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Community Engagement in Permafrost Research at the Western Arctic Research Centre, Inuvik, Northwest Territories, Canada

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The Arctic is experiencing climate warming at a more pronounced rate than other regions. This has significant implications for the thermal stability of permafrost, which strongly depends on the long, cold winters typical of the region. Canada's western Arctic is typically more sensitive to permafrost thaw than other Arctic regions in Canada, because it is underlain by large regions of ice-rich permafrost that are only protected by a thin layer of organic and mineral soil. As a result, disturbances (i.e. fire, shallow landslides, thermal and mechanical erosion, construction) often lead to the exposure and thaw of the underlying permafrost. Climate-induced permafrost thaw has led to dramatic changes to the landscape, impacting communities, infrastructure, and traditional ways of being. In this region, northern stakeholders have invested in research infrastructure that enables them to actively participate in research, research design and implementation, and lead their own research programs. Since permafrost is intrinsically linked to the social, cultural, and economic fabric of the region, it is critical that local stakeholders be engaged in permafrost research.

The Western Arctic Research Centre (WARC) is located in Inuvik, Northwest Territories, Canada. Inuvik is situated in the Beaufort Delta Region of Northwestern Canada, approximately 120km from the Arctic Ocean. A key goal of WARC is to support and conduct research that fosters the social, cultural, and economic prosperity of the people of the Northwest Territories. In response to local concerns, WARC has developed a suite of research programs that focus on the impacts of permafrost thaw on terrestrial, freshwater, and marine systems. To ensure that these research programs are responsive to the concerns of northern and Indigenous residents, WARC works in partnership with researchers, communities, government bodies, and Indigenous and co-management organizations. Project partners provide critical feedback on research design, study site selection, and how to communicate research to a northern audience. Furthermore, the Permafrost Information Hub at WARC is working with local organizations to establish community-based permafrost research and monitoring in the Beaufort Delta Region. This includes the development and delivery of training programs for local environmental monitors, increasing capacity in the region to support permafrost research. Northerners need to be involved in permafrost research. How Northerners want to be involved will differ depending on the location within the region and the nature of the research. This emphasizes the need for consistent, open lines of communication between researchers and local partners.

This oral presentation will outline the steps WARC has taken to engage northern and Indigenous residents in its permafrost research programs, lessons learned, and successes.