



US Army Corps  
of Engineers  
Kansas City District

## TUTTLE CREEK DAM

# FACT SHEET

April 2001

### ALTERNATIVES TO MINIMIZE RISK

The alternatives being considered that would not prevent damage to the dam but would minimize the risk associated with an uncontrolled release of the lake after a major earthquake are discussed below. None of these options prevent damage to the dam, they simply make the damage less critical. Abandonment or major reconstruction of the dam may still be necessary after an earthquake if these alternatives are implemented. These discussions are conceptual and all aspects of each option will not be evaluated in great detail until the community has had an opportunity to provide input. No attempt is made to document all of the positive and negative aspects of each option since these evaluations are currently only conceptual

**Improved Seepage Control:** The concept of improved seepage control involves eliminating the potential for a dam breach due to the failure of the relief wells at the toe of the dam that control water pressures under the dam. To improve seepage control and make the relief wells less critical, a barrier could be constructed from the bottom of the dam to the bedrock beneath the dam to prevent the flow of water. Alternately, a gravel filled drainage trench could

**Improved Emergency Planning:** This option could include activities such as improved downstream warning systems, frequent exercises of emergency plans, improved communications and other methods to facilitate downstream evacuation in the event of a damaging earthquake.

**Restricted Lake Levels:** Restricted lake levels would involve keeping the lake at a level below the current normal pool or draining the lake completely. Under this option, the dam would actually have increase flood control capacity but benefits such as upstream recreation, downstream flow control for water supply, fish and wildlife and navigation would be decreased or lost completely.

**Improved Ability to Drain the Lake:** This concept involves increasing the ability to drain the lake in emergency situations. This could involve tunneling or trenching to provide the ability to drain the lake to other basins as well as through the Big Blue River channel to minimize the potential for flooding on the downstream Big Blue River.

**Downstream Flood Plain Management:** This option would involve the purchase of property or future development rights downstream of the dam and moving residents out of the potential flood area.

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 [tdam.nwk@usace.army.mil](mailto:tdam.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: <http://www.nwk.usace.army.mil/tdam>



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