

PROJECT PROFILE

Eucha Dam Delaware County, OK



Project overview

Vertical Access was retained by AECOM to perform a hands-on investigation of the five radial spillway gates at Eucha Dam, and to document section loss due to corrosion at structural members, gusset plates and rivets. To aid inspection, Vertical Access used power washing equipment to remove heavy soiling at areas of particular interest.

Structure description

Completed in 1952, Eucha Dam sits on Spavinaw Creek in Delaware County, Oklahoma and serves as a buffer to the downstream Spavinaw Lake, which provides drinking water to the City of Tulsa. The dam consists of both an earthen embankment and a concrete gravity dam. The concrete portion of the dam includes an uncontrolled spillway, and five spillways regulated by radial gates, each of which is 36 feet wide. With a surface area of 2,880 acres, Eucha Lake is capable of storing 80,000 acre-feet of water.



Challenges

- Crucial inspection areas were obscured by built-up soiling and corrosion preventing the collection of deterioration data needed to create current structural model of the dam.
- Radial spillway gates presented complex access issues, with no provision for fall protection.

Solutions

- Power washed select areas of radial gates to permit unobstructed investigation.
- Used industrial rope access techniques to gain hands-on access to downstream structure of gates.
- Measured section loss at beams, gusset plates and rivets using digital calipers.

In collaboration with

- AECOM
- Tulsa Metropolitan Utility Authority



Photos by Vertical Access