The Grand Tower and Degognia and Fountain Bluff Levee System

The Grand Tower and Degognia and Fountain Bluff levee system is locally operated and maintained by Grand Tower Drainage & Levee District and Degognia and Fountain Bluff Levee & Drainage District.

The levee system was completed in the 1950s, and is federally authorized to reduce the risk of flooding from the Mississippi and Big Muddy Rivers to the communities of Cora, Jones Ridge, Raddle, Jacob, Gorham, and Grand Tower in Illinois. During 2019, it is estimated the system prevented more than **$105 million** in flood damages.

Benefits of the System

37 miles of earthen embankment along the Mississippi and Big Muddy Rivers reducing the risk of flooding to 52,000 acres which include:

- nearly 1,500 residents and employees
- nearly $122 million property value
- nearly 41,000 acres of agricultural land
- Illinois highway Route 3 and access to the Grand Tower Energy Center
- Heavily utilized double-track Union Pacific rail line
- multiple residential, commercial, and industrial properties including: Gavilon Grain, oil and gas pipelines, and emergency services

Levee Risks

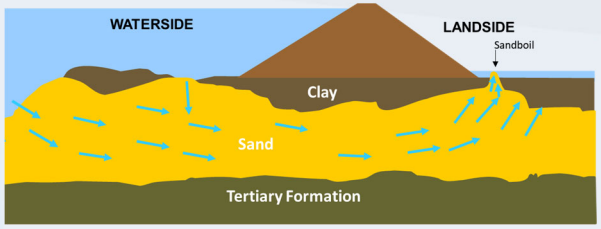
- Floodwaters could overtop or fail a levee
- Underseepage is the most likely issue to cause failure
- Pipes passing through the levee and levee slides could also lead to failure
- Levee failure could result in flooding of depths of up to 20 feet, loss of life, and significant economic damage

Risk Management

- Levee Districts maintain, repair and replace levee features as funding and conditions allow
- Jackson County has an evacuation plan that include warning systems and notifications
- Levee districts maintain an updated Emergency Operations Plan
- Levee districts work with partners to educate the community about levee risks for individuals to be an active part in reducing risks

Risk Driver: Underseepage

The primary concern with the levee is water seeping through and under the levee, which can erode soils. These eroded soils can be displaced in the form of sandboils on the landside of the levee. This repetitive damage through many flood events can lead to failure.



Risk reduction actions:

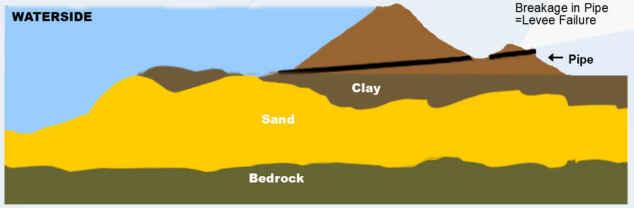
- Perform maintenance on existing underseepage control features, such as relief wells
- Replace relief wells that no longer function properly
- Monitor known problem areas during floods
- Continue emergency operations to control underseepage as it occurs during floods
- Construct permanent features, such as berms, in known problem areas to prevent underseepage

Risk Driver: Pipes through levees

Deteriorated or damaged pipes that pass through levees can allow soils to erode from the embankment and lead to a collapsed levee.

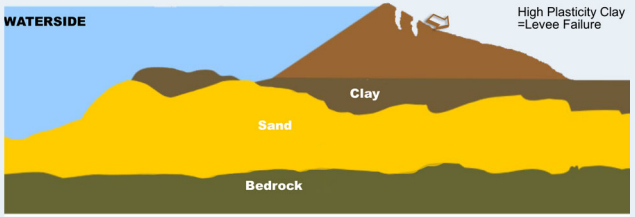
Risk reduction actions:

- Repair or replace old and damaged pipes
- Conduct regular inspection and maintenance of existing pipes



Risk Driver: Levee Slide

Water can collect within voids and cracks in the embankment. Pressure from this water can push out a section of levee. This can weaken the levee and lead to failure.



Risk reduction actions:

- Regularly inspect to locate existing slides or areas which may be vulnerable to slides
- Promptly repair slides as they occur
- Remove unwanted vegetation to maintain a clear view of levee slopes

What You Can Do

Everyone needs to be aware of their role in managing flood risks associated with levee systems.

Individual residents and businesses can take a variety of actions in order to reduce risk:

- Be aware if you live or work behind a levee
- Remain vigilant during flood events; listen for and follow instructions from local emergency management officials
- Know your community's flood emergency preparedness and evacuation plans and be prepared to evacuate during a flood
- Develop and practice a personal, family, or business emergency preparedness plan
- Flood-proof structures to reduce impacts of flooding to your home or business
- Support your local levee district in their efforts to operate and maintain a safe levee system
- Encourage elected local, county and state officials to make sound flood risk management decisions
- ***Know your risk, know your role, and take action to reduce your risk!***

Who to Contact

US Army Corps of Engineers

St. Louis District (USACE-MVS)
1222 Spruce Street, St. Louis, MO 63103
314-331-8000
MVS-LeveeSafety@usace.army.mil

Local Drainage & Levee Districts

Grand Tower Drainage and Levee District
Shawn McMahan, President
(480) 275-0600
smcmahan@tdwins.com

Degognia-Fountain Bluff Drainage and Levee District
Carl Heins, President
(618) 967-4740
heinsfarminc@yahoo.com

Local Emergency Management

Jackson County EMA
Sherriff Robert Burns
618-684-3137
jacksoncountyema@gmail.com

FEMA National Flood Insurance Program (NFIP)

NFIP flood hazard mapping products, including Flood Insurance Rate Maps:
https://msc.fema.gov/

National Levee Database

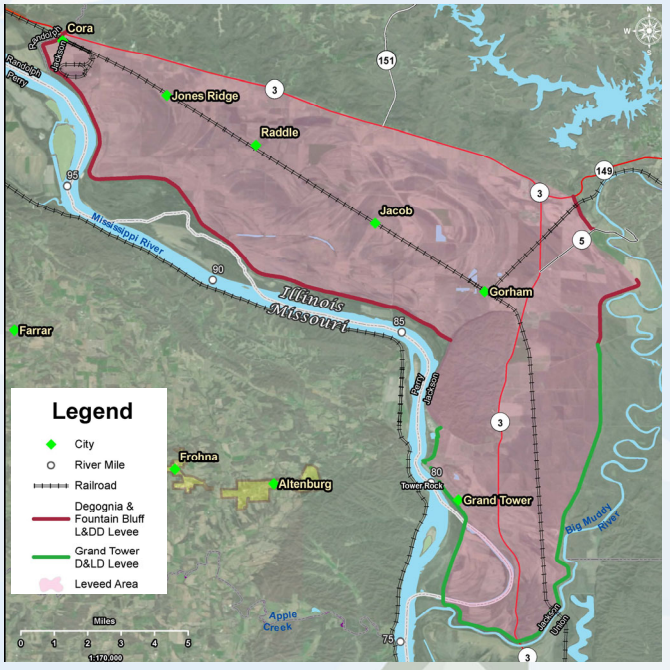
http://nld.usace.army.mil

US Army Corps of Engineers ®

USACE LEVEE SAFETY PROGRAM
Shared Risks. Shared Solutions.

The Grand Tower/ Degognia Levee System

Jackson County



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know your **role**,
and take **action** to reduce your risk!

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