



First Nations youth run water monitoring programs

The summer of 2013 brought a new program, Young Water Monitors, to the Environment Department at First Nations (AB) Technical Services Advisory Group (TSAG); First Nations youth in two communities received training in surface water monitoring techniques. In partnership with Enbridge Pipelines Inc., TSAG worked with Frog Lake First Nation and Kehewin Cree Nation to establish water monitoring programs focused on the water bodies from where they get their drinking water (called source water). These programs were largely conducted by youth from each community, providing career training and mentorship opportunities.

Kehewin Cree Nation youth participated in the Young Water Monitors program in conjunction with the water health program “Lakeshore Learning Paths – Water is Life” (Health Canada Aboriginal Health and Human Resources Initiative). The Lakeshore Learning Paths program promotes environmental awareness and source water stewardship for Kehewin youth. These objectives are echoed in the Young Water Monitors program, which provides youth with the training necessary to conduct water sampling in their community.

Frog Lake First Nation youth implemented their water monitoring program with guidance from two Lands Officers as a step towards building a sustained environmental monitoring program for the community. After a summer of training, two of the youth working on the project are now employed full time by the Lands Department.



Youth from Frog Lake First Nation and Kehewin Cree Nation collect water samples



Checking for invasive zebra mussels

At the project onset, the project teams from each community worked with TSAG staff to choose three sampling sites along the shore of the lakes where each community draws their drinking water. After an initial training session in early July, the teams worked together to sample each site on each lake four times over the summer months. At the end of the summer, each project team reviewed their data from their lakes and evaluated what direction they would like to see the program go in the future.

The teams collected baseline data for several common measurements of water quality, including dissolved oxygen (important for fish and other aquatic life), pH (a measurement of acidity), turbidity (how clear the water is), phosphorus (a nutrient commonly associated with algae growth) and chlorophyll a (a measurement of the amount of algae). The teams also checked for invasive aquatic species that could harm the ecosystem. Collecting these measurements every year will help each community to establish “normal” levels for their lake, so that they will be able to detect changes to their water in the future. Additionally, with trained staff, each community can customize their sampling methods to move beyond basic water quality measurements and address specific questions or concerns about water quality.

Overall the Young Water Monitors Program was a great success. The program engaged youth and land managers in environmental stewardship and career mentorship. Project teams from both Kehewin Cree Nation and Frog Lake First Nation now have the tools they need to learn more about water health in their communities. They can share this knowledge with their leaders and membership.