

Thirsk Dam and Spillway Rehabilitation

Summerland, BC

PROJECT



The newly expanded dam, viewed from



Original dam viewed from downstream.

Client

District of Summerland

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Since 1910, the District of Summerland has owned and operated the municipal water supply system that serves domestic and irrigation water users within the District. The system includes ten earth dams and one concrete arch dam. The dams are used to impound spring runoff water.

In 1997, the District retained the team of Associated Engineering and Golder Associates to perform a safety appraisal of the dams. This study included comprehensive site inspections and assessments, structural and seismic analysis of the concrete dam and spillway, flood hazard assessment, concrete materials assessment of the dam and spillway, assessment of the rock abutment stability, and cost estimates for proposed rehabilitations and upgrades.

Recommendations from the dam safety appraisals included minor rehabilitative work at the earth dams, and upgrading of the concrete arch dam to ensure its stability under peak flood conditions.

Following the dam safety appraisal, the District retained Associated Engineering to undertake detailed design, prepare cost estimates, complete contract documents, and provide contract administration and construction inspection services for raising and rehabilitating Thirsk Dam. The Thirsk Dam is a reinforced concrete arch dam. Prior to construction, the dam was 21 m high, had an 8 m spillway, and impounded 3200 ML of water in Thirsk Reservoir. The upgraded dam provides an additional 2500 ML of storage in the reservoir.

This project won the 2008 Consulting Engineers of British Columbia Award of Excellence in the Municipal Category.