



Appeals and Protests

What Appellants Need to Know About Required Support Data and Documentation

Introduction

The community Chief Executive Officer (CEO) is responsible for ensuring that the community meets its obligations as a participant in the National Flood Insurance Program (NFIP). Therefore, the Federal Emergency Management Agency (FEMA) and its State partners—the Mississippi Department of Environmental Quality (MDEQ) and the Mississippi Emergency Management Agency (MEMA)—will consult and confer with the CEOs in counties or with local officials designated by the CEOs to address formal comments submitted during the 90-day review and comment period referred to as the “90-day appeal period.” The designated officials will likely be the community floodplain administrators, planners, engineers, or building officials.

The 90-day appeal periods follow the issuance of preliminary versions of the Digital Flood Insurance Rate Maps (DFIRMs) and in the accompanying preliminary versions of the Flood Insurance Study (FIS) reports. The DFIRMs and FIS reports present Base Flood Elevations, or BFEs—the elevations of the flood having a 1-percent-chance of being equaled or exceeded in any given year—along with other flood hazard and risk information.

The 90-day appeal periods for the communities affected by the preliminary versions of the DFIRMs and FIS reports for county will begin approximately 30 days after delivery of the preliminary versions of the DFIRMs and FIS reports. The exact dates will be determined when the newspaper notices are published. In accordance with standard procedures, to start the 90-day appeal period, FEMA will (1) prepare and post listings of the BFEs shown on the Preliminary DFIRMs on their Website at www.floodmaps.fema.gov/fhm/Scripts/bfe_main.asp; (2) publish a legal notice, called a Proposed Rule, in the FEDERAL REGISTER; (3) publish public notices announcing the start of the appeal period and the posting of the BFE listings twice in local newspapers with wide circulation; and (4) mail letters notifying the mapped communities of the proposed BFEs, which are mailed to the CEOs and floodplain administrators in the mapped communities and are referred to as “proposed flood elevation determination letters.”

Any individual property owner who wishes to appeal the proposed BFEs or to protest any other information shown on the preliminary versions of the DFIRMs and in the preliminary versions of the FIS report must submit the appeal or protest along with appropriate support data and documentation to the appropriate CEO or designated local community official so that the community can comply with the requirements of Part 67 of the NFIP regulations.

The CEOs or designated community officials must then review each appeal to determine whether the data or documentation submitted are sufficient to forward to MDEQ and FEMA (specifically, the Region IV Office in Atlanta, Georgia). The contact information for MDEQ is provided in the “Where To Send Support Data and Documentation” section of this document.

The type and amount of support data and/or documentation will vary based on the type of appeal or protest that is submitted. This document has been prepared to clarify the data and documentation requirements that must be met to submit a valid appeal or protest and obtain a change to the information shown on the preliminary version of the DFIRMs and FIS reports.

Required Support Data and Documentation for Appeals

Only proposed BFEs developed from new detailed studies provided by FEMA, MEMA, MDEQ, and their contractors are eligible to be appealed. Redelineated base flood elevations do not qualify. An appeal must be based on data and documentation showing that the proposed BFEs shown on a DFIRM and/or in an FIS report are 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 a community or private appellant must submit to demonstrate one versus the other. Definitions of those terms are provided later in this document.

First, however, it is appropriate to discuss the meaning of the word "correct" as it applies to the BFEs. The BFEs presented on the maps and in the accompanying reports are the result of engineering methodologies and computer models that were used by the study/project team, which was composed of experts from FEMA, MEMA, MDEQ, and their contractors. Because numerous methodologies and models have been developed for estimating flood discharges and flood elevations under a variety of conditions, the study/project team used their professional judgment in selecting methodologies and models that were appropriate for particular flooding sources in the Mississippi counties.

In general, because the methodologies are the result of attempts to reduce complex physical processes to mathematical models, the methodologies include simplifying assumptions. As is usual for FEMA flood studies/mapping projects, methodologies were used for Mississippi counties with data developed specifically for the study/mapping project and specifically for the study areas. 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 were made and the limits imposed by cost considerations, the "correctness" of the BFEs is often a matter of degree, rather than absolute. For that reason, appellants who contend that the BFEs 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. If such analyses are provided, FEMA and MDEQ will review the alternative analyses and determine whether they are superior to those used for the study/mapping project.

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

Scientifically Incorrect Elevations

The BFEs are said to be *scientifically incorrect* if the methodology/model(s) used in the determination of the BFEs is inappropriate or incorrect, or if the assumptions made as part of using the methodology/model(s) are inappropriate or incorrect.

- An appeal that is based on the BFEs being scientifically incorrect would, therefore, contend that the use of a different methodology/model or different assumptions would produce more accurate results {i.e., BFEs that are more correct than the BFEs presented on the Preliminary versions of the DFIRM and FIS report).
- To show that an inappropriate or incorrect hydraulic methodology has been used, an appellant must submit the following data:
 - New hydraulic analysis based on the alternative methodology/model and the flood discharge values used in the hydraulic analysis performed by the study/project team;
 - Explanation for the superiority of the alternative methodology/model;
 - Revised Flood Profiles for the FIS report;
 - Revised 1-percent-annual-chance (100-year) floodplain boundary delineations;
 - Revised 0.2-percent-annual-chance (500-year) floodplain boundary delineations (if such boundaries are shown on the Preliminary DFIRM for the flooding source in question); and
 - Revised regulatory floodway boundary delineations (if a regulatory floodway was computed for the study/mapping project).

The revised floodplain and regulatory floodway boundaries must be shown on a topographic map whose scale and contour interval are sufficient to provide reasonable accuracy and whose topo is at least as good as that used to produce the preliminary maps.

Technically Incorrect Elevations

The BFEs are said to be *technically incorrect* if at least one of the following is true:

- The methodology/model was not applied correctly.
- The methodology/model was based on insufficient or poor-quality data.
- The application of the methodology/model included indisputable mathematical or measurement errors.
- The methodology/model 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 the original methodology has been applied differently;
- Explanation for the superiority of the new application;
- New hydraulic analysis based on the flood discharge values from the new hydrologic analysis;
- Revised Flood Profiles for the FIS report;
- Revised 1-percent-annual-chance floodplain boundary delineations;
- Revised 0.2-percent-annual-chance floodplain boundary delineations (if such boundaries are shown on the Preliminary DFIRM for the flooding source in question); and
- Revised regulatory floodway boundary delineations (if a regulatory floodway was computed for the flooding source in question).

The revised floodplain and regulatory floodway boundaries must be shown on a topographic map whose scale and contour interval are sufficient to provide reasonable accuracy and whose topo is at least as good as that used to produce the preliminary maps.

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

- New hydraulic analysis, based on the flood discharge values used by the study/project team, in which the methodology used by the study/project team has been applied differently;
- Revised Flood Profiles for the FIS report;
- Revised 1-percent-annual-chance floodplain boundary delineations;
- Revised 0.2-percent-annual-chance floodplain boundary delineations (if such boundaries are shown on the Preliminary DFIRM for the flooding source in question); and
- Revised regulatory floodway boundary delineations (if a regulatory floodway was computed for the flooding source in question).

The revised floodplain and regulatory floodway boundaries must be shown on a topographic map whose scale and contour interval are sufficient to provide reasonable accuracy and whose topo is at least as good as that used to produce the preliminary maps.

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 by the study/project team in the hydrologic analysis;
- Documentation for the source of the new data;
- Explanation for the improvement resulting from the use of the new data;
- New hydrologic analysis based on new data;
- New hydraulic analysis based on the flood discharge values resulting from the new hydrologic analysis;
- Revised Flood Profiles for the FIS report;
- Revised 1-percent-annual-chance floodplain boundary delineations;
- Revised 0.2-percent-annual-chance floodplain boundary delineations (if such boundaries are shown on the Preliminary DFIRM for the flooding source in question); and
- Revised regulatory floodway boundary delineations (if a regulatory floodway was computed for the flooding source in question).

The revised floodplain and regulatory floodway boundaries must be shown on a topographic map whose scale and contour interval are sufficient to provide reasonable accuracy and whose topo is at least as good as that used to produce the preliminary maps.

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 the hydraulic analysis performed by the study/project team;
- Documentation for the source of the new data;
- Explanation for the improvement resulting from use of the new data;
- New hydraulic analysis based on the new data and the flood discharge values used in the hydraulic analysis performed by the study/project team; and
- Revised 1-percent-annual-chance floodplain boundary delineations;
- Revised 0.2-percent-annual-chance floodplain boundary delineations (if such boundaries are shown on the Preliminary DFIRM for the flooding source in question); and

- Revised regulatory floodway boundary delineations (if a regulatory floodway was computed for the flooding source in question).

The revised floodplain and regulatory floodway boundaries must be shown on a topographic map whose scale and contour interval are sufficient to provide reasonable accuracy and whose topo is at least as good as that used to produce the preliminary maps.

Appeals Based on Contention That Analysis Contains Indisputable Errors

To show that a mathematical error or measurement 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 affected DFIRM panel(s) and/or the affected FIS report materials (i.e., Flood Profiles, data tables).

Appeals Based on Effects of Physical Changes That Have Occurred 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.

Certification Requirements for Technical Support Data and Documentation for Appeals

All maps and other support 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 a Federal agency—that is, the U.S. Army Corps of Engineers (USACE), U.S. Geological Survey (USGS), U.S. Bureau of Reclamation (USBR)—or a State department of highways or transportation, are acceptable without certification as long as the sources and dates of the maps are identified.

Required Support Data and Documentation for Protests

Protests will generally involve changes to one or more of the following:

- Floodplain boundary delineations;
- Corporate limits; and/or

- Road names and configurations.

The various types of protests and the data and documentation that must be submitted to support them are discussed below.

Changes to Floodplain Boundaries for Flooding Sources Studied by Detailed Methods

The detailed floodplain boundaries were delineated using topographic maps and the BFEs resulting from the hydraulic analysis performed for the study/mapping project. If topographic maps or other ground elevation data that are of greater detail than those used by the study/project team or that show more recent topographic conditions are submitted in support of a protest, MDEQ and FEMA will use the submitted maps and/or data to revise the floodplain boundary delineations shown on the affected DFIRM panel(s).

Changes to Floodplain Boundaries for Flooding Sources Studied by Approximate Methods

Approximate floodplain 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 in support of a protest, MDEQ and FEMA will use the submitted data or analyses to revise the floodplain boundary delineations shown on the affected DFIRM panel(s). 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 the study/project team or that are based on better data than those used by the study/project team.

NOTE: While more detailed data or analysis may be submitted to support a protest to floodplain delineations, detailed studies to establish base flood elevations must be submitted through the Letter of Map Revision process.

Changes to Corporate Limits

The corporate limits shown on the Preliminary DFIRM were taken from community maps obtained by the study/project team from community officials. If a community submits a protest because changes to the corporate limits shown on the DFIRM are necessary, the community must submit an up-to-date community map to support the protest. MDEQ and FEMA may use the submitted community map to revise the corporate limits shown on the affected DFIRM panel(s) or will explain to the CEOs of the affected communities, in writing, why no changes could be made.

Changes to Road Names and Configurations

On the Preliminary DFIRMs, the study/project team has shown all roads that are in or adjacent to the 1-percent-annual-chance floodplain. If a community or individual appellant chooses to submit a protest to show new or revised information concerning the locations and names of roads in or adjacent to floodplains, the community must provide a map showing the new or revised information.

Certification Requirements for Technical Support Data and Documentation for Protests

All maps and other support 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 a Federal agency—that is, the USACE, USGS, or USBR—or a State department of highways or transportation, are acceptable without certification as long as the sources and dates of the maps are identified.

General Technical Guidance

When developing technical support data or documentation, appellants should consider the information below.

- 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 DFIRM panel(s) and FIS report materials. Therefore, appellants should be prepared to perform hydrologic and hydraulic analyses, to plot new and/or revised Flood Profiles, and to provide revised floodplain and regulatory floodway boundary delineations as necessary.
- New flooding information cannot be added to a DFIRM panel in such a way as to create mismatches with the flooding information shown for adjacent DFIRM panels. Therefore, in performing new analyses and developing revised flooding information, appellants must tie the new flood elevations, floodplain boundaries, and regulatory floodway boundaries into those shown on the DFIRM panel(s) for areas that are not affected by the appeal or protest.
- 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 mapped area.
- 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.
- Appeals and protests cannot be based on the effects of proposed projects or future conditions.
- If hydrologic or hydraulic analyses are performed, they must be performed for the same recurrence interval floods as those performed for the study/mapping project.
- 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. For example, if a hydraulic analysis of the regulatory floodway was performed for a riverine flooding source, a comparable analysis would have to be performed by an appellant if changes to the regulatory floodway boundaries shown on the DFIRM are requested by an appellant.

- Unless appeals are based on the use of alternative models or methodologies, the hydrologic analyses that appellants submit must be performed using the hydrologic models used by the study/project team. The hydrologic analysis methods used to study riverine flooding sources in Mississippi countywide studies are documented in Section 3.1 of the FIS report.
- Unless appeals are based on the use of alternative models or methodologies, the hydraulic analyses that appellants submit must be performed using the hydraulic models used by the study/project team. The hydraulic analysis methods used to study riverine flooding sources are documented in Section 3.2 of the FIS report.
- Information on the models used for the analysis of the hazards associated with coastal storm surge and wave action, including wave height and wave runoff, are documented in Section 3.2 of the FIS report. The ADCIRC-2DDI, SWAN 2-D, JPM-OS, and WHAFIS-1D models were used.
- Appellants may request that MDEQ or FEMA provide them with copies of the input and output data from the model(s) used by the study/project team or copies of other calculations or analyses performed by the study/project team. The community should submit such requests, in writing, to MDEQ at the address shown in the “Where To Send Support Data and Documentation” section of this document.
 1. 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, the appellant must show that several conditions have been met. The model used must have been reviewed and accepted for general use by a Federal agency responsible for floodplain identification or regulation or a notable scientific body.
 2. The model has been well documented (with a user's manual that includes source codes).
 3. The model must be available to all present and future parties affected by the DFIRM that has been developed or amended through the use of the model.
- If appeals or protests will involve changing the floodplain boundaries shown on the DFIRM, the appellant will be required to submit delineations of both the 1- and 0.2-percent-annual-chance floodplain boundaries if 1- and 0.2-percent-annual-chance floodplain boundary delineations are shown on the Preliminary DFIRM.
- If the study/mapping project included analyses of only the 1-percent-annual-chance flood for the flooding source that is the subject of an appeal/protest, the appellant must submit only the 1-percent-annual-chance floodplain boundary delineations in support of the appeal/protest.

Use of North American Vertical Datum of 1988

The National Geodetic Survey has determined that the national vertical control network needs to be readjusted. Therefore, FEMA has been converting NFIP maps gradually from the old national datum, National Geodetic Vertical Datum of 1929 (NGVD29), to a new national datum, North American Vertical Datum of 1988 (NAVD88).

When submitting an appeal or protest, the appellant must use the reference datum on the Preliminary version of the DFIRM. For the Preliminary versions of the DFIRMs for Mississippi counties NAVD88 is

the datum that must be used. For more information on NAVD, interested parties should reference the following FEMA reference documents:

- FIA-20, *Converting the National Flood Insurance Program to the North American Vertical Datum of 1988, Guidelines for Community Officials, Engineers, and Surveyors*,
- Appendix B, “Guidance for Converting to the North American Vertical Datum of 1988, of *Guidelines and Specifications for Flood Hazard Mapping Partners*.

These and other useful reference documents may be accessed through the FEMA Information Resource Library, which is located at www.fema.gov/library.

Where To Send Support Data and Documentation

Property owners and other individuals who would like to submit appeals or protests must submit their written request along with the required support data and documentation to the community CEO or other designated community official.

The community CEO or designated community official must submit all appeals and protests, with the required support data discussed in this document, to MDEQ. The MDEQ contact information for the submittal of appeals and protests is as follows:

Mr. Stephen Champlin
Mississippi Department of Environmental Quality
Office of Geology, Geospatial Resources Division
700 North State Street
Jackson, MS 39225