

## Grand Falls Main Dam Rehabilitation | Design Exploits Generation



### Description of Services Provided:

Exploits Generation, operated by Newfoundland and Labrador Hydro, contracted Meco to develop a design for rehabilitation of the Grand Falls Main Dam, Grand Falls, Newfoundland & Labrador. Previous work had identified an Obermeyer inflatable gate system as the preferred method to replace the existing flashboard system. Grand Falls Main Dam was originally built in 1906 and is critical infrastructure in support of the industrial activity in Grand Falls. The dam's main function is to retain the reservoir used for electrical power generation. The Exploits River is an important waterway for Atlantic Salmon and all design activities were required to have minimal impact on habitat.

Responsibilities included topographic survey and prepare a design with contract documents. Construction activity was to be completed over three years and the design was phased to accommodate the extended construction period. The water control plan was key to project success and a two-part cofferdam system design was prepared. Phase 1 of the project was completed. The Owner decided to use an alternate concept for Phase 2 and 3. The main components of the project deliverables were:

- Prepare detailed design for an Obermeyer Inflatable Gate System to replace existing flashboards.
- Prepare detailed design for a water control plan, including cofferdam concept, project phasing and access during construction.
- Prepared detailed design for a single lane steel vehicular bridge and a pedestrian walkway, and a suspended slab for the control room.
- Prepare construction documents, including IFC drawings, construction schedule and construction cost estimates.
- Participate in construction in a non-resident/design support role. Activities included responses to RFI's, review of shop drawings, and advisory support for Owner's Representative during construction.