



ALBERTA INNOVATES

AGRICULTURE AND ENVIRONMENT

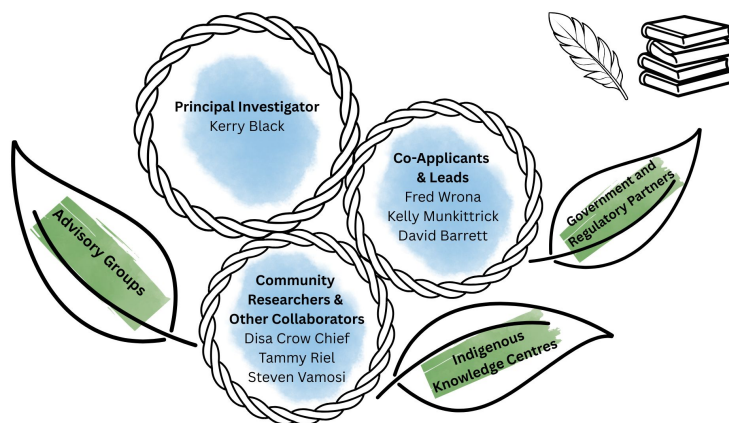
ENVIRONMENTAL INNOVATION

WATER INNOVATION

FUNDING DETAILS

Strategic Technologies for Resilient Environmental and Aquatic Management (STREAM)

The STREAM initiative aims to empower Indigenous communities across Alberta to lead environmental monitoring through community-based programs. It integrates Indigenous knowledge with advanced scientific tools like mobile labs and real-time sensors to assess water quality and ecosystem health. By fostering collaboration, training, and infrastructure development, STREAM addresses critical gaps in water governance, enabling timely, culturally relevant data collection and decision-making.



RECIPIENT:

University of Calgary



PARTNERS:

Environment and Climate
Change Canada
Nipiy Tu Laboratory



TOTAL BUDGET:

\$3,365,000



AI FUNDING:

\$750,000



PROJECT DATES:

DEC 2025 –
AUG 2028



PROJECT TRL:

Start: 6
End: 8

APPLICATION

STREAM will deploy mobile research stations and analytical tools in Indigenous communities to support real-time water quality monitoring. The data collected will inform local decision-making, regulatory compliance, and policy development. Training programs will build community capacity, ensuring long-term sustainability and integration of Indigenous-led monitoring into Alberta's environmental governance frameworks.



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PROJECT GOALS

STREAM seeks to co-develop sustainable infrastructure and monitoring tools tailored to Indigenous communities. Its goals include enhancing technical capacity, fostering community engagement, and creating knowledge translation tools that support environmental stewardship. The project will establish a provincial network of community-based monitoring programs, enabling cross-community learning and policy influence. It emphasizes reconciliation, data sovereignty, and long-term resilience through inclusive, participatory research.

BENEFITS TO ALBERTA

STREAM will improve water security and ecosystem health in Indigenous and rural communities, directly benefiting public health and environmental resilience. By training 40–65 community members and deploying advanced monitoring technologies, the project enhances local capacity and reduces reliance on external consultants. It supports Alberta's reconciliation goals by embedding Indigenous leadership in environmental governance and aligns with provincial priorities for sustainable resource management. The initiative also strengthens Alberta's position in Indigenous-led research and innovation, attracting federal investment and fostering collaboration across sectors. Long-term benefits include improved regulatory compliance, protection of traditional economies, and enhanced climate resilience, contributing to a more equitable and sustainable future for Alberta's communities.



2-3 Practices/Policies Informed



2-4 Publications



6-10 Students Trained

CURRENT STATUS

APR 2026 - IN PROGRESS

Project has recently kicked-off. Community and partner engagement is underway.