

Athabasca Watershed Monitoring Program First-Year in Summary Report 2022



Spring of 2022 marks the beginning of a long-term Athabasca Watershed water monitoring program initiated by the Keepers of the Water (KOW) board and staff. The first day of water sampling began in June. A vital part of this project includes the upcoming sharing of our citizen-based water monitoring data on the KOW website in a viewer-friendly and interactive style.

After years of discussing water monitoring data at our monthly meetings, it became clear that we, Keepers of the Water members, would likely not likely ever obtain in-depth access to the government /industry water monitoring data. We are also certain that we could never really trust or rely on industry-sponsored data. The ideal solution would be to start our own citizen-driven and citizen-based monitoring program in the Athabasca Watershed. The funding team went to work and sourced the money needed to purchase the startup equipment for this program. Paul Belanger researched the best options for this, and almost \$14,000 was spent on three portable digital units in March.

The units are called Aquatroll 400, made by In-Situ Environmental, and purchased through a distributor in Edmonton. They are straightforward to operate and only need to be dipped in the river water for a few minutes to take readings. This eliminates the possibility of errors, and sampling can be done quickly. Information is transferred to a smartphone via Bluetooth, and an internet connection is not required. The equipment has sensors to take readings on oxygen levels in the water, salinity, pH, temperature and electrical conductivity, which can indicate the presence of heavy metals. We will add more sensors and equipment as we grow the program.



Paul travelled with five community members in early June, and fieldwork began with water samples taken in the Smallboy Camp/Mountain Cree area. The sampling data showed us good water quality in the immediate area around the Small Boy Camp community. Water quality could have been better in the Pembina river on the way to the community South East of Hinton. During the week of June 20th, sampling was done from Jasper to Ft. McKay along there Athabasca River with the help of Jean L'Hommeccourt in the Ft. McKay area and Art Jackson in the Jasper area. About 18 sites were sampled



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altogether. The rivers were high, and water temperature increased dramatically from 6 deg C in the Jasper area to 16°C in the Ft McMurray area.

In October, water sampling was scheduled to begin, and 18 sites were visited and sampled. Art Jackson assisted in the Jasper Area, and Cleo Reece helped on the Clearwater River in Ft McMurray. At this time, river levels were relatively low, and water temperatures ranged from 1 deg C to 6.5 deg in the Ft McMurray area. All data will be on the website in the coming month or two.

Quality citizen-based water monitoring is challenging to maintain and can be expensive. Our approach is to start small and grow the program as we acquire more funding. Core funding will be required for consistency and suitable staffing.

This water monitoring project will be manageable and affordable by staying focused on the Athabasca River Watershed. A key objective of our water monitoring program is to get accurate information about the impacts of the oil sand industry on the Athabasca River and beyond. Mass quantities of air pollution impact water bodies well into Saskatchewan. KOW board members Candyce and Marius Paul have one of the Aquatroll units in Saskatchewan to collect waterway data in Treaty 10 Territory (English River First Nation).

The process to design the portion of the Keepers Website, which will hold the water monitoring data and educational information is underway with leadership from Tori Cress, Autumn Eaglespeaker and Paul Belanger. Jesse Cardinal has been doing an excellent job of overall general coordination.

- Paul Belanger, November 24th, 2022

