



ALBERTA INNOVATES

AGRICULTURE AND ENVIRONMENT

ENVIRONMENTAL INNOVATION

LAND MANAGEMENT SOLUTIONS

FUNDING DETAILS

Informing wood bison conservation through innovative landcover and microhabitat mapping and modeling in Alberta

The Informing Wood Bison Conservation in Alberta project, funded by Alberta Innovates, aims to advance habitat mapping and monitoring for Wood Bison across northern Alberta. Using cutting-edge tools such as lidar, high-resolution imagery, and data science, the project will identify key habitat features and model how bison use the landscape. This work will provide better, more detailed information to guide conservation planning, land-use decisions, and species recovery efforts. Delivered in collaboration with government, academic, and conservation partners, the project represents a major step toward developing long-term, data-driven solutions to support Alberta's wildlife and ecosystem management.



RECIPIENT:

Alberta Biodiversity
Monitoring Institute



PARTNERS:

Alberta Environment and
Protected Areas
InnoTech Alberta
University of Calgary
University of Manitoba
Parks Canada
CPAWS



TOTAL BUDGET:

\$785,880



AI FUNDING:

\$249,741



PROJECT DATES:

OCT 2025 –
SEP 2027



PROJECT TRL:

Start: 5
End: 7

APPLICATION

The project's outputs will be applied directly to support land-use planning, wildlife management, and species recovery initiatives in Alberta. Government agencies, Parks Canada, and conservation organizations will use the new habitat maps and models to identify priority areas for protection, restoration, and monitoring. The tools will also enhance Alberta's ability to track habitat changes and inform evidence-based conservation decisions.



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PROJECT GOALS

The project aims to improve how Wood Bison habitat is mapped and monitored across northern Alberta using advanced technologies such as lidar, aerial imagery, and data science. By creating detailed landcover maps, detecting fine-scale habitat features, and modeling habitat suitability, the project will generate tools to support conservation planning and land management. It strengthens collaboration among government, academic, and conservation partners to inform evidence-based decisions and enhance long-term habitat monitoring for this threatened species.

BENEFITS TO ALBERTA

This project will deliver multiple benefits to Alberta by strengthening the scientific foundation for Wood Bison conservation and land-use planning. It will provide high-quality, spatially detailed data and tools that help government, industry, and conservation partners make better-informed decisions about managing northern landscapes. Improved mapping of wetlands, grasslands, and microhabitat features such as wallows will support habitat restoration and monitoring efforts, contributing to biodiversity and ecosystem health. The project also fosters collaboration among provincial and federal agencies, universities, and NGOs, aligning with Alberta's goals for sustainable resource development and environmental stewardship. In the long term, the resulting data infrastructure and modeling approaches will enhance Alberta's capacity to monitor other species and habitats across the province efficiently and cost-effectively.



3 Project Jobs



>2 Practices/Policies Informed



1 Publication



2 Students Trained

CURRENT
STATUS

AUG 2026

Project is currently in progress