



FEMA

## APPEALING A PROPOSED FLOOD PLAIN ELEVATION

Community officials and individual property owners may submit formal objections to information shown on the proposed maps if they believe it is incorrect. If the objection involves the proposed base flood elevations (BFEs) and/or base flood depths shown on the map panels, it is considered an "appeal." All other objections are called "protests."

All appeals and protests must be filed in writing within the regulatory 90-day appeal period. That appeal period usually begins three to four weeks after the formal map presentation meeting—called the Community Coordination Outreach (CCO) meeting. (See Post-Mapping Study Appeal/Protest Process fact sheet)

### Appeals

Any owner or lessee of real property who believes their property rights are adversely affected by a proposed BFE may file a written appeal within the 90-day appeal period.

To appeal a BFE, an appellant needs to prove that the proposed elevations are scientifically or technically incorrect by providing documentation that demonstrates that alternative methods or applications result in more accurate estimates of BFEs for the property in question.

### Required documentation

Appeals are based on the following criteria and the technical and scientific data should prove such.

- ***Proposed BFEs are technically incorrect due to a mathematical or measurement error or changed physical conditions***

The specific source of the error must be identified. Supporting data provided to FEMA must include certifications by a registered professional engineer or licensed land surveyor with new data necessary for FEMA's reanalysis.

- ***Proposed BFEs are technically incorrect due to error in application of hydrologic, hydraulic or other information or the use of inferior data in applying such methods***

Appellant must demonstrate the errors by providing documentation:

1. Identifying the error in the application or the inferior data and support why it is believed to be incorrect
2. Providing application of same basic methods used by FEMA but using the documented changes
3. Providing background technical support for the changes with justification of why appellant's application is correct
4. Providing certification by a registered professional engineer or licensed land surveyor of any alternate data utilized or measurements made (such as topographic information)
5. Providing documentation of all locations where the appellant's base flood elevations are different from FEMA's

- ***Proposed BFEs are scientifically incorrect***

Appellant must demonstrate by providing documentation:

1. Identifying the methods, or assumptions that are scientifically incorrect
2. Supporting why the methods or assumptions are incorrect
3. Providing an alternative analysis using the methods or assumptions appellant believes to be correct
4. Providing technical support indicating why the appellant's methods should be accepted as correct
5. Showing all locations where the appellant's base flood elevations differ from FEMA's.

# How to Appeal or Protest the Proposed FEMA Map

There are fact sheets available for the public that will provide them with the guidance on how to use this process:

- Appeals and Protests, Supporting Data and Documentation  
[http://www.rampp-team.com/documents/region6/cco\\_handouts/appeals\\_and\\_protests.pdf](http://www.rampp-team.com/documents/region6/cco_handouts/appeals_and_protests.pdf)
- Appeals and Protests, Information for Owners  
[http://www.rampp-team.com/documents/region6/ap\\_outreach\\_owners.pdf](http://www.rampp-team.com/documents/region6/ap_outreach_owners.pdf)
- Appeals and Protests, Required Support Data and Documentation for Property Owners  
[http://www.rampp-team.com/documents/region6/ap\\_documentation\\_owners.pdf](http://www.rampp-team.com/documents/region6/ap_documentation_owners.pdf)
- How to Appeal a Base Flood Elevation  
[http://www.rampp-team.com/documents/region6/cco\\_handouts/how\\_to\\_appeal\\_bfe.pdf](http://www.rampp-team.com/documents/region6/cco_handouts/how_to_appeal_bfe.pdf)
- **IMPORTANT – this document should be included with each appeal/protest:**  
Application Information for Protest or Appeal of a Preliminary Flood Insurance Rate Map  
[http://www.rampp-team.com/documents/region6/ap\\_application.pdf](http://www.rampp-team.com/documents/region6/ap_application.pdf)

# Appeals and Protests

FEMA Region VI  
800 North Loop 288  
Denton, TX 76209



**FEMA**

## Required Support Data and Documentation for Property Owners

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### Introduction

Any individual property owner can **appeal** proposed base flood elevations (BFEs) or **protest** other information included on the preliminary digital maps, also known as DFIRMs. Both the appeal and protest must be supported by technical or scientific data and submitted to the appropriate community official within the designated "90-day appeal period" (See "*Appeals and Protests: Information for Property Owners*" for more details on the process.)

The following provides guidance on developing the technical and/or scientific data for an appeal or a protest.

### Appeals

- An appeal must be based on data and documentation showing that the proposed BFEs shown on the preliminary DFIRM and/or in a flood insurance study (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, and their contractors.
- Because numerous methodologies and models have been developed for estimating flood discharges and flood elevations under a variety of conditions, FEMA used their professional judgment in selecting methodologies and models that were appropriate for particular flooding sources.
- 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 and mapping projects, methodologies were used 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 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.

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## 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 must prove 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 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.

## 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).

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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.

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 FEMA 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.

### ***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 FEMA 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.

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;
- 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

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- 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.

### ***Appeals Based on Contention That Analysis Contains Indisputable Errors***

- To show that a mathematical error was made, an appellant must identify the error.
- The calculations provided to FEMA must indicate an overall change in the BFEs—base flood elevations.
- 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.
- Again, 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.
- Changes occurred prior to the start of the study, otherwise use Letter of Map Revision (LOMR).

### **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.

### **Protests**

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

- Road names and configurations.
- Corporate limits; and/or
- Floodplain boundary delineations;

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

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## **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 FEMA or that show more recent topographic conditions are submitted in support of a protest, 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, 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 FEMA or that are based on better data than those used by the study/project team.

## **Changes to Corporate Limits**

- The corporate limits shown on the preliminary DFIRM were taken from community maps obtained by FEMA from community officials.
- If a community submits a protest because changes to the corporate limits shown on the preliminary DFIRM are necessary, the community must submit an up-to-date community map to support the protest.
- FEMA may use the submitted community map to revise the corporate limits shown on the affected map 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, FEMA 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.

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## 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, future conditions, or projects started after the study is in progress.
- 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 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 run-up, are documented in Section 3.2 of the FIS report.
- Appellants may request that FEMA provide them with copies of the input and output data from the model(s) used by FEMA or copies of other calculations or analyses performed by the study/project team. The community should submit such requests, in writing, to FEMA at the address shown in the "Where to Send Support Data and Documentation" section of this document.
- As required by Title 44 of the US Code of Federal Regulations Paragraph 65.6(a) (6) states that when appeals are based on the use of an alternative hydrologic or hydraulic model, the appellant must show that several conditions have been met.

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- 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.
  - The model has been well documented (with a user's manual that includes source codes).
  - 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 DFIRM. NAVD88 is the datum used along with the latest datum adjustments.
- 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*.
- Interested parties may locate these reference documents in the FEMA Information Resource Library, which is located at [www.fema.gov/library](http://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.

Harris County PID  
10555 Northwest Freeway, Suite 120  
Houston, Texas 77092



# Appeals and Protests

## Information for Property Owners

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FEMA Region VI  
800 North Loop 288  
Denton, TX 76209



**FEMA**

### Introduction

The preliminary flood hazard maps being presented represent the most up-to-date, accurate information ever developed for the state. These maps, once finalized, serve as the basis for the communities' floodplain management and the primary tool in preventing loss of life and property due to flooding.

Property owners have an opportunity to review these preliminary maps—also known as the Digital Flood Insurance Rate Maps (DFIRMs)—during a formal public comment period. It is during this “90-day Appeal Period” in which objections (appeals or protests) to information shown on the digital map or in the accompanying Flood Insurance Study (FIS) report may be submitted to FEMA for consideration.

FEMA welcomes public input through the appeals and protests process. Additional proven scientific and technical information increases the accuracy of the maps and better reflects the community's flooding risks. The following information defines what constitutes an appeal or protest and explains the process by which a property owner may take such action.

### What is an Appeal?

Determining the Base Flood Elevation (BFE) within a community is a major component of the mapping process. The BFE is the elevation – above sea level, for example – of the flood having a 1-percent-chance of being equaled or exceeded in any given year. This becomes the basis for the detailed floodplain boundaries, flood insurance risk zones, and regulatory floodway boundaries shown on the DFIRM panels. If an objection to the map involves the proposed BFEs, it is considered an **appeal**.

### What is a Protest?

If an objection does not involve the proposed Base Flood Elevations shown on the digital map panels and in the FIS report materials, it is considered a **protest**. Protests usually involve changes to items such as roads and road names, corporate limits, floodway limits, and floodplain boundary delineations.

(Please see the document “Appeals and Protests: Required Support Data and Documentation” for detailed information on the technical information needed to support an appeal or protest.)

### Activities Leading Up To Appeal Period

FEMA formally presents both paper and digital copies of the preliminary maps to community officials at a county meeting and explains the map publication and adoption process in detail. FEMA encourages each community to publicize and display the maps and, if requested, may assist at public meetings. These meetings allow local residents and business owners to view the maps, ask questions and find out more information regarding their flooding risk.

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## The Appeals Period Process

After holding the formal meetings with community officials, FEMA will prepare the materials below:

- Listings of Base Flood Elevations shown on the preliminary digital maps, which are posted on the FEMA Website at [www.fema.gov/plan/prevent/fhm/bfe](http://www.fema.gov/plan/prevent/fhm/bfe).
- A legal notice, called a Proposed Rule, which is published in the FEDERAL REGISTER; Public notices announcing the start of this public comment period and the posting of the BFE listings, which are published twice in local newspapers with wide circulation.

On the date of the second publication of the public notice in the local newspaper, the 90-day appeal period begins. During the 90-day period, any individual property owner who wishes to file an objection to the BFEs or other information in preliminary map and preliminary FIS report should submit their appeal or protest along with the required scientific or technical data to the community official designated to manage this process. (See "Appeals and Protests: Required Support Data and Documentation").

Community officials will review each appeal and protest to determine whether the information or data submitted is sufficient to forward to FEMA. Once FEMA receives it, FEMA will request any additional support data through a letter to community officials who will then contact the property owner for the additional data. FEMA will allow approximately 30 days for submittal of the required data. Data submitted within the 30-day period will be considered in resolving the objections. If the data is not provided within the 30-day period, FEMA will resolve the appeals or protests using the data originally submitted.

If appeals and/or protests are adequately supported, FEMA will revise the Base Flood Elevations, floodplain boundaries, regulatory floodway boundaries, and any other information affected by the objections. If appropriate, FEMA will revise the affected map panel(s) and/or FIS report material(s).

If an appeal or protest is denied, FEMA will inform the community or other interested parties by letter and provide an explanation for the denial.

If property owners are unable to obtain and submit the appropriate support data within the 90-day appeal period, they may pursue a formal map revision after the map has become effective through a Letter of Map Change.



# Appeals and Protests

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800 North Loop 288  
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## Required Support Data and Documentation for Community Officials

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### Introduction

Any individual property owner can **appeal** proposed base flood elevations (BFEs) or **protest** other information included on the preliminary digital maps, also known as DFIRMs. Both the appeal and protest must be supported by technical or scientific data and submitted to the appropriate community official within the designated "90-day appeal period" (See "Appeals and Protests: Information for Community Officials" for more details on the process.)

The following provides guidance on developing the technical and/or scientific data for an appeal or a protest.

### Appeals

- An appeal must be based on data and documentation showing that the proposed BFEs shown on the preliminary DFIRM and/or in a flood insurance study (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, and their contractors.
- Because numerous methodologies and models have been developed for estimating flood discharges and flood elevations under a variety of conditions, FEMA used their professional judgment in selecting methodologies and models that were appropriate for particular flooding sources.
- 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 and mapping projects, methodologies were used 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 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.

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## 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 must prove 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 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.

## 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:

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- Explanation for the superiority of the new application;
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- Revised Flood Profiles for the FIS report;
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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.

### ***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 FEMA 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.

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;
- 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.

### ***Appeals Based on Contention That Analysis Contains Indisputable Errors***

- To show that a mathematical error was made, an appellant must identify the error.
- The calculations provided to FEMA must indicate an overall change in the BFEs—base flood elevations.
- 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.
- Again, 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.
- Changes occurred prior to the study, otherwise use Letter of Map Revision (LOMR).

## **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.

## **Protests**

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

- Road names and configurations.
- Corporate limits; and/or
- Floodplain boundary delineations;

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

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## **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 FEMA or that show more recent topographic conditions are submitted in support of a protest, 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, 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 FEMA or that are based on better data than those used by the study/project team.

## **Changes to Corporate Limits**

- The corporate limits shown on the preliminary DFIRM were taken from community maps obtained by FEMA from community officials.
- If a community submits a protest because changes to the corporate limits shown on the preliminary DFIRM are necessary, the community must submit an up-to-date community map to support the protest.
- FEMA may use the submitted community map to revise the corporate limits shown on the affected map 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, FEMA 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.

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## 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, future conditions, or projects started after the study is in progress.
- 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 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 run-up, are documented in Section 3.2 of the FIS report.
- Appellants may request that FEMA provide them with copies of the input and output data from the model(s) used by FEMA or copies of other calculations or analyses performed by the study/project team. The community should submit such requests, in writing, to FEMA at the address shown in the "Where To Send Support Data and Documentation" section of this document.
- As required by Title 44 of the US Code of Federal Regulations Paragraph 65.6(a) (6) states that when appeals are based on the use of an alternative hydrologic or hydraulic model, the appellant must show that several conditions have been met.

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- 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.
  - The model has been well documented (with a user's manual that includes source codes).
  - 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 DFIRM. NAVD88 is the datum used along with the latest datum adjustments.
- 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*.
- Interested parties may locate these reference documents in the FEMA Information Resource Library, which is located at [www.fema.gov/library](http://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 along with the required support data discussed above to:

Federal Emergency Management Agency  
Frank Pagano, Director  
Mitigation Division  
800 North Loop 288  
Denton, TX 76209-3698  
Telephone: (940) 898-5399  
Fax: (940) 898-5195



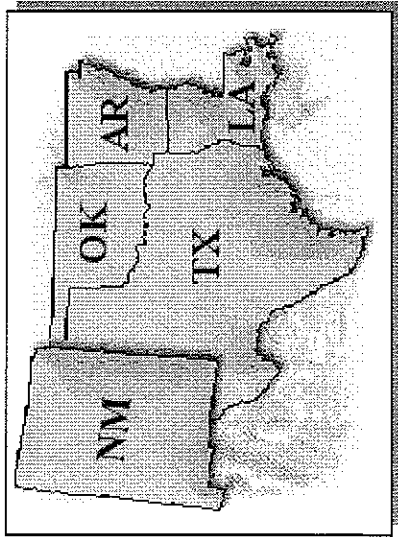
**Who has the right to appeal?**

Any owner or lessee of real property within a community where a proposed Base Flood Elevation is established or revised can file an appeal. The appellant must file a written appeal with FEMA within 90 days of the second newspaper publication.

**What is the basis for an appeal?**

The sole basis for an appeal must be the possession of knowledge or information indicating that the elevations proposed by FEMA are scientifically or technically incorrect.

**A protest is an objection to any information, other than BFE's, shown on a National Flood Insurance Program (NFIP) map that is submitted by community officials or interested citizens through the community officials during the 90-day appeal period.**



*Map of FEMA Region VI*



**F E M A R e g i o n V I**

Frank Pagano  
Federal Insurance and Mitigation Director  
Federal Emergency Management Agency  
FRC 800 North Loop 288  
Denton, TX 76209-3698  
Phone: 940-898-5165

**Baker**

**R M C , F E M A R e g i o n V I**

Michael Baker Jr., Inc.  
101 S. Locust St., Suite 300  
Denton, TX 76201  
Phone: 940-783-4155  
Fax: 940-783-4144

**National Flood Insurance Program:**

**How to Appeal a Proposed BFE**



**Baker**

# The Appeals Process

When Preliminary Flood Insurance Studies (FIS) and Digital Flood Insurance Rate Maps (DFIRM) establish new or revised Base Flood Elevations (BFE's), the community is given the opportunity to appeal the BFE's. After a thirty day review period, in which the public can review the preliminary information, the proposed BFE's are published on the web at [http://www.fema.gov/plan/prevent/firm/st\\_main.shtml](http://www.fema.gov/plan/prevent/firm/st_main.shtml), and a notification is placed in a local newspaper alerting the public of the proposed BFE change. After the second newspaper notice, the 90-day appeal period begins.

## Code of Federal Regulations 67.5 Right of appeal:

Any owner of property within a community where a proposed flood elevation determination has been made, who believes their property rights to be adversely affected by the proposed determination, may file a written appeal with their local floodplain administrator within ninety days of the second newspaper publication of the proposed determination. (paraphrased)

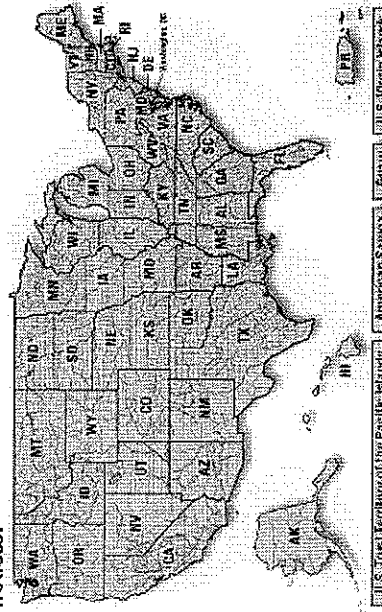
**Flood Insurance Rate Map (FIRM)** is an official map of a community, on which the local floodplain administrator has delineated both the special hazard areas and the risk premium zones applicable to the community.

An appeal is a formal objection to proposed base flood elevations. Appeals may be submitted by a community or individual resident during the 90-day appeal period. They must be based on data that show the proposed base flood elevations are scientifically or technically incorrect.

## Steps in the Appeals Process

- All inquiries of maps and requests for changes should be directed to a local community official.
- The local community official will collect all appeals and submit them to FEMA before the end of the 90-day appeal period.
- Supporting information or data should be submitted with the formal appeal.
- FEMA will send an acknowledgement letter to the local community official that the appeals have been received.
- After all cases have been reviewed and determinations are finalized, if necessary, a Revised Preliminary will be issued to the community.

Status of Map Changes  
Select a State for information about ongoing map change activities within it, including Base Flood Elevation (BFE) notices.



BFE Listings on FEMA's Website



FEMA

# Application Information for Protest or Appeal of a Preliminary Flood Insurance Rate Map

*(Submit this form along with the Supporting Technical Data and  
provide as much Digital Data possible when applicable.)*

<u>Location of Protest or Appeal</u>
Community Name _____
Watershed/Stream Name _____
Street Name with Cross Street _____
Preliminary Flood Insurance Rate Map Panel Number _____

## Applicant's Contact Information

Full Name \_\_\_\_\_ Company (If Applicable) \_\_\_\_\_

Mailing Address \_\_\_\_\_ Phone Number (\_\_\_\_) \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

E-mail Address (Optional) \_\_\_\_\_

## Type of Request: Please Indicate if You Are Submitting a Protest OR an Appeal *(A separate form must be filled out for each submission.)*

\_\_\_\_\_ **Protest** – To protest a floodplain boundary, street or stream name/location, or other map information, submit certified topographic maps or other certified ground elevation data that are of greater detail and/or more recent than those used for the preliminary map panel in question. In addition, the requested changes to the floodplain should be marked on the topographic mapping and flood map panel. **Note:** Protest of a floodway requires updated hydraulic modeling, and is submitted as an appeal.

### Technical Information you are submitting with the Protest Request (check all that apply)

- Certified Topographic Information (No certification needed if it is a government product, such as a USGS Map).
- Elevation Certificate Signed and Sealed by a Licensed Surveyor or Professional Engineer.
- Copy of the Preliminary Flood Insurance Rate Map Panel (with requested changes to the floodplain drawn on it).
- Other Information \_\_\_\_\_

\_\_\_\_\_ **Appeal** – Depending on what specific aspect of the study is being challenged, various types of data are required to support an appeal. In some cases, the applicant is required to submit a revised flood study, including updated hydrologic and/or hydraulic analyses, flood profiles, and floodplain and floodway boundaries, using alternate methods or data that are believed to be superior to those used in the preliminary study. A flood study determines **proposed base flood elevations** (BFEs) along a stream, and involves collection of historical and physical data, followed by analyses using hydrologic methods to determine flow rates and hydraulic modeling to determine water-surface elevations.

### Technical Information you are submitting with the Appeal Request (check all that apply)

- New Digital Model Data (including updated hydrologic and hydraulic analyses, digital data and any revised flood profiles)
- Other Information \_\_\_\_\_

Please mail this application, along with all supporting technical data,  
to the following address:

FEMA, Region VI  
Attn: Frank Pagano  
800 North Loop 288  
Denton, TX 76209-3698

For more information, please call (940)898-5399 or Fax (940)898-5195