



The Definition of a “Levee” under a National Levee Safety Program

The Importance of Having a Common Definition of “Levee”

Public safety is at the heart of a National Levee Safety Program, reflected in the National Committee on Levee Safety’s vision for the program of an involved public and reliable levee systems working as part of an integrated approach to protect people and property from floods.

A successful National Levee Safety Program starts with consistent program parameters, including standard terminology. One of the most important terms to define for the new National Levee Safety Program is, of course, “levee.” This definition provides a common basis for what will or will not be subject to program incentives and requirements. A clear and complete definition also is important because there are a variety of terms used to describe levee-like structures that provide flood protection. Although they may not be called “levees,” it is critical that structures that function like a levee are also held to safety standards to protect the public.

Congress Defines Parameters of the National Levee Safety Program

When Congress established the National Committee on Levee Safety (NCLS) to develop recommendations for a National Levee Safety Program, it also provided a definition of levee (Section 9002(3) of the Water Resources and Development Act, 2007):

In general the term “levee” means an embankment, including floodwalls –

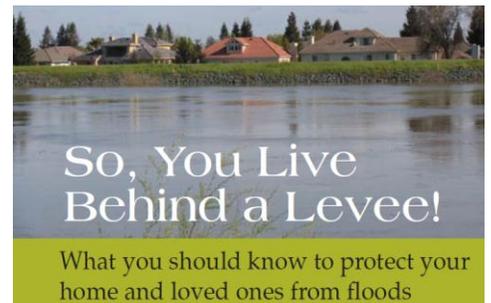
The primary purpose of which is to provide hurricane, storm, and flood protection relating to seasonal high water, storm surges, precipitation, and other weather events; and

That normally is subject to water loading for only a few days or weeks during a year.

Inclusion. The term includes structures along canals that constrain water flows and are subject to more frequent water loadings but that do not constitute a barrier across a watercourse.

Levees and Risks of Flooding Behind Levees

“So You Live Behind a Levee!” contains useful information about levees and the risks of flooding for those living and working in leveed areas, and actions you can take to reduce damages associated with flooding.



The free brochure can be downloaded from the American Society of Civil Engineers website:

<http://content.asce.org/files/pdf/SoYouLiveBehindLevee.pdf>

The National Committee on Levee Safety

Congress created the National Committee on Levee Safety to develop recommendations for a national levee safety program, including a strategic plan for implementation of the program. The NCLS adopted the vision of an involved public and reliable levee systems working as part of an integrated approach to protect people and property from floods, and has been working toward this goal since October 2008.

The NCLS recommendations for a National Levee Safety Program are based on three central concepts:

- Leadership via a National Levee Safety Commission that provides for participating state levee programs, national technical standards, risk communication, and coordination of environmental and safety concerns;
- Strong levee safety programs in and within all states that, in turn, provide oversight and critical levee safety processes; and
- A foundation of well-aligned federal agency programs and processes.

For more information on the NCLS and its recommendations for a National Levee Safety Program, please visit: www.leveesafety.org.

The National Committee on Levee Safety’s Definition of “Levee”

The National Committee on Levee Safety added detail to Congress’s definition of “levee,” recognizing that it would need to be specific enough to guide the development of a new national program. The definition aimed to protect public safety but not be so broad as to become overly burdensome. For the purposes of those structures that should come under the auspices of a National Levee Safety Program, the NCLS defined a “levee” as:

A manmade barrier (embankment, floodwall or structure) along a watercourse constructed for the primary purpose to provide hurricane, storm, and flood protection relating to seasonal high water, storm surges, precipitation and other weather events; and that normally is subject to water loading for only a few days or weeks during a year.

Levees also may be embankments, floodwalls and structures that provide flood protection to lands below sea level and other lowlands and that may be subject to water loading for much, if not all, portions of the year, but that do not constitute barriers across watercourses or constrain water along canals.

This levee definition does not apply to shoreline protection or riverbank protection systems such as revetments, barrier islands, etc. (Page 33, Recommendations for a National Levee Safety Program)

Because levee segments often operate as part of a flood damage reduction system, the NCLS also developed a definition for “levee system.” The NCLS defined “levee system” to include all features that are interconnected and necessary to ensure protection of the associated but separable floodplain, including embankment sections, floodwall sections, closure structure, pumping stations, interior drainage works and flood damage reduction channels.

Following the inclusion of structures along canals under the Congressional definition of levee, the NCLS included canal structures in its recommendations for a National Levee Safety Program, defining “canal structure” as:

An embankment, wall, or structure along a manmade canal or watercourse that constrains water flows and is subject to frequent loadings, but that does not constitute a barrier across a watercourse.

The NCLS felt it was appropriate to include canal structures in the National Levee Safety Program because, like levees, canal structures can and do fail, resulting in flood risks to people and property. Therefore, the NCLS believes structures along all types of canals, including navigation canals, water delivery canals, drainage canals, and power canals, in the interest of public safety, should go through the same types of analyses, operations and management processes as traditional levees, although the standards and approaches will need to be tailored appropriately. Their inclusion in the National Levee Safety Program will help ensure that people living behind those structures are as risk-aware and as safe as those behind traditional levees, and national efforts to manage this risk are comprehensive, coordinated and effective.

Levees That Should Be Excluded From the National Levee Safety Program

The proposed National Levee Safety Program should help ensure that all those living behind levees, including structures along canals, are risk-aware. The NCLS has recommended that certain levees and canal structures be excluded from the National Levee Safety Program for two reasons: if the structures pose relatively low risk to people and property; or if other federal programs covering the infrastructure provide for an adequate safety program, including inspection, standards, risk assessment, risk communication and the ability to fund repairs.

Levees and structures along canals would be excluded from the activities of the National Levee Safety Program, including national levee safety standards; inclusion in a national inventory of levees; and access to funding through the proposed National Levee Rehabilitation, Improvement and Flood Risk Mitigation Fund, if they meet the following conditions:

- A canal constructed completely within natural ground without any manmade structure such as an embankment or retaining wall to retain water and/or where water is retained only by natural ground; or
- Highway and railroad embankments that are not functioning as part of a flood control system; or
- The levee or canal structure meets *all* of the following criteria:
 - Not part of a federal flood control project.
 - Not an accredited levee for the National Flood Insurance Program by the Federal Emergency Management Agency.
 - Not greater than three feet high.
 - Not protecting a population greater than 50 people.
 - Not protecting an area greater than 1,000 acres.

The NCLS recommended that the National Levee Safety Program provide national leadership and bring together existing programs across the federal government to meet the shared goals of improving levee safety. The proposed Federal Interagency Committee on Levee Safety would bring together federal agencies with existing programs or expertise in levee safety, providing opportunities for aligning federal programs and ensuring wise investments of the federal dollar. The National Levee Safety Program should encourage and promote alignment of federal programs to improve levee safety, not duplicate programs or create an additional level of policies, programs or requirements. Therefore, levees or canals already regulated by the federal government should not be included under the authorities of the proposed National Levee Safety Program, provided that applied federal safety criteria meet or exceed the national standards of the to-be-developed National Levee Safety Code.