

Spillway Replacement | Design

Newfoundland Power



Description of Services Provided:

Meco was contracted by Newfoundland Power (NP) to design a replacement spillway and low level sluice for the control structure at Tors Cove/Horsechops Hydroelectric Development, located on the Avalon Peninsula, Newfoundland and Labrador. The Horsechops development has a single unit powerhouse rated at 2.7 MW. The facility was constructed in the 1920's. Through the assessment process, capital improvements were identified to extend the life of the facility. Capital improvement recommendations required upgrades to the canal, replacement of the spillway and sluice gate. Responsibilities included;

- Prepare a HEC-RAS model of the channel and route the design flood to establish operating and storm water levels.
- Design of hydraulic improvements to the approach channel and discharge channel.
- Design included a free overflow ogee spillway with supplemental anchoring and a gated sluiceway.
- Design of gate system, walkway and canal improvements.
- Design of a cofferdam to allow construction in the dry.

Meco completed the design within the schedule window established at project initiation. Deliverables from Meco included Conceptual design, design development of the concept to tender documents, including project specifications. Meco worked closely with NP, who procured the penstock separately, to ensure a proper handshake at the thimble, and cooperation with contractors.