

LEVEE RISK AND MITIGATION STEPS COMMUNITIES CAN TAKE TO REDUCE FLOOD RISK

Levees MAY reduce the risk from flooding events, but they do not eliminate flood risk.

Understanding a levee's ongoing risk—regardless of how strong, tall, or well-maintained it is, is critical to understanding the importance of reducing your community's financial and physical risk from floods. All levees have residual risk because:

- ✓ **Floodwater can exceed the levee's designed level for flood hazard reduction.** *Many levees are designed to withstand the runoff associated with a flood event that has a 1-percent chance of happening each year. However, there are often floods of much greater magnitude across the country, as recently seen in Houston.*
- ✓ **Levees can—and do—fail to perform as expected.** *While many levees are well maintained and operated, they still can breach, meaning that part of the levee breaks away and leaves a large opening for water to rush through. Sometimes water seeps underneath the levee, causing flooding and/or weakening the levee's overall stability, which can be hard to detect in advance.*
- ✓ **Flooding can happen on the landward side.** *Interior drainage can occur and may cause flooding, as the water is effectively “trapped” behind the levee.*

Key steps communities can take to manage levee-related risk:

Public Outreach and Education

- ✓ Educate property owners living and working near levees about levee-related flood risk.
- ✓ Encourage property owners to reduce the financial risk related to flooding by purchasing flood insurance (see FEMA's Levees and Flood Insurance Fact Sheet).
- ✓ Encourage residents to seek information about what additional steps they can take to protect their families, homes, and possessions. To learn more, check out FEMA's Homeowner's Guide to Retrofitting.

Floodplain Management

- ✓ Maintain and enforce floodplain permitting for development in the floodplain and the floodway.
- ✓ Consider if development behind levees is in the best long-term interest of the community and how to put standards in place to protect against future flooding.
- ✓ Acquire property and relocate structures behind levees to return those areas to green space.
- ✓ Remodel or retrofit buildings behind the levee to be floodproof, such as by elevating structures above the flood level.
- ✓ Avoid building structures, planting trees, or leaving debris on or near the levee that could impede proper operation and maintenance.

Emergency Preparedness

- ✓ Plan and practice emergency response and evacuations. If floodwaters are advancing on a levee, at what point should residents begin evacuating? If there is a levee failure, what are the safest travel modes and routes out of the flooded area?
- ✓ Encourage residents to visit Ready.gov to learn how to make an emergency plan.

Participation in FEMA Programs

- ✓ Participate in FEMA's Community Rating System, an incentive program that recognizes communities for additional efforts they take beyond the minimum NFIP standards to reduce the impacts of flooding. Communities that show a comprehensive approach to floodplain management can gain a reduction in flood insurance premium rates of up to 45 percent.

- ✓ Apply for [Hazard Mitigation Grants](#) as appropriate to help fund projects to reduce hazard-related losses both before and after a disaster event.

Planning

- ✓ Identify what local planning vehicle is the most appropriate for addressing levee-related flood risk and mitigation priorities. Does your community have a local hazard mitigation plan? Or a capital, comprehensive, continuity of operations, and/or stormwater plan?
- ✓ Use best available flood risk data (available for community use from FEMA) to inform local planning for mitigation.
- ✓ Encourage your local [hazard mitigation](#) planning team to include and prioritize mitigation actions for your community's levee.