

Summary of Aquatic Ecology

Frontier Lithium Inc. (Frontier) is proposing to develop an open pit mine with supporting facilities, known as the PAK Lithium Project (Project). The Project is located approximately 175 km north of Red Lake. Indigenous communities in proximity to the Project include Deer Lake, North Spirit Lake, Sandy Lake and Keewaywin.

Data was collected in 2017, 2022, and 2023 for waterbodies and streams within the footprint of the proposed Project. Frontier retained Minnow Environmental Inc. in 2023 to collect and summarize the data, including fish and fish habitat, fish tissue, and benthic invertebrate community. ***Frontier will be completing ongoing data collection in 2024.***

In 2022, professional aquatic biologists visited the area three (3) times in June, August and September to gather information on the fish and fish habitat that exists in waterbodies near the proposed Project. In general, the Project footprint consists of small to moderate sized boreal lakes, streams, wetlands and peat bogs. Most of the shoreline habitat is populated with dense areas of evergreen trees (needle-leaved trees that don't lose their needles during winter) or mixed-wood forest and many floating moss wetlands.

Fifteen fish species were collected in 2017 and 2022. Northern Pike, Yellow Perch, White Sucker and Walleye were the dominant species captured. Burbot, Lake Whitefish and Cisco were caught in smaller numbers and the small-bodied fish community consisted of Brook Stickleback, Spottail Shiner, Blacknose Shiner, Mottled Sculpin, Johnny Darter and Trout-perch. Lake Whitefish, Cisco, Mottled Sculpin, Blacknose Shiner, Johnny Darter and Trout-perch were all collected for the first time in 2022. There were no aquatic species at risk (meaning fish species that are rare or have declining numbers) collected during either study.

In 2022, five (5) benthic invertebrate community samples were collected from 7 different waterbodies, and again in 2023 with the addition of 5 more samples from an Unnamed Waterbody northeast of the Project footprint. Chironomids dominated the benthic invertebrate communities across most sampled waterbodies which reflects silty lakebeds.

