Criteria for Appeals of Flood Insurance Rate Maps

November 30, 2011

FEMA

This document outlines the criteria for appealing proposed changes in flood hazard information on Flood Insurance Rate Maps (FIRMs) during the appeal period. The Department of Homeland Security's Federal Emergency Management Agency (FEMA) applies rigorous standards in developing and updating flood hazard information and provides communities with an opportunity to review the updated flood hazard information presented on new or revised FIRMs before they become final.

1. Background

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 Procedure Memorandum No. 57, *Expanded Appeals Process*, dated November 30, 2011. Detailed information on appeals can also be found in *Appeals, Revisions, and Amendments to National Flood Insurance Program Maps—A Guide for Community Officials* and FEMA's *Document Control Procedures Manual.* All referenced documents are accessible through the "Guidance Documents and Other Published Resources" webpage, located at: http://www.fema.gov/plan/prevent/fhm/frm_docs.shtm.

As outlined in these documents, an appeal period is provided for all new or modified flood hazard information shown on a FIRM, including additions or modifications of any Base (1-percent-annual-chance) Flood Elevation (BFE), base flood depth, Special Flood Hazard Area (SFHA) boundary or zone designation, or regulatory floodway. SFHAs are areas subject to inundation by the base (1-percent-annual-chance) flood and include the following SFHA zone designations: A, AO, AH, A1-A30, AE, A99, AR, AR/A1-A30, AR/AE, AR/AO, AR/AH, AR/A, VO, V1-V30, VE, and V. Therefore, a statutory 90-day appeal period is required when a flood study, Physical Map Revision (PMR), or Letter of Map Revision (LOMR) is proposed in which:

- New BFEs or base flood depths are proposed or currently effective BFEs or base flood depths are modified;
- New SFHAs are proposed or the boundaries of currently effective SFHAs are modified;
- New SFHA zone designations are proposed or currently effective SFHA zone designations are modified; and
- New regulatory floodways are proposed or the boundaries of currently effective floodways are modified.

Clarification on the necessity for an appeal period is provided for certain specific circumstances outlined below:

- Edge matching of effective floodplain boundaries or information. This usually occurs in first-time countywide flood mapping projects when effective BFEs, base flood depths,

SFHAs, or floodways are extended to an adjacent community that previously had differing or no BFEs, base flood depths, SFHAs, or floodways shown on their effective FIRM in order to fix a map panel to map panel mismatch. In these instances, **an appeal period is required** because BFEs, base flood depths, SFHAs, or floodways are changing or being shown for the first time in the area.

- Redelineation of effective floodplain boundaries. This occurs when an effective SFHA boundary is redrawn on the FIRM using new or updated topography to more accurately represent the risk of flooding. In these instances **an appeal period is required** because the SFHA boundary is changing. However, the appeal period will only apply to the updated SFHA boundary delineations, not the methodology used to originally establish BFEs/flood depths (since this will not have changed).

- Revisions to SFHA zone designations. A revision to an SFHA zone designation may occur with or without a BFE and/or boundary change. For example, when a Zone VE floodplain is changed to a Zone AE designation to reflect the updated location of a Primary Frontal Dune (PFD), the BFE and SFHA boundary may not necessarily change. For any change in SFHA zone designation, including the *removal* of an SFHA designation from a FIRM, **an appeal period is required**.

- Regulatory floodway boundaries. When the effective floodway boundary is redrawn on the FIRM to more accurately represent the extent of the encroachment, **an appeal period is required**.

- MT-1 cases. When the SFHA or floodway boundary is amended due to the issuance of a Letter of Map Amendment (LOMA), Letter of Map Revision based on Fill (LOMR-F), Letter of Map Revision – Floodway, or other MT-1 case, **an appeal period is not required.**

- Annexation of effective floodplain boundaries. When a new or revised FIRM shows new community boundaries which include effective BFEs, base flood depths, SFHAs, or floodways, **an appeal period is not required,** provided no BFE, base flood depth, SFHA, or floodway changes apply.

  However, in cases where the flood hazard information in the annexed area has never received due process (for example, if the area is shown for information only on all FIRMs depicting the area), **an appeal period is required**.

- Reissuance of effective LOMRs: When a LOMR is reissued after not being incorporated into a revised FIRM, **an appeal period is not required**.

- Updates that do not impact flood hazard data: When flood studies, PMRs, or LOMRs result in changes to FIRMs that do not impact BFEs, base flood depths, SFHAs, or floodways, **an appeal period is not required**.

- Datum Conversions: **An appeal period is not required** specifically for a datum conversion (e.g., a conversion from NGVD 29 to NAVD 88).

1.1. Additional Procedures for LOMRs

Beginning with LOMRs issued on or after December 1, 2011, the following procedures will apply:

In order to provide sufficient due process rights for changes due to LOMRs, any LOMR in a compliant community that requires an appeal period will become effective 120 days from the second newspaper publication date, following FEMA's current policy. This allows time to collect appeals, as well as provides for newspaper publication schedule conflicts. LOMRs in non-compliant communities or in communities that require adoption of the LOMR will become effective following the six month compliance period.

Evidence of public notice or property owner notification of the changes due to a LOMR will continue to be requested during the review of the LOMR request. This will help to ensure that the affected population is aware of the flood hazard changes in the area and the resultant LOMR. However, evidence of property owner acceptance of the changes due to a LOMR will no longer be requested. Because all LOMRs that require an appeal period will become effective 120 days from the second newspaper publication date, the receipt of such acceptance will have no effect on the effective date of the LOMR; therefore, there is no need for the requester to pursue acceptance.

2. Appeal Eligibility Requirements

Areas that are eligible for appeal include:

- Areas showing new or revised BFEs or base flood depths
- Areas showing new or revised SFHA boundaries (including both increases and decreases in the extent of the SFHA)
- Areas where there is a change in SFHA zone designation
- Areas showing new or revised regulatory floodway boundaries (including both increases and decreases in the extent of the regulatory floodway).

The area of concern must be within the scope of the new or modified BFEs, base flood depths, SFHA boundaries, SFHA zone designations, and/or regulatory floodway boundary changes and

be supported by scientific and/or technical data. The criteria for data submittals are outlined in Title 44, Chapter 1, Code of Federal Regulations, Section 67.6(b) and in this document.

The statutory 90-day appeal period cannot be extended. FEMA may provide an additional 30 days for a community after the 90-day appeal period has ended to submit supporting and clarifying data for an appeal received during the appeal period. No appeals will be accepted after the 90-day appeal period.

Challenges that do not relate to new or modified BFEs, base flood depths, SFHA boundaries, SFHA zone designations, or floodways are not considered appeals. Challenges received by FEMA during the appeal period that do not address these items will be considered comments. Comments include, but are not limited to the following:

- The impacts of changes that have occurred in the floodplain that should have previously been submitted to FEMA in accordance with 44 Code of Federal Regulations, Section 65.3;
- Corporate limit revisions;
- Road name errors and revisions;
- Requests that changes effected by a LOMA, LOMR-F, or LOMR be incorporated;
- Base map errors; and
- Other possible omissions or potential improvements to the mapping.

Any significant problems identified by community officials or residents (at formal meetings or otherwise) will be addressed appropriately.

3. Supporting Data and Documentation Required for Appeals

The BFEs and base flood depths presented in Flood Insurance Study (FIS) reports and shown on FIRMs are typically the result of coastal, hydrologic and hydraulic engineering methodologies. Floodway configurations, generally developed as part of the hydraulic analyses, are adopted by communities as a regulatory tool for floodplain management and are delineated on FIRMs along with SFHAs.

Because numerous methodologies have been developed for estimating flood discharges and flood elevations/depths, and other flood hazard information under a variety of conditions, FEMA contractors, mapping partners, and others whose data and documentation FEMA approves and uses, such as communities, regional entities and State agencies participating in the Cooperating Technical Partners (CTP) Program, 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 flood studies and PMRs the approach to be used will usually be discussed with community officials at the beginning of the flood study or PMR mapping process.

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 flood study, PMR, or LOMR. 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, base flood depths and other flood hazard information is often a matter of degree, rather than absolute. For that reason, appellants who contend that the BFEs, base flood depths, or other flood hazard information is 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, base flood depths or other flood hazard information. FEMA will review the alternative analyses and determine whether they are superior to those used for the flood study, PMR, or LOMR and whether changes to the FIS report and/or FIRM, or LOMR are warranted as a result.

Unless appeals are based on indisputable mathematical or measurement errors or the effects of natural 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 FIRMs. Therefore, appellants should be prepared to perform coastal, hydrologic and hydraulic analyses, to plot new and/or revised Flood Profiles, and to delineate revised SFHA zone and regulatory floodway boundaries as necessary.

An appeal must be based on data that show the new or modified BFEs, base flood depths, SFHA boundaries, SFHA zone designations, or floodways to be scientifically or technically incorrect. All analyses and data submitted by appellants must be certified by a Registered Professional Engineer or Licensed Land Surveyor, as appropriate. The data and documentation that must be submitted in support of the various types of appeals are discussed in the subsections that follow.

3.1. Appealing BFEs, Base Flood Depths, SFHA Zone Designations, or Regulatory Floodways

Scientifically incorrect BFEs, base flood depths, SFHA zone designations, or regulatory floodways:

Proposed BFEs, base flood depths, SFHA zone designations, or regulatory floodways are said to be scientifically incorrect if the methodology used in the determination of the BFEs,

base flood depths, SFHA zone designations, or regulatory floodways 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, base flood depths, SFHA zone designations, or regulatory floodways being scientifically incorrect would, therefore, contend that the use of a different methodology or different assumptions would produce more accurate results. A list of National Flood Insurance Program-accepted hydrologic, hydraulic and coastal models is available on FEMA's website at http://www.fema.gov/plan/prevent/fhm/en_modl.shtm. To show that an inappropriate or incorrect coastal, hydraulic or hydrologic methodology has been used, an appellant must submit the following data, as applicable:

- New hydrologic analysis based on alternative methodology and if applicable, updated hydraulic/floodway or coastal analyses based on the updated discharge values;
- New hydraulic/floodway analysis based on alternative methodology and original flood discharge values (if the appeal does not involve the hydrologic analysis);
- New coastal analyses based on alternative methodology and original stillwater elevations (if the appeal does not involve the hydrologic analysis);
- Explanation for superiority of alternative methodology;
- As applicable, revised Summary of Discharges Table, Flood Profiles, Transect Data Table, Summary of Stillwater Elevations Table, and Floodway Data Table (FDT); and
- Revised SFHA zone boundaries and, if applicable, regulatory floodway boundary delineations.

Technically Incorrect BFEs, Base Flood Depths, SFHA Zone Designations, or Regulatory Floodways:

The proposed BFEs, base flood depths, SFHA zone designation or regulatory floodways are said to be technically incorrect if at least one of the following is true.

- **The methodology was not applied correctly.**
    - To show that a hydrologic methodology was not applied correctly, an appellant must submit the following:
        - New hydrologic analysis in which the original methodology has been applied differently;
        - Explanation for superiority of new application;
        - New hydraulic/floodway or coastal analysis based on flood discharge values from new hydrologic analysis;

        - Revised Summary of Discharges Table and/or Flood Profiles and, if applicable, FDT; and
        - Revised SFHA zone boundary and, if applicable, regulatory floodway boundary delineations.
    - To show that a hydraulic methodology was not applied correctly, an appellant must submit the following information. (*Please note that an appeal to a floodway configuration cannot be solely based on surcharge values.)*
        - New hydraulic/floodway analysis, based on original flood discharge values, in which the original methodology has been applied differently;
        - As applicable, revised Flood Profiles, FDT and other FIS report tables as needed; and
        - Revised SFHA zone boundary and, if applicable, regulatory floodway boundary delineations.
    - To show that a coastal methodology was not applied correctly, an appellant must submit the following:
        - New coastal analysis, based on the original stillwater elevations, in which the original methodology has been applied differently;
        - Revised SFHA zone boundary and, all applicable FIS report tables, including the Transect Data Table.
- **The methodology was based on insufficient or poor-quality data.**
    - 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/floodway or coastal analysis based on flood discharge values resulting from new hydrologic analysis;
        - Revised Summary of Discharges Table, Flood Profiles and, if applicable, FDT; and
        - Revised SFHA zone boundary and, if applicable, 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;
        - Revised Flood Profiles and, if applicable, FDT; and
        - Revised SFHA zone boundary and, if applicable, regulatory floodway boundary delineations.
    - To show that insufficient or poor-quality coastal analysis data were used, an appellant must submit the following:
        - Data believed to be better than those used in original coastal analysis;
        - Documentation for source of new data;
        - Explanation for improvement resulting from use of new data;
        - New coastal analysis based on better data and original stillwater elevation values; and
        - Revised SFHA zone boundary and, all applicable FIS report tables, including the Transect Data Table.
- **The application of the methodology included indisputable mathematical or measurement 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 and FIRM.
    - To show that a measurement error (e.g., an incorrect surveyed elevation used in the flood study, PMR, or LOMR) 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 and FIRM.
- **The methodology did not account for the effects of natural physical changes that have occurred in the floodplain.**
    - For appeals based on the effects of natural physical changes that have occurred in the base floodplain, appellants must identify the changes that have occurred and provide the data FEMA needs to perform a revised analysis. The data may include new stream channel and floodplain cross sections or coastal transects.

3.2. Appeals to SFHA Boundaries

The supporting data required for changes to SFHA 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 SFHA zone boundaries are delineated using topographic data and the BFEs and base flood depths resulting from the hydraulic analysis performed for the flood study, PMR, or LOMR. If topographic data are more detailed than those used by FEMA or show more recent topographic conditions, appellants should submit that data and the revised SFHA zone boundaries for FEMA to incorporate into 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 or data prepared by an authoritative source, such as the U.S. Army Corps of Engineers, U.S. Geological Survey, 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. For further information on submittals involving topographic data, please refer to the section below *Additional Guidance on Appeal Submittals Involving Topographic Data.*

Flooding Sources Studied by Approximate Methods
Usually, where BFEs or base flood depths 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 update the flood hazard information shown on the affected map panels. Such data and analyses may 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 more detailed data than those used by FEMA;
- Topographic data and resulting updated SFHA boundaries.

For further information on submittals involving topographic data, please refer to the section below *Additional Guidance on Appeal Submittals Involving Topographic Data.*

Please note that, when applicable, appeals related to the *methodology* used to develop an approximate flood zone boundary must follow the guidelines established for appeals to BFEs, base flood depths, SFHA zone designations, or regulatory floodways under Section 3.1 above. However, since flood profiles, FDTs, Summary of Discharges Tables, Transect

Data Tables, and Summary of Stillwater Elevations Tables are not developed in support of approximate floodplain boundaries, these data will not need to be submitted for appeals to flooding sources studied by approximate methods.

All submitted data and analyses must be certified by a Registered Professional Engineer or a Licensed Land Surveyor. Maps prepared by an authoritative source, such as the U.S. Army Corps of Engineers, U.S. Geological Survey, 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.

Additional Guidance on Appeal Submittals Involving Topographic Data
For appeal submittals that involve topographic data, the following additional guidelines must be followed:

- The data must be more detailed/accurate, and/or reflect more recent topographic conditions, and be in a digital Geographic Information System (GIS) format preferably;
- The appeal submittal must clearly state which flooding sources are being appealed based on the updated topographic data;
- Updated SFHA boundary delineations that reflect the submitted topographic data for each appealed flooding source must also be provided, preferably in digital GIS format;
- All topographic data submitted must adhere to FEMA's current data capture standards for such data;
- If necessary, a data sharing agreement must be provided.

4. Appeal Period Procedures

Appeals and comments must be resolved by following the procedures below:

- Acknowledgement by FEMA of the receipt of an appeal in writing, ensuring that acknowledged appeals include ALL of the criteria discussed above.

- Acknowledge the receipt of comments. This can be done either in writing, by FEMA, or through a documented phone conversation between the mapping partner and the community that submitted the comments. At a minimum FEMA must notify the community in writing that it did not receive any appeals. This can be done by separate correspondence or by the inclusion of language in the Letter of Final Determination (LFD).

- FEMA or the mapping partner will evaluate any scientific or technical data submitted for compliance with existing mapping statues, regulations, or Guidelines and Standards.
- FEMA or the mapping partner will request any additional scientific or technical data required to properly review the appeal or comment.
- FEMA or the mapping partner will make a recommendation to FEMA on the resolution of the appeal or comment.
- FEMA or the mapping partner will prepare a draft appeal resolution letter (if **all** the criteria for an appeal are met).
- The assigned mapping partner shall dispatch the signed FEMA appeal resolution letter and if warranted, Revised Preliminary copies of the FIRM and FIS report to the community CEO and floodplain administrator and all appellants. All correspondence must be prepared and issued on FEMA Headquarters or FEMA Regional letterhead.
- FEMA provides a comment period of 30 days following the date the appeal or comment resolution letter is issued. Any comments received during the 30 day comment period must be addressed and resolved before proceeding with the LFD. Extensions to this 30 day period can only be granted with FEMA Headquarters approval.

5. General Technical Guidance

Detailed guidance on the supporting documentation that must be submitted in support of an appeal can be found in *Appeals, Revisions, and Amendments to National Flood Insurance Program Maps—A Guide for Community Officials.*

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 flood study, PMR, or LOMR. 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 flood study, PMR, or LOMR. The vertical datum used in any data submitted must match the datum used in the preliminary FIS report and FIRM. Further, SFHA boundaries are to be shown on a topographic map (preferably, in digital form) whose scale and contour interval are sufficient to provide reasonable accuracy.

New flooding information cannot be added to a FIRM 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 BFEs, base flood

depths, SFHA boundaries, SFHA zone designations, and/or regulatory floodway boundaries into those shown on the maps for areas not affected by the appeal.

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.

6. Scientific Resolution Panel (SRP)

FEMA's Scientific Resolution Panel (SRP) process reinforces FEMA's commitment to work with communities to ensure the flood hazard data depicted on FIRMs is built collaboratively using the best science available.

When changes to the FIRMs are met with conflicting technical and scientific data, an independent third party review of the information may be needed to ensure the FIRMs are updated correctly. The SRP serves as the independent third party. To be eligible for an SRP, an appeal must include supporting information or data to substantiate that the BFEs, base flood depths, SFHA boundaries, SFHA zone designations, or floodways proposed by FEMA are scientifically or technically incorrect. An SRP request is an option only after FEMA and a local community have been engaged in a collaborative consultation process for at least 60 days without a mutually-acceptable resolution of an appeal.