
Miistakis
Institute
Strategic Plan 2024
INNOVATIVE RESEARCH.
ENGAGED COMMUNITIES.
HEALTHY LANDSCAPES.

About us

The Miistakis Institute is a registered charity that undertakes applied conservation research to enable responsible and sustainable decisions to support biodiversity, ecological connectivity and nature-based climate adaptation.

Miistakis is a Blackfoot word that translates to ‘backbone of the world’. When Miistakis was first formed in 1997, the work of the institute focused on the Crown of the Continent ecosystem. The Crown of the Continent is a geographical area centered on the Waterton-Glacier International Peace Park and stretches along the axis of the Rocky Mountains spanning southwest Alberta, southeast British Columbia and northern Montana, a place known to the Blackfoot people as the backbone of the world.

In its early years Miistakis developed a specialized expertise in GIS data and transboundary spatial analysis, and this skill set remains. In addition to focusing on spatial analysis, Miistakis has expanded our breadth of research expertise to include:

- research design
- spatial analysis and modeling
- facilitation
- on-line mapping and tool development
- citizen science
- database design and management
- policy research and analysis
- community engagement
- knowledge mobilization

Vision

A world where communities have genuine access to the science and research they need to make choices that promote healthy landscapes.

Mission

The Miistakis Institute brings people and ideas together to promote healthy communities and landscapes. We study the landscape, so we can help people maintain it; and we work to make innovative research accessible to communities and decision-makers.

Guiding Principles

- Miistakis seeks to create a positive and rewarding work environment, one which promotes equity, inclusion, growth, respect, integrity and collaboration.
- We are committed to an ongoing process of self-education to improve our awareness of Indigenous issues and to increase the cultural competence of our staff and board members.
- Miistakis works to form collaborative partnerships that provide mutual benefit.
- We are committed to working in partnership with Indigenous peoples, and to consult and take their lead when working on their land and with their communities.
- Miistakis selects projects and research that are deemed to be in the public interest, addressing ecological health and conservation.
- Because credible research is the foundation of Miistakis' work and reputation, Miistakis' endeavors are grounded by sound, science-based methods.
- Miistakis promotes an informed academic approach to projects, collaborating with academic colleagues and students in various related disciplines and institutions.
- Miistakis is committed to maintaining adaptive capacity to meet the ever-changing needs of land-use managers and decision-makers.
- Miistakis believes that the availability of information and data are vital to sound decision-making and endeavors to make such information available to managers and decision-makers.

Our community – who we serve

Miistakis works collaboratively with all sectors, developing our research in partnership with end knowledge users. These include federal, provincial and municipal governments, industry, Indigenous communities, private land owners, ENGO's, academics, and community groups.

Over the past 27 years we have developed strong community relationships, working collaboratively to provide practical, innovative, science-based conservation solutions.

MRU

Miistakis is an affiliated institute with Mount Royal University. The objective of the affiliation is to facilitate collaboration and cooperation between the Institute and Institute researchers and the University and University researchers in mutually beneficial activities, including, but not limited to applied environmental research, spatial and environmental analysis, environmental management, related social-ecological practice and analysis.

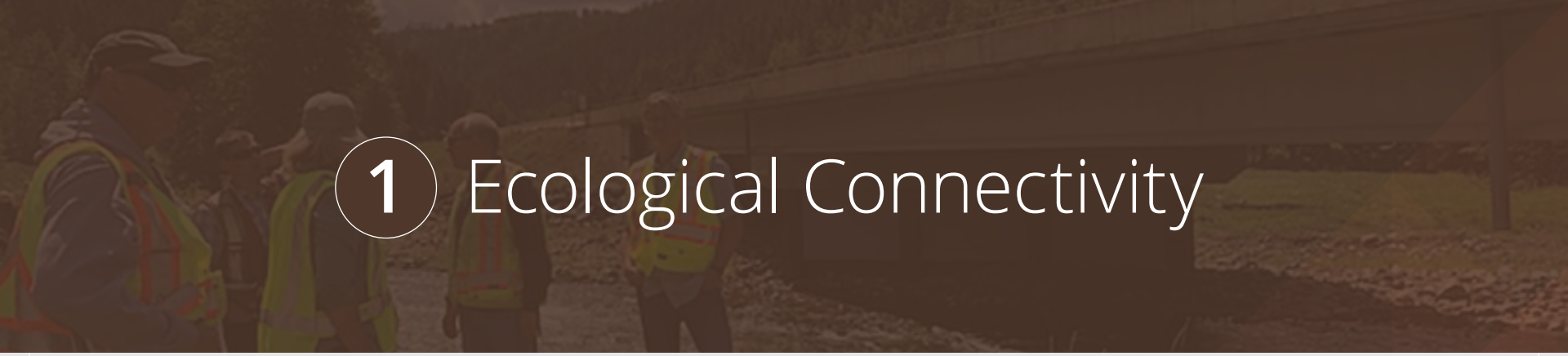
As MRU's only affiliated research institute, the Miistakis Institute plays a unique role at Mount Royal University working closely with MRU staff and undergraduate students to find innovative solutions to complex environmental challenges, and apply those in real-world efforts to advance conservation and environmental outcomes.

MRU prides itself with supporting research and scholarship that addresses problems of concern in local and regional communities and promotes research with and not simply in these communities.

Miistakis's work as an affiliated research institute at Mount Royal University:

- Enhances students' exposure to interdisciplinary research through student mentorship, student volunteer opportunities, class lectures and case studies.
- Links MRU students and faculty into partnerships they would not otherwise have access to.
- Enhances MRU's culture of innovation through our interdisciplinary, non-partisan and applied approach to research.
- Provides employment opportunities, both short and longer term, for students across campus, creating capstone integrated work learning experiences.
- Engages communities in innovative and productive partnerships – Miistakis is currently engaged with over 100 academic, government, industry, landowner, and ENGO partners.
- Accesses funding and partnership sources that do not draw on MRU's resources, bringing both research opportunities and research credibility back to the MRU community.
- Enhances MRU's profile of community engaged change-making - Miistakis acts as a conduit for collaboration and engagement between Mount Royal University and community partners.
- Contributes to the academic scholarship of MRU through peer-reviewed submissions.
- Offers unique opportunities for students to get work and research experience that is 'outside' the University, but physically on campus.


Our Research Priorities



1 Ecological Connectivity

Ecological connectivity, the unimpeded movement of species and the flow of natural processes, is essential to healthy landscapes.

World-wide, ecological connectivity is increasingly fragmented and degraded by human infrastructure and activity, which can reduce or prevent the ability of wildlife to move freely through the landscape, risking localized extinction and population level health impacts. Further, humans rely on ecological connectivity to maintain natural processes that provide services such as clean air, clean water, and ability to adapt to a changing climate.

STRATEGY 1

Identify areas important for ecological connectivity

WE WILL DO THIS BY:

- Undertaking spatial and analytical modeling to identify structural and functional connectivity needs
- Identifying data gaps and data needs
- Developing innovative tools to support data collection and data analysis
- Working with stakeholders to identify areas important for ecological connectivity

STRATEGY 2

Support the maintenance and restoration of connected landscapes

WE WILL DO THIS BY:

- Identifying and promoting workable solutions to improve ecological connectivity
- Facilitating the inclusion of ecological connectivity to policy and planning
- Supporting the implementation of mitigation strategies to reduce impacts of linear features and human infrastructure

STRATEGY 3

Promote the importance of ecological connectivity

WE WILL DO THIS BY:

- Generating awareness of the challenges that transportation infrastructure and other human features/activities pose to ecological connectivity
- Using citizen science to engage citizens in data collection and enhance understanding of the importance of ecological connectivity
- Broadly disseminating our ecological connectivity research results

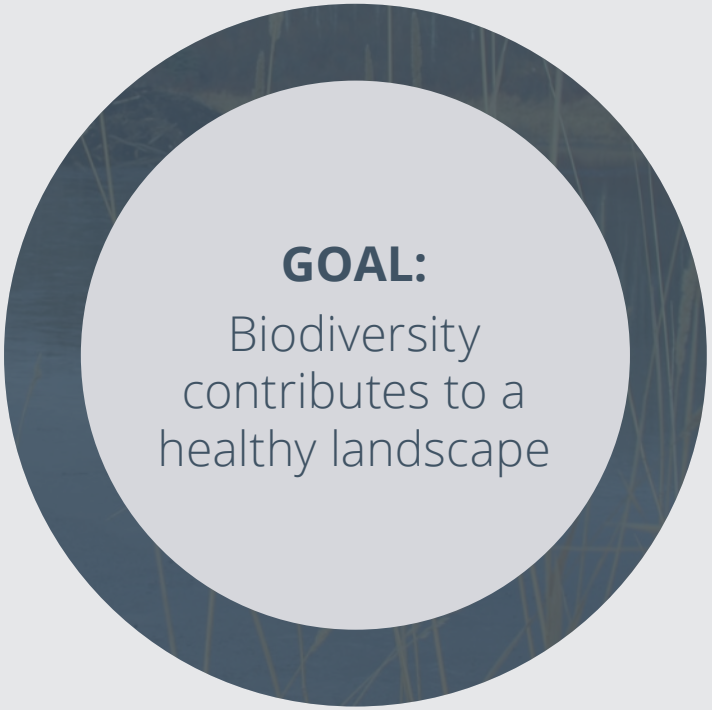
Actions 2024/2025

- Advance connectivity for pronghorn through the identification of priority mitigation sites.
- Advance the consideration for connectivity in municipal planning through improvements and updates to the Connectivity Risk Assessment Tool and identification of ecological corridors in the M.D. Pincher Creek.
- Improve understanding of connectivity through continued monitoring of wildlife in important wildlife corridors (Crowsnest Pass, City of Calgary).
- Develop an ecological network for the City of Calgary and neighbouring jurisdictions and develop tools to support implementation into planning, management and policy.
- Utilize regional wetland datasets to support the prioritization of wetlands and wetland corridors for conservation and restoration to ecological connectivity.

2 Biodiversity

Biodiversity, or biological diversity, refers to the number, variety, and variability of living organisms in an area.

A biodiverse landscape reflects a healthy ecosystem that supports natural processes human rely on such as food production, clean water, medicine, and clean air. Human activities, such as changes in land use (e.g. urbanization), over-exploitation, climate change, and pollution, cause alarming rates of biodiversity loss globally, reduce the ability of ecosystems to function properly, and impact economic, recreational, cultural and scientific opportunities.



STRATEGY 1

Enhance our understanding of biodiversity

WE WILL DO THIS BY:

- Identifying data gaps and biodiversity data needs
- Developing and implementing biodiversity monitoring methodologies
- Developing tools to support biodiversity data collection
- Elevating the understanding of the contribution of biodiversity to ecosystem health

STRATEGY 2

Support the maintenance and restoration of biodiversity

WE WILL DO THIS BY:

- Facilitating the inclusion of biodiversity information to planning and policy
- Examining ways to improve the coexistence of wildlife and humans

STRATEGY 3

Promote the importance of biodiversity

WE WILL DO THIS BY:

- Generating awareness of the challenges that human development/activities pose to biodiversity
- Using citizen science to engage citizens in data collection and enhance understanding of the importance of biodiversity
- Broadly disseminating our biodiversity research results

Actions 2024/2025

- Monitor biodiversity in the City of Calgary and surrounding urban/rural interface using remote cameras and citizen science
- Demonstrate private land conservation contributions to biodiversity
- Support biodiversity monitoring at industrial sites
- Prioritize wetlands and wetland corridors for conservation and restoration to improve biodiversity
- Support the creation of the Alberta Citizen Science Hub to support citizen science initiatives across Alberta

3 Ecosystem-based Climate Adaptation

Miistakis prioritizes ecosystem-based climate adaptation as a strategy to maintain resilient, healthy landscapes in the face of a changing climate.

Ecosystem-based climate adaptation refers to a variety of approaches that involve the conservation, sustainable management, and restoration of ecosystems, and is aimed at reducing the vulnerability of humans to climate change hazards. Examples of approaches include habitat restoration, wetland management, and sustainable forest management practices.

STRATEGY 1

Inform the conservation and restoration of natural landscapes and systems

WE WILL DO THIS BY:

- Researching the efficacy of nature conservation and restoration to address climate change
- Identifying data gaps and data needs
- Developing innovative tools to support nature conservation and restoration
- Promoting the use of nature-based solutions

STRATEGY 2

Promote nature conservation to enhance ecosystem-based adaptation

WE WILL DO THIS BY:

- Promoting the inclusion of ecosystem-based adaptation to planning and policy
- Communicating research results to broad audiences

Actions 2024/2025:

- Utilize and promote regional wetland datasets for the Bow River Basin to support municipal planning and wetland management, protection and restoration
- Create tools to support municipalities and communities in identifying and promoting their natural infrastructure including the use and integration of wetland data
- Identifiy and prioritize wetlands for conservation and restoration in the City of Calgary
- Promote coexistence with wildlife to realize watershed benefits
- Support the protection and maintenance of natural landscapes through the application of the Municipal Land Use Sustainability Tool

Organizational Sustainability and Operational Excellence

In addition to our Research Priorities, Miistakis will strive for organizational sustainability and operational excellence.

Goal:

Miistakis is a thriving, high-achieving applied research institute, positioned as a leader for providing access to science and research relevant to supporting healthy landscapes.

We will achieve this by:

- Supporting a highly competent staff dedicated to the mission and vision of Miistakis
- Supporting a diverse, inclusive and equitable work environment for all staff
- Generating a diverse and stable revenue base including revenue streams from private and community foundations, government grants, fee for service and donations
- Implementing sound governance including a diverse Board of Directors committed to the vision and mission of Miistakis
- Creating strong administrative supports and structures to support the operations of Miistakis
- Continuing to grow the reputation and awareness of Miistakis through a variety of communication channels including digital and print media, webinars, workshops and presentations

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