

Arsenic occurs naturally in the Earth's soil and water. Arsenic is also used to make products such as glass, paper, textiles, pesticides, and is also released into the environment through industrial activities, such as mining. Each form of arsenic has a different risk to human health, and some forms do not pose any risk.

Legacy gold mining operations around Yellowknife have resulted in contaminants, such as arsenic, antimony and mercury, entering the environment. Many studies done by government, universities and other organizations have provided information on the amount of arsenic and other contaminants in the soil, water, sediment, fish and country foods in the area.

## Where can I get more information?

Visit the Government of the Northwest Territories website at [www.gov.nt.ca](http://www.gov.nt.ca) or contact:

Erika Nyyssonen, Environmental Protection and Waste Management Division  
Environment and Natural Resources  
[erika\\_nyyssonen@gov.nt.ca](mailto:erika_nyyssonen@gov.nt.ca)

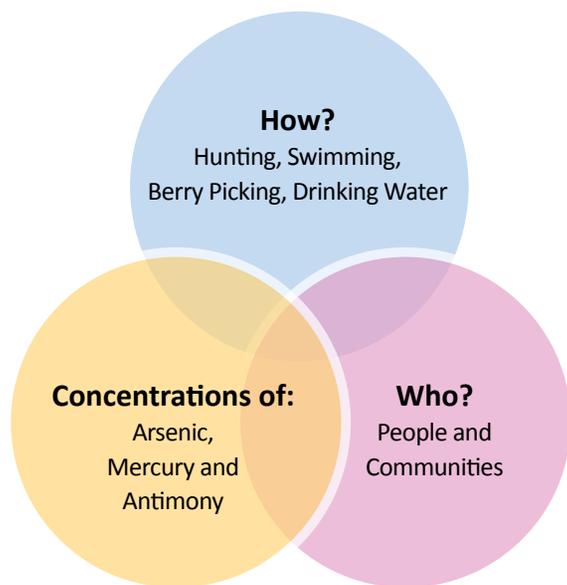
Alex Lynch, Environmental Protection and Waste Management Division  
Environment and Natural Resources  
[alex\\_lynch@gov.nt.ca](mailto:alex_lynch@gov.nt.ca)

# Legacy arsenic around Yellowknife: Human Health Risk Assessment



## How are we assessing possible risks to human health?

People want to know how these contaminants might affect human health. The Government of the Northwest Territories (GNWT) and the Government of Canada (Canada) are working together to carry out a Human Health Risk Assessment (HHRA) on legacy contamination in the areas around Yellowknife, Ndilo and Dettah. The HHRA is a scientific process used to describe and estimate the likelihood of potential risk to humans resulting from exposure to environmental contaminants.



All three of these questions need to be answered to determine level of risk.

## What areas are we studying?

The focus of the HHRA is on the areas west of Giant Mine and around Con Mine. We also want to look at areas where people have cabins, camp and fish to the east of Giant Mine (e.g. Ingraham Trail area), and other traditionally used areas identified by local Indigenous communities. The study extends out to a radius of 25km, at which point contaminant levels reflect local background conditions.

Areas within the City of Yellowknife, Ndilo and Dettah will not be considered in the HHRA since



they were already studied in the Giant Mine Remediation Project's Human Health and Ecological Risk Assessment.

Results of the study concluded the risk was very low for Dettah and Yellowknife and low for Ndilo. Risk levels are considered the same as having a CT scan (low) or getting an x-ray (very low).

For additional information on the Human Health and Ecological Risk Assessment, visit the Giant Mine Remediation Project's website:

<https://www.aadnc-aandc.gc.ca/eng/1100100027364/1100100027365>

## What information have we gathered?

As part of the HHRA, the GNWT and Canada have collected information on how people use the study area through a land-use survey. In this survey, we asked if people fish, hunt, camp or gather, and for how long they spend doing these activities in the study area. Information collected from the survey will help us better understand the ways people may come in contact with potential contaminants in these areas.

We have also conducted a review of the available data

for arsenic in soils, water, sediment, fish and other country food in the study area. Any missing data was addressed with additional sampling done in 2018. We will use this data and the information collected through the land-use survey to calculate the level of risk for the study area.

## What are the next steps?

The outcomes of the risk assessment will be reviewed by the GNWT and Canada to determine what remedial actions or risk management options, if any, are required. These next steps will include engagement with communities in the fall of 2019.