



FEMA



Levee Notes on FEMA Maps

Answers to Questions about Procedure Memorandum No. 45

Providing communities with up-to-date, accurate, and reliable flood hazard and risk information on Digital Flood Insurance Rate Maps (DFIRMs) is one of the primary goals of the ongoing map modernization effort undertaken by the Federal Emergency Management Agency (FEMA). As part of this effort, FEMA has been coordinating closely with the U.S. Army Corps of Engineers (USACE) and other Federal, State, and local professionals and technical partners. Through this coordination, FEMA and its partners are working to determine the risk reduction capabilities of the Nation's levee systems and accurately reflect the flood hazard and risk in "levee-impacted" areas on the DFIRMs.

In support of this effort, FEMA reviewed existing guidance regarding the submittal of data and documentation to meet National Flood Insurance Program (NFIP) requirements for the evaluation and mapping of levee-impacted areas. As a result of this review, FEMA issued several Procedure Memorandums to clarify requirements. The questions and answers below are provided to further explain the requirements.

Q: What is a levee system?

A: A levee system is a flood risk reduction system that consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices. A levee is a manmade structure, usually an earthen embankment designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water so as to reduce risk from temporary flooding.

Q: What do community officials and citizens need to know about levee systems?

A: Levee systems are designed to provide a *specific level of risk reduction* and require regular maintenance and periodic upgrades to retain that risk-reduction level. Levee systems can be overtopped or fail during larger flood events. When levee systems do fail, they often fail catastrophically, and the resulting damage, including loss of life, may be more significant than if the levee system had not been built. Therefore, it is vital that levee owners, community officials, homeowners, and business owners understand the risks associated with living and working in levee-impacted areas and proactive steps they can take to address these risks.

More Information

For more information on Procedure Memorandum 45, please visit <http://www.fema.gov/library/viewRecord.do?id=3281>.

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Q: What regulations apply to the evaluation and mapping of levee systems and levee-impacted areas?

A: The regulatory requirements of the NFIP that apply to the evaluation and mapping of levee systems and levee-impacted areas are cited at Title 44, Chapter 1, Section 65.10 of the Code of Federal Regulations. According to Section 65.10, it is the community, levee owner, and/or local project sponsor's responsibility to submit the data and documentation showing that a levee system complies with these requirements, including the development and maintenance of an operation and maintenance plan. Interested parties may access Section 65.10 of the NFIP regulations through the FEMA website at <http://www.fema.gov/library/viewRecord.do?id=2741>.

Q: Who is responsible for complying with the requirements of Section 65.10?

A: Compliance with Section 65.10 requirements rests with communities, levee owners, and/or local project sponsors who are interested in having a levee system accredited on the NFIP flood hazard map—not FEMA. A levee system owner can be a Federal or State agency, a water management or flood control district, a local community, a levee district, a non-public organization, or an individual. The party responsible for operating and maintaining the levee system must be a Federal or State agency, an agency created by Federal or State law, or an agency of a community participating in the NFIP. FEMA's responsibility is solely to review the data and documentation provided and either accredit the levee system on the DFIRM or, when the levee system is shown to be inadequate, to reflect the increased risk of flooding to people and structures in the levee-impacted areas on the DFIRM.

Q: What are the procedural requirements for evaluating and mapping levee-impacted areas?

A: FEMA has issued the following Procedure Memorandums that provide guidance for mapping levee-impacted areas as clarification to Appendix H of FEMA's *Guidelines and Specifications for Flood Hazard Mapping Partners*:

- Procedure Memorandum No. 34 (PM 34) —*Interim Guidance for Studies Including Levees*
- Procedure Memorandum No. 43 (PM 43)—*Guidelines for Identifying Provisionally Accredited Levees*
- Procedure Memorandum No. 45 (PM 45)—*Revisions to Accredited Levee and Provisionally Accredited Levee Notations*
- Procedure Memorandum No. 51 (PM 51)—*Guidance for Mapping of Non-Levee Embankments Previously Identified as Accredited*
- Procedure Memorandum No. 52 (PM 52)—*Guidance for Mapping Processes Associated with Levee Systems*

Procedure Memorandum No. 53 (PM 53)—*Guidance for Notification and Mapping of Expiring Provisionally Accredited Levee Designations*

Q: Are these Procedure Memorandums available to the public?

A: The Procedure Memorandums above are accessible, along with other FEMA Procedure Memorandums, on the FEMA Website: <http://www.fema.gov/ctp-main/guidelines-specifications-flood-hazard-mapping-partners>. These Procedure Memorandums and an assortment of other levee-related guidance documents and resources also are accessible through a dedicated portion of the FEMA Website, organized by a stakeholder group, at <http://www.fema.gov/national-flood-insurance-program-flood-hazard-mapping#6>.

Q: Which Procedure Memorandums apply to Provisionally Accredited Levee (PAL) systems?

A: PM 43, PM 45, and PM 53 provide guidance on PAL systems.

Q: When and why did FEMA issue PM 45?

A: FEMA issued PM 45 on May 12, 2008. FEMA determined that, going forward, greater clarity and consistency of risk messages related to areas impacted by accredited levee systems and PAL systems was necessary.



Q: When did the requirements in PM 45 go into effect?

A: The requirements in PM 45 applied, and continue to apply, to all FEMA studies/mapping projects for which FEMA issued Letters of Final Determination (LFDs) on or after June 1, 2008. The LFD notifies the affected communities that the DFIRM and Flood Insurance Study report are final, establishes an effective date, and reminds the affected community/communities that updates to their floodplain management ordinances may be required.

Q: As a result of FEMA implementing PM 45 what flood insurance risk zones are shown on the DFIRM panels in levee-impacted areas?

A: For all accredited levee systems and PAL systems, the levee-impacted area landward of the levee system continues to be mapped as a moderate-risk area, with the Zone X (shaded) flood insurance risk zone designation shown on the affected DFIRM panel(s).

Q: Do the same levee-related notes appear on all DFIRM panels?

A: The notes for accredited levee systems appear only on those DFIRM panels where the impacts of accredited levee systems are reflected. The notes for PAL systems, which are not the same as the notes for accredited levee systems, appear only on those DFIRM panels where the impacts of PAL systems are reflected.

Q: What notes are used on the DFIRMs now for PAL systems?

A: The following note is applied to the affected DFIRM panel(s) in the levee-impacted area(s) landward of the PAL system:

Note: This area is shown as being protected from the 1-percent-annual-chance or greater flood hazard by a levee system that has been provisionally accredited. Overtopping or failure of any levee system is possible. For additional information, see the “Provisionally Accredited Levee Note” in Notes to Users.

The following note appears in the Notes to Users section of the map frame for the affected panels:

Provisionally Accredited Levee Notes to Users: Check with your local community to obtain more information, such as the estimated level of protection provided (which may exceed the 1-percent-annual-chance level) and Emergency Action Plan, on the levee system(s) shown as providing protection for areas on this panel. To maintain accreditation, the levee owner or community is required to submit the data and documentation necessary to comply with Section 65.10 of the NFIP regulations by (_____, _____). If the community or owner does not provide the necessary data and documentation or if the data and documentation provided indicate the levee system does not comply with Section 65.10 requirements, FEMA will revise the flood hazard information for this area to reflect de-accreditation of the levee system. To mitigate flood risk in residual risk areas, property owners and residents are encouraged to consider flood insurance and floodproofing or other protective measures. For more information on flood insurance, interested parties should visit the FEMA website at <http://www.fema.gov/national-flood-insurance-program>.

Q: What notes are used on the DFIRMs for accredited levee systems?

A: The following note is applied to the affected DFIRM panel(s) in the levee-impacted area(s) landward of the accredited levee system:

Note: This area is shown as being protected from the 1-percent-annual-chance or greater flood hazard by a levee system. Overtopping or failure of any levee system is possible. For additional information, see the “Accredited Levee Note” in Notes to Users.

The following note appears in the Notes to Users section of the map frame for the affected panels:

Accredited Levee Notes to Users: Check with your local community to obtain more information, such as the estimated level of protection provided (which may exceed the 1-percent-annual-chance level) and Emergency Action Plan, on the levee system(s) shown as providing protection for areas on this panel. To mitigate flood risk in residual risk areas, property owners and residents are encouraged to consider flood insurance and floodproofing or other protective measures. For more information on flood insurance interested parties should visit the FEMA website at <http://www.fema.gov/national-flood-insurance-program>.