



Remote Monitoring Along the Athabasca River in Fort McMurray, Alberta

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The majority of Canadian rivers are covered with ice during the winter season. The picturesque view of rivers and the recreational activities associated with watercourses encourage many builders to develop in the vicinity of our magnificent rivers. The benefits of living close to a river are counterbalanced with the risk of flooding which can occur during open water or under ice conditions. The last major ice jam that occurred in Fort McMurray was in 1997 which resulted in significant loss of property in the city.

The ability to forecast ice jams along the Athabasca River is limited. Alberta Environment in collaboration with the University of Alberta has been working towards a forecasting model based on over 25 years of observations. Since manual observations are labor intense and very costly, the University of Alberta installed a remote monitoring system along the Athabasca River in the fall of 2000 for data collection. Alberta Environment has begun the task of replacing the research network with real-time operational stations. Following a station redesign, the first operational hydrometric site was installed in the Fall of 2004.

This paper will outline the Athabasca River monitoring program while highlighting the new equipment installed and explaining which criteria limited the use of certain types of equipment. In addition the 2004-2005 ice season observations will be presented.