

Aquatic Effects Monitoring Program (AEMP)

Large fish study summary

Why you're receiving this

You helped shape this work. This summary is being shared with everyone who has been involved so far including the Tu Luge Study Group and community members who joined on-the-land and on-the-water activities.

Please let us know what sounds right, what may be missing and what should be changed before the Large Fish Study plan is submitted to the Sahtú Land and Water Board.

Key questions to consider:

- Does the draft plan cover concerns about water being safe to drink and fish being safe to eat?
- Are there important items missing that Western science doesn't consider?
- Do the general sampling areas and seasons make sense?
- What should be watched for when checking fish quality?
- What is the best way to share results in a clear and useful way?

The Aquatic Effects Monitoring Program

In the Sahtú region, the Mackenzie River provides drinking water, fish for food and travel routes. Monitoring helps track river health, including any potential effects from Imperial's Norman Wells operation.

The Sahtú Land and Water Board (SLWB) requires Imperial to carry out an Aquatic Effects Monitoring Program as part of its Water Licence. The Board has directed that an updated program be submitted in 2026.

The updated program includes water quality monitoring, small fish work, and large fish work. Water quality monitoring and small fish work have been included since 2023. The Large Fish Study is the newest component being added

Why large fish are included

Large fish can show changes over many years because they live longer and use different parts of the river. They also reflect how communities use the river for harvesting food.

How this work has been shaped

Large Fish Study design started in 2022. In September 2025, the Tu Luge Study Group agreed to move ahead with the proposed study approach.

Community members and biologists also worked together on the land and water including fishing trips with Elders, school children and other community members.

This work uses a Two-Eyed Seeing, braided approach. Indigenous Traditional Knowledge and Western science guide the work together, from planning to field work to understanding results.



Respecting and protecting Indigenous Traditional Knowledge

Indigenous Traditional Knowledge shared for this work will be handled with care and respect.

- Exact fishing locations will not be made public.
- Locations will be described in general terms unless communities choose otherwise.
- Indigenous Traditional Knowledge will only be used and shared in the ways communities agree to.

Fish species included

Two fish were chosen based on community and working group guidance. One fish is often used for monitoring, but two were selected so the study reflects different river habitats and harvesting practices.

- Loche (burbot), which lives near the bottom
- Crookedback, which lives more in open water



Where and when fish will be collected

Exact fishing spots and timing will be chosen with community members, based on seasons, local practices, and safe river conditions. Locations will remain general to respect Indigenous Traditional Knowledge.

Fish will be collected from three general areas:

- Upriver near Tulit'a
- Near Norman Wells
- Downriver near Fort Good Hope

How fish will be checked and tested

Fish will be handled with care and respect. Biologists and community members will examine fish together. Community observations help document fish quality, such as meat colour and quality, parasites and anything unusual.

Some fish will be measured (for example, length and weight). Some fish will be carefully opened to look at the liver and signs of reproduction. These checks help show growth, survival, reproduction and signs of stress.



What will be tested in a lab

Small samples from the parts people eat will be tested for metals and oil-related substances. This testing is included because there is oil activity and natural oil seeps near Norman Wells.

Fish livers will also be checked for signs of oil exposure that can build up over time, even when changes in the water are hard to see.

Much of the edible fish can be kept for community use.



How results will be understood

Results will be reviewed using both Indigenous Traditional Knowledge and Western science. Western science will also be used to compare results over time and across the three river areas, using standard analysis methods.

How the monitoring plan can change over time

The sampling plan can change based on what results show. The draft plan includes a clear approach for making changes using set thresholds.

- If results show a change that needs a closer look, more sampling may happen for a period of time.
- If results stay steady, sampling may be adjusted.

Sharing fish observations

Community members are welcome to share fish quality observations during their own fishing, not only during sampling trips. Observations can be shared by email or through a simple form, attached to this package.

How results will be shared

All information collected through this program belongs to the communities, and all datasets will be fully available for community use. Imperial will ensure open access so communities can review, use, and share the data in the ways that matter to them.

Each year, the summaries where possible. Sharing sessions are planned for 2026, and the format will be shaped by community feedback.

In addition, the results will be posted online through the [SLWB public registry](#), added to the [Mackenzie DataStream website](#), and shared in other ways suggested by communities or required by regulators.