

The Lynn Lake Mine Tailings Q&A

What are the Lynn Lake Mine Tailings?

The Lynn Lake mine tailings are the waste material left from the *Sherritt Gordon Mines Limited* mill that operated between 1953 and 1976.

Are there any tailings in the Town of Lynn Lake?

In the 1970s, some of the tailings were used as backfill for part of the community of Lynn Lake.

What have tests of the tailings in Lynn Lake found?

Initial testing identified seven chemicals that required close evaluation because they exceeded the Canadian Council for Ministers of Environment (CCME) guidelines. These chemicals included aluminum, copper, iron, lead, nickel, manganese and particulate matter (PM10).

What happens when the CCME guidelines are exceeded?

CCME guidelines are developed for general guidance on when more in-depth studies may be required. When CCME guidelines are exceeded, additional assessment of human exposure to contaminants in soil is needed to determine if there is a health risk. A human health risk assessment may be considered.

What is a Human Health Risk Assessment (HHRA)?

An HHRA predicts people's exposures to certain chemicals, such as metals. Health risks are calculated based on: how dangerous the chemical is known to be; how sensitive people are to the chemical; how a person might come in contact with the chemical, such as swallowing, breathing, or skin contact as well as how often and how long they are exposed and how much of the chemical they are exposed to.

An HHRA was conducted in Lynn Lake in 2002. The 2002 study selected chemicals of concern and estimated how much exposure people would have for each substance by collecting and analyzing soil, sediment, surface water, ground water, vegetation, produce, and air samples. Additionally, surveys of community eating habits and lifestyle behaviour were undertaken, including general characteristics of people such as activity patterns and age.

All of this information was used to predict how much people might be exposed to chemicals of concern and whether a health risk might be related to that exposure.

Where was testing done in Lynn Lake in 2002?

Samples were collected in many different areas of Lynn Lake, including the school, parks, residential areas, and the hospital, among others.

Would people be affected by the tailings?

The 2002 Lynn Lake HHRA study concluded that metal exposures “would not be expected to result in the development of adverse human health effects for people living in the town for a life-time.”

- The HHRA did identify potential health effects from small dust particles (particulate matter) during high-wind conditions; “... *long-term inhalation exposures to particulate matter would not be expected to result in adverse health effects for people living in Lynn Lake. However, during dust storms, the particulate matter levels exceed the 50 µg/m³ levels. Air sampling conducted during dust events showed that particulate levels can exceed 160 µg/m³. Under these conditions, there is a potential for people with respiratory ailments to experience adverse reactions to the dust levels in the air.*”

What has been done to reduce the dust exposure in Lynn Lake?

The main source of dust exposure in Lynn Lake was windblown tailings from the tailings management area. Mine site rehabilitation work included consolidating the tailings and installing an engineered cover over top of the tailings. The intent of this work is to reduce windblown tailings dust and improve water draining in the area.

What studies have been done on the Health of Lynn Lake residents?

Recently, a study was done by Manitoba cancer experts and health officials looking at cancer rates in Lynn Lake. This study was started in 2013 in response to community concerns about cancer and finished in the spring of 2014. The study covered the time period 1985 – 2011.

Previously, in 2002, there was a similar study looking at cancer rates in Lynn Lake for the time period 1969 – 1998.

Do the tailings increase the risk of cancer for the people of Lynn Lake?

The most recent cancer study (2014) compared the rate of cancers in Lynn Lake to the rate of cancers in the (former) Burntwood region, as well as the province of Manitoba for the time period 1985 – 2011.

This study found there was no significant difference between the rate of invasive cancers in Lynn Lake compared to the rate of invasive cancers in the surrounding region and the province of Manitoba. It also indicated that the types of cancer found in Lynn Lake are similar to the types of cancer found in the (former) Burntwood region and in the province. The top four types of cancers most commonly being diagnosed in Lynn Lake match those being diagnosed in other areas of the province: prostate, colorectal, breast and lung cancer. A cluster of unusual cancer cases or a more frequent diagnosis of a certain cancer type was not found in Lynn Lake.

These findings are consistent with a previous study of the incidence of cancer in Lynn Lake during the time period of 1969-1998. This is also consistent with the Lynn Lake Human and Environmental Risk Assessment conducted in 2002 which predicted that metal exposures “would not be expected to result in the development of adverse human health effects for people living in the town for a life-time.

How can I prevent cancer?

There are steps people can take to reduce their risk of developing cancer. Risk factors such as unhealthy living (including smoking, poor diet, inactivity, sun exposure), some environmental carcinogens, genetic predisposition and not being screened influence the number of cancer cases diagnosed in Manitoba each year. CancerCare Manitoba encourages all Manitobans to get checked and participate as appropriate in the three provincial screening programs – BreastCheck, CervixCheck and ColonCheck. More information on these programs can be found on the CancerCare Manitoba website at: http://www.cancercare.mb.ca/home/prevention_and_screening/.

Have the mine tailings increased the number of lung conditions for residents of Lynn Lake?

After examining lung conditions diagnosed in Lynn Lake residents over the years 1993 - 2012 and comparing the data to lung conditions diagnosed in the Northern Health region and Manitoba overall for the same time period, the study shows that Lynn Lake residents have fewer lung conditions when compared to residents in the Northern Health region and Manitoba overall.

Is it safe for children to play at Sunshine playground or gravel areas?

Based on soil sampling (including samples from Sunshine playground) and other sources of potential metal exposures, the 2002 HHRA study concluded that, "Exposure to metals in the environment in the Town of Lynn Lake are below levels where there would be potential concern for human health, for people in all receptor age groups." Play areas for children were considered in the risk assessment.

However, Manitoba Mineral Resources staff have visited Sunshine Park and noted that there are very small areas within the park where tailings underlying the park have been exposed. Manitoba Mineral Resources is prepared to discuss with the Town possible improvements to Sunshine Park to ensure tailings are not exposed.