

**Release of Draft ETL 1110-2-570**  
***“Certification of Levee Systems for the National Flood Insurance Program”***

**Frequently Asked Questions**

**1. What does draft Engineer Technical Letter (ETL) 1110-2-570, *Certification of Levee Systems for the National Flood Insurance Program*, address?**

The draft Engineer Technical Letter (ETL) provides a consolidated document to guide USACE procedures for levee/floodwall systems certification determinations in support of the National Flood Insurance Program (NFIP) as administered by the Federal Emergency Management Agency (FEMA).

**2. Why is it being issued now?**

The Federal Emergency Management Agency (FEMA) embarked on a program, the Map Modernization Program, in 2002 to update the nation’s flood maps. Through this program, FEMA will verify that for all levees recognized as providing protection from the base flood, or the 1% annual chance exceedance flood, have levee certification documentation on file. As a result, there is increased interest by local project sponsors in USACE performing levee certification determinations for levees within its programs. This ETL guides USACE field offices with requests for levee/floodwall certification determinations through the process.

**3. What is ‘levee certification’?**

Levee certification is a technical finding, which for the floodplain in question, that there is reasonable certainty that the levee system protecting the area will contain the 1% annual chance exceedance flood (or base flood). This information is used to determine how the area behind the levee system will be mapped and which flood insurance rates and other flood plain management requirements under the NFIP apply.

**4. What guidance is specifically contained in the ETL?**

The Engineer Technical Letter (ETL) supplements and clarifies existing policy, procedural and technical guidance; provides an overview of documentation requirements; outlines the Independent Technical Review (ITR) process; and, summarizes authority and funding mechanisms. Additionally, the ETL includes - policy; investigation and evaluation strategies; and technical evaluation guidance. The technical evaluation sections address - operations and maintenance; field inspections; hydrology and hydraulics in riverine and coastal environments; structural, geotechnical, electrical and mechanical components; system evaluation; and residual risk and public safety.

**5. Does the ETL contain “new” guidance not presently contained in other published USACE documents?**

The draft ETL consolidates and summarizes existing policy and guidance previously distributed among various USACE documents. The draft ETL also provides policy and guidance about topics not previously covered in relation to certification, such as,

- a. USACE-issued certification letters will have a maximum of 10 years validity;
- b. Certification determination is required to be based on a system perspective encompassing all features and technical criteria;
- c. There is extensive discussion of waves and waves overtopping levees; and
- d. Addressing residual risk and public safety is required for certification.

**6. How does the ETL relate to FEMA certification guidance [Title 44 of the Code of Federal Regulations, Section 65.10 (44 CFR 65.10), *Mapping Areas Protected by Levee Systems*]?**

CFR 65.10, published in the mid-1980s, is the basic FEMA regulation prescribing requirements and criteria for levee certification. CFR 65.10 requires that structural components of the levee system be certified by a registered professional engineer. A provision of the regulation permits federal agencies, such as USACE, with levee design and construction competence to make certification determinations. ETL 1110-2-570 is consistent with and founded on the principles of 44 CFR 65.10 while updating methods and references to current USACE practices and criteria. As stated in ETL paragraph 9.a.:

*“Note that while the CFR components continue to be relevant, design approaches and criteria have evolved from those that were applicable for the CFR publication date of 1984. Further, USACE has more recently-adopted policies and perspectives re-emphasizing public safety that are appropriate to apply in USACE levee certification determinations. It is these up-to-date policies, engineering concepts and perspectives, and criteria that will be applied for USACE levee certification determinations and which are described in subsequent paragraphs.”*

**7. Instead of the minimum fixed freeboard requirement (3 feet) for levees as specified in 44 CFR 65.10, why does USACE instead apply a statistically-based criteria for the levee height certification requirement?**

In response to various challenges to its flood damage reduction project development process, USACE adopted a risk analysis framework for project formulation and justification studies in 1996 published as Engineer Regulation (ER) 1105-2-101, *Planning - Risk Analysis for Flood Damage Reduction Studies*. The policy was recently updated and applies today.

In 1997, USACE coordinated its proposed statistically-based levee height for certification policy (a byproduct of the risk framework policy) with FEMA and received concurrence. The USACE view is that the statistically-based levee height criteria for certification provides for a more robust treatment of the inherent variation in the nation’s flood regimes and stream profile response than does a fixed freeboard criteria. The

statistically-based levee height certification policy ensures consistency between the risk analysis policy of ER 1105-2-101 and USACE levee certification policy.

**8. What coordination with FEMA has taken place on the methods presented in this ETL?**

The first USACE national guidance related to levee certification was issued in April 1997. This guidance, coordinated with and accepted by FEMA, required the use of risk analysis (statistically-based levee height) for levee certifications performed by USACE. Since then, all supplemental USACE guidance for levee certification has been vetted with FEMA. For this ETL, FEMA has had a team member on the Project Delivery Team (PDT) and will be an integral part of the ITR process.

**9. What is the current status and what are the remaining steps to publishing the final version of the ETL?**

The ETL is in draft status and has been distributed to field offices for review, comment, and use as interim guidance. The draft has also been sent to several federal agencies, such as FEMA, US Geological Survey (USGS), and US Bureau of Reclamation (USBR), and outside professional societies such as the Association of State Flood Plain Managers (ASFPM) and the National Association of Flood and Stormwater Management Agencies (NASFMA) for peer review. District offices may distribute the ETL to other stakeholders for review and comment, but districts and divisions will be asked to collect and consolidate comments in the specified format from outside entities for submittal.

Following consideration of review comments, the revised draft ETL will be subject to formal Independent Technical Review (ITR) prior to being published as final. The target date for a final version will be sometime within the final quarter of calendar year 2007.

**10. Is there a plan to revise and update the ETL in the near future as lessons learned from Katrina/New Orleans become more solidified, and as the technical methods advance both in the US and Internationally?**

Yes, it is anticipated that there will be periodic updates of the ETL as advances are made in the engineering profession in relation to flood and hurricane storm damage reduction systems. Hurricanes Katrina and Rita brought the subject of flood risk management to the forefront of public interest and debate. Lessons learned from these events are the need to apply a systems approach and risk-informed decision making to flood risk management. Flood risk management is dynamic and constantly changes as we learn more about floods, storms and subsidence; the performance of our aging infrastructure; the engineering profession and the effects of increasing development behind flood and storm damage reduction systems. USACE is constantly working to improve its understanding of the loading on levee systems, how they respond to floods, and to advance the state-of-the-art of design and construction.

**11. After each revision to the ETL, what happens to previous certifications performed by USACE?**

After each revision, district offices should take under consideration how revisions affect previous certifications and decide whether or not the revisions warrant reanalysis or updating of previous certifications.

**12. Will there be training for levee certification offered to USACE field offices and other interested parties?**

Yes, training on the technical and policy aspects of levee certification will be available to USACE districts (and outside interests) at the end of FY07 and into FY08.

**13. Does USACE have funding to implement this ETL?**

In general, USACE's position is the same as FEMA's, in that the responsibility of providing certification documentation belongs to the levee owner, local community, or other entity seeking recognition that the levee system provides protection against at least the 1% annual chance exceedance flood. For certain cases, it will be up to the district's discretion to use certain program funding if applicable. However, because of activities associated with the USACE Levee Safety Program, which include revisions to the inspection program, updating design criteria as a result of Katrina, and moving forward with the national levee inventory, USACE will support levee certification to the extent possible, but does not anticipate allocating specific program funding directly for that purpose.

**14. Who should be contacted with questions about this ETL?**

Questions regarding this ETL should be directed to the district Levee Safety Officer (LSO), district Levee Safety Program Manager (LSPM), or equivalent designee. If needed, questions may be forwarded to the HQUSACE Levee Safety Program Manager, currently Mr. Tracy Hendren. Mr. Hendren may be contacted via email at [tracy.l.hendren@usace.army.mil](mailto:tracy.l.hendren@usace.army.mil) or phone at 202-761-5346.