



Q&As – Arsenic Monitoring in the Yellowknife Area

1. Where does the arsenic in the Yellowknife area come from?

Arsenic is found at naturally low levels in the water of many NWT rivers and lakes. However, past gold mining activities have resulted in additional quantities of arsenic being released in the immediate environment surrounding the city.

2. What arsenic-related monitoring is the GNWT doing in the Yellowknife area?

Under-ice water sampling was done by Environment and Natural Resources at seven sites on Kam Lake and three sites on Grace Lake in April, 2017. Open water samples were also collected in late May.

Results from Kam Lake are consistent with recent Surveillance Network Program sampling done by Miramar Northern Mining Limited under its existing water licence. Another round of sampling at both lakes is planned for later this summer.

Environment and Natural Resources, in collaboration with the University of Alberta, is also working to determine trends of metals, including arsenic, in fish from several lakes near Yellowknife and along the Ingraham Trail.

Additional work on the human health and ecological risk of contamination in the Giant Mine area is also being undertaken through the Giant Mine Remediation Project.

3. Is ENR funding any other monitoring work?

Three additional monitoring projects, also funded through the Northwest Territories Cumulative Impact Program (NWT CIMP), are looking at arsenic contamination in water, sediments, soils and fish in the Yellowknife region.

This work is being done by Queen's University, Environment and Climate Change Canada and Carleton University.

Queens University is currently in year three of a three-year study to determine levels of contaminants in soils near Yellowknife.

Environment and Climate Change Canada is currently in year two of a two-year NWT CIMP-funded study to examine metals, including arsenic, in lakes and peatlands.

Carleton University is investigating contaminant mobility, particularly arsenic in Yellowknife area watersheds.



4. What are the results of these studies?

As these projects are currently underway there are no results to share yet. ENR and its partners will share the results of these studies with the public as they are released.

5. How are the results being shared?

Preliminary results of these projects are shared with Health and Social Services to inform public health advisories, and with other interested departments. Final reports will be made available to the public as they are completed.

Updated information about arsenic concentrations measured in Kam Lake as well as other nearby lakes is available on the Health and Social Services website.

6. How do you determine which bodies of water will be studied?

To better define the zone of affected lakes, a regional study of approximately 100 lakes was done in the area around Yellowknife. Additional monitoring on specific lakes is conducted when concerns arise, on a case-by-case basis.

7. Are you studying arsenic in dust and its effect on air quality in the Yellowknife area?

Elevated dust can affect the air quality in Yellowknife, regardless of whether it has arsenic or not. For information on the health risks associated with dust, please contact Health and Social Services, or see their fact sheet on public health and arsenic in the Yellowknife area. <http://www.hss.gov.nt.ca/sites/www.hss.gov.nt.ca/files/fags-arsenic-levels-lakes-around-yellowknife.pdf>

The Air Quality Monitoring Program, which is part of the Giant Mine Remediation Project, is set up to monitor local air quality so that remediation activities at Giant Mine do not cause adverse effects to people or the environment. For more information, please contact the Giant Mine Remediation Project. <https://www.aadnc-aandc.gc.ca/eng/1100100027364/1100100027365>

8. What about water quality in Jackfish Lake?

Environment and Natural Resources will be collecting water samples in Jackfish Lake this summer. The standard water sampling includes testing for inorganic materials, ions, nutrients, and dissolved and total trace metals.

The presence or absence of some nutrients, such as phosphorus, controls the growth of aquatic vegetation.

The results will help us better understand the overall water quality of Jackfish Lake.



9. Is it safe to fish and swim in lakes around Yellowknife?

Arsenic levels vary from lake to lake. For information about arsenic-related health risks associated with recreational activities and fish in lakes around Yellowknife, contact Health and Social Services or view information on their website.

<http://www.hss.gov.nt.ca/sites/www.hss.gov.nt.ca/files/fags-arsenic-levels-lakes-around-yellowknife.pdf>.

10. What is the NWT Cumulative Impact Monitoring Program?

The NWT Cumulative Impact Monitoring Program (NWT CIMP) is an environmental monitoring program that works to fill key NWT environmental data gaps to support resource decision-making and regulatory efficiency. It has supported projects related to legacy contaminants in the Yellowknife region since 2011.

NWT CIMP is guided by a multi-party Steering Committee with members and observers from eight regional Aboriginal governments. The Steering Committee guides the program and makes recommendations for project funding.

For more information, visit www.nwtcimp.ca.

11. Where can I find more information about legacy arsenic monitoring in the Yellowknife area?

- www.enr.gov.nt.ca
- www.hss.gov.nt.ca
- Environment and Natural Resources Public Affairs and Communications
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