

Living with Levee Systems

Information for Property Owners

LEVEE SYSTEMS: RISK REDUCTION, NOT RISK ELIMINATION

The United States has thousands of miles of levee systems – usually earthen embankments, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water so as to provide protection from temporary flooding. Many levee systems were first put in place by farmers to protect agricultural areas from frequent flooding. They date back as much as 150 years. Others were designed to protect urban areas, and were typically built to higher standards used by the U.S. Army Corps of Engineers. However, no levee system provides full protection from all flooding events.

All levee systems are designed to provide a *specific level of protection*, and can be overtopped during larger flood events. Levee systems require regular maintenance to retain their level of protection. The fact is, levee systems can and do decay over time, and maintenance can become a serious challenge. When levee systems do fail, or they are overtopped, the results are often catastrophic; the flood damage may be more significant than if the levee system had not been built. For these reasons, the millions of people impacted by levee systems need to understand the flood risks they face and take steps to address them.

FEMA'S ROLE

The Department of Homeland Security, Federal Emergency Management Agency (FEMA), manages the National Flood

Insurance Program (NFIP), the cornerstone of the Nation's strategy for preparing communities for flood disasters. The NFIP was created to reduce flood damages by identifying flood hazards, assessing flood risks, encouraging sound community floodplain management practices, and providing flood insurance.

FEMA is updating the Nation's flood hazard and risk data and maps through an effort called Flood Map Modernization (Map Mod).

Accurately identifying flood hazards and assessing risks in levee-impacted areas is an important element of Map Mod. Levees systems have been identified in over one-fourth of the counties that will receive modernized flood maps.

FLOOD MAPS IDENTIFY RISKS

The modernized maps, also known as Digital Flood Insurance Rate Maps, show high-risk areas where there is a 1-percent chance of flooding in any given year. They also show low- and moderate risk areas with a less than 1-percent-annual-chance of flooding.

Assessing flood risk for levee-impacted areas is complex. Among the many factors that must be taken into account are the actual 1-percent-annual-chance flood elevations and the ability of levee systems to contain floodwaters. The NFIP has criteria for crediting levee systems with providing 1-percent-annual-chance flood protection. Levee owners must provide data and documentation to show that the levee system meets these criteria. FEMA does not examine levee systems to assess how they will perform during a flood.

ACCREDITING A LEVEE SYSTEM DOES NOT GUARANTEE PROTECTION

When National Flood Insurance Program (NFIP) maps show the impacted area behind a levee system as being protected from the 1-percent-annual-chance flood, the levee system is said to be *accredited*: this means the levee system has met certain NFIP criteria. However, an accredited levee system does not *guarantee* protection from all flooding events; levee systems are designed to provide a specific level of protection.

NFIP flood map panels where levee systems are shown will carry notes indicating that overtopping or failure is possible, and that flood insurance, adherence to evacuation procedures, floodproofing, or other protective measures are encouraged to mitigate flood risk.

FOR MORE INFORMATION VISIT

www.fema.gov/plan/prevent/fhm/lv_intro.shtm



If a levee system meets the criteria provided in Section 65.10 of the NFIP regulations, the DFIRM will show the impacted area landward of the levee system as a moderate-risk area. If a levee system does not meet the criteria, the DFIRM will show the levee-impacted area as a high-risk area, or Special Flood Hazard Area (SFHA). The SFHA is the area subject to inundation by the 1-percent-annual-chance flood. The chart below shows how FEMA depicts the levee-impacted areas on DFIRMs and the flood insurance requirements and options that will apply to structures in levee-impacted areas.

IF THE LEVEE SYSTEM...	THE FEMA FLOOD MAP WILL SHOW THIS FLOOD RISK AS...	AND THESE FLOOD INSURANCE REQUIREMENTS AND OPTIONS WILL APPLY
<p>Is not currently shown as providing protection from the 1-percent-annual- chance flood. (Not Accredited)</p>	<p>High flood risk, with levee-impacted areas shown as being in an SFHA (labeled as Zones A, AE, AH, AO).</p>	<p>Flood insurance is required in high-risk areas as a condition of any mortgage that is federally backed, regulated or insured. Property owners should be aware that Insurance rates may rise to reflect higher flood risk in these areas.</p>
<p>Provides protection from the 1-percent-annual- chance flood. (Accredited)</p>	<p>Moderate or low flood risk, with levee-impacted areas shown as being in Zones B, C, X, or X (shaded) on the map.</p>	<p>The mandatory flood insurance purchase requirements of the NFIP do not apply in Zones B, C, X, or X (shaded), but flood insurance is strongly recommended. Lower-cost Preferred Risk Policies (PRPs) are available for most buildings in Zones B, C, X, or X (shaded).</p>
<p>No longer meets the minimum standards to be shown as providing protection from the 1-percent-annual-chance flood. (De-Accredited)</p>	<p>High flood risk, with levee-impacted areas shown as being in an SFHA (labeled as Zones A, AE, AH, AO).</p>	<p>Flood insurance is required in high-risk areas as a condition of any mortgage that is federally backed, regulated or insured . Grandfathering may save property owners money. Buildings covered by flood insurance before the effective date of new DFIRM can be grandfathered in at the current flood insurance risk zone designation, as long as there is no lapse in coverage. Note: Tthis coverage can be transferred.</p>
<p>Is temporarily shown as providing protection from the 1-percent-annual-chance flood while additional data and documentation are being gathered. (Provisionally Accredited)</p>	<p>Moderate flood risk., with levee-impacted areas shown as being behind a Provisionally Accredited Levee, or PAL, system (labeled as Zone X (shaded) pending accreditation of the levee system).</p>	<p>The mandatory flood insurance purchase requirements of the NFIP do not apply in Zones B, C, X, or X (shaded), but flood insurance is strongly recommended. Lower-cost PRPs are available for most buildings in Zones B, C, X ,or X (shaded).</p>

*For more detailed information about levee systems and the flood insurance risk zones shown on the DFIRMs, please visit the FEMA Website. The gateway to the FEMA-provided levee information, which is organized by stakeholder group to assist levee owners, community officials, and other stakeholders, is www.fema.gov/plan/prevent/fhm/lv_intro.shtm.