

Indigenous Lake Monitoring Program

What

The Indigenous Lake Monitoring Program was developed in response to Indigenous communities concerns about the quality of lakes of local importance and the impact on resources.

This program is part of the Provincial Lake Monitoring Program designed to collect baseline lake quality data across Alberta. The program is funded and delivered by Alberta Environment and Parks, Environmental Monitoring and Science Division (EMSD).



Gilmen Cardinal, Bigstone Cree Nation, conducting lake water sampling on North Wabasca Lake.
Source: Zoey Wang

Why

Water is of cultural and spiritual importance to Indigenous peoples, and is seen as the interconnection among all living beings. Indigenous communities across Alberta have concerns and questions about water quality and quantity in their local water bodies and the effect these impacts are having on their resources.

How

In 2015, a member of Bigstone Cree Nation, and graduate of the Environmental Monitoring Technician Training Pilot Program, brought a picture of a “diseased” walleye to government scientists with questions about water quality and fish health of North Wabasca Lake.

The Indigenous Lake Monitoring program was piloted with Bigstone Cree Nation through the North Wabasca Lake Monitoring Project.

Program Objectives:

- Build capacity within Indigenous communities and organizations for collecting scientifically credible water quality data.
- Establish respectful relationships between Indigenous communities and organizations and government researchers and scientists.
- Address the lack of water quality information for North Wabasca Lake.



“Diseased” walleye brought to government scientists from North Wabasca Lake. Source: Gilmen Cardinal

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The program has the following components:

- The community identifies a technologist to receive safety training, and to join government technologists in data collection for a year.
- Sampling occurs four times throughout the year.
- Water chemistry, physical measurements and biological samples are collected during each round of sampling.
- Community technologists work with government scientists to interpret the data and prepare a technical report.
- The community works with government staff to develop useful communication products and publicly release the data and technical report.

Where

Lakes are selected based on overlap and alignment between scientific knowledge gaps and the concerns and needs of Indigenous communities and organizations.



Baptiste Metchooyeah, Dene Tha' First Nation, sampling for ultra-trace Hg in the Amber River with government technologist Julie Hepburn.
Source: Greg Poirier

When

The program was piloted in 2016-2017 with the aim of becoming a long-term monitoring program.

Who

Indigenous communities across Alberta and Alberta Environment & Parks.

Progress to Date

In 2016-2017 Bigstone Cree Nation monitored North Wabasca Lake. The Wabasca Lake Monitoring Project Results Report, as well as a fact sheet summarizing results are available online at environmentalmonitoring.ab.ca.

Next Steps

In 2017-2018, Whitefish Lake First Nation monitored Utikumasis Lake; Dene Tha' First Nation monitored Hutch Lake and an Amber River site; and Cold Lake First Nations monitored Cold Lake. Data evaluation and reporting will occur throughout 2018-2019.

In 2018-2019, the program will work with Indigenous communities to monitoring additional lakes of local concern and address scientific knowledge gaps.

The program is currently being evaluated to assess the ability of expanding the program across the province, with the aim to develop a long-term monitoring program based on the braiding of Indigenous and scientific knowledge systems and a regular cycle in which Indigenous communities and organizations are involved.

Project Contact

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