

BC Hydro Uses New Shallow Water Ice Profiler

ASL has introduced a new, smaller and more cost effective version of the Ice Profiler product for use in rivers and lakes at depths up to 10 metres. This new product, the Shallow Water Ice Profiler (SWIP), provides real time output and, because it is intended for shallow water applications, does not require a pressure housing. In addition, all but essential components have been moved to a shore panel, thus minimising replacement costs if the underwater unit is lost to ice.

BC Hydro of Burnaby, BC Canada, is using the SWIP on the Peace River where they own and operate the Bennett and Peace Canyon dams. During the winter months, ice in the river starts to form and can cause flooding through ice jamming. BC Hydro therefore has an interest in managing flood risk while optimising power production. One method is to use river ice computer models to help forecast and avoid ice jam problems. However, extensive field data are needed to calibrate these models.

The new Shallow Water Ice Profiler (SWIP) from ASL is being used to collect these data at the town of Peace River, Alberta, the largest community on the Peace River with ice jam flooding potential. The SWIP has been placed on the riverbed and will measure the position of the bottom of the ice floes. Comparing the data to a measured water level, the thickness of the ice can be calculated. The SWIP will also be able to measure the surface ice concentration since it will give values equal to the water surface for readings with no ice. Once a solid ice cover forms, the SWIP will monitor the ice thickness growth and erosion during the rest of the ice season.

<https://www.hydro-international.com/content/news/bc-hydro-uses-new-shallow-water-ice-profiler>
