

Ramsey's water focus of study

Laurentian student examines Sudbury's water source for nickel

By Carol Mulligan
THE SUDBURY STAR

Lisanne Desbiens could title her research, Everything You Wanted to Know About Nickel Levels in Ramsey Lake — But Were Afraid to Ask.

Desbiens, a masters student in biology at Laurentian University, will know more about nickel in the local water source than anyone may want to know by the time she's finished the work she began last June.

She's analysing 4,000 samples of water taken from the lake as part of a Laurentian University study called Probing the Health of Ramsey Lake.

She's also following the path of nickel as it travels through the aquatic food chain — from lowly algae to the fish that reside in what is often called the "jewel" of Sudbury.

Desbiens, who is from southern Ontario, said she was surprised when she took up her studies at Laurentian and discovered there wasn't much research on nickel levels in water sources here.

A story earlier this month in *The Sudbury Star* further piqued her curiosity as to why not much attention has been paid to nickel in water

in the Nickel Capital of the world.

Pat Reid of Sudbury appeared before the Sudbury Soils Study's technical committee and asked why city drinking water isn't tested for the presence of nickel.

Reid is particularly interested in the effect nickel levels in water might have on the immune system.

Nickel is known to be a carcinogen and Sudbury is considered, not surprisingly, to have the highest level of nickel in water in the world.

The technical committee agreed to look at the issue in its work leading up to the release of the Sudbury Soils Study's findings in the summer or fall of 2005.

While the Ministry of the Environment does occasionally test water for nickel, the province has no guidelines regulating it.

"There's no drinking water standard for nickel," says Desbiens in an interview at Laurentian's Willet Green Miller Centre, where she's conducting her research.

"It's not there."

She speculates that, in most parts of Ontario, it's not a concern, but is not surprised that it is here.

Part of Desbiens' research will focus on nickel isotopes in Ramsey Lake — different forms of nickel whose properties may indicate where they come from.

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Lisanne Desbiens shows off some of the 4,000 samples of water taken from Ramsey Lake. The masters student in biology at Laurentian University is analysing 4,000 samples of water taken from the downtown water source as part of a Laurentian University study called Probing the Health of Ramsey Lake.

Water: Ramsey a source of drinking water

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Ramsey Lake supplies the city with much of its drinking water.

"With so many freshwater lakes in Sudbury, why not test it (nickel levels)?"

Desbiens' work could very well be included in the Sudbury Soils Study, says Graham Spiers.

Spiers teaches biology at Laurentian University and is director of the Centre for Environmental Monitoring, a sub-unit of MIRARCO.

MIRARCO is the Mining Innovation, Rehabilitation and Applied Research Corporation, a not-for-profit applied research and technical service company formed through collaboration between Laurentian and the private and public sectors.

"We're the 'rehabilitation' in MIRARCO," Spiers says of the CEM.

Five graduate students are working on research related to Probing the Health of Ramsey Lake, he says.

Another of them is Francois Prevost, a research scientist at CEM and a masters biology student.

Prevost is studying circulation patterns of water in Ramsey Lake and looking for sources of groundwater in the lake.

Already, testing and sampling has shown that several discharge springs feed Ramsey Lake — "at least as much as water sources running into it," says Spiers.

Spiers says the research his students are involved in is probably the most comprehensive look at a lake anywhere.

Not only is the number of samples collected huge, but researchers are "trying to understand the entire lake, rather than just (taking) a snapshot of it."