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## Appeals and Comments: Required Support Data and Documentation for Property Owners

Any community or individual property owner can **appeal** proposed changes to flood hazard information or **comment** on other information included on the preliminary flood hazard maps, also known as Flood Insurance Rate Maps (FIRMs) and in the preliminary Flood Insurance Study (FIS) report. Appeals and comments are subject to the data requirements outlined below and must be submitted to the appropriate community official within the designated “90-day appeal period” who will provide to FEMA for review (see “Appeals and Comments: Information for Property Owners” for more details on the process). The following provides guidance on developing the required data for an appeal or a comment.

### **Appeals**

Additions or changes to flood hazard information shown on the preliminary FIRM and in the accompanying FIS report, which may include Base Flood Elevations (BFEs), base flood depths, Special Flood Hazard Area (SFHA) boundaries or Zone designations and/or regulatory floodways, are eligible to be appealed. This flood hazard information is developed by experienced engineers and mapping professionals using the latest engineering methods and computer models.

*The regulatory floodway is the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water-surface elevation more than a designated height.*

SFHAs are areas subject to inundation by the base flood and include the following flood insurance risk 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.

Because numerous methodologies have been developed for estimating flood discharges, elevations, and other flood hazard information, professional judgment is used to select methodologies appropriate for a particular flooding source. The approach to be used is usually discussed with community officials at the beginning of the flood mapping process. Because the methodologies are the result of attempts to reduce complex physical processes to mathematical models, the methodologies include simplifying assumptions. The results are also affected by the amount of data collected and the precision of any

measurements made.

An appeal must be based on data and documentation showing the proposed flood hazard information shown on the preliminary FIRM or in the FIS report is scientifically or technically incorrect. Appellants need to demonstrate better methodologies, assumptions or data exists and provide alternative analyses that incorporate those methodologies, assumptions, or data if appropriate. The results must show an overall change in the flood hazard information shown on the preliminary FIRM



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and/or in the FIS report. The data that must be submitted in support of the various types of appeals are discussed in the sections that follow.

### **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.

- To show 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.

1. The methodology was not applied correctly.
  - To show 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;



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- 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 a **hydraulic methodology** was not applied correctly, an appellant must submit the following information.
  - 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 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.

2. The methodology was based on insufficient or poor-quality data.

- To show 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 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;



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- 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 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.

### 3. The application of the methodology included indisputable mathematical or measurement errors.

To show 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 a measurement error (e.g., an incorrectly surveyed elevation was used) 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.

### 4. 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.

## **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 (i.e., with BFEs established) or flooding sources studied by approximate methods (i.e., with no BFEs established), 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 mapping study. If



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topographic data is available which is more detailed than that used by FEMA or which shows more recent topographic conditions, appellants should submit the data and the revised SFHA zone boundaries for FEMA to incorporate into the affected map panels.

### **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/or 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.

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 as discussed 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 floodplains, these materials will not need to be submitted for appeals to flooding sources studied by approximate methods.

### **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.

### **Certification Requirements for 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.



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## General Technical Guidance

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

- New flooding information cannot be added to a FIRM panel in such a way as to create mismatches with the flooding information shown for adjacent FIRM 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 FIRM panel(s) for areas that are not affected by the appeal.
- For appeals involving new flood discharge values, extensive changes in hydraulic conditions, or complex situations in which changes made to the flooding information developed for one flooding source will affect that developed for others, appellants may be required to provide new information for a large portion of the mapped area.
- Appeals 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 FIRM are requested by an appellant.
- Unless appeals are based on the use of alternative models or methodologies, the hydrologic and/or hydraulic analyses that appellants submit must be performed using the hydrologic and/or hydraulic models used by the study/project team.
- Information on the models used for the analysis of the flood hazards shown on the preliminary FIRM is provided in the preliminary 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.
- 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.
  - 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 FIRM that has been developed or amended through the use of the model.



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If appeals will involve changing the floodplain boundaries shown on the FIRM, 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 FIRM.

## **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, the appellant must use the reference datum on the preliminary FIRM. 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).

## **Comments**

Comments generally involve requests for changes to information shown on the preliminary FIRM and in the FIS report other than flood hazard data, such as corporate limit boundaries, road names and configurations, and other non-appealable changes.

## **Changes to Corporate Limits**

The corporate limits shown on the preliminary FIRMs were taken from community data obtained by FEMA from local community officials. If changes to the corporate limits shown on the preliminary FIRMs are necessary, a community map or GIS dataset showing the current corporate limits must be provided.

## **Changes to Road Names and Other Base Map features**

On the preliminary FIRMs, FEMA has shown all roads that are in or adjacent to the 1-percent-annual-chance floodplain. Property owners may provide a map showing more up-to-date information on locations and names of roads in or adjacent to floodplains if necessary.



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## **Where to Send Support Data and Documentation**

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