

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.