan Flooding Form” (Form 6).

For most CLOMR requests, the data and documentation discussed below must be submitted.

- Hydraulic modeling analysis of the floodplain and regulatory floodway (as appropriate) of all flood frequencies listed in the effective FIS report must be submitted.
- A 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 for the CLOMR requester to 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 the effective Flood Insurance Rate Map (FIRM) or Digital Flood Insurance Rate Map (DFIRM) and delineating the flood zone and regulatory floodway boundaries (as appropriate) must be submitted.
- A copy of the effective FIRM/DFIRM (panel number and effective date must be included in copy) annotated to reflect the proposed flood zone and regulatory floodway boundaries (as appropriate) must be submitted.
- All appropriate completed certification forms including community concurrence of proposed revision are to be submitted.
- Documentation showing compliance with Sections 9 and 10 of the Endangered Species Act must be submitted.

Certifications, where referenced in the requirements for supporting data and documentation, 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 CLOMR requester should ensure that certifications include the certifier's name, signature, registration number, and the registration date of the certifier.

6.8 Conditional Letter of Map Revision Processing Procedures

As shown below and in Figure 6-1, which appears at the end of this chapter, the processing procedures for LOMR and PMR requests also apply to CLOMR requests.

Although a CLOMR does not revise the effective Flood Insurance Study (FIS) report, FIRM, DFIRM or Flood Boundary and Floodway Map (FBFM), the CLOMR determination documents do describe

changes to the effective FIS report, FIRM/DFIRM, 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 by FEMA 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. (See 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 the CLOMR process. 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.

In their review of a map revision request, FEMA will acknowledge receipt of the request by letter and, if necessary, by telephone to the person who submitted the request. If that person is a private party, FEMA will send copies of all letters to that person to the community CEO(s) and FPA(s) of the affected community or communities.

Upon receiving a CLOMR request, FEMA will perform a preliminary review to determine whether the requester has completed the appropriate forms; to determine whether the required supporting data and review and processing fee have

been provided; and, if a private party submitted the request to FEMA, to verify that the community is aware of the request.

If the required supporting data, documentation, forms, and/or review and processing fee have not been provided, FEMA will send a letter to the requester. This letter will identify the supporting data, documentation, forms, or review and processing fee that the requester must submit before FEMA can complete its review of the request. In this “additional data” letter, FEMA will also provide a timeframe (usually 90 days) for submitting the required data, documentation, forms, and/or fee.

FEMA will generally send the additional data letter within 30 days. Until the requested data, documentation, forms, and/or fee are received, FEMA will not take any further action concerning the request.

If FEMA determines from its preliminary review that the required forms and fee have been provided along with sufficient supporting data and documentation to complete its review, FEMA will then inform the requester of the amount of time that will be needed to complete its detailed review of the request (usually 30 to 90 days).

After completing its detailed review, FEMA will inform the requester by letter if any additional supporting data and/or documentation must be submitted before the CLOMR determination is issued. FEMA will always issue such letters within the 90-day period stipulated in the NFIP regulations, but will frequently send them within 30 days. Again, FEMA will take no further action on the request until

the required supporting data and/or documentation are received.

Upon receipt of all required data and documentation, FEMA will complete its review and will issue its determination regarding the CLOMR request in the form of a letter to the CEO(s) of the affected community or communities. FEMA will send copies of the letter(s) to the community FPA(s), other community official(s) who requested the CLOMR, and any individual non-community official requester(s).

Samples of the CLOMR determination documents are provided in Appendix B of FEMA’s *Document Control Procedures Manual*, which is available from the FEMA Library (<http://www.fema.gov/library/index.jsp>). The Manual also can be accessed from a dedicated page on the FEMA Website: <http://www.fema.gov/plan/prevent/fhm/gsdcpm.shtm>.

6.9 How To Request a Conditional Letter of Map Revision Based on Fill

To request a CLOMR-F, the requester must complete the MT-1 application forms. Requesters may obtain paper copies of these forms and the step-by-step instructions from the Map Specialists in the FMAC. Requesters may contact the FMAC by telephone, toll free, at 1-877-FEMA MAP (1-877-336-2627), or send an e-mail message to FEMAMapSpecialist@riskmapcds.com.

Requesters also may download Word, PDF, and TXT versions of the MT-1

application forms and instructions from the FEMA Library; the forms and instructions are accessible through the following page on the FEMA Website:

<http://www.fema.gov/plan/prevent/fhm/dlmt-1.shtm>.

Completed application forms, supporting data and documentation, and review and processing fees for CLOMR-F requests are to be submitted to:

LOMC Clearinghouse
6730 Santa Barbara Court
Elkridge, MD 21075

6.10 Supporting Data and Documentation Required for Conditional Letters of Map Revision Based on Fill

The supporting data and documentation required for CLOMR-F are summarized below. The supporting data and documentation are the same as those required for LOMR-F requests; however, because CLOMR-F requests are based on proposed construction, as-built information is not required.

- Property description documentation must be enclosed for every request and can consist of either 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.

Note: The recordation data (e.g., Book, Volume, Page, Reel,

Document Number, Date) must appear on all documents submitted so that FEMA may use the legal description of the property in making its determination, and FEMA must be able to identify the property exactly.

- If the property is not recorded on a Plat Map, a copy of the tax assessor's map must be submitted to help FEMA locate the property.
- A photocopy of the effective FIRM/DFIRM panel, annotated to show where the property is located, must be submitted for every request. If FEMA has produced a separate FBFM for the area in which the structure(s) or parcel(s) of land may be located, a photocopy of the FBFM panel also should be included. The panel number and effective date of the FIRM/DFIRM and FBFM must appear on the copy submitted. The original paper copy of the map panel(s) or a photocopy of the map panels must be used. Due to possible distortion, a reproduction from a photocopy is unacceptable.
- Elevation data must be submitted for all CLOMR-F requests. As discussed below, the type and source of the elevation data will vary.
 - a. For riverine flood hazard areas, the BFE can be established by interpolation along the Flood Profile for the flooding source in the FIS report. If, for some reason, no Flood Profile exists,

the BFE should be taken from the effective FIRM/DFIRM.

- b. For lacustrine flood hazard areas, the BFE can be taken from the Summary of Stillwater Elevations in the FIS report. If the flooding source is not included in the table, the BFE should be taken from the effective FIRM/DFIRM.
- c. For coastal flood hazard areas, the BFE should be taken from the effective FIRM/DFIRM and then compared with the elevation in the Summary of Stillwater Elevations table. If the stillwater elevation listed in the table is less than or equal to the whole-foot BFE shown on the map minus 0.5 foot, a wave height, wave runup, and/or wave setup component exists; therefore, the whole-foot BFE shown on the map should be used. If the stillwater elevation listed in the table is greater than the whole-foot BFE shown on the map minus 0.4 foot, the stillwater elevation shown in the table should be used as the BFE.
- d. For approximate flood hazard areas (designated Zone A on the map), FEMA has not determined BFEs. If a BFE for the area has not been developed by a Federal, State, or local government agency, the requester should refer to FEMA-265, *Managing Floodplain Development in Approximate Zone A Areas: A*

Guide for Obtaining and Developing Base (100-Year) Flood Elevations, accessible through the FEMA Website (http://www.fema.gov/plan/prevent/fhm/frm_docs.shtm).

- e. For shallow flooding areas (designated Zone AH on the map), the BFE shown on the effective FIRM/DFIRM should be used.
 - f. For shallow/sheet flooding areas (designated Zone AO on the map), the characteristics of the area will determine the appropriate methodology, and the requester should refer to the guidance in the MT-EZ and MT-1 instructions.
 - g. In addition to the BFE, the elevation data required for a structure is the Lowest Adjacent Grade (LAG) to the structure (i.e., the elevation of the lowest ground touching the structure, including attached decks or garage).
 - h. The elevation data required for a legally defined parcel of land, or portion thereof, is the elevation of the lowest ground on the parcel or within the portion of land that is to be removed from the SFHA
- Unless an NFIP Elevation Certificate has been completed for a proposed structure, the “Elevation Form” (Form 2) from the MT-1 package must be completed and certified by a Licensed Land

Surveyor or Registered Professional Engineer.

- If an NFIP Elevation Certificate has been completed, it may be submitted in lieu of Form 2. The Elevation Certificate also must be certified by a Licensed Land Surveyor or Registered Professional Engineer. The Elevation Certificate is available through the FEMA Library and is accessible through the following page on the FEMA Website:
http://www.fema.gov/plan/prevent/fhm/frm_form.shtm. Paper copies of the Elevation Certificate also may be acquired by contacting the Map Specialists in the FMAC.
- The “Community Acknowledgment Form” (Form 3) must be included for all CLOMR-F requests in which a property has been or will be inadvertently included within the regulatory floodway shown on the NFIP map; however, only Section A of Form 3 needs to be completed.
- Documentation showing compliance with Sections 9 and 10 of the Endangered Species Act must be submitted.

For CLOMR-F requests involving property located in an area designated Zone A on the FIRM/DFIRM, with no BFEs determined, the requester should refer to FEMA-265, *Managing Floodplain Development in Approximate Zone A Areas: A Guide for Obtaining and Developing Base (100-Year) Flood Elevations*. This manual provides engineering guidelines for determining BFEs in Zone A areas and is accessible

through the FEMA Website:

http://www.fema.gov/plan/prevent/fhm/frm_docs.shtm.

Printed paper copies of the effective FIRM, DFIRM, and/or FBFM panel(s) and FIS report materials are kept on file in the Community Map Repository of each affected community. (Digital versions may also be available in some communities.) The Community Map Repository is the community office responsible for floodplain management activities in the community.

Interested citizens who are having trouble locating the Community Map Repository may call a Map Specialist in the FMAC, toll free, at 1-877-FEMA MAP (1-877-336-2627), or send an e-mail to FEMAMapSpecialist@riskmapcds.com.

To obtain their own digital copy of the complete effective NFIP map(s) or selected panel(s) and the FIS report, requesters should contact the MSC. The effective NFIP maps may be viewed online through the MSC Website:

<http://www.msc.fema.gov/>. Effective NFIP maps, FIS reports, and related products also may be downloaded for a nominal fee from the MSC Website. (Note: Effective October 1, 2009, the MSC distributes only digital versions of the flood maps and FIS reports.) A screen shot of the MSC Home Page is provided in Appendix B of this *Guide*.

Individuals who do not have Internet access or who require additional assistance also may contact the MSC staff by telephone, toll free, at 1-800-358-9616, or by facsimile transmission, toll free, at 1-800-358-9620.

For CLOMR-F requests affecting a single structure, a single lot, or multiple structures or lots in a relatively small area, requesters may also choose to create another product available from the MSC Website. This product is called a FIRMette. A FIRMette is a full-scale portion of particular map panel that a user creates by selecting a desired area from the online image of that map panel. In addition to the area of interest, the FIRMette includes the map title block, north arrow, and scale bar. There is no cost for producing a FIRMette. A FIRMette tutorial is available on the MSC Website to assist first-time users.

Certifications, where referenced in the requirements for supporting data and documentation, 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.

The CLOMR-F requester should ensure that certifications include the certifier's name, signature, registration number, and the registration date of the certifier.

6.11 Conditional Letter of Map Revision Based on Fill Processing Procedures

The procedures that are followed in processing requests for CLOMR-Fs are shown in Figure 6-2 at the end of this chapter and are summarized below.

After the CLOMR-F request has been received at the LOMC Clearinghouse mentioned earlier in this chapter, FEMA will review the submittal package for completeness and acknowledge receipt of the request by letter to the requester, usually within 10 days, but not later than 60 days. This letter will identify any required supporting data, application forms, and/or fee that the requester did not submit and inform the requester to submit the required data, forms and other documentation, and/or fees within 90 days of the date of the letter. If the required supporting data, forms, documentation, and/or fee are not provided within 90 days, FEMA will suspend the processing of the request.

If all required supporting data, forms, other documentation, and fee have been provided with the request, FEMA staff will acknowledge the request by letter and proceed with performing a technical review. If any questions or problems arise during this review, FEMA will work with the requester to resolve them appropriately.

Once all required data, forms and other documentation, and fee are received, FEMA staff will complete their review and issue the appropriate conditional determination documents indicating:

- The lot(s) would not be located in the SFHA if fill is placed as shown in the data and documentation provided by the requester.
- The proposed structure(s) would not be located in the SFHA if the fill is placed and the proposed structure is/structures are built as shown in the data and documentation provided by the requester.
- Neither the proposed structure(s) nor the lot(s) will be located in the SFHA if the fill is placed and the proposed structure is/structures are built as shown in the data and documentation provided by the requester.
- The proposed structure(s) will not be located in the SFHA, but the lot(s) will be located in the SFHA if the fill is placed and the structure is/structures are built as shown in the data and documentation provided by the requester.

Samples of the CLOMR-F determination documents are provided in Appendix C of FEMA's *Document Control Procedures Manual*, which is available in the FEMA Library (<http://www.fema.gov/library/index.jsp>). The Manual also can be accessed from the following page on the FEMA Website: <http://www.fema.gov/plan/prevent/fhm/gsdcpm.shtm>.

As provided for in the NFIP regulations, FEMA must complete the processing of CLOMR-F requests within 60 days of the date that all required supporting data and documentation are received. However, FEMA generally issues determinations for CLOMR-Fs within 4 weeks of the date that all required supporting data and documentation are received.

As discussed earlier in this *Guide*, a CLOMR-F does not revise the effective FIRM or DFIRM panel(s) for the community, structure(s), and lot(s) that are the subject of the request.

6.12 How To Request a Conditional Letter of Map Amendment

To request a CLOMA, the requester must complete the MT-1 application forms. Requesters may obtain paper copies of these forms and the step-by-step instructions from the Map Specialists in the FMAC. Requesters may contact the FMAC by telephone, toll free, at 1-877-FEMA MAP (1-877-336-2627), or send an e-mail message to FEMAMapSpecialist@riskmapcds.com.

Requesters also may download Word, PDF, and TXT versions of the MT-1 application forms and instructions from the FEMA. The forms and instructions also are accessible through the following page on the FEMA Website:

<http://www.fema.gov/plan/prevent/fhm/dlmt-1.shtm>.

Completed application forms, supporting data and documentation, and review and processing fees for CLOMA requests are to be submitted to:

LOMC Clearinghouse
6730 Santa Barbara Court
Elkridge, MD 21075

6.13 Supporting Data and Documentation Required for Conditional Letters of Map Amendment

The supporting data and documentation required for CLOMA requests are summarized below. The supporting data and documentation are the same as those required for LOMA requests; however, because LOMAs requests are based on proposed construction, as-built information is not required.

Under the conditional map amendment process, FEMA will make determinations for single or multiple proposed structures on one or more lots and for single or multiple parcels of land that can be legally described. The supporting data and documentation summarized below are to be submitted in support of a CLOMA request.

- Property description documentation must be enclosed for every request and can consist of either 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. Note: The recordation data (e.g., Book,

Volume, Page, Reel, Document Number, Date) must appear on all documents submitted so that FEMA may use the legal description of the property in making its determination, and FEMA must be able to identify the property exactly.

- If the property is not recorded on a Plat Map, a copy of the tax assessor's map must be submitted to help FEMA located the property.
- A photocopy of the effective FIRM/DFIRM panel, annotated to show where the property is located, must be submitted for every request. If FEMA has produced a separate Flood Boundary and Floodway Map (FBFM) for the area in which the structure(s) or parcel(s) of land may be located, a photocopy of the FBFM panel also should be included. The panel number and effective date of the FIRM/DFIRM and FBFM must appear on the copy submitted. The original paper copy of the map panel(s) or a photocopy of the map panels must be used. A reproduction from a photocopy is unacceptable due to possible distortion.
- Elevation data must be submitted for all requests, except requests for determinations in which the effective FIRM/DFIRM already shows the property to be clearly outside the SFHA. As discussed below, the type and source of the elevation data will vary.

- a. For riverine flood hazard areas, the BFE can be established by interpolation along the Flood Profile for the flooding source that appears in the FIS report. If, for some reason, no Flood Profile exists, the BFE should be taken from the effective FIRM/DFIRM.
- b. For lacustrine flood hazard areas, the BFE can be taken from the Summary of Stillwater Elevations in the FIS report. If the flooding source is not included in the table, the BFE should be taken from the effective FIRM/DFIRM.
- c. For coastal flood hazard areas, the BFE should be taken from the effective FIRM/DFIRM and then compared with the elevation in the Summary of Stillwater Elevations table. If the stillwater elevation listed in the table is less than or equal to the whole-foot BFE shown on the map minus 0.5 foot, a wave height, wave runup, and/or wave setup component exists; therefore, the whole-foot BFE shown on the map should be used. If the stillwater elevation listed in the table is greater than the whole-foot BFE shown on the map minus 0.4 foot, the stillwater elevation shown in the table should be used as the BFE.
- d. For approximate flood hazard areas (designated Zone A on the map), FEMA has not determined BFEs. If a BFE for the area has not been developed by a Federal, State, or local government agency, the requester should refer to FEMA-265, *Managing Floodplain Development in Approximate Zone A Areas: A Guide for Obtaining and Developing Base (100-Year) Flood Elevations*, which is accessible through the FEMA Website:
http://www.fema.gov/plan/prevent/fhm/frm_docs.shtm.
- e. For shallow flooding areas (designated Zone AH on the map), the BFE shown on the effective FIRM/DFIRM should be used.
- f. For shallow/sheet flooding areas (designated Zone AO on the map), the characteristics of the area will determine the appropriate methodology, and the requester should refer to the guidance in the MT-EZ and MT-1 instructions.
- g. In addition to the BFE, the elevation data required for a structure is the Lowest Adjacent Grade (LAG) to the structure (i.e., the elevation of the lowest ground touching the structure, including attached decks or garage).

- h. The elevation data required for a legally defined parcel of land, or portion thereof, is the elevation of the lowest ground on the parcel or within the portion of land that is to be removed from the SFHA.
- For all requests except requests for determinations in which the effective FIRM/DFIRM already shows the property to be clearly outside the SFHA, the “Elevation Form” (Form 2) from the MT-1 package must be included unless an NFIP Elevation Certificate (EC) has been completed. The elevation data must be certified by a Licensed Land Surveyor or Registered Professional Engineer.
- If an EC has been completed for the proposed structure(s), the EC may be submitted in lieu of Form 2. The EC(s) also must be certified by a Licensed Land Surveyor or Registered Professional Engineer. The EC is available through the FEMA Library and can be accessed through the following page on the FEMA Website: http://www.fema.gov/plan/prevent/fhm/frm_form.shtm. Paper copies of the EC form also may be acquired by contacting the Map Specialists in the FMAC.
- Documentation showing compliance with Sections 9 and 10 of the Endangered Species Act must be submitted.

Printed paper copies of the effective FIRM, DFIRM, and/or FBFM panel(s) and FIS report materials are kept on file in the Community Map Repository of each affected community. (Digital versions may also be available in some communities.) The Community Map Repository is the community office responsible for floodplain management activities in the community. Interested citizens who are having trouble locating the Community Map Repository may call a Map Specialist in the FMAC, toll free, at 1-877-FEMA MAP (1-877-336-2627), or send an e-mail to FEMAMapSpecialist@riskmapcds.com.

To obtain their own digital copy of the effective NFIP map(s) or selected panel(s) and the FIS report, CLOMA requesters should contact the MSC. The effective NFIP maps may be viewed online through the MSC Website: <http://www.msc.fema.gov/>. Effective NFIP maps, FIS reports, and related products also may be downloaded for a nominal fee from the MSC Website. (Effective October 1, 2009, the MSC distributes only digital versions of the flood maps and FIS reports.) A screen shot of the MSC Home Page is provided in Appendix B of this *Guide*.

Individuals who do not have Internet access or who require additional assistance also may contact the MSC staff by telephone, toll free, at 1-800-358-9616, or by facsimile transmission, toll free, at 1-800-358-9620.

For many CLOMA requests, particularly those involving single structures, single lots, or multiple lots and structures occupying a relatively small area, requesters may also choose to create another product available from the MSC Website. This product is called a FIRMette.

A FIRMette is a full-sized section of particular map panel that a user creates by selecting a desired area from the online image of that map panel. In addition to the area of interest, the FIRMette includes the map title block, north arrow, and scale bar. FEMA does not charge a fee for producing a FIRMette. To assist first-time users, the MSC has produced a FIRMette tutorial, which also is available on the MSC Website.

Certifications, where referenced in the requirements for supporting data and documentation, 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.

The CLOMA requester should ensure that certifications include the certifier's name, signature, registration number, and the registration date of the certifier.

6.14 Conditional Letter of Map Amendment Processing Procedures

After the request has been received, FEMA will acknowledge receipt of the request by letter to the requester, usually within 10 days, but not later than 60 days. This letter will identify any basic data or documentation that the requester may have neglected to submit. If sufficient data have been provided with the request, FEMA will review the request and the supporting data and/or documentation. If any questions or problems arise during this review, FEMA will work with the requester to resolve them. If these required data and/or documentation are not provided within 90 days, FEMA will generally suspend the processing of the request.

As provided for in the NFIP regulations, FEMA must complete the processing of CLOMA requests within 60 days of the date that all required supporting data and documentation are received. However, FEMA generally issues determinations for CLOMAs within 4 weeks of the date that all required supporting data and documentation are received.

Once all required data and documentation, including application forms, are provided, FEMA will complete its review and issue one of the determinations below as appropriate:

- The proposed structure(s) and lot(s) are/will be out of the SFHA as shown on the effective NFIP map. No amendment to the map will be necessary.
- The proposed structure(s) and lot(s) will be out of the SFHA because the proposed structure(s) or lot(s) will be above the BFE.
- The proposed structure(s) and lot(s) will be in the SFHA because the proposed structure(s) or lot(s) will be below the BFE.
- The proposed structure(s) will be above the BFE and therefore out of the SFHA. However, the remainder of the lot(s) will continue to be in the SFHA.

Samples of the CLOMA determination documents are provided in Appendix C of FEMA's *Document Control Procedures Manual*, which is available in the FEMA Library

(<http://www.fema.gov/library/index.jsp>)

and can be accessed from the following page on the FEMA Website:

<http://www.fema.gov/plan/prevent/fhm/gsdcpm.shtm>.

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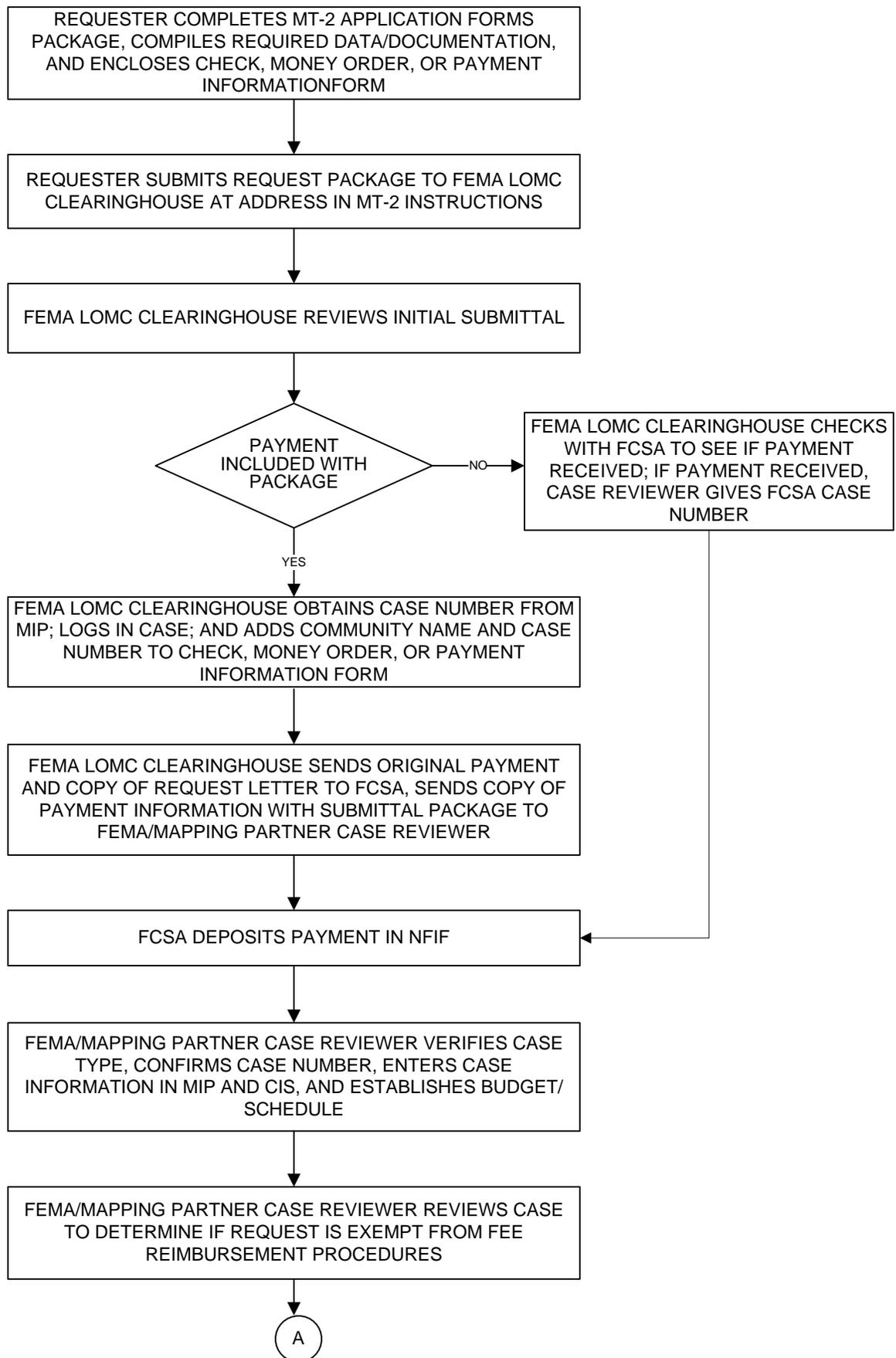


Figure 6-1. Processing Procedures for CLOMRs

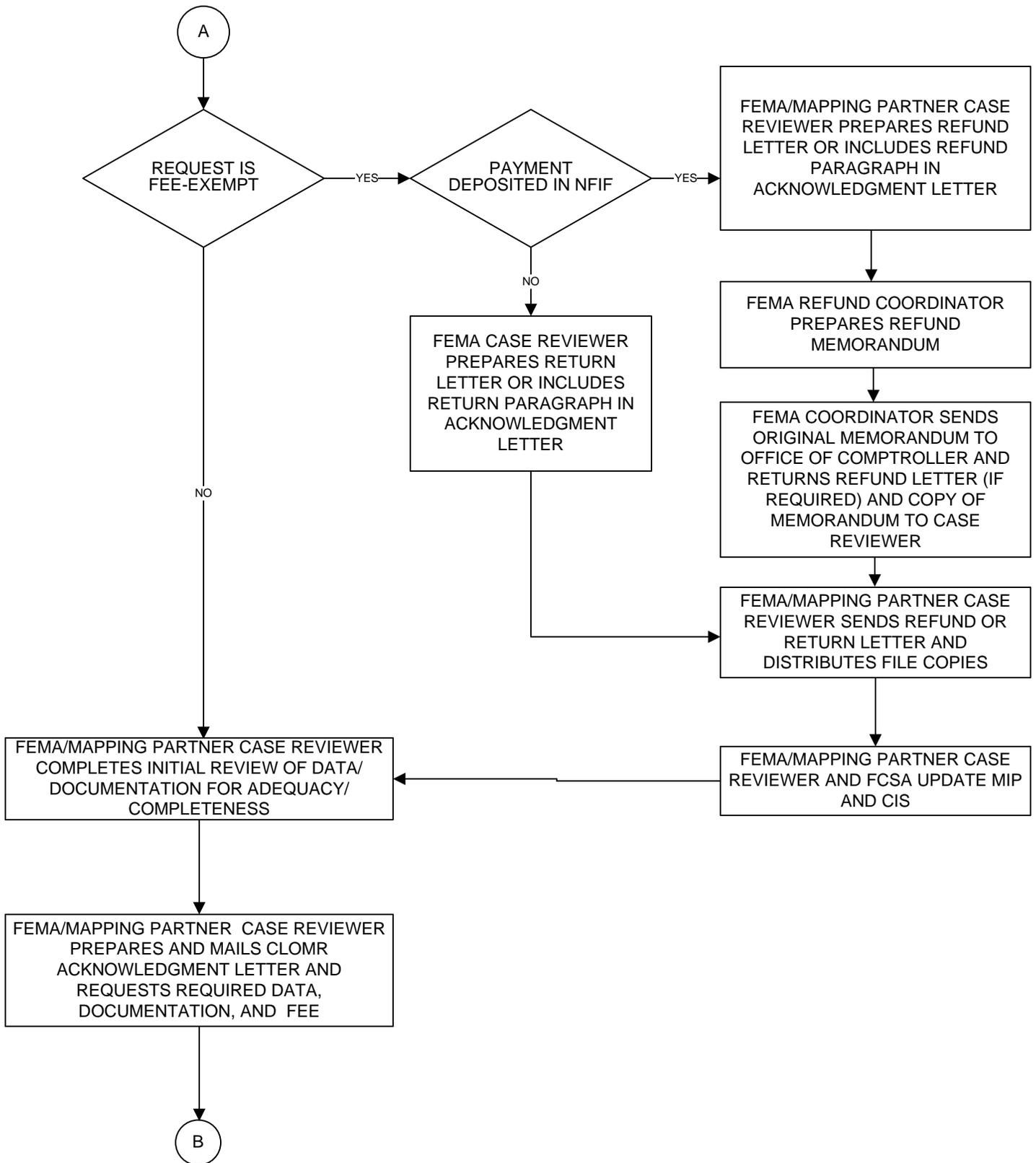


Figure 6-1. Processing Procedures for CLOMRs (Cont'd)

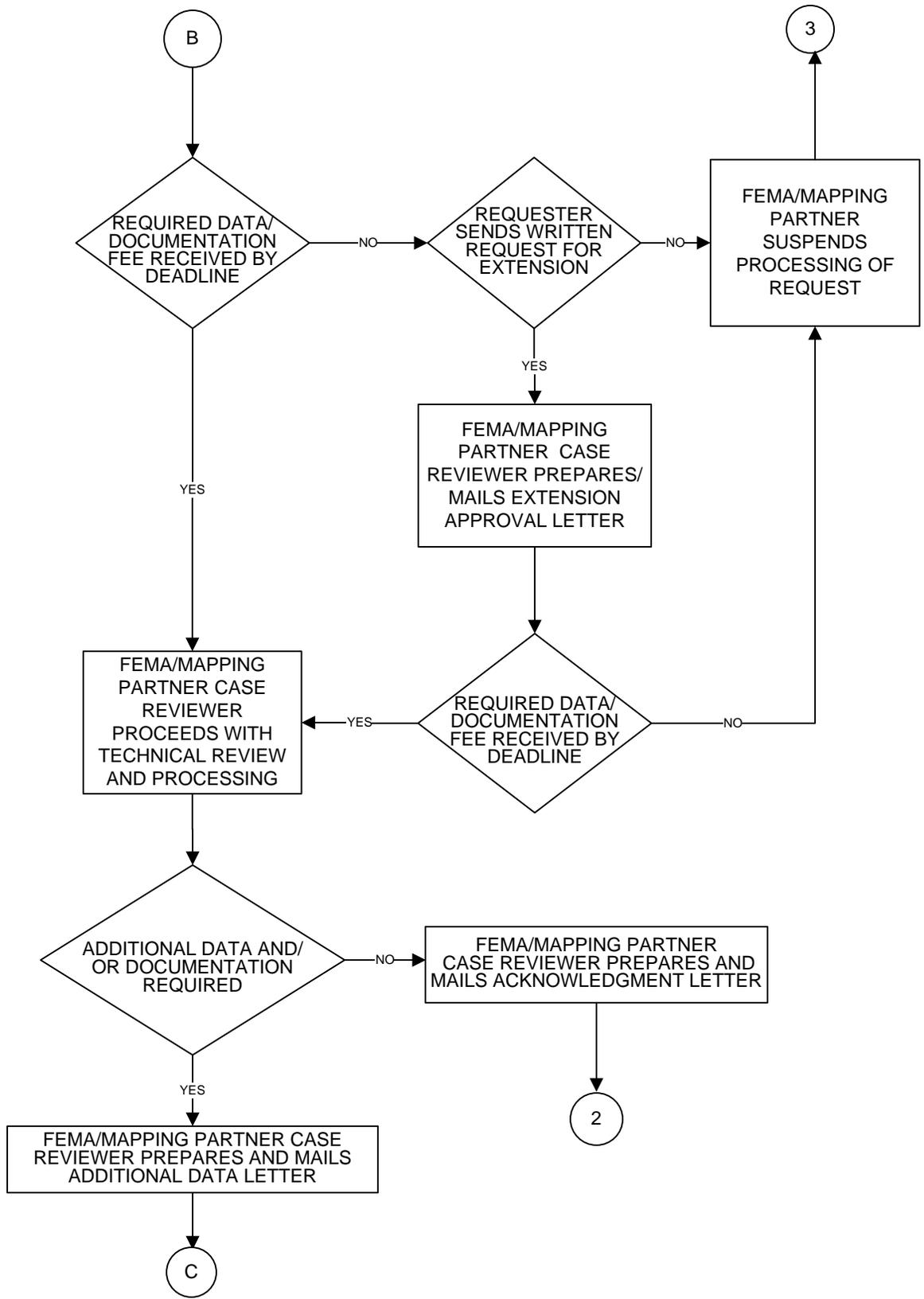


Figure 6-1. Processing Procedures for CLOMRs (Cont'd)

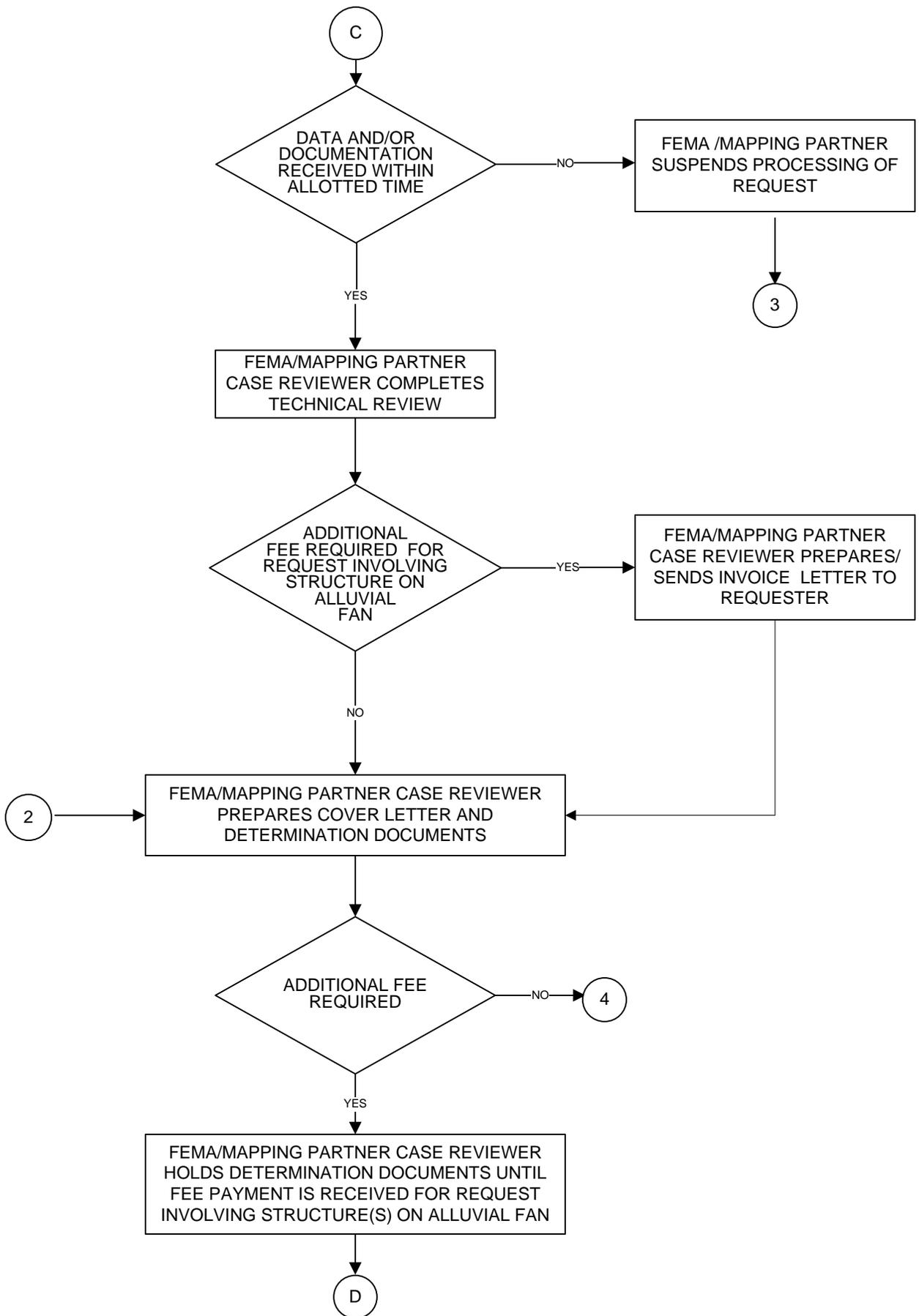


Figure 6-1. Processing Procedures for CLOMRs (Cont'd)

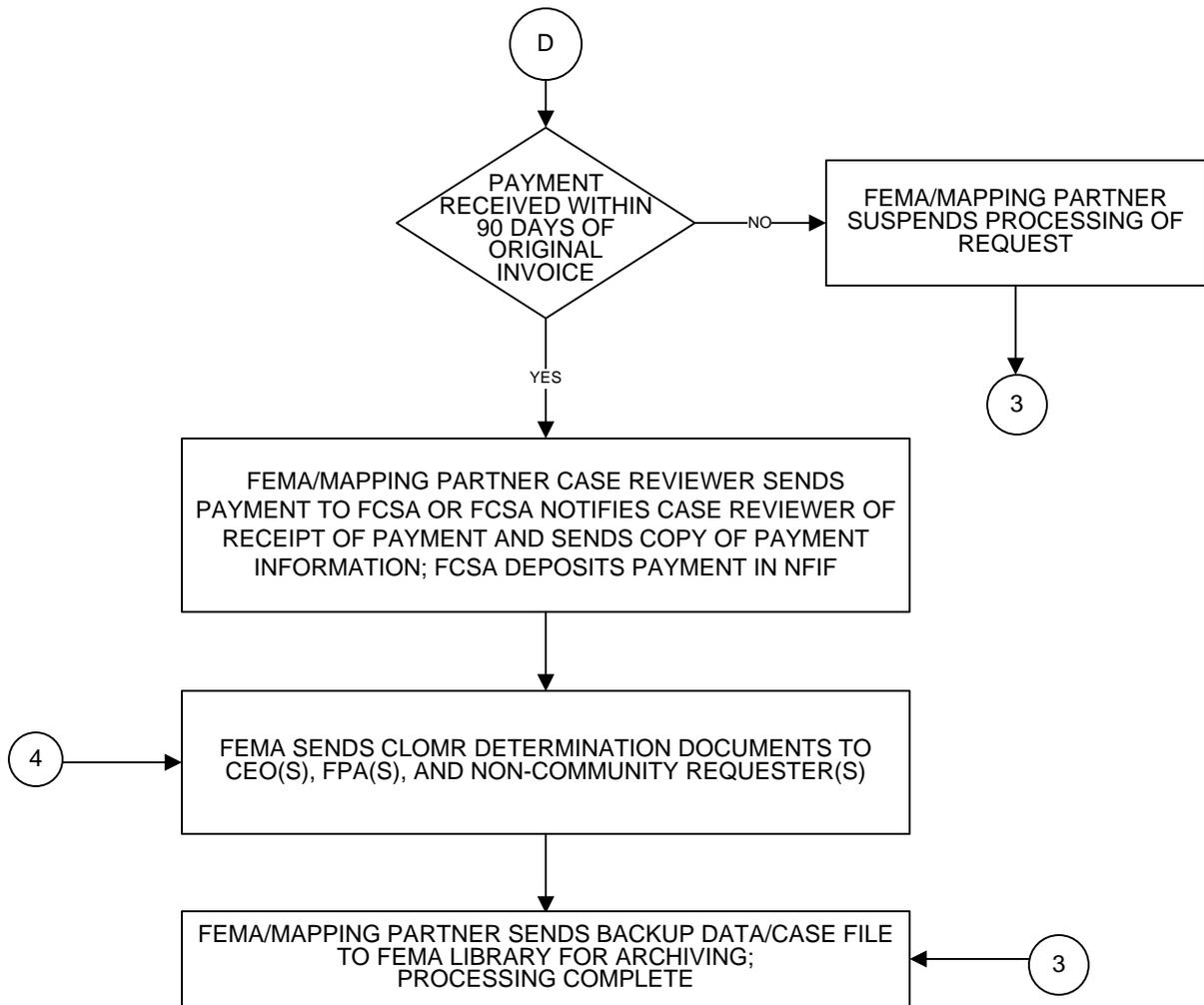


Figure 6-1. Processing Procedures for CLOMRs (Cont'd)

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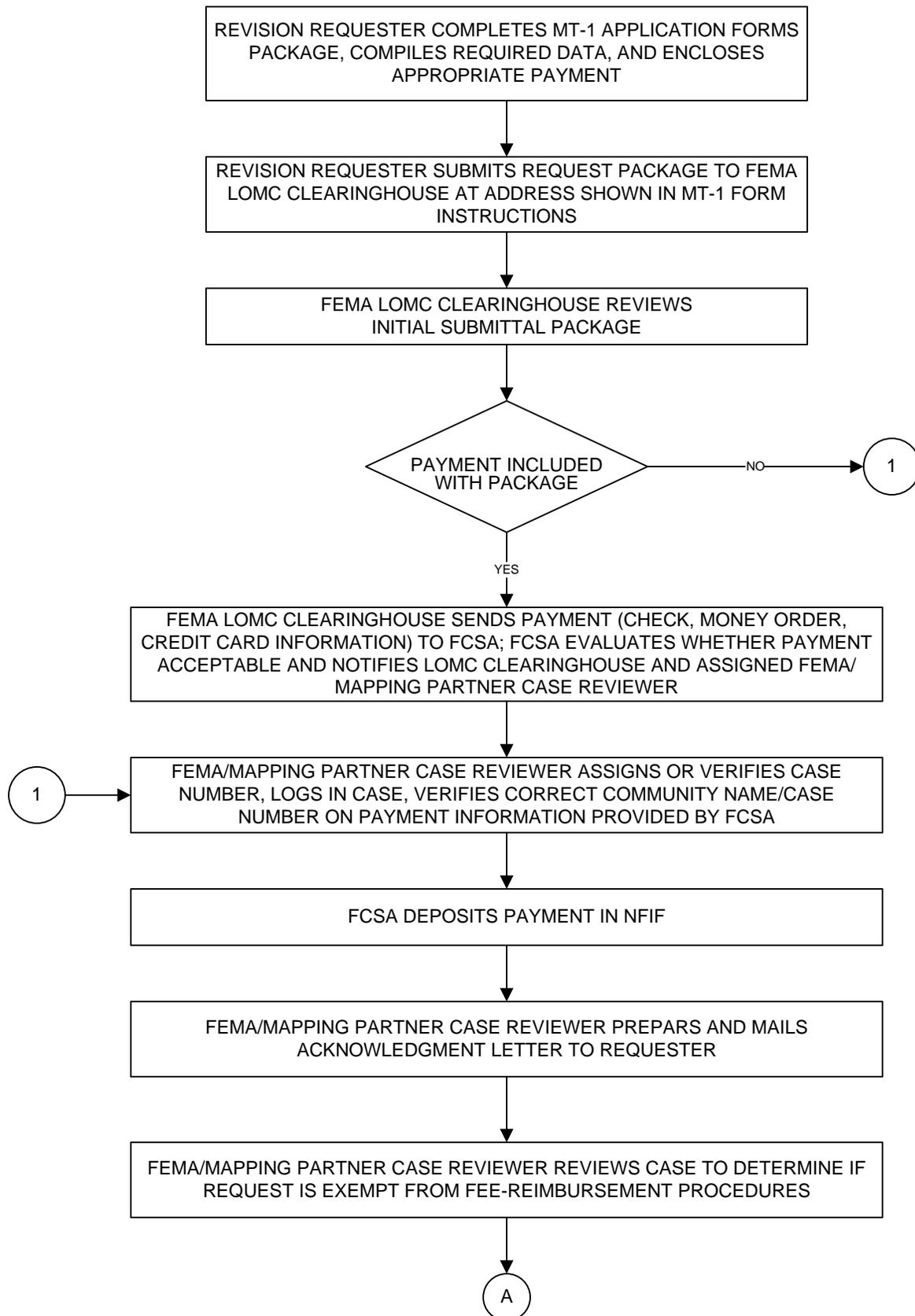


Figure 6-2. Processing Procedures for CLOMR-Fs

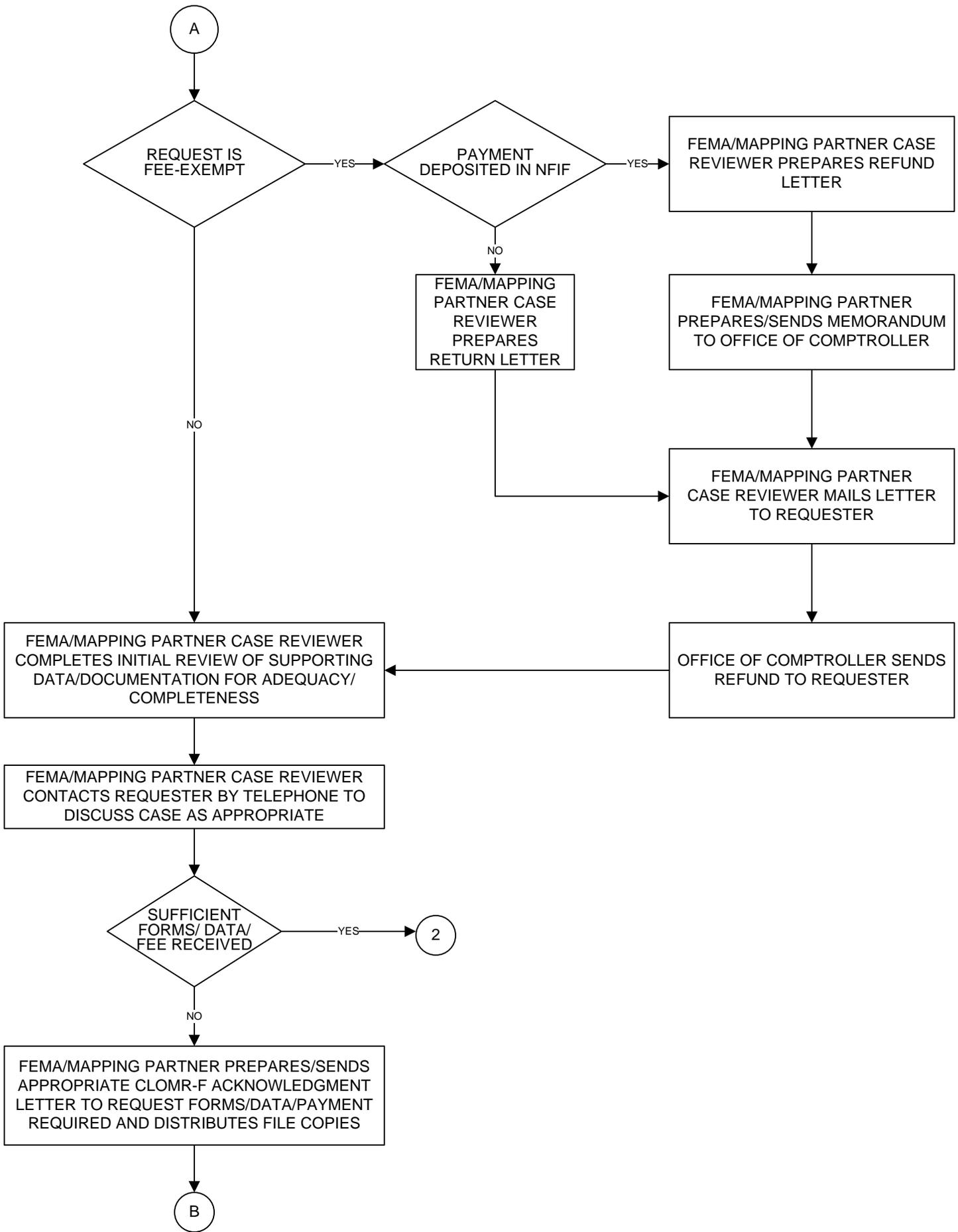


Figure 6-2. Processing Procedures for CLOMR-Fs (Cont'd)

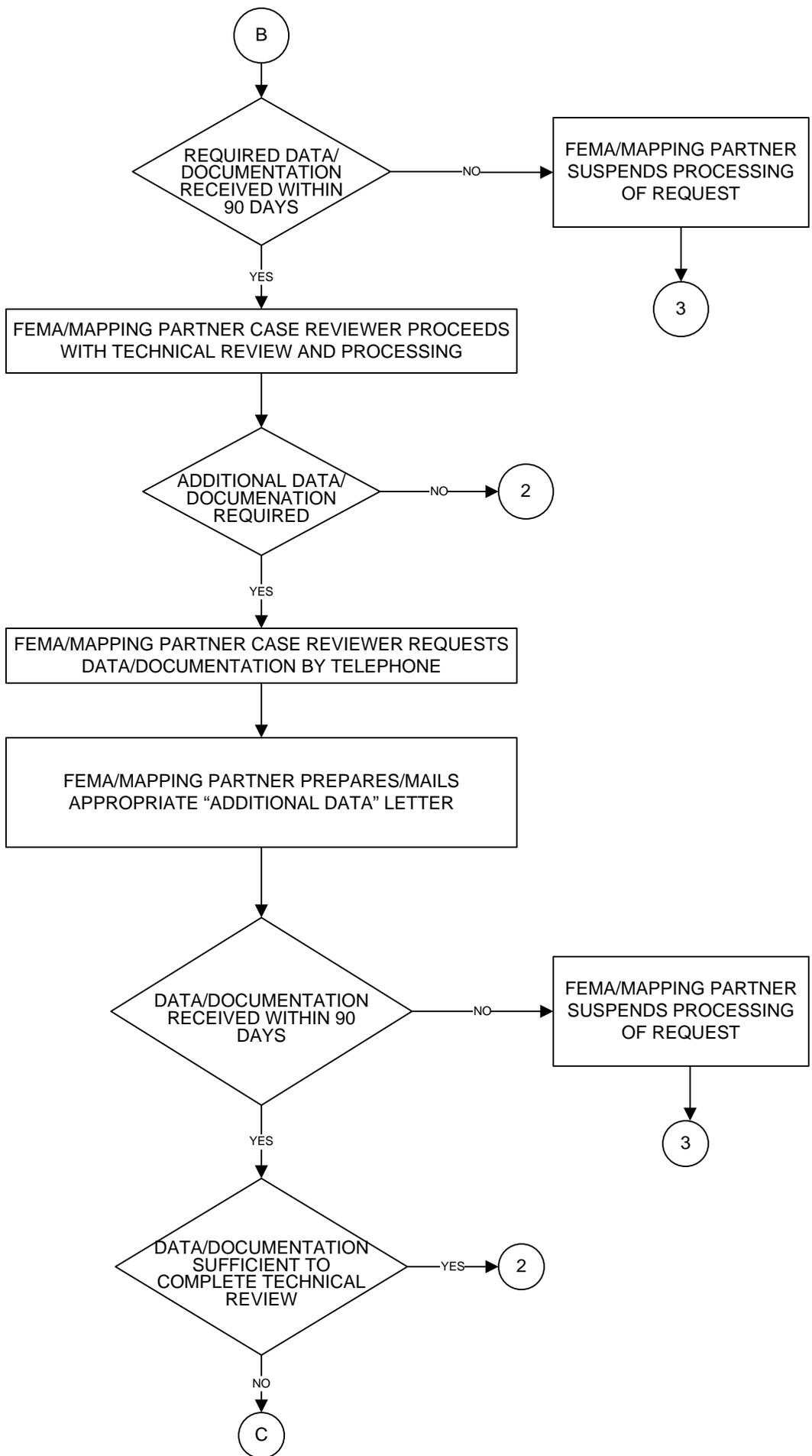


Figure 6-2. Processing Procedures for CLOMR-Fs (Cont'd)

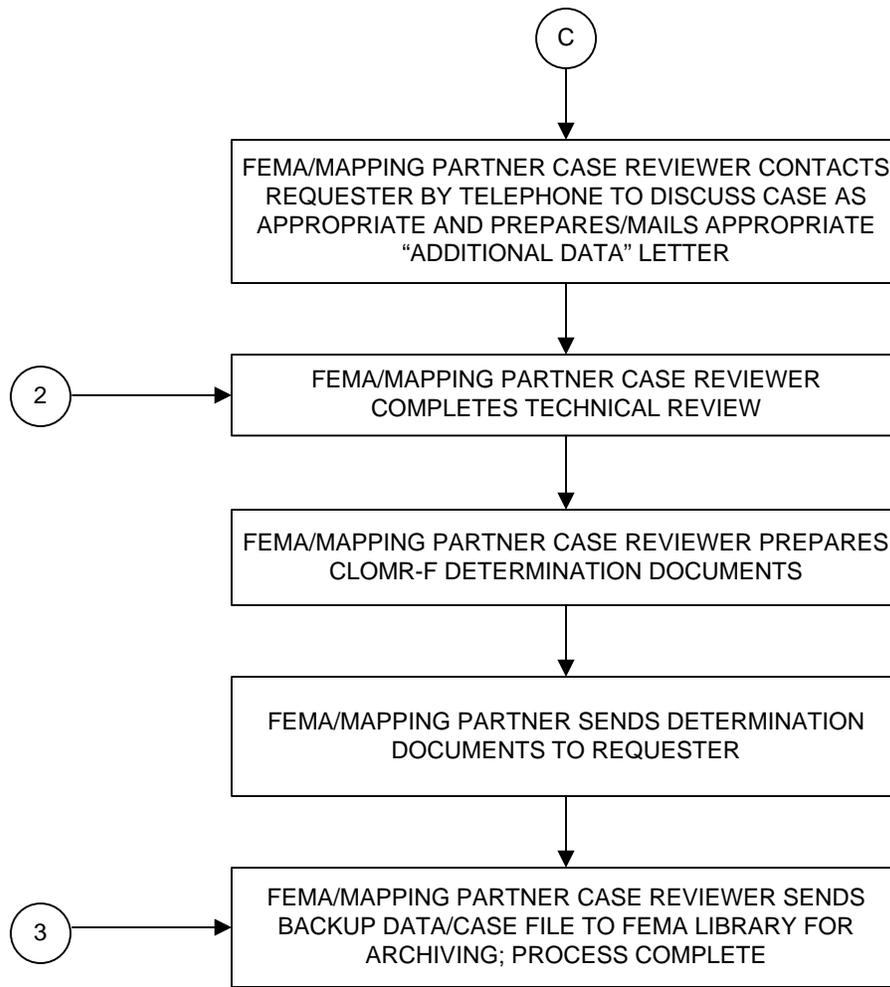


Figure 6-2. Processing Procedures for CLOMR-Fs (Cont'd)

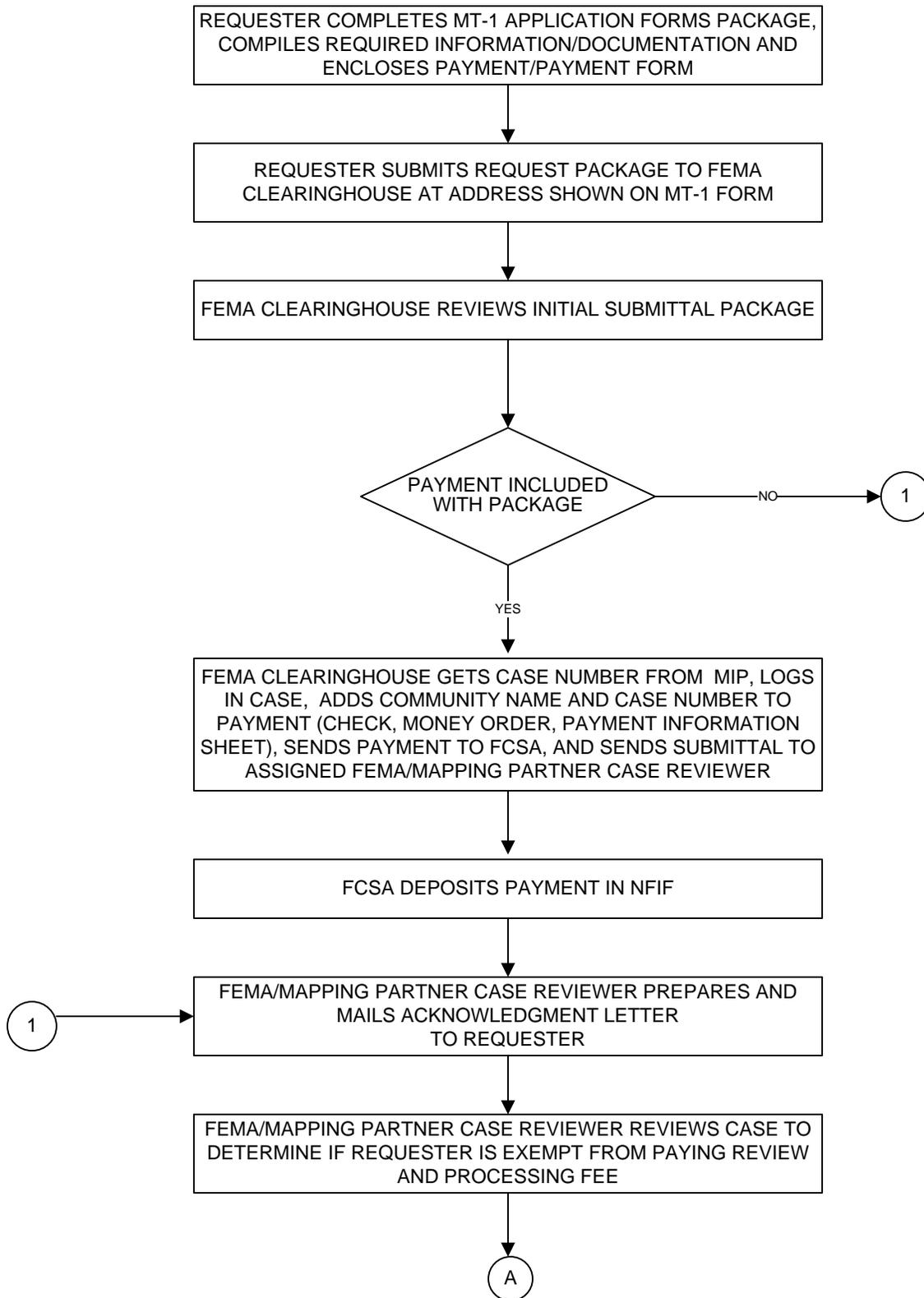


Figure 6-3. Processing Procedures for CLOMAs

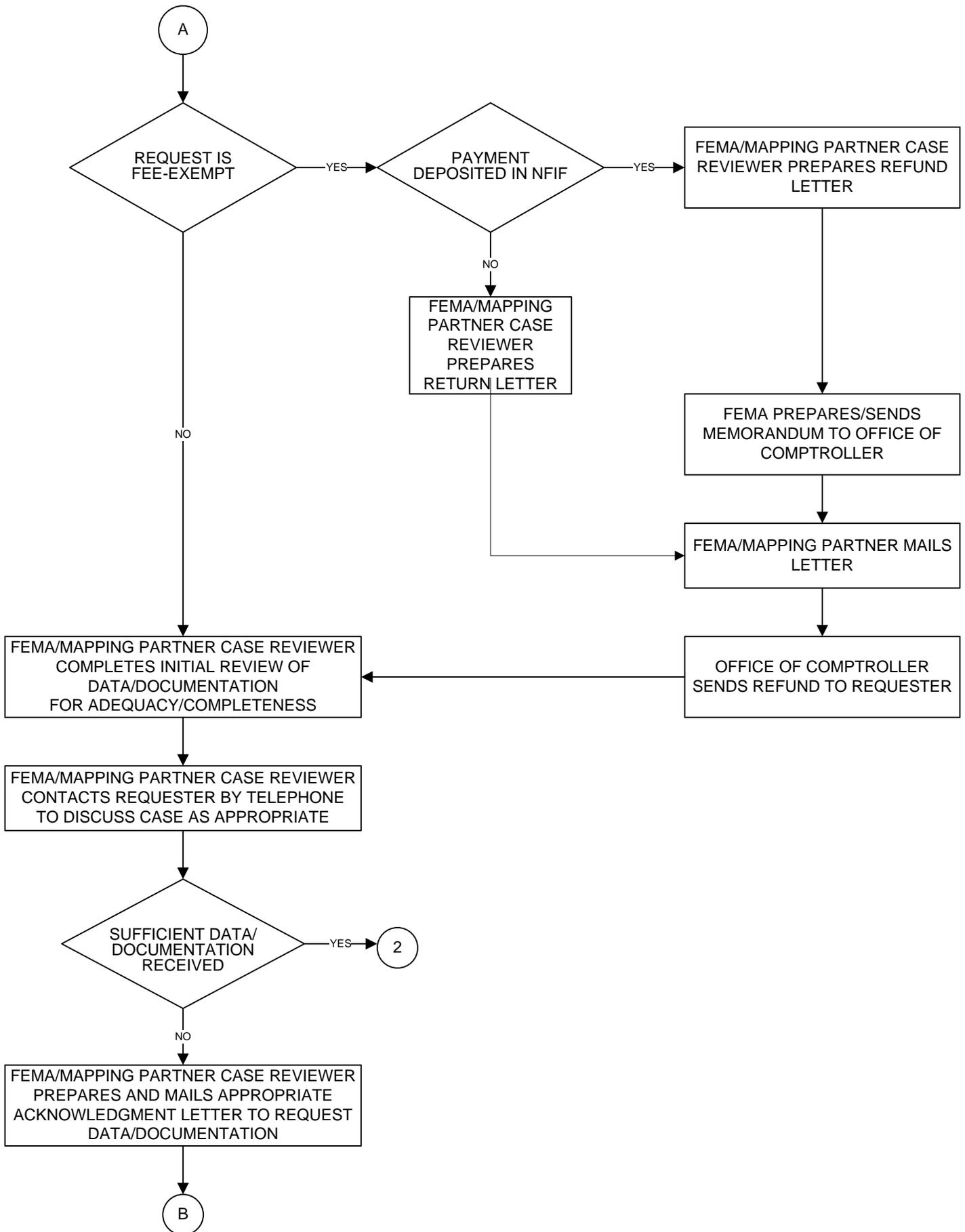


Figure 6-3. Processing Procedures for CLOMAs (Cont'd)

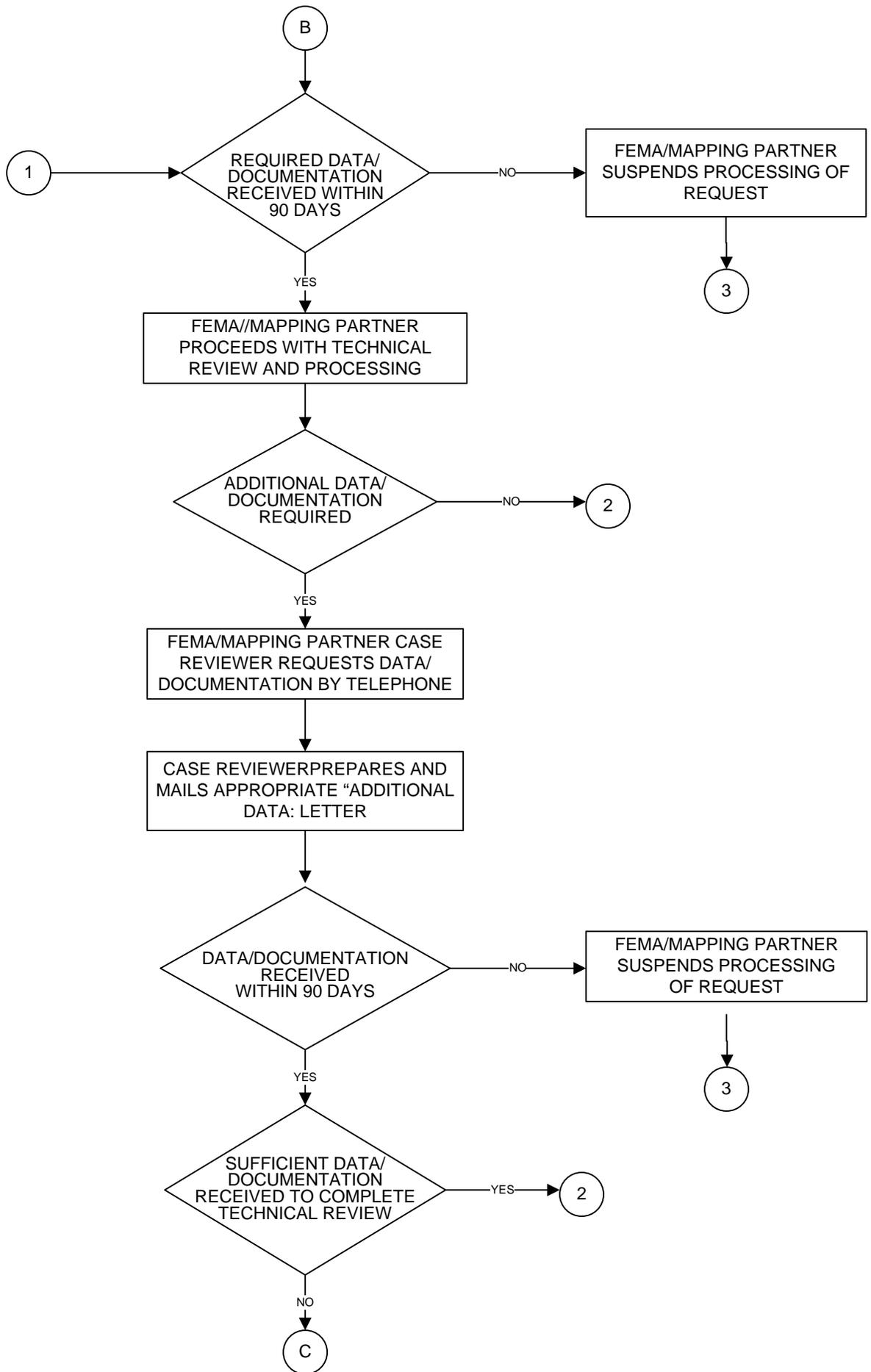


Figure 6-3. Processing Procedures for CLOMAs (Cont'd)

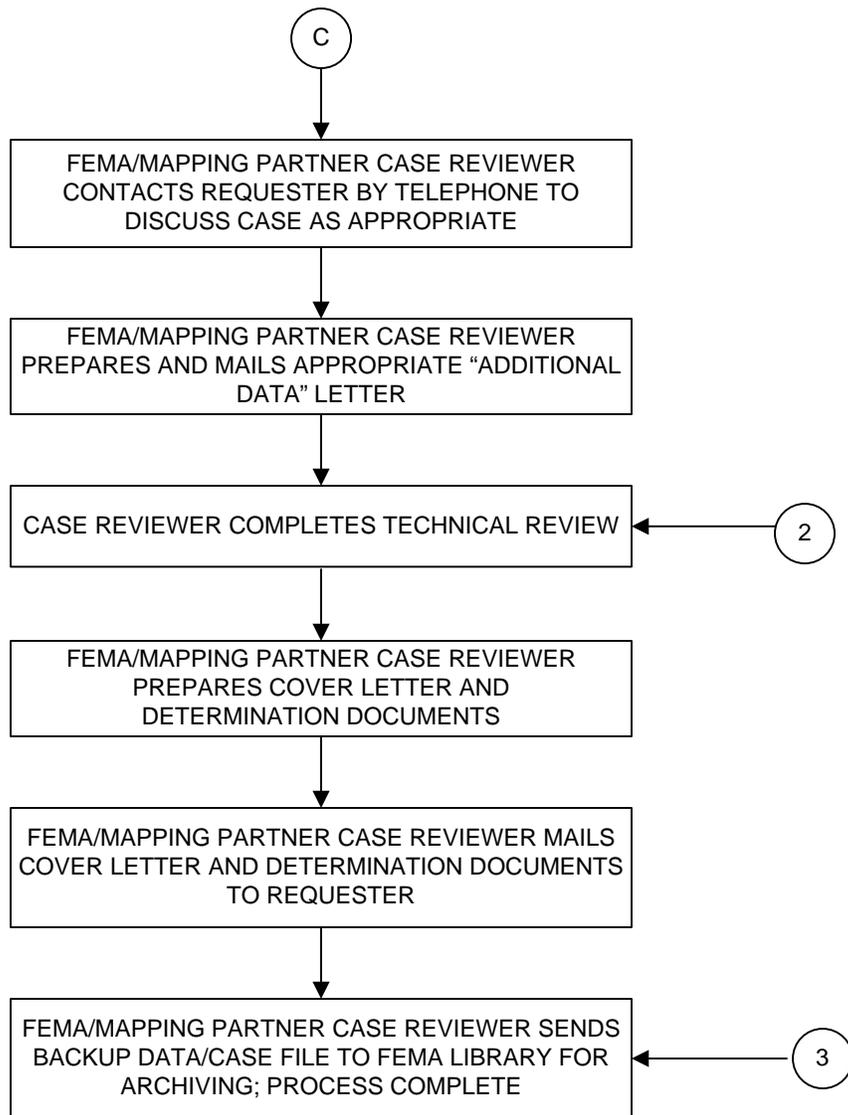


Figure 6-3. Processing Procedures for CLOMAs (Cont'd)

Chapter 7

Floodway Revisions

The regulatory floodways shown on National Flood Insurance Program (NFIP) maps—Flood Boundary and Floodway Maps (FBFMs), Flood Insurance Rate Maps (FIRMs), or Digital Flood Insurance Rate Maps (DFIRMs)—are developed by/for the Federal Emergency Management Agency (FEMA) as part of detailed flood hazard studies and are adopted by communities for use in establishing sound floodplain management programs. By restricting development in the regulatory floodway, a community can preserve the conveyance area necessary for the passage of floodwaters and avoid significant increases in flood elevations.

Although the boundaries of the regulatory floodway are intended to remain unchanged once they are established and adopted by the community, the community may find it necessary, in response to extraordinary circumstances, to change the configuration of the regulatory floodway.

7.1 Background

Although fill may be placed or construction carried out in floodplains in such a way that the flood hazards to development will be minimal, the effect of such activities on existing development, both upstream and downstream, must be considered. Encroachments, such as construction and placement of fill, within the 1-percent-annual-chance floodplain can increase flood levels by blocking areas of the floodplain that would otherwise be open and able to convey floodwaters.

To achieve a balance between benefits to be gained from floodplain development and the resulting increase in flood hazards, and to help communities regulate such development and avoid significant increases in Base (1-percent-annual-chance) Flood Elevations (BFEs), FEMA establishes regulatory floodways. The limits of the regulatory floodway are determined through a hydraulic analysis in which the increase in the -percent-annual-chance flood elevation (the surcharge) due to encroachment within the 1-percent-annual-chance floodplain is calculated.

FEMA has established as a standard a maximum allowable surcharge of 1.0 foot. Because the surcharge generally increases as the amount of encroachment increases, setting a limit on the magnitude of the surcharge sets limits on the amount of encroachment that may take place. A regulatory floodway based on a maximum allowable surcharge of 1.0 foot is therefore the channel of a stream plus the portion of the floodplain adjacent to it that must be kept free of encroachment so that the entire 1-percent-annual-chance flood can discharge with no greater than a 1.0-foot increase to the BFE.

The portions of the flood zone outside the regulatory floodway are referred to as the floodway fringe. Once a regulatory floodway has been established, the community may allow development in the floodway fringe with the assurance that flood hazards will not be increased significantly. However, all such development must meet the minimum floodplain management standards required for participation in the NFIP.

Several States have adopted requirements that limit the allowable surcharge to less than 1.0 foot. For the following States that have adopted more stringent standards by legally enforceable statutes or regulations, FEMA computes the regulatory floodways using those standards.

- New Jersey 0.2 foot
- Puerto Rico 0.3 meter
- Illinois 0.1 foot
- Indiana 0.1 foot
- Michigan 0.1 foot
- Minnesota 0.5 foot
- Wisconsin 0.0 foot
- Montana 0.5 foot

In addition, some individual communities have established and enforce more stringent standards. Although the NFIP maps for such communities usually depict regulatory floodways based on a 1.0-foot surcharge, FEMA encourages the adoption of more stringent standards.

Once a regulatory floodway has been adopted by the community, any encroachments within the regulatory floodway that would increase the elevations during the 1-percent-annual-chance flood are prohibited. Such encroachments could include fill, new construction, substantial improvements, and other types of development.

In this *Guide*, when a 1.0-foot surcharge is referenced, the assumption has been made that there is no more stringent State or local surcharge standard. Where such a standard exists, the allowable surcharge is limited to that standard. In addition, where a flooding source with a regulatory

floodway forms the boundary between two communities or two States, the allowable increase in the BFE due to encroachment in one community or State is limited to 0.5 foot, unless a more stringent State standard has been established.

Regulatory floodways are developed for streams studied by detailed methods as part of the hydraulic analyses performed for those streams. The most common method that FEMA uses to develop regulatory floodways is referred to as the "equal conveyance reduction method," in which the hydraulic computer model is modified so that equal amounts of hydraulic conveyance are eliminated from opposite sides of the 1-percent-annual-chance flood zone until the allowable increase in the BFE is reached.

When it is necessary to develop regulatory floodways with specific configurations requested by the community, unequal reductions of conveyance area may be used. A regulatory floodway is a reasonable depiction of the area that must be kept open to convey floodwaters and is not necessarily the minimum area required to meet FEMA or State standards.

Once adopted by the community, a particular regulatory floodway configuration becomes administratively established and the limits of the regulatory floodway are intended to remain unchanged. However, in one situation, a community must request conditional approval of a floodway revision; in two other situations, a community may find it necessary to request a floodway revision, as explained below.

A community must obtain a floodway revision or Conditional Letter of Map Revision from FEMA before permitting an encroachment into a regulatory floodway that would cause any increase in 1-percent-annual-chance flood levels. Before FEMA can grant such a request, the community must apply to FEMA for conditional approval of the proposed project. The data the community must submit in support of such an application to revise the regulatory floodway, and the procedures FEMA will follow in reviewing and responding to the application, are discussed in Chapter 6. If the community has demonstrated through hydrologic and hydraulic analyses that the proposed encroachment will not cause any rise in flood levels, then a “no-rise” certification can be used to document the analyses, and no application to FEMA is required.

A community may request a regulatory floodway revision in the following situations:

- When an appeal or a map revision results in changes to effective BFEs; and
- When, for good cause, the community wishes to shift the regulatory floodway or change its configuration in some way.

Appeals and map revisions that result in changes to BFEs are generally supported by new or revised hydraulic analyses that involve modification of the original hydraulic computer model. Because the regulatory floodway is developed with that model and the regulatory floodway width depends on a specified increase in the BFEs, changes to regulatory floodways may be a part of any appeal or map

revision that results in changes to BFEs on flooding source studied using detailed methods.

If a levee system has been constructed along the flooding source that is the subject of the appeal or map revision, the requirements documented in Appendix H, Section H.5 of FEMA’s *Guidelines and Specifications for Flood Hazard Mapping Partners* must be met. The *Guidelines and Specifications* are accessible through a dedicated page on the FEMA Website, located at

<http://www.fema.gov/plan/prevent/fhm/gsmain.shtm>, or may be downloaded directly from the FEMA Library (<http://www.fema.gov/library/index.jsp>).

When a levee is present, the regulatory floodway analysis is performed using standard equal-conveyance methods for the “without levee” analysis. The “without levee” analysis includes the ground geometry of the levee within the cross sections, but does not assume that the levee impedes conveyance.

The resulting regulatory floodway boundary is then delineated as follows:

- If the regulatory floodway boundary falls entirely riverward of the levee, the boundary is shown at its computed location unless the FEMA Regional Office and community/State elect to show the regulatory floodway on the landward toe of the levee; the community/State must agree to enforce the widened regulatory floodway.
- If the regulatory floodway boundary is computed to be between the riverward and

landward toes of the levee (i.e., within the geometry of the levee itself), then the regulatory floodway boundary should be delineated on the landward toe.

- If the regulatory floodway boundary falls entirely landward of the levee, then the floodway boundary should be shown at its computed location.

It is important to note that, if the levee itself lies within the designated regulatory floodway, this does not preclude flood-fighting efforts along that levee.

7.2 Application Forms

In 1992, FEMA developed the MT-2 application forms and instructions for revisions to NFIP maps to make the regulatory floodway revision process quicker and more efficient. The MT-2 forms provide step-by-step instructions for requesters to follow and are comprehensive, ensuring that the requesters' submissions are complete and more logically structured. This allows FEMA staff to complete their review quicker and at lower cost to the NFIP.

While completing the forms may seem burdensome, experience has shown that the advantages to the requesters outweigh any inconvenience. These forms are discussed in more detail later in this chapter.

7.3 Fee-Charge System

To reduce the expenses to the NFIP by more fully recovering the costs associated with processing map change requests, FEMA implemented a procedure to

recover costs associated with reviewing and processing such requests. The fee schedule for map change requests is provided in Table D-1 in Appendix D of this *Guide*.

FEMA reviews its fee-charge procedures periodically (usually, once every 2 years) and may revise the review and processing fees for map change requests. Therefore, interested parties should visit the following page on the FEMA Website for the most up-to-date information:

http://www.fema.gov/plan/prevent/fhm/firm_fees.shtm.

Certain map change requests may qualify for exemptions in accordance with Section 72.5 of the NFIP regulations, as summarized on the above-referenced Web page and in Appendix D, and include changes that correct mapping errors, natural changes, and better quality data that do not partially or wholly incorporate manmade modifications within the SFHA.

7.4 North American Vertical Datum of 1988

Since the National Geodetic Survey determined that the national vertical control network needed to be readjusted, FEMA has been gradually converting NFIP maps from the National Geodetic Vertical Datum of 1929 (NGVD29) to the North American Vertical Datum of 1988 (NAVD88) in the contiguous United States. Therefore, when submitting a regulatory floodway revision request, requesters should use the reference datum shown on the applicable, effective FIRM/DFIRM panel.

For more information on the conversion from NGVD29 to NAVD88, requesters should refer to FIA-20, *Converting the National Flood Insurance Program to the North American Vertical Datum of 1988, Guidelines for Community Officials, Engineers, and Surveyors*, and to Appendix B, “Guidance for Converting to the North American Vertical Datum of 1988,” of FEMA’s *Guidelines and Specifications for Flood Hazard Mapping Partners*. These guidance documents are available from the FEMA Library (<http://www.fema.gov/library/index.jsp>). Information on how to obtain copies of these and other useful guidance documents is provided in Appendix B of this *Guide*.

7.5 How To Request a Floodway Revision

A request to revise the regulatory floodway may be submitted during the 90-day appeal period or after the NFIP map on which the regulatory floodway is shown has become effective. A request for a revision to a regulatory floodway submitted during the appeal period will be handled as a formal comment on the Preliminary or Revised Preliminary version of the map and FIS report. (See Chapter 3 of this *Guide* for additional information on comment processing requirements.) Any request submitted after the effective date of the NFIP map will be handled as a map revision request in accordance with Part 65 of the NFIP regulations.

Because the community selects and adopts the regulatory floodway, all requests for changes to regulatory floodways must be made or approved by community officials. FEMA will not revise a regulatory

floodway without the approval of the community. Because the Chief Executive Office (CEO) of the community is responsible for ensuring that the community meets the obligation to regulate floodways, FEMA will work with the CEO or a local official designated by the CEO, such as a floodplain administrator (FPA), city planner, or city engineer, in evaluating requests that involve changes to regulatory floodways.

For this reason, any individual property owner, developer, or other person who wishes to request a map change that involves the regulatory floodway must complete the MT-2 application forms, and must have the community CEO, FPA, or other designated official approve this requested change by completing the appropriate sections of Form 1, “Overview & Concurrence Form.”

To request a map revision to change the regulatory floodway only, the requester must complete the MT-2 application forms. Requesters may obtain paper copies of these forms and the step-by-step instructions from the Map Specialists in the FEMA Map Assistance Center (FMAC). Requesters may contact the FMAC by telephone, toll free, at 1-877-FEMA MAP (1-877-336-2627), or send an e-mail message to

FEMAMapSpecialist@riskmapcds.com.

For hours of operation and to learn more about FMAC services, interested parties should visit the FMAC page:

http://www.fema.gov/plan/prevent/fhm/fmc_main.shtm.

Requesters also may download Word, PDF, and TXT versions of the MT-1 application forms and instructions from the FEMA Library

(<http://www.fema.gov/library/index.jsp>).

The forms and instructions also are accessible through the following page on the FEMA Website:

<http://www.fema.gov/plan/prevent/fhm/dlmt-2.shtm>.

Completed application forms, supporting data and documentation, and review and processing fees for a request to revise the regulatory floodway are to be submitted to:

LOMC Clearinghouse
6730 Santa Barbara Court
Elkridge, MD 21075

Payment of the review and processing fee may be made by credit card, check, or money order. Checks and money orders are to be made payable in U.S. funds to the National Flood Insurance Program. If a revision requester chooses to use a credit card, the credit card information is to be provided on the “Payment Information Form” that is included in the MT-2 forms package.

An assigned FEMA Fee-Charge System Administrator (FCSA) will review the check, money order, or payment information and, if appropriate, deposit the payment in the National Flood Insurance Fund (NFIF). If the FCSA identifies any irregularities with the payment, the FCSA will not deposit the payment in the NFIF. In such instances, FEMA will send a letter to the requester explaining any additional actions the requester must take to allow FEMA to process the request.

7.6 Supporting Data and Documentation Required for Floodway Revisions

FEMA cannot make regulatory floodway revisions without adequate supporting data and documentation. Table 7-1 lists the types of supporting data and documentation required to support revisions to regulatory floodways.

Many States require communities to follow administrative procedures for establishing and revising regulatory floodways, and the limits of the regulatory floodway are established through engineering analyses. Therefore, both legal documentation and technical data must be submitted.

In addition, as development takes place in the floodway fringe, an increasing amount (if not all) of the allowable surcharge is used. Therefore, a revised regulatory floodway must be configured in such a way that it will continue to convey the 1-percent-annual-chance flood discharge with no greater than the allowable increase (1.0 foot, unless a lower surcharge is to be used) in the original BFEs (i.e., the BFEs on which the unrevised regulatory floodway is based) at any point. If the regulatory floodway revision is part of a revision that results in BFEs lower than those on the map that is to be revised, the surcharge limit (1.0 foot, unless a lower surcharge is to be used) applies to those lower BFEs.

Table 7-1. Supporting Data and Documentation for Floodway Revisions

Supporting Data Type	Revisions Made as Part of Appeal	Revisions Made as Part of Map Revision
Copy of public notice stating community's intent to revise regulatory floodway and statement that community has notified affected property owners and/or adjacent jurisdictions	X	X
Copy of letter notifying State/Commonwealth/Territory of revisions to regulatory floodway	X	X
Documentation of approval of revised regulatory floodway by appropriate State agency (for communities where State has jurisdiction over regulatory floodway or its adoption by communities participating in the NFIP)	X	X
Original hydraulic computer model revised to include all encroachments that have occurred in floodplain since original regulatory floodway was developed		X
New regulatory floodway limits incorporated into floodway analysis in revised computer model		X
New regulatory floodway limits incorporated into hydraulic computer model used for determination of new BFEs for the appeal	X	
New regulatory floodway limits set so that combined effects of these limits, past encroachment, and changes on which the appeal is based do not increase original BFEs or those resulting from appeal by more than the allowable amount	X	
Regulatory floodway limits set so that combined effects of these limits and past encroachment do not increase original BFEs by more than the allowable amount		X
Delineation of revised regulatory floodway boundaries shown on same work map as that used for delineation of revised flood zone boundaries computed in hydraulic model for appeal or map revision	X	X
Delineation of revised regulatory floodway boundaries on copy of effective NFIP map		X

7.7 Floodway Revision Processing Procedures

Requests for regulatory floodway revisions that are submitted as part of an appeal of the proposed BFEs shown on a Preliminary or Revised Preliminary map and associated FIS report are handled in accordance with the procedures detailed in Chapter 3. A regulatory floodway revision that results from map revision requests involving changes to BFEs shown on an effective map and accompanying FIS report or a map revision request that involves only the regulatory floodway are handled according to the procedures detailed in Chapter 4.

However, if a request submitted during the 90-day appeal period involves a change to the BFEs, it will be handled as an appeal; if a request submitted during the 90-day appeal period does not involve a change to the BFEs, it will be handled as a formal comment. The appeal or comment will then be handled as described below.

After receiving the request, FEMA will send an acknowledgment letter to the CEO(s) and FPA(s) of the affected communities. If the request is submitted by a private party or a community official other than a CEO or FPA, FEMA will also send a copy of the acknowledgment letter to that requester.

During its review of the request, FEMA will communicate by letter with the CEO(s), FPA(s), or other community official(s) designated by the CEO(s). If the request was submitted by a private party who is not affiliated with the affected community or communities, FEMA also will send copies of letters to the requester.

If additional data or documentation are needed to support the request, FEMA will request the data by letter to the CEO, FPA, or other designated community official. To avoid spending time reviewing poorly documented requests, FEMA allows 30 days for the community to provide the requested data and/or documentation.

If the data and/or documentation are not provided by the deadline included in the FEMA letter, FEMA will complete the review using the data originally submitted. If the requested data and/or documentation are provided on or before the deadline, FEMA will consider them in its review.

After reviewing all supporting data and documentation, FEMA will determine whether the revision is warranted. If no revision is warranted, FEMA will inform the community by letter that the request is denied.

If a revision is warranted, FEMA will inform the community by letter when and how the revised regulatory floodway will be incorporated into the map. The revised regulatory floodway data will be incorporated into the FIS report at the same time.

As with other revisions, FEMA will address correspondence to the community CEO(s), and will provide copies to the community FPA(s), other identified community official(s), and to any non-community revision requester(s) if appropriate.

In compiling data for a floodway revision request, the requester should keep the following in mind:

- The required data will vary with each request; therefore, requesters should refer to the MT-2 application forms package for details.
- FEMA may request data other than those shown in Table 7-1.
- All analyses and data submitted must be certified by a Registered Professional Engineer; survey data must be certified by a Licensed Land Surveyor.
- The letter notifying the State of revisions to the regulatory floodway is required only when the State has jurisdiction over the regulatory floodway or its adoption.
- Copies of input and output data from the original and modified regulatory floodway computer models must be submitted.

Chapter 8

Revisions Based on “Adequate Progress” (Zone A99) Determinations

8.1 Background

As administrator of the National Flood Insurance Program (NFIP), the Federal Emergency Management Agency (FEMA) is **not** responsible for building, maintaining, operating, or certifying levee systems. FEMA does, however, develop and enforce the regulatory and procedural requirements that are used to determine whether a **completed** levee system should be accredited on a Flood Insurance Rate Map (FIRM) or Digital Flood Insurance Rate Map (DFIRM). These criteria are documented in Section 65.10 of the NFIP regulations, titled “Mapping of Areas Protected by Levee Systems.”

The following resources help guide mapping in levee-impacted areas:

- Appendix H, “Guidance for Mapping of Areas Protected by Levee Systems,” of FEMA’s *Guidelines and Specifications for Flood Hazard Mapping Partners*;
- Numerous FEMA Procedure Memorandums issued to clarify the regulatory and procedural requirements for FEMA staff, contractors, and mapping partners; and

- “Meeting the Criteria for Accrediting Levees on FEMA’s Flood Maps: How-To Guide for Floodplain Managers and Engineers.”

These resources and the other resources related to levee systems discussed in this *Guide* are posted in the FEMA Library (<http://www.fema.gov/library/index.jsp>) and are accessible through levee-dedicated pages on the FEMA Website. The gateway to the FEMA-provided levee system information is www.fema.gov/plan/prevent/fhm/lv_intro.shtm.

FEMA relies on Federal, State, and local agencies and private levee owners to provide them with data and documentation on levee systems so that the hazards in levee-impacted areas may be presented accurately on the FIRM/DFIRM, in the associated Flood Insurance Study (FIS) report, and in related products. Requirements related to appeals involving completed levee systems are provided in Chapter 3 of this *Guide*.

FEMA also develops and enforces regulatory and procedural requirements for levee systems that are being constructed for the first time or that are being restored to or above the base (1-percent-annual-chance) flood design level. These requirements are presented in Sections 61.12 and 65.14 of the NFIP regulations and in the previously referenced Appendix H and Procedure Memorandums.

As with completed levee systems, FEMA relies on Federal, State, and local agencies to provide data and documentation regarding new and restored levee systems.

8.2 Community, State, and Federal Responsibilities

Communities, State agencies, and Federal agencies may construct new levee systems to address flood hazards and reduce flood risks to structures and people in a particular community or particular area of a state. Likewise, these communities and agencies may undertake a project to restore the flood protection capability of a levee system that had previously been accredited, thereby reducing the flood risk to the people and structures located in levee-impacted areas.

When communities, State agencies, and Federal agencies undertake such projects, they will want to submit the appropriate data and documentation to FEMA, so that FEMA may present updated, accurate flood hazard information in the levee-impacted areas on the maps and related documents. The required data and documentation will vary, depending on the type of determination that the community would like FEMA to make regarding the project and the flood insurance risk zone designation that the community would like FEMA to include on the effective FIRM or DFIRM for that community.

Once a flood protection project, such as a levee system, that is intended to be accredited has reached certain completion milestones, a community may submit the data and documentation required by Section 61.12 of the NFIP regulations and request an "adequate progress" determination from FEMA.

8.3 Eligibility Requirements

In accordance with Section 61.12 of the NFIP regulations, FEMA may issue adequate progress determinations for construction of flood protection systems, such as levee systems, involving Federal funds that will significantly limit the area of a community that will be included in the identified Special Flood Hazard Area (SFHA). The SFHA is the high-risk area that will be inundated by the base flood. Such projects reduce, but do not eliminate, the risk of flooding to people who live and work in these levee-impacted areas or to the structures in which they live and work.

The Chief Executive Officer (CEO) of the community or another responsible community official designated by the CEO, such as the floodplain administrator (FPA), may request that FEMA make an adequate progress determination for a construction project and revise the effective FIRM or DFIRM to designate the SFHA in the levee-impacted area as Zone A99. The CEO, FPA, or other community official may only request an adequate progress determination when Federal funds are used for the project and the completion milestones discussed below are met.

8.4 Application and Submittal Requirements

In accordance with Paragraph 61.12(b) of the NFIP regulations, the FEMA office that serves the community or communities affected by the project must receive information from the sponsoring community indicating that the project meets *all* of the following requirements:

- 100 percent of the total financial project cost of the completed flood protection system has been authorized;
 - At least 50 percent of the total financial project cost of the completed flood protection system has been expended;
 - At least 60 percent of the total financial project cost of the completed flood protection system has been appropriated;
 - All critical features of the flood protection system, as identified by FEMA, are under construction, and each critical feature is 50 percent completed as measured by the actual expenditure of the estimated construction budget funds; and
 - The community has not been responsible for any delay in the completion of the system.
- Supporting technical data (e.g., U.S. Army Corps of Engineers project data);
 - Cost schedules;
 - Budget appropriation data;
 - Extent of Federal funding of system construction;
 - Full and precise statement of the purpose of the system;
 - Information sufficient to identify all persons affected by system/project;
 - Carefully detailed description of project, including construction completion target dates; and
 - True copies of *all* contracts, agreements, leases, instruments, and other documents.

Relevant facts reflected in the submitted documents must be included in the statement and not merely incorporated by reference, and must be accompanied by an analysis of their bearing on the requirements of Paragraph 61.12(b) of the NFIP regulations, specifying the pertinent provisions.

The request must contain a statement whether, to the best of the knowledge of the person responsible for preparing the application for the community, the project is currently the subject matter of litigation before any Federal, State, or local court or administrative agency, and the purpose of that litigation.

The request also must contain a statement as to whether the community has previously requested an adequate progress determination for the project from FEMA, detailing the disposition of such previous request.

See Appendix E of this *Guide* for the address of the appropriate FEMA office.

Each request must contain a complete statement of all relevant facts relating to the flood protection system, including, but not limited to, the following:

Note: Documents submitted to FEMA become part of the agency's files and cannot be returned; therefore, the community should not submit the original documents.

8.5 FEMA Review and Response

FEMA will review all data and documentation submitted in support of the community's application for the adequate progress determination. Upon completing this review, FEMA will respond, in writing, to the CEO of the community in accordance with the procedures specified in Section 65.9 of the NFIP regulations. FEMA will send copies of the written determination to the community FPA and the community official that submitted the request if it was not submitted by the CEO or FPA.

If FEMA issues an adequate progress determination, FEMA will prepare new or revised FIRM or DFIRM panels that designate the flood hazard areas that are impacted by the levee system as Zone A99. FEMA will map the areas impacted by internal drainage associated with the 1-percent-annual-chance flood as Zone A, AE, AH, or AO as appropriate.

8.6 Requirements for Maintaining Zone A99 Designation

To maintain the Zone A99 designation for the impacted area on the FIRM or DFIRM panels, the CEO, FPA, or other responsible official of a community who receives an adequate progress determination from FEMA must certify to the FEMA Regional

Office *annually*, on the anniversary date of receipt of the adequate progress determination, that no present delay in completion of the project is attributable to local sponsors of the project, and that a good faith effort to complete the project is being made.

8.7 Flood Insurance Requirements in Zone A99

The following flood insurance requirements apply in areas designated Zone A99 on an effective FIRM or DFIRM:

- The mandatory flood insurance purchase requirements of the NFIP apply.
- Properties located in Zone A99 will be charged the same flood insurance premium rates that would be applicable to insurable structures once the project is complete (i.e., rates applicable to low- or moderate-risk areas labeled Zone X or Zone X shaded).
- The flood insurance premium rates go into effect on the date that FEMA issues its final determination to the community CEO and others, in writing, that adequate progress has been made toward completion of the flood protection system.

8.8 Floodplain Management and Building Requirements in Zone A99

The following floodplain management and building requirements apply in areas designated Zone A99 on an effective FIRM or DFIRM:

- Residential buildings do not have to be elevated to or above the elevation of the 1-percent-annual-chance flood (i.e., the Base Flood Elevation).
- Nonresidential buildings do not have to be elevated or floodproofed to or above the 1-percent-annual-chance flood elevation.
- Unlike the requirements in other SFHAs that are determined based on detailed engineering studies, the community only needs to meet the standards of Subparagraphs 60.3(a)(1) through (5) and Subparagraphs 60.3(b)(5) through (9) for Zone A99 areas.

8.9 Requirements for Removing Zone A99 Designation

A community that has received an adequate progress determination from FEMA must notify the FEMA Regional Office that serves the community if, at any time, all progress on the completion of the project has been halted or if the project has been canceled. When this occurs, FEMA will notify all affected communities in writing and will revise the FIRM or

DFIRM to present flood hazard and risk information based on the levee system **not** providing 1-percent-annual-chance flood protection.

In this case, FEMA would redesignate the levee-impacted area as Zone A or Zone AE, depending on the type of engineering study that had been performed for the flooding source, and the flood insurance and floodplain management benefits that apply to Zone A99 areas discussed above would no longer apply.

A community that has completed a project as planned must provide the data and documentation cited in the criteria in Section 65.10 of the NFIP regulations to FEMA for the levee system to be accredited on an updated FIRM/DFIRM. Once FEMA receives and reviews the required data and documentation, FEMA will redesignate the levee-impacted area as shaded Zone X, except for internal drainage areas, to indicate the residual flood hazard of the completed project.

Chapter 9

Revisions Based on “Flood Protection Restoration” (Zone AR) Determinations

9.1 Background

Legislation passed in October 1992 amended the National Flood Insurance Act of 1968 and established a flood restoration zone, termed Zone AR. The U.S. Congress created the Zone AR designation so that a community participating in the National Flood Insurance Program (NFIP) with a de-accredited flood protection system (i.e., levee system) can allow development to continue, using less stringent floodplain management requirements, and property owners may receive a lower insurance premium while the system is being restored.

In response to that legislation, the Federal Emergency Management Agency (FEMA), as administrator of the NFIP, had to develop and enforce regulatory and procedural requirements for Zone AR. Although FEMA is **not** responsible for building, maintaining, operating, certifying, or restoring levee systems, FEMA does have responsibility for developing and enforcing the regulatory and procedural requirements that support the NFIP. The requirements for determining whether a completed levee system should be credited with providing 1-percent-annual-chance flood protection on a Flood Insurance Rate Map (FIRM) or Digital Flood Insurance Rate Map (DFIRM) are documented in Section 65.10 of the NFIP regulations, titled “Mapping of

Areas Protected by Levee Systems.” The following resources help guide mapping in levee-impacted areas:

- Appendix H, “Guidance for Mapping of Areas Protected by Levee Systems,” of FEMA’s *Guidelines and Specifications for Flood Hazard Mapping Partners*;
- FEMA Procedure Memorandums issued to clarify the regulatory and procedural requirements for FEMA staff, contractors, and mapping partners; and
- “Meeting the Criteria for Accrediting Levees on FEMA’s Flood Maps: How-To Guide for Floodplain Managers and Engineers.”

The regulatory requirements for levee systems that are being restored are provided in Section 65.14 of the NFIP regulations, titled “Remapping of Areas for Which Local Flood Protection Systems No Longer Provide Base Flood Protection.” The procedural requirements also are provided in FEMA’s *Guidelines and Specifications for Flood Hazard Mapping Partners*.

These resources and the other resources related to levee systems discussed in this *Guide* are posted in the FEMA Library (<http://www.fema.gov/library/index.jsp>) and are accessible through levee-dedicated pages on the FEMA Website. The gateway to the FEMA-provided levee system information is www.fema.gov/plan/prevent/fhm/lv_intro.shtm.

FEMA relies on Federal, State, and local agencies and private levee owners to provide them with the required data and documentation on levee systems so that the hazards and risks in levee-impacted areas may be presented accurately on the FIRM/DFIRM, in the associated Flood Insurance Study (FIS) report, and in related products. Requirements related to appeals involving completed levee systems are provided in Chapter 3 of this *Guide*.

FEMA relies on Federal, State, and local agencies to provide data and documentation regarding new and restored levee systems.

9.2 Community, State, and Federal Responsibilities

Communities, State agencies, and Federal agencies may construct new levee systems to address flood hazards and reduce flood risks to structures and people in a particular community or particular area of a state. Likewise, these communities and agencies may undertake a project to restore the flood protection capability of a levee system that had previously been credited with providing a 1-percent-annual-chance level of flood protection to that level of protection, thereby reducing the flood risk to the people and structures located in levee-impacted areas.

When communities, State agencies, and Federal agencies undertake such projects to provide a 1-percent-annual-chance level of flood protection, they will want to submit the appropriate data and documentation to FEMA, so that FEMA may present updated, accurate flood hazard and risk information in the levee-impacted

areas on the maps and related documents. The required data and documentation will vary, depending on the type of determination that the community would like FEMA to make regarding the project and the flood insurance risk zone designation that the community would like FEMA to include on the effective FIRM/DFIRM for that community.

9.3 General Requirements

The “flood protection restoration” (Zone AR) determination process can be used when a Federal flood protection system, such as a levee system, no longer provides a 1-percent-annual-chance level of flood protection. This designation indicates that the increased flood hazard and associated risk is considered temporary and recognizes that a levee system is being restored to provide the 1-percent-annual-chance level of flood protection, thereby reducing the flood risk to people and structures in the levee-impacted areas.

The Zone AR determination process may result in reductions in the flood insurance premium costs and in the elevation requirements for new construction and substantial improvements to existing structures. The process also helps eligible communities establish a plan for restoring flood protection with the assurance that the restoration project, if constructed as proposed, will result in the eventual removal of the high-risk Special Flood Hazard Area (SFHA) designation from the levee-impacted areas. The SFHA is the area that would be inundated by the 1-percent-annual-chance flood.

9.4 Eligibility Requirements

A community may be eligible to apply for the Zone AR designation if FEMA determines that the community is engaged in the process of restoring a flood protection system that was:

- Constructed using Federal funds;
- Recognized as providing 1-percent-annual-chance flood protection on the effective FIRM/DFIRM; and
- Decertified by a Federal agency responsible for flood protection design or construction.

9.5 Application and Submittal Requirements

To apply for the Zone AR designation, the community Chief Executive Officer (CEO), community floodplain administrator (FPA), or another community official designated by the CEO must submit a formal written request to the Administrator of the FEMA Regional Office that serves the community along with the supporting information and documentation outlined in Section 65.14 of the NFIP regulations (and listed below), and any additional information requested by the FEMA Regional Office. The addresses of the FEMA Regional Offices are provided in Appendix E of this *Guide*.

The FEMA Regional Office will not initiate any action to designate flood protection restoration zones without receiving a formal written request from the community that complies with **all**

requirements of Section 65.14 of the NFIP regulations.

9.5.1 Supporting Information and Documentation Required for Community That Does Receive Federal Funds

The minimum information and documentation required for a flood protection project that involves Federal funds are listed below. FEMA reserves the right to request additional information and documentation from the community to support or further document the community's formal request.

1. A statement whether, to the best of the knowledge of the community CEO, the flood protection system is currently the subject matter of litigation before any Federal, State or local court or administrative agency, and if so, the purpose of that litigation;
2. A statement whether the community has previously requested a determination from FEMA with respect to the same subject matter, and, if so, a statement that details the disposition of the previous request;
3. A statement from the community and certification by a Federal agency responsible for flood protection design or construction that the existing system, as shown on the effective FIRM or DFIRM, was originally built using Federal funds, that it no longer provides 1-percent-annual-chance flood

protection, but that it continues to provide at least a 3-percent-annual-chance flood protection during any year;

4. An official map of the community or legal description, with supporting documentation, that the community will adopt as part of its floodplain management measures, which designates “developed areas” as defined in Section 59.1 of the NFIP regulations and as further defined in Paragraph 60.3(f) of the NFIP regulations;
5. A restoration plan to return the system to a 1-percent-annual-chance level of flood protection;
6. A statement identifying the local project sponsor responsible for restoration of the flood protection system;
7. A copy of a study, performed by a Federal agency responsible for flood protection design or construction in consultation with the local project sponsor, which demonstrates a Federal interest in restoration of the system and which deems that the system is restorable to a 1-percent-annual-chance level of protection; and
8. A joint statement from the Federal agency responsible for flood protection design or construction involved in the project and the local project sponsor certifying that the design and construction of the system involves Federal funds, and that the restoration of the system will provide a 1-percent-annual-chance level of protection.

At a minimum, the restoration plan submitted with the community’s determination request must:

- List all important project elements, such as acquisition of permits, approvals, and contracts and construction schedules of planned features.
- Identify anticipated start and completion dates for each element, as well as significant milestones and dates.
- Identify the date on which “as-built” drawings and certification for the completed restoration project will be submitted. This date must provide for a restoration period not to exceed the maximum allowable restoration period for the system.
- Identify the date on which the community will submit a request for a finding of adequate progress that meets all requirements of Section 61.12 of the NFIP regulations. This date may not exceed the maximum allowable restoration period for the system. (Additional information on adequate progress determinations is provided in Chapter 10 of this *Guide*.)

9.5.2 Supporting Information and Documentation Required for Community That Does Not Receive Federal Funds

The minimum information and documentation required for a flood protection project that involves no Federal

funds are listed below. FEMA reserves the right to request additional information and documentation from the community to support or further document the community's formal request.

- Item Nos. 1-6 from the list above for communities that do receive Federal funds;
- A copy of a study, certified by Registered Professional Engineer, that demonstrates that the flood protection system is restorable to provide 1-percent-annual-chance flood protection;
- A statement from the local agency responsible for restoration of the system certifying that the restored system will meet the applicable criteria of Part 65 of the NFIP regulations; and
- A statement from the local agency responsible for restoration of the system that identifies the source(s) of funding for the project and the percentage of the total funds contributed by each source to demonstrate, at a minimum, that 100 percent of the total financial project cost of the completed system has been appropriated.

The requirements for the restoration plan that must be submitted are the same as those cited above for communities that do receive Federal funds, with one exception. Because the project does not involve Federal funds, it does not meet the minimum qualifications for an adequate progress determination. Therefore, the restoration plan does not need to identify the date on which the community will

submit a request for an adequate progress determination from FEMA.

9.6 Limitations and Completion Requirements

A community may have a Zone AR designation only once during the restoration of a particular levee system. This limitation does not preclude future Zone AR designations should a fully restored, certified, and accredited levee system become decertified for a second or subsequent time.

A community that receives Federal funds for the purpose of designing, or constructing, or designing and constructing the restoration project must complete the restoration or meet the adequate progress requirements of Section 61.12 of the NFIP regulations within a specified period. The completion date for federally funded projects is not to exceed a maximum of 10 years from the date of submittal of the community's application for the Zone AR designation.

A community that does **not** receive Federal funds for the purpose of designing or constructing the project must also complete the restoration within a specified period, not to exceed a maximum of 5 years from the date of submittal of the community's application for the Zone AR designation. Because no Federal funds are involved, the project would not be eligible for a Zone A99 designation under the provisions of Section 61.12 of the NFIP regulations. The designated restoration period may not be extended beyond the maximum allowable under this limitation.

9.7 Exclusions

The provisions of Section 65.14 of the NFIP regulations do not apply to a levee system in a coastal high hazard area as defined in Section 59.1 of the NFIP regulations. This exclusion includes areas that would be subject to coastal high hazards as a result of the decertification of a previously certified levee system that had been accredited and shown on the effective FIRM/DFIRM for a community as providing 1-percent-annual-chance flood protection.

9.8 FEMA Review and Response

FEMA will review all data and documentation submitted in support of the community's application for the Zone AR designation. Upon completing this review, FEMA will respond, in writing, to the CEO of the community, in accordance with the procedures specified in Section 65.9 of the NFIP regulations.

If FEMA issues a flood protection restoration determination, they will prepare new or revised FIRM/DFIRM panels that designate the temporary flood hazard areas that are impacted by the levee system as Zone AR. Existing SFHAs shown on the effective FIRM/DFIRM panel(s) for the areas that are further inundated by Zone AR flooding will be designated as one of the following flood insurance risk zones, which are referred to collectively as dual flood zones:

- Zone AR/AE or AR/AH with Zone AR Base (1-percent-annual-chance) Flood Elevations (BFEs) determined;
- Zone AR/A1-30, for older FIRMs, where the flooding source was studied by detailed methods in accordance with Appendix C of FEMA's *Guidelines and Specifications for Flood Hazard Mapping Partners* or previous FEMA guidelines and specifications document and Zone AR BFEs are determined;
- Zone AR/AE, for newer FIRMs and on DFIRMs, where the flooding source was studied by detailed methods in accordance with Appendix C of FEMA's *Guidelines and Specifications for Flood Hazard Mapping Partners* or previous FEMA guidelines and specifications document and Zone AR BFEs are determined;
- Zone AR/AH, for FIRMs or DFIRMs, where a shallow flooding analysis was performed in accordance with Appendix E of FEMA's *Guidelines and Specifications for Flood Hazard Mapping Partners* or previous FEMA guidelines and specifications document and Zone AR BFEs are determined;
- Zone AR/AO, for FIRMs or DFIRMs, where a shallow/sheet flooding analysis was performed in accordance with Appendix E of FEMA's *Guidelines and Specifications for Flood Hazard Mapping Partners* or previous FEMA guidelines and specifications document and Zone AR base flood depths are determined; and

- Zone AR/A, for FIRMs or DFIRMs, where the flooding source was studied by approximate methods in accordance with Appendix C of FEMA's *Guidelines and Specifications for Flood Hazard Mapping Partners* or previous FEMA guidelines and specifications document and no BFEs are determined.

9.9 Requirements for Maintaining Zone AR Designation

To maintain the Zone AR designation, the following requirements must be met:

- The community and any cost-sharing Federal agency must certify annually to the FEMA Regional Office that serves the affected community/communities that the restoration will be completed in accordance with the restoration plan within the time period specified by the plan.
- The community and Federal agency must update the restoration plan and must identify any permitting or construction problems that will delay the project completion.

The FEMA Regional Office that serves the affected community/communities will make an annual assessment and recommendation to the FEMA Administrator as to the viability of the restoration plan and will conduct periodic onsite inspections of the restoration project.

9.10 Flood Insurance Requirements in Zone AR

The following flood insurance requirements apply in areas designated Zone AR on an effective FIRM/DFIRM:

- The mandatory flood insurance purchase requirements of the NFIP apply; however, the flood insurance premium rates for Zone AR are significantly lower than the premium rates for other SFHAs.
- The NFIP grandfathering rules apply to structures in Zone AR and dual flood zones, which is important after the restoration project is complete.
- If a property owner purchases a policy, maintains continuous coverage, and is later determined to be in an SFHA after the restoration project is complete, the original flood insurance premium rate would apply.

The effective date for any flood insurance risk premium rates established for Zone AR is the effective date of the new or revised FIRM/DFIRM showing the Zone AR designations.

9.11 Floodplain Management and Building Requirements in Zone AR

The floodplain management and building requirements below apply when FEMA has issued a Letter of Final Determination to a community to finalize a new or revised

FIRM/DFIRM and has identified flood protection restoration areas by designating the areas as Zone AR or as dual flood zones on the FIRM/DFIRM. These requirements also apply in areas designated Zone AR on an **effective** FIRM/DFIRM.

The floodplain management and building requirements summarized below are in accordance with Paragraph 60.3(f) of the NFIP regulations.

- The community must adopt an official map or legal description of those areas within Zone AR and dual flood zones that are designated as "developed areas," as defined in Section 59.1 of the NFIP regulations.
- For all new construction of structures in areas within Zone AR, the community must determine the applicable Zone AR BFE and use that BFE to apply the requirements of Subparagraphs 60.3(c)(1) through (14) of the NFIP regulations.
 - a. For areas that are designated as developed areas, the community must use the elevation that is 3 feet above the highest adjacent grade (or the Zone AR BFE, if that is lower).
 - b. For areas outside of the developed areas where the Zone AR flood depth is 5 feet or less, the community must use the elevation that is 3 feet above the highest adjacent grade (or the Zone AR BFE, if that is lower).
 - c. For areas outside of the developed areas where the Zone AR flood depth is more than 5 feet, the community must use the Zone AR BFE.
 - d. For dual flood zones, the community must use the higher of the applicable Zone AR BFE or the BFE or base flood depth for the underlying Zone A1-30, Zone AE, Zone AH, Zone AO, or Zone A.
- For all substantial improvements to existing construction within dual flood zones, the community shall use the BFE or base flood depth for the underlying Zone A1-30, AE, AH, AO, or A to apply the requirements of Subparagraphs 60.3(c)(1) through (14).
- The community must notify the permit applicant that the area has been designated as Zone AR, Zone AR/A1-30, Zone AR/AE, Zone AR/AH, Zone AR/AO, or Zone AR/A, and whether the structure will be elevated to or above the Zone AR BFE.

9.12 Requirements for Removing Zone AR Designation from Map

Once a levee system restoration or construction project has made adequate progress, as defined in Section 61.12 of the NFIP regulations, the CEO of the community or another community official designated by the CEO may submit written evidence that the criteria of Section 61.12 have been met and request that FEMA

make an adequate progress determination and revise the FIRM/DFIRM to show a Zone A99 designation for the levee-impacted area. Additional requirements for Zone A99 designations are provided in Chapter 10 of this *Guide*.

The Zone AR designation also may be removed when the levee system restoration project has been completed. The requirements are as follows:

- If a community receives Federal funds for the project, that community must provide written evidence of certification from a Federal agency having flood protection design or construction responsibility that the necessary improvements have been completed and that the system has been restored to provide a 1-percent-annual-chance level of flood protection.
- If a community does not receive Federal funds for the project, that community must provide written evidence that the restored levee system meets the requirements of Section 65.10 of the NFIP regulations.

Upon receipt of the required data and documentation, FEMA will revise the affected FIRM/DFIRM panel(s) and related products to reflect the impact of the completed project on flood hazards in the levee-impacted area.

FEMA also has procedures for removing the Zone AR designation due to non-compliance with the restoration schedule or as a result of a finding that satisfactory progress is not being made to complete the restoration. These procedures and the resulting action that will be taken by FEMA are documented in Paragraph 65.14(i) of the NFIP regulations.

A community that has completed a project as planned must provide the data and documentation cited in the criteria in Section 65.10 of the NFIP regulations to FEMA for the levee system to be accredited on an updated FIRM/DFIRM. Once FEMA receives and reviews the required data and documentation, FEMA will redesignate the levee-impacted area as shaded Zone X, except for internal drainage areas, to indicate the residual flood hazard of the completed project.

Chapter 10 Letters of Determination Review

10.1 Background

Since January 2, 1996, in accordance with a mandate issued by the U.S. Congress in the National Flood Insurance Reform Act of 1994 (NFIRA), FEMA has accepted and processed requests for its review of determinations of whether buildings or manufactured homes are located in Special Flood Hazard Areas (SFHAs) identified on the effective National Flood Insurance Program (NFIP) maps. The result of this review, referred to as a Letter of Determination Review, or “LODR”, provides borrowers and lenders with information to resolve disputes regarding lender determinations of whether a borrower’s building or manufactured home is in the mapped SFHA.

To facilitate the determination process, FEMA developed a Standard Flood Hazard Determination Form (SFHDF) that is to be used by all regulated lenders and Federal agency lenders that make flood hazard determinations for improved property used to secure loans. The SFHDF is accessible through the “Forms” page on the FEMA Website:

http://www.fema.gov/plan/prevent/fhm/form_form.shtm.

When a borrower contests the determination made by the lender as documented in the SFHDF and the borrower and lender jointly request a LODR from FEMA, they must provide the completed SFHDF and all technical information FEMA will need to complete

its review. The LODR submittal to FEMA must be postmarked no later than 45 days after the date of the lender’s determination.

If sufficient information is provided, the written response from FEMA will indicate FEMA’s concurrence or disagreement with the lender’s determination and whether the subject building or manufactured home is to be considered in the SFHA. If sufficient information is not provided, the submitted information will be returned with a written response indicating the additional information to be submitted.

10.2 Review and Processing Fees

FEMA assesses a review and processing fee for LODR requests. The current fee is \$80 per request and applies to all requests, regardless of the determination that is issued.

10.3 Letter of Determination Review Processing Procedures

The procedures to be followed in processing LODR requests are summarized below. More detailed information on the procedures is provided in Subsection 3.3 of FEMA’s *Document Control Procedures Manual*. The form letters and other documents to be produced for LODR requests are provided in Appendix C of the *Document Control Procedures Manual*. The *Manual* is accessible through a dedicated page on the FEMA Website (<http://www.fema.gov/plan/prevent/fhm/gsdcpm.shtm>) or directly through the FEMA Library (<http://www.fema.gov/library/index.jsp>).

10.3.1 Initial Review and Processing

Within 5 days of receipt of a request, FEMA will complete the review and processing actions that are summarized below.

- Open, inventory, and date-stamp the submitted information.
 - Log the request into a tracking database.
 - Confirm that the borrower/lender notice and postmark date are not more than 45 days apart.
 - Confirm that the correct review and processing fee was submitted and in a form that can be deposited directly into the National Flood Insurance Fund (NFIF).
 - Confirm that the effective NFIP map was used in making the determination.
 - Verify whether required information was submitted.
 - Return the package to the borrower with the appropriate return notice and update the tracking database if any of the required supporting information is missing, the request is submitted to FEMA more than 45 days after the date on the SFHDF, or the review and processing fee submitted is insufficient or is nonnegotiable (and therefore cannot be deposited into the NFIF). The return package will include all items submitted by the borrower, including the payment.
- Process the review and processing fee, prepare and mail a written acknowledgment of the LODR request, and initiate the case review if all required items have been submitted.

10.3.2 Required Information and Documentation

The following information is to be submitted in support of a LODR request:

- Request to FEMA for a review of the lender's determination with the signature of the borrower and lender;
- Copy of the lender's dated notification to the borrower that the building or manufactured home is in an SFHA;
- Completed SFHDF;
- Copies of all map materials used by the lender or the lender's agent to make the determination, including Plat of Tax Assessor's map and map showing the location of the building or manufactured home as related to the property; and
- Copy of map panel covering area in which the building or manufactured home is located, annotated to show the location of the building or manufactured home.

10.3.3 Final Review and Processing

After mailing the written acknowledgment of the LODR request and obtaining all information required to make a determination regarding the LODR

request, FEMA will complete the following tasks:

- Verify the location, NFIP community name, and the community identification number (CID). If the building or manufactured home is in an area that has been annexed to a community, FEMA will verify that the name and CID for the community that has jurisdictional authority for the property is used in the determination.
- Search the Community Information System (CIS) database, Letter of Map Change case files, and other community-based files for completed or in-progress Letter of Map Amendment (LOMA), Letter of Map Revision Based on Fill (LOMR-F), and Letter of Map Revision (LOMR) requests for the area in which the building or manufactured home in question is located and verify the location of the building or manufactured home.
- Evaluate the submitted information and make a preliminary determination.
- Prepare and send a determination letter.
- Update the tracking database.

If FEMA denies the LODR request and the elevation data submitted indicate the building or manufactured home may be removed from the SFHA by a LOMR-F or LOMA, FEMA will include a notification in the response letter to the borrower and lender. When appropriate, the FEMA response letter also will indicate that FEMA has initiated processing of a LOMR-F or LOMA request.

10.4 Deliverable Products

FEMA will prepare and distribute the standard letters for LODRs in accordance with Subsection 3.3 and Appendix C of FEMA's *Document Control Procedures Manual*. This includes mailing the letters, with their appropriate enclosures, as specified in the U.S. Postal Service *Domestic Mail Manual*.

10.5 Impact of Letter of Determination Review

The FEMA determination letters issued in response to LODR requests do not have any direct impact on the NFIP map on which a building or manufactured home is located. If a property owner would like to change the NFIP map, he or she would need to pursue a LOMR-F or LOMA in accordance with the procedures in Chapters 4 or 5 of this *Guide*.

Appendix A Glossary of Terms

The terms listed below are commonly encountered in this *Guide* and other Federal Emergency Management Agency (FEMA) and National Flood Insurance Program (NFIP) publications, including those listed in Appendix B of this *Guide*. The terms below also will be encountered during the processing of appeals and other comments submitted during the 90-day appeal period, conditional and final map amendments, conditional and final map revisions, map changes based on the accreditation or de-accreditation of levee systems, and Letters of Determination Review.

- The **0.2-percent-annual-chance flood** is the flood that has a 0.2-percent chance of being equaled or exceeded in any given year (also known as the 500-year flood).
- The **1-percent-annual-chance flood** is the flood that has a 1-percent chance of being equaled or exceeded in any given year (also known as the 100-year flood).
- The **2-percent-annual-chance flood** is the flood that has a 2-percent chance of being equaled or exceeded in any given year (also known as the 50-year flood).
- The **10-percent-annual-chance flood** is the flood that has a 10-percent chance of being equaled or exceeded in any given year (also known as the 10-year flood).
- An **accredited levee system** is a levee system that FEMA has shown on a Flood Insurance Rate Map (FIRM) or Digital Flood Insurance Rate Map (DFIRM) as providing protection from the 1-percent-annual-chance or greater flood. This determination is based on the submittal of data and documentation as required by Section 65.10 of the NFIP regulations. The impacted area landward of an accredited levee system is shown as Zone X (shaded) on the FIRM or DFIRM except for areas of residual flooding, such as ponding areas, which are shown as Special Flood Hazard Area.
- An **adequate progress determination** is a written determination issued by FEMA to the Chief Executive Officer of a community that has provided sufficient information for FEMA to determine that substantial completion of a flood protection system has been effected because: (1) 100 percent of the total financial project cost of the completed flood protection system has been authorized; (2) at least 60 percent of the total financial project cost of the completed flood protection system has been appropriated; (3) at least 50 percent of the total financial project cost of the completed flood protection system has been expended; (4) all critical features of the flood protection system, as identified by FEMA, are under construction, and each critical feature is 50 percent completed as measured by the

actual expenditure of the estimated construction budget funds; and (5) The community has not been responsible for any delay in the completion of the system.

- The **adoption/compliance period** is the period that begins with the issuance of a Letter of Final Determination and ends when a new or revised FIRM or DFIRM becomes effective. During the adoption/compliance period, a community must enact and adopt new or revised floodplain management ordinances required for participation in the NFIP.
- An **appeal** is a formal objection to proposed Base (1-percent-annual-chance) Flood Elevations and or base flood depths shown on a Preliminary version of a FIRM or DFIRM, in a Preliminary version of a Flood Insurance Study (FIS) report, or in map and report attachments to a Letter of Map Revision (LOMR), submitted by a community official or individual appellant during the 90-day appeal period, that is based on data and documentation that show the proposed Base Flood Elevations are scientifically or technically incorrect.
- The **appeal period** is the statutory period, beginning on the date of second publication of a notice of proposed and/or proposed modified BFEs and/or base flood depths in the local newspaper, during which community officials or owners or lessees of real property within the community may appeal the proposed or proposed modified BFEs and/or base flood depths by submitting data to show the proposed and/or proposed modified BFEs and/or base flood depths are scientifically or technically incorrect.
- The **application forms** are the comprehensive, easy-to-use forms that were implemented by FEMA in October 1992 to facilitate the processing of requests for revisions or amendments to NFIP maps.
- An **approved model** is a numerical computer program that has been accepted by FEMA for use in performing new or revised hydrologic or hydraulic analyses for NFIP purposes. All accepted models must meet the requirements set forth in Subparagraph 65.6(a)(6) of the NFIP regulations.
- An **approximate study** is an engineering study that results in the delineation of flood zone boundaries for the 1-percent-annual-chance flood, but does not include the determination of BFEs.
- The term **as-built** is used to describe mapping and mapping-related data that reflect conditions within a floodplain based on flood-control and other structures being completed.
- The **base flood** is the flood that has a 1-percent probability of being equaled or exceeded in any given year (also referred to as 100-year flood).

- The **Base Flood Elevation (BFE)** is the height of the base flood, usually in feet, in relation to the National Geodetic Vertical Datum of 1929, the North American Vertical Datum of 1988, or other datum referenced in the FIS report, or depth of the base flood, usually in feet, above the ground surface.
- The **Chief Executive Officer (CEO)** is the community official who has the authority to implement and administer laws, ordinances, and regulations for that community.
- **Coastal flooding** is flooding that occurs along the Great Lakes, the Atlantic and Pacific Oceans, the Gulf of Mexico, and connected flooding sources.
- The **Coastal High Hazard Area** is an area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high-velocity wave actions from storms or seismic sources.
- The **Code of Federal Regulations (CFR)** is the codification of the general and permanent rules published in the FEDERAL REGISTER by the Executive Departments and agencies of the Federal Government.
- A **comment** is an objection to any information, other than the proposed BFEs or base flood depths, shown on a Preliminary version of a map, in a Preliminary version of a Flood Insurance Study report, or in map and report attachments to a Letter of Map Revision that is submitted by a community official or individual resident during the 90-day appeal period.
- A **community** is any State or area or political subdivision thereof, or any Indian tribe or authorized tribal organization, or Alaska Native village or authorized native organization, which has the authority to adopt and enforce floodplain management regulations for the areas within its jurisdiction.
- A **community coordination meeting** is a meeting during which FEMA Regional Office staff, the State NFIP Coordinator, community officials, and other project team members or stakeholders discuss scope and plans for a study/mapping project, interim results of a study/mapping project, and final results of a study/mapping project for a particular community or group of communities.
- The **community identification number (CID)** is the six-digit code used by FEMA to identify each community that is potentially subject to flood hazards.
- A **Conditional Letter of Map Revision (CLOMR)** is FEMA's comment on a proposed project that would affect the hydrologic and/or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway or effective BFEs.

- A **Conditional Letter of Map Revision Based on Fill (CLOMR-F)** is the FEMA's comment on whether a proposed project involving the placement of fill at or above the BFE would be excluded from the Special Flood Hazard Area shown on the effective NFIP map.
- The **Consultation Coordination Officer (CCO)** is the individual on the FEMA Regional Office staff who is responsible for coordinating with a community on activities related to the National Flood Insurance Program.
- The **Cooperating Technical Partners (CTP) Program** is an innovative FEMA program to create partnerships between FEMA and participating NFIP communities, regional agencies, and State agencies that have the interest and capability to become more active participants in the flood hazard mapping process.
- The **Countywide Format** is the format used by FEMA to show flood hazard information for the entire geographic area of a county on one map and in one report.
- **Cultural features** are the prominent manmade features and landmarks shown on a NFIP map, including railroads, airfields, streets, roads, highways, levees, dikes, seawalls, dams, and other flood-control structure.
- The **Customer and Data Services (CDS) Contractor** is a team of private-sector firms that, under contract to FEMA, maintain the archives of flood hazard mapping and related data and perform activities related to program development and program support; including maintenance of the Flood Hazard Mapping pages on the FEMA Website, operation of the FEMA Map Assistance Center, and operation of the FEMA Mapping Information Platform.
- A **de-accredited levee system** is a levee system that was once shown on the FIRM or DFIRM as providing protection from the 1-percent-annual-chance or greater flood, but is no longer accredited with providing this protection because FEMA has not been provided with sufficient data and documentation to determine that the levee system continues to meet the NFIP regulatory requirements cited in Section 65.10 of the NFIP regulations. The impacted area landward of a de-accredited levee system is shown on a new DFIRM as a Special Flood Hazard Area (SFHA), labeled Zone A or Zone AE, depending on the type of engineering study that was performed for the area.
- A **detailed study** is an engineering study that, at a minimum, results in the delineation of flood zone boundaries for the 1-percent-annual-chance flood and the determination of BFEs and/or base flood depths.

- A **Digital Flood Insurance Rate Map (DFIRM)** is a FIRM that has been prepared as a digital product, which may involve converting an existing manually produced FIRM to digital format, or creating a product from new digital data sources using a Geographic Information System environment. The DFIRM product allows for the creation of interactive, multi-hazard digital maps. Links are built into an associated database to allow users options to access the engineering backup material used to develop the DFIRM, such as hydrologic and hydraulic models; Flood Profiles; data tables; DEMs; and structure-specific data, such as digital elevation certificates and digital photographs of bridges and culverts.
- A **Digital Flood Insurance Rate Map (DFIRM) Database** is a database designed to facilitate collecting, storing, processing, and accessing data developed by FEMA, enabling Mapping Partners to share the data necessary for the DFIRM production and conversion process. Where possible, all mapping and engineering data elements are linked to physical geographic features and georeferenced. The use of a Geographic Information System as a component of the DFIRM spatial database provides the ability to georeference and overlay the mapping and engineering data, allowing the database to support a wide variety of existing and forthcoming FEMA engineering and mapping products.
- A **Digital Orthophoto Quadrangle (DOQ)** is a photographic maps distributed by the U.S. Geological Survey. A DOQ is an aerial photograph that is adjusted to remove distortions caused by variations in terrain and the camera lens to produce a photograph that displays features in their planimetrically correct location. This term is sometimes used loosely to mean any photographic map produced by this process.
- The **dual flood zones** are the flood insurance risk zones shown on a FIRM or DFIRM when (1) a levee-impacted area that is labeled as Zone AR also is subject to 1-percent-annual-chance flooding from a flooding source other than the source on the riverward side of the levee that causes the Zone AR flooding; or (2) some residual 1-percent-annual-chance flooding from the flooding source that causes the Zone AR flooding will remain even after the restoration project is complete. The flood insurance risk zone designations for dual flood zones are AR/A1-30, AR/AE, AR/AH, AR/AO, and AR/A
- The **effective date** is the date on which the NFIP map for a community goes into effect and all legal sanctions of the NFIP apply.

- The **effective map** is the latest NFIP map issued by FEMA which is in effect as of the date shown in the title box of the map as "Effective Date," "Revised," or "Map Revised."
- An **eligible levee** is a levee categorized as "active" in the U.S. Army Corps of Engineers (USACE) Rehabilitation and Inspection Program (RIP), for which USACE can provide assistance under Public Law 84-99 to repair damage caused by a flood event.
- The **eLOMA** is a Web-based application within the FEMA Mapping Information Platform (MIP) that provides "Licensed Professionals" (i.e., Licensed Land Surveyors, Registered Professional Engineers) with a system to submit simple Letter of Map Amendment requests to FEMA. This tool is designed to make a determination based on the information submitted by the Licensed Professional.
- The **Emergency Phase** is the phase of the NFIP that was implemented, on an emergency basis, to provide a first layer amount of insurance on all insurable structures before the effective date of the initial FIRM.
- An **encroachment** is construction, placement of fill, or similar alteration of topography in the floodplain that reduces the area available to convey floodwaters.
- An **External Data Request (EDR)** is a request from a State, community, or other non-FEMA source for the archived technical and administrative support data developed and maintained by FEMA for the NFIP.
- The **Federal Emergency Management Agency (FEMA)** is the Federal agency within the Department of Homeland Security that, in addition to carrying out many other responsibilities, oversees the administration of the National Flood Insurance Program.
- A **federally authorized levee system** is a levee system that was designed and built by the U.S. Army Corps of Engineers in cooperation with a local sponsor and then turned over to that local sponsor to operate and maintain.
- The **Federal Register** is the document, published daily by the U.S. Government, which presents regulations and legal notices issued by Federal agencies, including proposed and final BFE determinations.
- The **Fee-Charge System Administrator** is the person responsible for processing and maintaining records of payments submitted to the National Flood Insurance Fund for conditional and final map change requests and requests for technical and administrative support data.

- The **FEMA Map Assistance Center (FMAC)** is the FEMA customer service center staffed by Map Specialists that are specially trained to answer specific questions about NFIP mapping and related issues.
- **Fill** is any soil that is brought in to raise the level of the ground. Depending on where the soil is placed, fill may change the flow of water or increase flood elevations. Fill may be used to elevate a building to meet NFIP requirements. Sometimes fill is combined with other methods of elevation such as pilings or foundation walls. Placement of fill requires a local permit from the community.
- A **fiscal year** is a 12-month period that begins on October 1 of one calendar year and ends on September 30 of the following calendar year.
- A **flood** is a general and temporary condition of partial or complete inundation of normally dry land areas from (1) the overflow of inland or tidal waters or (2) the unusual and rapid accumulation or runoff of surface waters from any source.
- The **Flood Boundary and Floodway Map (FBFM)** is the floodplain management map issued by FEMA that depicts, based on detailed analyses, the 1- and 0.2-percent-annual-chance floodplain boundaries and, when appropriate, the regulatory floodway. The FBFM does not show flood insurance risk zones or BFEs.
- The **Flood Elevation Determination Docket (FEDD)** is the file maintained by FEMA concerning a study/mapping project, Physical Map Revision, or Letter of Map Revision involving proposed BFEs or base flood depths that includes: all correspondence between FEMA and the community; reports of meetings held among FEMA representatives, community representatives, the State NFIP Coordinator, private citizens, FEMA and community contractors, or other interested parties; relevant publications (e.g., newspaper notices, FEDERAL REGISTER notices); Letter of Final Determination; a copy of the Flood Insurance Study report; and a copy of the FIRM/DFIRM and FBFM.
- The **Flood Hazard Boundary Map (FHBM)** is the initial insurance map issued by FEMA that identifies, based on approximate analyses, the areas of 1-percent-annual-chance flood hazard in a community.
- The **Flood Insurance Rate Map (FIRM)** is the insurance and floodplain management map produced by FEMA that identifies, based on detailed or approximate analyses, the areas subject to flooding during a 1-percent-annual-chance (100-year) flood event in a community. Flood insurance risk zones, which are used to compute actuarial flood insurance rates, also

are shown. In areas studied by detailed analyses, the FIRM shows Base Flood Elevations (BFEs) to reflect the elevations of the 1-percent-annual-chance flood. For many communities, when detailed analyses are performed, the FIRM also may show areas inundated by 0.2-percent-annual-chance (500-year) flood and regulatory floodway areas.

- The **flood insurance risk zones** are the zones, also referred to as “risk premium rate zones” and “flood insurance rate zones,” shown on a FIRM, DFIRM, or FHBM that are used to determine flood insurance premium rates for properties in the community covered by the FIRM, DFIRM, or FHBM. The flood insurance risk zones include Special Flood Hazard Areas (i.e., Zones A, A1-30, AE, A0, A99, AH, AR, AR/A, AR/A1-30, AR/AE, AR/A99, V, V1-30, VE, V0) and areas outside Special Flood Hazard Areas (i.e., Zones B, X, D, M, N, P, E).
- The **Flood Insurance Study (FIS) report** is a document, prepared and issued by FEMA, that documents the results of the detailed flood hazard assessment performed for a community. The primary components of the FIS report are text, data tables, photographs, and Flood Profiles.
- The **floodplain** is the area subject to inundation by floodwaters from any source.
- The **floodplain administrator (FPA)** is the community official who is responsible for implementing and enforcing floodplain management measures and for monitoring floodplain development.
- **Floodplain management** is the operation of a program of corrective and preventive measures for reducing flood damage, including emergency preparedness plans, flood-control works, and floodplain management regulations.
- **Floodplain management regulations** are the zoning ordinances, subdivision regulations, building codes, health regulations, special-purpose ordinances, and other applications of enforcement used by a community to manage development in its floodplain areas.
- A **floodprone community** is any community that is subject to inundation by the 1-percent-annual-chance flood.
- A **Flood Profile** is a graph showing the relationship of water-surface elevation to location, with the latter generally expressed as distance above the mouth for a stream of water flowing in an open channel.
- A **“flood protection restoration determination”** is a written determination by FEMA, issued to the CEO of a community, that the community has provided the data and documentation required by Section 65.14 of the NFIP regulations to show that the

community is in the process of restoring a flood protection system (i.e., a levee system) that was constructed using Federal funds, recognized as providing 1-percent-annual-chance flood protection on an effective FIRM or DFIRM, and decertified by a Federal agency responsible for flood protection design or construction. The determination informs the community that FEMA will revise the effective FIRM or DFIRM to designated areas impacted by the system as a Special Flood Hazard Area designated Zone AR.

- A **flood protection restoration project** is a project undertaken by a community, alone or in cooperation with a sponsoring Federal agency, to restore a flood protection system (i.e., levee system) that was constructed using Federal funds, recognized as providing 1-percent-annual-chance flood protection on an effective FIRM or DFIRM, and decertified by a Federal agency responsible for flood protection design or construction. The intent of the completed project is to restore the system to providing at least a 1-percent-annual-chance level of flood protection.
- A **flood protection system** is those physical works for which funds have been authorized, appropriated, and expended and which have been constructed specifically to modify flooding in order to reduce the extent of the area subject to a “special flood hazard” and the extent of the depths of the associated flooding. Flood protection systems typically include hurricane tidal barriers, dams, reservoirs, levees, or dikes.
- A **floodwall** is a concrete wall constructed adjacent to streams for the purpose of reducing flooding of property on the landside of the wall. Floodwalls are normally constructed in lieu of or supplement levees where the land required for levee construction is too expensive or not available.
- The **floodway fringe** is the portion of the 1-percent-annual-chance floodplain that is not within the regulatory floodway and in which development and other forms of encroachment may be permitted under certain circumstances.
- **Freeboard** is a factor of safety usually expressed in feet above a flood level for purposes of floodplain management.
- A **future-conditions flood zone or flood hazard area** is the land area that would be inundated by the 1-percent-annual-chance flood based on future-conditions hydrology.
- **Future-conditions hydrology** is the flood discharges associated with projected land-use conditions based on a community’s zoning maps and/or comprehensive land-use plans and without consideration of projected future construction of flood detention structures or projected future hydraulic modifications within a stream or other waterway.

- A **Geographic Information System (GIS)** is a system of computer hardware, software, and procedures designed to support the capture, management, manipulation, analysis, modeling, and display of spatially referenced data for solving complex planning and management problems.
- A **hazard** is an event or physical condition that has the potential to cause fatalities, injuries, property damage, infrastructure damage, agricultural loss, damage to the environment, interruption of business, and other types of loss or harm.
- **Headquarters (HQ)** is the FEMA office in Washington, DC.
- The **highest adjacent grade** is the highest natural elevation of the ground surface, prior to construction, next to the proposed walls of a structure.
- A **hydraulic analysis** is an engineering analysis of a flooding source carried out to provide estimates of the elevations of floods of selected recurrence intervals.
- A **hydraulic computer** model is a computer program that uses flood discharge values and floodplain characteristic data to simulate flow conditions and determine flood elevations.
- A **hydraulic methodology** is an analytical methodology used for assessing the movement and behavior of floodwaters and determining flood elevations and regulatory floodway data.
- A **hydrologic analysis** is an engineering analysis of a flooding source carried out to establish peak flood discharges and their frequencies of occurrence.
- **Hydrology** is the science encompassing the behavior of water as it occurs in the atmosphere, on the surface of the ground, and underground
- A **hydraulic computer model** is a computer program that uses flood discharge values and data concerning floodplain characteristics to simulate flow conditions and determine flood elevations.
- A **hydraulic methodology** is a methodology used for assessing the movements and behavior of floodwaters and determining flood elevations and regulatory floodway data.
- A **hydrologic methodology** is a methodology used for conducting an analysis that determines peak flood discharges and their frequencies.
- An **ice jam** is an accumulation of ice in a stream that reduces the cross-sectional area available to carry streamflow and increases the water-surface elevation of the stream.
- **Interior drainage** is the natural or modified outflow of streams within a levee-impacted area for the conveyance of runoff.

- **Interior Drainage Systems** are the systems associated with levee systems that usually include storage areas, gravity outlets, pumping stations, or a combination thereof.
- A **legally described parcel of land** is a parcel of land for which a metes and bounds description or a plat has been recorded. There can be structures on legally described parcels.
- The **Letter of Determination Review (LODR)** is the FEMA response to a request from a borrower and lender that FEMA provide its concurrence or disagreement with the lender's determination on whether the borrower's building is in the Special Flood Hazard Area shown on the effective NFIP map.
- The **Letter of Final Determination (LFD)** is the letter in which FEMA announces its final determination regarding the flood hazard information, including (when appropriate) BFEs or base flood depths, presented on a new or revised FIRM/DFIRM and FIS report. By issuing the LFD, FEMA begins the compliance period and establishes the effective date for the new or revised FIRM/DFIRM and FIS report.
- A **Letter of Map Amendment (LOMA)** is an official amendment, by letter, to an effective NFIP map. A LOMA establishes a property's location in relation to the SFHA.
- A **Letter of Map Change** is a collective term used to describe official amendments and revisions to National Flood Insurance maps that are accomplished by a cost-effective administrative procedure and disseminated by letter.
- A **Letter of Map Change Revalidation (LOMC-VALID) letter** is a letter issued by FEMA, immediately before the effective date of a revised FIRM or DFIRM, to notify community officials about LOMAs, LOMR-Fs, and LOMRs that will remain in effect after the FIRM or DFIRM is published.
- A **Letter of Map Revision (LOMR)** is an official revision, by letter, to an effective NFIP map. A LOMR may change flood insurance risk zones, flood zone boundary delineations, planimetric features, and/or BFEs.
- A **Letter of Map Revision Based on Fill (LOMR-F)** is an official revision by letter to an effective NFIP map. A LOMR-F provides FEMA's determination concerning whether a structure or parcel has been elevated on fill above the BFE and excluded from the SFHA.
- A **levee** is a manmade structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water so as to provide protection from temporary flooding.
- A **levee-impacted area** is the floodplain area landward of a levee system for which the levee system

provides some level of flood protection or risk reduction.

- A **levee owner** is a Federal or State agency, a water management or flood control district, a local community, a levee district, a nonpublic organization, or an individual considered the proprietor of a levee.
- A **levee system** is a flood protection system that consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices
- The **local newspaper** is the community newspaper, identified by the CEO, in which FEMA publishes notices at the beginning of an FIS or RFIS and notices of proposed BFEs.
- A **lot** is a parcel of land for which a metes and bounds description or a plat has been recorded and on which one or more structures may be built.
- The **lowest adjacent grade (LAG)** is the lowest natural elevation of the ground surface next to a structure.
- The **lowest finished floor elevation (LFFE)** is the lowest floor of the lowest enclosed area (including basement) of a structure.
- The **maintenance deficiency correction period** is a one-time-only 1-year period granted for qualified levee systems that

provides the time for levee system owners/communities to correct maintenance deficiencies.

- **Manning's n** is the coefficient of roughness, used in a formula for estimating the capacity of channel to convey water.
- A **manufactured home** is any building that is transportable in one or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. Park trailers, recreational vehicles, and other similar vehicles are not manufactured homes.
- A **map amendment** is a change to an effective NFIP map that results in the exclusion from the SFHA of an individual structure or legally defined parcel of land that has been inadvertently included in the SFHA (i.e., no alterations of topography have occurred since the date of the first NFIP map that showed the structure or parcel to be within the SFHA).
- The **Mapping Information Platform** is a Web-based platform used by FEMA to manage activities and data for the FEMA flood hazard mapping program.
- A **map revision** is a change to an effective NFIP map that is accomplished by a LOMR or a Physical Map Revision (PMR).
- **Mitigation** is a sustained action taken to reduce or eliminate long-term risk to people and property

from flood hazards and their effects. Mitigation distinguishes actions that have a long-term impact from those more closely associated with preparedness for, immediate response to, and short-term recovery from specific events.

- The **Mitigation Directorate** is the component of FEMA that manages the NFIP and a range of other programs designed to reduce future losses to homes, businesses, schools, public buildings, and critical facilities from floods, earthquakes, tornadoes, and other natural disasters.
- The **National Flood Insurance Fund (NFIF)** is the fund used as the funding mechanism for the NFIP.
- The **National Flood Insurance Program (NFIP)** is a Federal Program under which floodprone areas are identified and flood insurance is made available to the owners of the property in participating communities.
- A **non-Federal levee system** is a levee system that was designed, built, operated, and maintained by an entity other than a Federal agency.
- A **non-participating community** is a community that has been identified by FEMA as being floodprone but has chosen not to participate in the NFIP.
- **Non-U.S. Army Corps of Engineers (USACE) levee systems** are levee systems that are not authorized by the U.S. Congress or other Federal agency authority; levee systems built by other Federal agencies and not incorporated into the USACE Federal system; locally built and maintained levee systems built by a local community; and levee systems that were privately built by a nonpublic organization or individuals and maintained by a local community
- A **participating community** is any community that voluntarily elects to participate in the NFIP by adopting and enforcing floodplain management regulations that are consistent with the standards of the NFIP.
- A **Physical Map Revision (PMR)** is an official republication of an NFIP map to show changes to floodplain and/or regulatory floodway boundary delineations, BFEs, and planimetric features.
- **Ponding** is the result of runoff or flows collecting in a depression that may have no outlet, subterranean outlets, rim outlets, or manmade outlets such as culverts or pumping stations. Impoundments behind manmade obstructions are included in this type of shallow flooding as long as they are not backwater from a defined channel or do not exceed 3.0 feet in depth.

- A **Production and Technical Services (PTS) Contractor** is a team of private-sector firms, including firms specializing in engineering, information technology, and program management that provides a variety of engineering services under contract to FEMA, including performing new and revised flood risk studies; reviewing and processing new and revised flood risk studies performed by mapping partners; reviewing and processing appeals and other comments submitted during the 90-day appeal period for new and revised flood studies as well as requests for CLOMAs, LOMAs, CLOMRs, LOMRs, CLOMR-Fs, LOMR-Fs, and LODRs; preparing technical and administrative support data for storage in FEMA archives; and providing updates for FEMA Web and IT reporting systems as required.
- The **Program Management (PM) Contractor** is a team of private-sector firms that, under contract to FEMA HQ, performs a variety of program management activities.
- **Proposed BFEs/depths and proposed modified BFEs/depths** are those new and modified BFEs and base flood depths that FEMA posts on a public Website and publishes in the FEDERAL REGISTER to start the 90-day appeal period.
- The **proposed flood elevation determination letter** is the letter sent to the community CEO and FPA to announce the beginning of the 90-day appeal period.
- **Provisionally Accredited Levee (PAL)** is a designation for a levee system that FEMA has previously accredited with providing 1-percent-annual-chance protection on an effective FIRM or DFIRM, and for which FEMA is awaiting data and/or documentation that will demonstrate the levee system's compliance with the NFIP regulatory criteria cited in Section 65.10 of the NFIP regulations. A PAL is shown on a DFIRM as providing 1-percent-annual-chance flood protection, and the area landward of the levee is shown as Zone X (shaded) except for areas of residual flooding, such as ponding areas, which are shown as SFHAs.
- A **Provisionally Accredited Levee (PAL) agreement** is a signed agreement stating that, to the best of the levee system owner's knowledge, the levee system that is the subject of the agreement meets the regulatory requirements of Section 65.10 of the NFIP regulations has been maintained in accordance with an adopted operation and maintenance plan as well as tests of any mechanized interior drainage systems.

- A **public sponsor** is a public entity that is a legally constituted public body with full authority and capability to perform the terms of its agreement as the non-Federal partner of the USACE for a project, and able to pay damages, if necessary, in the event of its failure to perform. A public sponsor may be a State, county, city, town, federally recognized Indian Tribe or tribal organization, Alaska Native Corporation, or any political subpart of a State or group of states that has the legal and financial authority and capability to provide the necessary cash contributions and lands, easements, rights-of-way, relocations, and borrow and dredged or excavated material disposal areas necessary for the project.
- The **Regional Mitigation Divisions** are the offices within the FEMA Regional Offices that oversee all regional activities under the FEMA flood hazard mapping program.
- The **Regional Offices (ROs)** are the FEMA offices located in Boston, MA; New York, NY; Philadelphia, PA; Atlanta, GA; Chicago, IL; Denton, TX; Kansas City, MO; Denver, CO; San Francisco, CA; and Bothell, WA.
- The **Regular Phase** is the phase of a community's participation in the NFIP when more comprehensive floodplain management requirements are imposed and higher amounts of insurance are available. The FIRM forms the basis for this phase.
- The **regulatory floodway** is a floodplain management tool that is the regulatory area defined as the channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment so that the base flood discharge can be conveyed without increasing the BFEs more than a specified amount. The regulatory floodway is not an insurance rating factor.
- **Rehabilitation and Inspection Program (RIP)**—The Rehabilitation and Inspection Program is a U.S. Army Corps of Engineers program that provides for inspection of flood-control projects, rehabilitation of damaged flood-control projects, and rehabilitation of federally authorized and constructed shore protection projects.
- A **residual flooding area** is the area of 1-percent-annual-chance flooding that is shown as an SFHA on a FIRM or DFIRM in the impacted area behind an accredited or provisionally accredited levee system; the source of residual flooding is usually local drainage or flooding from a source that is controlled by the levee system.
- The **Risk Analysis Division** is the component of the Mitigation Directorate that applies engineering and planning practices in conjunction with advanced technology tools to identify hazards, assess vulnerabilities, and

develop strategies to manage the risks associated with natural hazards.

- The **Risk Insurance Division** is the component of the Mitigation Directorate that helps reduce flood losses by providing affordable flood insurance for property owners and by encouraging communities to adopt and enforce floodplain management regulations that mitigate the effects of flooding on new and improved structures.
- The **Risk Mapping, Analysis, and Planning (Risk MAP) program** was developed by FEMA to leverage the successes of Map Modernization and enhance the usability and value of flood hazard mapping. Risk MAP combines flood hazard mapping, risk assessment tools, and mitigation planning into one seamless program. The intent of this integrated program is to encourage beneficial partnerships and innovative uses of flood hazard and risk assessment data to maximize flood loss reduction.
- The **Risk Reduction Division** is the component of the Mitigation Directorate that works to reduce risk to life and property through the use of land use controls, building practices, and other tools. These activities address risk in both the existing built environment and in future development.
- **Scientifically incorrect BFEs** are those BFEs determined through analyses in which the methodologies used and/or assumptions made are inappropriate for the physical processes being evaluated or are otherwise erroneous.
- **Section 65.10 requirements** are the NFIP regulatory criteria for the evaluation and mapping of areas impacted by levee systems, which are presented at Title 44, Chapter 1, Section 65.10 of the Code of Federal Regulations.
- **Shallow flooding** is the term used to describe unconfined flows over broad, relatively low relief areas, such as alluvial plains; intermittent flows in arid regions that have not developed a system of well-defined channels; overbank flows that remain unconfined, such as on delta formations; overland flow in urban areas; and flows collecting in depressions to form ponding areas. For NFIP purposes, shallow flooding conditions are defined as flooding that is limited to 3.0 feet or less in depth where no defined channel exists.
- **Sheet runoff** is the broad, relatively unconfined downslope movement of water across sloping terrain that results from many sources, including intense rainfall and/or snowmelt, overflow from a channel that crosses a drainage divide, and overflow from a perched channel onto deltas or plains of lower elevation. Sheet runoff is typical in areas of low topographic relief and poorly established drainage systems.

- The **Special Flood Hazard Area (SFHA)** is the area delineated on an NFIP map (FHBM, FIRM, or DFIRM) as being subject to inundation by the 1-percent-annual-chance flood. SFHAs are determined using statistical analyses of records of riverflow, storm tides, and rainfall; information obtained through consultation with a community; floodplain topographic surveys; and hydrologic and hydraulic analyses.
- The **State NFIP Coordinator** is the agency of the State government, or other office designated by the Governor of the State or by State statute at the request of FEMA to assist in the implementation of the NFIP in that State.
- **Structures**, for floodplain management purposes, are walled and roofed buildings, including gas or liquid storage tanks that are principally above ground, as well as manufactured homes. For flood insurance purposes, structures are walled and roofed buildings, other than a gas or liquid storage tanks, that are principally above ground and affixed to permanent sites, as well as a manufactured homes on a permanent foundation.
- A **study/mapping project** is any activity undertaken by FEMA, separately or in partnership with a mapping partner, to create a new or updated DFIRM, including detailed engineering studies, approximate engineering studies, and flood zone boundary redelineations based on updated topographic information.
- **Technically incorrect BFEs/depths** are BFEs/depths determined through analyses in which the methodologies used have not been properly applied, are based on insufficient or poor quality data, or do not account for the effects of physical changes that have occurred in the floodplain.
- A **transect** is a cross section taken perpendicular to the shoreline to represent a segment of coast with similar characteristics
- **Unnumbered A zones** are flood insurance risk zones, designated “Zone A” on an FHBM, FIRM, or DFIRM, that are based on approximate studies.
- **USACE levees** are levees that are within the programs operated by the U.S. Army Corps of Engineers (USACE), including levees that were built by the USACE that were authorized for construction by the U.S. Congress or by USACE continuing authorities (e.g., Section 205); levee projects constructed by non-Federal interests or other (non-USACE) Federal agencies and incorporated into the USACE Federal system by specific congressional action; Federal projects that are either operated and maintained by the USACE or turned over to a local sponsor for operation and maintenance; and Non-Federal projects within the RIP (Public Law 84-99).

- A **violation** is the failure of a structure or other development to be fully compliant with a community's floodplain management regulations. A structure or other development without an Elevation Certificate, other certifications, or other evidence of compliance required in Section 60.3 of the NFIP regulations is presumed to be in violation until such time as that documentation is provided.
- A **watershed** is an area of land that drains into a single outlet and is separated from other drainage basins by a divide.
- **Water-Surface Elevations (WSEs)** are the heights of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas, in relation to a specified vertical datum.
- The **wave height** is the vertical distance between the wave crest and the wave trough.
- **Wave runup** is the rush of wave water up a slope or structure.
- **Wave setup** is the increase in the still water surface near the shoreline, due to the presence of breaking waves.
- The **work map** is the floodplain mapping prepared by FEMA, or submitted to FEMA by a mapping partner, reflecting the results of a study/mapping project or other mapping activity. The work map depicts flood zone boundaries, regulatory floodway boundaries, BFEs, and cross sections, and provides the basis for the presentation of this information on a FIRM or DFIRM.
- The **zone gutter/zone division line** is the boundary, shown on a FIRM or DFIRM, dividing SFHAs of different BFEs, base flood depths, flow velocities, or flood insurance risk zone designations.

Appendix B

How To Obtain FEMA Publications and Backup Data

To comply with the requirements for supporting data discussed in this *Guide*, community officials and others who wish to submit Appeals, Protests, or requests for Map Revisions or Map amendments may find it necessary to obtain copies of effective Flood Hazard Boundary Maps (FHBMs), Flood Insurance Rate Maps (FIRMs), Flood Boundary and Floodway Maps (FBFMs), Digital Flood Insurance Rate Maps (DFIRMs), and Flood Insurance Study (FIS) reports; backup data for NFIP maps; or FEMA publications that explain the map change processes further. As discussed in the paragraphs that follow, those materials are available from the FEMA Map Service Center (MSC), Regional Offices, or Headquarters Office. (See Appendix D of this *Guide* for contact information.)

Maps and Reports

The location and availability of the maps, reports, and directly related products (e.g., the DFIRM Database) will depend on whether the processing of the maps, reports, and other products is still in progress or they have been completed and are effective for NFIP flood insurance and floodplain management purposes.

In-Progress Maps, Reports, and Other Products

After Preliminary versions of the NFIP map, report, and associated products for a community have been issued, and again after Revised Preliminary versions have been issued by FEMA as a result of appeals or other comments submitted by community officials or by individuals through community officials, copies of the maps and, if applicable, the accompanying FIS report and other products are sent to the community.

After FEMA issues the Letter of Final Determination for a study/mapping project or Physical Map Revision (PMR) and before the affected NFIP map panel(s), the FIS report, and associated products become effective, the MSC will prepare and distribute a limited number of paper copies of these final products to the community along with a digital version on a CD or DVD.

Communities that are participants in good standing in the NFIP are to store the paper copies of the maps, reports, and associated products in an official local Community Map Repository, where they are to be made available for community residents and other interested parties to review. The Community Map Repository is often in the office of a community floodplain administrator, engineer, planner, or clerk. To locate the Community Map Repository, interested parties may call a Map Specialist in the FEMA Map Assistance Center (FMAC), toll free, at 1-877-FEMA MAP (1-877-336-2627).

FEMA also sends copies of completed Letters of Map Amendment (LOMAs) that amend NFIP maps and copies of Letters of Map Revision Based on Fill (LOMR-Fs) and Letters of Map Revision (LOMRs) that revise maps to the Community Map Repository.

In some communities and States, these products also are made available online through a State- or community-maintained Website; information on such Websites should be obtained from the staff at the local Community Map Repository.

Completed Maps, Reports, and Other Products

After a new or updated NFIP map, FIS report, database, LOMA, LOMR-F, or LOMR becomes effective, a digital version of the product is maintained at the MSC and is accessible for viewing or download through the MSC Website:

<http://www.msc.fema.gov/>. The home page for the MSC Website is shown in Figure B-1. After reviewing a copy of the completed product on the MSC site, requesters may want to order a digital copy of their own from the MSC. Effective October 1, 2009, the MSC distributes only digital versions of the flood maps and FIS reports.

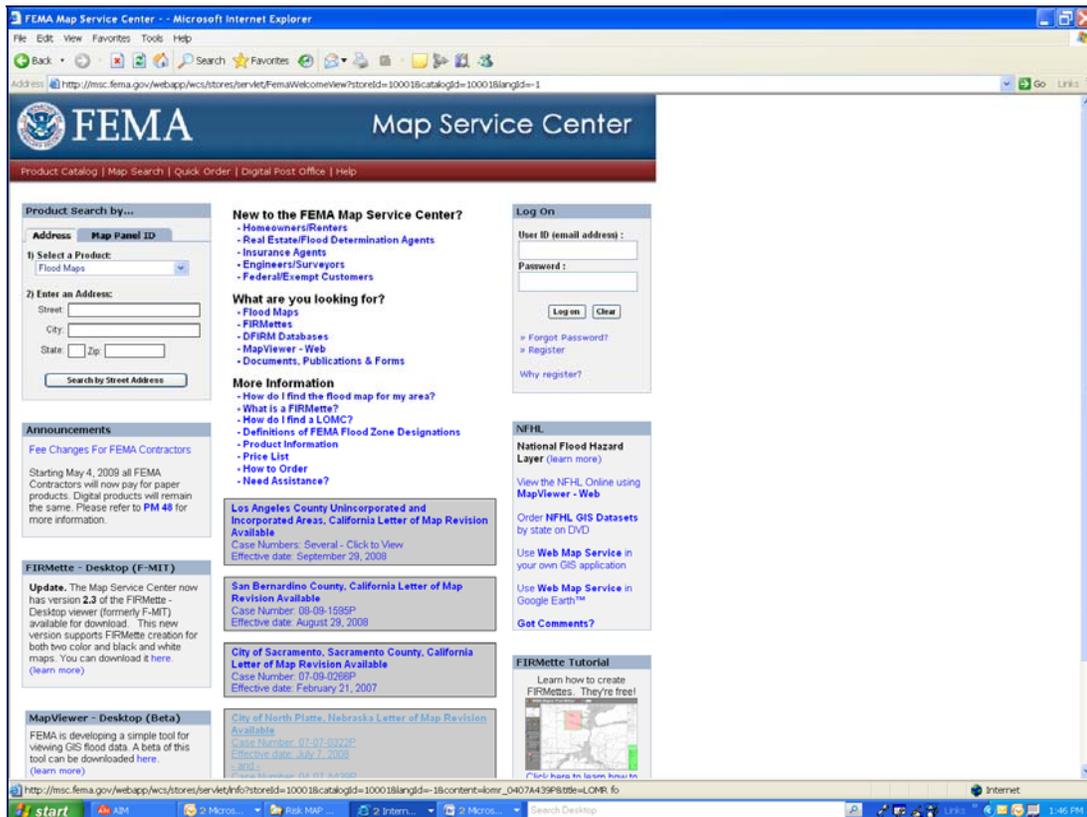


Figure B-1. Map Service Center Home Page

Written requests for digital copies of effective NFIP maps, reports, and related products should be sent to the following address:

Federal Emergency Management Agency
Map Service Center
P.O. Box 1038
Jessup, MD 20794-1038

Requesters can also place an order for NFIP products by calling the MSC staff, toll-free, at 1-800-358-9616, or by sending a request by facsimile, toll free, to (800) 358-9620.

Complete ordering information, including the products that are available and the nominal fees that apply to the products, also area accessible through the MSC Website.

Other Mapping-Related Resources

To help communities and individual map users, FEMA has prepared a number of resources that provide additional information about the NFIP, NFIP maps, and the map change processes. These documents, which are accessible through the FEMA Library, include the following:

- ***National Flood Insurance Program and Related Regulations*** is a reprint of the regulations that govern the administration of the NFIP, including the map change processes discussed in this *Guide*. Individual parts of the NFIP regulations also are accessible through the following page on the FEMA Website: (http://www.fema.gov/plan/prevent/fhm/frm_docs.shtm).
- ***Answers to Questions about the NFIP (MitDiv-2)*** provides answers to frequently asked questions about the purpose and operation of the NFIP, flood insurance and floodplain management requirements, and the mapping of flood hazards under the NFIP. An HTML version of the questions and answers is also accessible through <http://www.fema.gov/business/nfip/qanda.shtm>.
- ***Guidelines and Specifications for Flood Hazard Mapping Partners*** – This publication defines technical requirements, product specifications for Flood Hazard Maps and related NFIP products, and associated coordination and documentation activities. More information on this publication is provided on the FEMA Website at http://www.fema.gov/plan/prevent/fhm/gs_main.shtm.
- ***Document Control Procedures Manual*** provides guidance for the processing of the standard and non-standard documents used by FEMA, FEMA mapping partners, and contractors in the processing the map change requests discussed in this *Guide*. More information on this publication is provided on the FEMA Website at http://www.fema.gov/plan/prevent/fhm/gs_dcpm.shtm.
- ***Use of Flood Insurance Study (FIS) Data As Available Data*** (Floodplain Management Bulletin 1-98) provides guidance on the use of FEMA draft or preliminary study data as "available data" for

regulating floodplain development in an NFIP participating community. An HTML version of this bulletin is accessible at http://www.fema.gov/plan/prevent/floodplain/fis_data.shtm.

- ***Managing Floodplain Development in Approximate Zone A Areas: A Guide for Obtaining and Developing Base (100-Year) Flood Elevations (FEMA 265)*** provides engineering guidelines for determining Base Flood Elevations in Special Flood Hazard Areas studied by approximate methods only. FEMA 265 is accessible through the following page: http://www.fema.gov/plan/prevent/fhm/frm_docs.shtm.
- ***Adoption of Flood Insurance Rate Maps by Participating Communities (FEMA 495)*** provides a high-level overview of a community's role in adopting the NFIP flood maps as a participant in the NFIP. FEMA 495 is accessible through the "Floodplain Management Publications" page on the FEMA Website: <http://www.fema.gov/plan/prevent/floodplain/publications.shtm>
- ***Joining the National Flood Insurance Program (FEMA 496)*** provides a high-level overview of the steps a community must take to become a participant in the NFIP for the first time. FEMA 496 also is accessible through the Floodplain Management Publications" page on the FEMA Website.

The MT-EZ, MT-1, and MT-2 application forms and instructions

referenced throughout this *Guide* describe the map revision, map amendment, and conditional determination processes and the required supporting data and documentation in more technical terms and in greater detail than does this *Guide*.

The application forms and instructions, also available from the FEMA Library, are accessible through the "Forms" page on the FEMA Website:

http://www.fema.gov/plan/prevent/fhm/frm_form.shtm

The **NFIP Elevation Certificate (EC)** and instructions and the Standard Flood Hazard Determination Form (SFHDF) also are accessible through the "Forms" page referenced above. The EC is to be used to provide elevation information necessary to ensure compliance with community floodplain management ordinances, to determine the proper insurance premium rate, and to support a LOMA or LOMR-F request. The SFHDF is to be used by lending institutions when informing borrowers of their determinations regarding the location of structures in relation to the mapped Special Flood Hazard Area.

FEMA is continuing to convert maps and reports from the National Geodetic Vertical Datum of 1929 (NGVD29) to the North American Vertical Datum of 1988 (NAVD88) for the contiguous United States. For a better understanding of requirements with regard to the conversion from NGVD29 to NAVD88, interested parties should read ***Converting the National Flood Insurance Program to the North American Vertical Datum of 1988***,

Guidelines for Community Officials, Engineers, and Surveyors (FIA-20).

Technical Bulletins

FEMA has produced a number of Technical Bulletins that community officials and other map change requesters may find useful. These Technical Bulletins, including those that are listed below, are on file in the FEMA Library and are accessible through the following page:

<http://www.fema.gov/plan/prevent/floodplain/techbul.shtm>.

- **Openings in Foundation Walls and Walls of Enclosures (Technical Bulletin 1)** provides guidance on the NFIP regulations concerning the requirement for openings in below-Base Flood Elevation foundation walls for buildings located in Zones A, AE, A1-A30, AR, AO, and AH.
- **Flood Damage-Resistant Materials Requirements (Technical Bulletin 2)** provides guidance on the NFIP regulations concerning the required use of flood damage-resistant construction materials for building components located below the Base Flood Elevation in Special Flood Hazard Areas (both A and V Zones).
- **Design and Construction Guidance for Breakaway Walls Below Elevated Coastal Buildings (Technical Bulletin 9)** provides guidance on the NFIP regulations concerning the design and construction of breakaway walls

beneath elevated buildings in Coastal High Hazard Areas.

- **Ensuring that Structures Built in or Near Special Flood Hazard Areas Are Reasonably Safe from Flooding (Technical Bulletin 10-00)** discusses building techniques, including the use of fill, that can be used to ensure structures are reasonably safe from flooding.
- **Crawlspace Construction for Buildings Located in Special Flood Hazard Areas (Technical Bulletin 11-01)** provides interim guidance on minimum NFIP requirements as well as best practices for crawlspace construction in the Special Flood Hazard Area.

Floodplain Management Publications

A number of useful publications, including those listed below, are provided on the previously referenced “Floodplain Management Publications” page, which is located at

<http://www.fema.gov/plan/prevent/floodplain/publications.shtm>.

- **Design Guidelines for Flood Damage Reduction (FEMA-15)** provides general information about flooding and how to properly design and build in floodprone areas.
- **Elevated Residential Structures (FEMA-54)** covers proper design and construction methods for elevated homes.

- **Coastal Construction Manual (FEMA-55)** demonstrates design and construction techniques for construction in coastal high hazard areas.
- **Manufactured Home Installation in Flood Hazard Areas (FEMA-85)** contains information about how to properly site and install a manufactured home in a flood hazard area, with emphasis on design of elevated foundations.
- **A Unified National Program for Floodplain Management (FEMA-100)** updates a 1979 report that presents strategies fundamental to implementing a balanced approach to floodplain management.

FEMA Map Assistance Center

For answers to most flood hazard mapping questions, interested parties may call a FEMA Map Specialist in the FMAC, toll free, at 1-877-FEMA MAP (1-877-336-2627), or send an e-mail message to a Map Specialist in the FMAC at FEMAMapSpecialist@riskmapcds.com.

The FMAC provides information to the public about NFIP rules, regulations, and procedures. Map Specialists respond to inquiries from Federal, State, and local officials and the general public, and inform callers about a variety of topics including: (1) requirements necessary to meet NFIP criteria for Letters of Map Change (LOMCs), PMRs, appeals and other comments submitted during the 90-day appeal period, and community compliance; (2) Preliminary, Revised Preliminary, and final versions of maps and reports; (3) requests for technical and administrative

support data; and (4) map change and data request processing fees.

For additional information on the FMAC, including hours of operation, please visit the FMAC Web page at www.fema.gov/plan/prevent/fhm/fmc_main.shtm.

Technical and Administrative Support Data

While an NFIP map is being processed for publication, copies of the technical and administrative support data on which the NFIP map is based are available through the appropriate FEMA Regional Office or, with Regional Office approval, directly through the FEMA contractor responsible for maintaining the data until the map becomes effective.

Once the map becomes effective, the archived technical and administrative support data are available through:

FEMA Project Library
South Pickett Street
Alexandria, VA 22304
Attention: Library Manager

Information on the types of technical and administrative support data that are available and the fees associated with data requests is provided in Table E.3 in Appendix E of this *Guide*.

Appendix C How To Support Revisions When Backup Data Are Unavailable

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

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

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

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

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

Recreating Models

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

Riverine Flooding Sources

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

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

Coastal Flooding Sources

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

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

Appendix D FEMA Fee-Charge System

Background

In June 1986, the Federal Emergency Management Agency (FEMA) implemented a fee-charge system to allow for a partial recovery of costs incurred by FEMA in reviewing requests for determinations based on proposed projects and issuing determinations in the form of Conditional Letters of Map Amendment, or “CLOMAs”; Conditional Letters of Map Revision Based on Fill, or “CLOMR-Fs”; and Conditional Letters of Map Revision, or “CLOMRs”, based on conditions other than fill.

On October 1, 1992, FEMA expanded the fee-charge system to include requests for reviewing completed projects and issuing determinations in the form of Letters of Map Revision Based on Fill, or “LOMR-Fs”; Letters of Map Revision, or “LOMRs”, based on conditions other than fill; and Physical Map Revisions, or “PMRs.” Like the previously existing system for CLOMAs, CLOMR-Fs, and CLOMRs, the expanded action was implemented to reduce expenses to the National Flood Insurance Program (NFIP).

Affected Submittals

The current fee-charge procedures, which are set forth in Part 72 of the NFIP regulations, apply to requests for the following:

- Single-lot/single-structure and multiple-lot/subdivision CLOMAs;

- Single-lot/single-structure and multiple-lot/subdivision CLOMR-Fs;
- CLOMRs;
- Single-lot/single-structure and multiple-lot/subdivision LOMR-Fs;
- LOMRs; and
- PMRs.

Exemptions

In accordance with Section 72.5 of the NFIP regulations, review and processing fees are not required for the following types of map change requests:

- Map changes based on mapping or study analysis errors;
- Map changes based on the effects of natural changes within the mapped Special Flood Hazard Area (SFHA);
- Requests for Letters of Map Amendment;
- Federally sponsored flood-control projects where 50 percent or more of the project's costs are federally funded;
- Map changes 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 Flood Insurance Rate Map or Digital Flood Insurance Rate Map (DFIRM); and

- Map changes based on flood hazard information meant to improve upon that shown on the flood map or within the flood study.

Requests based on improvements to flood maps or studies that partially or wholly incorporate manmade modifications within the SFHA are not be exempt from the review and processing fees.

For single-lot/single-structure LOMR-Fs, FEMA's determination will be based, in part, on whether the LOMR-F is being requested by an individual property owner or whether it is being requested prior to the transfer of ownership of the property in question from a developer to an individual property owner.

For requests from Federal, State, and local governments and their agencies, FEMA's determination will be based on whether the requesting agency certifies that the particular project is (1) for public benefit, (2) primarily intended for flood-loss reduction to insurable structures in identified SFHAs, and (3) the structures were in existence prior to the beginning of construction of the flood-control project. Projects that were undertaken to protect planned floodplain development are not eligible for fee exemptions.

Unfavorable Responses

As cited in Section 72.5 of the NFIP regulations, under certain circumstances, requests for CLOMAs, CLOMR-Fs, or CLOMRs may be denied or the determination may contain specific comments, concerns, or conditions regarding proposed projects or designs and their impacts on communities' flood hazards, or the requesters may be unable to

provide the appropriate scientific or technical data or obtain necessary authorizations or permits. In such cases, requesters are not entitled to refunds of the review and processing fees paid.

Requesters also are not entitled to refunds of fees paid for LOMR-F, LOMR, or PMR requests that are denied or that do not result in the extent of revision desired by the requesters.

Fee Schedule

The fee schedule for map change requests that was in effect at the time of publication for this *Guide* is provided in Table D-1. The fee schedule was published as a notice in the FEDERAL REGISTER on July 27, 2007, and it applies to requests dated October 1, 2007, or later.

FEMA reviews its fee-charge procedures every 2 years and may revise the review and processing fees for map change requests. Therefore, interested parties should visit the following page on the FEMA Website for the most up-to-date information:

http://www.fema.gov/plan/prevent/fhm/fm_fees.shtm.

From that page, interested parties may also access the FEDERAL REGISTER notices that FEMA publishes to announce changes to the fee schedule and their reasons for making those changes.

Table D-1. Fee Schedule for Conditional and Final Map Change Products

Product Type	Review and Processing Fee
Single-Lot or Single-Structure LOMA	\$0
Single-Lot/Single-Structure CLOMA	\$500
Single-Lot/Single-Structure CLOMR-F	\$500
Single-Lot/Single-Structure LOMR-F	\$425
Single-Lot/Single-Structure LOMR-F Based on As-Built Information (CLOMR-F previously issued by FEMA)	\$325
Multiple-Lot/Multiple-Structure LOMA	\$0
Multiple-Lot/Multiple-Structure CLOMA	\$700
Multiple-Lot/Multiple-Structure LOMR-F	\$800
Multiple-Lot/Multiple-Structure CLOMR-F	\$800
Multiple-Lot/Multiple-Structure LOMR-F Based on As-Built Information (CLOMR-F previously issued by FEMA)	\$700
CLOMR Based on New Hydrology, Bridge, Culvert, Channel, or Combination Thereof	\$4,400
CLOMR Based on Levee, Berm, or Other Structural Measures	\$5,500
LOMR/PMR Based on Bridge, Culvert, Channel, or Combination Thereof	\$4,800
LOMR/PMR Based on Levee, Berm, or Other Structural Measures	\$6,500
LOMR Based on As-Built Information (CLOMR previously issued by FEMA)	\$4,800
LOMR/PMR Based Solely on Submission of More Detailed Data	\$0
LOMR/CLOMR Based on Structural Measures on Alluvial Fans (Initial Fee)	\$5,600

Note: In addition to the initial fee of \$5,600, requesters of LOMRs or CLOMRs based on structural measures on alluvial fans will be invoiced for FEMA's review at a rate of \$60/hour.

Appendix E FEMA and State Resources

The addresses, telephone numbers, facsimile (fax) numbers, and e-mail addresses for the FEMA Headquarters office, the various FEMA Regional Offices, the State NFIP Coordinators, and the locations for archived data and published FEMA documents are provided in Subsections E.1 through E.5.

FEMA Headquarters Office

Written inquiries regarding the information presented in this *Guide* may be addressed to the FEMA Risk Analysis Division staff in the FEMA Headquarters office through the following address and fax number:

Federal Emergency Management Agency
Mitigation Directorate
Risk Analysis Division
1800 South Bell Street
Arlington, VA 20598-3030
Fax No.: 202-646-2719

FEMA Map Assistance Center

Inquiries regarding this *Guide* also may be made to FEMA Map Specialists via telephone or e-mail. Telephone inquiries should be made to the FEMA Map Assistance Center (FMAC); the FMAC can be reached, toll free, at 1-877 FEMA MAP (1-336-2627). Parties who are interested in learning more about the FMAC, including hours of operation, should visit the FMAC Web page on the FEMA Website:

http://www.fema.gov/plan/prevent/fhm/fmc_main.shtm

E-mail inquiries to the Map Specialist(s) in the FMAC should be sent to the following address:

FEMAMapSpecialist@riskmapcds.com.

FEMA Regional Offices

The FEMA Regions are identified on the map in Figure E-1. The contact information for the FEMA Regional Offices at the time that this *Guide* was published is provided in Table E-1. An Internet address is provided at the end of each Regional Office entry in Table E-1 so that interested parties may learn more about Regional Office activities and confirm addresses and telephone numbers.

State Resources

The State NFIP Coordinators, or State Coordinating Agencies, are the State, Commonwealth, or Territory agencies, or other offices designated by the Governor or by State, Commonwealth, or Territory statute at the request of FEMA, to assist in the implementation of the NFIP. Contact information for each State NFIP Coordinator is provided in Table E-2. Updated contact information—mailing address, telephone number, fax number, and e-mail address—for the State NFIP Coordinators can be found by visiting the following Web page:

<http://www.floods.org/StatePOCs/stcoor.asp>.

This page is maintained by the Association of State Floodplain Managers.

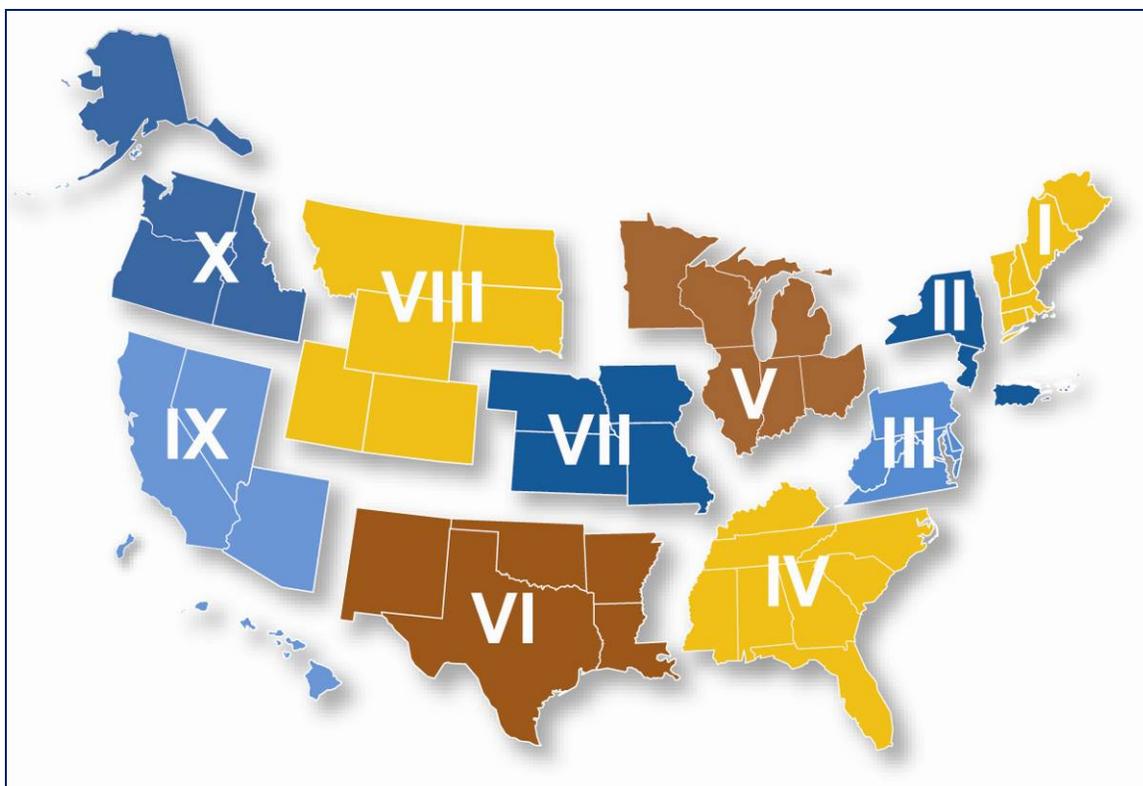


Figure E-1. FEMA Regions

Table E-1. FEMA Regional Office Contact Information

<p>Region I (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont) Federal Emergency Management Agency Director, Mitigation Division 99 High Street, 6th Floor Boston, MA 02110 Telephone: 617-956-7506 Fax: 617-956-7519 Internet Address: http://www.fema.gov/about/regions/regioni.shtm</p>	<p>Region VI (Arkansas, Louisiana, New Mexico, Oklahoma, and Texas) Federal Emergency Management Agency Director, Mitigation Division Federal Regional Center 800 North Loop 288, Room 206 Denton, TX 76209-3698 Telephone: 940-898-5399 Fax: 940-898-5325 Internet Address: http://www.fema.gov/about/contact/regionvi.shtm</p>
<p>Region II (New Jersey, New York, Puerto Rico, Virgin Islands) Federal Emergency Management Agency Director, Mitigation Division 26 Federal Plaza, Room 1307 New York, NY 10278-0002 Region II (Cont'd) Telephone: 212-680-3600 (NJ and NY) 787-296-3500 (PR and VI) Fax: 212-680-3681 Internet Address: http://www.fema.gov/about/contact/regionii.shtm</p>	<p>Region VII (Iowa, Kansas, Missouri, and Nebraska) Federal Emergency Management Agency Director, Mitigation Division 9221 Ward Parkway, Suite 300 Kansas City, MO 64114-3372 Telephone: 816-283-7002 Region VII (Cont'd) Fax: 816-283-7582 Internet Address: http://www.fema.gov/about/contact/regionvii.shtm</p>
<p>Region III (Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia) Federal Emergency Management Agency Director, Mitigation Division 615 Chestnut Street One Independence Mall, Sixth Floor Philadelphia, PA 19106-3316 Telephone: 215-931-5608 Fax: 215-931-5621 Internet Address: http://www.fema.gov/about/contact/regioniii.shtm</p>	<p>Region VIII (Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming) Federal Emergency Management Agency Director, Mitigation Division Denver Federal Center, Building 710 Box 25267 Denver, CO 80225-0267 Telephone: 303-235-4830 Fax: 303-235-4976 Internet Address: http://www.fema.gov/about/contact/regionviii.shtm</p>

Table E-1. FEMA Regional Office Contact Information (Cont'd)

<p>Region IV (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee) Federal Emergency Management Agency Director, Mitigation Division 3003 Chamblee Tucker Road Atlanta, GA 30341 Telephone: 770-220-5400 Fax: 770-220-5275 Internet Address: http://www.fema.gov/about/contact/regioniv.shtm</p>	<p>Region IX (Arizona, California, Guam, Hawaii, and Nevada) Federal Emergency Management Agency Director, Mitigation Division 1111 Broadway Suite 1200 Oakland, CA 94607-4052 Telephone: 510-627-7000 Fax: 510-627-7112 Internet Address: http://www.fema.gov/about/contact/regionix.shtm</p>
<p>Region V (Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin) Federal Emergency Management Agency Director, Mitigation Division 536 South Clark Street, Sixth Floor Chicago, IL 60605-1521 Telephone: 312-408-5500 Fax: 312-408-5234 Internet Address: http://www.fema.gov/about/contact/regionv.shtm</p>	<p>Region X (Alaska, Idaho, Oregon, and Washington) Federal Emergency Management Agency Director, Mitigation Division Federal Region Center 130 228th Street, SW Bothell, WA 98021-8627 Telephone: 425-487-4600 Fax: 425-487-4622 Internet Address: http://www.fema.gov/about/contact/regionx.shtm</p>

Table E-2. State NFIP Coordinator Contact Information

<p>Alabama Ken Meredith, CFM Alabama Department of Economic and Community Affairs Office of Water Resources P. O. Box 5690 Montgomery, AL 36103-5690 Telephone: 334-353-0853 Fax: 334-242-0776 E-Mail: ken.meredith@adeca.alabama.gov</p>	<p>Alaska Taunnie L. Boothby, CFM Alaska Department of Community & Economic Development 550 West 7th Avenue, Suite 1770 Anchorage, AK 99501-3510 Telephone: 907-269-4583 Fax: 907-269-4563 E-Mail: taunnie_boothby@alaska.gov</p>
<p>Arizona Brian Cosson, CFM Arizona Department of Water Resources 3550 North Central Avenue Phoenix, AZ 85012-2105 Telephone: 602-771-8657 Fax: 602-771-8691 E-Mail: btcosson@azwater.gov</p>	<p>Arkansas Michael Borengasser, CFM Arkansas Natural Resources Commission 101 East Capitol Avenue, Suite 350 Little Rock, AR 72201 Telephone: 501-682-3969 Fax: 501-682-3991 E-Mail: michael.borengasser@arkansas.gov</p>
<p>California Ricardo Pineda, PE, CFM California Department of Water Resources 2825 Watt Avenue, Suite 100 Sacramento, CA 95821 Telephone: 916-574-1475 Fax: 916-574-1478 E-Mail: rpineda@water.ca.gov</p>	<p>Colorado Cristina Martinez, CFM Colorado Water Conservation Board 1313 Sherman Street, Room 721 Denver, CO 80203 Telephone: 303-866-3441, ext. 3215 Fax: 303-866-4474 E-Mail: cristina.martinez@state.co.us</p>
<p>Connecticut Diane Ifkovic Connecticut Department of Environmental Protection 79 Elm Street Hartford, CT 06106 Telephone: 860-424-3537 Fax: 860-424-4075 E-Mail: diane.ifkovic@po.state.ct.us</p>	<p>Delaware Michael Powell, CFM Delaware Department of Natural Resources 89 Kings Highway Dover, DE 19901 Telephone: 302-739-9921 Fax: 302-739-6724 E-Mail: michael.powell@state.de.us</p>
<p>District of Columbia Timothy J. Karikari, P.E., CPESC District Department of the Environment Watershed Protection Division 51 N Street, NE., 5th Floor, Room 5021 Washington, DC 20002 Telephone: 202-535-2248 or 202-535-2240 Fax: 202-535-1364 E-Mail: timothy.karikari@dc.gov</p>	<p>Florida Joy Duperault Florida Division of Emergency Management 2555 Shumard Oak Boulevard Tallahassee, FL 32399-2100 Telephone: 850-922-4518 E-Mail: joy.duperault@em.myflorida.com</p>

Table E-2. State NFIP Coordinator Contact Information (Cont'd)

<p>Georgia Collis Brown, CFM Georgia Department of Natural Resources Seven Martin Luther King Drive Suite 440 Atlanta, GA 30334 Telephone: 404-656-6382 Fax: 404-656-6383 E-Mail: collis_brown@dnr.state.ga.us</p>	<p>Hawaii Carol Tyau-Beam, CFM Hawaii Department of Land & Natural Resources P.O. Box 373 Honolulu, HI 96809 Telephone: 808-587-0267 Fax: 808-587-0283 E-Mail: carol.l.tyau@hawaii.gov</p>
<p>Idaho Mary McGown, CFM Idaho Department of Water Resources 322 East Front Street Boise, ID 83720 Telephone: 208-287-4928 Fax: 208-287-6700 E-Mail: mary.mcgown@idwr.idaho.gov</p>	<p>Illinois Paul Osman, CFM Illinois Department of Natural Resources One Natural Resources Way Springfield, IL 62702-1271 Telephone: 217-782-4428 Fax: 217-785-5014 E-Mail: paul.osman@illinois.gov</p>
<p>Indiana Gregory Main, CFM Indiana Department of Natural Resources 402 West Washington Street, Room W264 Indianapolis, IN 46204-2748 Telephone: 317-234-1107 Fax: 317-233-4579 E-Mail: gmain@dnr.in.us</p>	<p>Iowa Bill Cappuccio Iowa Department of Natural Resources Wallace State Office Building Des Moines, IA 50319 Telephone: 515-281-8942 Fax: 515-281-8895 E-Mail: bill.cappuccio@dnr.iowa.gov</p>
<p>Kansas Tom Morey, CFM Kansas Department of Agriculture 109 SW 9th Street, 2nd Floor Topeka, KS 66612-1283 Telephone: 785-296-5440 Fax: 785-296-4835 E-Mail: tmorey@kda.ks.gov</p>	<p>Kentucky Christopher Hart, CFM Kentucky Division of Water 14 Reilly Road Frankfort, KY 40601 Telephone: 502-564-3410 Fax: 502-564-9003 E-Mail: chris.hart@ky.gov</p>
<p>Louisiana Cindy O'Neal, CFM Louisiana Department of Transportation & Development P.O. Box 94245, Capitol Station Baton Rouge, LA 70804-9425 Telephone: 225-274-4354 Fax: 225-274-4351 E-Mail: cindy'o'neal@dotd.louisiana.gov</p>	<p>Maine Susan Baker, CFM Maine State Planning Office 38 State House Station 184 State Street Augusta, ME 04333-0038 Telephone: 207-287-8063 Fax: 207-287-6489 E-Mail: susan.baker@maine.gov</p>

Table E-2. State NFIP Coordinator Contact Information (Cont'd)

<p>Maryland David Guignet, P.E., CFM Maryland Department of the Environment 1800 Washington Boulevard, Suite 430 Baltimore, MD 21230 Telephone: 410-537-3775 Fax: 410-537-3751 E-Mail: dguignet@mde.state.md.us</p>	<p>Massachusetts Richard Zingarelli Massachusetts Department of Conservation & Recreation, Flood Hazard Management 251 Causeway Street, Suite 700 Boston, MA 02114 Telephone: 617-626-1406 Fax: 617-626-1349 E-Mail: richard.zingarelli@state.ma.us</p>
<p>Michigan Les Thomas Michigan Department of Environmental Quality P.O. Box 30458 Lansing, MI 48909-7958 Telephone: 517-335-3448 Fax: 517-373-9965 E-Mail: thomasl@michigan.gov</p>	<p>Minnesota Ceil Strauss, CFM Minnesota Department of Natural Resources - Waters 500 Lafayette Road St. Paul, MN 55155-4032 Telephone: 651-259-5713 Fax: 651-296-0445 E-Mail: ceil.strauss@dnr.state.mn.us</p>
<p>Mississippi Al Goodman, Jr., CFM Mississippi Emergency Management Agency Office of Mitigation P.O. Box 5644 Pearl, MS 39208 Telephone: 601-933-6884 Fax: 601-933-6805 E-Mail: agoodman@mema.ms.gov</p>	<p>Missouri Randy Scrivner Missouri State Emergency Management Agency P.O. Box 116 Jefferson City, MO 65102 Telephone: 573-526-9141 Fax: 573-526-9198 E-Mail: randy.scrivner@sema.dps.mo.gov</p>
<p>Montana Traci Sears, CFM Montana Floodplain Management Program 1424 9th Avenue Helena, MT 59620-1601 Telephone: 406-444-6654 Fax: 406-444-0533 E-Mail: tsears@mt.gov</p>	<p>Nebraska Bill Jones, CFM Nebraska Department of Natural Resources 301 Centennial Mall South Lincoln, NE 68509-4876 Telephone: 402-471-3932 Fax: 402-471-2900 E-Mail: bjones@dnr.ne.gov</p>
<p>Nevada Kim Groenewold, CFM Nevada Division of Water Resources 901 South Stewart Street, Suite 2002 Carson City, NV 89701 Telephone: 775-684-2860 Fax: 775-684-2811 E-Mail: groenewd@water.nv.gov</p>	<p>New Hampshire Jennifer Gilbert, CFM Office of Energy and Planning 4 Chennell Drive, 2nd Floor Concord, NH 03301 Telephone: 603-271-1762 Fax: 603-271-2615 E-Mail: jennifer.gilbert@nh.gov</p>

Table E-2. State NFIP Coordinator Contact Information (Cont'd)

<p>New Jersey John H. Moyle New Jersey Department of Environmental Protection P.O. Box 419 Trenton, NJ 08625 Telephone: 609-984-0859 Fax: 609-984-1908 E-Mail: john.moyle@dep.state.nj.us</p>	<p>New Mexico Bill Borthwick, CFM New Mexico Office of Emergency Management P.O. Box 1628 Santa Fe, NM 87504-1628 Telephone: 505-476-9617 Fax: 505-471-9695 E-Mail: wborthwick@state.nm.us</p>
<p>New York William Nechamen, CFM New York Department of Environmental Conservation 625 Broadway Albany, NY 12233-3507 Telephone: 518-402-8146 Fax: 518-402-9029 E-Mail: wsnecham@gw.dec.state.ny.us</p>	<p>North Carolina Randy Mundt, AICP, CFM North Carolina Division of Emergency Management 1812 Tillery Place, Suite 105 Raleigh, NC 27604-1356 Telephone: 919-715-5711, ext. 119 Fax: 919-715-0408 E-Mail: rmundt@ncem.org</p>
<p>North Dakota Jeffrey Klein, CFM North Dakota State Water Commission 900 East Boulevard Avenue Bismarck, ND 58505-0850 Telephone: 701-328-4898 Fax: 701-328-3747 E-Mail: jjklein@state.nd.us</p>	<p>Ohio Christopher Thoms, CFM Ohio Department of Natural Resources 2045 Morse Road, Building B-2 Columbus, OH 43229 Telephone: 614-265-6752 Fax: 614-265-6767 E-Mail: christopher.thoms@dnr.state.oh.us</p>
<p>Oklahoma Gavin Brady, CFM Oklahoma Water Resources Board 3800 North Classen Oklahoma, OK 73118 Telephone: 918-581-2924 Fax: 405-530-8900 E-Mail: jgbrady@owrb.state.ok.us</p>	<p>Oregon Christine Shirley, CFM Department of Land Conservation & Development 635 Capitol Street, NE., Suite 150 Salem, OR 97301-2540 Telephone: 503-373-0050 x250 Fax : 503-375-5518 E-Mail: christine.shirley@state.or.us</p>
<p>Pennsylvania Daniel Fitzpatrick Pennsylvania Department of Community & Economic Development Commonwealth Keystone Building 400 North Street, 4th Floor Harrisburg, PA 17120-0225 Telephone: 717-720-7396 Fax: 717-783-1402 E-Mail: dafitzpatr@state.pa.us</p>	<p>Puerto Rico Hector Morales Vargas, PE, CFM Puerto Rico Planning Board P.O. Box 41119 Minillas Government Center Santurce, PR 00940-1119 Telephone: 787-727-4444 Fax: 787-268-6858 E-Mail: morales_hp@jp.gobierno.pr</p>

Table E-2. State NFIP Coordinator Contact Information (Cont'd)

<p>Rhode Island Michelle F. Burnett, CFM Rhode Island Emergency Management Agency 645 New London Avenue Cranston, RI 02920 Telephone: 401-462-7048 Fax: 401-944-1891 E-Mail: michelle.f.burnett@us.army.mil</p>	<p>South Carolina Lisa Jones, CFM South Carolina Department of Natural Resources 1000 Assembly Street, Suite 345C P.O. Box 167 Columbia, SC 29201 Telephone: 803-734-9120 Fax: 803-734-9106 E-Mail: jonesls@dnr.sc.gov</p>
<p>South Dakota Nicole Prince South Dakota Division of Emergency Management 118 West Capitol Avenue Pierre, SD 57501 Telephone: 605-883-3238 Fax: 605-883-3580 E-Mail: michelle.saxman@state.sd.us</p>	<p>Tennessee Dan Hawk Tennessee Department of Economic & Community Development 312 8th Avenue North, TN Tower Building, 10th Floor Nashville, TN 37243-0405 Telephone: 615-741-2211 Fax: 615-741-0607 E-Mail: dan.hawk@state.tn.us</p>
<p>Texas Michael Segner, CFM Texas Water Development Board 1700 North Congress Avenue P.O. Box 13231 Austin, TX 78711-3231 Telephone: 512-463-3509 Fax: 512-475-2053 E-Mail: michael.segner@twdb.state.tx.us</p>	<p>Utah John Crofts, CFM Utah Emergency Management State Office Building, Room 1110 Salt Lake City, UT 84114 Telephone: 801-538-3332 Fax: 801-538-3772 E-Mail: jcrofts@utah.gov</p>
<p>Vermont Rob Evans Vermont Department of Environmental Conservation 103 South Main Street, Building 10N Waterbury, VT 05671 Telephone: 802-241-a554 E-Mail: rob.evans@state.vt.us</p>	<p>Virginia Bill Browning Virginia Department of Conservation & Recreation 203 Governor Street, Suite 206 Richmond, VA 23219-2019 Telephone: 804-786-3914 Fax: 804-371-2630 E-Mail: bill.browning@dcr.virginia.gov</p>

Table E-2. State NFIP Coordinator Contact Information (Cont'd)

<p>Virgin Islands Brent Blyden Virgin Island Planning & Natural Resources C.E. King Airport Terminal Building, 2nd Floor St. Thomas, VI 00802 Telephone: 340-774-3320 Fax: 340-775-5706</p>	<p>Washington Daniel Sokol, CFM Washington Department of Ecology P.O. Box 47600 Olympia, WA 98504-7600 Telephone: 360-407-6796 Fax: 360-407-6902 E-Mail: dsok461@ecy.wa.gov</p>
<p>Wisconsin Robert Watson Wisconsin Department of Natural Resources 101 South Webster Street Madison, WI 53702 Telephone: 608-266-8037 Fax: 608-266-3093 E-Mail: robert.watson@dnr.state.wi.us</p>	<p>West Virginia Robert L. Perry, CFM West Virginia Office of Emergency Services 1900 Kanawha Boulevard Capitol Building, 1, Room EB-80 Charleston, WV 25305-0360 Telephone: 304-965-2331 Fax: 304-965-3216 E-Mail: robert.l.perry@wv.gov</p>
<p>Wyoming Kim Johnson Wyoming Office of Homeland Security Herschler Building, 1st East 122 West 25th Street Cheyenne, WY 82002 Telephone: 307-777-4910 Fax: 307-635-6017 E-Mail: kjohns6@state.wy.us</p>	

Archived Data

Technical and administrative support data that have been archived by FEMA for studies/mapping projects, PMRs, and LOMCs may be requested by contacting:

FEMA Project Library
847 South Pickett Street
Alexandria, VA 22304
Attn: Library Manager
Fax No.: (703) 212-4090

Fees are charged for such External Data Requests (EDRs.) The current fee schedule for EDRs is provided in Table E-3 on page E-13. Updates to the FEMA fee schedule for EDRs are posted on the FEMA Website at http://www.fema.gov/plan/prevent/fhm/fm_fees.shtm#4.

As shown in Table E-3, for Categories 1, 2, and 3, an initial fee of \$135 is required to initiate the request, and full payment of the total fee is required before the requested data will be provided. For Categories 4 through 7, requesters will be notified by telephone about the availability of, and the fees associated with, the requested data. As with Categories 1, 2, and 3, no data will be provided until the appropriate fee payment has been received.

Checks, money orders, and credit cards are accepted. Checks and money orders must be made payable, in U.S. funds, to “National Flood Insurance Program.”

The following are exempt from paying the fees for EDRs summarized in Table E-3:

- Private architectural-engineering firms under contract to FEMA to perform or evaluate studies/mapping projects;

- Federal agencies involved in performing studies/mapping projects for FEMA under Inter-Agency Agreements (i.e., U.S. Army Corps of Engineers, U.S. Geological Survey, Natural Resources Conservation Service, Tennessee Valley Authority);
- Communities that have supplied the DLG base or other digital community GIS data to FEMA and request the DLG data or DFIRM files (Category 6);
- Communities that request data during the statutory 90-day appeal period for an initial or revised FIS for that community;
- Mapped participating communities that request data at any time other than during the statutory 90-day appeal period, provided the data are for use by the community and not a third-party user; and
- State NFIP Coordinators, provided that the data that they request are for use by the State NFIP Coordinators and not for use by a third-party user.

FEMA Web-Based Resources

As discussed in Appendix B of this *Guide*, FEMA has developed a variety of resources to assist public- and private-sector mapping partners, stakeholders, and users in gaining a better understanding of FEMA, the NFIP, and the Flood Hazard Mapping Program, as well as becoming better informed about the flood hazards and risks to people and property across the United States. Throughout this *Guide*,

hyperlinks to specific resources are provided. The FEMA Web pages that are dedicated to the NFIP are accessible through the NFIP home page located at <http://www.fema.gov/about/programs/nfip/index.shtm>.

Information related to the three primary components of the NFIP—flood hazard mapping, flood insurance, and floodplain management—are accessible through that page or through the individual links below.

- Flood Hazard Mapping:
<http://www.fema.gov/plan/prevent/fhm/index.shtm>
- Flood Insurance:
<http://www.fema.gov/business/nfip/index.shtm>
- Floodplain Management:
<http://www.fema.gov/plan/prevent/floodplain/index.shtm>

Additional information regarding flood insurance is provided on the Flood Smart site, located at <http://www.floodsmart.gov/floodsmart/pages/index.jsp>.

Individuals also may view or download a variety of other resources directly from the FEMA Library. The FEMA Library, located at <http://www.fema.gov/library/index.jsp>, is a searchable Web-based collection of publicly accessible FEMA information resources, including: CDs, DVDs, VHS tapes, audio tapes, disability resources, posters and display items, brochures, publications, guidance and policy papers, program regulations and guidelines, forms, slide presentations, and some documents.

How To Order FEMA Publications

To order most FEMA and Mitigation Directorate publications about the NFIP, you may write, call, or fax the MSC (see below). You can download the Public Awareness Materials Order Form from the Web at:

www.fema.gov/business/nfip/forms.shtm

Please cite both the publication number and title when ordering.

FEMA Distribution Center
8241-A Sandy Court
P.O. Box 2012
Jessup, MD 20794-2012
Telephone: 1-800-480-2520
Fax: 301-362-5335

Table E-3. Fee Schedule for Technical and Administrative Support Data

Data Category	Fee
1. Paper copies, diskettes, or microfiche of hydrologic and hydraulic backup data for effective studies/mapping projects and map revisions	\$135 initial fee. Final fee due is calculated as a sum of the standard per-product charge plus a per-request surcharge of \$93, designed to recover the cost of library maintenance and archiving.
2. Paper or mylar copies of topographic mapping developed during study/mapping process	\$135 initial fee. Final fee due is calculated as a sum of the standard per-product charge plus a per-request surcharge of \$93, designed to recover the cost of library maintenance and archiving.
3. Paper copies or microfiche of survey notes developed during FIS process	\$135 initial fee. Final fee due is calculated as a sum of standard per-product charge plus a per-case surcharge of \$93, designed to recover the cost of library maintenance and archiving.
4. Paper copies of individual LOMCs	\$40 for first letter; \$10 for each additional letter in the same request.
5. Paper copies of Preliminary DFIRM panels	\$35 for first panel; \$2 for each additional panel in the same request
6. Computer tapes or CD-ROMs of Digital Line Graph files (DLG), DFIRM files, or Digital LOMR attachment files	\$150 for first county, \$100 for each additional county in the same request
7. Computer diskettes and user manuals for FEMA computer programs	\$25 per copy

For more information about map change options and the flood hazard mapping program in general, please call
[1-877-FEMA MAP \(1-877-336-2627\)](tel:1-877-FEMA-MAP)
or visit
<http://www.fema.gov/fhm>