



LEVEE SAFETY CONNECTIONS

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TEST YOUR LEVEE IQ

What percentage of the approximately 15,000 miles of levees in US Army Corps of Engineers Levee Safety Program are operated and maintained by local sponsors?

- a. 10%
- b. 25%
- c. 65%
- d. 85%

Find the Test Your Levee IQ answer on our redesigned website: www leveesafety.org

LEVEE SAFETY CONNECTIONS
A Publication From The National Committee On Levee Safety

For more information or to provide an idea for an article, please e-mail contact@leveesafety.org.

Looking Ahead to 2012 As Levee Safety Connections marks its first year in publication, we would like to recognize all the connections you are making to address levee safety in your communities and across the nation. With budget cuts at every level of government and demands to "do more with less," raising awareness about the role of levees, the interaction of structural and nonstructural approaches to mitigating flood risk, and the continued assumptions about the safety of levees is a challenge we all face. If you would like to share the connections you are making, contact the NCLS at contact@leveesafety.org.

Irene & Lee Test Northeast Levees

Following record-setting flooding on the Missouri and Mississippi Rivers this spring and summer, mid-Atlantic and northeastern states were hit with the double-punch of Hurricane Irene and Tropical Storm Lee. Compared to the slow rises in river levels on the Missouri and Mississippi, flooding due to these two storms was fast and furious.

First came Hurricane Irene, which made landfall over coastal North Carolina and moved northward along the Mid-Atlantic Coast causing torrential rainfall and flooding across the Northeast. The National Oceanic and Atmospheric Administration (NOAA) has categorized Irene as one of 2011's "billion dollar disasters" with over \$7.3 billion in damages and costs to communities.

A few days later, Tropical Storm Lee made landfall along the Louisiana Coast and started its march north. Floodprone areas from Pennsylvania's Susquehanna Valley to the river valleys of Vermont saw more than a foot of rain in many communities over the five-day period as the slow-moving storm moved north over soils left saturated by Irene.

Flood damages were severe in many communities, as the Susquehanna River hit a new record, exceeding the benchmark flood for the region set by Hurricane Agnes in 1972 by nearly two feet. Floodwalls in downtown Binghamton, N.Y., were



Esperance, N.Y., September 26, 2011 — Residents along Priddle Road suffer a total loss of structure due to heavy flooding caused from Hurricane Irene and Tropical Storm Lee. Adam DuBrowal/FEMA

overtopped, resulting in the city's worst flooding since the flood walls were built in the 1930s and 1940s. Downstream, authorities evacuated most of Wilkes-Barre, Pa., due to concerns that the levees that were built to withstand another Agnes-level flood might not hold. In the end, the levees in Wilkes-Barre performed beyond their design capacity and prevented significant damage in the city.

As communities impacted by the flooding move from disaster response into recovery and planning for the future, they will do so with the renewed understanding that "100-year floods" don't wait 100 years and that flood risk planning and mitigation are critical for reducing the damages to lives and property caused by flooding.

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CONNECTIONS

Connecting people and agencies engaged in improving levee safety.

The **Missouri River Flood Task Force (MRFTF)** was convened to provide a temporary forum for coordination, collaboration and cooperation among the federal officials and designated officers of state, local and tribal governments within the states of Nebraska, Montana, Iowa, South Dakota, North Dakota, Wyoming, Kansas and Missouri following the floods of 2011. The task force is chartered to seize the opportunity to shape the future of the flood plain and to set conditions for success for all involved by streamlining governmental processes, accelerating necessary assessments, coordination and permitting requirements. The MRFTF has convened working groups to focus on a variety of topics included in the NCLS’s recommendations for a National Levee Safety Program, including communications, levee repair, regulatory/permitting issues, tribal support and floodplain management. For more information, including recent news and work group products, please visit www.nwd.usace.army.mil/mrftf/.

The **Natomas basin in California** is a large section of land, some 55,000 acres, on the north side of Sacramento, with a population of approximately 100,000. Local, state, and US Army Corps of Engineers experts are working together to communicate why the risk is so high in the basin and what remains to be done to reduce it: www.youtube.com/watch?v=GRYdVyUVkSs.

FEMA Region X (Alaska, Washington, Oregon, and Idaho) has launched a monthly newsletter to provide regular updates on what’s going on inside FEMA and around the region, including information to reduce risk through outreach efforts and training opportunities. The online newsletter can be found at: www.starr-team.com/starr/RegionalWorkspaces/RegionX/Pages/default.aspx.



FEMA

FEMA Requests Comments on New Approach for Mapping Levees

As part of the National Flood Insurance Program, the Federal Emergency Management Agency (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 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, FEMA Administrator Craig Fugate committed to replace the “without levee” approach with an approach that is more sound, credible and cost effective. 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.

FEMA has now released their proposed approach for public comment through January 30, 2012. The proposed approach is available online at: www.fema.gov/library/viewRecord.do?id=4954

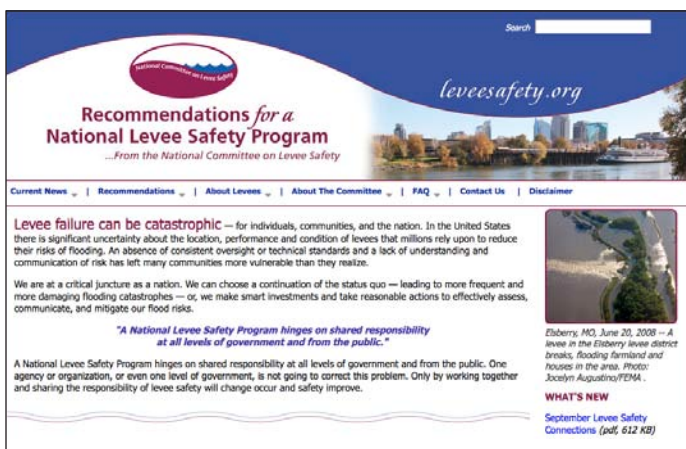
To provide comments on the new approach, visit regulations.gov, search “FEMA-2011-0025” and download a copy of the “Revised Analysis and Mapping Procedures for Non-Accredited Levees: Proposed Approach for Public Review.” Follow directions provided on how to submit comments through regulations.gov or submit comments at www.nfip-levees.com.

FEMA will also hold online public 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 serve basis. Upcoming webinars will take place January 3 and January 10, 2012, from 1:00pm-2:30pm EST. If you wish to attend, please send an email to FEMA-GS@fema.dhs.gov and note which webinar date you prefer.

National Organizations Speak Out for a National Levee Safety Program

Members of the National Association of Flood and Stormwater Management Agencies (NAFSMA) during the association's annual meeting last month approved a resolution expressing support for a National Levee Safety Program that is voluntary, incentive-based and includes a levee rehabilitation and repair fund and incentives for sound flood risk management at all levels of government. The resolution also stressed that the program needed to include not only qualified states, but local and regional flood control districts as well.

In their testimony before the House Transportation & Infrastructure Committee's Subcommittee on Water Resources & Environment on November 30, the American Society of Civil Engineers (ASCE) called for Congress to establish a national levee safety program and enact legislation and regulations to protect the health and welfare of citizens from the catastrophic effects of levee failure.



Copies of NAFSMA's resolution and ASCE's statement are available on the NCLS website, www.levéesafety.org.

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While levees and floodwalls reduce the risk of flooding for communities and mitigate flood damages within those communities, they are only one element of flood risk reduction. Understanding your flood risk and how you can mitigate that risk, encouraging responsible local floodplain management and zoning ordinances, having an emergency plan, and protecting the value of your property with flood insurance are all important components for reducing the impact of flooding on individuals and communities.

SPOTLIGHT ON LEVEE SAFETY

Using Social Media to Educate and Keep the Public Informed

The importance of social media for communicating with the public was reiterated for federal, state and local agencies during the 2011 flooding season. By answering questions online on sites that people visit in the course of their daily lives, agencies were able to inform the public more efficiently than they would by television, newspaper or phone — while saving precious manpower hours to boot.

Social media vehicles, including Facebook, Twitter, YouTube and Flickr, were used extensively to rapidly disseminate information. Posting up-to-date information and linking to each other through a network of sharing posts, the Army Corps of Engineers, Federal Emergency Management Agency, National Weather Service, US Coast Guard, US Geological Survey, and state and local agencies were able to provide up-to-date information and dispel rumors during the flood event and the first months of the recovery.

Corps of Engineers' districts, for example, established Facebook pages for individual flood events, including "Operation Mighty MO" and the Birds Point New Madrid Floodway Joint Information Center (JIC), providing a venue for information. Within several hours of its establishment, more than 2000 individuals and organizations were "following" the Birds Point New Madrid Floodway JIC page; three days later that grew to 16,500.

Facebook became a primary source of information for the public and the media, partly because of the real-time updates. Prior to the activation of the Birds Point New Madrid floodway (last operated in 1937), the JIC worked to dispel rumors about the timing of the operation, the condition of setback levees, and the impact of the explosive technology on the surrounding area. In addition to up-to-date information, JIC staff posted quotes from leadership during news conferences, uploaded images from the field and linked to video on YouTube.

— *Contribution by Steve Rochette (USACE)*

NCLS Members on the Road

Record flooding in 2011 highlighted the need for a comprehensive national approach to levee safety. Members of the National Committee have recently shared their recommendations for a National Levee Safety Program with the following organizations:

- Arizona Floodplain Management Association (November)
- National Association of Flood and Stormwater Management Agencies (November)

If your organization would like to hear from the NCLS, please contact Terry Zien at contact@leveesafety.org.

Coordinating Federal Communications on Levees

An important NCLS recommendation calls for a communication and education program to increase public awareness of levee safety including risks associated with living in leveed areas. The NCLS recommended the immediate establishment of a Coordinating Council on Communication (CCC) for Levees to promote consistency of terminology, messages and approaches across federal agencies.

Representatives from FEMA, USACE, National Weather Service, and the Federal Highway Administration met in November to explore the opportunities for collaboration. The next meeting will focus on sharing existing products and activities and determining how to engage other agencies and establish the CCC.

TEST YOUR LEVEE IQ: ANSWERS

In the last issue of *Levee Safety Connections*, we asked:

The median length of time homeowners maintain their flood insurance policies is:

- a) 1 year
- b) **2-4 years.** The Wharton Center for Risk Management and Decision Processes analyzed the entire portfolio of the National Flood Insurance Program over the period 2000–2009. The median tenure of flood insurance in the country was 2 to 4 years. This finding is relatively stable over time and levels of flood hazard. (Source: http://opim.wharton.upenn.edu/risk/library/WRCib2011a_nfip_tenure.pdf)
- c) 10 years
- d) 30 years

For the answer to this issue's and previous Test Your Levee IQ questions, please visit our redesigned website: www.leveesafety.org

FEDERAL AGENCY UPDATE

For a National Levee Safety Program to be successful, existing federal programs must be aligned toward the promotion of levee safety. This section provides descriptions of some of the federal activities currently addressing levee safety.

Corps Releases Levee System-wide Improvement Framework Policy

Levee sponsors have a new tool for retaining eligibility for federal rehabilitation assistance under Public Law 84-99. The US Army Corps of Engineers' System-Wide Improvement Framework (SWIF) policy provides committed levee sponsors a process to transition their levees, over time, to Corps of Engineers' standards while remaining eligible for federal rehabilitation funding.

The policy allows levee system deficiencies, which may include vegetation, to be addressed on a "worst first" basis as part of a larger system-wide plan. The larger plan will optimize flood risk reduction by identifying solutions that efficiently use resources, prioritize improvements and corrective actions based on risk, and establish frameworks for coordinating overlapping or complementary programs and requirements. A copy of the policy may be found online at: www.nfrmp.us/currentissues.cfm

FEMA Expands Communication of Levees & Flood Risk

With the recent consolidation of many of its levee-related messages, tools and information on one website, the Federal Emergency Management Agency (FEMA) has also improved access to videos highlighting experiences with flooding in leveed areas and a "levee simulator" that demonstrates different ways that flooding may occur behind a levee. Find this and more at: www.fema.gov/levees

OPT IN — BE LEVEE AWARE

The NCLS has created an opt-in electronic mailing list to distribute *Levee Safety Connections* and information on the NCLS and its activities, as well as information on other levee-related activities. To sign up, follow the link on the "Contact Us" page on the website.