

Lead and drinking water: Protecting vulnerable citizens



The Community Geomatics Centre (CGC) is a division of the nonprofit Sault Ste. Marie Innovation Centre, a Council Advisor located in Sault Ste. Marie, Ontario. The CGC promotes partnerships and technological means to efficiently share geospatial data, tools and knowledge among community organizations to create a safer, healthier and more prosperous community.

A 2007 study completed in London, Ontario determined that running a water tap in a home did not always flush out unacceptable levels of [lead in drinking water](#) [1]. Within a day of the study's release, the CGC utilized data from Algoma Public Health, the local water utility, the municipal social services office and Child Care Algoma to address the issue.

As a first step, the CGC queried the community GIS system and determined that all known lead pipes were installed between 1943 and 1948, a period when copper was in short supply because of the war.

Using postal code level data, the CGC was able to match homes with known or probable lead-based pipes with homes where pregnant residents lived. Exposure to lead has its greatest effect during neurological development. If a postal match was made, exact addresses were provided. Any home with an active pregnancy, and known or probable lead, received a free water filter through the health unit.

Preventing diseases and disorders before they emerge. The CGC lead pipe initiative demonstrates the benefits of data visualization and breaking down information silos to improve public health. The map above shows lead testing results, ages of homes and pipes and addresses refusing testing for a small neighborhood area in Sault Ste. Marie.

The same process was also applied to supply free filters to those residents on social assistance. As well, home daycare locations were checked against known or possible lead. To date, over 150 families on social assistance and over 200 families with active pregnancies received free filters.

Readiness Guide Chapter: [Health and Human Services](#) [2]

[Health and Human Services](#) [3]

Associated Company: [Sault Ste. Marie Innovation Centre](#) [4]

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