

Title: Freshwater near Qikiqtarjuaq as sources of potable water by community members

Project Description:

The Qikiqtarjuaq Research Center (QRC) collaborates closely with the local community to conduct environmental research near Qikiqtarjuaq, Nunavut.

Bubble Lake, located near the village, has traditionally been a source of fresh water for residents. Community members have raised concerns about the origin of the bubbles observed in the lake as well as the potability of the water. Similarly, some residents obtain freshwater from other sources near Qikiqtarjuaq, and questions have also been raised regarding their safety for consumption.

In the first year, in partnership with Qikiqtarjuaq residents, we will sample Bubble Lake to determine the source of the bubbles (e.g., methane, CO₂, or other gases) and establish baseline information on freshwater quality. Sampling may take place on a monthly basis to assess temporal variability. In the second year, the monitoring program will be expanded to include additional freshwater sources. At each site, water will be collected using a pump or Niskin bottle, and water properties such as oxygen, temperature, salinity, and turbidity will be measured using a Licor sensor.

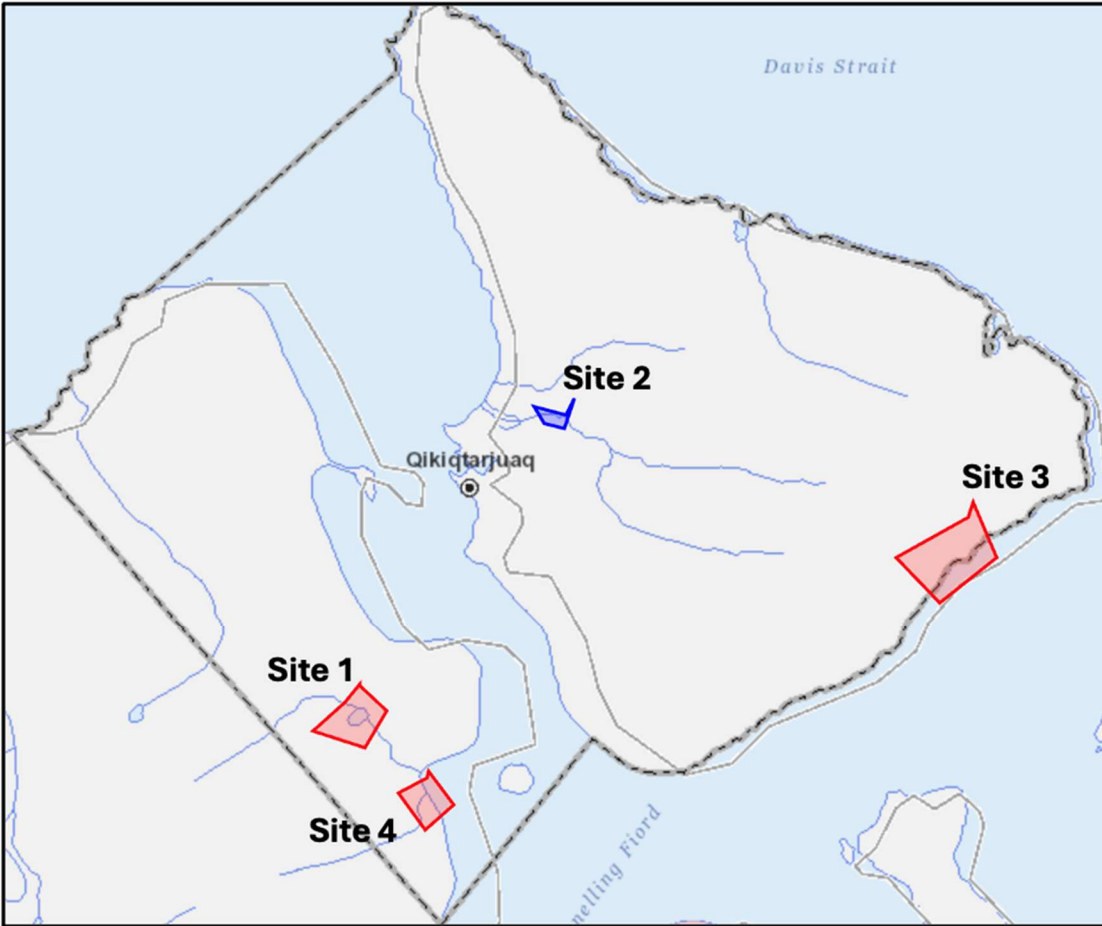


Figure 1. Locations of the sampling sites (**Site 1** - Bubble Lake; **Site 2** - Source of municipal water; **Site 3** - Source of fresh water; **Site 4** - Other source of fresh water).

Coordinates of the sampling sites:

Site 1 - Bubble lake: 67.524926, -64.130499

Site 2 - Source of municipal water: 67.554294, -63.969695

Site 3 - Source of fresh water: 67.500212, -63.821654

Site 4 - Other source of fresh water: 67.501685, -64.118994

