

How did we Sample in 2004?

Initial Site Selection and Characterization

- We mapped soil metal levels, based on samples collected in 2001. We used this information to select general areas for sampling in 2004, choosing areas with low, medium and high metal levels. We then chose specific sample sites within these broader areas.
- We collected soil at each site in 2004 and analyzed the samples for metal levels and pH.
- We used these results to select 22 sites throughout the Greater Sudbury area.

Collection of Soil for Toxicity Testing

We collected a total of 325 gallons of soil from the 22 study sites throughout the Greater Sudbury area. The samples were sifted, combined, and stored in 20 gallon buckets for transportation to the laboratory. The buckets filled the trailer of a large transport truck!

We collected soil from the 0-5 cm layer at each site, then sieved the soil to remove large stones, vegetation, etc. We then combined the soil in a large plastic container, and placed it back into the buckets. Finally, we sealed the buckets and stored them until they were sent to the laboratory for use in the terrestrial toxicity testing.



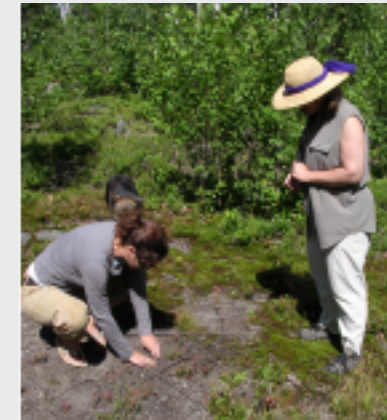
Ecological Survey

We conducted the ecological survey to examine the vegetation and ecological characteristics at each site. We documented vegetation by looking at all species of:

- Trees
- Shrubs
- Herbs
- Grasses
- Mosses
- Lichens

We also examined other aspects of the sites, including:

- Percentage of the site covered by each plant species
- Amount of coarse woody debris (dead tree branches and trunks on the ground, etc.)
- Species diversity



Litter Bags



Decomposition, or the breakdown of organic plant material by soil microbes, is a good sign of a healthy ecosystem. However, at many sites in Sudbury, decomposition is not apparent.

To measure the rate of decomposition at our study sites, we collected, weighed and bagged birch leaves. We secured these bags on the soil surface (see photo), where they will remain until this spring. We will then collect, dry and reweigh the leaves, to determine if there is a difference in the weight resulting from decomposition over the winter.