Chapter 7
Floodway Revisions

The regulatory floodways shown on National Flood Insurance Program (NFIP) maps—Flood Boundary and Floodway Maps (FBFMs), Flood Insurance Rate Maps (FIRMs), or Digital Flood Insurance Rate Maps (DFIRMs)—are developed by/for the Federal Emergency Management Agency (FEMA) as part of detailed flood hazard studies and are adopted by communities for use in establishing sound floodplain management programs. By restricting development in the regulatory floodway, a community can preserve the conveyance area necessary for the passage of floodwaters and avoid significant increases in flood elevations.

Although the boundaries of the regulatory floodway are intended to remain unchanged once they are established and adopted by the community, the community may find it necessary, in response to extraordinary circumstances, to change the configuration of the regulatory floodway.

7.1 Background

Although fill may be placed or construction carried out in floodplains in such a way that the flood hazards to development will be minimal, the effect of such activities on existing development, both upstream and downstream, must be considered. Encroachments, such as construction and placement of fill, within the 1-percent-annual-chance floodplain can increase flood levels by blocking areas of the floodplain that would otherwise be open and able to convey floodwaters.

To achieve a balance between benefits to be gained from floodplain development and the resulting increase in flood hazards, and to help communities regulate such development and avoid significant increases in Base (1-percent-annual-chance) Flood Elevations (BFEs), FEMA establishes regulatory floodways. The limits of the regulatory floodway are determined through a hydraulic analysis in which the increase in the -percent-annual-chance flood elevation (the surcharge) due to encroachment within the 1-percent-annual-chance floodplain is calculated.

FEMA has established as a standard a maximum allowable surcharge of 1.0 foot. Because the surcharge generally increases as the amount of encroachment increases, setting a limit on the magnitude of the surcharge sets limits on the amount of encroachment that may take place. A regulatory floodway based on a maximum allowable surcharge of 1.0 foot is therefore the channel of a stream plus the portion of the floodplain adjacent to it that must be kept free of encroachment so that the entire 1-percent-annual-chance flood can discharge with no greater than a 1.0-foot increase to the BFE.

The portions of the flood zone outside the regulatory floodway are referred to as the floodway fringe. Once a regulatory floodway has been established, the community may allow development in the floodway fringe with the assurance that flood hazards will not be increased significantly. However, all such development must meet the minimum floodplain management standards required for participation in the NFIP.

Several States have adopted requirements that limit the allowable surcharge to less than 1.0 foot. For the following States that have adopted more stringent standards by legally enforceable statutes or regulations, FEMA computes the regulatory floodways using those standards.

- New Jersey 0.2 foot
- Puerto Rico 0.3 meter
- Illinois 0.1 foot
- Indiana 0.1 foot
- Michigan 0.1 foot
- Minnesota 0.5 foot
- Wisconsin 0.0 foot
- Montana 0.5 foot

In addition, some individual communities have established and enforce more stringent standards. Although the NFIP maps for such communities usually depict regulatory floodways based on a 1.0-foot surcharge, FEMA encourages the adoption of more stringent standards.

Once a regulatory floodway has been adopted by the community, any encroachments within the regulatory floodway that would increase the elevations during the 1-percent-annual-chance flood are prohibited. Such encroachments could include fill, new construction, substantial improvements, and other types of development.

In this *Guide*, when a 1.0-foot surcharge is referenced, the assumption has been made that there is no more stringent State or local surcharge standard. Where such a standard exists, the allowable surcharge is limited to that standard. In addition, where a flooding source with a regulatory floodway forms the boundary between two communities or two States, the allowable increase in the BFE due to encroachment in one community or State is limited to 0.5 foot, unless a more stringent State standard has been established.

Regulatory floodways are developed for streams studied by detailed methods as part of the hydraulic analyses performed for those streams. The most common method that FEMA uses to develop regulatory floodways is referred to as the "equal conveyance reduction method," in which the hydraulic computer model is modified so that equal amounts of hydraulic conveyance are eliminated from opposite sides of the 1-percent-annual-chance flood zone until the allowable increase in the BFE is reached.

When it is necessary to develop regulatory floodways with specific configurations requested by the community, unequal reductions of conveyance area may be used. A regulatory floodway is a reasonable depiction of the area that must be kept open to convey floodwaters and is not necessarily the minimum area required to meet FEMA or State standards.

Once adopted by the community, a particular regulatory floodway configuration becomes administratively established and the limits of the regulatory floodway are intended to remain unchanged. However, in one situation, a community must request conditional approval of a floodway revision; in two other situations, a community may find it necessary to request a floodway revision, as explained below.

A community must obtain a floodway revision or Conditional Letter of Map Revision from FEMA before permitting an encroachment into a regulatory floodway that would cause any increase in 1-percent-annual-chance flood levels. Before FEMA can grant such a request, the community must apply to FEMA for conditional approval of the proposed project. The data the community must submit in support of such an application to revise the regulatory floodway, and the procedures FEMA will follow in reviewing and responding to the application, are discussed in Chapter 6. If the community has demonstrated through hydrologic and hydraulic analyses that the proposed encroachment will not cause any rise in flood levels, then a "no-rise" certification can be used to document the analyses, and no application to FEMA is required.

A community may request a regulatory floodway revision in the following situations:

- When an appeal or a map revision results in changes to effective BFEs; and
- When, for good cause, the community wishes to shift the regulatory floodway or change its configuration in some way.

Appeals and map revisions that result in changes to BFEs are generally supported by new or revised hydraulic analyses that involve modification of the original hydraulic computer model. Because the regulatory floodway is developed with that model and the regulatory floodway width depends on a specified increase in the BFEs, changes to regulatory floodways may be a part of any appeal or map revision that results in changes to BFEs on flooding source studied using detailed methods.

If a levee system has been constructed along the flooding source that is the subject of the appeal or map revision, the requirements documented in Appendix H, Section H.5 of FEMA's *Guidelines and Specifications for Flood Hazard Mapping Partners* must be met. The *Guidelines and Specifications* are accessible through a dedicated page on the FEMA Website, located at http://www.fema.gov/plan/prevent/fhm/gs_main.shtm, or may be downloaded directly from the FEMA Library (http://www.fema.gov/library/index.jsp).

When a levee is present, the regulatory floodway analysis is performed using standard equal- conveyance methods for the "without levee" analysis. The "without levee" analysis includes the ground geometry of the levee within the cross sections, but does not assume that the levee impedes conveyance.

The resulting regulatory floodway boundary is then delineated as follows:

- If the regulatory floodway boundary falls entirely riverward of the levee, the boundary is shown at its computed location unless the FEMA Regional Office and community/State elect to show the regulatory floodway on the landward toe of the levee; the community/State must agree to enforce the widened regulatory floodway.
- If the regulatory floodway boundary is computed to be between the riverward and

landward toes of the levee (i.e., within the geometry of the levee itself), then the regulatory floodway boundary should be delineated on the landward toe.

- If the regulatory floodway boundary falls entirely landward of the levee, then the floodway boundary should be shown at its computed location.

It is important to note that, if the levee itself lies within the designated regulatory floodway, this does not preclude flood-fighting efforts along that levee.

7.2 Application Forms

In 1992, FEMA developed the MT-2 application forms and instructions for revisions to NFIP maps to make the regulatory floodway revision process quicker and more efficient. The MT-2 forms provide step-by-step instructions for requesters to follow and are comprehensive, ensuring that the requesters' submissions are complete and more logically structured. This allows FEMA staff to complete their review quicker and at lower cost to the NFIP.

While completing the forms may seem burdensome, experience has shown that the advantages to the requesters outweigh any inconvenience. These forms are discussed in more detail later in this chapter.

7.3 Fee-Charge System

To reduce the expenses to the NFIP by more fully recovering the costs associated with processing map change requests, FEMA implemented a procedure to recover costs associated with reviewing and processing such requests. The fee schedule for map change requests is provided in Table D-1 in Appendix D of this *Guide*.

FEMA reviews its fee-charge procedures periodically (usually, once every 2 years) and may revise the review and processing fees for map change requests. Therefore, interested parties should visit the following page on the FEMA Website for the most up-to-date information: http://www.fema.gov/plan/prevent/fhm/frm_fees.shtm.

Certain map change requests may qualify for exemptions in accordance with Section 72.5 of the NFIP regulations, as summarized on the above-referenced Web page and in Appendix D, and include changes that correct mapping errors, natural changes, and better quality data that do not partially or wholly incorporate manmade modifications within the SFHA.

7.4 North American Vertical Datum of 1988

Since the National Geodetic Survey determined that the national vertical control network needed to be readjusted, FEMA has been gradually converting NFIP maps from the National Geodetic Vertical Datum of 1929 (NGVD29) to the North American Vertical Datum of 1988 (NAVD88) in the contiguous United States. Therefore, when submitting a regulatory floodway revision request, requesters should use the reference datum shown on the applicable, effective FIRM/DFIRM panel.

For more information on the conversion from NGVD29 to NAVD88, requesters should refer to FIA-20, *Converting the National Flood Insurance Program to the North American Vertical Datum of 1988, Guidelines for Community Officials, Engineers, and Surveyors*, and to Appendix B, "Guidance for Converting to the North American Vertical Datum of 1988," of FEMA's *Guidelines and Specifications for Flood Hazard Mapping Partners*. These guidance documents are available from the FEMA Library (http://www.fema.gov/library/index.jsp). Information on how to obtain copies of these and other useful guidance documents is provided in Appendix B of this *Guide*.

7.5 How To Request a Floodway Revision

A request to revise the regulatory floodway may be submitted during the 90-day appeal period or after the NFIP map on which the regulatory floodway is shown has become effective. A request for a revision to a regulatory floodway submitted during the appeal period will be handled as a formal comment on the Preliminary or Revised Preliminary version of the map and FIS report. (See Chapter 3 of this *Guide* for additional information on comment processing requirements.) Any request submitted after the effective date of the NFIP map will be handled as a map revision request in accordance with Part 65 of the NFIP regulations.

Because the community selects and adopts the regulatory floodway, all requests for changes to regulatory floodways must be made or approved by community officials. FEMA will not revise a regulatory floodway without the approval of the community. Because the Chief Executive Office (CEO) of the community is responsible for ensuring that the community meets the obligation to regulate floodways, FEMA will work with the CEO or a local official designated by the CEO, such as a floodplain administrator (FPA), city planner, or city engineer, in evaluating requests that involve changes to regulatory floodways.

For this reason, any individual property owner, developer, or other person who wishes to request a map change that involves the regulatory floodway must complete the MT-2 application forms, and must have the community CEO, FPA, or other designated official approve this requested change by completing the appropriate sections of Form 1, "Overview & Concurrence Form."

To request a map revision to change the regulatory floodway only, the requester must complete the MT-2 application forms. Requesters may obtain paper copies of these forms and the step-by-step instructions from the Map Specialists in the FEMA Map Assistance Center (FMAC). Requesters may contact the FMAC by telephone, toll free, at 1-877-FEMA MAP (1-877-336-2627), or send an e-mail message to FEMAMapSpecialist@riskmapcds.com. For hours of operation and to learn more about FMAC services, interested parties should visit the FMAC page: http://www.fema.gov/plan/prevent/fhm/fmc_main.shtm.

Requesters also may download Word, PDF, and TXT versions of the MT-1 application forms and instructions from the FEMA Library

(http://www.fema.gov/library/index.jsp). The forms and instructions also are accessible through the following page on the FEMA Website: http://www.fema.gov/plan/prevent/fhm/dl_mt-2.shtm.

Completed application forms, supporting data and documentation, and review and processing fees for a request to revise the regulatory floodway are to be submitted to:

LOMC Clearinghouse
6730 Santa Barbara Court
Elkridge, MD 21075

Payment of the review and processing fee may be made by credit card, check, or money order. Checks and money orders are to be made payable in U.S. funds to the National Flood Insurance Program. If a revision requester chooses to use a credit card, the credit card information is to be provided on the "Payment Information Form" that is included in the MT-2 forms package.

An assigned FEMA Fee-Charge System Administrator (FCSA) will review the check, money order, or payment information and, if appropriate, deposit the payment in the National Flood Insurance Fund (NFIF). If the FCSA identifies any irregularities with the payment, the FCSA will not deposit the payment in the NFIF. In such instances, FEMA will send a letter to the requester explaining any additional actions the requester must take to allow FEMA to process the request.

7.6 Supporting Data and Documentation Required for Floodway Revisions

FEMA cannot make regulatory floodway revisions without adequate supporting data and documentation. Table 7-1 lists the types of supporting data and documentation required to support revisions to regulatory floodways.

Many States require communities to follow administrative procedures for establishing and revising regulatory floodways, and the limits of the regulatory floodway are established through engineering analyses. Therefore, both legal documentation and technical data must be submitted.

In addition, as development takes place in the floodway fringe, an increasing amount (if not all) of the allowable surcharge is used. Therefore, a revised regulatory floodway must be configured in such a way that it will continue to convey the 1-percent-annual-chance flood discharge with no greater than the allowable increase (1.0 foot, unless a lower surcharge is to be used) in the original BFEs (i.e., the BFEs on which the unrevised regulatory floodway is based) at any point. If the regulatory floodway revision is part of a revision that results in BFEs lower than those on the map that is to be revised, the surcharge limit (1.0 foot, unless a lower surcharge is to be used) applies to those lower BFEs.

Table 7-1. Supporting Data and Documentation for Floodway Revisions

Supporting Data Type	Revisions Made as Part of Appeal	Revisions Made as Part of Map Revision
Copy of public notice stating community's intent to revise regulatory floodway and statement that community has notified affected property owners and/or adjacent jurisdictions	X	X
Copy of letter notifying State/Commonwealth/Territory of revisions to regulatory floodway	X	X
Documentation of approval of revised regulatory floodway by appropriate State agency (for communities where State has jurisdiction over regulatory floodway or its adoption by communities participating in the NFIP)	X	X
Original hydraulic computer model revised to include all encroachments that have occurred in floodplain since original regulatory floodway was developed		X
New regulatory floodway limits incorporated into floodway analysis in revised computer model		X
New regulatory floodway limits incorporated into hydraulic computer model used for determination of new BFEs for the appeal	X	
New regulatory floodway limits set so that combined effects of these limits, past encroachment, and changes on which the appeal is based do not increase original BFEs or those resulting from appeal by more than the allowable amount	X	
Regulatory floodway limits set so that combined effects of these limits and past encroachment do not increase original BFEs by more than the allowable amount		X
Delineation of revised regulatory floodway boundaries shown on same work map as that used for delineation of revised flood zone boundaries computed in hydraulic model for appeal or map revision	X	X
Delineation of revised regulatory floodway boundaries on copy of effective NFIP map		X

7.7 Floodway Revision Processing Procedures

Requests for regulatory floodway revisions that are submitted as part of an appeal of the proposed BFEs shown on a Preliminary or Revised Preliminary map and associated FIS report are handled in accordance with the procedures detailed in Chapter 3. A regulatory floodway revision that results from map revision requests involving changes to BFEs shown on an effective map and accompanying FIS report or a map revision request that involves only the regulatory floodway are handled according to the procedures detailed in Chapter 4.

However, if a request submitted during the 90-day appeal period involves a change to the BFEs, it will be handled as an appeal; if a request submitted during the 90-day appeal period does not involve a change to the BFEs, it will be handled as a formal comment. The appeal or comment will then be handled as described below.

After receiving the request, FEMA will send an acknowledgment letter to the CEO(s) and FPA(s) of the affected communities. If the request is submitted by a private party or a community official other than a CEO or FPA, FEMA will also send a copy of the acknowledgment letter to that requester.

During its review of the request, FEMA will communicate by letter with the CEO(s), FPA(s), or other community official(s) designated by the CEO(s). If the request was submitted by a private party who is not affiliated with the affected community or communities, FEMA also will send copies of letters to the requester.

If additional data or documentation are needed to support the request, FEMA will request the data by letter to the CEO, FPA, or other designated community official. To avoid spending time reviewing poorly documented requests, FEMA allows 30 days for the community to provide the requested data and/or documentation.

If the data and/or documentation are not provided by the deadline included in the FEMA letter, FEMA will complete the review using the data originally submitted. If the requested data and/or documentation are provided on or before the deadline, FEMA will consider them in its review.

After reviewing all supporting data and documentation, FEMA will determine whether the revision is warranted. If no revision is warranted, FEMA will inform the community by letter that the request is denied.

If a revision is warranted, FEMA will inform the community by letter when and how the revised regulatory floodway will be incorporated into the map. The revised regulatory floodway data will be incorporated into the FIS report at the same time.

As with other revisions, FEMA will address correspondence to the community CEO(s), and will provide copies to the community FPA(s), other identified community official(s), and to any non-community revision requester(s) if appropriate.

In compiling data for a floodway revision request, the requester should keep the following in mind:

- The required data will vary with each request; therefore, requesters should refer to the MT-2 application forms package for details.
- FEMA may request data other than those shown in Table 7-1.
- All analyses and data submitted must be certified by a Registered Professional Engineer; survey data must be certified by a Licensed Land Surveyor.
- The letter notifying the State of revisions to the regulatory floodway is required only when the State has jurisdiction over the regulatory floodway or its adoption.
- Copies of input and output data from the original and modified regulatory floodway computer models must be submitted.