

2003 HHRA Studies

Fish Tissue Study

As part of the HHRA, a selection of fish found in local lakes was collected. The purpose was to obtain Sudbury-specific data on the levels of metals found in fish eaten by residents.

Where did we sample?

Fish were caught in eight popular fishing lakes in the Greater Sudbury area. The locations of these lakes are shown in the map below.

What did we collect?

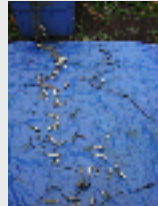
- Walleye and yellow perch were collected from four lakes (Ashigami, Massey, Ramsey, Whitson)
- Walleye, yellow perch and lake herring were collected from four lakes (Crooked, Long, McFarlane, Vermillion)
- Spottail shiner and trout perch were caught from one lake (Vermillion)
- Golden shiner were caught from one lake (Crooked)

Tissues from each fish were then analyzed for metal levels.

Figure 1. Species of fish caught from majority of lakes



Walleye (*Stizostedion vitreum*)



Yellow Perch (*Perca flavescens*)



Ice-fishing on Ramsey Lake

Summary of results

The metal levels in fish tissue were typically very low. This means that even though fish in Sudbury lakes do contain low-level traces of certain metals, these metals do not accumulate in fish tissue to concentrations that would cause human health concerns.

What did we do with the results?

The results were examined to determine whether there was any immediate human health risk associated with eating fish from lakes in the Sudbury area. Our analysis confirmed that the fish collected did not contain metal levels that would cause a human health risk.

The results are currently being used as site-specific data as part of the exposure assessment for the HHRA.

Livestock Survey

As part of the HHRA, samples from beef cattle from local farms were collected. The purpose was to obtain the range of metal concentrations found in the tissue of beef cattle raised in the Sudbury Area.

Where did we sample?

Samples were collected from 5 locations in Chelmsford, Azilda and Blezard Valley.

What did we collect?

We collected muscle, kidney and liver tissue from 10 beef cattle.

What was analyzed?

Cattle tissues were analyzed for metal levels.



What did we do with the results?

The SARA Group summarized results for metal levels in all cattle tissues used in the study. Results are currently being used as site-specific data as part of the exposure assessment for the HHRA.

