

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_fpm.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.

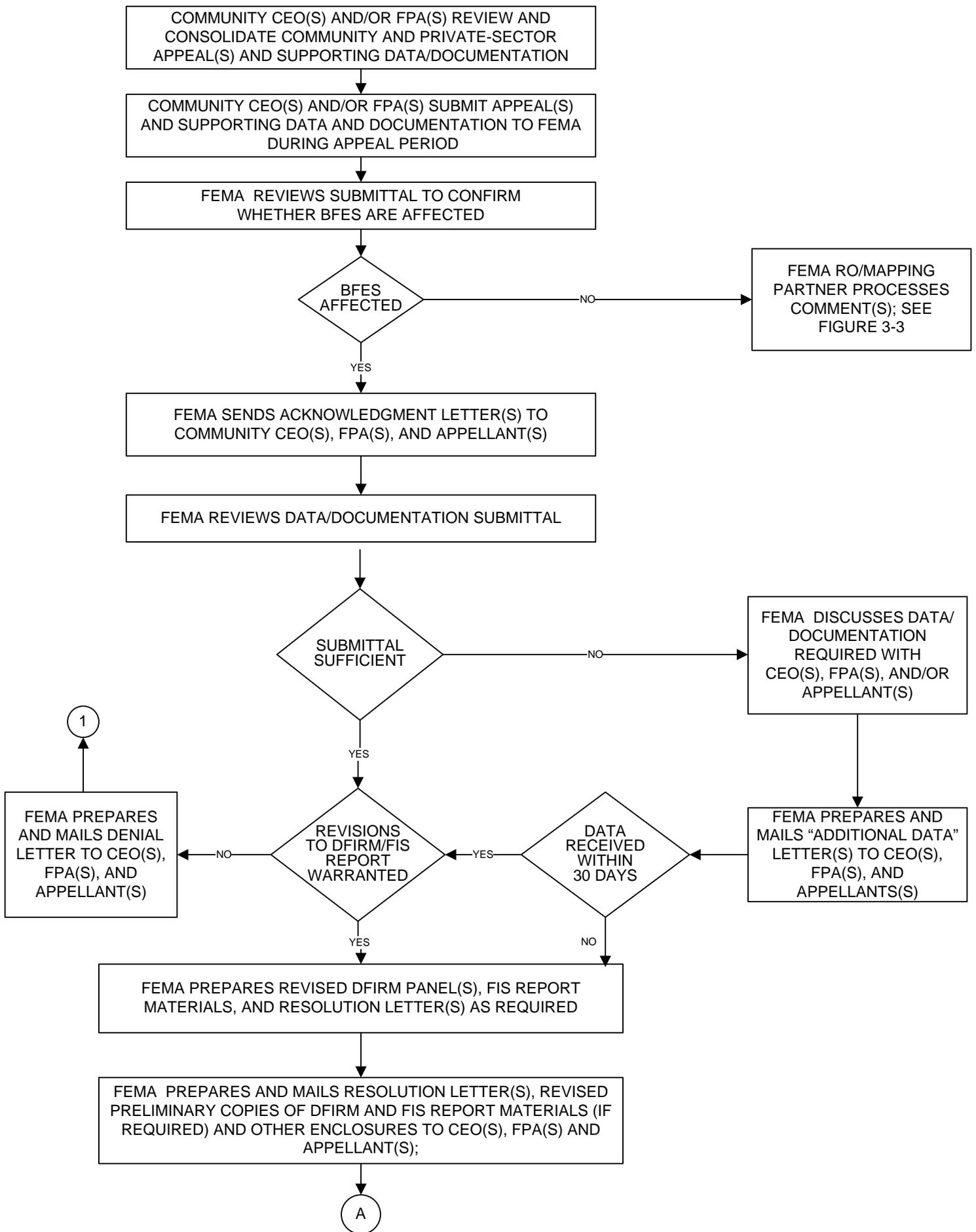


Figure 3-1. Processing Procedures for Appeals

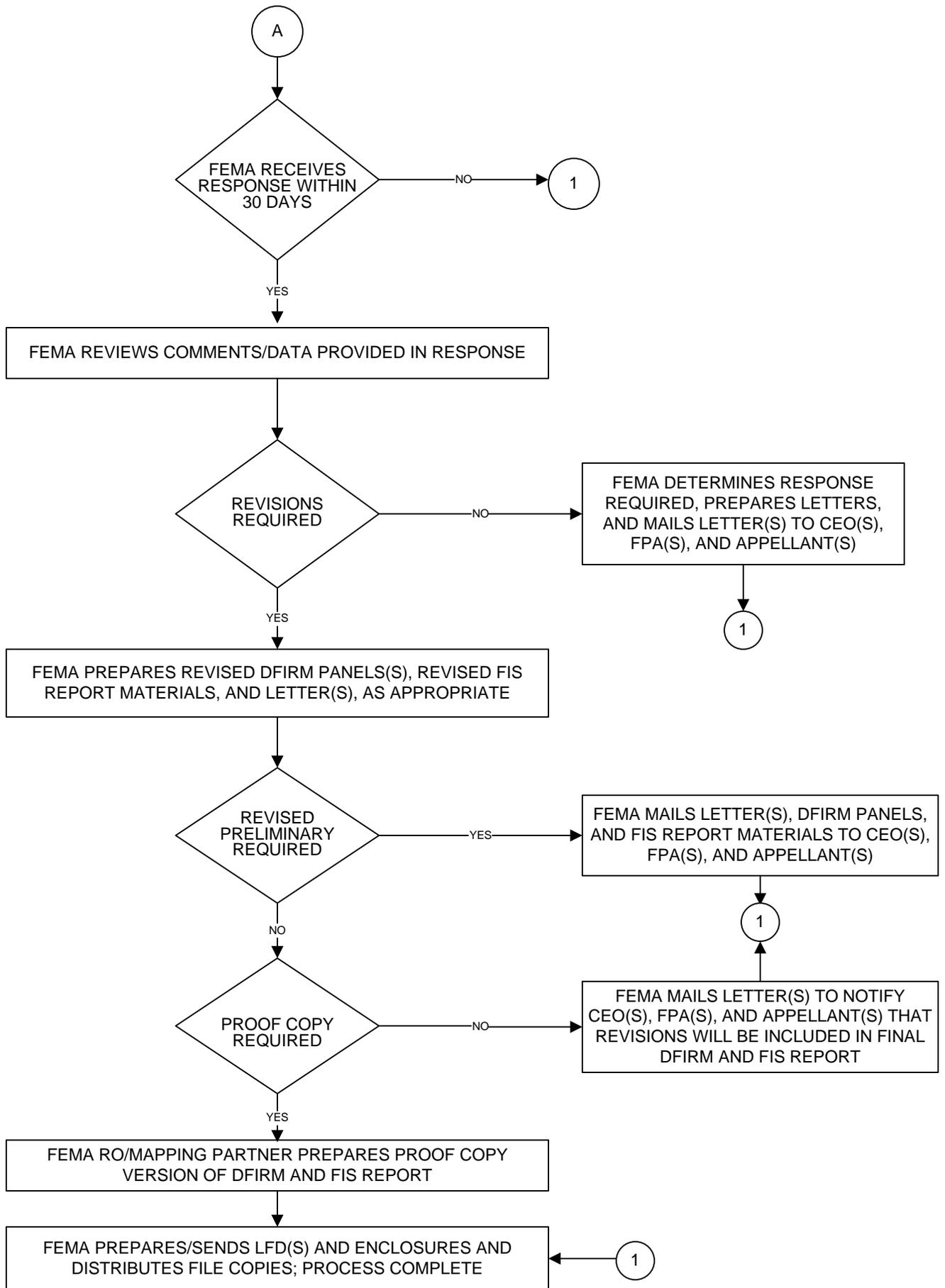


Figure 3-1. Processing Procedures for Appeals (Cont'd)

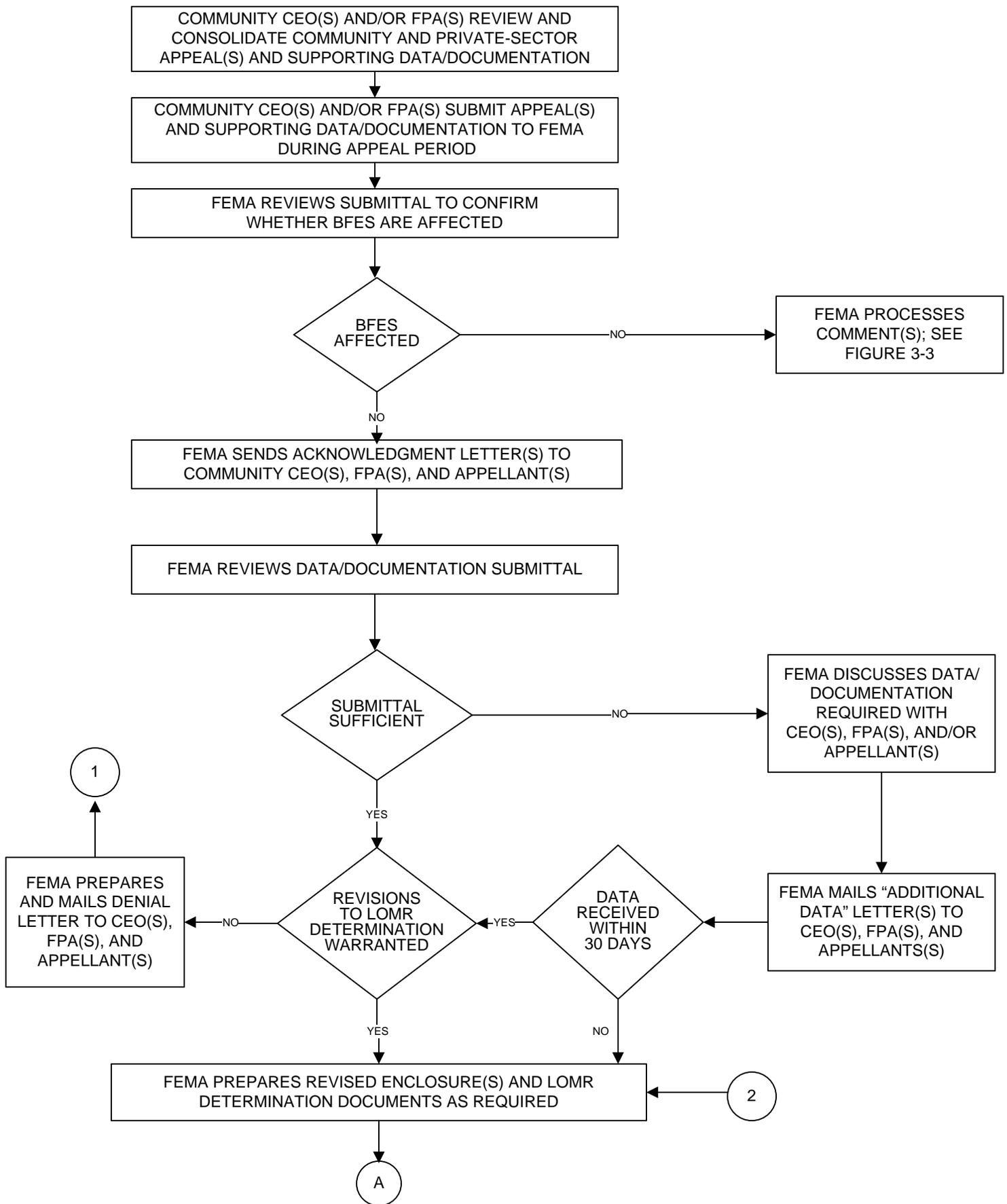


Figure 3-2. Processing Procedures for Appeals of LOMR Determinations

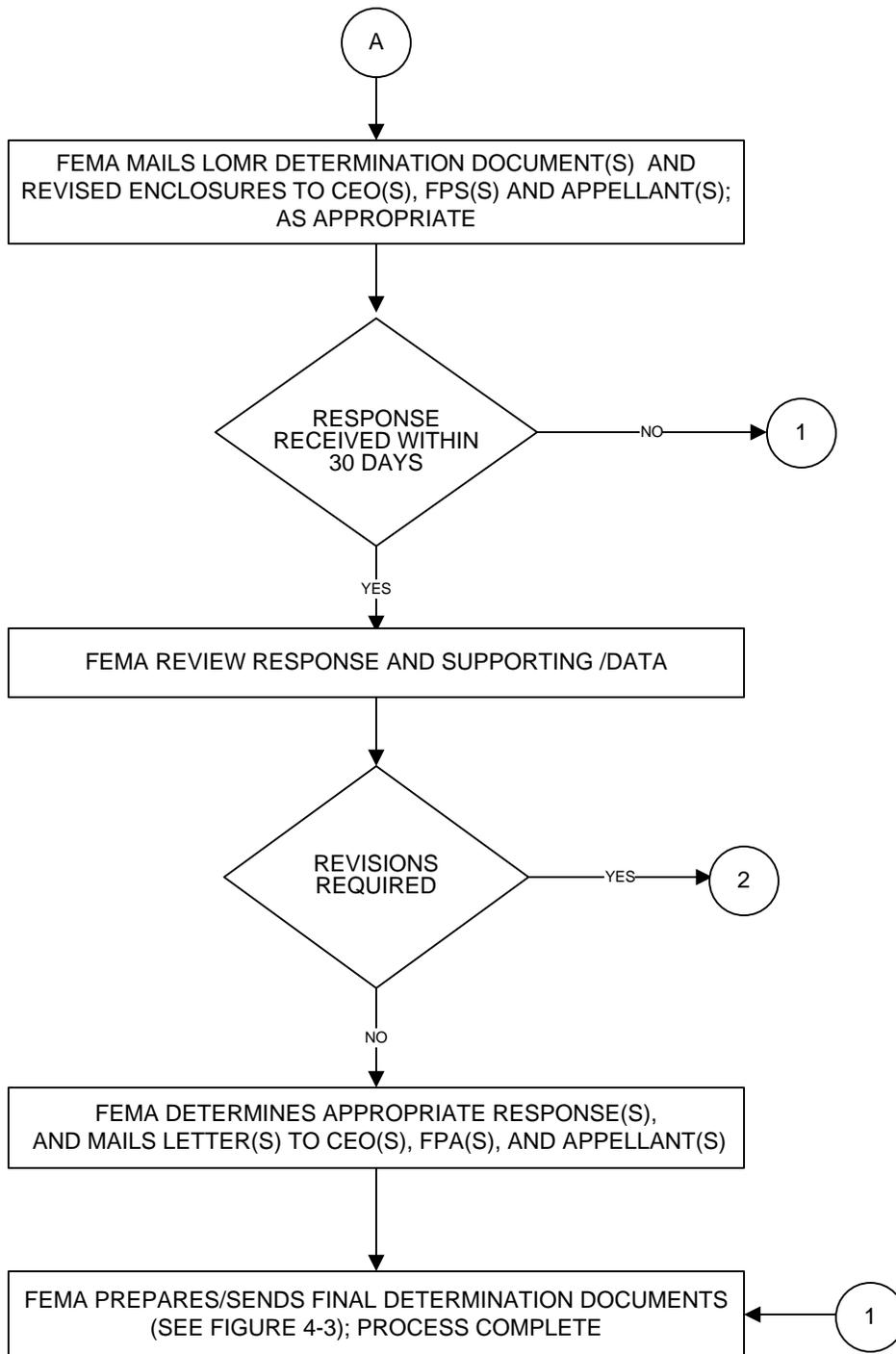


Figure 3-2. Processing Procedures for Appeals of LOMR Determinations (Cont'd)

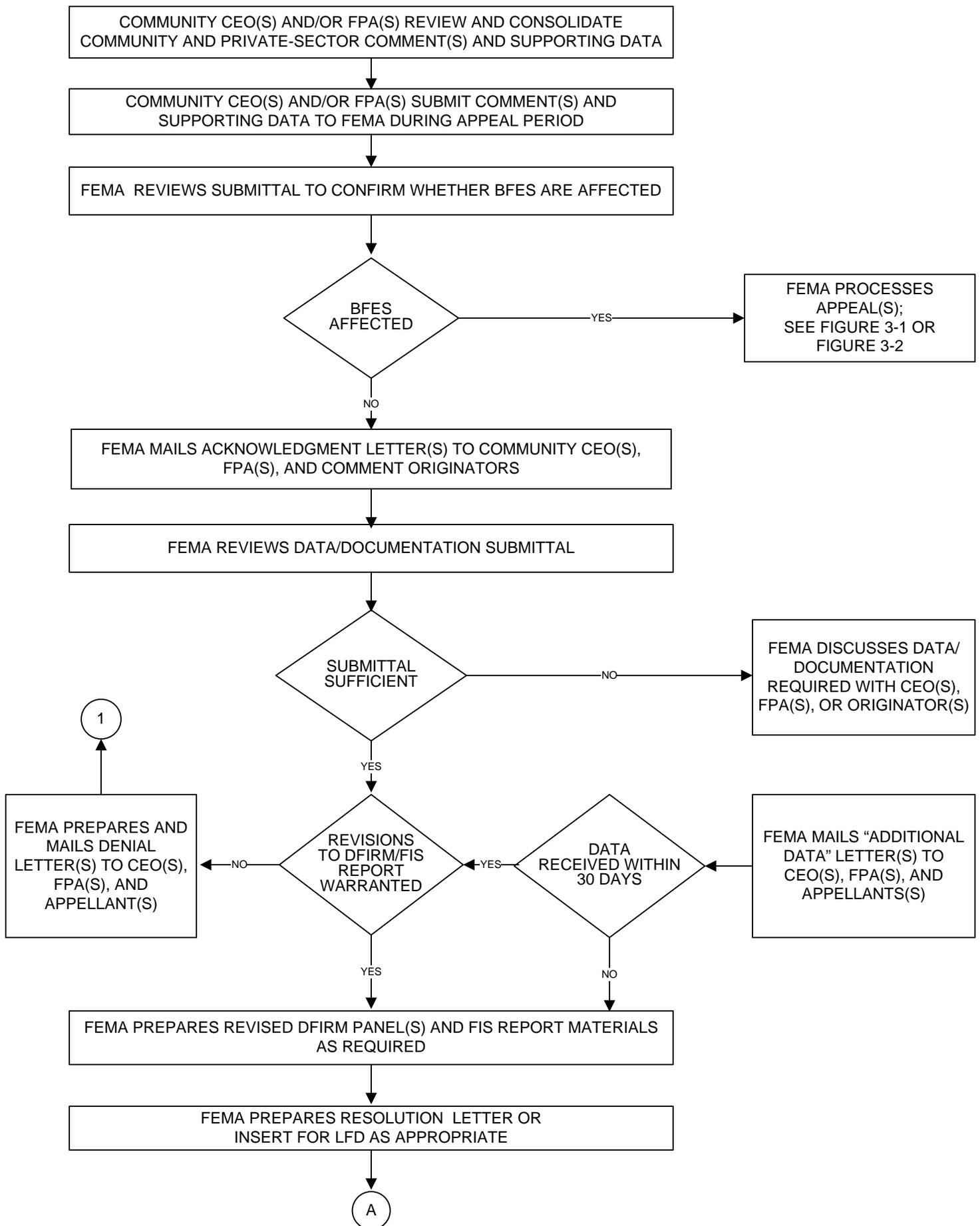


Figure 3-3. Processing Procedures for Comments Received During Appeal Period

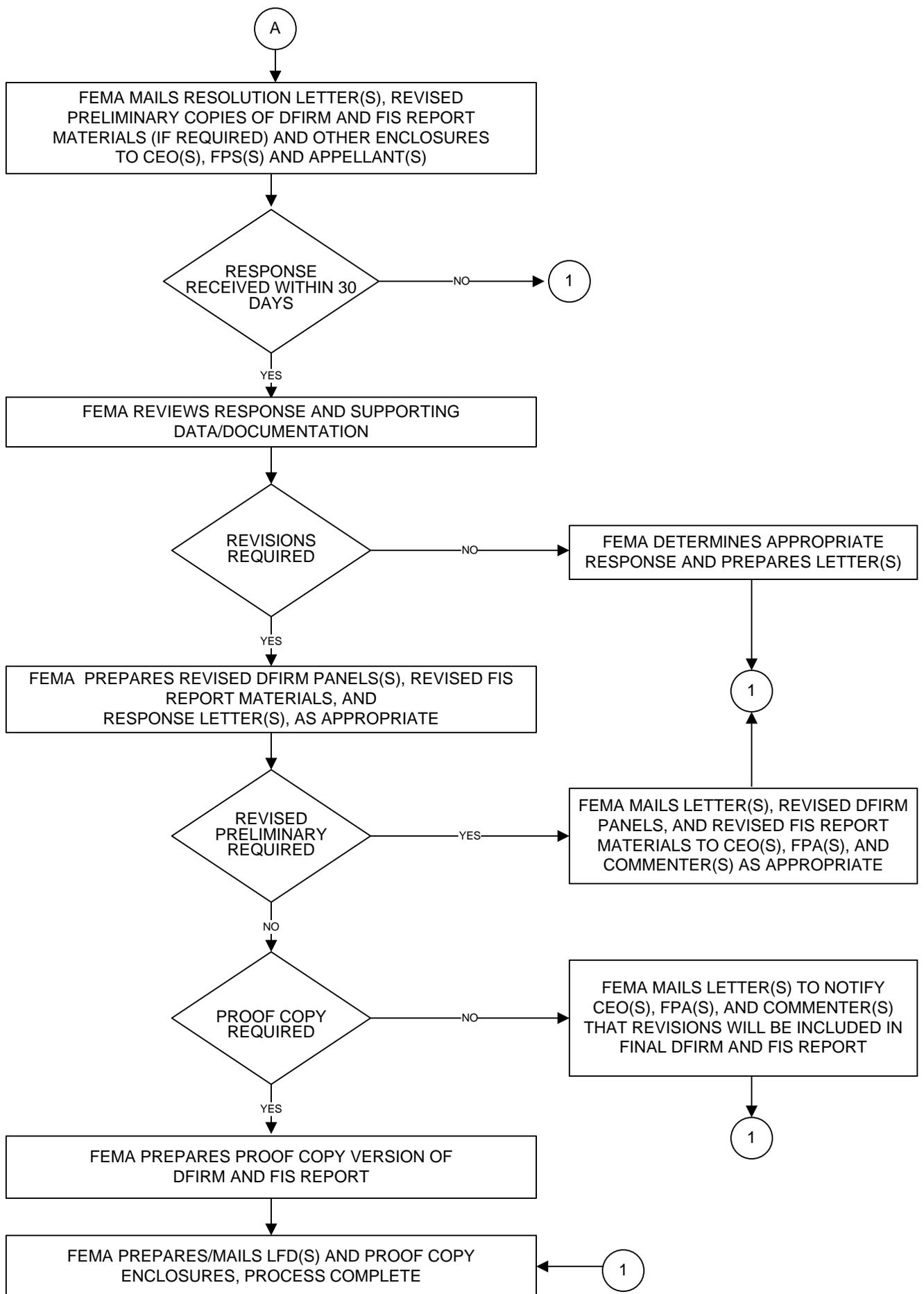


Figure 3-3. Processing Procedures for Comments Received During Appeal Period (Cont'd)