



US Army Corps
of Engineers
Kansas City District

TUTTLE CREEK DAM

FACT SHEET

April 2001

THE SPILLWAY

Background

The spillway is located on the left bank of the river, to the north and east of the main dam. The concrete spillway structure's primary purpose is to release water during times of extreme flooding after the flood pool is either filled to capacity or is projected to fill to capacity. The spillway structure consists of 18 steel gates (tainter gates), each being 40 feet wide and 20 feet tall. The total width of the spillway is 1,059 feet with 720 feet of that being clear space capable of being opened to release water. The weir crest elevation of the spillway (the lowest point at which water can be released thru the structure) is at elevation 1116.0 feet, which means that 41 feet of water must be stored in the lake before the spillway can be utilized. Once the flood control pool is filled by reaching elevation 1136.0, water must be released or water will flow over the top of the gates. Water has actually been against these gate on only two occasions since the dam was built, in 1973 and in 1993. The top of the tainter gates is equal to the top of the flood control pool, which is at elevation 1136.0 feet. The spillway gates are exercised and lubricated every year by partially or fully traveling them (with no water behind them) and have been used only one time for their designed purpose in the life of the project, which was in the summer of 1993.

Key Points

- Maximum discharge through the spillway during the 1993 flood event was 60,000 cubic feet per second.
- Maximum Discharge Capacity at the top of flood pool (el 1136.0) is 233,500 cubic feet per second.
- Maximum Discharge Capacity at the top of the surcharge pool (el 1151.4) is 579,000 cubic feet per second (10 times that discharged in the 1993 flood)
- The spillway is the structure that must pass the Probable Maximum Flood (PMF). The PMF is one of the subjects of the Dam Safety Assurance Program
- The tainter gates, which are a primary component of the spillway, and are a subject of the Dam Safety Assurance Program

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: <http://www.nwk.usace.army.mil/tcdam>



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