



FEMA



# New Levee Approach in Development

## Background

As part of the National Flood Insurance Program, FEMA is responsible for analyzing and identifying the flood hazard associated with the 1-percent-annual-chance flood event or base flood event. The flood hazard associated with this event is shown on Flood Insurance Rate Maps (FIRMs). Currently if a levee or other flood protection system does not meet the requirements detailed in the Code of Federal Regulations (CFR) Title 44, Chapter 1, Section 65.10 (44CFR65.10), they are not “accredited” and FEMA maps the area as if the system does not exist. This approach is commonly referred to as the “without levee” approach.

In March 2011, Administrator Fugate committed to replace the singular “without levee” approach with an approach that is more sound, credible, and cost effective. FEMA had previously received inquiries from stakeholders expressing their concerns about FEMA’s “without levee” approach. The U.S. Congress echoed this concern earlier this year when members of both the House and Senate asked FEMA to consider discontinuing the use of their current approach. Given the significant technological advances in data collection and flood hazard modeling in the recent years, FEMA acknowledged that creating an approach with many options that can be applied to a variety of situations would better meet the needs of the American public and provide more precise results.

The objective of this effort was to create an approach that would be flexible, collaborative and feasible. FEMA would also set out to determine the best way to replace the current analysis with a new approach to map non-accredited levees.

## The Process

FEMA convened a multidisciplinary Project Team with representatives from FEMA, the U.S. Army Corps of Engineers (USACE), and experts from the academic and engineering communities to develop the new approach. The Project Team explored a spectrum of options, evaluated analysis and mapping methods for multiple levee scenarios, assessed their feasibility, and tested them in simulations using real life situations. FEMA engaged internal and external stakeholders during the development of the approach, and shortly following asked independent experts and community officials for feedback.

## Levee-Impacted Studies

On-going flood studies with at least one levee system categorized as non-accredited may be impacted by the new levee approach.

A “non-accredited” levee is one that does not provide protection from the base flood per the criteria of 44CFR65.10. This includes de-accredited levees as well.

For more information on the development of the proposed approach please visit:

[www.fema.gov/plan/prevent/fhm/lv\\_lamp.shtm](http://www.fema.gov/plan/prevent/fhm/lv_lamp.shtm)

## Levee Systems

Need more information on levee systems? Please visit the levee dedicated pages at:

[http://www.fema.gov/plan/prevent/fhm/lv\\_intro.shtm](http://www.fema.gov/plan/prevent/fhm/lv_intro.shtm)

## FEMA Library

The FEMA Library is a database of publicly available FEMA resources, including:

### ***NFIP and Levees: An Overview Fact Sheet***

<http://www.fema.gov/library/viewRecord.do?id=2609>

### ***Requirements of 44 CFR Section 65.10: Mapping of Areas Protected by Levee Systems***

<http://www.fema.gov/library/viewRecord.do?id=2741>

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## Independent Scientific Body

Following the testing process, an Independent Scientific Body (ISB) made up of recognized experts and certified professional engineers was convened by the National Institute of Building Sciences (NIBS) to review the methods and provide comments.

## Community Roundtable

After the ISB, FEMA convened a Community Roundtable with local officials, engineers, floodplain managers, and levee owners from throughout the U.S. to gather their feedback on the revised methods. This interaction allowed FEMA and community representatives to meet together, review the approaches, and identify how implementation would affect communities.

## Public Review

Now, the Public Review and Comment Period allows the public to review the new levee mapping and analysis approach and provide feedback.

- FEMA announces the Public Review Period in the Federal Register and publishes a document, “The Revised Analysis and Mapping Procedures for Non-Accredited Levees: Proposed Approach for Public Review,” which details the proposed approach.
- The public is welcomed to visit [www.regulations.gov](http://www.regulations.gov) and search for “FEMA-2011-0025” to read the Federal Register Notice and download the proposed approach.
- The Public has 45-days to review the proposed approach and provide comments.
- FEMA holds online forums to orally present the approach.

## Documents for Public Review

“The Revised Analysis and Mapping Procedures for Non-Accredited Levees: Proposed Approach for Public Review” available at [www.regulations.gov](http://www.regulations.gov) includes an overview of the following proposed procedures to suit a variety of levee situations:

- **Sound Reach** – A continuous section of a levee system designed and constructed to withstand, and provide protection from, the 1-percent-annual-chance flood event, in accordance with sound engineering practices.
- **Freeboard Deficient** – A section of a levee system that would be considered sound, except that it does not have adequate freeboard.

- **Overtopping** – A section of levee for which the 1-percent-annual-chance flood elevation is determined to be higher than the top (crest elevation) of the levee.
- **Structural-Based Inundation** – A continuous section of a levee that is determined to have structural issues or otherwise appear to be susceptible to failure of the section.
- **Natural Valley** – A section of a levee system that would not obstruct the river from flowing on the landward side of the levee during the 1-percent-annual-chance flood.

In addition as part of the proposed approach, FEMA looks to collaborate with local communities and levee owners in Local Levee Working Groups to collect the available information to support these procedures and get input on the procedure to be used.

## How to Submit Comments for Public Review

Since the public comment period is an official federal process for collecting and managing public feedback, it is important that all comments are submitted through the formal process for review and possible inclusion. Please follow the steps below to read the approach and submit comments:

1. Visit [www.regulations.gov](http://www.regulations.gov).
2. Search “FEMA-2011-0025” and read the Federal Register Notice.
3. Download and read “The Revised Analysis and Mapping Procedures for Non-Accredited Levees: Proposed Approach for Public Review.”
4. Follow the directions provided at [www.regulations.gov](http://www.regulations.gov) for comment submission.
5. You can also submit comments at [www.nfip-levee.com](http://www.nfip-levee.com).

## Online Forums

In addition to the documents online for public review, FEMA will also hold three online forums in the form of webinars to present the approach and answer clarifying questions. Participation is limited to 300 guests for each webinar, and invitations will be extended on a first-come-first-served basis. For forum dates and times and to request an invitation, refer to the Federal Register Notice at [www.regulations.gov](http://www.regulations.gov) or visit [www.fema.gov/plan/prevent/fhm/lv\\_lamp.shtm](http://www.fema.gov/plan/prevent/fhm/lv_lamp.shtm).

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