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Study finds high levels of mercury in Lepreau

A new scientific study has found potentially dangerous levels of mercury contamination in the Lepreau region of southwestern New Brunswick.

The study was conducted by a team of U.S. and Canadian researchers and published in the January issue of BioScience magazine.

Mercury in the environment originates mainly from coal-fired power plants. It's dangerous to animals and humans, and in high concentrations can cause brain and nerve damage in children.

The researchers examined mercury levels in yellow perch and common loons for traces of the potent neurotoxin and found five regions where those concentrations exceeded those established for wildlife and human health.

The Lepreau area is not one of the five so-called "hotspots" but is identified as one of nine "areas of concern" in eastern North America.

Researchers found higher than acceptable levels of mercury in a 40-square-kilometre region in the Lepreau area.

Project coordinator Charles Driscoll, a professor at Syracuse University, said the news is not good for people who eat fish and game caught in the area.

"It's an area of concern because there have been some measurements made in that region which show high concentrations of mercury in fish and animals."

Wetlands more susceptible to mercury Mercury pollution can come from both local and regional sources, but scientists say the local habitats can help determine whether the toxin stays in the system. Wetlands, such as the Musquash Marsh area of Lepreau, are more susceptible to mercury accumulation than dry grasslands.

Lakes with low pH levels are also more vulnerable, because they have more bacteria to convert mercury into an organic form, which can then be consumed by fish and animals, and eventually people.

"The lakes could have a naturally low pH because it lacks the limestone or bedrock to create a more neutral pH, or it could have its pH lowered from sulphur or acid rain. It really creates a double-whammy because those places affected by acid rain are also more sensitive to mercury," said Maine scientist David Evers, lead researcher of the study.

David Coon of the Conservation Council of New Brunswick isn't surprised by the findings and says the Lepreau area of Charlotte County is particularly sensitive to acid rain caused by pollution from the northeastern United States.

"[There is] very little capacity to neutralize acid rain, and as a result it's essentially leaching it out of the sediments and making it available for wildlife and fish to move into the food chain," he said.

Coon says most of the mercury affecting the Lepreau area is probably coming from emissions originating outside of the province. Despite that, he says New Brunswick still has work to do on reducing mercury emissions from coal-fired power plants in Grand Lake and Belledune.