

March 25, 2026

Doerr School of Sustainability
450 Jane Stanford Way
Building 320, Rm 118
Stanford CA, 94305

RE: 2026 Stanford University proposed fieldwork: Cornwallis Island, Bathurst Island (Qausuittuq National Park), and Truro Island

Dear Nunavut Water Board,

Erik Sperling, professor at Stanford University in California, would like to have a one year research program at sites on Cornwallis Island, Bathurst Island, and Truro Island. The project is proposed for mid July-early August 2026. We would like to work near Read Bay on eastern Cornwallis Island (75 ° 0.763' N; 93 ° 45.606' W) and near Twilight Creek on northwest Bathurst Island (76 ° 10.827' N; 99 ° 10.766' W). If we cannot land at Twilight Creek we have planned an alternative site at the established landing strip on Truro Island (76 ° 18.637' N; 97 ° 9.229' W).

The Read Bay camp is expected to take eight people into the field for 8-10 days by helicopter from Resolute Bay (Polar Continental Shelf Project). The Twilight Creek camp is expected to take six people into the field for 6-7 days by Twin Otter, also from Resolute Bay. The camp would be small tents, with one central cooking/working tent. Water will be taken from a local creek (about 45 litres a day). The site will be cleaned of all material when the camp is removed. Our research group worked in Qausuittuq National Park on Bathurst Island in 2023 and can provide pictures of the area when we left.

Our research group led by Erik Sperling involves numerous researchers from the United States, Canada, and around the world. This includes students at Stanford (Emily Ellefson, Leah Kahn, Sarah Leibovitz), professors and students at Yale University (Lidya Tarhan, Sydney Riemer, David Havlat), and professors at the University of Ottawa (Malcolm Hodgskiss) and Imperial College London (Martin Brazeau). We are also collaborating on this project with Keith Dewing and Sofie Gouwy, who are researchers with the Canadian federal government at the Geological Survey of Canada. Sofie Gouwy may collaborate with us in the field. We would like to have the support of a wildlife expert from Resolute Bay to provide safety and advice about animals in the area.

The main activity is to describe the rock layers and sample the outcrop in localities near our camp. Samples (~100 grams, size of an egg) would be taken from the outcrop every 1 metre. Samples are collected by hand, hammer or shovel. A total of 300-400 samples would be taken at each camp. Graptolite and conodont fossils are common in these rocks and would be sampled to provide a way to compare to other outcrops in the region and world. These samples would be returned to the university for processing to understand the rock chemistry, organic matter (including fossil spores and plant particles), and fossil molecules.

The purpose of the study is to examine changes in the rocks related to the rise of land plants, which took place at the time these rocks were deposited. The spread of land plants is proposed to have changed the way iron, organic matter, and other elements were weathered from the soil. These changes should be preserved in the rocks we would like to collect. This work will help understand how the Earth's climate and other Earth cycles changed about 415 million years ago.

We look forward to hearing any advice or concerns you have on these proposed activities and to explore the opportunity for contracting a wildlife expert from Resolute Bay. Should you have any question about the field work, please do not hesitate to contact me by email at esper@stanford.edu

Sincerely,

A handwritten signature in black ink, appearing to read 'Erik Sperling', with a long horizontal flourish underneath.

Erik Sperling
Associate Professor, Earth and Planetary Sciences
Stanford University

