

Water Resources



City of Winnipeg floodway expansion planning studies



KGS Group has numerous awards for various water resource engineering projects, with extensive experience in pre-feasibility through final design and construction of water conveyance structures and hydroelectric plants. This includes energy production optimization, reservoir simulation and optimization of operation, flood control, river training works, water supply, irrigation, hydrology studies, drainage, and ice jam remediation. KGS Group has also undertaken dam safety and FMEA evaluations for several major utilities to CDA standards. Our water resources group also provides environmental licensing, as well as fishery and fish passage design services.

Reservoir control decision support system services include numerical hydrologic simulation by the application of "off the shelf" models or by developing "custom built" models. KGS Group can assist utilities and government agencies in the optimization of reservoir storage and development and application of water management plans using previously developed optimization solvers (e.g. Minos, Conopt, etc.), modeling of linear, non-linear, continuous, and discontinuous objective functions and constraints. This process can be utilized for single or multiple reservoirs.