

Lake George Dam | Compliance Town of Yarmouth



Description of Services Provided:

The Town of Yarmouth retained Meco to assist in responding to Nova Scotia Environment (NSE) concerns regarding the ability of the dam at Lake George to reliably discharge the minimum flow requirements in their water withdraw permit. The Lake George Dam was originally built in the 1930's, with upgrades in the 90's and again in 2010. The current dam is an earth fill embankment with reinforced concrete spillway. Ecological flows are achieved through a 400mm conduit and an overflow spillway. The town manages the Lake George reservoir which retains the municipal drinking water supply for the Town of Yarmouth.

The summer of 2016 was a dry year for Nova Scotia and there were challenges demonstrating ecological flows required as part of the withdraw permit. The main components of the project deliverables were:

- An Seasonal Ecological Maintenance Flow Study, including
 - Establish rating curves for outlet structures
 - Reservoir simulation model in HEC-RES-Sim to model different ecological flow rates
 - Assessment of downstream habitat and wetted perimeters for habitat capacity
 - Recommendation on capacity of stream for different ecological flow rates
- Concept development for downstream monitoring of flow in an unconventional geometry.
- Participate in negotiations with NSE and the DFO to determine the appropriate ecological flows for ecological sustainability.
- Develop a monitoring plan to permit accurate and reliable monitoring of ecological flows with the current infrastructure.