



**Science Outreach – Athabasca
presents...**

The good, bad and ugly of the microbes in the oil sands tailings ponds.



Speaker: Dr. Shawn Lewenza

**Associate Professor,
Environmental Health,
Athabasca University**

Date: Tuesday, November 9, 2021

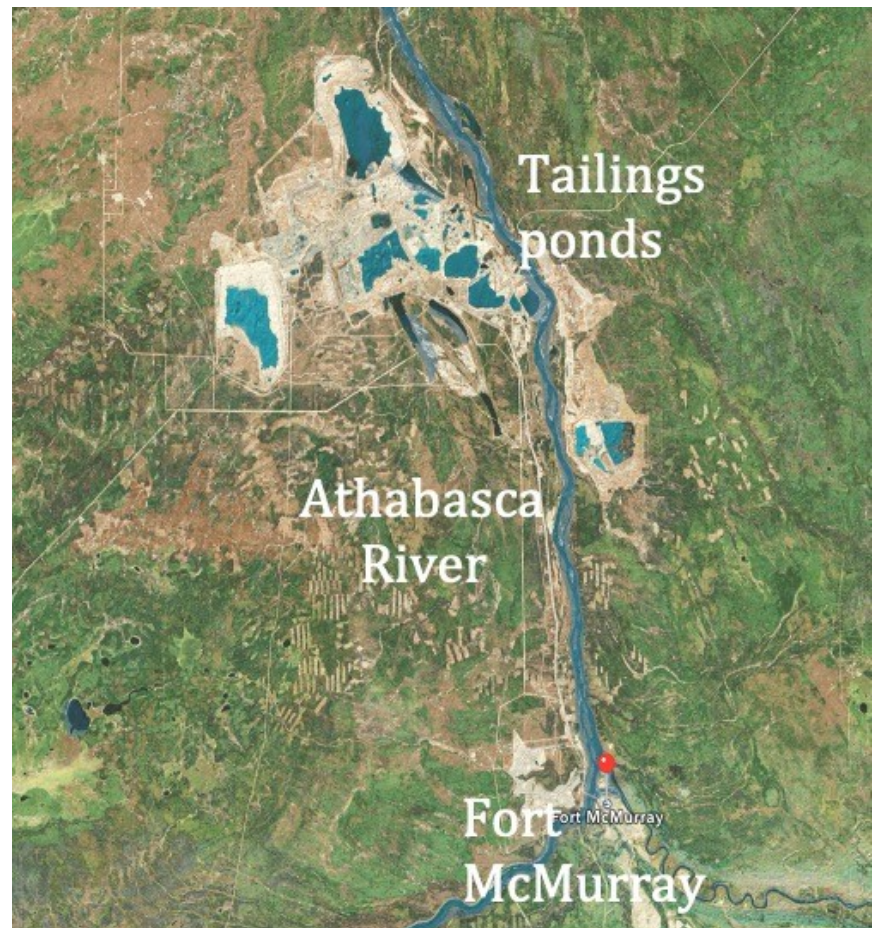
Time: 7 PM

Please join the virtual session below:

<https://us06web.zoom.us/j/88337889021?pwd=Y1o3dk1pMHI0Q1BHV1R2RlF4bXhJUT09>

Meeting ID: 883 3788 9021 Passcode: 498047

Tailings ponds contain large volumes of wastewater that was used to extract bitumen from oil sands deposits in the Athabasca region. The ponds are a long-term storage solution and water will not be released back into the environment until the water has been treated to remove the organic compounds that accumulate in the ponds. There is a thriving microbial community in the oil sands tailings ponds, and new genomic methods are beginning to appreciate the diversity of microbes that can survive in these conditions. The bacterial communities and their activities in bioremediation will be discussed. Some of these microbes can be exploited for their ability to degrade pollutants like naphthenic acids. Unfortunately, some microbes in the ponds also produce methane, and contribute to additional greenhouse gas emission. I will discuss the underappreciated microbes in this unique environment and highlight the potential of these microbes to contribute to water monitoring, treatment and long-term environmental health. Free community event!



This event may be recorded. To view this event and other recordings, please feel free to [visit our YouTube Channel](#) or go to our [Science Outreach - Athabasca website in Past Events](#).

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