

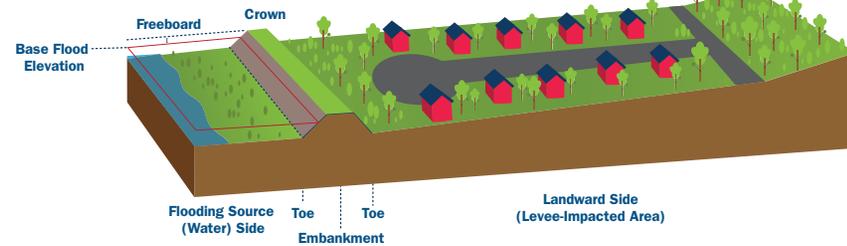
# Flood Hazard Mapping Projects with Levee Systems

When a flood hazard mapping project includes a levee system, there are a number of mapping options that could be used depending on the condition of the levee. This tool helps communities visualize and ultimately determine which option best meets their situation and determine the path forward.

## 1 Is it a Levee System?

The first step in a mapping project with a levee system is to determine if the structure is in fact a levee. A levee is a man made 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 provide protection from temporary flooding.

ANATOMY OF A LEVEE



## 2 What is the Levee System's Current Mapping Options?

### Accredited Levee System

This levee system meets the standards of [44 CFR 65.10](#) to provide flood hazard reduction for a 1-percent-annual-chance flood.

If the levee system does not meet the requirements to provide flood hazard reduction for a 1-percent-annual-chance flood, then there are different approaches a community may take to accurately reflect the hazard:

### Does not Meet Accreditation Requirements

- **Levee Analysis and Mapping Procedures:** In this path, the community follows the levee analysis and mapping procedures process for non-accredited levee systems and may choose to use the following procedures to accurately map the flood hazard:
  - Sound Reach
  - Freeboard Deficient
  - Overtopping
  - Natural Valley
  - Structural-Based Inundation

### In Progress to Meet Accreditation

- **A99/AR:** Zone A99 and Zone AR regulations apply to levee systems that are either being built for the first time or are being restored or modified to provide flood hazard reduction to at least the 1-percent-annual-chance flood level.
- **Provisionally Accredited Levee (PAL) System:** The PAL designation is used for a levee system when FEMA has previously accredited the system with providing 1-percent-annual-chance flood hazard reduction on an effective Flood Insurance Rate Map and FEMA is awaiting data and/or documentation that will demonstrate the levee system's compliance with [Section 65.10](#) of the National Flood Insurance Program regulations.

## 3 Integrate into the Mapping Process

Once the mapping option for the levee system has been determined, it can be integrated back into the original mapping process.

