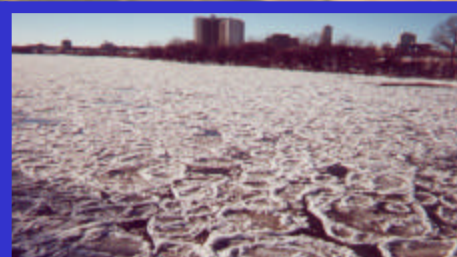
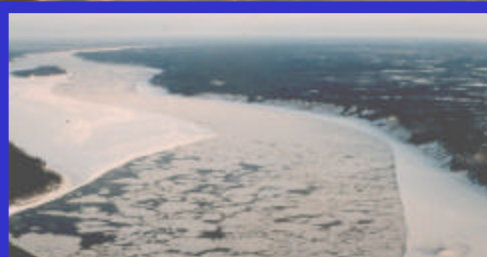


River Ice Engineering



KGS Group has staff members that are experienced in a full range of river ice engineering skills covering, for example:

- Design of major river control structures in a harsh sub-Arctic climate, both from the perspective of success of construction as well as long-term functionality.
- Development and implementation of ice observation programs that provide necessary understanding a site specific river lake ice processes that can profoundly affect planned or existing hydraulic structures.
- Development and application of numerical models of river ice processes for the use in design studies and construction planning, environmental assessment, or planning of effective operation at dams.
- Preparation of real-time strategies of river ice control, including computer assisted decision support systems involving ice control.

KGS Group recently completed a manual of “rule-of-thumb” guidelines for analysis of river ice problems. KGS Group has recently been retained to complete a non-proprietary computer analysis tool for river ice engineering. The development of this software was originally started in the 1980’s by a group of four national engineering firms on behalf of over a dozen Canadian and international clients interested in development of such a comprehensive tool. The software is projected to be operational in 2006.