



US Army Corps
of Engineers
Kansas City District

TUTTLE CREEK DAM

FACT SHEET

TUTTLE CREEK DAM FAILURE WARNING SYSTEM

August 2004

Background

The Dam Safety Assurance Program was established to investigate the safety of dams such as Tuttle Creek Dam and to take corrective action to address identified problems.

As part of this program, the Corps of Engineers has conducted extensive testing of Tuttle Creek Dam to evaluate how well it could withstand an earthquake. The dam is located about 12 miles from the Humboldt Fault Zone, which may be capable of producing a strong (5.7-6.6 magnitude) earthquake. Although the probability of such an earthquake is very low, should it occur it would cause the sand beneath Tuttle Creek Dam to liquefy, leading to major cracking of the dam, eventually causing the dam to fail and flood areas downstream of the dam.

Why a Dam Failure Warning System?

Construction work is expected to begin in 2005 to strengthen the Tuttle Creek Dam so it can withstand an earthquake. As an interim measure, at the request of the downstream community, the Corps of Engineers is building a Dam Failure Warning System to help protect the community until the construction work is complete.

The primary purpose of the warning system is to alert the downstream community of the need to evacuate in the event of a potential dam failure. The warning system will alert the Corps of Engineers in Kansas City (CENWK) and local officials in Manhattan of two things:

- That an earthquake of a certain threshold has occurred at the dam and
- To provide the means for emergency operations personnel to activate the siren warning system in Manhattan.

The Dam Failure Warning System consists of the following elements:

- Instruments to detect earthquake-induced damage to the dam;
- Six new warning sirens that sound distinctly different from tornado sirens;
- An evacuation plan for the nearby downstream areas in Manhattan; and
- A community outreach program (including the project web site) to educate the public about the Dam Failure Warning System.



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Given the potential for earthquake damage described above, the siren system will be activated immediately in response to an earthquake of the magnitude required to severely damage Tuttle Creek Dam. The Evacuation Plan provides procedures for immediately evacuating areas in the Big Blue River Valley downstream of the dam (between Tuttle Creek Dam and the Kansas River) within 2 to 6 hours. The Corps of Engineers is working with emergency management agencies in Riley and Pottawatomie Counties to develop the Evacuation Plan, with input from other local agencies.

The community outreach program consists of a web site, newsletters, fact sheets, an exhibit, a public meeting (on September 21 at Eisenhower Middle School), and other materials intended to communicate with local citizens about the Dam Failure Warning System.

This fact sheet is published by the U.S. Army Corps of Engineers, the lead agency for the Tuttle Creek Dam Safety Assurance Program. Comments or questions about this fact sheet or the Dam Safety Assurance Program should be directed to Bill Empson of the Kansas City District, Corps of Engineers at (816) 983-3556 or by e-mail at tcdam.nwk@usace.army.mil. Questions or comments about lake operations or Tuttle Creek project office activities should be directed to the on-site Operations Manager, Brian McNulty at 785-539-8511. For additional information, visit our web site at <http://www.nwk.usace.army.mil/projects/tcdam/index.htm>



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